



Research & Analysis for use of the Blue Ribbon Panel on Alberta's Finances

August 15, 2019



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Our scope was limited to research and analysis over a very short timeframe. The procedures we performed were limited in nature and extent, and those procedures will not necessarily disclose all matters about finances, functions, policies and operations of a provincial ministry or functional area, or reveal errors in the underlying information. Our role was to provide research, analysis and approaches used in Alberta in comparison primarily to B.C., Ontario and Quebec to manage operating expenditures, and other operating metrics as input for the Panel; KPMG was not contracted for and provides no opinions, conclusions or recommendations on the information included herein.

Our procedures primarily consisted of research, comparison and analysis of Government of Alberta-provided information and data, as well as data and information on other provinces from publically-available sources, which was not exhaustive. Readers are cautioned that, in some cases, estimates are provided based on available information and assumptions for order of magnitude only.

The procedures we performed do not constitute an audit, examination or review in accordance with standards established by the Chartered Professional Accountants of Canada, and we have not otherwise verified the information we obtained or presented in this Document. We express no opinion or any form of assurance on the information presented in the Document, and make no representations concerning its accuracy or completeness.



Table of Contents

	Page
Summary of Research and Analysis	4
Introduction	10
10 Year Overall Comparisons	14
Public Sector Workforce & Collective Bargaining	20
Health	56
Community and Social Services (incl. Seniors)	90
Advanced Education	105
Education	128

Summary of Research and Analysis (1 of 6)

Introduction

As outlined in the direction provided in the letter from the President of Treasury Board and Minister of Finance to Janice MacKinnon, Chair of the Blue Ribbon Panel on Alberta's Finances, a robust fiscal management system is critical in responding to the wide array of challenges that Alberta will face over the next decade.

To this end, KPMG was engaged to conduct a comparative spend analysis and identify practices that have been used towards managing provincial expenditures to inform the Panel's review and considerations. The Panel directed the areas for KPMG to research and analyze and used the information as one of many inputs in their final report.

This included the following three scope areas:

- Scope 1: A comparison of expense trends for the past decade between Alberta, BC, Ontario and Quebec for spending on health, social services, education, and advanced education
- Scope 2: A review, update and analysis of CIHI data based on the Physician Services Analysis information (completed in February 2016), and
- Scope 3: A high-level review of collective bargaining processes and practices across the western Canadian jurisdictions (British Columbia, Alberta, Saskatchewan, and Manitoba).

This document presents the results from this work that was completed between June 3 and July 31, 2019. Data sources have been noted throughout the body of the document. KPMG's role was to provide research and analysis but has not provided any recommendations or opinions.

As such, the Panel is responsible for making any recommendations (where this document is one of many inputs into its work), and the Government of Alberta is responsible for all decisions arising from the Panel's report.

10 Year Summary

Alberta had the highest per capita total expenditure for Health, Education and Social Services in 2018 at \$10,848, and the highest 10-year compounded annual growth rate (CAGR) at 4% compared to British Columbia, Ontario and Quebec. Alberta's per capital total expenditure for Health, Education and Social Services was \$1,840 higher than Ontario, which had the lowest per capita total expenditure in 2018 of \$9,008.

Alberta's total population (and its older and younger populations) grew faster than any of British Columbia, Ontario or Quebec over the past 10 years. The population under 65 years grew by 1.5% CAGR and the population over 65 years grew by 4% CAGR. Alberta is the youngest of the provinces with a median age of 36.9 years, and the smallest share of individuals over the age of 60 among other provinces.

Source: Analysis of Parliamentary Budget Office Fiscal Sustainability Report source data tables (September 30, 2018). Population data from Statistics Canada Table 17-10-0005-01.



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Summary of Research and Analysis (2 of 6)

Public Sector Workforce

One of the primary cost drivers for provincial governments is compensation. In 2018/19, the consolidated compensation expenditures of the Government of Alberta and its related entities represented 38% of the total expenditures by Government.

Alberta's compensation for its core government departments grew by 4.6% CAGR since 2008/09. By comparison, British Columbia's core government department compensation grew by 1.2% CAGR, Ontario's grew by 2.4% CAGR and Quebec's by 3.9% CAGR.

From 2008 to 2018, the core government department employment (headcount) in Alberta grew by 1.3% CAGR, which was comparable to Ontario's growth (1.4% CAGR), but less than British Columbia's (2.8% CAGR) and more than Quebec's (1.1% CAGR).

Alberta deals with a workforce that covers 128 collective agreements for teachers, physicians, nurses, other medical professionals, support professionals, public agencies, and post-secondary institutions.

Health

In 2018, Alberta had the highest health and physician services per capita expenditures compared to other provinces. Alberta spends \$997 more per capita on health services than Ontario, which spends the least at \$4,080 per capita. This equates to more than \$4 billion in additional spending on the health system.

There are inherent differences in Alberta, British Columbia, Ontario and Quebec's business models for health.

Alberta has a single health authority, while British Columbia has a single shared service authority and five regional health authorities. Ontario is the most distributed model with 14 Local Health Integration Networks that deliver health services across that province.

There are several areas where the health outcomes / system performance for Albertans are worse than other provinces. In comparison to British Columbia, Ontario, and Quebec, Alberta has:

- The lowest life expectancy at age 0
- The highest infant mortality rates per 1,000 population
- The highest number of deaths from major cardiovascular disease and suicide per 100,000 population
- The second highest number of hospitalized heart attacks per 100,000 population
- The highest percentage of persons being cared for in hospitals that could be provided in a more appropriate setting
- The highest Ambulatory Care Sensitive Condition hospitalization rates, per 100,000 population, and
- The highest median wait (number of weeks) from referral by a GP to treatment.

Source: Government of Alberta Annual Reports 2009-10 to 2018-19. Canadian government finance statistics for the provincial and territorial governments (x 1,000,000) data from Statistics Canada Table 10-10-0017-01. Employment by industry, annual (Provincial and territorial public administration) data from Statistics Canada Table 14-10-0202-01. Based on information from the Government of Alberta Provincial Bargaining Coordination Office. CIHI National Health Expenditure Database. Business Plans (Service Plans), Annual Reports and Ministry websites. CIHI data (2017 - hospitalized heart attacks, and Statistics Canada (Tables 13-10-0713-01, 13-10-0114-01, 13-10-0800-01) and Alberta population data.

Summary of Research and Analysis (3 of 6)

Health (continued)

An overview of key health system indicators is outlined below for Alberta, British Columbia, Ontario and Quebec.

Health Indicators	AB	BC	ON	QC
Life expectancy at age 0	81.5	82.5	82.5	82.4
Infant (under 1 year old) mortality rates per 1,000 population	4.9	3.1	4.7	4.0
General mortality rates per 1,000 population	6.0	8.0	7.3	7.7
Deaths from major cardiovascular diseases per 100,000 population	195.2	174.5	163.0	150.1
Deaths from intentional self-harm (suicide) per 100,000 population	15.2	9.7	10.0	10.4
Prevalence of high blood pressure	15.4	16.8	18.4	16.7
Prevalence of diabetes	6.9	5.9	8.0	6.6
Prevalence of COPD	3.8	4	4.1	4.6
Access to primary care – percentage of persons reporting they have a regular doctor	84	83	92	75

Alberta ranks highest in terms of the supply of technical specialists, 2nd highest in terms of total physicians, family medicine physicians, and medical specialists, and 4th highest in terms of surgical specialists, when compared to British Columbia, Ontario and Quebec.

Growth in Alberta's physician service expenditure has averaged 7.6% per year since 2009/10. Alberta's physicians operate under a fee for service model, that is governed by an agreement with Government and the Alberta Medical Association.

Alberta ranks 2nd highest in fee for service payment rates per service with an average rate of \$64. By comparison, Alberta has the lowest percentage of payments for physicians through Alternative Payment Programs in Canada.

Legend: **Red** – higher than average for negative indicator and lower than average for positive indicator.

Yellow – middle value(s) for indicator.

Green – lower than average for negative indicator and higher than average for positive indicator.

Source: CIHI data (2017 - number of physicians, in-hospital sepsis, hospitalized heart attacks, and Statistics Canada (Tables 13-10-0713-01, 13-10-0114-01, 13-10-0800-01) and Alberta population data. Fraser Institute. CIHI Scott's Medical Database 2017: Table 3.0, Table 4.0. Alberta Health completed analysis of actual spending on physicians. CIHI National Physician Database, Historical Payments and HEF Calculations.

Summary of Research and Analysis (4 of 6)

Community and Social Services (including Seniors)

There are several social service programs in British Columbia and Ontario whose costs were not included in this analysis as they proved difficult to find.

Alberta's social services expenditures grew by 2.9% CAGR, which was comparable to Ontario's expenditure growth (2.8% CAGR), higher than Quebec's (2.3% CAGR), and lower than British Columbia's (3.3% CAGR).

Alberta's per capita spending on social services in 2018 was \$13,914, when adjusted for low income, and was the highest when compared to British Columbia and Ontario, while Alberta has the lowest incidence of low income persons (6.8%). Comparable data for Quebec was not available.

Caseloads for the AISH, FSCD and PDD programs have increased year-over-year in Alberta. Alberta notes that this trend is expected to continue for the foreseeable future. Alberta's Income Support programs have also been growing over the past 10 years in terms of caseloads and costs per case. The enrolment in the Expected to Work or Working program has grown by 8.4% CAGR, while the Barrier to Full Employment program has grown by 6.4%, while the costs per case of these programs have grown by 1.5% CAGR and 2.2% CAGR, respectively.

Alberta began indexing its AISH, Income Supports and Alberta Seniors Benefit programs in January 2019. Of the comparator provinces, Quebec and Alberta index financial assistance rates.

In 2017, in Alberta, seniors who were low income represented 2.3% of the total population, as compared to British Columbia at 6.3%, Ontario at 3.8% and Quebec at 3.5%.

Advanced Education

Alberta's funding to post-secondary institutions has grown over the past 10 years by 4% CAGR. By comparison, the population of post-secondary aged persons (15 to 39 years) has grown by 1.3% CAGR. Alberta spends more per student than British Columbia, Ontario or Quebec on advanced education; it spends almost \$5,000 more per student than British Columbia, which is its closest comparator.

There are four Comprehensive Academic and Research Universities in Alberta that represent the greatest number of students across the sector. These institutions also receive the greatest share of operational funding from the Government on a per student fully loaded equivalent (FLE) basis.

Source: Analysis of Parliamentary Budget Office Fiscal Sustainability Report source data tables (September 30, 2018). Population data from Statistics Canada Table 17-10-0005-01. Analysis of Budget Estimates for 2018-19 for Alberta, British Columbia and Ontario; Low income persons data from Statistics Canada Table 11-10-0135-01 (based on Market Basket Measure). Analysis of Alberta Community and Social Services information on caseload and cost data. Analysis of information collected from government websites. Low income statistics by age, sex and economic family type data from Statistics Canada, Table 11-10-0135-01.

Summary of Research and Analysis (5 of 6)

Advanced Education (continued)

Within Alberta, the average salary and benefit per FTE across all of Alberta's institution types and staffing is highest within the Polytechnical Institutions at \$116K; while the average salaries for Academic / Instructional staff at Polytechnic Institutions and Comprehensive Academic and Research Universities are the highest at \$142K and \$136K respectively.

From a completion rate perspective, there were 9 institutions (out of 26) that fell below an average completion rate of 60%. One institution, Portage College (in Lac La Biche), had the lowest completion rate (below 40%) of all of Alberta's post-secondary institutions.

Alberta's institutions appear comparable to British Columbia, Ontario and Quebec's research-intensive universities in terms of own source revenue; indicating that they are not solely reliant on tuition fees and operating grants from government.

The following table compares the department sizes for advanced education on a per student FTE expenditure basis:

	AB	BC	ON	QC
Departmental Expenses per Student FTE ^(a)	\$417	\$608	\$344	\$286

(a) This excludes operating Grants to post-secondary institutions, other transfers to post-secondary institutions (e.g. Community Education), foundational learning, and Student Aid Grants and administration costs. As well due to data availability constraints, Department costs for administering apprenticeship training in Ontario and Quebec have not been captured.

Education

Alberta's funding to school boards (early childhood to grade 12) has grown over the past 10 years by 3.5% CAGR. By comparison, the population of school aged children (0 to 19 years) has grown by 1.5% CAGR. Alberta spends more per student on Education (\$11,121) than British Columbia (\$9,681). Ontario and Quebec spend more per student than Alberta.

Since 2007/08, student enrolment growth has been higher in Alberta as compared to the other provinces. Alberta's enrolment growth was 16.7% in 2016/17 while the other provinces declined: -1.2% in Quebec, -1.6% in British Columbia, and -3.9% in Ontario.

Alberta's schools are geographically disbursed. Rural-Distant school boards spend the most on their operations across all areas but have the least number of student enrolments per school board. Metro and Rural-Urban school boards saw their expenditures grow the most by 4.4% CAGR and 4.7% CAGR, respectively over the past 10 years.

Alberta measures School Board performance using 16 measures. There are several school boards who scored lower than 50% (as very high / high) on these measure and one that scored below 20% with a cost in excess of \$40,000 per student.

Source: Analysis of Budget Estimates from 2008-09 to 2018-19 for Alberta and Consolidated Actuals. Analysis of Budget Estimates for British Columbia and Ontario; Student enrolment data to inform per student FTE expenditures from Statistics Canada for 2016-17. FLE counts, operational funding, post-secondary salary costs, staff FTE count, and completion rates from the Ministry of Advanced Education. 2016-17 Revenue from Canadian Association of University Business Officers FIUC database. Analysis of Budget Estimates from 2008-09 to 2018-19 for Alberta and Consolidated Actuals for School Board Expenditures 2008-09 to 2017-18. Analysis of Budget Estimates for 2018-19 for British Columbia, Ontario and Quebec.

Summary of Research and Analysis (6 of 6)

Education (continued)

Many school boards in Alberta and across Canada have operating reserves that represent government funding not expended in the year it was provided.

The accumulated surpluses from operations in Alberta (on a per student basis) are comparable to Quebec, less than Ontario and higher than British Columbia.

Ontario's teachers receive the most compensation (salary, benefits and pension) of the three comparator provinces at \$119K. By comparison, Alberta's teachers receive \$116K and British Columbia's teachers receive \$104K. Similar information was not available for Quebec.

However, when Alberta's total pre-1992 Teachers Pension Plan liability is considered as part of this, the total teacher compensation increases to \$119K and is comparable to Ontario but higher than British Columbia.

In 2008, the Government of Alberta and the Alberta Teachers Association struck the first provincial collective agreement, which included a number of items. One of which was that Government assumed 100% of the pre-1992 Teachers Pension Plan liability, which was valued at \$7.7 billion million in the 2018/19 Government of Alberta Annual report. Prior to this there was a shared contribution rate of 3.1% of salary for teachers and 6.3% for Government.

Source: Per student expenditures based on student data for 2017-18. Provincial enrolments from Statistics Canada Table 37-10-0007-01. School Authorities Audited Financial Statements; School Board Enrolment from the Ministry of Education. 2017-18 Audited Financial Statements per School Board for comparator provinces; 2017-18 Accumulated Surplus from Operations for Alberta from the Ministry of Education. Teacher Maximum Total Compensation: Cross-Jurisdictional Analysis, 2017-18 from the Ministry of Education. Teacher Pension Plan liability history provided by Government of Alberta. Accountability Pillar Results for Annual Education Results Report (AERR) from the Ministry of Education.



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Introduction



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As outlined in the direction provided in the letter from the President of Treasury Board and Minister of Finance to Janice MacKinnon, Chair of the Blue Ribbon Panel on Alberta's Finances, a robust fiscal management system is critical in responding to the wide array of challenges that Alberta will face over the next decade.

To this end, KPMG was engaged to conduct a comparative spend analysis and identify practices that have been used towards managing provincial expenditures to inform the Panel's review and considerations. The Panel directed the areas for KPMG to research and analyze and used the information as one of many inputs in their final report.

This included the following three scope areas:

- **Scope 1:** A comparison of expense trends for the past decade between Alberta, BC, Ontario and Quebec (where possible) for spending on health, social services, education, and advanced education. The scope was limited to comparing Alberta to BC, Ontario and Quebec. Specific data limitations by province are provided on page 12.
- **Scope 2:** A review, update and analysis of CIHI data based on the Physician Services Analysis information (completed in February 2016), and
- **Scope 3:** A high-level review of collective bargaining processes and practices across the western Canadian jurisdictions (BC, Alberta, Saskatchewan, and Manitoba).

This document presents the results from this work that was completed between June 3 and July 31, 2019. Data sources have been noted throughout the body of the document.

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The information included herein is based on publically available information, as well as data and information provided from the Ministries of Treasury Board and Finance, Health, Education, Advanced Education, Community and Social Services, Seniors & Housing, the Public Service Commission, and Alberta Health Services.

KPMG appreciates and acknowledges the work of these Ministries of Treasury Board and Finance, Health, Education, Advanced Education, Community and Social Services, Seniors & Housing, the Public Service Commission, and Alberta Health Services for the data information provided to KPMG to assist in the completion of this work.



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Data Limitations



- The level of detail reported over the 10 years has changed; for example, many programs in Community and Social Services (including Seniors) were transferred between multiple Ministries; as a result, assumptions were made to normalize the information over the period.
- Consolidated estimates were used; however where there was an insufficient level of detail for entities outside of the Department, actuals from 2017-18 were used as a proxy.
- Some comparative information on health was not available (e.g. community care, home care, continuing care) across the comparator provinces.



- There are limitations in how British Columbia consolidates its expenditure data (e.g. unclear how some entities such as school boards and health authorities, are included within the budget estimates).
- Limited details on expenditures by program exist within the budget estimates; details from the 2017-18 public account actual expenditures were used as a proxy.
- Program expenditures for seniors and homelessness program were not readily available and therefore not included within the Community and Social Services (including Seniors) sector analysis.



- Several Ministries provide programs similar to Alberta's Community and Social Services (including Seniors) which required assumptions to be made in order to identify and report comparable costs.
- Ontario consolidates expenditures of its colleges but does not do so for its universities, as a result, additional expenditure details for universities were found through alternative sources.
- Local Health Integration Networks report using different financial expenditure classifications adding complexity and requiring the use of assumptions to be made in order to complete the comparative analysis.



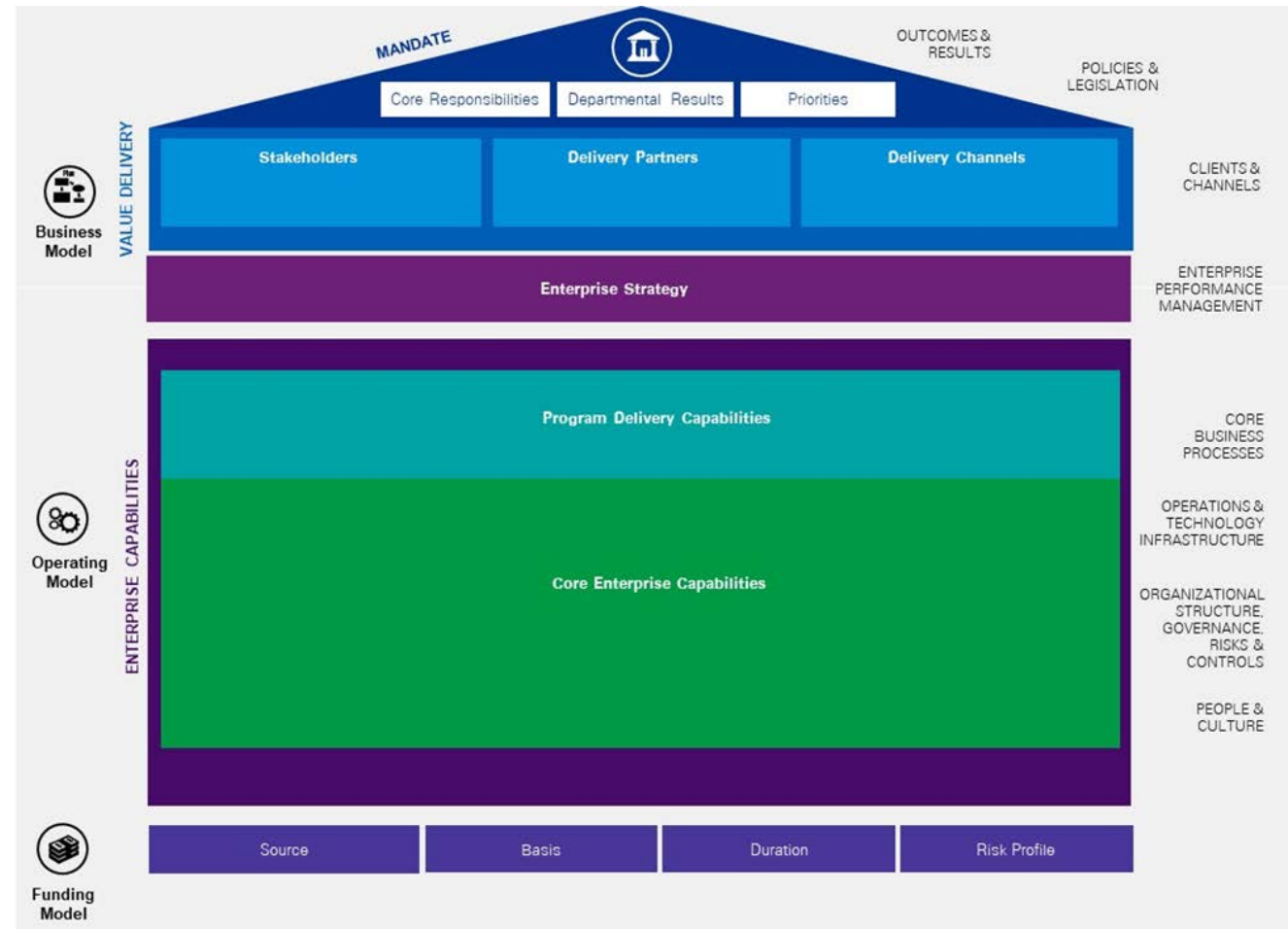
- Quebec does not consolidate its entities which makes comparisons difficult.
- Difference in its departmental structures limited the availability of comparable information for this jurisdiction.
- Where it was available for Quebec, comparative information was included in the research and analysis of health, advanced education, education and social services.

Connected Enterprise

KPMG's **Connected Enterprise** framework was applied to collate core program delivery costs, and enabling enterprise costs (corporate and other administrative requirements needed to sustain and support an organization). The framework provides visibility and understanding to the relationship between supporting corporate and administrative functions and core program requirements. It provides a foundation to understand the relationship of key cost drivers to the full cost of delivering the functional areas of health, education, and community and social services.

The framework provides a **holistic view of the total enterprise** (business model, operating model and funding model) in order to understand key cost differences and related business and operating model variables between jurisdictions.

Applying a Connected Enterprise approach also recognizes that administration costs (i.e. the cost of administering a program) are often embedded within the core program operations and can be hidden depending on the delivery channels and methods used to deliver programs.





10 Year Overall Comparisons



10 Year Total Expenditure Comparisons (1 of 2)

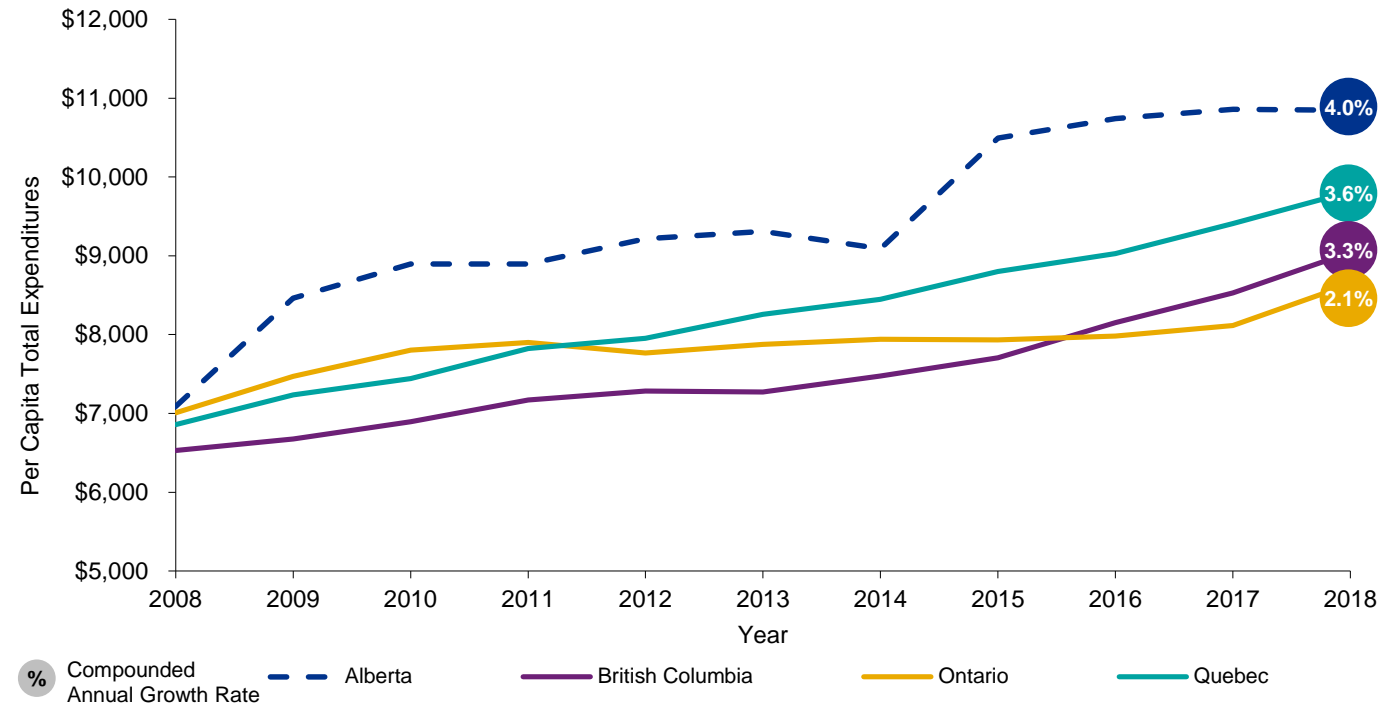
Alberta had the highest per capita total expenditure for Health, Education and Social Services in 2018 and the highest 10-year compounded annual growth rate (CAGR) across the comparator provinces.

Alberta's per capita total expenditure in 2018 was \$10,848. From 2008 to 2018, Alberta's expenditures grew by 4.0% CAGR (or 53% over 10 years).

By comparison over the same period of time:

- British Columbia's CAGR was 3.3% (or 39% in total) and its per capita total expenditure in 2018 was \$9,044.
- Ontario's CAGR was 2.1% (or 23% in total) and its per capita total expenditure in 2018 was \$8,644.
- Quebec's CAGR was 3.6% (or 43% in total) and its per capita total expenditure in 2018 was \$9,814.

Figure 1: Per Capita 10 Year Total Expenditures (Health, Education and Social Services) in Real 2007 Dollars



Note: Due to differences in accounting and reporting, data may not be strictly comparable between the Provinces. Total expenditures include the sum of health, education and social services expenditures reported by provinces; note social services will include more expenditures than represented by the programs that are delivered through Alberta's Ministry of Community and Social Services and the seniors programs that are delivered through Alberta's Ministry of Seniors & Housing.

Source: Analysis of Parliamentary Budget Office Fiscal Sustainability Report source data tables (September 30, 2018).

10 Year Population Comparison (1 of 2)

Alberta's total population (and its older and younger populations) grew faster than any comparator province over the past 10 years.

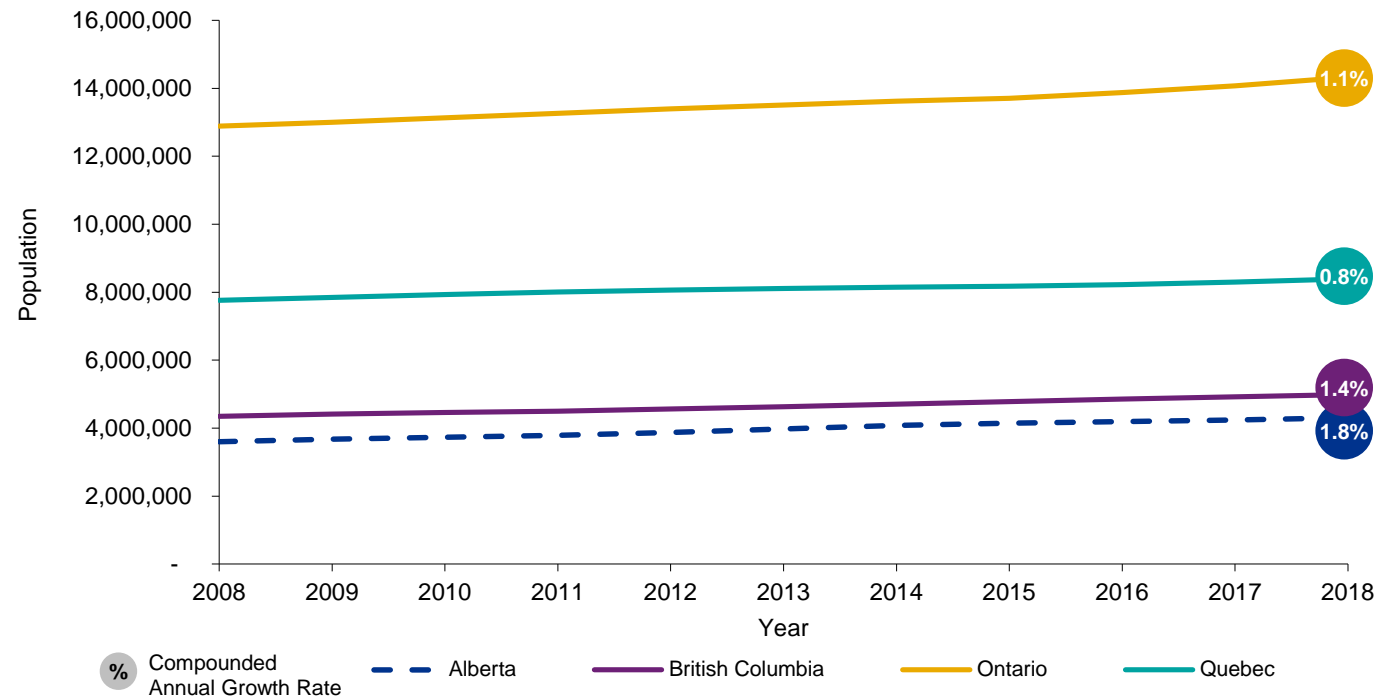
Alberta's total population grew by 1.8% CAGR or 20% over the past 10 years. 87% of the population was under 65 years in 2018.

Alberta's population under 65 years grew by 1.5% CAGR or 17% over 10 years (see Figure 3) and the population over 65 years grew by 4% CAGR or 48% over 10 years (see Figure 4).

By comparison over the past 10 years:

- British Columbia's total population grew by 15%, or 1.4% CAGR. 82% of the population was under 65 years in 2018.
- Ontario's total population grew by 11% or 1.1% CAGR. 83% of the population was under 65 years in 2018.
- Quebec's total population grew by 8% or 0.8% CAGR. 81% of the population was under 65 years in 2018.

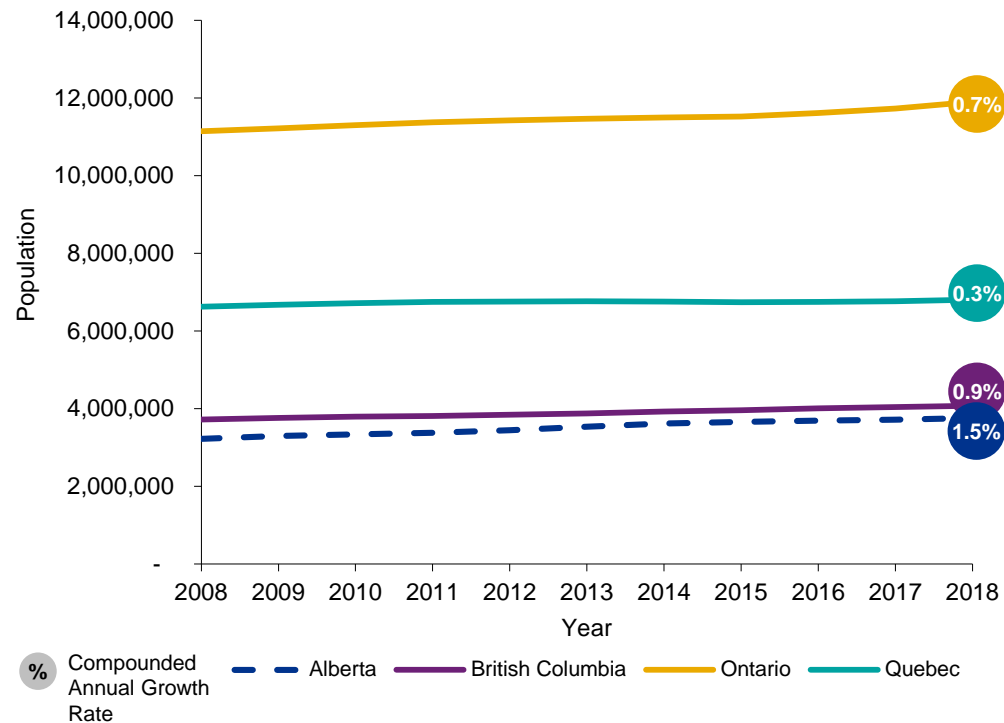
Figure 2: 10 Year Trend in Total Population



Source: Population data from Statistics Canada Table 17-10-0005-01

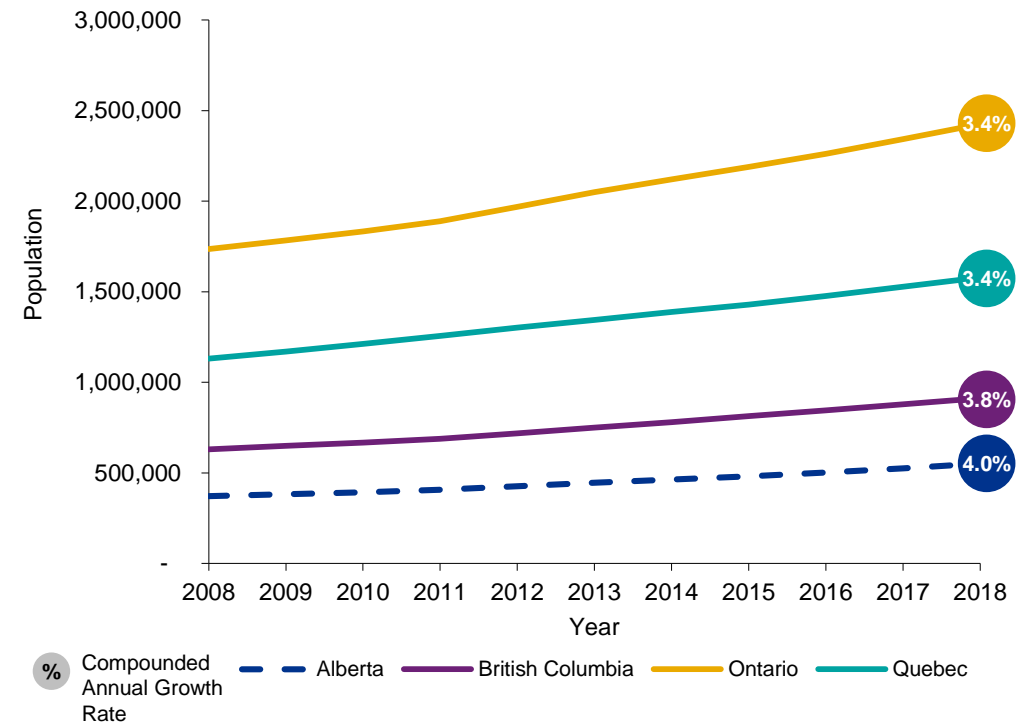
10 Year Population Comparison (2 of 2)

Figure 3: 10 Year Trend in Total Population Under 65 Years



Source: Population data from Statistics Canada Table 17-10-0005-01

Figure 4: 10 Year Trend in Total Population 65 Years and Older



Source: Population data from Statistics Canada Table 17-10-0005-01

Average Weekly Earnings Comparison

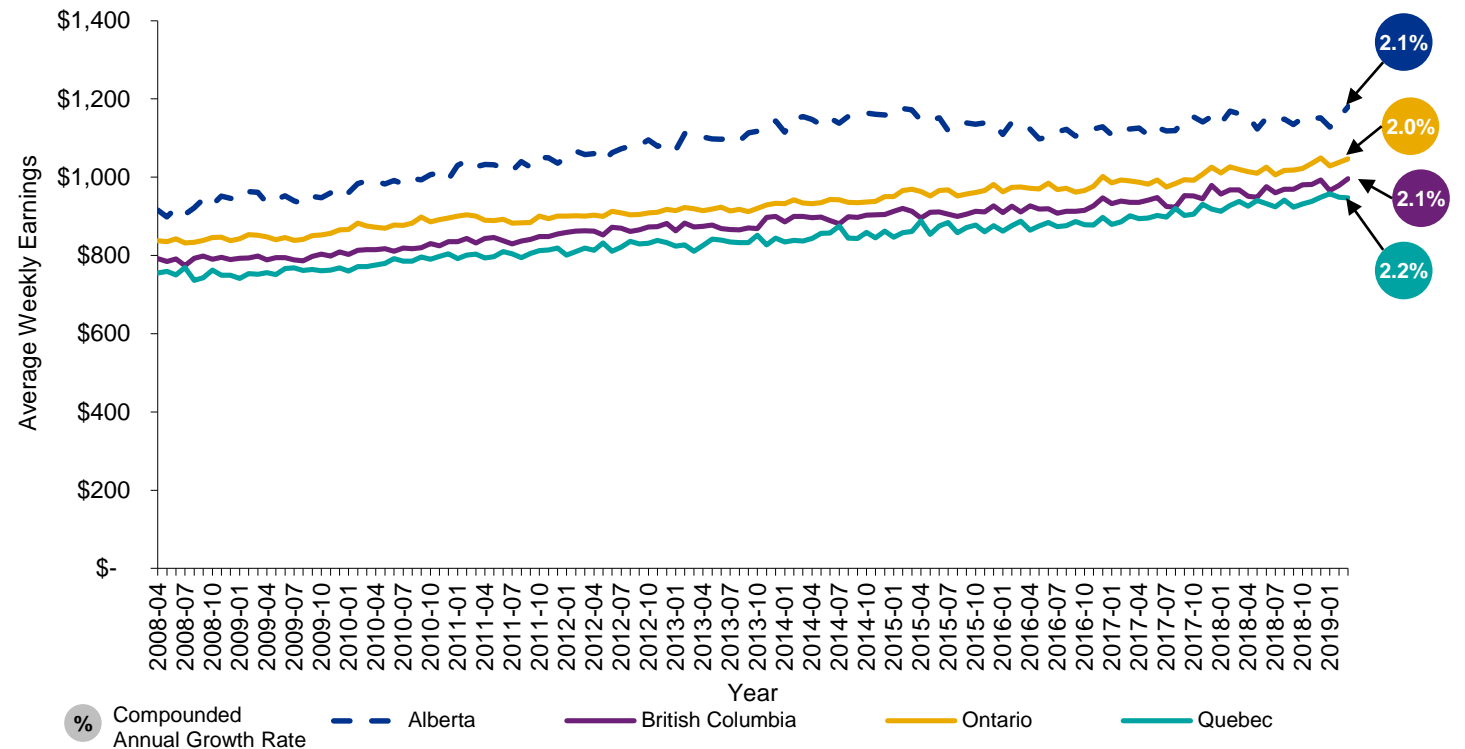
Alberta has the highest average weekly earnings of the comparator provinces; the pattern of growth in this indicator was consistent across all provinces.

In 2019, Alberta's average weekly earnings were \$1,180. This had grown by 29% since 2008, or 2.1% CAGR.

By comparison over the past 10 years:

- British Columbia's average weekly earnings were \$996 in 2019, and had grown by 26% or 2.1% CAGR.
- Ontario's average weekly earnings were \$1,047 in 2019, and had grown by 25% or 2% CAGR.
- Quebec's average weekly earnings were \$947 in 2019, and had grown by 25% or 2.2% CAGR since 2008.

Figure 5: Trend in Average Weekly Earnings (All Industries)



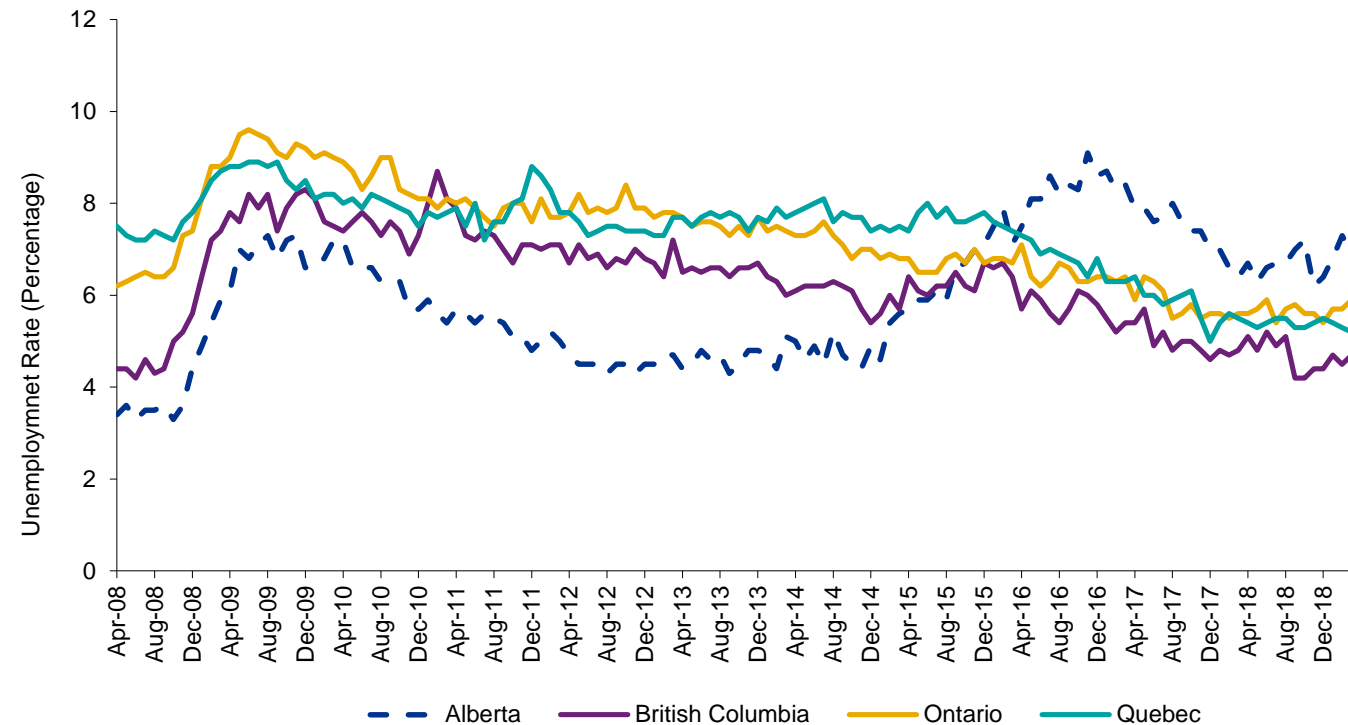
Source: Average weekly earnings by industry, monthly, unadjusted for seasonality data from Statistics Canada Table 14-10-0203-01 (All Industries).

10 Year Unemployment Rates

Prior to 2015, Alberta had the lowest unemployment rate of the comparator provinces, while from 2016 to 2018 Alberta had the highest unemployment rate of the comparator provinces.

From 2014 to 2016, Alberta's unemployment rate grew by 40%. By comparison, British Columbia's rate grew by 10%, Ontario's fell by 10% and Quebec's rate remained flat.

Figure 6: 10 Year Trend in Unemployment Rates



Source: Labour force characteristics, monthly, seasonally adjusted and trend-cycle, last 5 months data from Statistics Canada Table 14-10-0287-01.



Public Sector Workforce & Collective Bargaining



Public Sector Workforce Context

Based on public reports for the past decade, Alberta's deficit and debt levels, particularly the past five years, have experienced a rapid pace of growth. As approximately 38% of the Government of Alberta's expenditures (capital and operating) are spent on salaries and benefits, workforce adjustment and strategy was identified by the Panel as one of the areas requiring research and analysis.

Government of Alberta information shows that overall compensation (salaries and benefits) is approximately \$22 billion for the consolidated entities of government (i.e., core government, school boards, AHS, post-secondary institutions, etc.).

The majority of Alberta's public sector workforce is employed by government agencies such as Alberta Health Services, school boards, post-secondary institutions, and other Crown corporations and agencies.

However, this does not include government business enterprises like ATB or AGLC, social service agencies that are contracted by government to deliver services, or physicians (who represent approximately \$5 billion in spending).

10 Year Provincial Government Employment

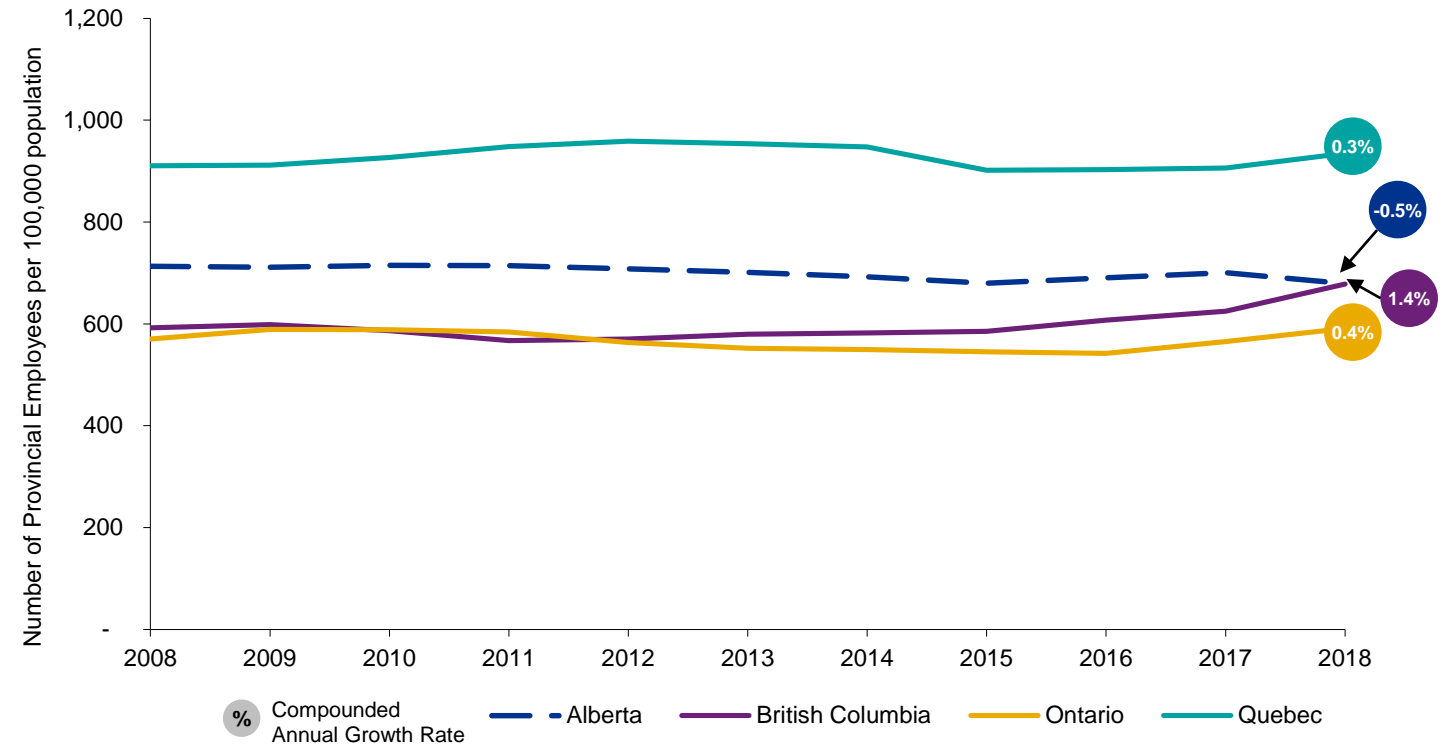
From 2008 to 2018, the total core government employment in Alberta grew by 14% (or 1.3% CAGR), which was comparable to Ontario's growth, but less than British Columbia's.

On a per capita basis (per 100,000 population), Alberta's core government employment decreased by 5% over the past 10 years or 0.5% CAGR. All other comparator provinces showed increases in their core government employment levels over the same period.

Table 1: 2018 Core Government Employment (Headcount, Departments only)

	AB	BC	ON	QC
Total number of employees (2018)	29,425	34,024	85,149	78,758
<i>CAGR (from 2008)</i>	<i>1.3%</i>	<i>2.8%</i>	<i>1.4%</i>	<i>1.1%</i>
Total number of employees per 100,000 pop. (2018)	680	678	591	935
<i>CAGR (from 2008)</i>	<i>-0.5%</i>	<i>1.4%</i>	<i>0.4%</i>	<i>0.3%</i>

Figure 7: 10 Year Trend in Per Capita (100,000 population) Core Government Employment Levels



Note: This data includes employment by the Departments only; employment numbers for external agencies, boards or commissions are excluded from the analysis (e.g. AHS employment levels are not included) due to limitations in available comparable data.

Source: Employment by industry, annual (Provincial and territorial public administration) data from Statistics Canada Table 14-10-0202-01.

Provincial Government Compensation Expense

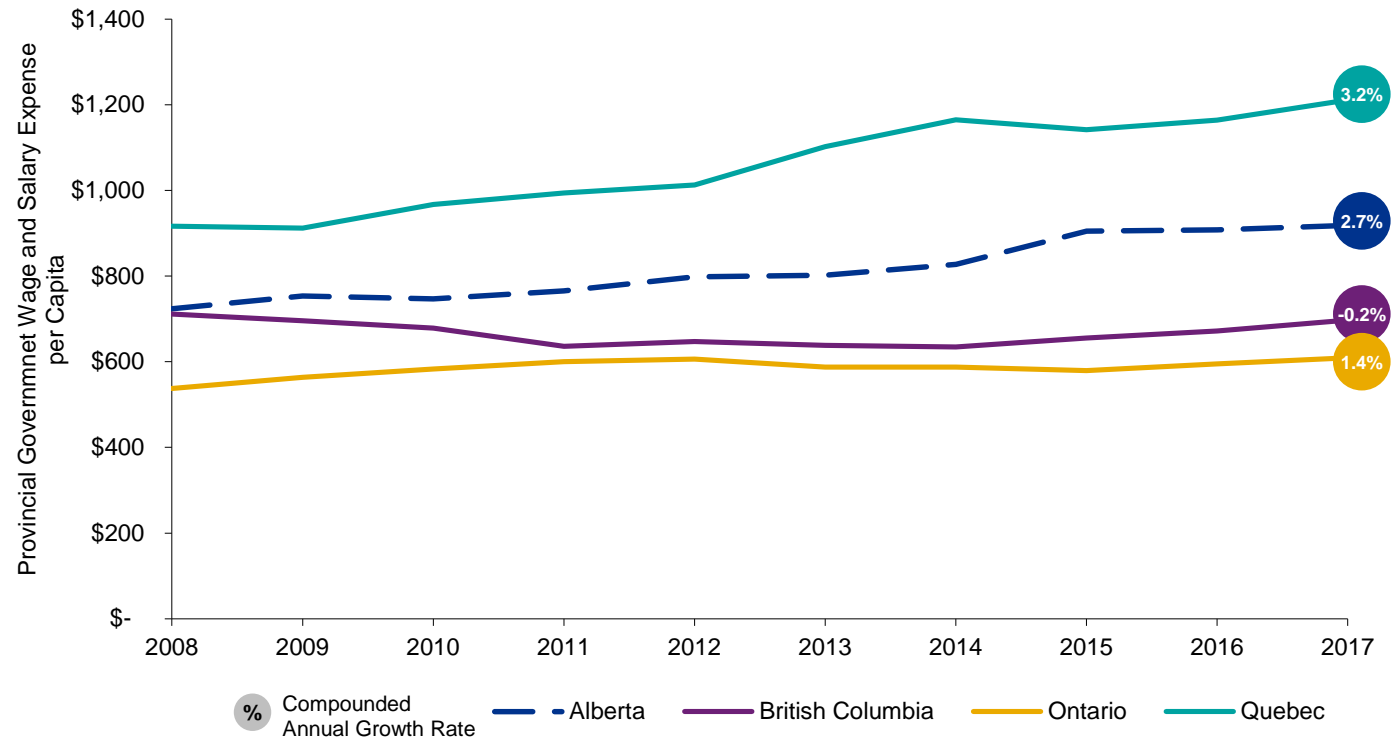
From 2008 to 2017, the total core government compensation expenses in Alberta grew by 49% (or 4.6% CAGR), which was the highest across all of the comparator provinces.

On a per capita basis (per 100,000 population), Alberta's core government compensation increased by 27% or 2.7% CAGR from 2008 to 2017. Quebec had higher expense growth over the same period, while British Columbia saw its expenses fall by 2% or -0.2% CAGR.

Table 2: 2017 Core Government Compensation (Departments)

	AB	BC	ON	QC
Total expense (2017) in billions	\$3.91	\$3.45	\$8.62	\$10.09
<i>CAGR (from 2008)</i>	<i>4.6%</i>	<i>1.2%</i>	<i>2.4%</i>	<i>3.9%</i>
Total expense per capita (2017)	\$918	\$698	\$609	\$1,211
<i>CAGR (from 2008)</i>	<i>2.7%</i>	<i>-0.2%</i>	<i>1.4%</i>	<i>3.2%</i>

Figure 8: Trend in Per Capita Core Government Compensation for Employees



Note: This data includes employment expenses by the Departments; employment expenses for external agencies, boards or commissions are excluded from the analysis (e.g. AHS expenses are not included) due to limitations in comparable available data.

Source: Canadian government finance statistics for the provincial and territorial governments (x 1,000,000) data from Statistics Canada Table 10-10-0017-01.

Government of Alberta Compensation Expense

From 2009/10 to 2018/19 the total consolidated expense for compensation for the Government of Alberta (and its related entities) grew by 43% or 4% CAGR.

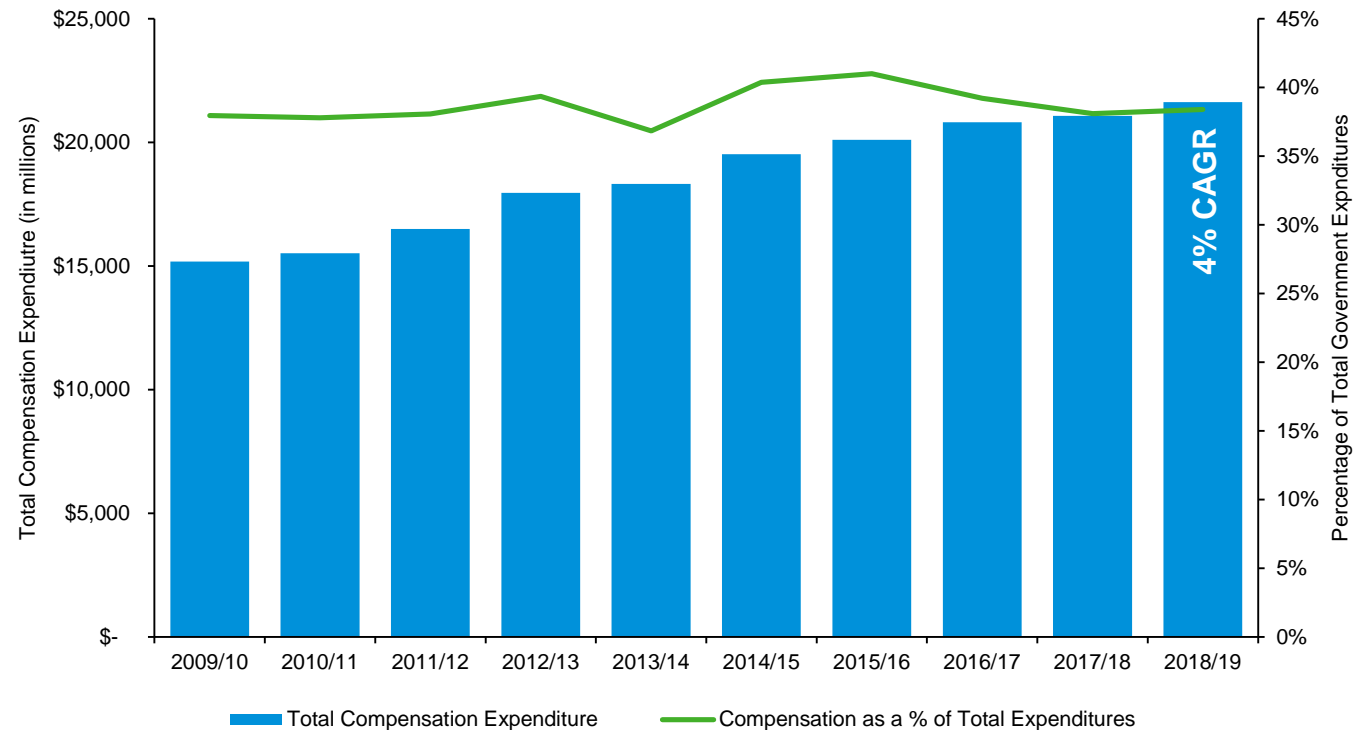
In 2018/19, compensation expenditures for the Government of Alberta and its related entities, totaled over \$22 billion and represented 38% of the total expenditures.

In 2018/19, per capita spending on compensation was \$4,996. The large majority of compensation is for related government entities.

However this compensation expenditure does not include:

- Government business enterprises like ATB or AGLC
- Social service agencies that are contracted by government to deliver services, or
- Physicians (who represent approximately \$5 billion in spending).

Figure 9: Government of Alberta Total Consolidated Expense for Compensation



Note: The consolidated expenditure information (operating and capital) includes AHS, school boards, post-secondary institutions and other related entities of the Government of Alberta. Data for 2008/09 was not available on a consolidated basis.

Source: Government of Alberta Annual Reports 2009-10 to 2018-19.

Public Service Commission information on historical salary adjustments within Alberta Public Service.

10 Year Average Weekly Earnings for Provincial Government

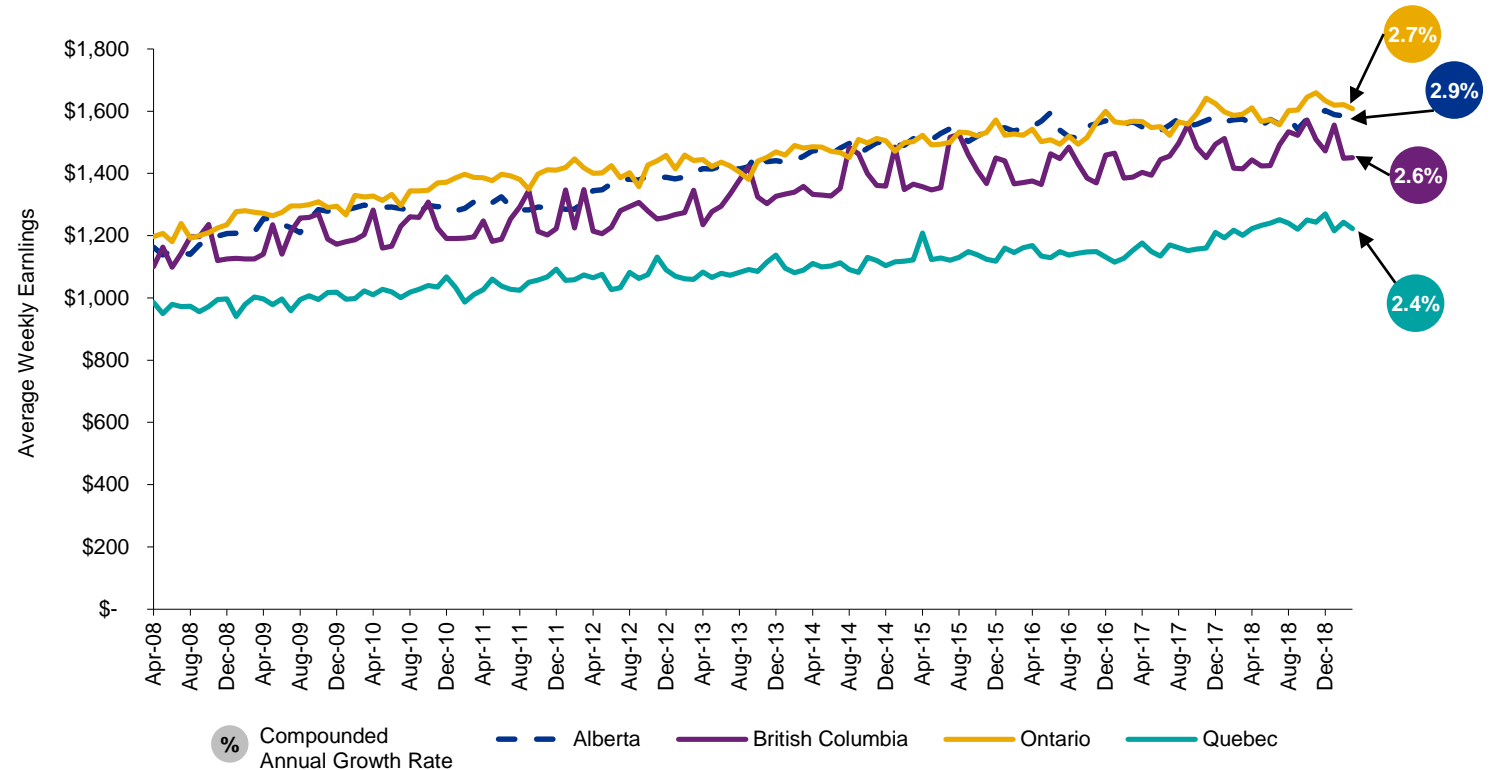
Alberta and Ontario have the highest average weekly earnings for core government earners across the comparator provinces. Alberta saw the highest growth at 2.9% CAGR.

In 2018, Alberta's average weekly earnings for core government earners were \$1,574. This has grown by 37% since 2008.

By comparison over the same period:

- British Columbia's average weekly earnings for core government earners were \$1,487 in 2018, and has grown by 32% or 2.6% CAGR over the past 10 years.
- Ontario's average weekly earnings for core government earners were \$1,608 in 2018, and has grown by 34% or 2.7% CAGR over the past 10 years.
- Quebec's average weekly earnings for core government earners were \$1,238 in 2018, and has grown by 24% or 2.4% CAGR over the past 10 years.

Figure 10: 10 Year Trend in Average Weekly Earnings for Core Government Earners (Provincial and Territorial Public Administration)



Source: Average weekly earnings by industry, monthly, unadjusted for seasonality data from Statistics Canada Table 14-10-0203-01 (Provincial and Territorial Public Administration).

Attrition and Retirements

As of June 20, 2019, there were 26,718 permanent employees that worked for the core departments within the Government of Alberta.

The overall attrition rate for core departments was 7%.

Voluntary departures represented 4% and retirements 3%.

As of June 20, 2019, more than 3,600 employees in the core departments were eligible to retire with an unreduced pension. Over the next four years an additional 2,500 (average of 625 per year) employees will also be eligible.

Alberta Health Services represents the largest employer of the Government of Alberta's agencies, board and commissions, with 102,000 employees (more than 55% of the agencies, board and commissions employment estimates). AHS had an attrition rate of 4%⁴, and more than 5,000 eligible for retirement over the next four years.

Table 3: Attrition and Eligibility for Unreduced Pension, GoA Departments

Department	Total Headcount	Attrition Rate (1)	Elig. for Unreduced Pension (2)
Advanced Education	549	6%	13%
Agriculture and Forestry	1,375	5%	16%
Children's Services	2,999	7%	8%
Communications & Public Engagement	306	4%	10%
Community and Social Services	3,369	6%	16%
Culture and Tourism	519	8%	13%
Economic Development & Trade	329	6%	8%
Education	574	10%	16%
Energy	540	7%	16%
Environment and Parks	2,021	6%	15%
Executive Council	70	3%	9%
Health	867	10%	16%
Indigenous Relations	209	5%	6%
Infrastructure	911	8%	16%
Justice & Solicitor General	6,764	7%	10%
Labour	742	6%	8%
Municipal Affairs	556	7%	10%
Public Service Commission	345	10%	10%
Seniors and Housing	245	6%	18%
Service Alberta	2,143	8%	17%
Status of Women	33	15%	18%
Transportation	766	8%	13%
Treasury Board and Finance	484	8%	13%
Total (3)	26,718	7%	13%

Note: Only data for the Departments and AHS has been shown. Similar information for other related entities of the Government of Alberta was not available.

(1) Attrition Rates are calculated by taking the number of departures divided by the annual average employee size (all departmental employees, both active and on leave). This includes voluntary departures, transfers out, retirements, completed employment and other.

(2) Eligibility for Unreduced Pension is based on the employees who are at least 55 years of age with a combined age and years of service equal to 80 (management) or 85 (non-management).

(3) Totals are based on Departmental figures only.

(4) AHS attrition rate based on terminations both voluntary and involuntary. There may be measurement differences with how the Government of Alberta tracks and reports on attrition.

Source: Alberta Public Service Workforce Data as of 2019-06-21.

High-Level Collective Bargaining Context & Comparison

Key terms

Decentralized bargaining takes place on a workplace-by-workplace basis, e.g., much of children and youth services. University bargaining can also be decentralized (e.g. when multiple separate collective agreements cover university staff in different institutions).

Centralized bargaining often takes place among health care staff (e.g. in Ontario, 140 hospitals participate in voluntary centralized bargaining with the nursing association, led by the Ontario Hospital Association).

Bargaining mandate is a funding or conditions envelope within which bargaining units are able to negotiate.

Background

Much of the Government of Alberta information in this section is from the Provincial Bargaining Coordination Office (PBCO).

PBCO notes there are 128 collective agreements with 227,800 employees, with an estimated cost of \$22.7 billion.

- The “direct sector”, where the Government has legal standing in the governance relationship to dictate bargaining outcomes cover 162,700 employees and an estimated \$12.7 billion. This direct sector includes: core government and staff in some agencies, boards and commissions (e.g. teachers, and nurses)
- The “indirect sector”, where government has no legal standing and relies on voluntary participation and compliance with mandates, cover approximately 53,000 employees and an estimated cost of \$5.2 billion. This indirect sector includes: post-secondary institutions (faculty and support services), education support, and some of the agencies, boards and commissions.
- Physicians represent the remaining \$4.7 billion.

The Alberta Public Service (representing the core government departments) has had a hiring restraint and salary freezes (at 2015/16 staffing levels until 2018/19) for non-union staff. The salary freeze applied to non-union staff, while the hiring restraint applied to the whole Alberta Public Service (i.e. all core departmental staff). Other agencies, board and commissions, voluntarily adopted the same salary freeze for non-union staff and then were required to do so through regulation.

This has resulted in core government compensation growing at a slower rate compared to the broader Government of Alberta entity, which includes Alberta Health Service, school boards, post-secondary institutions, and other agencies, boards and commissions.



This research and analysis was completed at the request of the Panel. KPMG's role was to provide research and analysis but has not provided any recommendations or opinions. As such, the Panel is responsible for all recommendations and the Panel's report, and the Government of Alberta is responsible for all decisions arising from the Panel's report.

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Current Profile of Alberta's Collective Agreements

The following table outlines Alberta's key collective agreements, expiry, number of employees and estimated compensation costs:

Table 4: Alberta's Collective Agreements

Workforce Covered	Agreements	Expiry	Number of Employees	Estimated Cost
Teachers	1 Central, 62 Local Agreements, TEBA-ATA	August 2018	45,900	\$4.3 Billion (2018/19)
Physicians	GoA-AMA	March 2020	10,400	\$4.7 Billion (2018/19)
Resident Physicians	AHS/UoA/UoC-PARA	June 2020	1,600	\$0.1 Billion (2017/18)
Direct Nursing	AHS-UNA	March 2020	28,600	\$2.4 Billion (2018/19)
Auxiliary Nursing	AHS-AUPE ANC	March 2020	16,400	\$0.7 Billion (2018/19)
Paramedical-Professional-Technical	AHS-HSAA	March 2020	20,000	\$1.8 Billion (2018/19)
Healthcare Support Services	AHS-AUPE GSS	March 2020	30,400	\$1.5 Billion (2018/19)
Alberta Public Service	GoA-AUPE	March 2020	21,400	\$2.0 Billion (2018/19)
Public Agencies	6 Agreements		1,600	\$0.4 Billion (2017/18)
Independent Commissions	JCC/JPCC		200	\$0.03 Billion (2018/19)
PSI Faculty	20 Agreements		14,000	\$2.0 Billion (2018/19)
PSI Support Services	23 Agreements		18,800	\$1.2 Billion (2018/19)
Education Support Services	69 Agreements		18,500	\$1.6 Billion (2017/18)
TOTAL	128 Agreements		227,800	\$22.7 Billion

Source: Based on information from the PBCO



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A Closer Look at Health

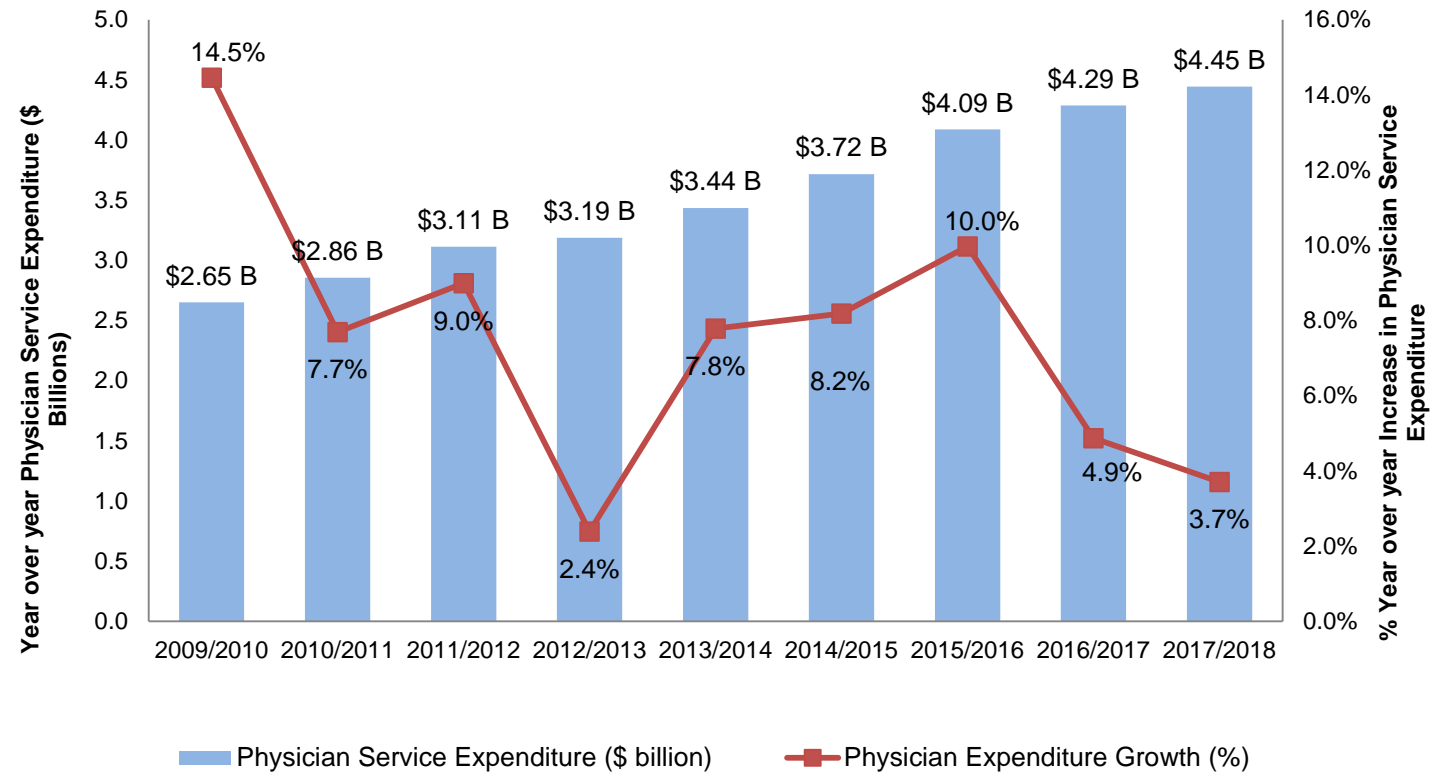
The following pages are based on information from Alberta Health, the PBCO, and the Canadian Federation of Nurses Unions, including:

- Comparison of provincial health expenditure growth and physician expenditure growth.
- An outline of how physician fees are determined in Alberta.
- Recent proposals by Alberta Health with the Alberta Medical Association (AMA) on physician compensation.
- Comparisons to what other provinces are doing for physicians.
- Comparison of Alberta wages for nurses, which are higher than comparator provinces.
- Comparison of full-time versus part-time nursing workforces.
- Comparison of key nursing contract provisions.
- Provisions in Alberta's agreement with nurses.

Growth in Physician Expenditure

Growth in Alberta's physician service expenditure has averaged 7.6% per year since 2009/10.

Figure 11: Growth in Alberta's Physician Service Expenditure



Note: This includes FFS, ARP, physician benefits and other programs (such as RRNP, BCP, and PMO).
Source: Alberta Health completed analysis of actual spending on physicians.

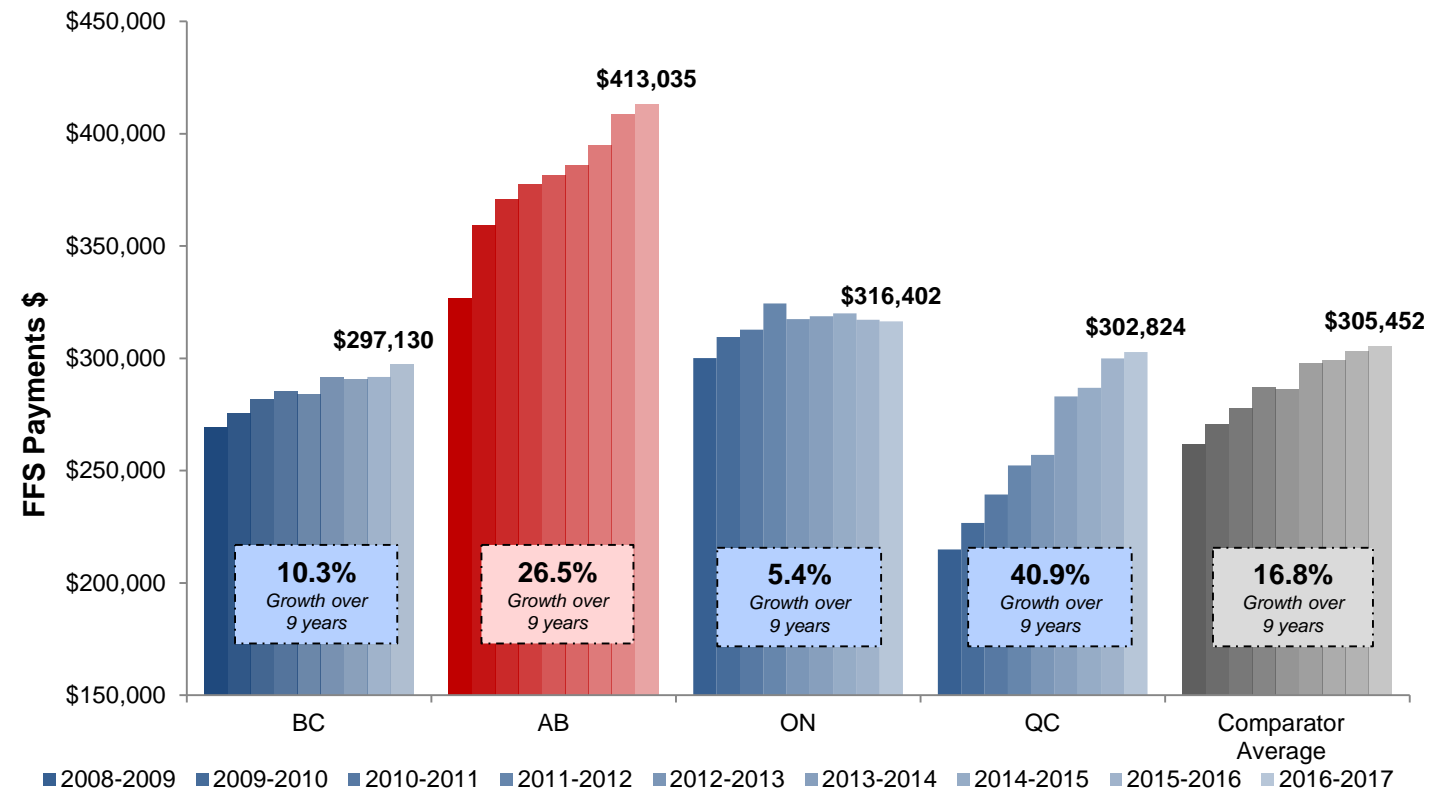
Physician Fee for Service Earnings

In 2016/2017, the average fee for service (FFS) earnings for all physicians in Alberta was \$413K; \$107K (35%) higher than the average observed in comparator provinces.

The average FFS earnings in Alberta are the highest among comparator provinces.

Over the past 9 years, the average FFS physician earnings in Alberta have grown faster than the comparator average.

Figure 12: Average Fee For Service Payment for All Physicians Earning More than \$60,000



Source: Alberta Health completed analysis of CIHI National Health Expenditure Database.

How Changes to Alberta Physician Fees are Determined

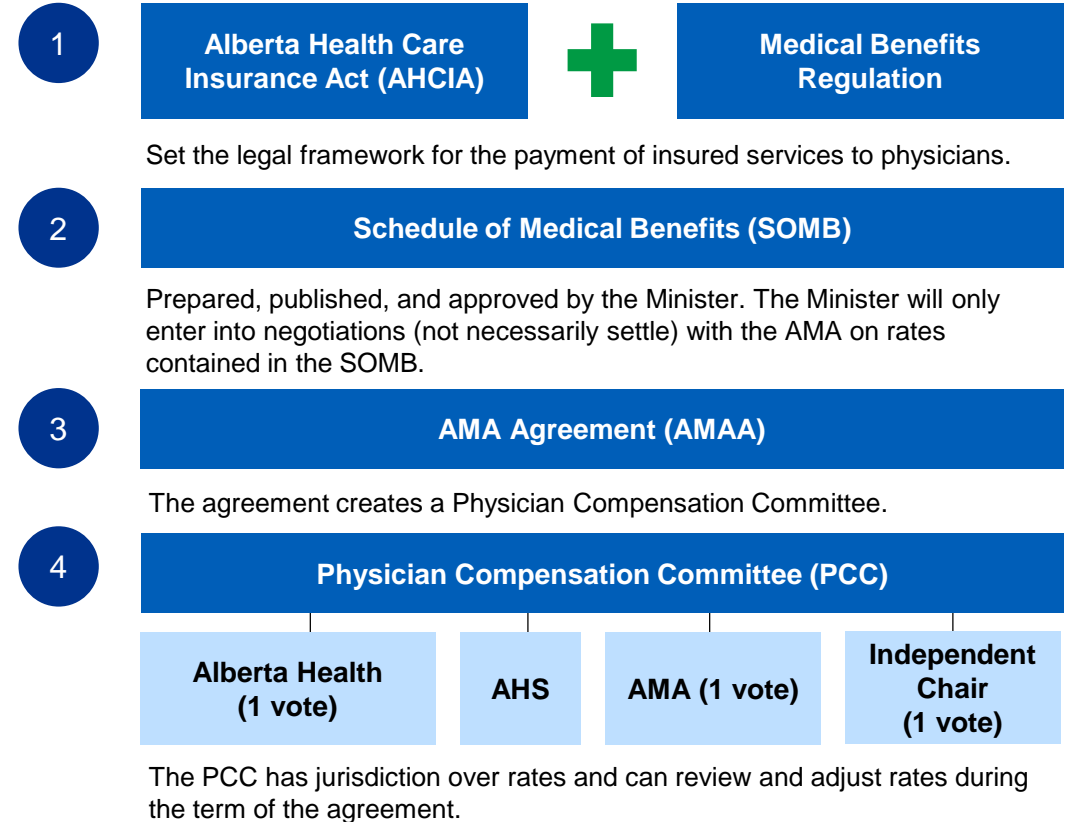
The diagram to the right sets out the governance for physician fees in Alberta; this is largely driven through the Schedule of Medical Benefits, the Agreement with the Alberta Medical Association (AMA), and the Physician Compensation Committee (PCC).

In 2016, a Schedule of Medical Benefits Savings Working Group dealt with rule changes, not rate reductions in order to achieve savings.

Alberta Health reported that within this governance structure the AMA's position is that the PCC can only decrease rates if savings are redistributed within the physician services budget.

For example, a \$5M reduction in one code would lead to a \$5M increase in another set of codes.

Alberta Health noted that it has considered bringing rate changes forward to decrease significant outliers in Alberta's fee schedule or to bring spending down to remain within budget targets, but has deferred these proposals.



Source: Based on information from Alberta Health.



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Examples of Physician Fees Requiring Change

Alberta Health provided KPMG the following information on proposed changes that were presented to the AMA:

1

Separate overhead from hospital based services

\$79M in full year savings | Certain Health Service Codes (HSCs) listed in the SOMB can be provided in either the community or the hospital setting. Fees associated with these HSCs incorporate an overhead cost component. Physicians have their overhead costs covered in a hospital setting. *The Ministry's position is that under the current rules physicians get paid twice for overhead when services are provided in hospitals.*

2

Implement a daily cap on physician visits

\$26M in full year savings | There are no limits on the number of visits that a physician can claim in one day. A lack of limits can lead to large patient loads and may compromise patient safety / quality of care. *A daily cap on visits would encourage physicians to practice within reasonable timeframes and provide appropriate standard of care.* The Ministry tabled this proposal to respond to AMA concerns about the growth of walk-in clinics, which can lead to episodic care. Billings for volumes of daily visits in excess of 50 per day would be discounted as follows:

- Between 51-65 daily visits: 50% discount
- More than 65 daily visits: 100% discount

3

Increase time requirements for complex patient modifiers

\$169M in full year savings | Physicians receive extra funding when a patient presents with one or more conditions (e.g. diabetic, overweight, hypertension). This funding reflects that these patients may need extra time from the physician or their team. Alberta's fee schedule consists of more than 300 time based codes and modifiers. One highly used modifier (Complex Patient General Practice) outpaces the growth of expenditures on eligible codes. Audits have shown that time reporting for the use of time-based codes and modifiers is insufficient to provide support for the time requested. *The Ministry has proposed increasing the threshold of time before a physician can claim for this modifier.*

Other Province's Actions on Physician Fees

The following outlines relevant actions, as identified by Alberta Health, that governments in British Columbia, Ontario and Manitoba have taken with regards to physician fees:

British Columbia	<ul style="list-style-type: none"> The Medical Services Panel, established by statute, is responsible for overseeing the provision, verification and payment of medical and health services on behalf of the Government of British Columbia. This is governed by a Committee with three representatives each from the Government, the public and Doctors of BC; it has a mandate similar (with more rigour than Alberta's PCC) to review and adjust fees, and does so on an annual basis. 		
Ontario	<table border="1"> <tr> <td data-bbox="443 554 907 1046"> <ul style="list-style-type: none"> Ontario has been without an agreement since 2014. They are currently in arbitration on individual fee schedule changes as agreed to in the arbitration framework between the government and the medical association. Arbitration on these matters has been underway for over two years. </td><td data-bbox="907 554 2339 1046"> <p>After a protracted period of negotiations for a new agreement with physicians, in 2015 the Government imposed a unilateral, non-legislative 2.65% reduction in fees and imposed specific changes including:</p> <ul style="list-style-type: none"> Eliminated funding for doctors to take continuing medical education courses; Reduced the fee for walk-in clinic visits by \$1.70 to bring it in line with the fee paid for visits to a patients' regular family doctor; Eliminated a premium for doctors to accept new patients who are healthy; and Limited the number of family doctors in well-served areas. <p>In 2019, an arbitrator awarded the Ontario Medical Association (OMA) a 4% fee increase in a four-year term ending March 31, 2021. Government and the OMA remain in arbitration on specific changes to the fee schedule.</p> </td></tr> </table>	<ul style="list-style-type: none"> Ontario has been without an agreement since 2014. They are currently in arbitration on individual fee schedule changes as agreed to in the arbitration framework between the government and the medical association. Arbitration on these matters has been underway for over two years. 	<p>After a protracted period of negotiations for a new agreement with physicians, in 2015 the Government imposed a unilateral, non-legislative 2.65% reduction in fees and imposed specific changes including:</p> <ul style="list-style-type: none"> Eliminated funding for doctors to take continuing medical education courses; Reduced the fee for walk-in clinic visits by \$1.70 to bring it in line with the fee paid for visits to a patients' regular family doctor; Eliminated a premium for doctors to accept new patients who are healthy; and Limited the number of family doctors in well-served areas. <p>In 2019, an arbitrator awarded the Ontario Medical Association (OMA) a 4% fee increase in a four-year term ending March 31, 2021. Government and the OMA remain in arbitration on specific changes to the fee schedule.</p>
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Manitoba	<ul style="list-style-type: none"> Manitoba's recent labour relation legislation has imposed the same rules on physician bargaining as other public sector bargaining. Bill 28 (awaiting proclamation and facing legal challenges) in Manitoba imposed a freeze on physician fee increases for two years and allowed increases to grow by a maximum of 0.75% and 1% respectively in the two years after. 		

Nursing Workforce Comparison (1 of 2)

In 2018, Alberta had the largest proportion of part-time nurses compared to the comparator provinces at 43% of their total nursing workforce.

By comparison, Ontario had the largest proportion of full-time nurses at 63% of their total nursing workforce.

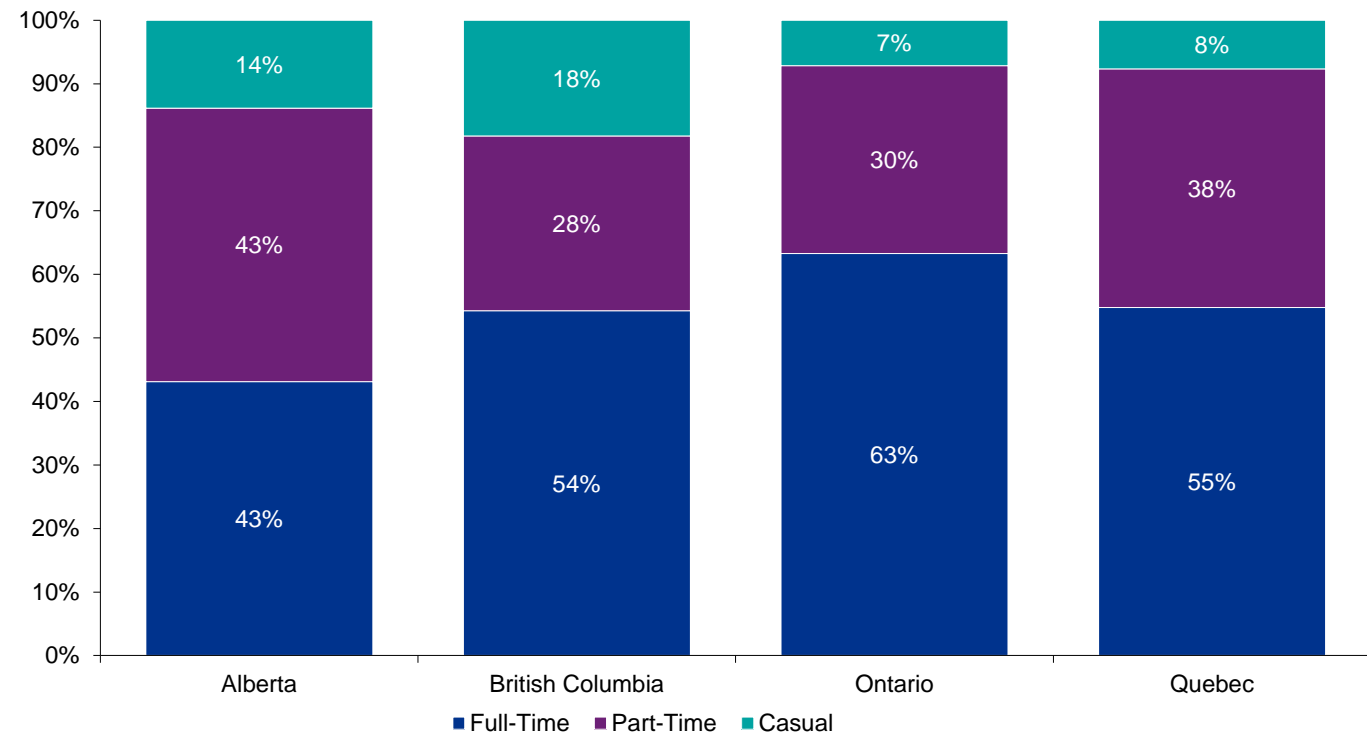
Alberta had the largest proportion of part-time Registered Nurses at 31% of its total nursing workforce compared to Quebec, who had the second-highest with 25%.

From 2009 to 2018 the total nursing workforce in Alberta grew by 30%, or 3% CAGR, as shown in Figure 15 on the following page.

Licensed Practical Nurses saw an 85% growth, or 7.1% CAGR, in their total workforce numbers over this period and Registered Nurses experienced an 18% growth, or 1.8% CAGR.

Figure 14 on the following page shows the ratio of Full-Time, Part-Time and Casual Nurses in Alberta over the last 10 years.

Figure 13: 2018 Comparison of the Ratio of Full-Time, Part-Time and Casual Nurses

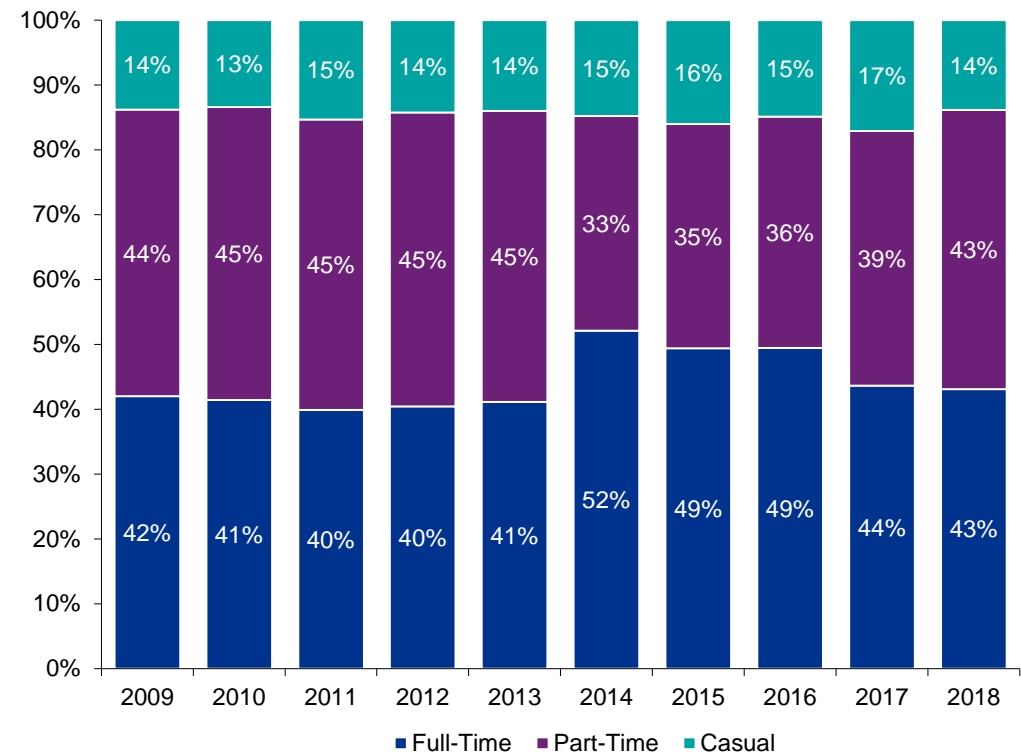


Note: Due to limited availability of data for comparators, RPNs have been excluded from this analysis. Nurse Practitioner totals are included with Registered Nurse Totals.

Source: Nursing in Canada, 2018 Data Tables from CIHI.

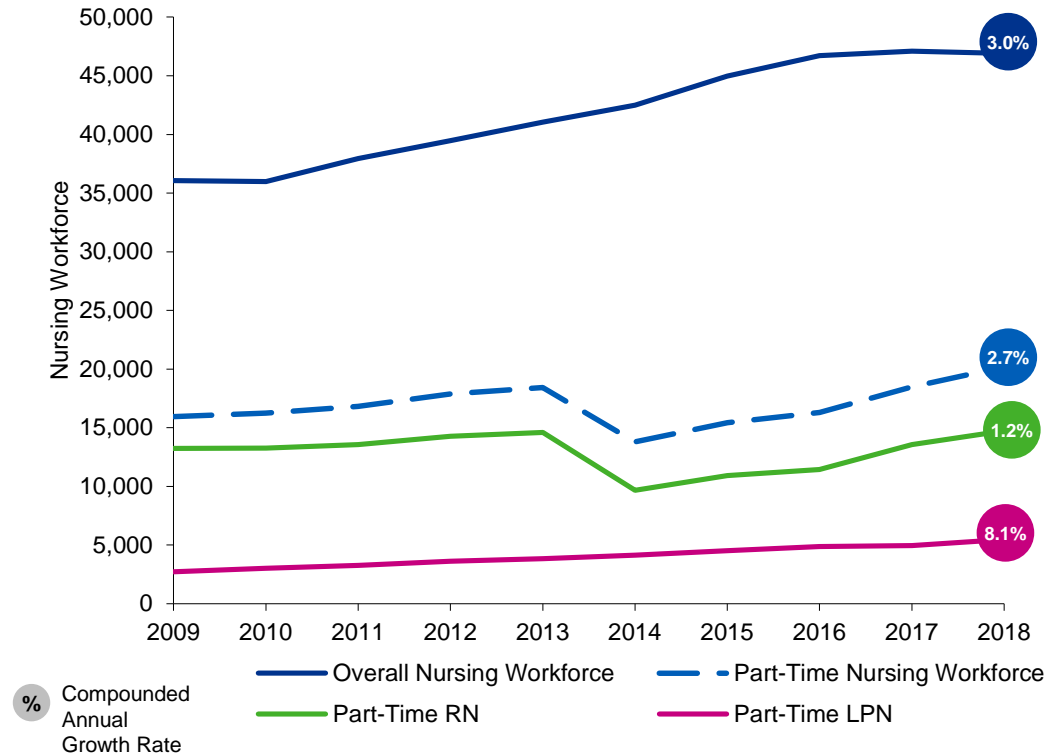
Nursing Workforce Comparison (2 of 2)

Figure 14: Comparison of the Split between Full-Time, Part-Time and Casual Nurses in Alberta



Note: Due to limited availability of data for comparators, RPNs have been excluded from this analysis.
Source: Nursing in Canada, 2018 Data Tables from CIHI.

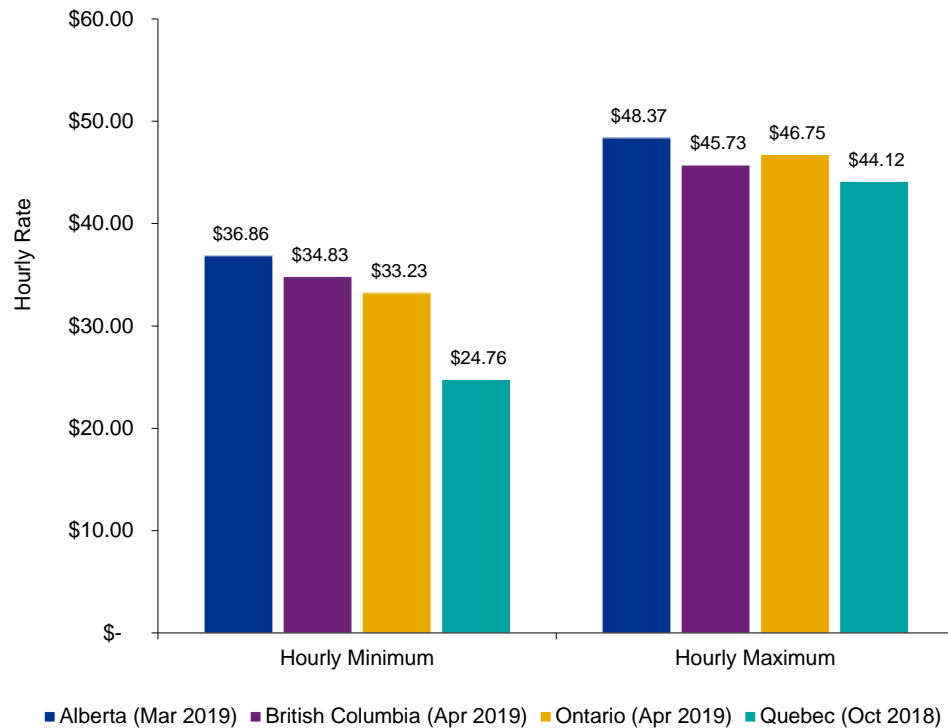
Figure 15: Comparison of Part-Time Nursing versus Total Nursing Workforce in Alberta



Note: Due to limited availability of data for comparators, RPNs have been excluded from this analysis.
Source: Nursing in Canada, 2018 Data Tables from CIHI

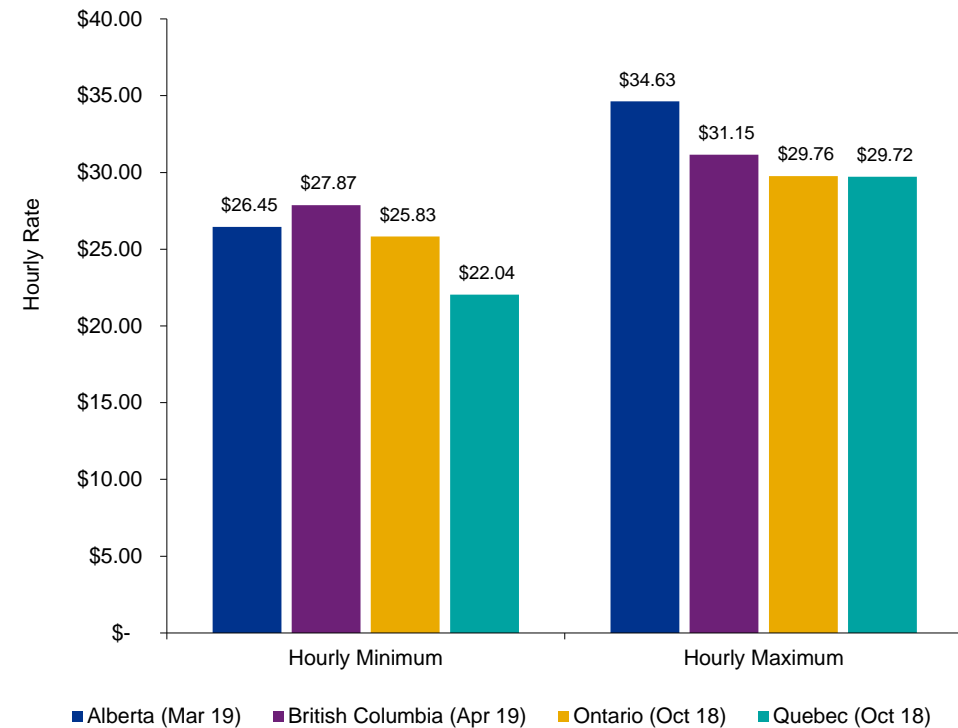
Comparison of Nursing Wages

Figure 16: Comparison of Registered Nurse Hourly Minimum and Maximum Rates by Effective Date



Source: Information provided by Alberta Health Services.

Figure 17: Comparison of Licensed Practical Nurse Hourly Minimum and Maximum Rates by Effective Date



Source: Information provided by Alberta Health Services.

Comparison of Nursing Key Provisions (1 of 2)

Table 5 outlines the key contract provisions for nurses in Alberta, British Columbia, Ontario and Quebec, based on a comparison document prepared by the Canadian Federation of Nurses Unions in 2018. Limited information was available for British Columbia.

- Alberta has the highest hourly salary range for RNs, Head Nurses / Supervisors and Graduate Nurses. For example Alberta's starting hourly salary rates for Registered Nurses is 33% higher than Quebec, and 11% and 9% for Ontario and British Columbia, respectively.
- Compared to Quebec, Alberta has a higher hourly minimum and maximum range for all types of nursing, while Ontario exceeds Alberta's range in two instances.
- For LPNs, Alberta has a comparable starting rate and its maximum rate is higher by 14% or more relative to the comparator provinces.
- Alberta has higher hourly premium rates compared to Ontario and Quebec.
- Alberta has a lower standby / on call rate compared to Ontario, a higher call back rate compared to Ontario, and a higher travel allowance compared to Ontario and Quebec.
- Alberta uses double time for overtime, while Ontario and Quebec offer 1.5 times for most events / scenarios.
- Quebec does not pay overtime for shift change without sufficient notice or after 7 consecutive shifts, while Ontario and Alberta do.

Table 5: Key Contract Provisions for Nurses

	AB	BC	ON	QC
Hourly Salary Rates (Min - Max)				
RN	\$37 - \$48	\$34 - \$44	\$33 - \$46	\$25 - \$44
LPN	\$25 - \$35	\$27 - \$30	\$26 - \$29	\$22 - \$30
Head Nurse / Supervisor	\$38 - \$51	N/A	\$34 - \$48	\$29 - \$42
Clinical Nurse Specialist	\$42 - \$57	N/A	\$47 - \$54	\$26 - \$49
Graduate Nurse	\$34 - \$41	N/A	\$31 - \$43	\$22 - \$22
Premiums – Time of Work				
Nights per hour	\$5.00	N/A	\$2.65	Varies ¹
Evenings per hour	\$2.75	N/A	\$2.25	4% of salary
Weekends per hour	\$3.25	N/A	\$2.80	4% of salary
Standby / On Call per hour	\$3.30	N/A	\$3.45	1 hr straight time per 8 hrs
Call Back	2x rate, min. 3 hrs	N/A	1.5x rate, min 4 hours	2 hrs at 1.5x rate, 1 hr travel at 1x rate
Travel	\$0.505 per km and \$130 / allowance	N/A	\$0.22 per km or hospital policy	\$0.44 per km first 8,000 km
Overtime Rate	2x	N/A	1.5x	1.5x

Note: Limited information was included in the source noted below for British Columbia.

UNA (Alberta), BCNU (British Columbia), ONA (Ontario), FIQ (Quebec).

¹ 0-5 years - 11% of basic rate, 5-10 years - 12% of basic rate, 10+ years - 14% of basic rate.

Source: Canadian Federations of Nurses Unions. October 31, 2018. Overview of Key Nursing Contract Provisions.

Comparison of Nursing Key Provisions (2 of 2)

- For RNs, Head Nurses / Supervisors, and Graduate Nurses, Alberta has lower annual hours compared to Ontario and Quebec.
- Alberta has higher annual hours for LPNs compared to all other jurisdictions and for Clinical Nurse Specialists, Alberta has higher hours compared to Quebec.
- Alberta provides fewer vacation days compared to Ontario and has a higher maximum cap than Quebec.
- Alberta and Ontario provide the same rate of holiday pay (1.5x for a statutory holiday), except for Christmas and New Year's Eve, where Alberta provides higher compensation (2x basic rate). Quebec provides a lower rate of compensation for statutory holidays (1x basic rate), except for Christmas and New Years, where the rates (1.5x) are still lower compared to Alberta.
- Alberta provides a higher overtime rate (2.5x basic rate) for statutory holidays compared to Ontario and Quebec's rate (2x basic rate).
- Alberta provides higher premiums for responsibility pay (\$2 vs. \$1 per hour) and preceptor positions (\$0.65 vs. \$0.60 per hour) compared to Ontario.
- Alberta has a comparable employer contribution for benefits as Ontario, but pays more than Quebec.
- Alberta provides more sick days than other provinces at the basic rate.

Table 5 (continued): Key Contract Provisions for Nurses

	AB	BC	ON	QC
Annual Hours				
RN	1,921	1,950	1,950	1,950
LPN	2,023	1,950	1,950	1,885
Head Nurse / Supervisor	1,921	N/A	1,950	1,950
Clinical Nurse Specialist	1,921	N/A	1,950	1,885
Graduate Nurse	1,921	N/A	1,950	1,950
Vacation (Min – Max)	15 -30	N/A	20 - 35	20 – 25 \$5.97 or \$13.24 per 14-day pay period
Benefits - Employer Contribution	75%	N/A	75%	
Sick Leave				
Sick days per month	1.5	N/A	Covered by HOOPDIP (STD)	0.8
Maximum	120 days	N/A	75 days at a % of salary	104 weeks at 80%

Note: Limited information was included in the source noted below for British Columbia.

UNA (Alberta), BCNU (British Columbia), ONA (Ontario), FIQ (Quebec).

Source: Canadian Federations of Nurses Unions. October 31, 2018. Overview of Key Nursing Contract Provisions.

Alberta Nursing Contract Provisions (1 of 2)

The following outlines the key contract provisions for nurses in Alberta that are considered to be advantageous by Alberta Health and Alberta Health services:

Contract Issue	Impacts	Date Provisions Introduced	Jurisdictional Comparison
Lump Sum Payments	\$34.8 million, impacting 28,569 employees	UNA - 2007	These provisions are not in other Canadian nursing agreements.
Restrictions on the Use of Vacancies	\$3.4 million, impacting 1,852 employees	UNA – 2001 HSA – 2008 AUPE GSS – 2009 AUPE Auxiliary Nursing – 2001	These provisions are not common in other Canadian nursing agreements. The SK nurses agreement restricts the use of vacancies.
Job Security: <ul style="list-style-type: none"> Operational Best Practice (OBP) Contracting Out No Reduction in Nursing Hours 	Indirect costs associated with reduced efficiency and effectiveness in implementing workforce changes.	<i>OBP LOUs:</i> UNA – 2016; HSA – 2016; AUPE GSS – 2016; AUPE Auxiliary Nursing – 2016 <i>Contracting Out:</i> AUPE GSS – 2018 <i>No reduction in Nursing Hours:</i> UNA – 2010	The reduction in nursing hours are not common in nursing agreements across Canada. The SK nurses agreement contains a provision that guarantees the number of full-time nurses. The BC nurses agreement contains a provision to increase nursing hours by an additional 2 million hours by December 2019.
Designated Days of Rest (DDOR)	\$7 million, impacting 12,089 employees.	UNA - 1982 – (Forsyth Tribunal binding arbitration)	These provisions are not in other Canadian nursing agreements
Displacement Process for Small Changes to Positions and Schedules	Indirect costs associated with reduced efficiency and effectiveness in daily operations.	UNA – 1988 (Series of arbitration awards in the following years lead to current interpretation)	These provisions are not common in other Canadian nursing agreements.

Source: Information provided by Alberta Health / AHS.



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Alberta Nursing Contract Provisions (2 of 2)

Contract Issue	Impacts	Date Provisions Introduced	Jurisdictional Comparison
Professional Responsibility Committee (PRC) Workload Review Committees	Indirect costs associated with reduced efficiency and effectiveness in daily operations. NOTE: HSAA does not have PRC or workload review provisions.	<i>PRC</i> : UNA - 1982 -(Forsyth Tribunal (binding arbitration) Language was amended in 2017 <i>Workload Review Committees</i> : AUPE GSS – 2018; AUPE Auxiliary Nursing - 2018	Many nursing agreements across Canada have varied processes related to workload review and professional responsibility
Unit Definition and In-Charge Designation	Costs are difficult to estimate due to the many variations of units and unique local circumstances. Currently, AHS spends \$8.3 million on in-charge pay for RNs. Those costs could be reduced if RNs could be in charge of multiple units, or other clinicians could be in charge.	UNA - 1990	Most Canadian healthcare agreements provide for payment of a premium for employees designated to be in-charge. The requirement to have an RN in charge is not common in nursing agreements across Canada. The SK nurses agreement requires an RN to be in charge. The BC nurses agreement requires an RN to be in charge but in certain circumstances an LPN can be in charge.
Benefits for employees working less than 15 hours per week	\$0.2 million, impacting 60 employees.	UNA - 1984	These provisions are not common in nursing agreements across Canada. The BC and MB nursing agreements provide some health care benefits for employees working less than 0.4 FTE.

Source: Information provided by Alberta Health / AHS.



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A Closer Look at Education

The following pages are based on information from Alberta Education and the PBCO, including:

- Maximum teacher compensation, including the pre-1992 Teachers Pension Plan liability.
- Summary of the 2008 provincial collective agreement with the Alberta Teacher's Association.
- Summary of assignable hour provisions in Alberta's teachers agreement.

Comparison of Maximum Teacher Compensation

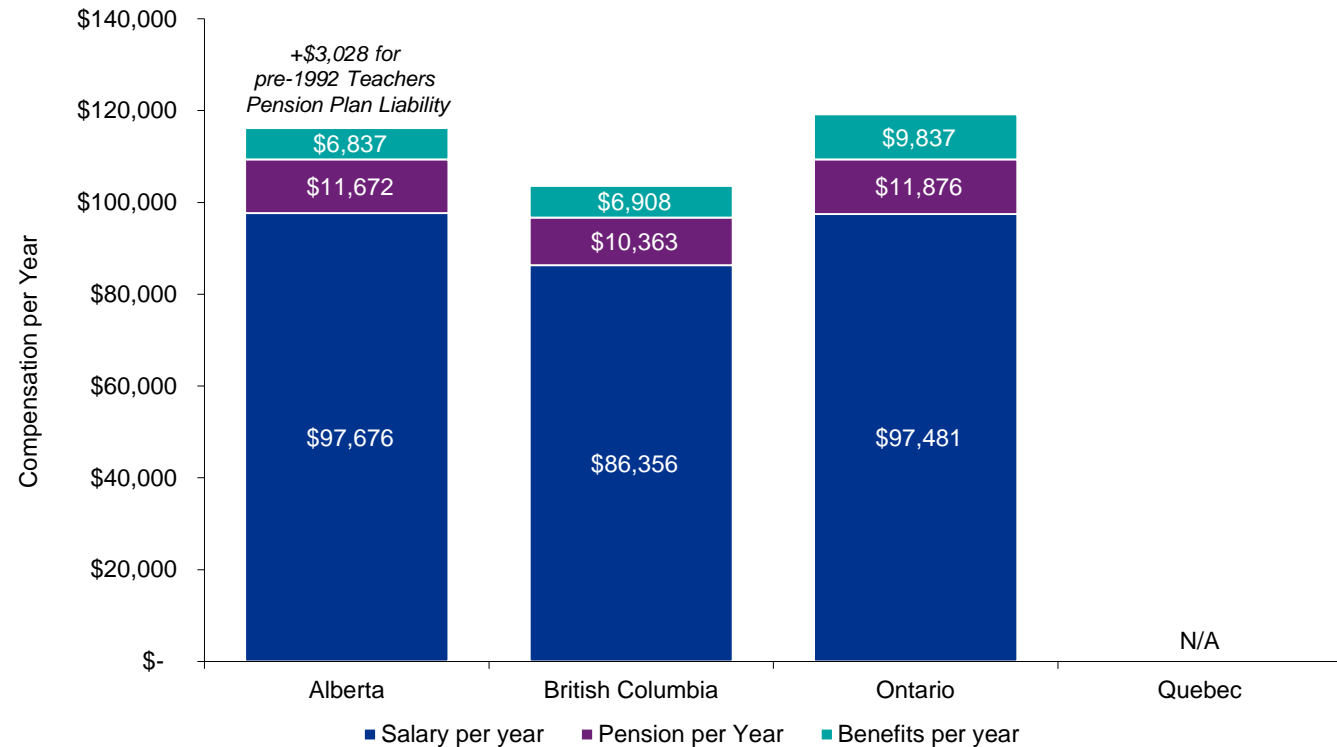
Ontario's teachers receive the most compensation (salary, benefits and pension) of the three comparator provinces at \$119K.

By comparison, Alberta's teachers receive \$116K and British Columbia's teachers receive \$104K.

When Alberta's total pre-1992 Teachers Pension Plan liability is considered as part of this, the total teacher compensation increases to \$119K and is comparable to Ontario and higher than British Columbia.

Further information on the 2008 Provincial Collective Agreement that resulted in Government assuming the teacher's contributions of this pension liability is provided on the following page.

Figure 18: Teacher Maximum Compensation



Note: Figures are based on C5 maximum salary and the equivalents across the comparator provinces. The per teacher amount in Alberta for the pre-1992 teacher's pension liability is based on the 3.1% contribution of teacher's salary that was assumed by Government, per the Ministry of Education.

Source: Teacher Maximum Total Compensation: Cross-Jurisdictional Analysis, 2017-18 from the Ministry of Education.
Teacher Pension Plan liability history provided by Government of Alberta

2008 Provincial Collective Agreement with the ATA

In 2008, the Government of Alberta and the Alberta Teachers Association struck the first provincial collective agreement. As part of this agreement, Government assumed 100% of the pre-1992 Teachers Pension Plan liability, which was valued at \$7.7 billion in the 2018/19 Government of Alberta Annual report. Prior to this, there was a shared contribution rate of 3.1% of salary for teachers and 6.3% for Government.

This 5 year agreement (September 1, 2007 to August 31, 2012) included:

- An assumption of the full pre-1992 unfunded pension liability contribution (effective January 1, 2008).
- A wage increase of 3% in the first year, with subsequent annual wage increases based on the year-over-year change in the Statistics Canada table of Alberta's Average Weekly Earnings (4.52%, 5.99%, 2.92% and 4.54% in each subsequent year).
- A \$1,500 lump sum payment per teacher.
- A commitment to no-strikes or lock-outs.
- A letter from the Premier to the Alberta Teacher's Association President stating that no changes would be made to the class size initiative and that Government had no intention of making changes to legislation, regulation or policy that affects teacher's employment conditions.
- A letter from the Minister of Education to the Alberta Teacher's Association President assuring the establishment of a Consultation Committee, approval for the Practice Review Bylaw, and that Principals would remain members of the Alberta Teacher's Association.
- A commitment that hours of work / minutes of instruction would not be bargained for in any collective agreements that do not already have those provisions; in agreements that do have provisions, they would not be altered, except for sunsets which would be extended to 2012.

Over the duration of this agreement, teacher wages increased by an average of 4.2% per year (or 22.3% cumulatively). By comparison, the Consumer Price Index increased by 2.3% per year over that same time period. Since the agreement has expired in 2012, teacher wages have not been increased, except for a 2% increase in 2015/16 (this equates to a 0.3% increase per year from 2012/13 to 2017/18), while the Consumer Price Index increased by 1.5% per year over that same time period.

Note: Statistics Canada revised their methodology for calculating the Average Weekly Earnings in 2009, which resulted in higher than expected wage increases for teacher. The matter went to arbitration, which ruled in favour of the ATA. The agreement referred specifically to a Statistics Canada table, rather than to a specific methodology.

Source: Notes on 2007-12 Memorandum of Agreement with the Alberta Teacher's Association provided by the Ministry of Education; CPI Inflation provided by Alberta Treasury Board and Finance.

Assignable Hours in Teachers Agreement

As per analysis completed by the Government of Alberta, there are a number of assignable hour provisions for teachers that have been trialed or implemented, as described below. The Government of Alberta has indicated that these provisions are not out of line with other jurisdictions; however, it is unclear if some jurisdictions include assignable hours in their regulation rather than their collective agreements.

Contract Provision	Impacts to Productivity / Operations
Instructional and Assignable Time Limits (907 hours and 1,200 hours respectively)	<ul style="list-style-type: none"> Instructional time includes instruction, examinations / testing and other student activities where direct student–teacher interaction and supervision are maintained. Assignable time includes instruction, supervision, parent-teacher conferences, teachers' convention, staff meetings, etc. Caps on instructional and assignable time pre-existed in some agreements covering the majority of teachers in Alberta. Remaining agreements without time caps included a standard provision with a max of 1200 hours assignable time and 907 instructional hours. There was a minor productivity loss as the majority of teachers were already assigned less than set maximums. An environmental scan from Ontario and western Canada identified limited commonalities or trends. Jurisdictions have uniquely addressed this matter with varying definitions and thresholds.
LOU: Time off for compression trial program review	<ul style="list-style-type: none"> A one-time trial program (by 9 school boards) to offset compressed instructional calendars by providing teachers with time-off in relation to the additional time worked. This expired on August 31, 2018.
LOU: Impact of assignable time on smaller schools review	<ul style="list-style-type: none"> Tracking hours became a task of teachers and leaders in schools that required additional time. Teachers were neutral to positive on the change and Principals indicated that this affected their workload. This expired on August 31, 2018.
LOU: Pilot Project on Right to Disconnect	<ul style="list-style-type: none"> The pilot was intended to clarify when it is appropriate for staff to send and review electronic communications; this was done through voluntary participation by individual school boards and their ATA Locals in the pilot project for the 2019-20 school year; only 1 school board volunteered. This expires on August 31, 2020.
Lieu Days for Principals (framework agreement 2012-2016)	<ul style="list-style-type: none"> Principals were granted a minimum of 2 paid leave days per school year. This expired on August 31, 2016, however, administrators' lieu days was part of local negotiations in the 2016-18 round of bargaining with 35 school boards or more extending lieu days to their Principals.

Research on Collective Bargaining

The following pages are based on information from the PBCO, and publically available information, including:

- Historical practices and outcomes in Alberta.
- A high-level jurisdictional comparison of Alberta, BC, Saskatchewan and Manitoba.
- Recent use of legislated mandates across Canada (NOTE: the Panel requested that a broader scan of the use of legislated mandates be included).
- Public sector bargaining mandates in British Columbia.
- Considerations for a legislative model in Alberta.
- Practices for potential in Alberta.

Historical Practices and Outcomes in Alberta

Alberta's public sector has more than 120 agreements, which were historically negotiated at an employer / enterprise level. From the fall of 2014, following strong growth during the period of the oil boom, Alberta sought to gain control of wage prices.

Influenced by the British Columbia model, in 2016, Alberta issued its first mandates. In 2017, the Provincial Bargaining Coordination Office (PBCO) was formed to oversee and support the process, and mandates were issued for all tables. The fiscal mandates represent bargaining limits for all 120+ agreements. They are set by government, and administered by the PBCO. For the 2017 round, the mandate specified a two-year term with no wage increases.

The main mechanism chosen by bargaining parties to achieve the mandates was to set limits on across the board on total compensation, including salary, benefits and pension. The focus of the negotiating parties was on trading off job security (i.e. no layoffs) for wage increases. As such, the mandates resulted in wage freezes for two years.

Wage reopeners – current state

The United Nurses of Alberta current three year agreement, which expires in 2020, includes a 'wage reopener' for the third year – meaning determination of the wages for the year April 2019 to 2020 are still to be negotiated.

When the decision was made to include this provision in the nurses agreement, government amended all other agreements to include wage reopeners in the third year.

Four of the six big tables (Alberta Public Service, Alberta Union of Provincial Employees, AHS Auxiliary Nursing Care, and AHS General Support Services) have wage reopeners for 2019-20 that were to be concluded by June 2019, according to the contractual agreement.

The other two tables (Health Sciences Association of Alberta and the Alberta Teachers' Association) are scheduled on or after September 2019.

Unions have already rejected a 0% increase in negotiations.

Note: This information does not represent KPMG's advice or opinion.

Source: Information above summarized from Provincial Bargaining State of Play; Labour Relations Advice to Executive Council



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High-level Jurisdictional Comparison (1 of 3)

	Alberta	B.C.	Manitoba	Saskatchewan
Use of mandates (specifically legislative mandates)	<ul style="list-style-type: none"> Mandates used to establish fiscal limits from 2016 (modelled on BC mandates). Government has control (through mandates) of AHS, central agreement with Teachers, Physician's Agreement, and the direct government employee agreements (79% of compensation). Government does not have direct control over PSIs and ES (21% of compensation), although PSIs have almost unilaterally complied with mandates. 	<ul style="list-style-type: none"> Highly legislated model, with most bargaining requirements in legislation. Employers required to participate in Employer Associations (EAs) (bargaining agents on behalf of employers). Government issues mandates to EAs, which prescribe limits for compensation. Mandates are developed provincially; variances for sectors or employers are possible but not common. Legislation requires EAs to have tentative agreements approved prior to ratification. 	<ul style="list-style-type: none"> In 2016/17, introduced legislation, Bill 28 – <i>The Public Services Sustainability Act</i>. Establishes a framework and mandate that specifies public sector salary increases for next four years – (0%, 0%, 0.75%, 1%). Enables collective bargaining in other areas, as well as authorization of a portion of “negotiated sustainability savings” in a collective agreement that reduce or avoid costs to fund an increase to the compensation payable to employees during the last 24 months of the sustainability period. The Act also covers restricts fee increases for insured and health services for the 4-year period to same levels as salary increases. Note: legislation has been introduced but not proclaimed and acts as an signal of a ‘bargaining cap’ mandate. 	<ul style="list-style-type: none"> Legislated EAs for health care (SAHO) and teacher bargaining. Saskatchewan recently consolidated its 12 Regional Health Authorities into a single province-wide body, and as part of that process, SAHO is being incorporated into the structure of the new province-wide health authority. Teacher bargaining is for a single provincial agreement between the Saskatchewan Teachers Federation and the EA of which Government and the Saskatchewan School Boards Association are members. Voluntary compliance in other sectors.

Note: EA - Employer Association PSI - Post-Secondary Institution ES - Education Support (staff) PS - public sector

This high-level jurisdictional comparison information does not represent KPMG's advice or opinion.

Source: Summarized from Provincial Bargaining State of Play; Labour Relations Advice to Executive Council; and Wage Reopeners – Options and Risk Analysis supplied by PBCO and Treasury Board and Finance.



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High-level Jurisdictional Comparison (2 of 3)

	Alberta	B.C.	Manitoba	Saskatchewan
Scope	<ul style="list-style-type: none"> Limited to union and “association” bargaining (unlike BC, doesn’t include executive, opted out and excluded compensation) 	<ul style="list-style-type: none"> Includes executive, opted out and excluded compensation, as well as union and “association” bargaining 	<ul style="list-style-type: none"> Legislative mandate applies to all provincial employees, including Government and Government agencies, health and social services organizations, school districts, PSIs, other provincial agencies 	<ul style="list-style-type: none"> N/A
Degree of centralization	<ul style="list-style-type: none"> 128 collective agreements covered by mandates. 	<ul style="list-style-type: none"> Relatively centralized. Agreements typically cover large numbers of employees, but are not always provincial in scope. 	<ul style="list-style-type: none"> Decentralized. Education bargaining is decentralized (done by individual school boards). Government has sought system reform, including more centralized and consolidated labour relations framework. 	<ul style="list-style-type: none"> Relatively centralized – 38 collective agreements covering most PS unionized employees. Teachers covered by a single agreement between the SK Teachers’ Federation and the EA. Bargaining for health care carried out through a legislated EA, bargained provincially. PSI employers and school support staff more decentralized and have greater autonomy.

Note: EA - Employer Association PSI - Post-Secondary Institution ES - Education Support (staff) PS - public sector

This high-level jurisdictional comparison information does not represent KPMG’s advice or opinion.

Source: Summarized from Provincial Bargaining State of Play; Labour Relations Advice to Executive Council; and Wage Reopeners – Options and Risk Analysis supplied by PBCO and Treasury Board and Finance.



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High-level Jurisdictional Comparison (3 of 3)

	Alberta	B.C.	Manitoba	Saskatchewan
Governance arrangements	<ul style="list-style-type: none"> PBCO established in 2014, drawing heavily on the BC model. Core responsibilities are to prepare, approve and assure bargaining mandates (establishing fiscal limits for bargaining, based on economic, labour market and compensation research) for partner employers. 	<ul style="list-style-type: none"> PSEC Secretariat (joint Government-EA governance body) coordinates bargaining. EAs prepare bargaining plans in accordance with the mandate (approved by PSEC Secretariat). Employers are expected to work through EAs for labour relations goals. 	<ul style="list-style-type: none"> Government (Cabinet), approves mandates. Two 'secretariat' offices are coordinated under Treasury Board. Purpose-built secretariats or dedicated business areas provide strategic research and advice, and support Government and affected employer partners. 	<ul style="list-style-type: none"> Sub-committee of Cabinet oversees public sector labour relationships. Sub-committee approves mandates, monitors collective bargaining, and directs or facilitates solutions.
Legal challenges	<ul style="list-style-type: none"> The Charter of Rights and Freedoms provides for the right to collectively bargain. Unions have brought legal challenges against legislation that has been seen to limit these rights. However, Governments have been able to legislate wage restraint, where respect for employees' constitutional rights to bargain has been shown. According to a Supreme Court of Canada decision in 2007, employees are guaranteed freedom of association, and have the right to undertake collective bargaining right (SCC, 2007, 27). (Section 2(d) of the Charter of Rights refers). Canadian governments can establish and impose salary settlements on unionized employees, but they have to show respect for the collective bargaining process. 			

Note: EA - Employer Association PSI - Post-Secondary Institution ES - Education Support (staff) PS - public sector

This high-level jurisdictional comparison information does not represent KPMG's advice or opinion.

Source: Summarized from Provincial Bargaining State of Play; Labour Relations Advice to Executive Council; and Wage Reopeners – Options and Risk Analysis supplied by PBCO and Treasury Board and Finance.



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Legislated Models

Government Roles are More Active in the Process

There has been a move towards more active and strategic models of government engagement in public sector collective bargaining. These models have motivated by practical concerns for cost control, more consistency across the broad public sector, fiscal and public policy objectives, and stable labour relations.

All provinces have made efforts to establish coordination at a public policy and operational level with respect to labour relations by the government and by government's funded employer partners.

Each jurisdiction has a sub-Committee of Cabinet for key decisions with respect to mandate and contract approval. Such Committees are supported by secretariats or labour relations business units to provide advice, research, analysis, negotiations, and other support to Government and related entities or funded employer partners.

While there is commonality in approaches among provinces, a key distinction is the extent to which coordination and control is achieved through legislated mandate, directed mandate, or on a voluntary basis.

Legislated Mandate

The Panel requested that a broad scan of the use of legislated mandates across Canada be included.

In recent years, the Government of Canada, Government of Nova Scotia, and Government of Manitoba have established maximum compensation increases through legislation.

Note: This information does not represent KPMG's advice or opinion.

Source: Summarized from Provincial Bargaining State of Play; Labour Relations Advice to Executive Council; and Wage Reopeners – Options and Risk Analysis supplied by PBCO and Treasury Board and Finance. The Public Services Sustainability Act (Bill 28 in Manitoba).

In 2019, The Government of Ontario introduced legislation to set limits in public sector compensation increases for the next three years.

These have each been met with legal challenges from unions.

The *Public Services Sustainability Act* (2017) in Manitoba

The purposes of this *Act* are stated as:

- To create a framework respecting future increases to compensation for public sector employees and to fees for insured medical and health services that reflects the fiscal situation of the province, is consistent with the principles of responsible fiscal management and protects the sustainability of public services;
- To authorize a portion of sustainability savings identified through collective bargaining to fund increases in compensation or other employee benefits;
- To support meaningful collective bargaining within the context of fiscal sustainability.

Section 3 states that subject to the other provisions of the *Act*, there is still a right to bargain collectively and Section 4 states that nothing in the *Act* affects the right to strike.

Section 6 states that nothing in the *Act* affects entitlement to increases as a result of promotion or reclassification or to periodic or performance-based increases within established pay ranges based on a collective agreement or terms of employment.

Section 12 specifies that the maximum increases in pay over the sustainability period (0% in each of the first two years, 0.75% in the third year, 1.0% in the fourth year).



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Public Sector Bargaining Mandates in British Columbia (1 of 2)

The governance arrangements operating in Alberta are similar to those in British Columbia, upon which they are modelled. The key difference is the extent to which mandates are legislated – noting that Alberta, to date, has been able to achieve similar wage outcomes to that of British Columbia, without legislation.

British Columbia legislated large statutory bargaining units that have corresponding employer associations. The mandates are issued to these associations, who in turn are required by legislation to have their tentative agreements approved prior to ratification.

Overall, British Columbia's legislative mandates have contained elements that set expectations around both wage restraint, and productivity improvement.

2010 Net Zero Mandate

- A two-year term, with no net increases in total compensation costs.
- Compensation trade-offs: savings found through (mutually-agreed) changes in collective agreements may be used to fund compensation increases.

2012 Cooperative Gains Mandate

- The Province will not provide additional funding for increases to compensation negotiated in collective bargaining.
- Employers to work with responsible ministries and employer bargaining agents to develop Savings Plans to free up funding from within existing budgets to provide modest compensation increases.

- Employers must not reduce service levels to the public in order to fund compensation increases, nor transfer the costs of existing services to the public to pay for compensation increases.
- Savings Plans can include savings resulting from operational cost reductions, increased efficiency, service redesign, business gains and other initiatives, so they can propose much broader savings than under the previous Net Zero Mandate.
- Identified savings are to be used to fund compensation increases that will facilitate negotiated settlements with unions through collective bargaining.
- Identified savings must be real, measurable and incremental to savings identified by public service employers to meet Provincial Budget and deficit reduction targets.

Settlements under the Cooperative Gains Mandate were unique and differentiated between sectors and between employers in some sectors as each depended on a number of factors, particularly the ability to generate savings to fund modest compensation improvements.

2014 Economic Stability Mandate

- Employers have the ability to negotiate longer-term agreements within a fixed fiscal envelope.

Note: This information does not represent KPMG's advice or opinion.

Source: BC Government, Public Sector Bargaining Mandates and Agreements. <https://www2.gov.bc.ca/gov/content/employment-business/employers/public-sector-employers/public-sector-bargaining/mandates-and-agreements>.

BC Health Authority Shared Service Organization. Transforming Healthcare Supply Chains: An update on progress in BC. Managing Transformation. A Modernization Action Plan for Ontario (2018).



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Public Sector Bargaining Mandates in British Columbia (2 of 2)

2014 Economic Stability Mandate (continued)

- Public sector employees have an opportunity to participate in the Province's economic growth through the Economic Stability Dividend – e.g. if actual real GDP growth is 1 percentage point above forecast, a 0.5% wage increase would result, beyond whatever wage increase had been negotiated in the contract.

2019 Sustainable Services Negotiating Mandate

- Three-year term, with general wage increases of 2% in each year.
- Ability to negotiate conditional and modest funding that can be used to drive tangible service improvements for British Columbians, e.g. targeted funds to address existing, chronic labour market challenges where employers need to meet service delivery commitments, or changes that achieve service innovations, modernization or efficiencies.

Legislation (or other bargaining approaches) that only contemplate wage restraint, and do not set aspirational goals for productivity improvements or service innovations, may limit wage growth, but at the cost of lower levels or quality of community services.

British Columbia moved to a more consolidated, broader public sector shared services model to reduce administrative spend, with British Columbia's implementation of a broader public Shared Services Organization (for example) realizing efficiencies of approximately \$100 million on spending of \$1 billion (see Transforming Healthcare Supply Chains).

While the relationship between these outcomes and the collective bargaining approach taken in British Columbia is not direct, by incorporating the productivity-inducing elements of its collective bargaining strategy, along the lines of a gains sharing model, it was able to share the 'problem' of the fiscal situation with employees and employers, and achieve collective and collaborative solutions.

Note: This information does not represent KPMG's advice or opinion.

Source: BC Government, Public Sector Bargaining Mandates and Agreements. <https://www2.gov.bc.ca/gov/content/employment-business/employers/public-sector-employers/public-sector-bargaining/mandates-and-agreements>.

BC Health Authority Shared Service Organization. Transforming Healthcare Supply Chains: An update on progress in BC. Managing Transformation. A Modernization Action Plan for Ontario (2018).



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Considering a Legislated Model for Alberta

Legislating for wage restraint

The Panel requested that a broad scan of the use of legislated mandates across Canada be included. Based on this review Nova Scotia, Manitoba and British Columbia are the only jurisdictions that appear to have used legislated arrangements (Ontario introduced its legislation in 2019).

Where legislation has been introduced to effect wage restraint in the public service elsewhere in Canada, it has not always been to impose a legislative cap, but sometimes to set the expectations within which bargaining will occur.

- In Nova Scotia, for example, legislation was proclaimed two years after Royal Assent. In effect, the legislation acted as a mandate prior to Assent, and capped remaining open negotiations on proclamation.
- Manitoba has recently introduced legislation that has not been proclaimed and is facing legal challenges.
- British Columbia's model relies on legislated arrangements, as outlined on page 52.

Introducing a more legislated model in Alberta – the process

According to the PBCO, a legislated approach for Alberta would involve:

- Legislation to ensure mandatory participation of all affected employer partners in statutory employer associations, with formal authority to bargain on employers' behalf (at a practical level, this would only be required with respect to education support staff, agencies boards and commission and post-secondary institutions – due to existing legal mandate over remaining agreements), and

- Legislation to formally establish a compulsory mandate system to guide or set limits for all affected public sector bargaining.

The relevance of a more legislated model for Alberta

According to Alberta's PBCO:

- The current 4 statutory bargaining units (Alberta Health Services, the central agreement with Teachers, physician agreements, and the direct Government employees' agreement) represent 79% of all public sector compensation. This has enabled achievement of 2 years of zero wage increases without the need for legislation.
- The remaining public sector compensation where government does not have direct control, is the post-secondary institutions and educational supports – representing 21% of all public sector compensation, or \$4.8 billion. Within these two sectors, in the absence of a legislative requirement to comply, post-secondary institutions have almost unilaterally complied voluntarily.
- While legislation will allow government to restrain wages, it is unlikely to be able to be used consecutively for multiple rounds of bargaining.
- Enhancing Alberta's current model by controlling the remaining 21% of all public sector compensation, through employer associations and legislating a backstop (per British Columbia's model) to mandate compliance may provide the government similar wage restraint as a legislative approach and may be more effective in the long term.

Note: This information does not represent KPMG's advice or opinion.

Source: Janice MacKinnon and Jack Mintz, Putting the Alberta budget on a new trajectory, University of Calgary, October 2017.



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Innovative Models in Public Sector Bargaining

Other jurisdictions going through similar fiscal challenges have developed strategies that involve workforce adjustment without impacting public-facing, front-line workers. Other provinces such as Manitoba and Saskatchewan established multi-year targets, primarily through attrition, to moderately reduce the level of workforce and associated compensation.

When faced with a sharp reduction in its revenues driven by low commodity prices, along with controlling its operating expenditures, the Government of Saskatchewan reduced the size of its core civil services by 15% over a four-year period.

In 2016, the Government of Manitoba introduced a more moderate 8% target phased-in over four years to reduce the size of its core civil service, primarily through attrition, along with a reduction in management layers which had experienced a relatively high growth trends in previous years. Span of control analysis was undertaken in each department, after the Government reduced the number of departments from 18 to 12.

Other service-oriented sectors have tended to focus on efficiencies and workforce reductions in back office functions and / or normalization of management positions.

Analysis of common functions across the Government of Alberta such as administration, policies, research procurement, information technology, HR, etc., to identify opportunities to reduce any duplication and overlap, and to centralize common back-office functions and to digitize certain back-office functions is a common practice of service-based sectors. This includes the public sector, in efforts to improve efficiencies, and enables limited resources to be allocated to more frontline services.

Note: This information does not represent KPMG's advice or opinion.

Source: Information derived from Government of Manitoba and Government of Saskatchewan.

Other related practices include: rationalization or amalgamation of departments and related government agencies, consolidation of the number of job classifications, reducing overtime, and reducing the level of vacancies across departments and agencies.

Various jurisdictions also encourage innovation within the Public Service and fund select innovation initiatives from within the Public Sector to improve efficiencies.

For example, in 2018, The Province of Manitoba created a new \$50-million Transformation Capital Fund to support innovative initiatives within government. All public servants have been invited to contribute ideas and all departments have been invited to submit funding proposals. Applications will be evaluated based on risk adjusted return on investment and in order to access funding, departments must demonstrate measurable savings that ensure the up-front investment pays for itself in less than four years. (Source: Government of Manitoba News Release, May 9, 2018).

Experiences from other provinces identify a requirement for central coordination, clear upfront communications, transparency, advance notification as required, appropriate and timely dialogue with all parties involved, and progress reporting when dealing with workforce and compensation matters.



This research and analysis was completed at the request of the Panel. KPMG's role was to provide research and analysis but has not provided any recommendations or opinions. As such, the Panel is responsible for all recommendations and the Panel's report, and the Government of Alberta is responsible for all decisions arising from the Panel's report.

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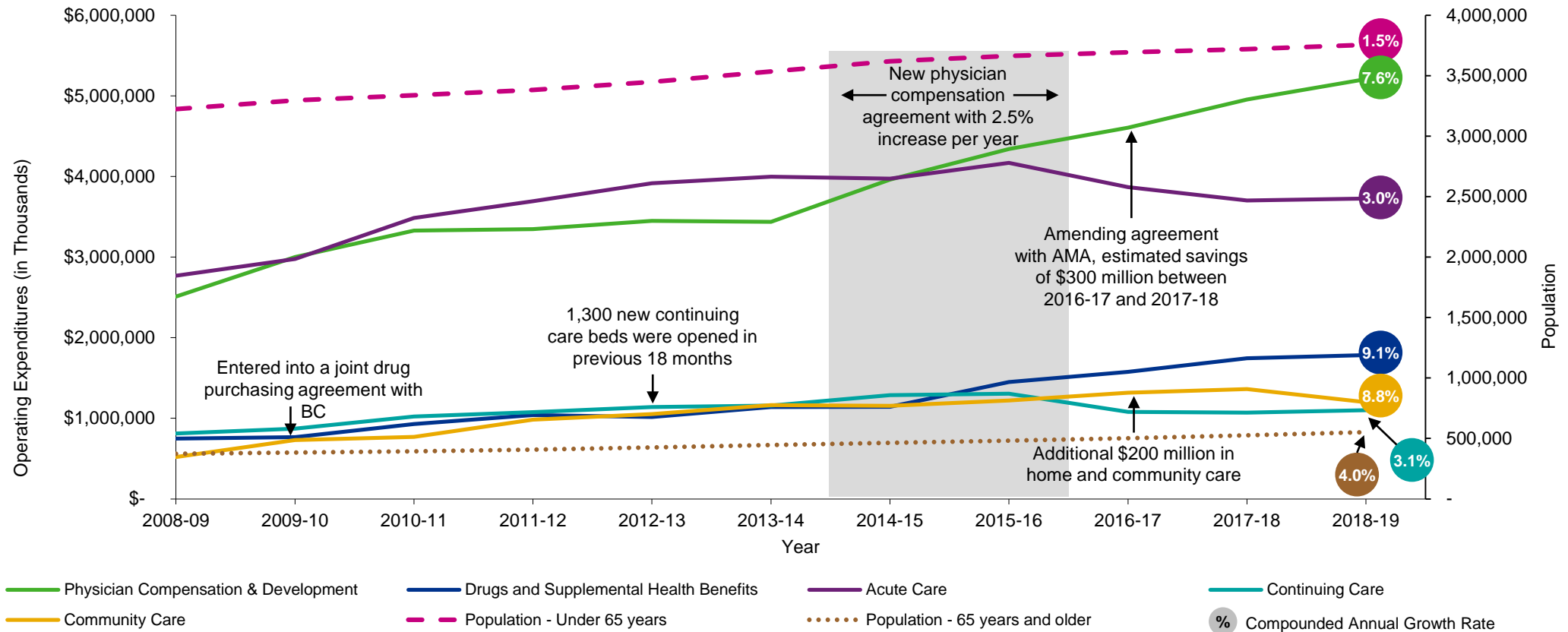


Health



Key Trends for Health in Alberta

Figure 19: 10 Year Trend for Alberta's Major Expenditures in Health



Note: Health benefits associated with Income Supports and AISH were transferred to Alberta Health in 2014-15; these amounts were removed from the above data to provide a comparable 10 year trend line.

Source: Analysis of Budget Estimates from 2008-09 to 2018-19 for Alberta, Annual Report for Health Authority Consolidation 2008-09, and Annual Reports for Alberta Health Services from 2009-10 to 2017-18; Population data from Statistics Canada Table 17-10-0005-01.

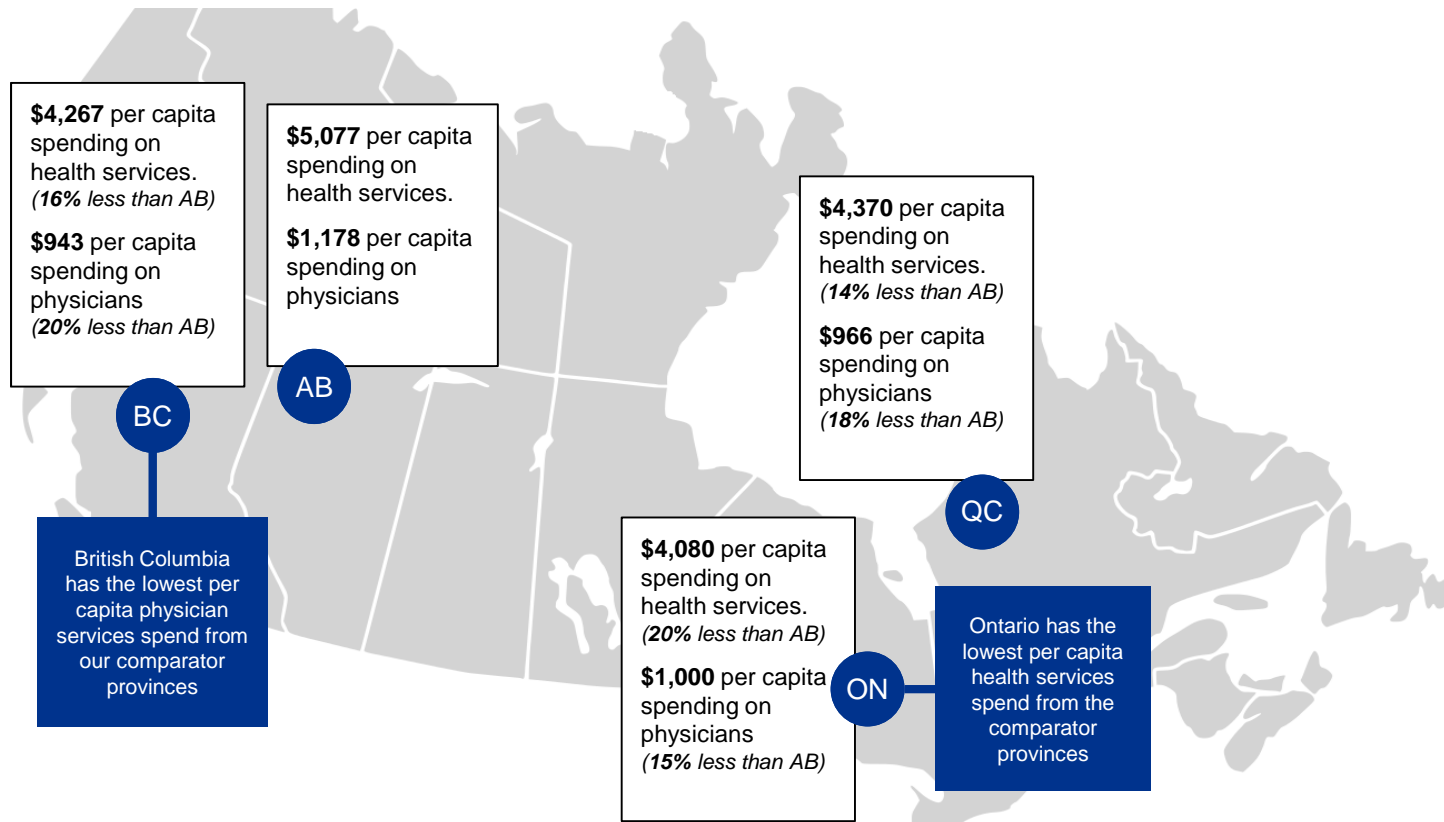
Per Capita Health Expenditures

In 2018, Alberta had the highest health and physician services per capita provincial government expenditures relative to the comparator provinces.

According to CIHI, Alberta spends \$997 more per capita on health services than Ontario, which spends the least at \$4,080 per capita.

Alberta spends \$235 more per capita on physician services than British Columbia, which spends the least at \$943 per capita.

Figure 20: Per Capita Spending on Health Services and Physicians in 2018



Note: Based on data for 2018-19 forecast.

Source: Alberta Health completed analysis of the CIHI National Health Expenditure Database.

Comparison of Provincial Demographics

In 2018, Alberta has the smallest share of individuals over the age of 60 among comparator provinces.

Alberta had a median age of 36.9 years, the youngest of the provinces.

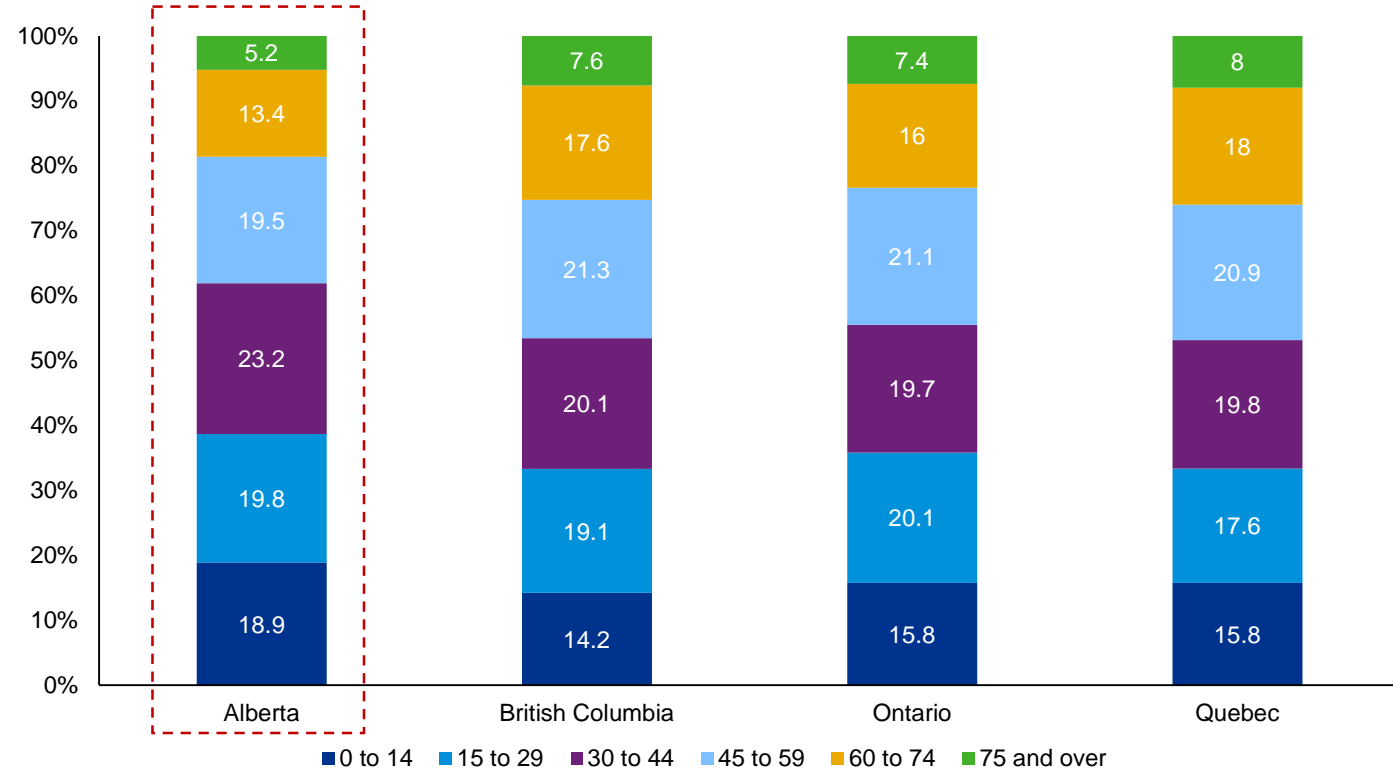
62% of Albertans were under the age of 45 compared to:

- 56% in Ontario
- 53% in British Columbia
- 53% in Quebec

19% of Albertans were 60 years and older compared to:

- 26% in Quebec
- 25% in British Columbia
- 23% in Ontario

Figure 21: 2018 Provincial Demographics by Age Category

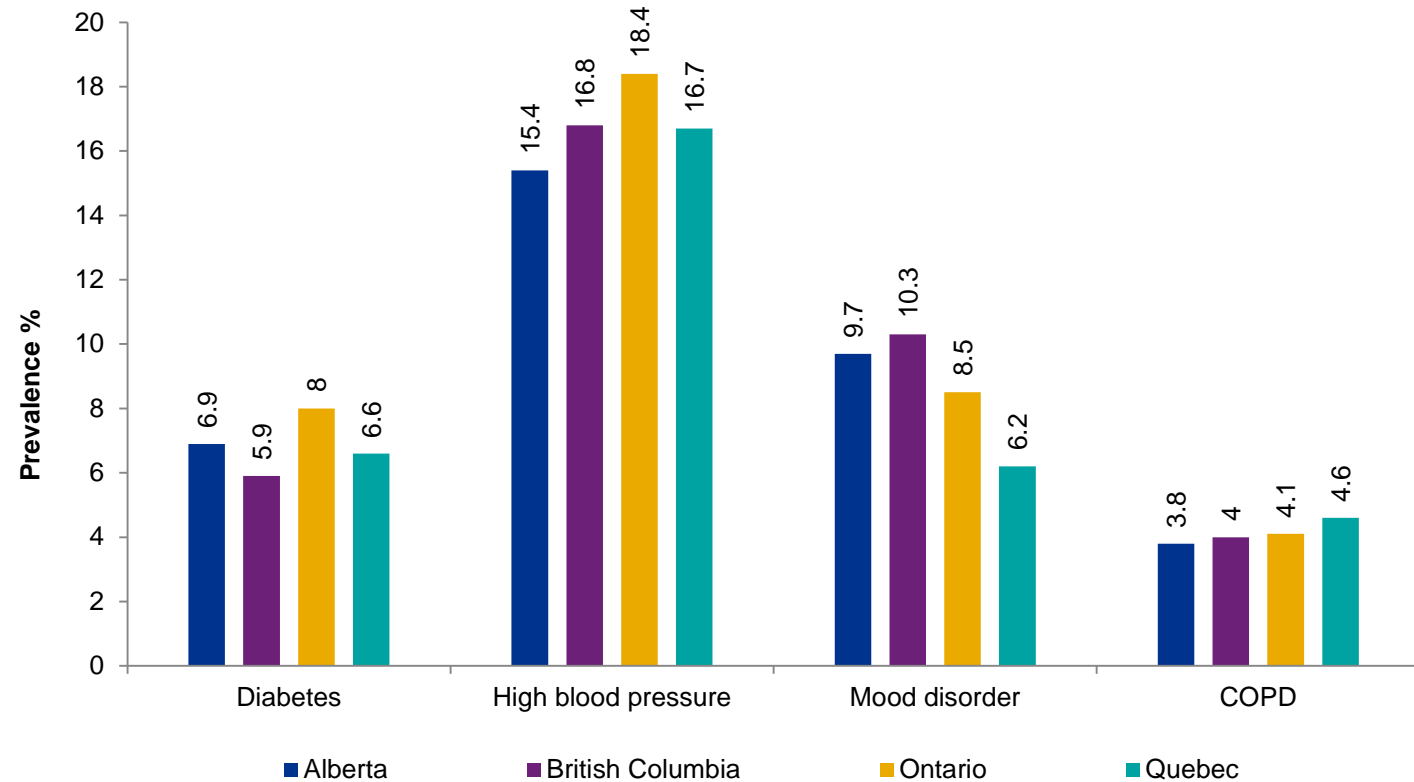


Source: Population Estimates on July 1st by Age and Sex data from Statistics Canada, 2018, Table 17-10-0005-01.

Prevalence of Chronic Illnesses

In 2017, Alberta had the lowest prevalence rate of Chronic Obstructive Pulmonary Disease (COPD) and high blood pressure, and a higher prevalence rate of Diabetes than British Columbia and Quebec, and a higher prevalence rate of Mood Disorders compared to Ontario and Quebec.

Figure 22: 2017 Chronic Illness Prevalence



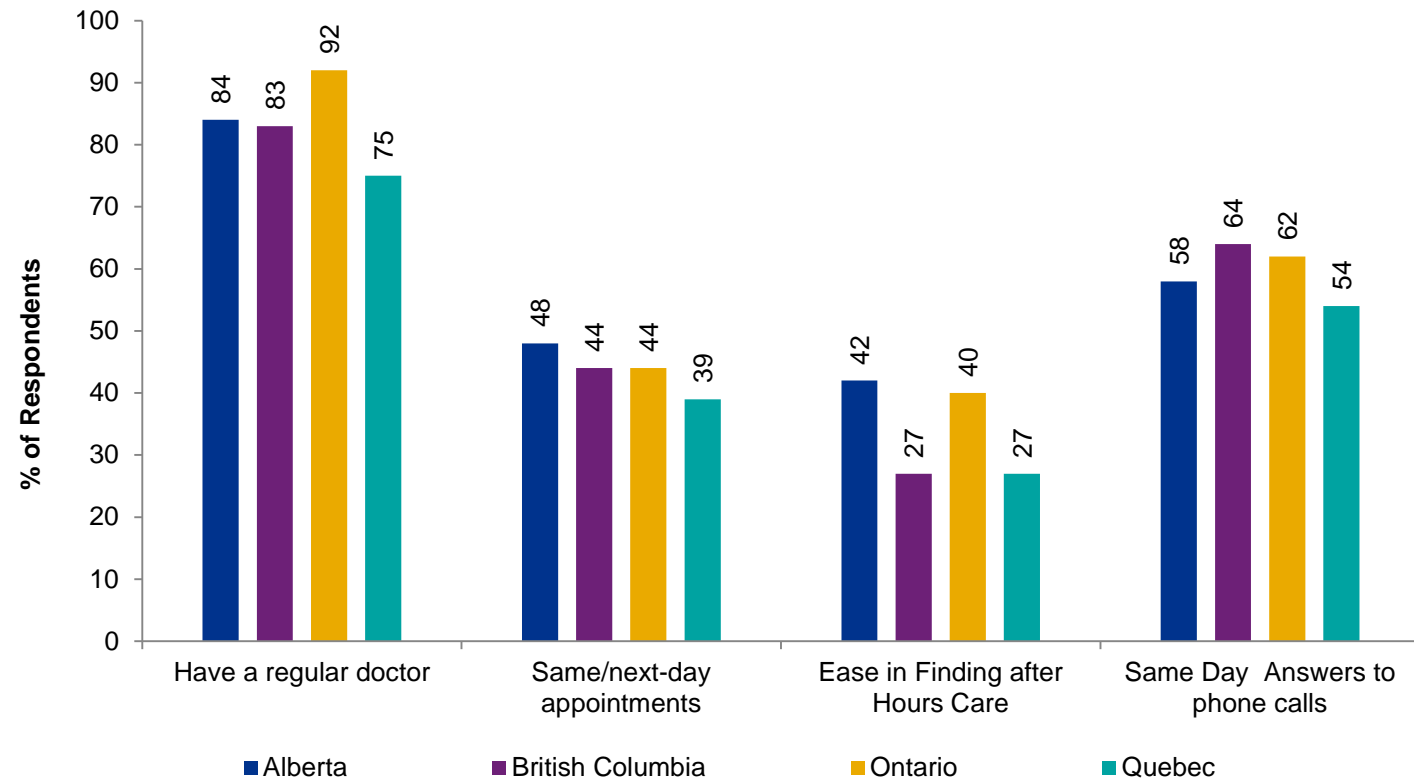
Source: Alberta Health completed analysis of Statistics Canada, 2017. CANSIM Table 13-10-0096-01.

Access to Primary Care

Relative to the comparator provinces, Alberta ranks:

- Highest in same / next day appointments, and
- Highest in ease in finding after hours care.

Figure 23: Access to Primary Care



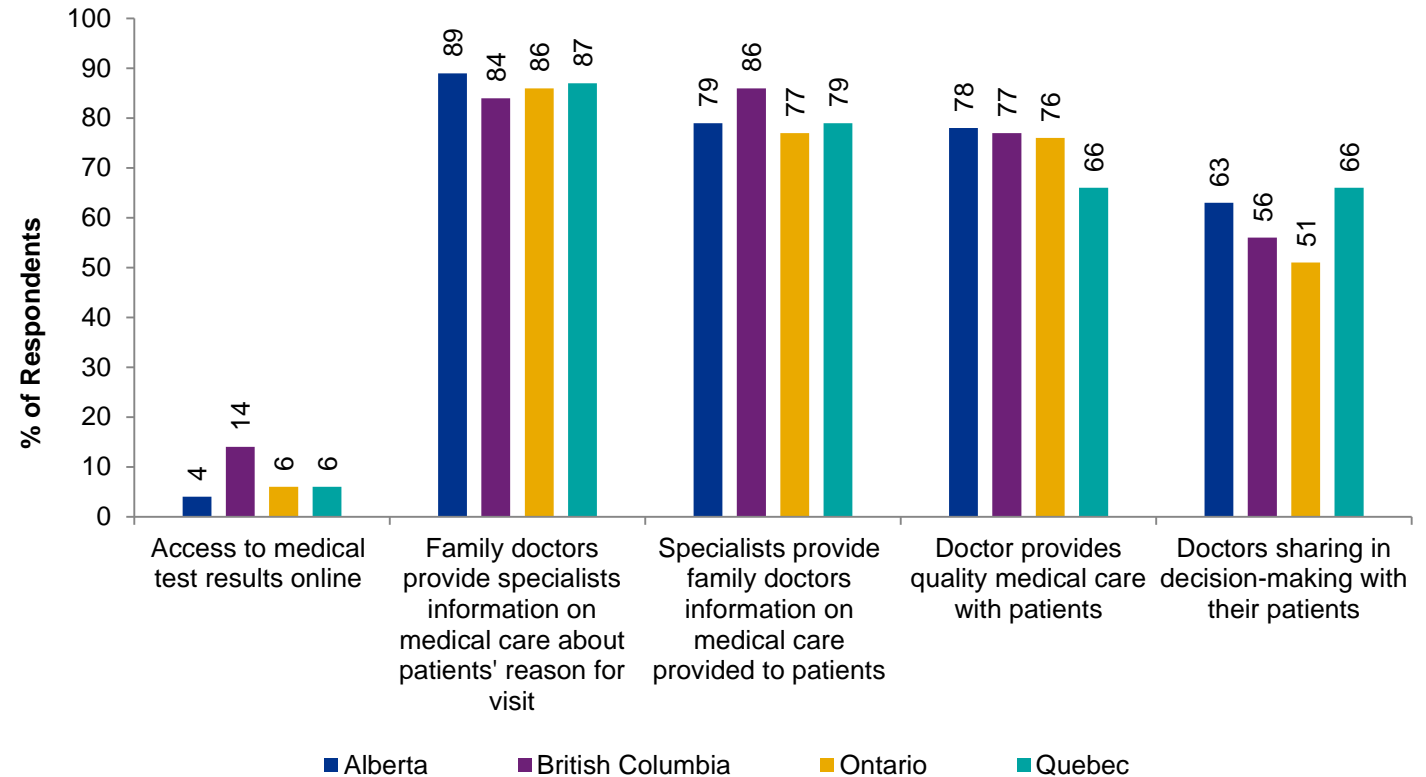
Note: The Commonwealth Fund's International Health Policy Survey of Adults was last carried out in Canada from March through June 2016.
Source: Alberta Health completed analysis of Canadian Institute for Health Information; How Canada Compares: Results From the Commonwealth Funds 2016 International Health Policy Survey of Adults in 11 Countries Accessible Report. Ottawa, ON: CIHI; 2017.

Care Coordination

Relative to the comparator provinces, Alberta ranks:

- Lowest in access to medical tests online
- Highest in family doctors providing specialist information, and
- Highest on doctor providing quality medical care.

Figure 24: Care Coordination Metrics



Note: The Commonwealth Fund's International Health Policy Survey of Adults was last carried out in Canada from March through June 2016.
Source: Alberta Health completed analysis of Canadian Institute for Health Information; How Canada Compares: Results From the Commonwealth Funds 2016 International Health Policy Survey of Adults in 11 Countries Accessible Report. Ottawa, ON: CIHI; 2017.

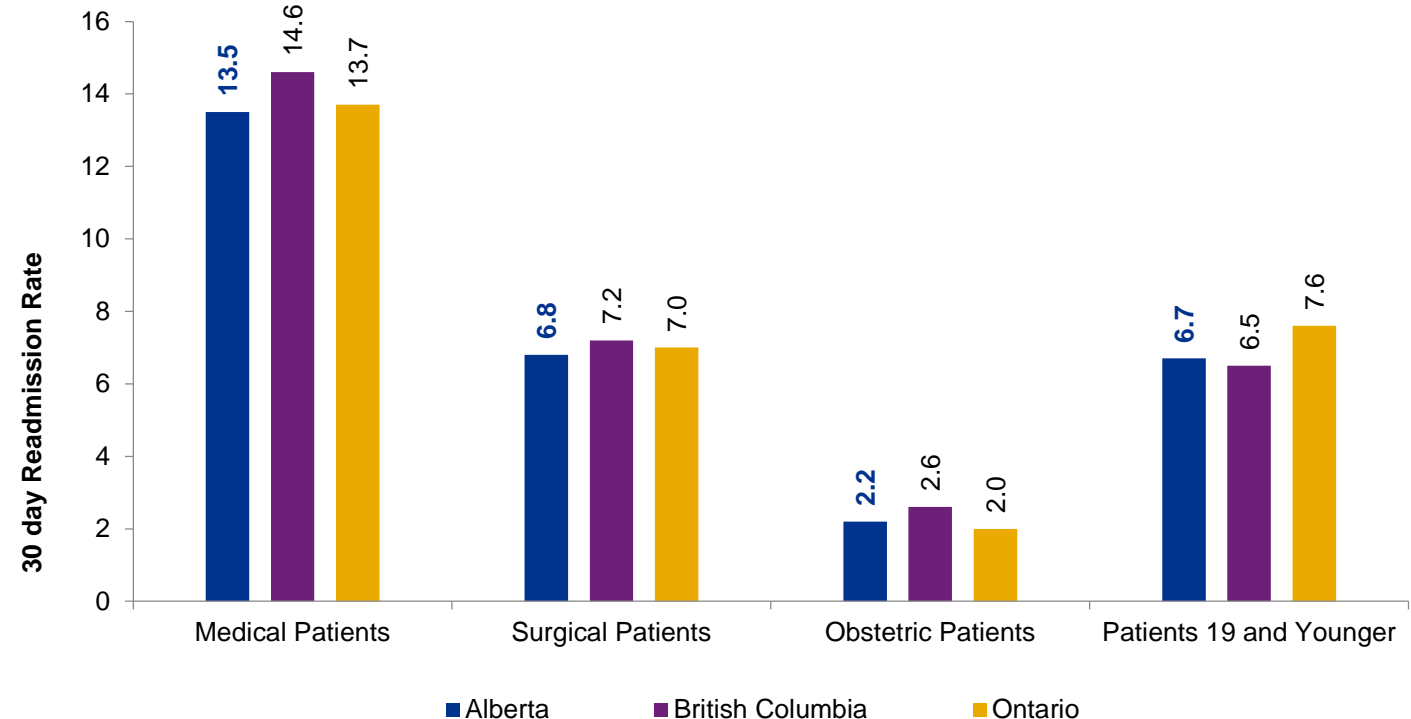
Readmissions to Hospitals & Length of Stay

Alberta has lower readmission rates for medical and surgical patients, and ranks in the middle in terms of its readmission rates for obstetric and younger patients, relative to the comparator provinces.

The Age-Standardized average length of stay for acute inpatient hospitalization in days (2016/17) in Alberta was 7.7 days. By comparison it was:

- 7.1 days in British Columbia
- 6.2 days in Ontario, and
- 7.1 days in Quebec.

Figure 25: Readmissions to Hospitals within 30 Days



Note: 30 day readmission rates are not available for Quebec.

Source: Alberta Health completed analysis of CIHI National Health Expenditure Database, yourhealthsystem.ca

Wait Times (1 of 2)

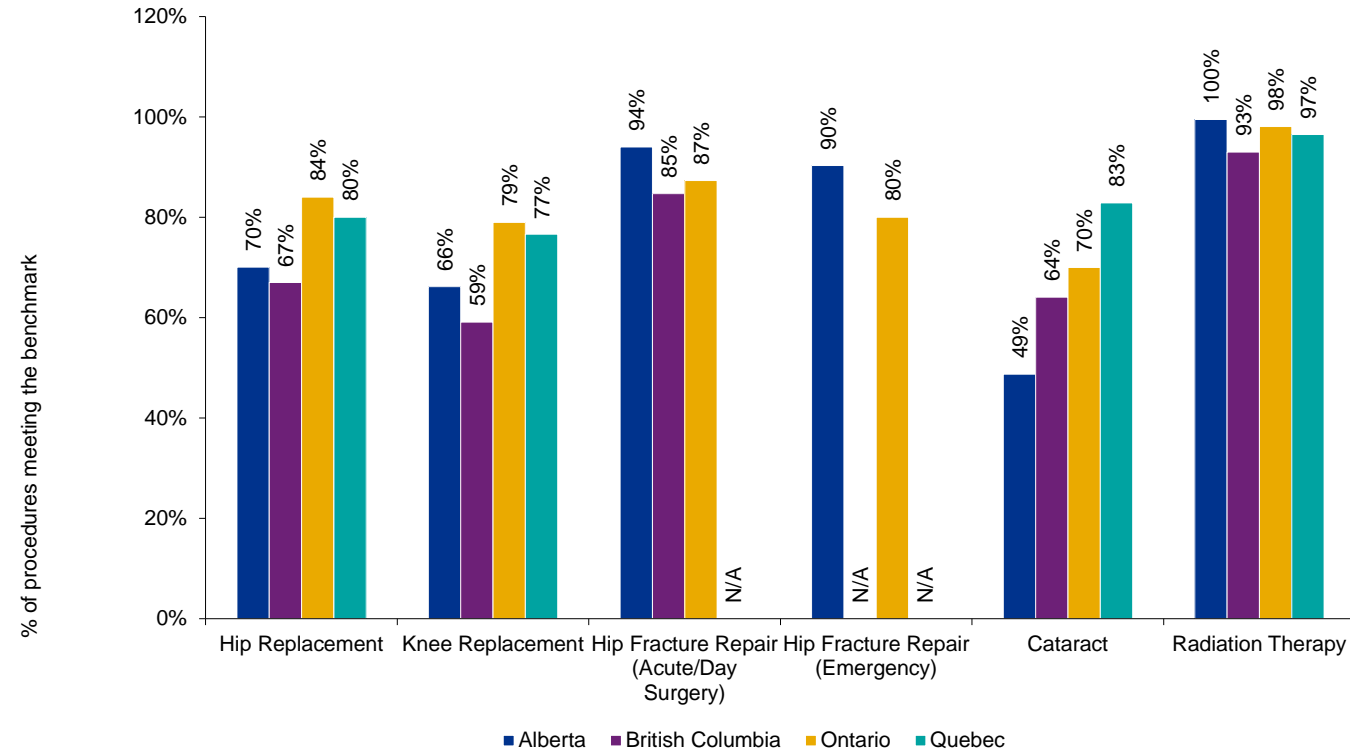
There are six key wait time indicators with an established benchmark.

Of these indicators, Alberta has a higher percentage of meeting the benchmark for Hip Fracture Repair (Acute/Day Surgery), Hip Fracture Repair (Emergency), and Radiation Therapy and a lower percentage of meeting the benchmark for Hip Replacement, Knee Replacement and Cataracts, relative to the comparator provinces.

Over the past 10 years, Alberta has improved wait times for Hip Fracture Repair (Acute/Day Surgery), Hip Fracture Repair (Emergency), and Radiation Therapy, while other indicators show a decline in the achievement of the benchmark (see Figure 27).

In terms of Emergency Department wait times, Albertans spend more time than their counterparts in British Columbia for a Physician assessment, and less time being admitted relative to the comparator provinces (see Table 6 on following page).

Figure 26: Comparison of Waiting Times by Province as a Percentage of Meeting the Benchmark



Note: The metrics is the percentage of times the province met with benchmark time for the procedures listed. British Columbia and Quebec had no values recorded for Hip Fracture Repair (Emergency). Quebec also had no values recorded for Hip Fracture Repair (Acute/Day Surgery).

Source: CIHI data for wait time for procedures in Canada 2018

Wait Times (2 of 2)

Table 6: Emergency Department Wait Times (2017/18)

	AB	BC	ON	QC
Physician Assessment (90% spent less, in hours)	3.1	3.0	3.2	N/A
<i>Percentage change from 2013/14</i>	<i>3%</i>	<i>20%</i>	<i>7%</i>	<i>N/A</i>
Admitted Patients (90% spent less, in hours)	31	39	33	N/A
<i>Percentage change from 2013/14</i>	<i>34%</i>	<i>17%</i>	<i>15%</i>	<i>N/A</i>

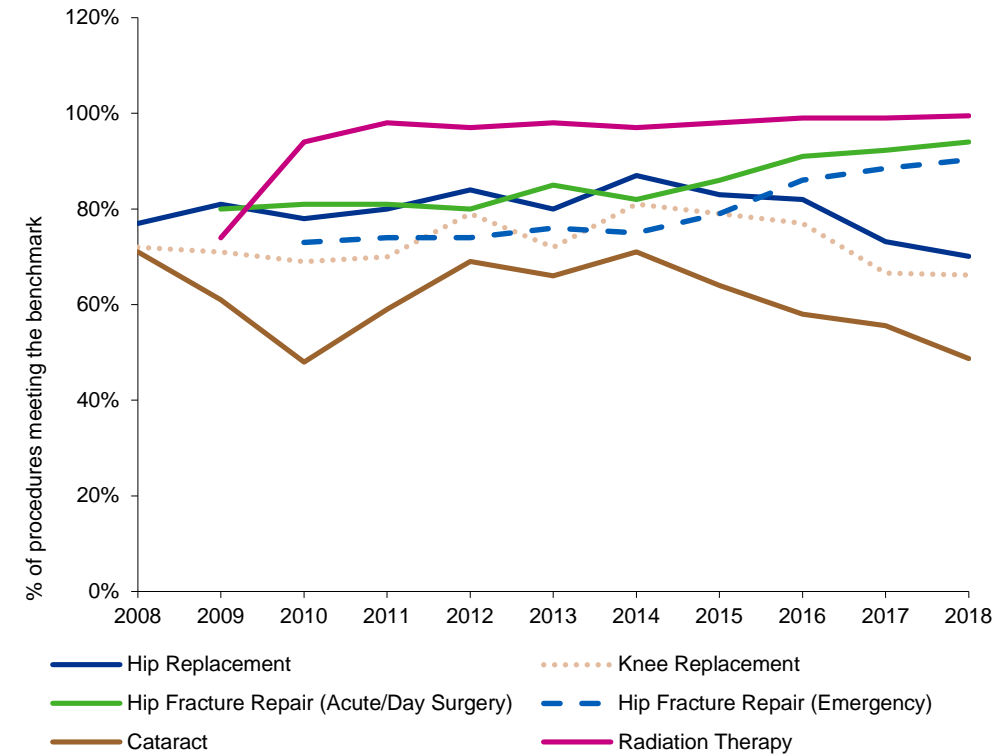
The top surgery in each of the comparator provinces and Alberta in 2017/18 was caesarean section delivery. It represented 8.2% of the total inpatient surgeries completed. Alberta had the highest per capita number of these surgeries and the second shortest length of stay.

Table 7: Caesarean Section Surgeries (2017/18)

	AB	BC	ON	QC
Number of caesarean section delivery surgeries per 100,000 population	359	314	282	232
Average acute length of stay (in days) for caesarean section delivery surgery	3.0	3.2	2.8	3.3

Source: CIHI data on Emergency Department Wait Times and number, percentage and average acute length of stay for top 10 high-volume inpatient surgeries by province/territory, HMDB, 2017–2018

Figure 27: 10 Year Trend for Alberta's Waiting Times as a Percentage of Meeting the Benchmark



Note: The metrics is the percentage of times the province met with benchmark time for the procedures listed. Hip Fracture Repair (Acute/Day Surgery) and Radiation Therapy were measured beginning in 2009 Hip Fracture Repair (Emergency) was measured beginning in 2010.

Source: CIHI data for wait time for procedures in Canada 2008 to 2018

Health System Indicators (1 of 2)

In terms of the health system indicators, relative to the comparator provinces, Alberta has:

- One of the highest number of family medicine physicians and an average number of specialist physicians
- The lowest life expectancy at age 0
- The highest infant mortality rates and the lowest general mortality rates per 1,000 population
- The highest number of deaths from major cardiovascular disease and suicide per 100,000 population
- The lowest incidence of end-stage renal disease
- An average percentage of patients being readmitted to the hospital within 30 days
- An average rate of in hospital sepsis per 1,000 population
- The second highest number of hospitalized heart attacks per 100,000 population.

Table 8: Health System Indicators

	AB	BC	ON	QC
Number of family medicine physicians per 100,000 population	128	131	112	122
Number of specialist physicians per 100,000 population	119	112	112	127
Life expectancy at age 0	81.5	82.5	82.5	82.4
Infant (under 1 year old) mortality rates per 1,000 population	4.9	3.1	4.7	4.0
General mortality rates per 1,000 population	6.0	8.0	7.3	7.7
Deaths from major cardiovascular diseases per 100,000 population	195.2	174.5	163.0	150.1
Deaths from intentional self-harm (suicide) per 100,000 population	15.2	9.7	10.0	10.4
Incidence of end-stage renal disease patients per 1,000,000 population	136	207	218	N/A
Patients readmitted to hospital (percentage) within 30 days	9.0	9.7	9.2	8.9
In hospital sepsis per 1,000 population	3.8	3.2	4.3	3.2
Hospitalized heart attacks per 100,000 population	227	197	217	309

Legend: **Red** – higher than average for negative indicator and lower than average for positive indicator.

Yellow – middle value(s) for indicator.

Green – lower than average for negative indicator and higher than average for positive indicator.

Source: Analysis based on CIHI data (2017 - number of physicians, hospital patient readmission, in-hospital sepsis, hospitalized heart attacks, end-stage renal disease, CIHI 'yourhealthsystem' data - In Depth, Incident End-Stage Renal Disease (ESRD), Patients by Primary Diagnosis, Report ID: PROC17) and Statistics Canada (Tables 13-10-0713-01, 13-10-0114-01, 13-10-0800-01) and Alberta population data.

Health System Indicators (2 of 2)

The Panel requested that Alberta Health and Alberta Health Services identify a set of key indicators that could be used to benchmark and guide improvements in Alberta's health system. Table 9 reflects the set of indicators which Alberta Health and Alberta Health Services have developed for this purpose.

Table 9: Key indicators for Alberta Health and Alberta Health Services

	AB	BC	ON	QC
Provincial Per Capita Spending on Health Care				
Total – Nominal	\$ 5,077	\$ 4,267	\$ 4,080	\$ 4,370
Hospital	\$ 1,964	\$ 1,941	\$ 1,471	\$ 1,547
Physician	\$ 1,178	\$ 943	\$ 1,000	\$ 966
Drugs	\$ 382	\$ 221	\$ 400	\$ 297
Total – Age / Gender Standardized ¹	\$ 5,312	\$ 3,836	\$ 3,706	\$ 3,643
Physicians				
APP payments as a % of total physician payments	13%	20%	36%	20%
Acute Care				
Patients readmitted to Hospital	9.0%	9.7%	9.2%	8.9%
Percentage of care in hospitals that could be provided in a more appropriate care setting (% of hospitalization days)	18.3%	13.0%	14.6%	N/A
Median number of days hospital stay extended until home care services or supports ready	11	7	7	N/A
Ambulatory Care Sensitive Condition Hospitalization Rates, per 100,000	338	294	314	332
Cost of a Standard Hospital Day	\$ 7,983	\$ 6,539	\$ 5,460	\$ 5,839

	AB	BC	ON	QC
System Performance				
Percentage with access to a regular healthcare provider	83.7%	82.2%	90.3%	79.4%
Percentage of LPNs relative to RNs	38%	30%	47%	39%
Percentage of NPs relative to Family Medicine Physicians ²	9%	7%	19%	4%
Percentage of facility based beds in a community setting ³	78%	N/A	N/A	N/A
Median wait (number of weeks) from referral by GP to treatment ⁴	26.1	23.2	15.7	15.8

Note:

- (1) Age / gender-standardized rates are used to account for the differences in the age and gender structure of the populations being compared. The population is mathematically adjusted to have the same age and gender structure as the comparator populations.
- (2) Family Medicine includes the specialties of general practice, emergency family medicine and family medicine
- (3) Mental Health and Addictions, Continuing Care (LTC & SL) and Sub-Acute beds are considered community based care; there is no interjurisdictional data accessible for this
- (4) The 'median wait (number of weeks) from a referral by a GP to treatment' is based on a 2018 Fraser Institute report. In discussions with AH / AHS this measure may not be readily available in the future as the data source is based on a survey administered by the Fraser Institute.

Source: Alberta Health and Alberta Health Services Analysis based on CIHI data, Statistics Canada and the Fraser Institute.

Comparison of Total to Physician Expenditure Growth (1 of 2)

Since 2002, Alberta has seen higher growth in both its overall health expenditure and its physician expenditures relative to comparator provinces, as depicted in the table on right and the figures on the following page.

Table 10: Provincial Health Expenditure Growth

	2002 (\$B)	2018 f (\$B)	% Growth
Alberta	\$7.70	\$22.30	190%
British Columbia	\$10.80	\$20.80	93%
Ontario	\$27.30	\$58.20	113%
Quebec	\$16.30	\$36.70	125%
Comparator Average	\$18.13	\$38.57	113%

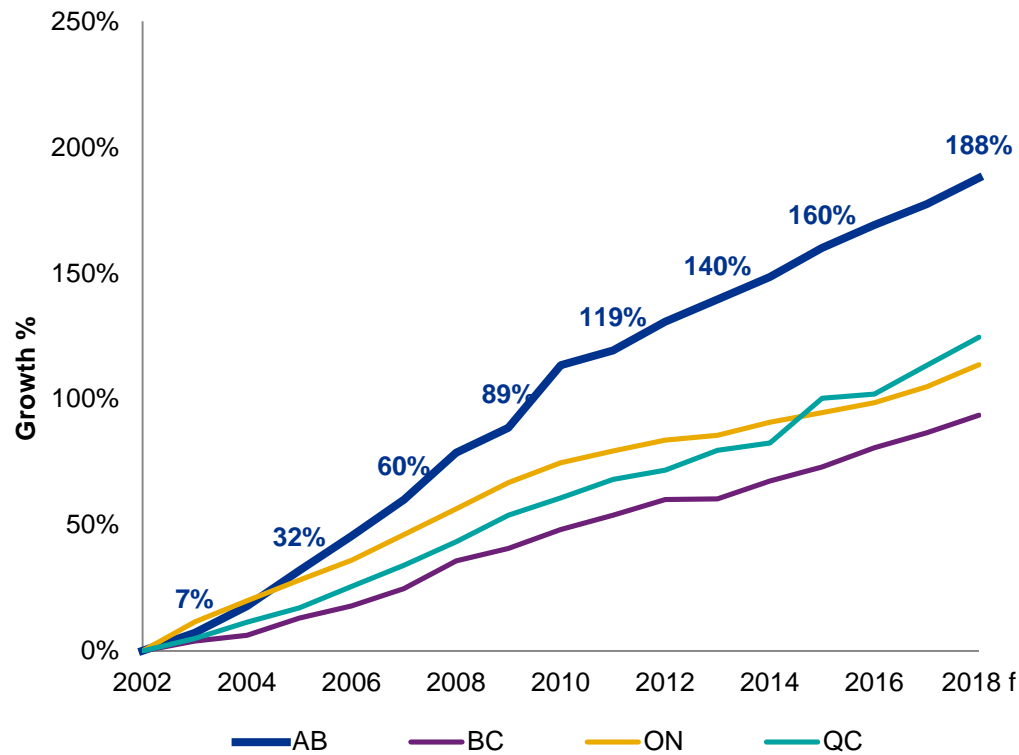
Table 11: Provincial Physician Expenditure Growth

	2002 (\$B)	2018 f (\$B)	% Growth
Alberta	\$1.30	\$5.20	300%
British Columbia	\$2.40	\$4.60	92%
Ontario	\$6.10	\$14.30	134%
Quebec	\$2.90	\$8.10	179%
Comparator Average	\$3.00	\$9.00	200%

Note: Values used for 2017 & 2018 are forecasts. Comparator Average excludes Alberta.
Source: Alberta Health completed analysis of the CIHI National Health Expenditure Database.

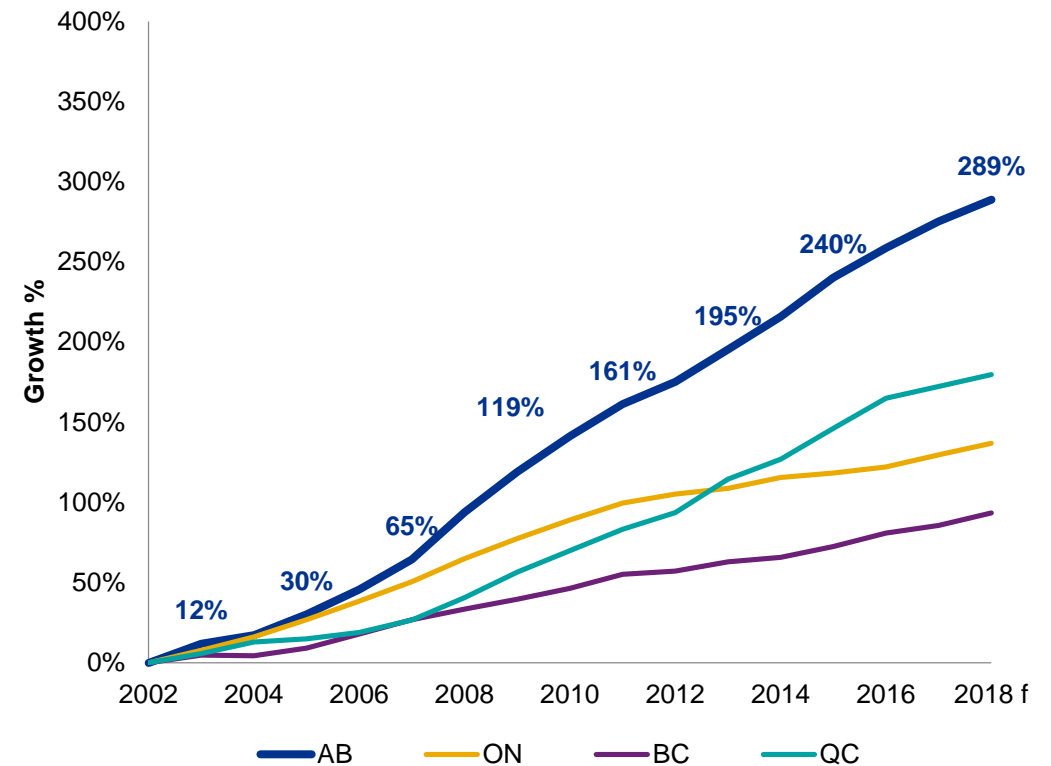
Comparison of Total to Physician Expenditure Growth (2 of 2)

Figure 28: Provincial Health Expenditure Growth



Note: Values used for 2017 & 2018 are forecasts.
 Source: Alberta Health completed analysis of the CIHI National Health Expenditure Database.

Figure 29: Provincial Physician Expenditure Growth



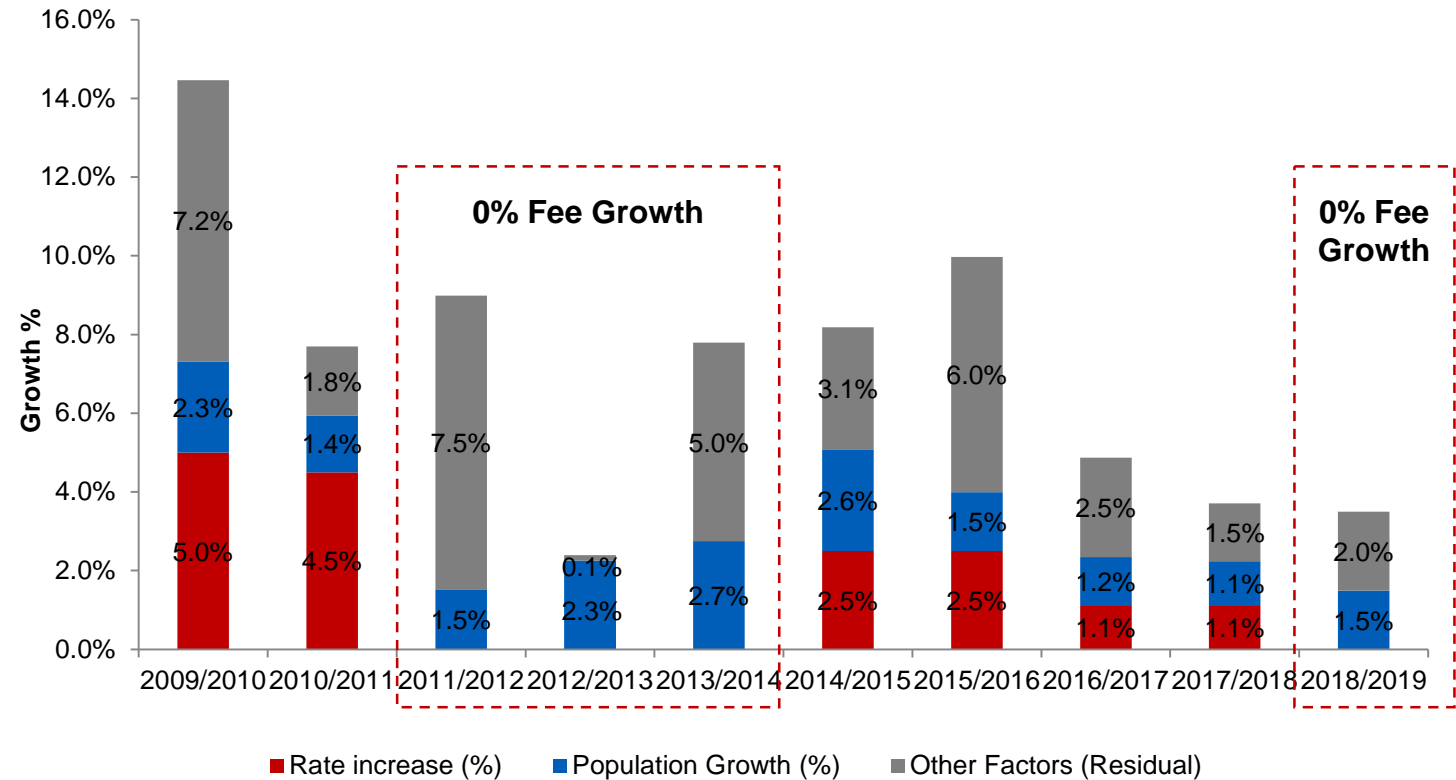
Note: Values used for 2017 & 2018 are forecasts.
 Source: Alberta Health completed analysis of the CIHI National Health Expenditure Database.

Physician Service Expenditures

Rate increases, population, and utilization growth are key drivers of the total growth in the physician services expenditure.

In 2018/19, physician services costs grew by 3.5% driven primarily by utilization as measured by population growth, and other factors (e.g., grant reallocations); physician rates were unchanged.

Figure 30: Component's of Alberta's Physician Service Expenditures



Note: Includes only comparable items to the existing AMA agreement such as FFS, AARPS, CARPS, Physician Benefit Pool, Rural Remote North Primary Physician (RRNP), Alt Relationship Plan PMO and Physician on Call Program. In 2018/2019, the Alt Relationship Plan PMO grant was rolled into the Physician Benefit Pool Grant. Some of the numbers may not add up to the totals.

Source: Alberta Health completed analysis of Alberta Health Physician Compensation, Benefits, and Other Initiatives (actual spending), OSI-Statistics Canada Population Estimates.

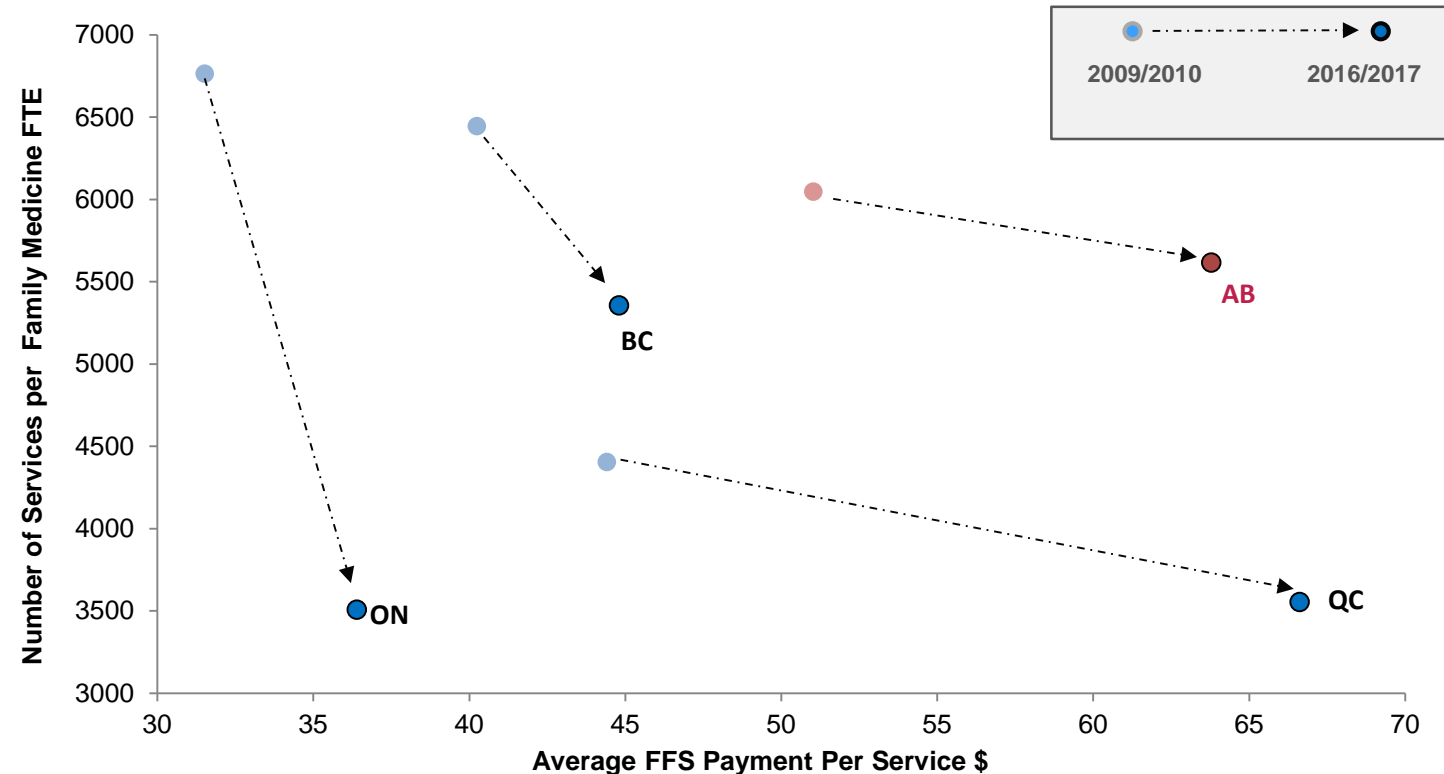
Family Medicine Physician Service Payments

Since 2009/10, Family Medicine Physician average service volumes have declined in all comparator provinces, despite fee increases.

From 2009/10 to 2016/17, the average service volume provided by an Albertan family medicine physician FTE fell by 7% while the average cost per service increased by 37%.

Alberta ranks 2nd highest in fee for service payment rates per service with an average rate of \$64.

Figure 31: Comparison of Fee for Service Payments and Number of Services per FTE Family Medicine Practitioner



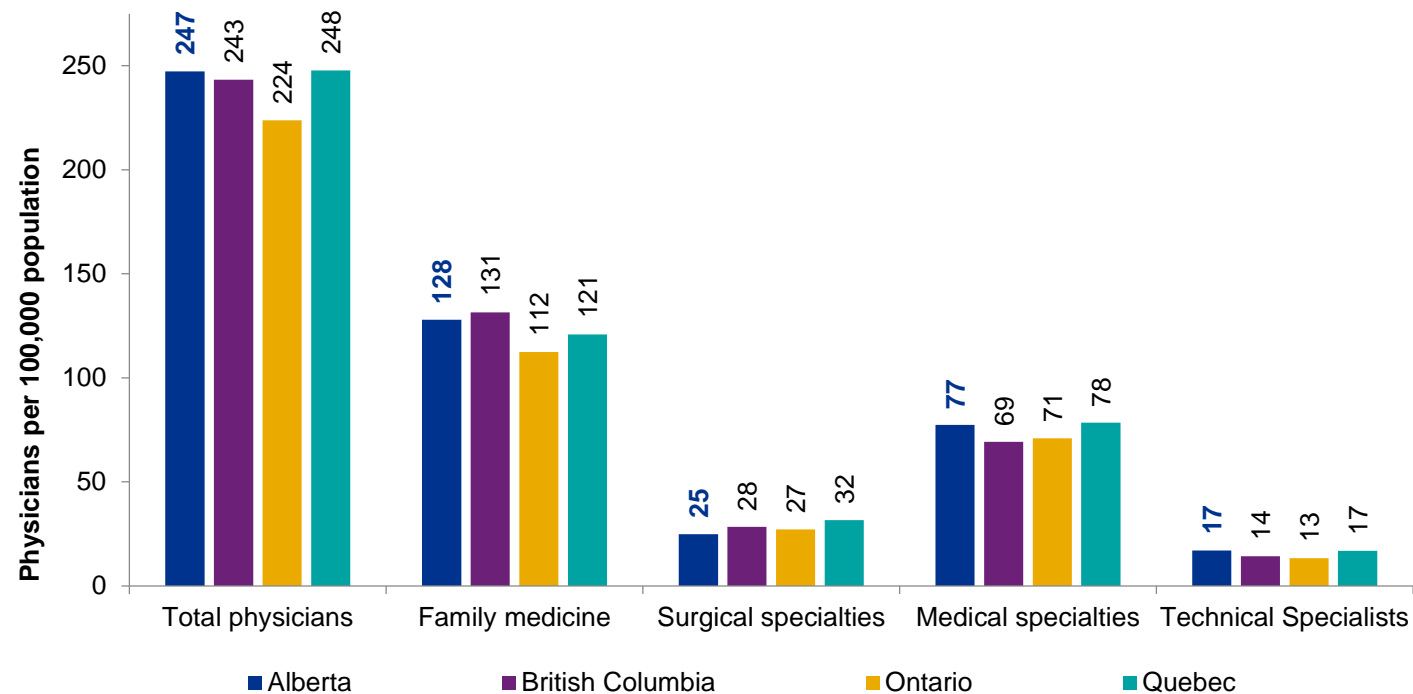
Note: In 2016/17, CIHI's methodology for physicians' Full-Time Equivalent (FTE) for AB and SK was based on FFS payments only, while in other provinces total clinical payments were used.

Source: Alberta Health completed analysis of CIHI National Physician Database.

Number of Physicians

Alberta ranks highest in terms of the supply of technical specialists, 2nd highest in terms of total physicians, family medicine physicians, and medical specialists, and 4th highest in terms of surgical specialists, relative to the comparator provinces.

Figure 32: Physicians per 100,000 Population by Specialty



Note: Technical Specialists include Nuclear medicine, Diagnostic Radiology, Radiation Oncology and Laboratory Specialists. Medical Specialists exclude Nuclear medicine, Diagnostic Radiology, Radiation Oncology.

Source: Alberta Health completed analysis of CIHI Scott's Medical Database 2017, Table 3.0.

Physician Migration

Of all the provinces, Alberta is ranked 2nd highest in terms of interprovincial net in-migration and 4th highest in terms of the physician retention rate.

Table 12: Physicians Migrating Between Canadian Provinces

Province	Total Physicians Residing in 2016	Total Physicians Residing in 2017	Physician Retention Rate	Retention Rate Rank	Net In-migration	Net In-migration Rank
Ontario	30,664	30,733	99.7%	2	69	1
Alberta	10,241	10,293	99.6%	4	52	2
N.B.	1,731	1,737	99.2%	5	6	3
P.E.I.	278	275	98.6%	7	-3	4
Quebec	20,207	20,203	99.8%	1	-4	5
Manitoba	2,731	2,724	99.1%	6	-7	6
Sask.	2,261	2,243	98.4%	8	-18	7
B.C.	11,522	11,492	99.6%	3	-30	8
N.L.	1,301	1,269	96.8%	10	-32	9
N.S.	2,449	2,413	98.2%	9	-36	10

Note: Physician retention rate refers to the percentage of residing physicians in 2016 who continue to practice in the same province in 2017.

Source: Alberta Health completed analysis of CIHI Scott's Medical Database 2017, Table 4.0.

Alternative Payment Programs

Alternative payments programs (APP) in Canada have been on the rise since 2001/02.

Alberta has the lowest percentage of payments for APP in Canada.

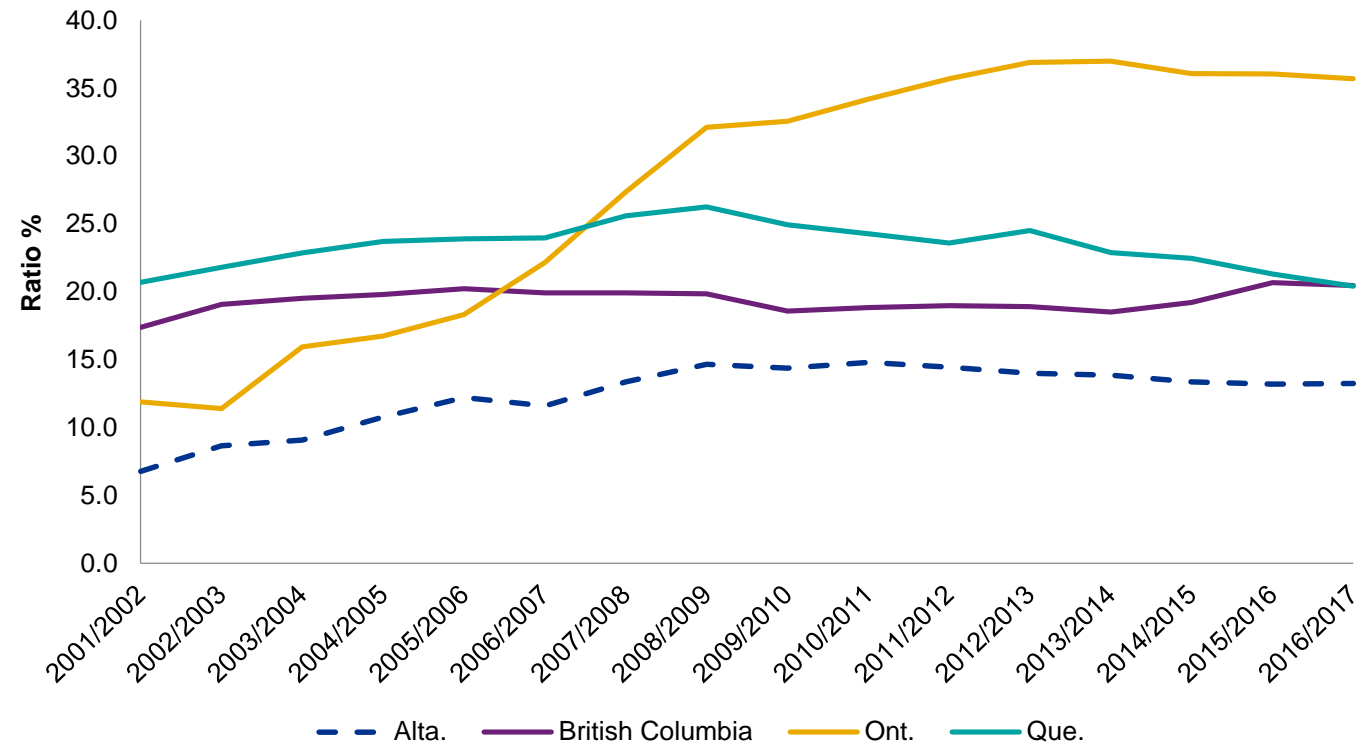
Alberta's total APP payments as a percentage of total clinical payments grew by a modest 1.6% between 2006/07 and 2016/17.

Recent trends show downward pressure on APP payment usage (14.4% in 2011/12 to 13.5% in 2016/17).

Table 13: Annual Alternative Payment Program as a % of All Clinical Payments

Change across 10 years (2006/2007 to 2016/2017)			
Year	2006/2007	2016/2017	Difference
Alberta	11.6%	13.2%	1.6%
British Columbia	19.9%	20.5%	0.6%
Ontario	22.2%	35.7%	13.5%
Quebec	24.0%	20.4%	-3.6%
Comparator Average	22.0%	25.5%	3.5%

Figure 33: Annual Alternative Payment Program as a Percentage of All Clinical Payments

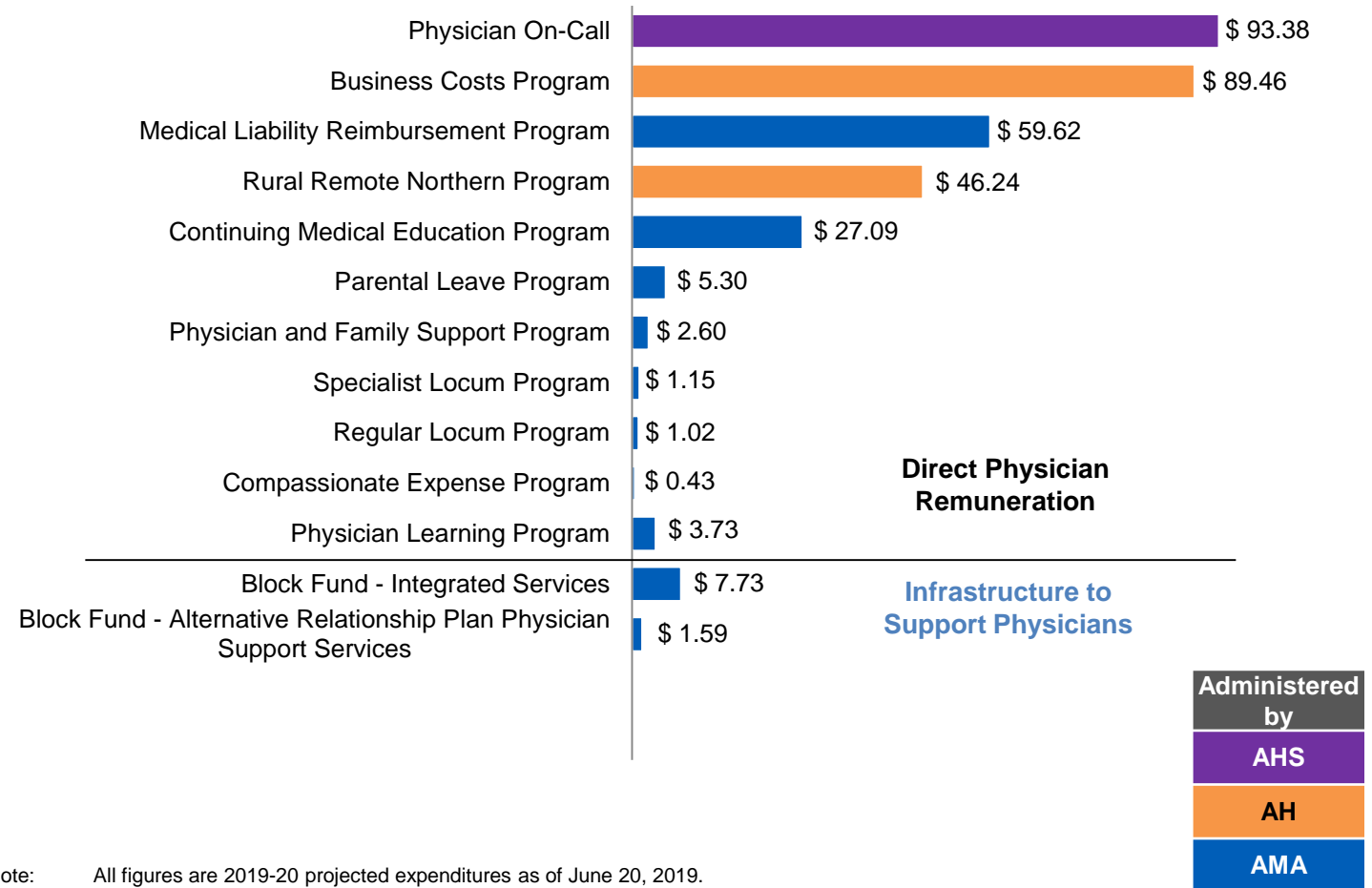


Source: Alberta Health completed analysis of CIHI National Physician Database, Historical Payments and HEF Calculations.

Physician Benefit Programs

Forecasted expenditures of the 13 Alberta Health funded physician benefit programs totaled \$337 million in FY2019-20.

Figure 34: Physician Benefit Program Expenditures (in millions)



Note: All figures are 2019-20 projected expenditures as of June 20, 2019.

Source: Alberta Health completed analysis of financial results.

Health Workforce

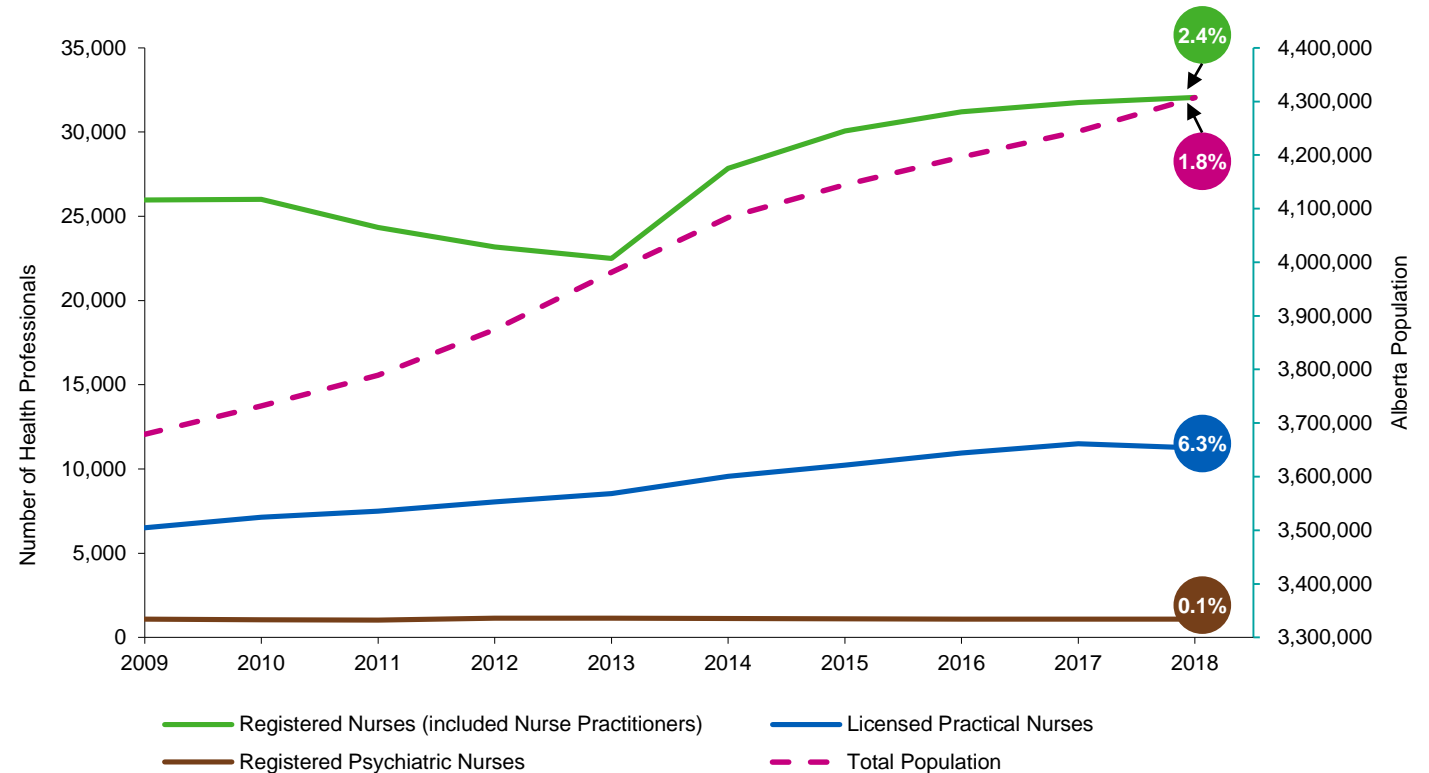
The number of LPNs in Alberta has grown by 73% or 6.3% CAGR from 2009 to 2018. By comparison, RPNs have grown by 0.1% CAGR and RNs by 2.4% CAGR.

Alberta has the highest per capita number of Registered Nurses across the comparator provinces.

Table 14: Number of health workforce professionals (head count) per 100,000 population

Per 100,000 pop.	AB	BC	ON	QC
Number of Family Medicine Physicians	128	131	112	122
Number of Specialist Physicians	119	112	112	127
Number of Registered Nurses (included Nurse Practitioners)	744	654	625	740
Number of Licensed Practical Nurses	261	211	304	273
Number of Registered Psychiatric Nurses	25	45	N/A	N/A

Figure 35: Growth of Nursing Professionals in Alberta



Note: Number of physicians is based on 2017 data, while other sources are based on 2018 data; based on CIHI's reporting of data, separate numbers for Nurse Practitioners are not available over this time period.

Source: CIHI Health Workforce Data 2009 to 2018, and Statistics Canada Population data, Table 17-10-0005-01.

Health Workforce Scope of Practice (1 of 3)

The table below describes the scope of restricted activities for several key health professions in Alberta. Physicians have the broadest scope of practice in Alberta.

Table 15: Scope of Restricted Activities by Key Health Professions in Alberta

Health Profession	#	Degree	Avg. Salary	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Physicians – Specialist	5,652	Doctorate	\$526,664	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Physicians - General Practitioner	3,477	Doctorate	\$391,539	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Nursing - Licensed Practical Nurse	16,657	Diploma	\$53,371	●	●	●			○		○		●	●				○	●		
Nursing - Nurse Practitioner	606	Graduate	\$92,569	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	
Nursing - Registered Nurse	37,853	Baccal.	\$80,129	●	●		●				●	○	○	○	○				●	●	
Nursing - Registered Psychiatric Nurse	1,411	Diploma	\$80,129	●	●		●		●	●	●	●	●	●	●	●			●	●	
Emergency Medical Personnel (Technicians and Responder)	9,440	Certificate	\$62,978	●	●	●	●							●							
Pharmacist	5,559	Baccal.	\$98,037	●				●	○		●	●									
Midwife	132	Baccal.	\$92,569	●	●				●	●	●			●			●			●	

Legend: Scope of practice for restricted activities: ● Complete ● Complete / Partial ○ Partial ○ Partial / Limited ○ Limited

Note: Based on 2018 information. Estimate for average salary for physicians based on fee for service billing information; other salary costs based on the most recent information available on ALIS.

Source: Analysis based on Alberta Health supplied information.

List of Restricted Activities

- A. Performing a prescribed procedure on tissue below the dermis or mucous membrane
- B. Inserting or removing instruments, devices, fingers or hands into natural or artificial body openings
- C. Setting or resetting a fracture of a bone
- D. Reducing a dislocation of any joint
- E. Using a deliberate, brief, fast thrust to move the joints of the spine beyond the normal range
- F. Prescribing a Schedule 1 drug within the meaning of the *Pharmacy and Drug Act*
- G. Dispensing, compounding or selling a Schedule 1 or 2 drug within the meaning of the *Pharmacy and Drug Act*
- H. Administering a vaccine or parenteral nutrition
- I. Prescribing, compounding or administering blood or blood products
- J. Prescribing or administering diagnostic imaging contrast agents
- K. Prescribing or administering anesthetic gases, including nitrous oxide (for anesthesia or sedation)
- L. Prescribing or administering radiopharmaceuticals, radiolabelled substances, radioactive gases or radioaerosols
- M. Ordering or applying any form of ionizing radiation in medical radiography, nuclear medicine or radiation therapy
- N. Ordering or applying any non-ionizing radiation in lithotripsy, MRI or ultrasound imaging (including ultrasound to fetus)
- O. Prescribing or fitting an orthodontic or periodontal appliance, dentures or an implant-supported prosthesis
- P. Performing a psychosocial intervention
- Q. Managing labour or delivering a baby
- R. Prescribing or dispensing corrective lenses

Health Workforce Scope of Practice (2 of 3)

The following tables outline the scope of practice within the nursing professions in Alberta and the comparator provinces. Alberta's nurse professions are able to provide as much care as other provinces, and in some instances more care (for example, compared to Quebec, Alberta's Nurse Practitioners can provide more services).

Table 16: Scope of Practice for Registered Nurses

Registered Nurses	Assessment		Care Planning and Coordination				Practice			Evaluation
	Complete comp. evaluation	Diagnose	Engage patient	Document plan	Modify plan	Make decisions	Prescribe drugs	Perform Procedures	Order Tests	Monitor Outcomes
Alberta	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Limited	Not Allowed	Limited	Allowed
British Columbia	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Limited	Limited	Limited	Allowed
Ontario	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Limited	Not Allowed	Not Allowed	Allowed
Quebec	Allowed	Not Allowed	Allowed	Allowed	Allowed	Allowed	Limited	Not Allowed	Allowed	Allowed

Table 17: Scope of Practice for Nurse Practitioner

Nurse Practitioner	Assessment		Care Planning and Coordination				Practice			Evaluation
	Complete comp. evaluation	Diagnose	Engage patient	Document plan	Modify plan	Make decisions	Prescribe drugs	Perform Procedures	Order Tests	Monitor Outcomes
Alberta	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed
British Columbia	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed
Ontario	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed
Quebec	Allowed	Not Allowed	Allowed	Allowed	Allowed	Allowed	Limited	Allowed	Allowed	Allowed

Health Workforce Scope of Practice (3 of 3)

Table 18: Scope of Practice for Licensed Practical Nurse





Licensed Practical Nurse	Assessment		Care Planning and Coordination				Practice			Evaluation
	Complete comp. evaluation	Diagnose	Engage patient	Document plan	Modify plan	Make decisions	Prescribe drugs	Perform Procedures	Order Tests	Monitor Outcomes
Alberta	Limited	Limited	Allowed	Allowed	Allowed	Limited	Not Allowed	Not Allowed	Not Allowed	Allowed
British Columbia	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Not Allowed	Not Allowed	Not Allowed	Allowed
Ontario	Allowed	Limited	Allowed	Allowed	Allowed	Limited	Not Allowed	Not Allowed	Not Allowed	Allowed
Quebec	Not Allowed	Not Allowed	Allowed	Not Allowed	Not Allowed	Not Allowed	Not Allowed	Not Allowed	Not Allowed	Undefined

Table 19: Scope of Practice for Registered Psychiatric Nurse

Registered Psychiatric Nurse	Assessment		Care Planning and Coordination				Practice			Evaluation
	Complete comp. evaluation	Diagnose	Engage patient	Document plan	Modify plan	Make decisions	Prescribe drugs	Perform Procedures	Order Tests	Monitor Outcomes
Alberta	Limited	Allowed	Allowed	Allowed	Allowed	Allowed	Limited	Not Allowed	Not Allowed	Allowed
British Columbia	Limited	Allowed	Allowed	Allowed	Allowed	Allowed	Undefined	Not Allowed	Not Allowed	Allowed
Ontario	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
Quebec	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined





Source: Analysis based on 2018 information drawn from various nursing organization and provincial government resources.

Health Business Model Differences (1 of 2)

				
Organization	Ministry of Health (includes Alberta Health Services)	Ministry of Health, Ministry of Mental Health & Addictions (includes Health Authorities and BC Vital Statistics Agency)	Ministry of Health and Long-Term Care (includes LHINs, eHealth Ontario Agency)	Ministry of Health and Social Services
Primary Funding Model	Fee for service, plus operating grants to support non-medical professional costs	Four funding models to fund physicians, the primary model being fee for services	Enhanced funding model, including fee model targeted to specific populations	Not currently available
Core Business	Comprehensive health system responsibility			
Additional Unique Responsibilities	N/A	Works in partnership with the First Nations Health Authority to improve health status of First Nations in BC	Provides for home and community services / supports through the LHINs for people of all ages who require care in their home, at school or in the community.	An integrated model of health and social services.
Unique Goals	<ul style="list-style-type: none"> Population health, focus on health professionals Sustainability Implementing Connect Care Enhancing care in the community 	<ul style="list-style-type: none"> Family care, rural services and enhanced / improved services for seniors 	<ul style="list-style-type: none"> To achieve better connected care Ontario is coordinating provincial health agencies and specialized provincial programs under a single agency, Ontario Health. Sustainability 	<ul style="list-style-type: none"> Meet rapid growth in seniors, chronic disease and increasing disability rates. Respond more effectively to needs of people suffering from chronic diseases, cognitive disorders and disabilities in daily life as well as inequalities related to poverty.

Source: Business Plans (Service Plans), Annual Reports and Ministry websites; Population data to inform per capita from Statistics Canada Table 17-10-0005-01.

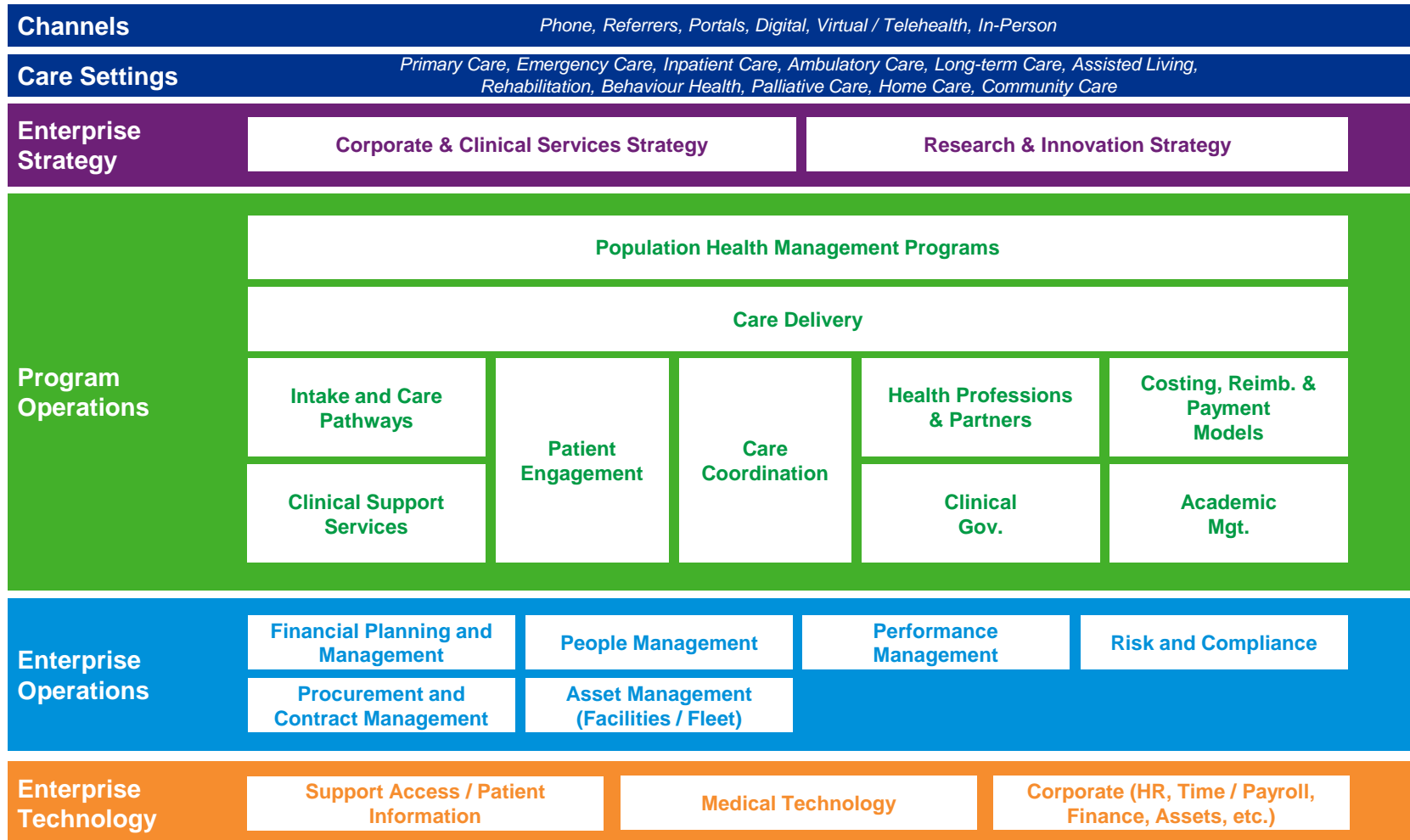
Health Business Model Differences (2 of 2)

				
Number of Health Authorities	1 ^(a)	1 Provincial Authority and 5 Regional Authorities	14 Local Health Integration Networks (LHIN)	Not currently available – includes Health regions, various health and social services institutions, and integrated centres.
Total Expenditures per Capita based on budget estimates ^(b)	\$5,113	\$3,977	\$4,149	Not available
Total Expenditures per Capita based on CIHI data ^(c)	\$ 5,077	\$ 4,267	\$ 4,080	\$ 4,370
Administration Expenditures per Capita based on CIHI data ^(d)	\$37	\$56	\$39	\$30

Note: (a) Also includes one large faith based provider of acute and continuing care; other provinces, for example, British Columbia have similar approaches using large faith based providers of acute care.
 (b) Based on Budget Estimates for Consolidated Operating Expenditures 2018-19.
 (c) Based on CIHI data for 2018-19 forecast.
 (d) Administration as per the CIHI National Health Expenditure source includes expenditures related to the cost of providing health insurance programs, and all costs for the infrastructure to operate health departments. i.e., information systems, finance, planning, policy development, etc.). Additional items may be included in other estimates for CIHI

Source: Business Plans (Service Plans), Annual Reports and Ministry websites; CIHI national health expenditure data; Population data to inform per capita from Statistics Canada Table 17-10-0005-01.





Connected Enterprise Framework for Health



Health Expenditure Comparisons

Table 20: Health Budget Estimates 2018-19

% of Total Expenses // Per Capita Exp.

								
Enterprise Strategy	1.1%	\$56	0.05%	\$2	0.15%	\$6		
Program Operations	89.6%	\$4,554	87.5%	\$3,478	94.2%	\$3,910		
Population Health Management Programs	2.8%	\$144	5.8%	\$229	4.3%	\$179		
Care Delivery	46.8%	\$2,392	81.7%	\$3,248	45.8%	\$1,898		
Intake and Care Pathways	0.1%	\$6	-	-	0.04%	\$2		
Clinical Support Services	14.4%	\$735	0.01%	<\$1	11.7%	\$485		
Patient Engagement	0.3%	\$13	-	-	0.3%	\$10		
Care Coordination	-	-	0.02%	\$1	-	-		
Health Professionals & Partners	1.6%	\$81	-	-	0.01%	\$1		
Clinical Governance	0.1%	\$3	-	-	0.2%	\$9		
Costing, Reimbursement & Payment Models	22.8%	\$1,166	-	-	30.7%	\$1,274		
Academic Management	0.3%	\$14	-	-	1.3%	\$53		
Enterprise Operations	7.1%	\$365	12.5%	\$497	4.6%	\$190		
Enterprise Technology	2.7%	\$139	-	-	1.0%	\$43		
Total Expenditures per Capita	\$5,113		\$3,977		\$4,149			

As Quebec's Ministry of Health and Social Services delivers an integrated portfolio of programs, KPMG was unable to separate the expenses for the different sectors. Appendix A includes a summary of the combined view of the Health and Community and Social Services Connected Enterprise analysis across the comparator provinces

Note: Consolidated views for British Columbia do not exist and for Ontario are limited and not detailed; expenditures by health authority / LHIN for these provinces were included using estimating assumptions. Based on validation by Alberta Health and Alberta Health Services there is greater reliability in how the budget estimates have been mapped and allocated across the Connected Enterprise model. The same level of reliability is not present with the figures for British Columbia and Ontario as this was based on similar line item descriptions to Alberta and / or based on experience.

Source: Analysis of Budget Estimates for 2018-19 for Alberta, British Columbia and Ontario; Population data to inform per capita expenditures from Statistics Canada Table 17-10-0005-01.

Innovative Models in Health (1 of 6)

There are numerous examples of innovative practices and alternative approaches being used around the world to improve population health outcomes while also improving the efficiency of the overall health system and/or increasing the value for money. The following illustrates just a few of the many innovative approaches that are in practice today.

Practice	Description	Known / Identified Results	Further Information / Source
Global funding models for physician pay that incentivize team results and focus on social determinants of health	<p>Community Health Centres (CHC) are typically non-profit primary care organizations that provide integrated health care and social services, with a focus on addressing the social determinants of health. CHCs have been an effective but under-valued model for delivering primary health care for decades in Canada and the US.</p> <p>One of the unique features of the model is its strong focus on the social determinants of health and preventing acute illness among groups who are more likely to experience poor health and suffer from chronic conditions, including low-income people, ethno-cultural communities, Indigenous peoples, and frail seniors.</p> <p>In Canada, CHCs in Ontario are globally funded (one funding envelope to cover all operating and staffing costs) by the Ontario Ministry of Health through their respective Local Health Integration Network (LHIN) (similar to BC's regional health authorities) and accountable to their LHIN.</p>	<p>Critical to the success has been the global funding model where the physician is paid a salary (with pension and benefits) as it incentivizes team results. It provides considerable flexibility to the CHC to hire staff and develop services appropriate to the specific needs of their patient population, shift funding priorities in response to changes in community needs and demographics and opens up opportunities to develop innovative funding partnerships to support new community initiatives, sector-wide improvement strategies and needed infrastructure.</p> <p>In contrast when physicians are compensated on a fee-for-service model disincentives are created to working with other providers and developing collaborative strategies for improving quality and cost-effectiveness of care.</p> <p>There are many other examples that support alternative pay models to fee-for-service. Also refer to the recent KPMG report referenced at the end of this section.</p>	https://www.policynote.ca/chcs-in-bc/

Note: This information does not represent KPMG's advice or opinion.



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Innovative Models in Health (2 of 6)

Practice	Description	Known / Identified Results	Further Information / Source
Consistent measurement and related compensation models that focus on health outcomes	<p>Kaiser Permanente is the largest integrated non-profit healthcare system in the United States, generating \$79.7B USD in operating revenues in 2018 alone with a “profit” of \$2.5B USD. While there has been debate as to its full applicability to Canada’s public system, there are aspects of the Kaiser model that should be considered.</p> <p>The Kaiser model stresses a consistent measurement and comparison of outcomes aligned with proper structure and incentives to encourage evidence-based care – a key component of a learning healthcare system. Also, Kaiser physicians are paid a salary for their services instead of fee-for-service compensation. Incentives for performance features such as access, patient satisfaction, and ensuring evidence-based care supplement physician salary as well as profit sharing through shareholder ownership.</p> <p>The model of capitation applied by Kaiser is analogous to capitated primary care models in Canada that have a goal of providing high-quality, affordable care and managing population health rather than generating high volume of services. Unlike most models in Canada, the Kaiser capitated payment model extends beyond family practitioners to specialists. It should also be noted that foundational to the Kaiser model being able to achieve the degree of integration with its entire care team is through seamless communication using integrated information technology.</p>	<p>Reforming health systems to improve patient care and increase value to payers requires change in the way health services are reimbursed. Practices in other jurisdictions are marrying changes to reimbursement with using outcome measures and aligning accountability structures with patient care goals.</p> <p>Some jurisdictions have had early success using fixed bundled payments for patient conditions that span the health system continuum. Others are introducing evidence-informed pricing models to improve outputs and outcomes for specific acute care procedures and treatment.</p>	Various sources on Kaiser Permanente

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Innovative Models in Health (3 of 6)

Practice	Description	Known / Identified Results	Further Information / Source
Information sharing across the broader health and social support systems to enable real time communication and coordination of services	<p>In Alberta, all of the medical facilities keep their own records of the services they provide to their patients. A copy of information that is considered “key health information” is now sent to Alberta Netcare allowing health care professionals at sites across the province to access that information whenever they need it.</p> <p>While, Alberta has made great strides, along with Ontario and Manitoba which also appear to be either above or equal to the national average with respect to the use of both information and communication technologies and the use of electronic medical records (EMR) in their primary care practices (Canadian Institute for Health Information, 2016), the Northwest Territories is the only jurisdiction in Canada with a fully interoperable and jurisdiction-wide EMR.</p> <p>More specifically no jurisdiction in Canada (apart from small scale initiatives) other than NT offers EMRs that can facilitate information sharing between patients/caregivers and providers beyond traditional medical professionals to access information and engage in real-time communication through a digital charting system.</p> <p>Alberta is currently working on a Connect Care initiative that will address approximately 65% of the 1,300 clinical and administrative information systems as well as the work done in launching “My Health Record,” which provides a patient centric view of their personal health record.</p>	<p>There is evidence to suggest effective care transitions between acute and community settings requires comprehensive planning for discharge, improved communication between providers and with clients, medication reconciliation and management, patient and caregiver education, and timely primary care follow-up and supports in the community and/or home.</p>	<p>NAO Rapid Review https://ihpme.utoronto.ca/research/research-centres-initiatives/nao/rapid-reviews/rapid-review-2/</p>

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Innovative Models in Health (4 of 6)

Practice	Description	Known / Identified Results	Further Information / Source
An increasing number of jurisdictions are introducing programs to engage and better leverage the private sector to drive both efficiency in service delivery and innovative solutions for care	<p>Founded in 2012 by Stephen Johnston and Katy Fike, Aging2.0 strives to accelerate innovation to address the biggest challenges and opportunities in aging. Aging2.0's international, interdisciplinary and intergenerational community has grown to 40k+ innovators across 20+ countries, including five chapters in Canada, although none in Alberta.</p> <p>Aging 2.0 recent research discovered an increasing number of startups operate on the social determinants of health, in particular social inclusion. Experts in aging have always emphasized the importance of "whole person" care, rather than purely just treating the clinical symptoms, and this is the direction that healthcare as a whole is heading. Moreover, many promising areas for innovation including wearables, smart homes, voice interface, robots, and autonomous vehicles are being driven from outside healthcare entirely. Government alone cannot deliver this kind of innovation and needs to be able to direct funding to the private sector to innovate at the pace needed.</p> <p>In Canada, the use of private clinics in Saskatchewan provides an excellent example of leveraging the private clinics to deliver specific procedures more affordably. Comparing the cost of performing 34 procedures in private clinics and in hospitals shows that in all cases the clinics were less expensive. The cost savings varied across procedures, but it should be noted that in four cases it was twice as expensive to perform procedures in hospitals relative to the clinics.</p>	<p>Reforming the health system requires challenging the traditional focus of the health system and to broaden the focus on the social determinants of health.</p> <p>This is particularly important when addressing the aging population and the need to support seniors care outside of traditional facilities.</p>	<p>https://www.aging2.com/blog/new-aging20-report-on-the-state-of-global-innovation-in-aging-and-senior-care/</p>

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Innovative Models in Health (5 of 6)

Practice	Description	Known / Identified Results	Further Information / Source
Other common innovative practices emerging include enhanced use of technology to support rural and remote health, public health initiatives and enabling seniors to stay in their homes and communities longer.	<p>The Program of All-Inclusive Care for the Elderly (PACE) in the US is a model of care to promote effective and efficient treatment of patients with multiple chronic conditions outside of the hospital setting. PACE incorporates interdisciplinary team care and an adult daycare to meet the needs of older adults with multiple chronic conditions, helping them remain in the community.</p> <p>Norway redesigned senior homes to make them more suitable for elderly with cognitive impairments. Use of technology to keep elderly in the home, e.g. a smart stove, kettle, fridge, mattress. Integrated teams support the elderly within the community, funding is provided to coordinate services as well as penalties charged for allowing "bed-blockers" (individuals who occupy acute care beds) that could be transferred.</p> <p>The Geisinger Health System in the US delivers community care, ambulatory services, acute care and specialty hospitals, and developed the ProvenHealth Navigator to improve care coordination for people who require significant medical services. At-risk patients are monitored at home through a virtual care management support system, and a nurse contacts the patients when there are abnormalities. A personal patient navigator responds to patients' questions 24/7. This program has resulted in marked reductions in ER visits, hospital readmissions and in-patient costs.</p>	<p>New approaches and use of technology to deliver inter-professional care and teams and introducing new roles to support different patient populations, particularly those who are frequent users of acute care services have demonstrated better health outcomes at lower cost.</p>	<p>https://www.medicaid.gov/medicaid/ltss/pace/index.html</p> <p>https://www.geisinger.org/</p>

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Innovative Models in Health (6 of 6)

Practice	Description	Known / Identified Results	Further Information / Source
Various	<p>A recent KPMG publication includes examples of practices applicable to Canada covering</p> <ul style="list-style-type: none"> ▪ International Medical Graduates ▪ Rural Practice ▪ Scope of Practice ▪ Operational Excellence 	N/A	https://assets.kpmg/content/dam/kpmg/ca/pdf/2019/06/24149-igh-mark-britnell-book-v5-web.pdf

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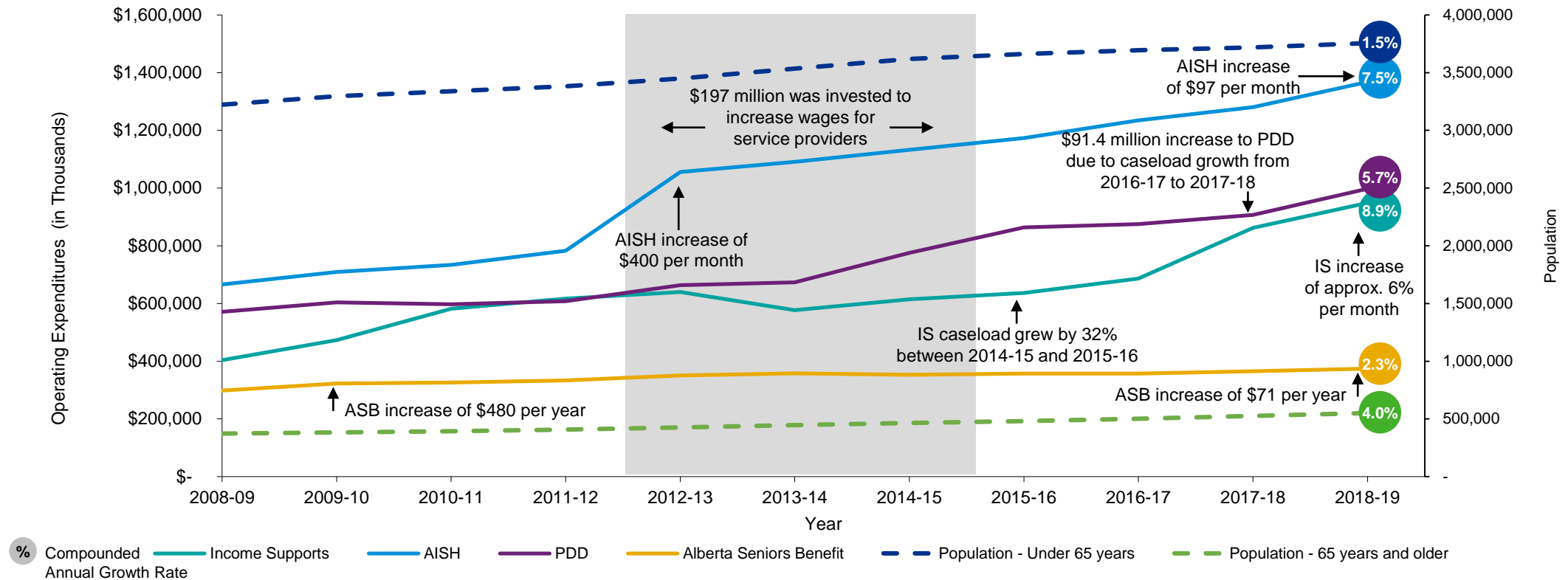


Community & Social Services (including Seniors)



Key Trends for CSS (incl. Seniors) in Alberta

Figure 36: 10 Year Trend for Alberta's Major Expenditures in Community and Social Services (incl. Seniors)



Note: Health benefits associated with Income Supports and AISH were transferred to Alberta Health in 2014-15; these amounts were added back to the above data to provide a comparable 10 year trend line.

Source: Analysis of Budget Estimates from 2008-09 to 2018-19 for Alberta; Population data from Statistics Canada Table 17-10-0005-01.

Caseloads

Caseloads for the AISH, FSCD and PDD programs have increased year-over-year in Alberta. According to the Ministry of Community and Social Services, this trend is expected to continue for 2018/19 and into the foreseeable future.

Caseloads were only available for AISH, FSCD and PDD programs. No comparator caseload data was publicly available for any of the programs. Caseloads for AISH, FSCD and PDD are outside of Alberta's approved benchmark ranges.

Figures 37 and 38 (on the following page) show the 10 year growth in the average monthly caseloads and the average monthly cost per case across the various CSS programs from 2008/09 to 2018/19:

- The Expected to Work or Working (Income Support) caseload increased by 8.4% CAGR and the cost per case increased by 1.5% CAGR.
- The People with Barriers to Full Employment (Income Support) caseload increased by 6.4% CAGR and the cost per case increased by 2.2% CAGR.
- The AISH caseload increased by 5.1% CAGR and the cost per case increased by 4.3% CAGR.
- The PDD caseload increased by 3.2% CAGR and the cost per case increased by 2.9% CAGR.
- The FSCD caseload increased by 4.9% CAGR and the cost per case increased by 1.1% CAGR.

Table 21: Workloads by Program

Program	Role	No. of FTEs (1)	Current Caseload (1)	Approved Benchmark Ranges	Current Caseload per FTE
Assured Income for the Severely Handicapped	AISH Generalist	198.9	60,644	225 to 265	305
Family Support for Children with Disabilities	FSCD Worker	245 (combined for both roles)	13,173	85 to 100	108
Persons with Development Disabilities	PDD Coordinator		12,035	80 to 95	98

Table 22: Caseload Growth (Actual and Forecast)

Program	207/18 Growth (Actual)	2018/19 Growth (Est.)	2019/20 Growth (Est.)	2020/21 Growth (Est.)
Assured Income for the Severely Handicapped	6.6%	5.0%	4.4%	5.0%
Family Support for Children with Disabilities	10.8%	8.0%	8.4%	7.5%
Persons with Development Disabilities	4.9%	5.0%	5.0%	5.0%

Note: (1) As of September 2018.

Source: Analysis of Alberta Community and Social Services information on workload benchmark ranges and forecasted caseload growth.

Average Caseloads and Costs per Case

Figure 37: 10 Year Alberta Average Monthly Caseload

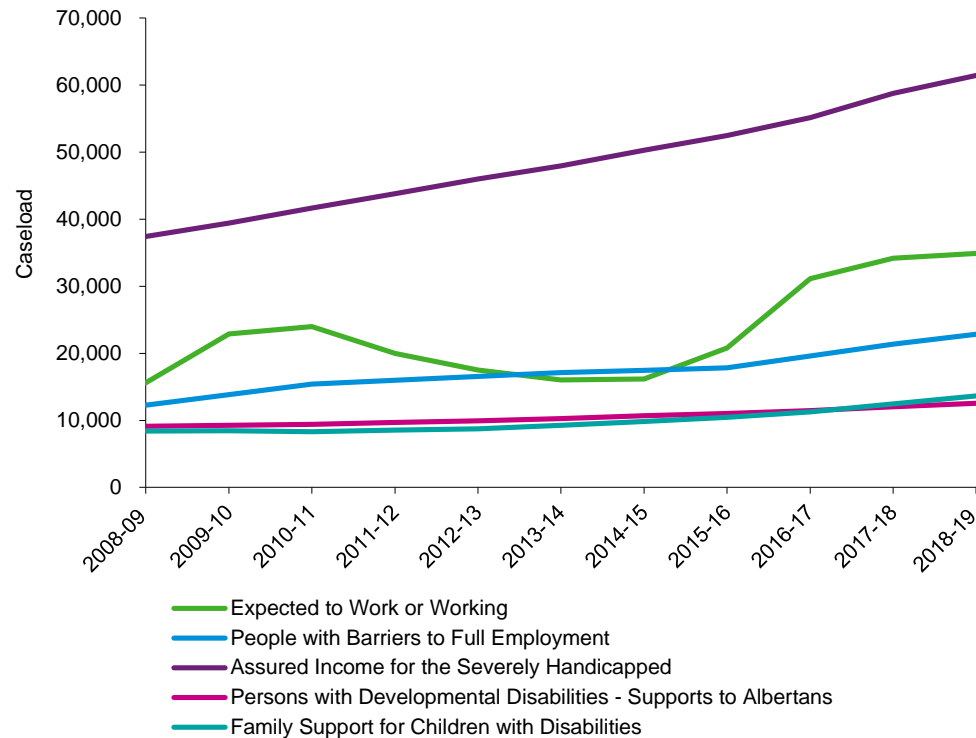
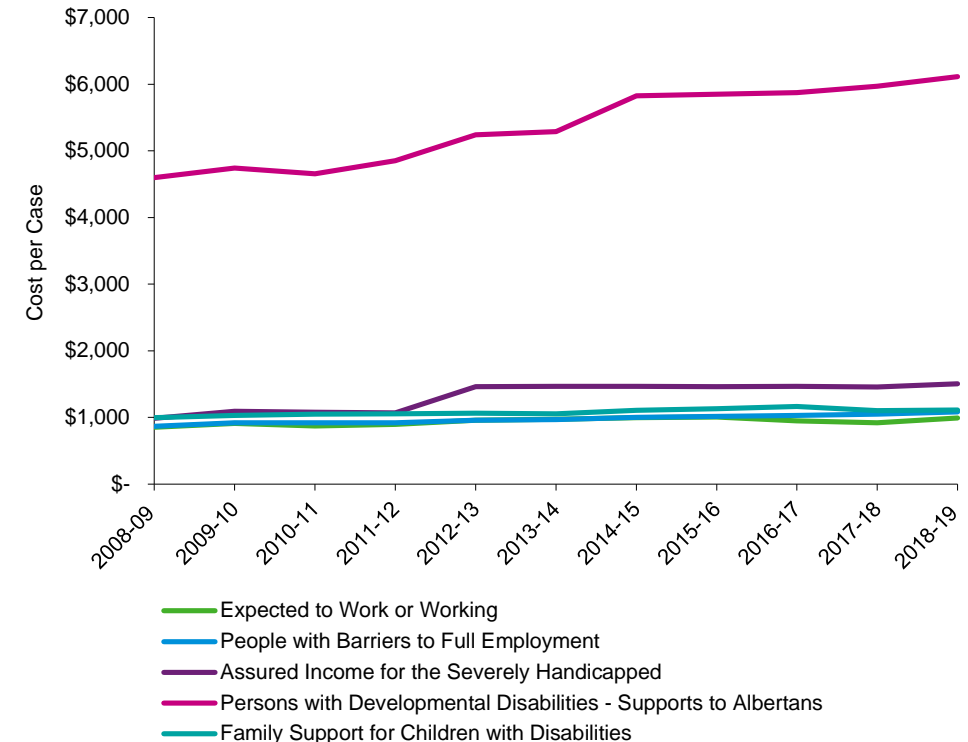


Figure 38: 10 Year Alberta Average Monthly Cost per Case



Source: Analysis of Alberta Community and Social Services caseload and cost data.

Source: Analysis of Alberta Community and Social Services caseload and cost data.

Indexation of Financial Assistance

The indexation arrangements for major income assistance programs (other than for seniors) identified are shown in Table 23. Of the comparator provinces, Quebec and Alberta index financial assistance rates. Outside of these comparators, Manitoba indexes its rental assistance benefit to 75% of the median market rent for Winnipeg; no other benefits are indexed.

Table 23: Indexation Arrangements by Province

AB	BC	ON	QC
Annually (as of January 2019)	None; rates were increased in 2017	None	Annually; basic amounts indexed by CPI (excluding alcohol and tobacco)

The following changes to payment arrangements have been identified in other provinces.

- Ontario increased its income 'free' area for Ontario Works from \$200 to \$300, and from \$2,000 to \$6,000 per year for the Ontario Disability Support Program in 2019. This means people on benefits who earn more are able to retain more of their earnings.
- In Quebec, the Aim for Employment program replaced Social Assistance for new cases (expected to work or working) in 2018, with a rate of \$669 per month (previously \$805 per month). A labour market plan is prepared for every participant, and the program is compulsory for 12 months.
- Saskatchewan announced (June 18, 2019) a new Income Support program, beginning July 2019. Features include:
 - Monthly earned income exemptions increased to allow clients to keep more of their earnings;
 - Motivational interviewing to support clients to make positive decisions and reach their goals;
 - A new online application process, saving time and paperwork;
 - A simpler benefit structure, to reduce paperwork and increase the time staff can spend helping clients.

Source: Analysis of information collected from the governments of Ontario, British Columbia, Quebec, Manitoba, and Saskatchewan websites.

Seniors in Alberta (1 of 2)

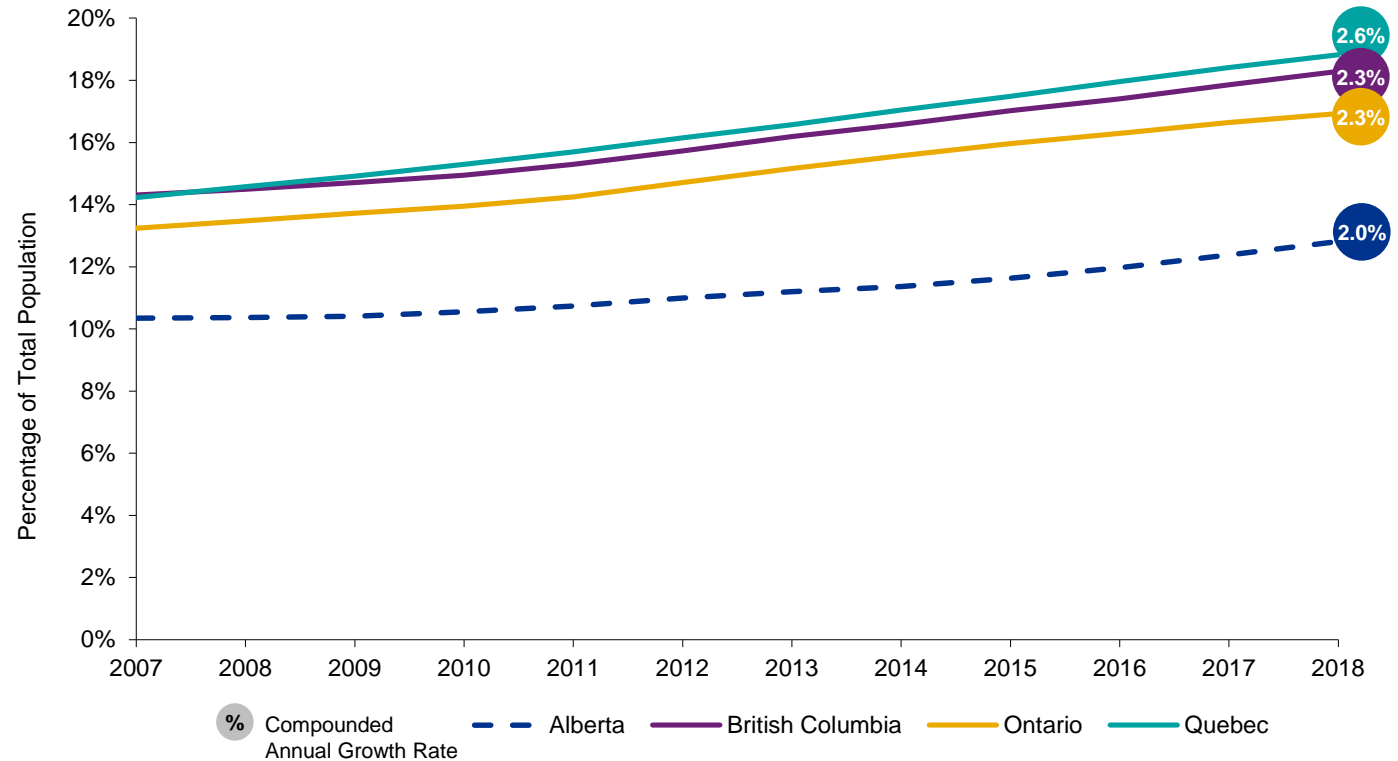
Alberta's total seniors population is growing faster than the comparator provinces, but has the lowest proportion of seniors to its total population.

Between 2007 and 2018, the total number of people over the age of 65 grew by 52% (or 3.9% CAGR), compared to an average of 45% (3.5% CAGR) across the other provinces.

As a percentage of the total population, the growth of the seniors population in Alberta has not been as high as the comparator provinces, as depicted in Figure 39.

There are fewer people aged over 65 in Alberta compared to other provinces (12.8% in 2018 compared to an average of 18% in the comparator provinces), and the rate of growth in this indicator has also been slower, increasing by 24% (2% CAGR) points compared to an average of 29% (2.4% CAGR) across other provinces (2007-2018).

Figure 39: Change in Proportion of Total Population 65 years and older

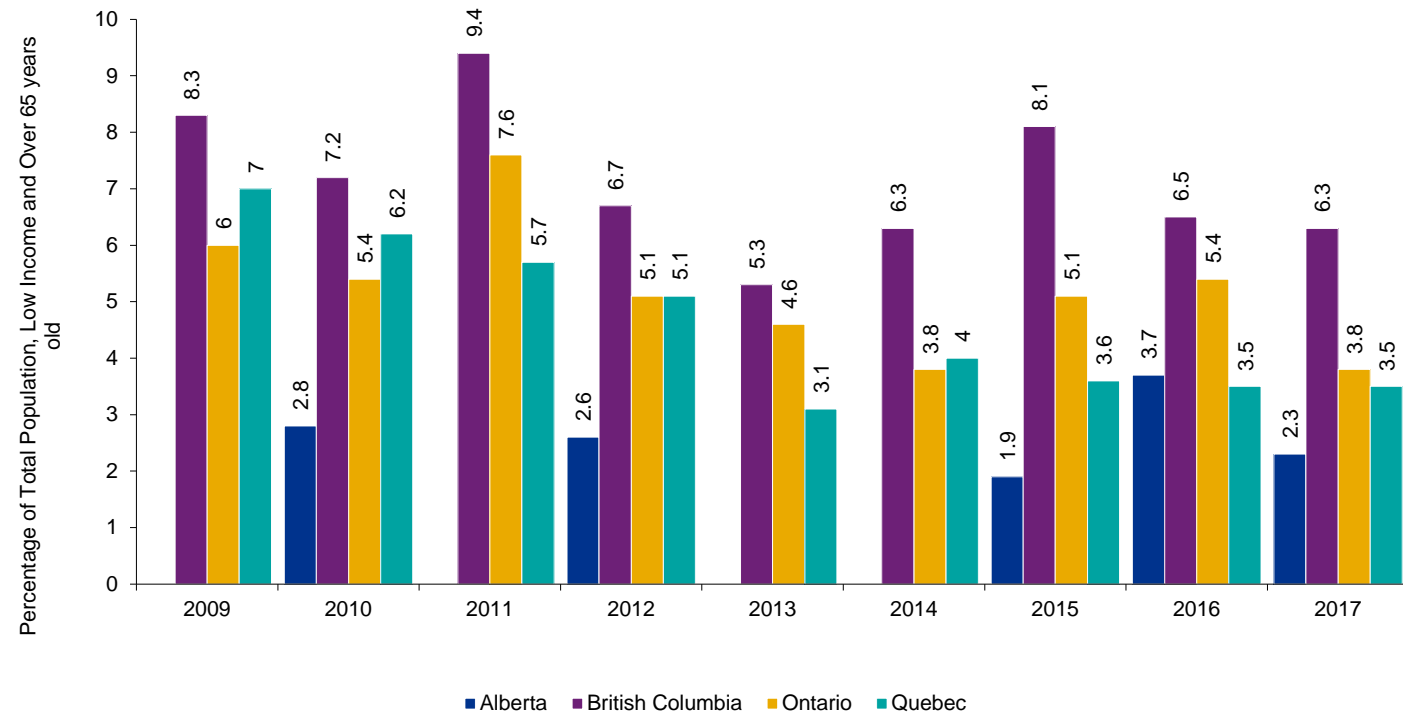


Source: Population estimates on July 1st, by age and sex data from Statistics Canada, Table 17-10-0005-01.

Seniors in Alberta (2 of 2)

In 2017, in Alberta, seniors who were low income represented 2.3% of the total population, as compared to British Columbia at 6.3%, Ontario at 3.8% and Quebec at 3.5%.

Figure 40: Incidence of Low Income for Seniors (65 Years and Older)



Note: Data for Alberta was unavailable for 2009, 2011, 2013, and 2014.

Source: Low income statistics by age, sex and economic family type data from Statistics Canada, Table 11-10-0135-01.

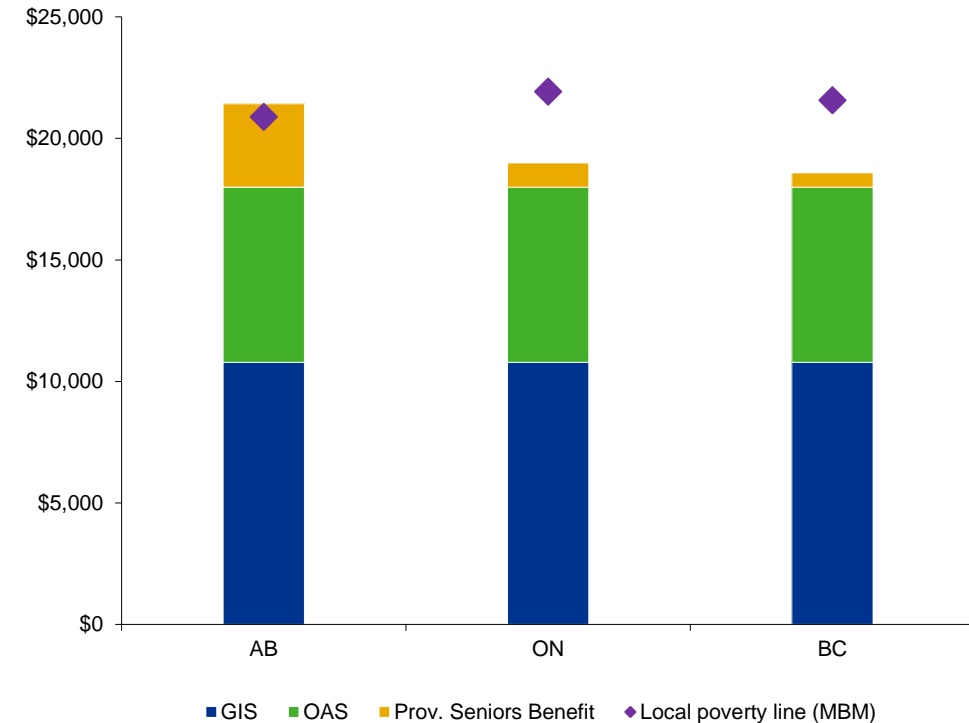
Seniors Financial Assistance and Rates of Poverty

Figure 41 shows the relationship between seniors payment rates and poverty lines (for provinces with 'like' seniors payments). All figures assume no sources of private income.

Table 24: Seniors Payment Rates and Thresholds

	AB	BC	ON
Maximum monthly rate (single / couple) ¹	\$280 / \$420	\$49.30 / \$120.50	\$83
Indexation of seniors payments	Annually (as of January 2019) based on CPI	None	Quarterly, based on CPI
Maximum private income to receive maximum rate (single / couple)	None	\$24 / \$48	\$1,992 / \$3,984
Phase out rate (rate payment is reduced by over the maximum private income amount)	\$0.17 for every \$1	\$1 for every \$25 / \$50	\$0.50 for every \$1 / \$0.25 for every \$1
No payment at private income of or above (cut off – single / couple)	\$20,715 / \$31,010	\$22,560	\$1,200 / \$2,928





Figure 41: Seniors Payments and Poverty Line



Note: 2019 data. All figures assume no sources of private income. Data for Quebec was not available.
(1) These are pre-index maximum rates.





Source: Provincial Benefit payment rates from Alberta Seniors & Housing; GIS and OAS rates from the Government of Canada; Poverty lines from the Government of Canada, Canada's First Poverty Reduction Strategy.

CSS (incl. Seniors) Business Model Differences (1 of 2)

Organization	 Ministry of Community and Social Services, Ministry of Seniors & Housing (includes Premiers Council on Status of Persons with Disabilities, Family Violence Death Review Committee, Appeals Panels, Seniors Advocate)	 Ministry of Social Development and Poverty Reduction, Ministry of Children and Family Development	 Ministry of Community and Social Services, Ministry of Seniors Affairs, Ministry of Municipal Affairs and Housing	 Ministry of Health and Social Services
Funding Model	Benefits and income support are determined on a range of criteria including medical condition, income level, age, determination of developmental disability			
Core Business	Support vulnerable and at-risk populations to create equity, belonging and a sense of wellbeing			
Additional Unique Responsibilities	<ul style="list-style-type: none"> Seniors Disabilities Supports Family Violence and Bullying Prevention Community Well-being and Resilience Employment Services Homelessness Supports Financial Security 	<ul style="list-style-type: none"> Seniors Services for People with Disabilities Financial Support Family Benefits Data Monitoring and Quality Assurance 	<ul style="list-style-type: none"> Seniors Support for adults with a developmental disability Other Disability Supports Family Supports Financial supports 	An integrated model of health and social services

Source: Business Plans (Service Plans), Annual Reports and Ministry websites.

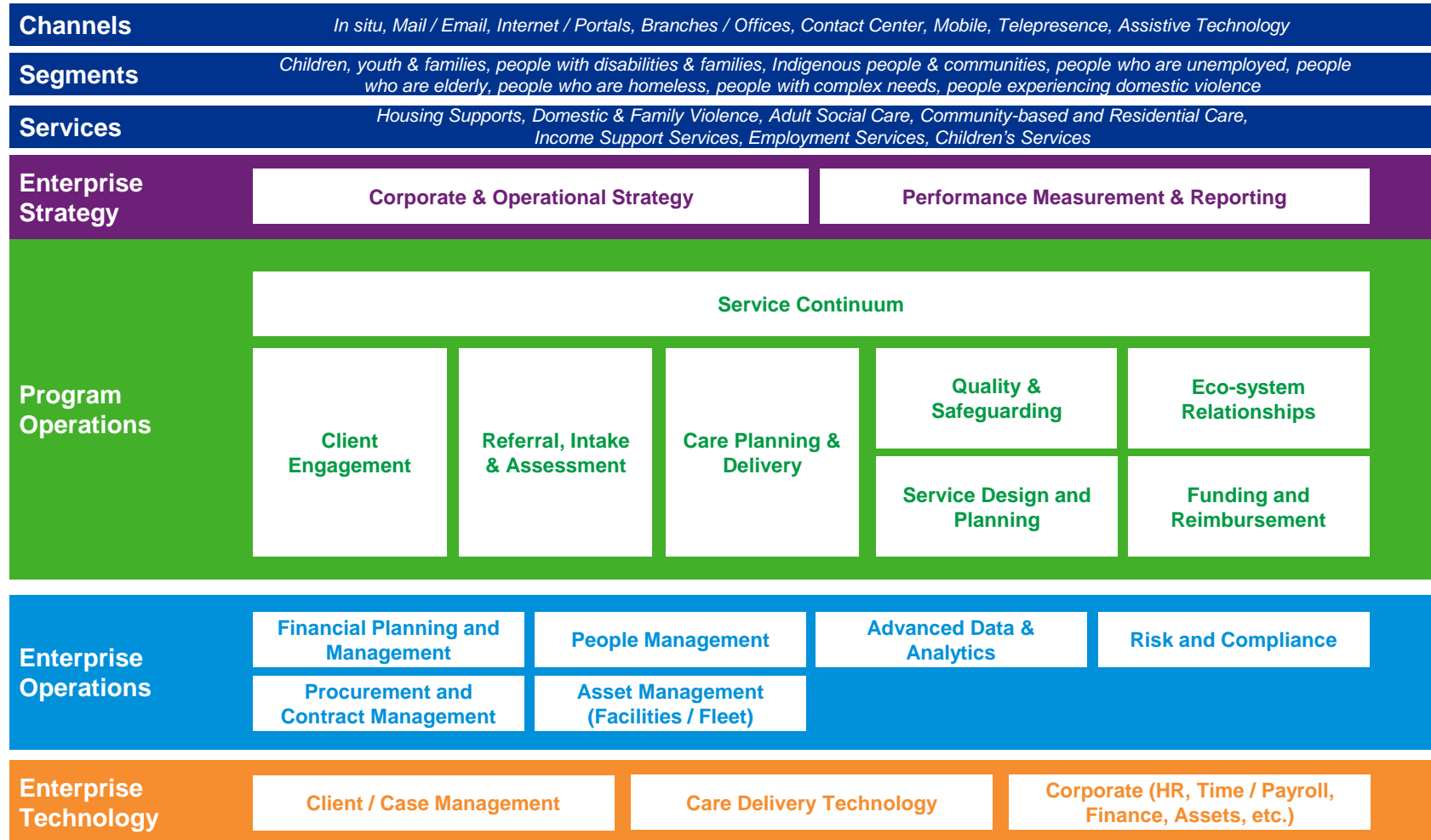
CSS (incl. Seniors) Business Model Differences (2 of 2)

				
Outcomes Focus	<ul style="list-style-type: none"> Stability Participation Inclusion 	<ul style="list-style-type: none"> Reliable and consistent services More effective balancing across service delivery channels 	<ul style="list-style-type: none"> Resilient, inclusive and sustained by the economic and civic contributions of Ontarians 	<ul style="list-style-type: none"> Meet rapid growth in seniors and increasing disability rates Respond more effectively to needs of people with disabilities as well as inequalities related to poverty
Delivery Model	<ul style="list-style-type: none"> Combination of direct delivery and contracted agencies Alberta Supports centres, online and call centre are intended to enhance integration of services 	<ul style="list-style-type: none"> Combination of direct delivery, agencies and crown corporations, and community based agencies My Self Serve provides online access to apply for some services and report and track information 	<ul style="list-style-type: none"> Combination of direct delivery, funding provided to contracted agencies, municipalities and First Nations Online applications and call centres in addition to in person offices 	<ul style="list-style-type: none"> Includes Health regions, various institutions, and integrated centres, which coordinate services from medical clinics, pharmacies, community and social economy enterprises, LT care and residences for seniors
Approx. Number of Contracted Agencies ^(a)	4,000	3,600	9,800	12,300
Total Expenditures per Capita, Adj. for Low Income ^(b)	\$13,914	\$7,335	\$9,290	Not available
Percentage of Persons in Low Income ^(c)	6.8%	10.3%	10.2%	9.0%

Note: (a) Based on number of social services organizations per 100,000 population by region for 2003 and population data from 2018, adjusted using Alberta's approx. number as reported in the Social Policy Framework (February 2013) as a base (b) Based on Budget Estimates for Operating Expenditures 2018-19, divided by the population of low income persons (c) Based on 2017 data.

Source: Business Plans (Service Plans), Annual Reports and Ministry websites; National Survey Non-profit and Voluntary Organizations, 2003; Population data to inform per capita from Statistics Canada Table 17-10-0005-01; Low income persons data from Statistics Canada Table 11-10-0135-01 (based on Market Basket Measure).




Connected Enterprise Framework for CSS (incl. Seniors)



CSS (incl. Seniors) Expenditure Comparisons

Table 25: CSS Budget Estimates 2018-19

% of Total Expenses // Per Capita Exp.(1)

						
Enterprise Strategy	0.3%	\$40	0.02%	\$1	0.2%	\$18
Program Operations	96.0%	\$13,358	95.6%	\$7,085	98.6%	\$9,155
Service Continuum	84.7%	\$11,782	91.3%	\$6,697	84.2%	\$7,821
Referral, Intake & Assessment	1.0%	\$144	-	-	-	-
Care Planning & Delivery	3.7%	\$513	0.9%	\$68	9.7%	\$905
Quality & Safeguarding	0.2%	\$21	0.03%	\$2	-	-
Eco-system Relationships	-	-	0.1%	\$10	0.1%	\$11
Service Design & Planning	4.6%	\$644	3.1%	\$226	1.3%	\$123
Funding and Reimbursement	1.8%	\$254	1.1%	\$81	3.2%	\$294
Enterprise Operations	3.7%	\$516	3.4%	\$249	1.3%	\$117
Enterprise Technology	-	-	-	-	-	-
Total Expenditures per Capita	\$13,914		\$7,335		\$9,290	

As Quebec's Ministry of Health and Social Services delivers an integrated portfolio of programs, KPMG was unable to separate the expenses for the different sectors. Appendix A includes a summary of the combined view of the Health and Community and Social Services Connected Enterprise analysis across the comparator provinces

Note: British Columbia and Ontario have distributed models and summary expenditure information which cannot be broken down and matched to Alberta's program mix on a one-for-one basis; where possible similar programs were included using estimating assumptions

(1) Per capita expense reflects an income adjusted amount (i.e. the expense per low income person in the province).

Source: Analysis of Budget Estimates for 2018-19 for Alberta, British Columbia and Ontario; Population data to inform per capita expenditures from Statistics Canada Table 17-10-0005-01

Innovative Models in CSS (incl. Seniors) (1 of 3)

The following outlines examples of emerging practices and innovative models in social service systems that have been used to increase efficiencies while driving improved outcomes for clients and the vulnerable populations being targeted.

Practice	Description	Known / Identified Results	Further Information / Source
Preventative Investment	<p>New Zealand's single central government uses what are known as investment approaches to guide its social services. Investment approaches are premised on identifying early those individuals who, because of a combination of reasons, are more likely to need social supports for an extended period of time over their lives, and focus prevention and early intervention strategies on them. The goal is to deliver more efficient and effective social services, by getting people the help they need, before their problems become entrenched and complex.</p> <p>Comprehensive annual Benefit System Performance Reports highlight the performance of the approach to date, and indicate where changes will be made to improve the efficiency and effectiveness of programs going forward.</p>	<p>The most recent strategy (2018-21) noted the following:</p> <p>"In the past the focus has been too narrow, concentrated on reducing costs to government. An approach premised on fiscal restraint and reducing future liabilities provides a limited insight into what are often complex and enduring social challenges, and the range of solutions that might be found.</p> <p>... Investing for social wellbeing means supporting and resourcing people to improve theirs and others' wellbeing which, in turn, will contribute to broader positive social outcomes. This approach is centred on an attempt to understand, and the need to appreciate, the complexities in people's lives as well as their ability to build resilience and fulfil their potential in different ways." – Cabinet Paper: Towards Investing for Social Wellbeing (March, 2018)</p>	<p>https://www.msd.govt.nz/about-msd-and-our-work/publications-resources/evaluation/investment-approach/index.html</p>

Note: This information does not represent KPMG's advice or opinion.



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Innovative Models in CSS (incl. Seniors) (2 of 3)

Practice	Description	Known / Identified Results	Further Information / Source
Payment for Outcomes	<p>A number of models/practices are in use including:</p> <ul style="list-style-type: none"> ▪ Pay for Performance (Ontario WSIB) ▪ Social Impact Bonds (New South Wales, Australia) ▪ Performance Based Contracting (New Zealand Ministry of Social Development) ▪ Performance Incentive Fund (US State governments) 	While there is still a lot more work required to support the evidence based for pay for outcome models, the evidence available supports that designed right each of the four models will produce better social outcomes.	https://assets.kpmg/content/dam/kpmg/pdf/2015/01/better-outcomes-for-public-services.pdf
Commissioning	<p>In a commissioning model of service delivery, the government's role shifts from direct service deliverer to being responsible for the delivery of outcomes. Services themselves are delivered by other organizations, whether private or public, to achieve the required outcomes. This represents a considerable change in the role of government, far beyond traditional policy setting and service delivery. Getting it right requires government to develop new knowledge and capabilities to fulfil its new role, otherwise it will likely be unable to improve service outcomes.</p>	<p>The Community Homelessness Prevention Initiative in Ontario, Canada, was a whole-of-market reform in 2013 to reduce homelessness rates in Ontario and improve the outcomes of people receiving homelessness services. Funding was consolidated across five programs that were coordinated by two ministries, and allocated based on changing needs in different areas. Within the first 15 months, the initiative assisted more than 33,100 households experiencing homelessness, and enabled more than 83,800 households to remain in their homes.</p>	https://news.ontario.ca/mma/en/2015/03/community-homelessness-prevention-initiative.html

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Innovative Models in CSS (incl. Seniors) (3 of 3)

Practice	Description	Known / Identified Results	Further Information / Source
Commissioning (continued)		<p>The Isle of Wight is relatively isolated from southern England by the unbridged Solent strait, making joint working particularly important for its public services. Its council, health commissioning body and not-for-profit providers established My Life A Full Life, a single point of access, integrated care and support. This provides:</p> <ul style="list-style-type: none"> • an integrated care hub, where emergency call operators, paramedics, crisis response teams, mental health workers and social workers (amongst other clinicians and service providers) are physically co-located • the concept of 'one commissioning pound', whereby the different agencies pool their resources to address the holistic needs of citizens. Services are coordinated around the individual, with people being empowered — and given a budget — to 'self-serve' the services that deliver the care outcomes they need 	https://www.theguardian.com/society/2016/jan/20/nhs-isle-of-wight-hub-leading-way-integrated-healthcare

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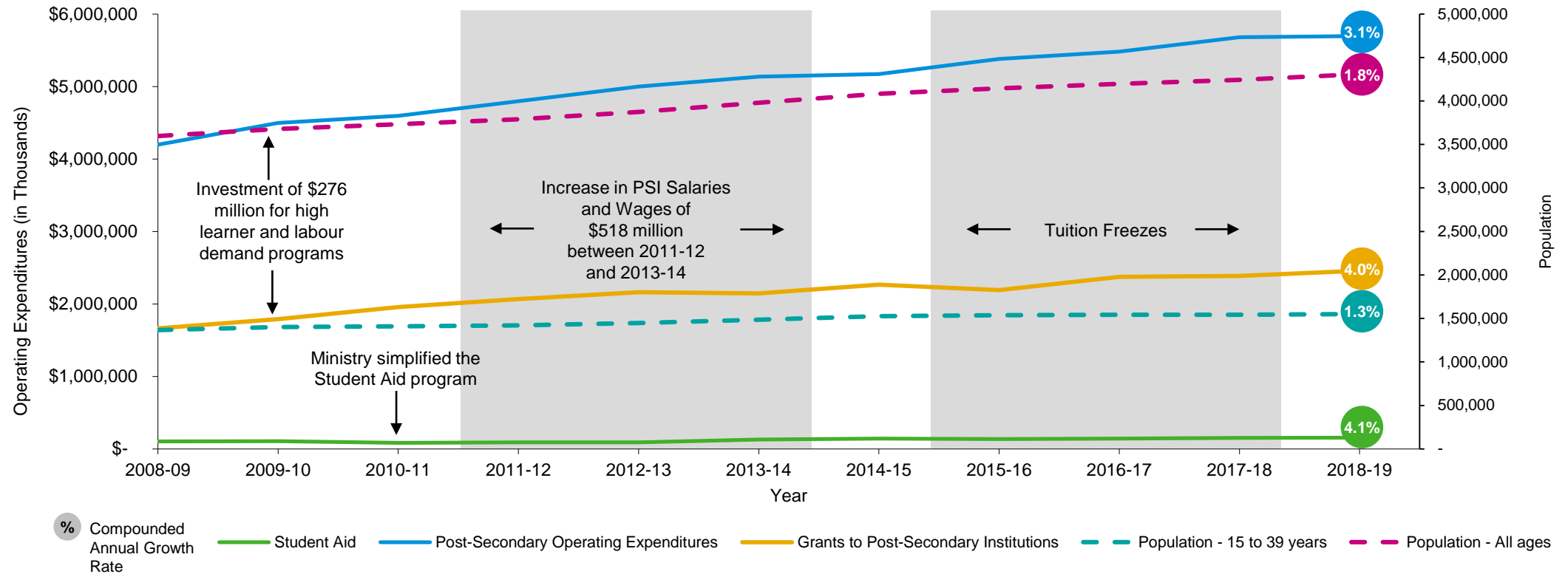


Advanced Education



Key Trends for Advanced Education in Alberta

Figure 42: 10 Year Trend for Alberta's Major Expenditures in Advanced Education



Note: Student Aid estimates exclude Student Loan Relief Benefit, Student Aid Amortization, Program Delivery Support and Provisions for Future Cost of Student Loans Issued.

Source: Analysis of Budget Estimates from 2008-09 to 2018-19 for Alberta and Consolidated Actuals for Post-Secondary Expenditures 2008-09 to 2017-18; Population data from Statistics Canada Table 17-10-0005-01; Key trends identified from Ministry Annual Reports 2008-09 to 2017-18.

Differences between Colleges and Universities (1 of 2)

In comparing post-secondary institution's mandates across the provinces, Alberta's Six-Sector Model, which is highlighted in the following pages, provides a summary of the roles that the different institutions undertake in coordinating learning opportunities and maximizing public investments in adult education to achieve outcomes that benefit learners, society, and the economy.

Sector	Programming	Research	Collaboration
Comprehensive Academic and Research Universities (4 institutions)	<ul style="list-style-type: none"> Must provide approved undergraduate and graduate degree programs. May offer approved diploma and certificate programs. 	<ul style="list-style-type: none"> May undertake all forms of research, including discovery. 	<ul style="list-style-type: none"> May collaborate with other postsecondary institutions and sectors to support regional access to undergraduate degree programs.
Undergraduate Universities (3 institutions)	<ul style="list-style-type: none"> Must provide approved undergraduate degree programming. May offer approved foundational learning diploma or certificate programs. Not permitted to offer graduate level programming unless previously approved to do so. 	<ul style="list-style-type: none"> May undertake research and scholarly activity that enriches undergraduate education. 	<ul style="list-style-type: none"> Must collaborate with other post-secondary institutions and sectors to support regional access to undergraduate degree programming.
Comprehensive Community Colleges (11 institutions)	<ul style="list-style-type: none"> Must provide approved foundational learning programs, as well as diploma and certificate programs. May provide apprenticeship programming where demand warrants, as well as undergraduate degree programming primarily in collaboration with a degree granting institution, or autonomously under particular conditions and subject to Ministerial approval. Not permitted to offer graduate level programs. 	<ul style="list-style-type: none"> May undertake research and scholarly activity in alignment with credentials offered or focused on industry or community needs that support regional economic and social development. 	<ul style="list-style-type: none"> Must collaborate with other post-secondary institutions and partners in the community, business, and industry sectors to support regional access to foundational learning, diploma, certificate and undergraduate degree programming.

Source: Roles and Mandates Policy Framework for Alberta's Adult Learning System.

Difference between Colleges and Universities (2 of 2)

Sector	Programming	Research	Collaboration
Independent Academic Institutions (Private) (5 institutions)	<ul style="list-style-type: none"> May provide foundational learning, diploma, certificate, and approved undergraduate degree programming. Undergraduate diploma and certificate programs may be either ministry approved or board-approved. May provide graduate level programs in niche areas under particular conditions. 	<ul style="list-style-type: none"> May undertake research and scholarly activity in alignment with credentials offered. 	<ul style="list-style-type: none"> May collaborate with other institutions and sectors to support regional access to undergraduate degree programming.
Polytechnic Institutions (2 institutions)	<ul style="list-style-type: none"> Must provide approved apprenticeship, diploma, and certificate programs. May provide approved foundational learning and undergraduate degree programs. Not permitted to offer graduate level programming. 	<ul style="list-style-type: none"> May undertake research and scholarly activity in alignment with credentials offered, and/or research that is focused on strengthening economic development in Alberta. 	<ul style="list-style-type: none"> Must collaborate with other institutions and sectors to support regional access to polytechnic education. May collaborate to support access to diploma, certificate or undergraduate degree programming.
Specialized Arts and Cultural Institutions (1 institution)	<ul style="list-style-type: none"> May provide non-credential, certificate and diploma programming. 	<ul style="list-style-type: none"> May undertake research and scholarly activity in alignment with programs offered. 	<ul style="list-style-type: none"> May collaborate with other sectors as necessary to support regional access to specialized arts and culture programming, through provision of non-credential certificate and diploma programming.

Source: Roles and Mandates Policy Framework for Alberta's Adult Learning System.



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Post-Secondary Institution Comparison (1 of 4)

Table 26 shows Alberta's 26 post-secondary institutions and aggregates them by their Ministry of Advanced Education defined sectors, which include:

- **CARU** = Comprehensive Academic and Research Universities
- **UU** = Undergraduate Universities
- **PI** = Polytechnical Institutions
- **CCC** = Comprehensive Community Colleges
- **SACI** = Specialized Arts and Culture Institutions
- **IAI** = Independent Academic Institutions

CARU institutions represent the greatest number of students across the sector. These institutions also receive the greatest share of operational funding from the Government on a per student fully loaded equivalent (FLE) basis.

Figures 43 and 44 show additional comparator data for Alberta's post secondary institutions.

Table 26: Alberta Post-Secondary Sector Comparison

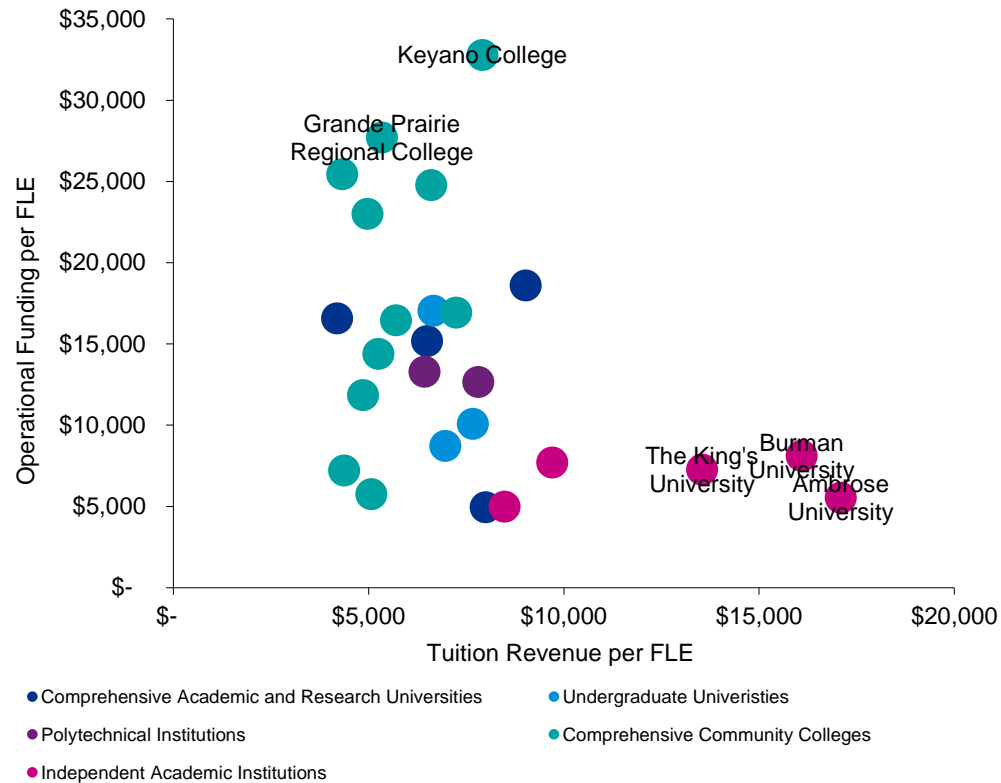
2017-18 Measures		CARU	UU	PI	CCC	SACI	IAI
Total FLE		80,256	23,627	27,094	32,566	n/a	3,961
Number of Institutions		4	3	2	11	1	5
FLE per Institution		20,064	7,876	13,546	2,960	N/A	792
\$ Per FLE	Total Expenses	\$43,817	\$21,631	\$26,770	\$24,836	N/A	\$24,326
	Total Revenue	\$45,125	\$22,926	\$26,858	\$25,593	N/A	\$25,109
	Operational Funding from GoA	\$16,086	\$9,614	\$12,990	\$13,236	N/A	\$6,889
	Tuition Revenue	\$6,935	\$7,243	\$7,105	\$5,246	N/A	\$11,701
Urban Rural Institutions		3 1	3 0	2 0	6 5	0 1	4 1
Domestic International FLE %		87% 13%	95% 5%	91% 9%	92% 8%	N/A	93% 7%

Note: A proxy of population within 20KM was used to determine Rural or Urban status - If the population within 20KM of a PSI was >40,000, it was defined as an Urban institution; FLEs are calculated based on approved programming, since the Banff Centre does not offer any ministerial approved programming, FLEs are not tracked for The Banff Centre.

Source: FLE counts and Operational funding from the Ministry of Advanced Education; Total Expenses, Total Revenue and Tuition Revenue from 2017-18 Institution Audited Financial Statements.

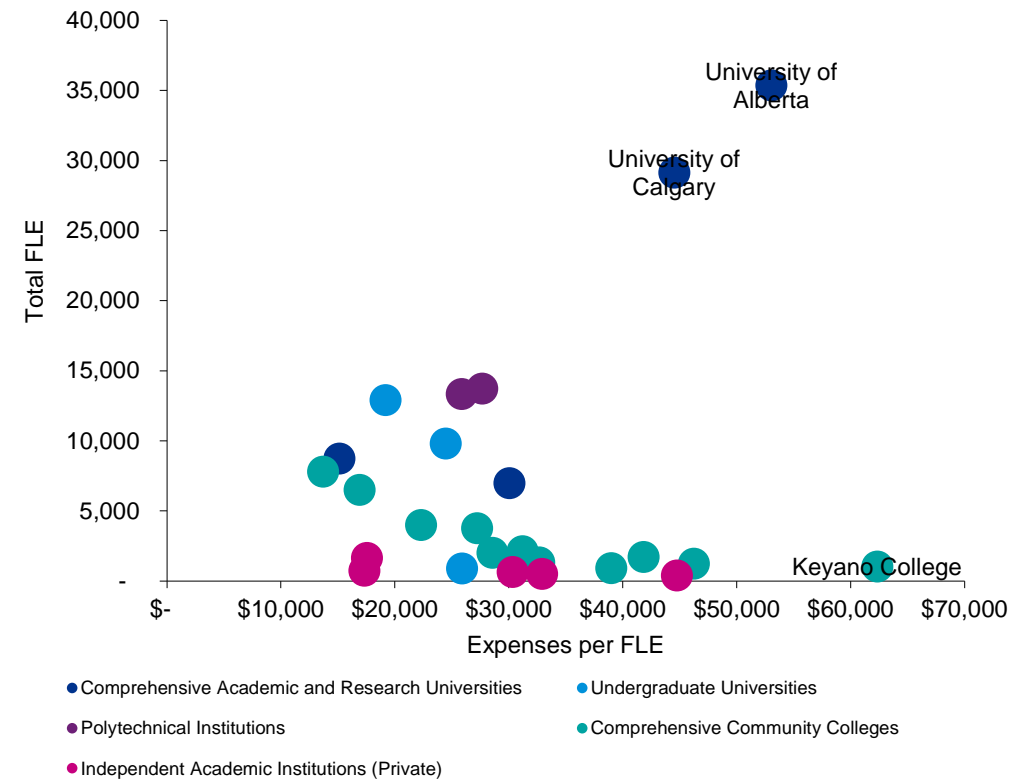
Post-Secondary Institution Comparison (2 of 4)

Figure 43: 2017-18 Operational Funding & Tuition Revenue per FLE



Note: Data is for Alberta Post-Secondary Institutions; SACI has been excluded due to lack of FLE data.
 Source: FLE counts and Operational Funding from Ministry of Advanced Education; Tuition Revenue from 2017-18 Institution Audited Financial Statements.

Figure 44: 2017-18 Expenses per FLE



Note: Data is for Alberta Post-Secondary Institutions; SACI has been excluded due to lack of FLE data.
 Source: FLE counts from Ministry of Advanced Education; PSI Expenses from 2017-18 Institution Audited Financial Statements.

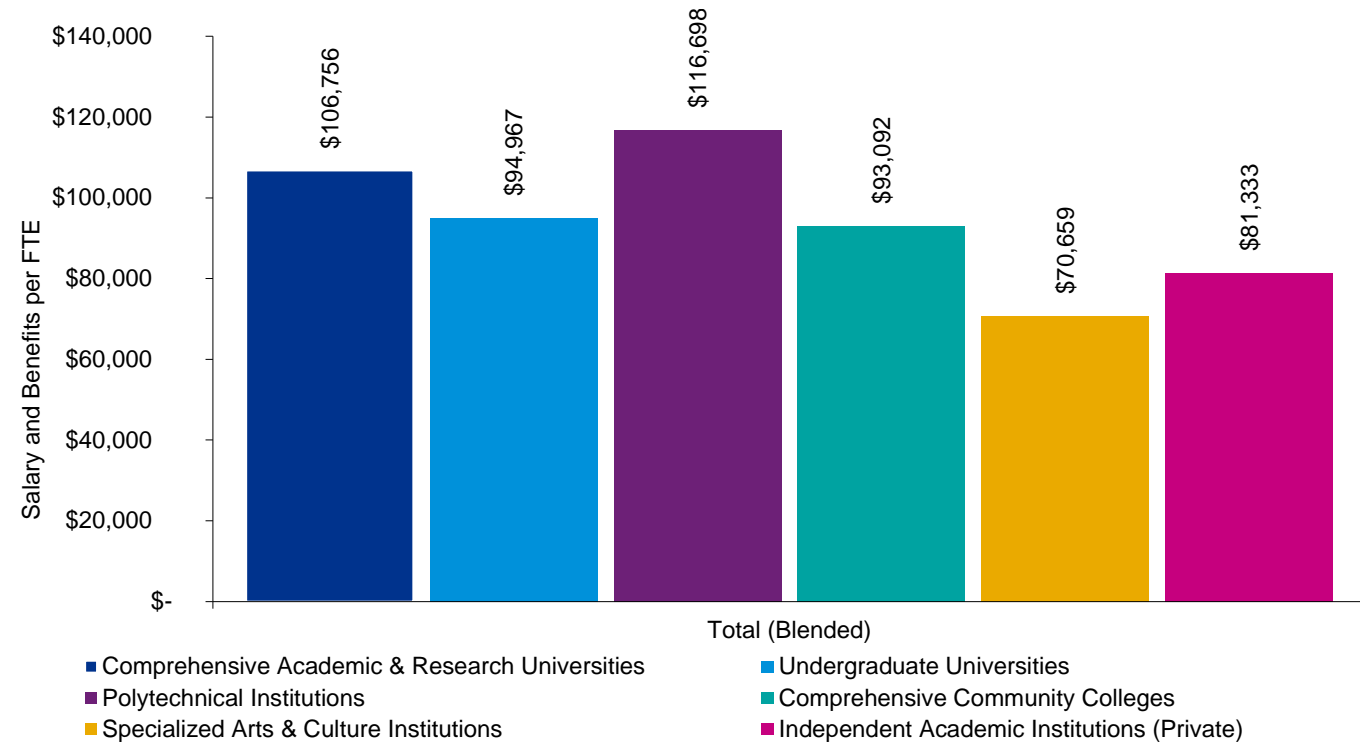
Post-Secondary Institution Comparison (3 of 4)

The average salary and benefit per FTE across all of Alberta's institution types and staffing is highest within the PI institutions at \$116K .

The lowest average salary and benefit per FTE is within the SACI institution at \$70K.

The following page breaks this down further into the different staffing classifications.

Figure 45: 2017/18 Average Salary and Benefits per FTE



Note: This represents the average across all positions (academic / instructional, administrative / managerial, and non-academic / support).
Source: Post-Secondary salary costs and staff FTE count from the Ministry of Advanced Education.

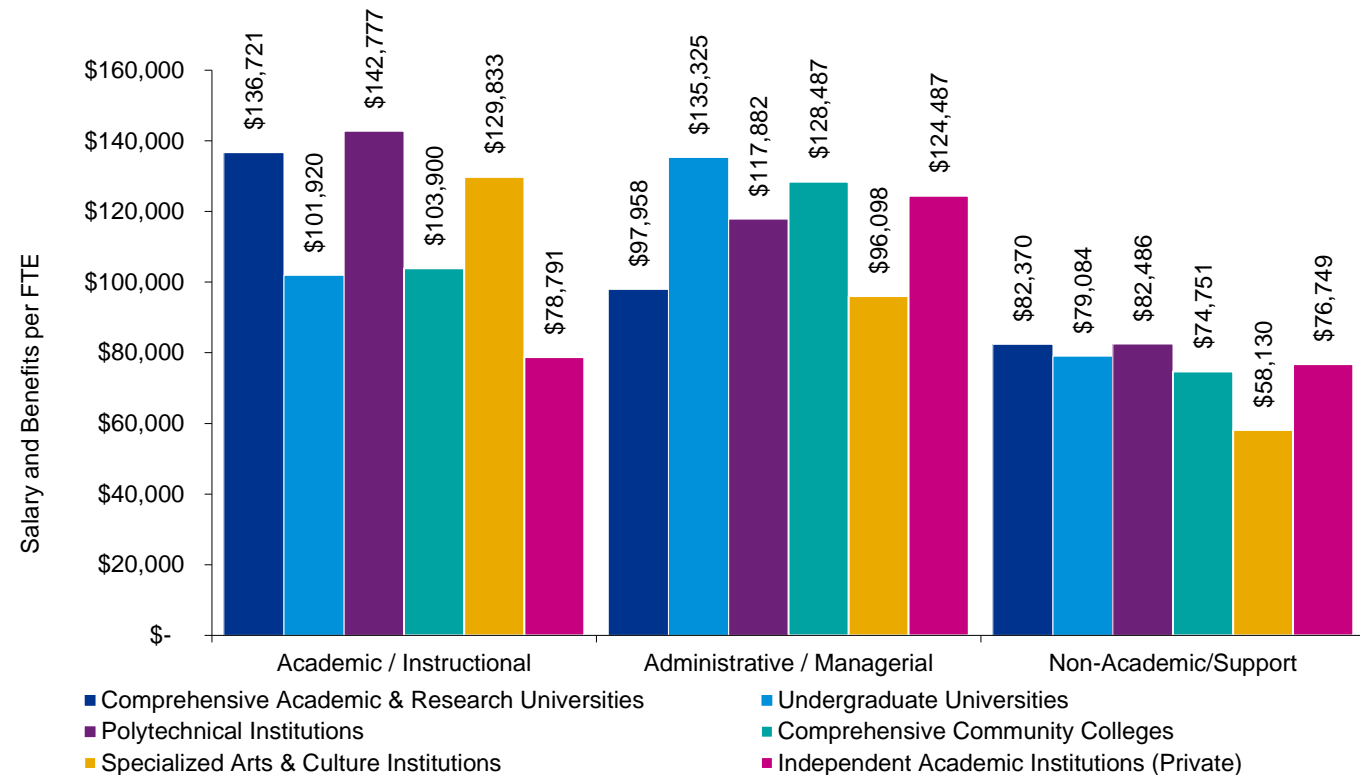
Post-Secondary Institution Comparison (4 of 4)

The average salaries for Academic / Instructional staff at PI and CARU institutions are the highest at \$142K and \$136K respectively.

The average salaries and benefits for Administrative / Managerial staff for UU institutions are higher than many of the Academic / Instructional salaries across the sector.

The average salaries and benefits for Non-Academic / Support staff across the sector are comparable, with the SACI institution being the lowest cost.

Figure 46: 2017/18 Average Salary and Benefits per FTE by Function



Source: Post-Secondary salary costs and staff FTE count from the Ministry of Advanced Education.

Post-Secondary Institution Performance

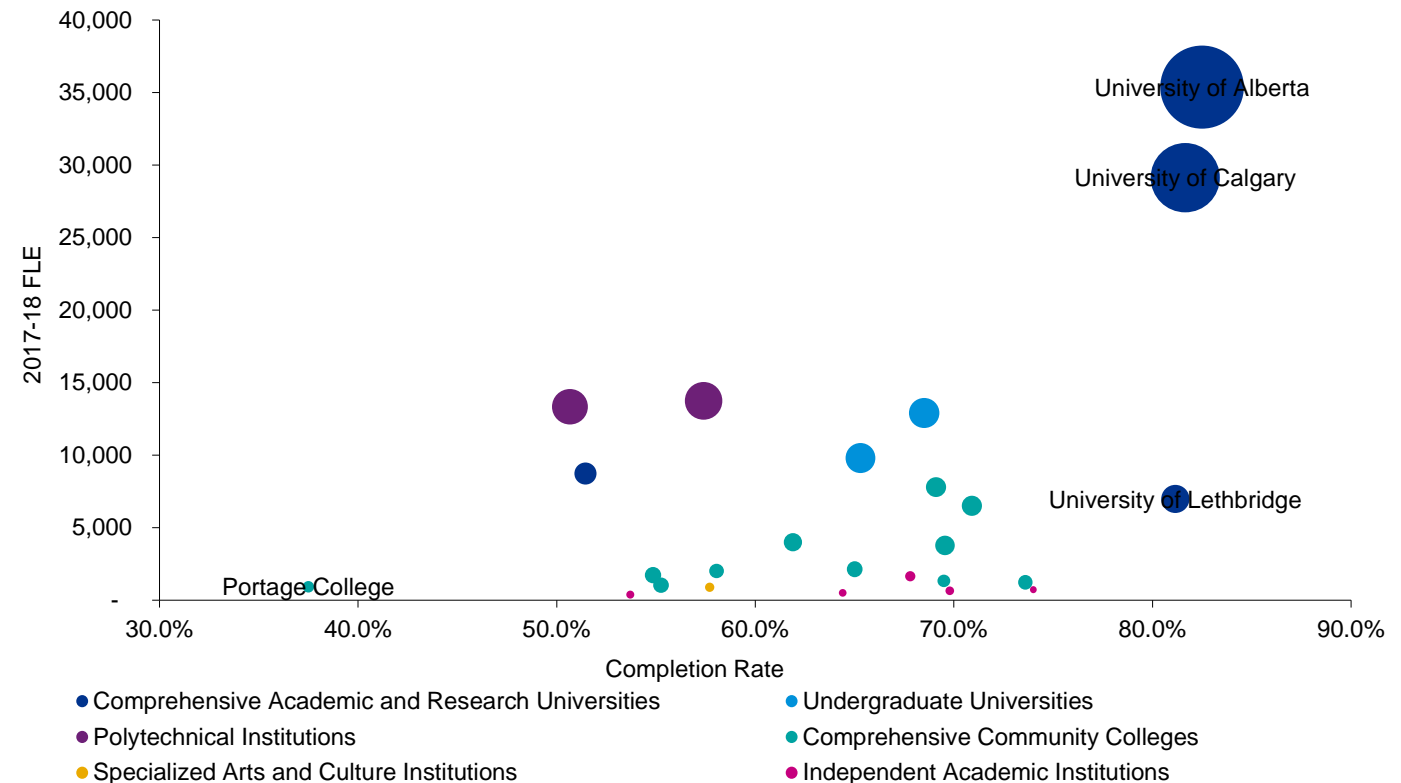
From a completion rate perspective, there are 9 institutions (out of 26) in Alberta that fall below an average completion rate of 60%.

The completion rate is based on a 2011 enrollment of students who's progress in the post-secondary system in Alberta under three years after their program had ended.

Portage College (in Lac La Biche), a CCC institution had the lowest completion rate of all of Alberta's post secondary institutions.

The three large CARU institutions in Alberta had completion rates above 80%.

Figure 47: Post-Secondary Completion Rate



Note: Completion rate is calculated as an average of post-secondary program types based on the 2011 cohort that was tracked until up to three years after their program ended; Bubble size relates to 2017-18 Total Expenses.

Source: Completion Rate and FLE counts from the Ministry of Advanced Education; PSI Expenses from 2017-18 Institution Audited Financial Statements.

Post-Secondary Revenue Generation (1 of 3)

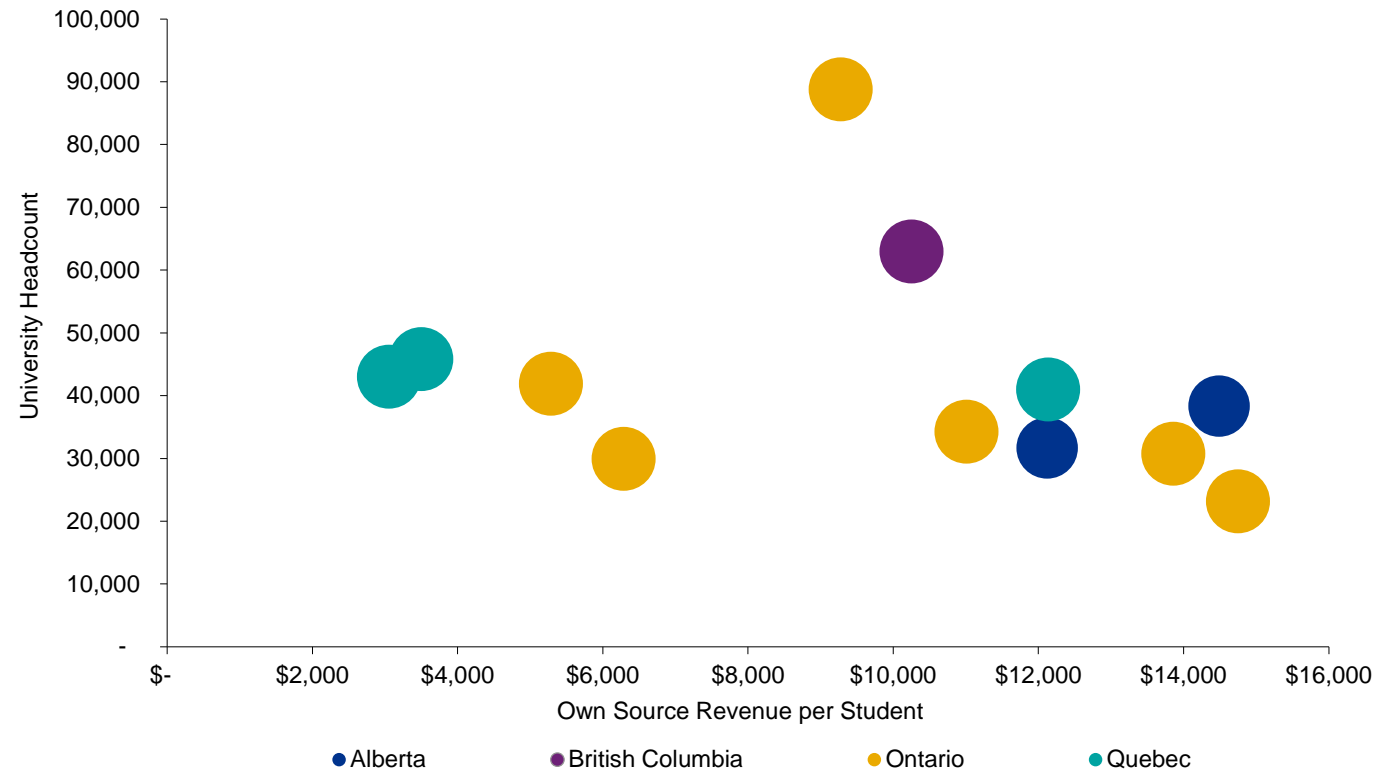
Alberta's institutions appear comparable to other provinces and their research-intensive universities in terms of own source revenue.

Own source revenue includes: investment income, donations, sales of services, and products and miscellaneous income.

Table 27: Comparison of Own Source Revenues as a Percentage of Total Revenues (2016/17)

Own Source Revenue as a % of Total Revenue		
Université Laval	QC	13%
Université McGill	QC	31%
Université de Montréal	QC	11%
McMaster University	ON	27%
University of Ottawa	ON	17%
Queen's University	ON	31%
University of Toronto	ON	20%
University of Waterloo	ON	17%
The University of Western Ontario	ON	30%
University of Alberta	AB	26%
University of Calgary	AB	25%
The University of British Columbia	BC	24%

Figure 46: Own Source Revenue by Research-Intensive University



Note: Analysis completed on research-intensive institutions are defined by the Ministry of Advanced Education.

Source: 2016-17 Revenue from Canadian Association of University Business Officers FIUC database; 2016-17 Headcounts from University Enrolment Reports and Annual Reports.

Post-Secondary Revenue Generation (2 of 3)

Figure 49: University Revenue Sources by Province

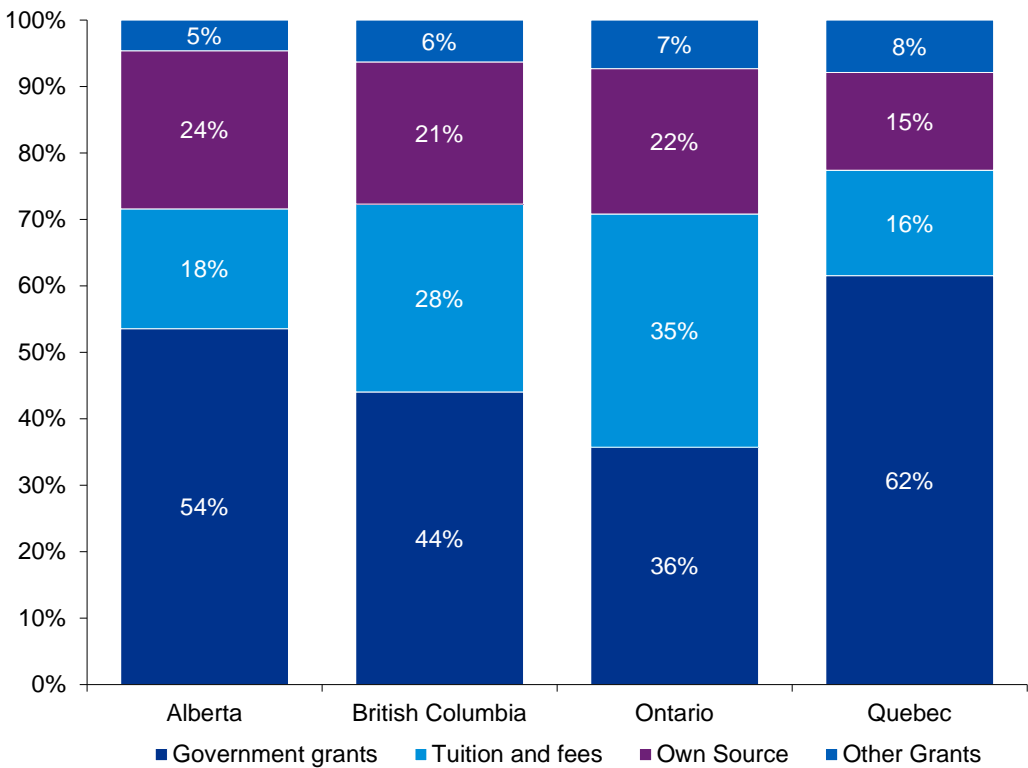
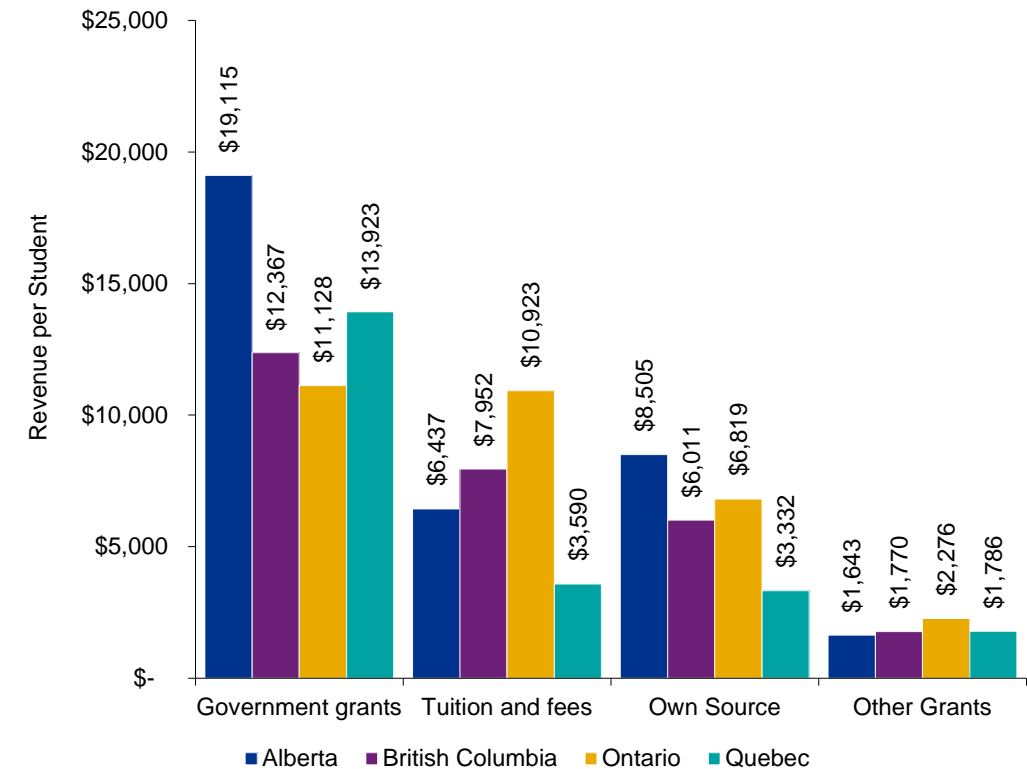


Figure 50: University Revenue Sources per Student



Note: Based on data availability/granularity, Own Source revenue is inclusive of Investment Income, Donations, Sales of Services and Products and Miscellaneous Income.

Source: 2016-17 Revenue from Canadian Association of University Business Officers FIUC database.

Source: 2016-17 Revenue from Canadian Association of University Business Officers FIUC database; 2016-17 University Headcount from Statistics Canada Table 37-10-0015-01.



Post-Secondary Revenue Generation (3 of 3)

Figure 51: College and Vocational School Revenue Sources by Province

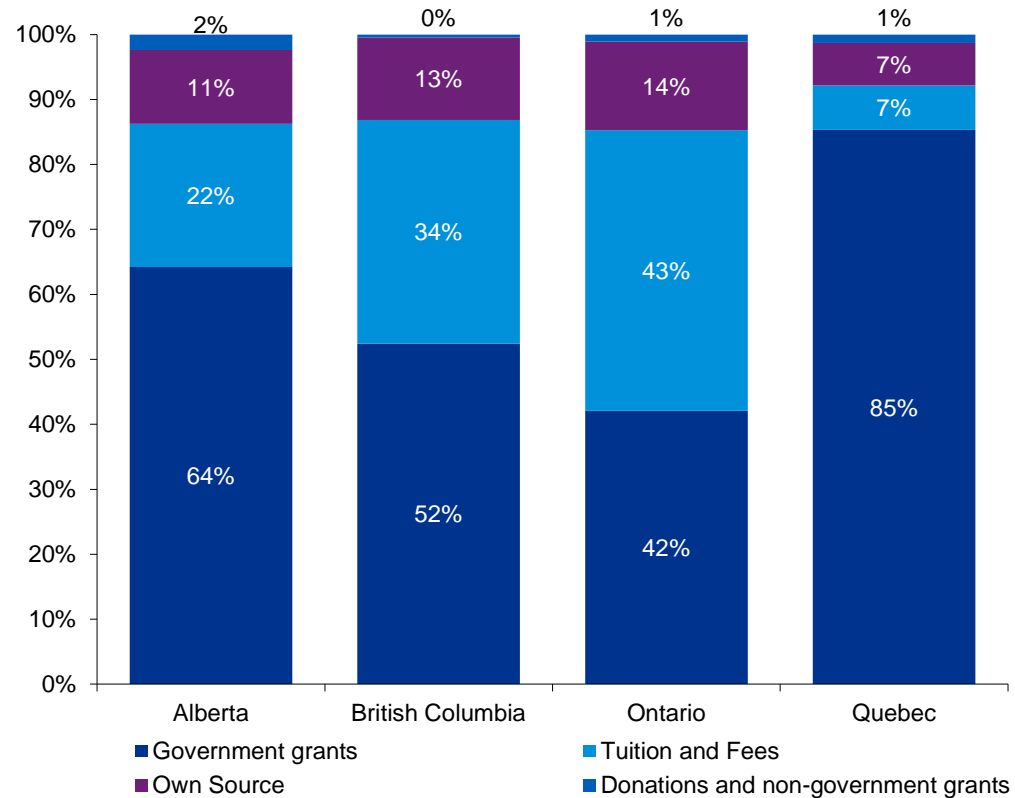
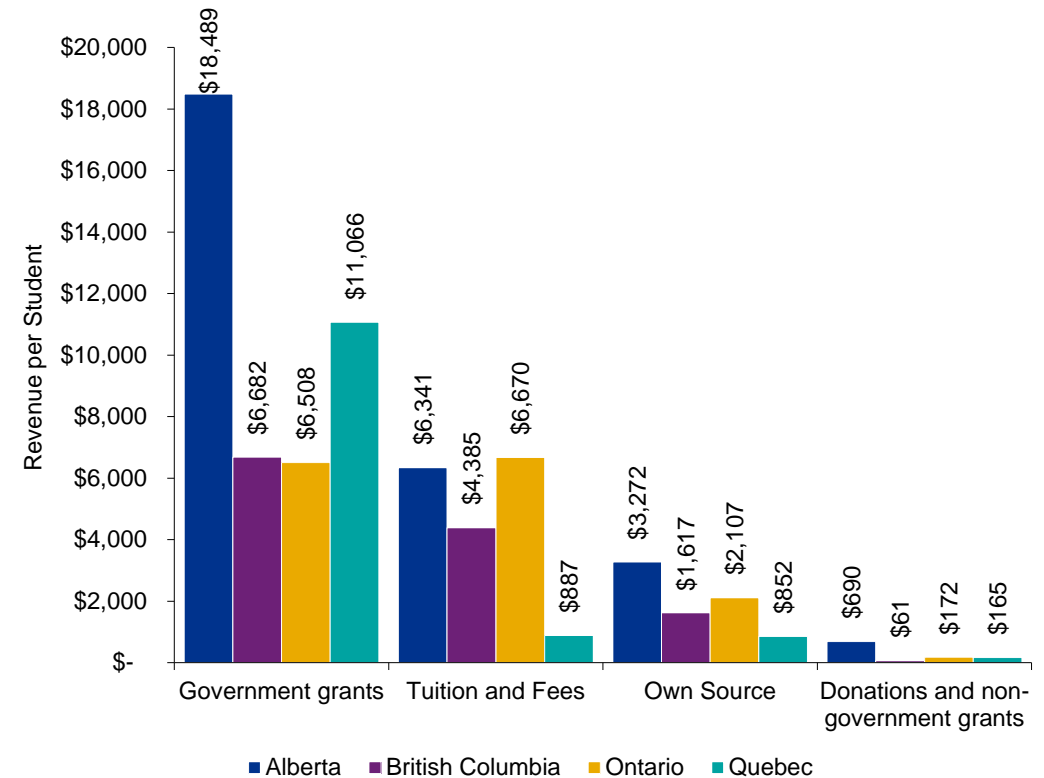


Figure 52: College and Vocational School Revenue Sources per Student



Note: Based on data availability/granularity, Own Source revenue is inclusive of Investment Income, Ancillary Enterprises and Miscellaneous Income.

Source: 2016-17 Revenue from Statistics Canada Table 37-10-0028-01.

Source: 2016-17 Revenue from Statistics Canada Table 37-10-0028-01; 2016-17 College and Vocational School Headcount from Statistics Canada Table 37-10-0015-01.

Intellectual Property and Commercialization (1 of 3)

At the request of the Panel, the following slides were prepared to summarize research completed on Intellectual Property (including Venture Capital) and Commercialization.

Intellectual Property (IP) is under federal jurisdiction as a whole, and IP policies are specific to universities and faculty agreements.

A study of Canadian universities conducted at Waterloo in 2006 indicated that 23 of the 36 institutions examined had “inventor-owns” IP policies. Universities without such policies generally have clauses stipulating that the institution has a “right of first offer” to claim an interest in IP generated from research.

The Intellectual Property policy of the University of Waterloo is often credited with stimulating opportunities for technology transfer and commercialization. The ownership model of IP rights is not unique to Waterloo as the majority of Canadian universities recognize faculty members as owners of IP.

The distinctive aspect of the Waterloo model is with respect to the sharing of any net revenue from commercialization. The Waterloo Model states that researchers may seek commercial opportunities without university involvement and are entitled to 100% of the associated revenue (but must bear the IP protection costs). ***The IP policy of other Canadian universities dictate that the institutions retain a partial economic interest even when researchers commercialize alone.***

Researchers may elect to assign commercialization rights to the University of Waterloo for technology transfer assistance by the University of Waterloo Office of Research run Waterloo Commercialization Office. When this occurs, net revenues are shared with 75% to the research and 25% to the University of Waterloo.

Alberta’s IP policy is different from other provinces in relation to several factors, including: access to venture capital, intellectual property policies, revenue sharing agreements, IP ownership and the technology transfer offices of universities for IP coming out of the university. Each of these is explored on the following pages. Table 30 on page 119 provides a comparison of Alberta’s IP commercialized policies at select post-secondary institutions.

Source: Government of Alberta analysis on Intellectual Property and Commercialization.



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Intellectual Property and Commercialization (2 of 3)

Venture Capital

As per the Conference Board of Canada, venture capital is noted as a factor in innovation. Compared to other provinces, Alberta has historically received less venture capital investment as a percentage of GDP.

Table 28: Venture Capital Investment by Province

	AB	BC	ON	QC
Venture Capital Investment as a % of GDP (2014-16)	0.037%	0.184%	0.145%	0.199%

IP Policies

Based on a comparison of IP policies across Canadian universities completed by the Government of Alberta (using the few academic studies that have examined the effect of IP policies on technology transfer), an IP policy does not appear to be a major factor underlying a university's success in technology commercialization.

Table 29: Revenue sharing, IP Ownership and TTO by Major University

		McGill University	University de Montreal	University of Toronto	University of Alberta	University of Calgary	University of British Columbia
Revenue Sharing when University Commercializes	University	40%	50%	20%	33.3%	50%	50%
	Researcher	60%	50%	60%	33.3%	50%	50%
	Technology Transfer Office	-	-	20%	33.3%	-	-
IP Ownership		Individual / University	University	Individual / University	Individual	Individual	University

Source: Government of Alberta analysis on Intellectual Property and Commercialization; The Conference Board of Canada analysis on Venture Capital Investment in Canadian Provinces.



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Intellectual Property and Commercialization (3 of 3)

Table 30: Comparison of Alberta's IP Commercialization Policies at Post-Secondary Institutions

	Revenue Sharing		Notes
	Creator Commercializes	University Commercializes	
University of Alberta	67% to Creator 33% to University	33% to Creator 67% to University	The inventor owns the IP unless it is created under a contract research agreement stipulating that IP will be owned by the university. If inventors want the university to commercialize their IP, ownership is transferred to the university. The IP policy is currently under review and the U of A is consulting with government and other stakeholders.
University of Calgary	Inventors can chose between three revenue sharing options: the university receives either equity (5% protected to \$1M), royalty (2-3%), or a 1% royalty with a 2% change of control fee.		The inventor may own the IP and manage the commercialization process themselves, or may engage Innovate Calgary, who can mediate a technology license transfer to a company that the inventor is a founder or shareholder, or assign the IP into a company that the inventor may or may not be a founder/shareholder.
University of Lethbridge	75% to Creator 25% to University	25% to Creator 75% to University	The inventor owns the IP, however ownership may be impacted if: the inventor is an employee of the university, the work created is supported by external funding, or the work is created with a supervisor or a research group (either collaboratively or jointly).
SAIT	Negotiable; SAIT and the organization may agree on ownership at the beginning of the project.		SAIT retains exclusive ownership of IP rights if SAIT's facilities, funds or resources are used in the creation of the IP. External organizations have the option of entering into a revenue sharing agreement resulting from commercialization between the inventor and SAIT.
NAIT	Negotiable; NAIT and researcher will assign ownership to the researcher and receive a portion of net revenues.		All IP developed in partnership with industry is exclusively retained by the industry partner. If the IP is not commercialized by the researcher, NAIT may retain the IP for a period of time in order to catalyze other channels for IP commercialization.

Source: Government of Alberta analysis on Intellectual Property and Commercialization.



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International Students (1 of 2)

From 2007/08 to 2016/17, British Columbia had the largest CAGR growth in International Enrolments at 11.4%.

Alberta's CAGR in international students was similar to Ontario at 9% and ahead of Quebec's at 6.8%.

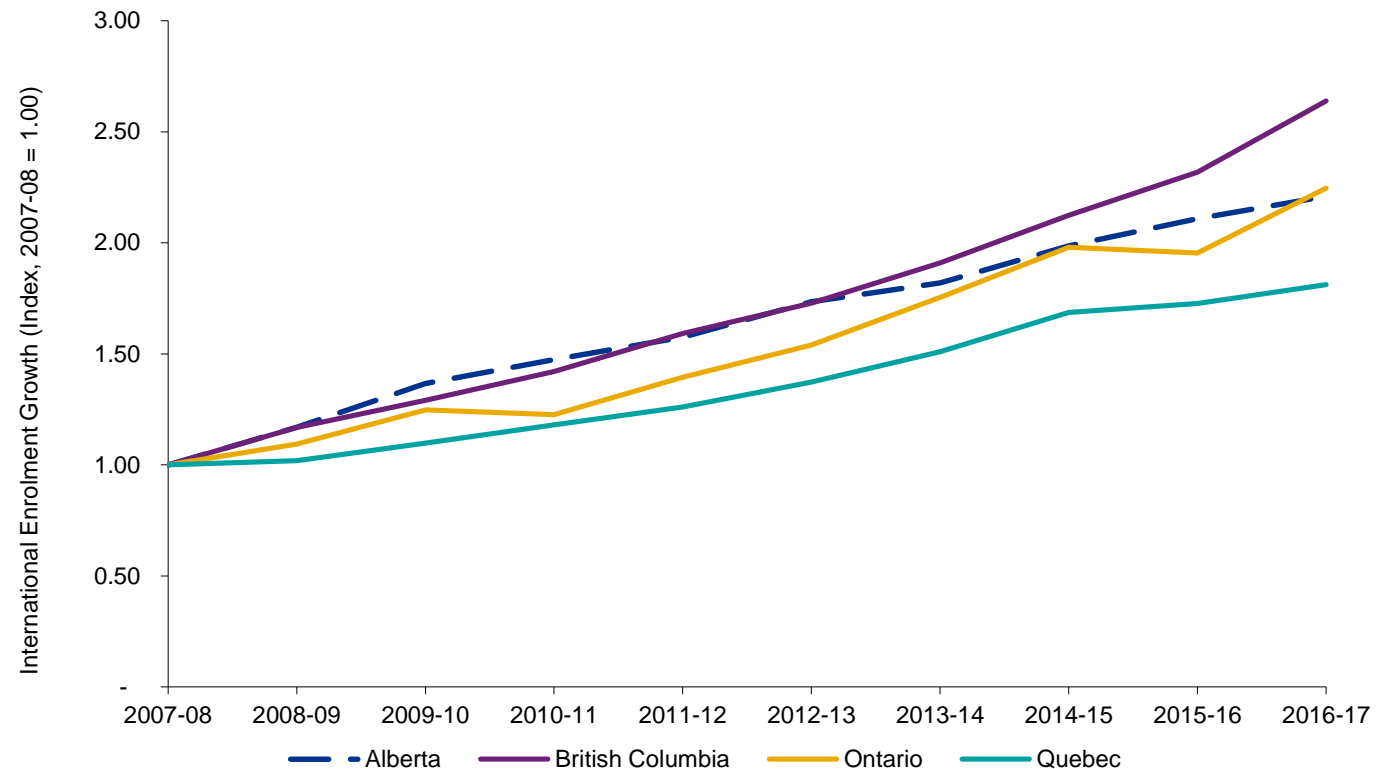
In 2016/17, there were 18,303 international enrolments in Alberta.

Figure 54 on the following page shows the breakdown by each of the post-secondary sector groupings in Alberta. CARU institutions have a greater proportion of international student enrollments while UU institutions have the lowest proportion.

Figure 55 on the following pages shows the total international tuition as a percentage of the total revenue for post-secondary institutions across each of the comparator provinces.

In 2016-17, Alberta's institutions derived 5%, while British Columbia derived 17%, Ontario derived 14%, and Quebec derived 8% of its total revenues from international students.

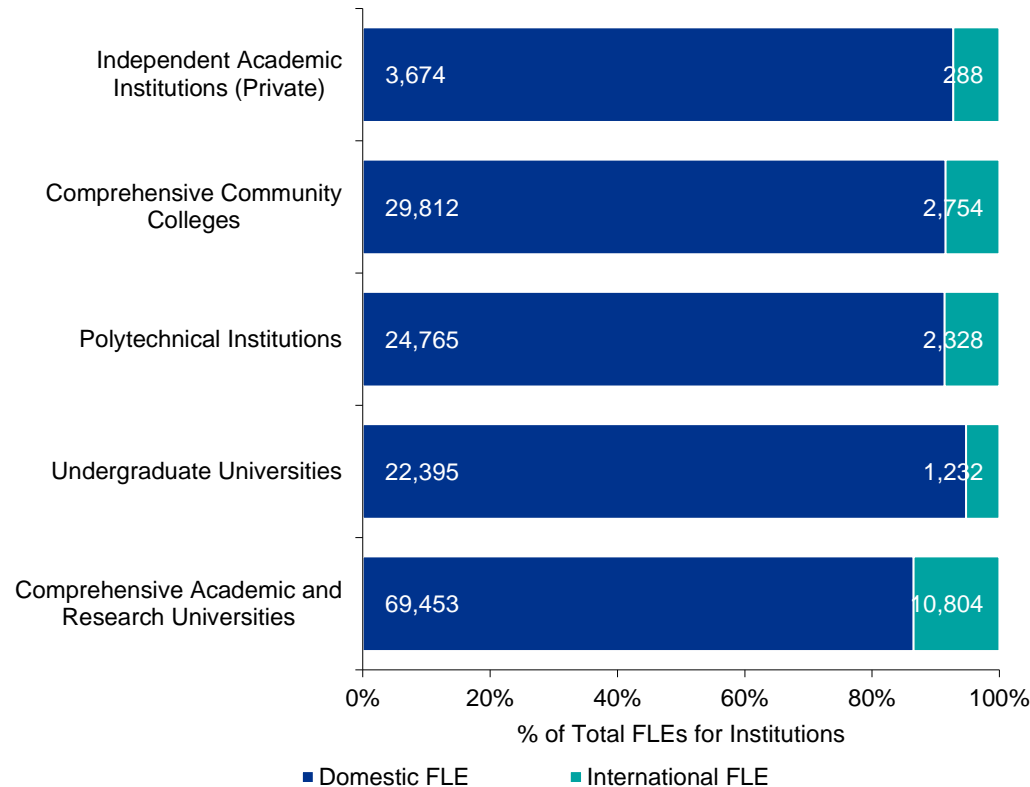
Figure 53: International Post-Secondary Enrolment Growth (Index, 2007-08 = 1.00)



Source: International Enrolments from Statistics Canada Table 37-10-0018-01.

International Students (1 of 2)

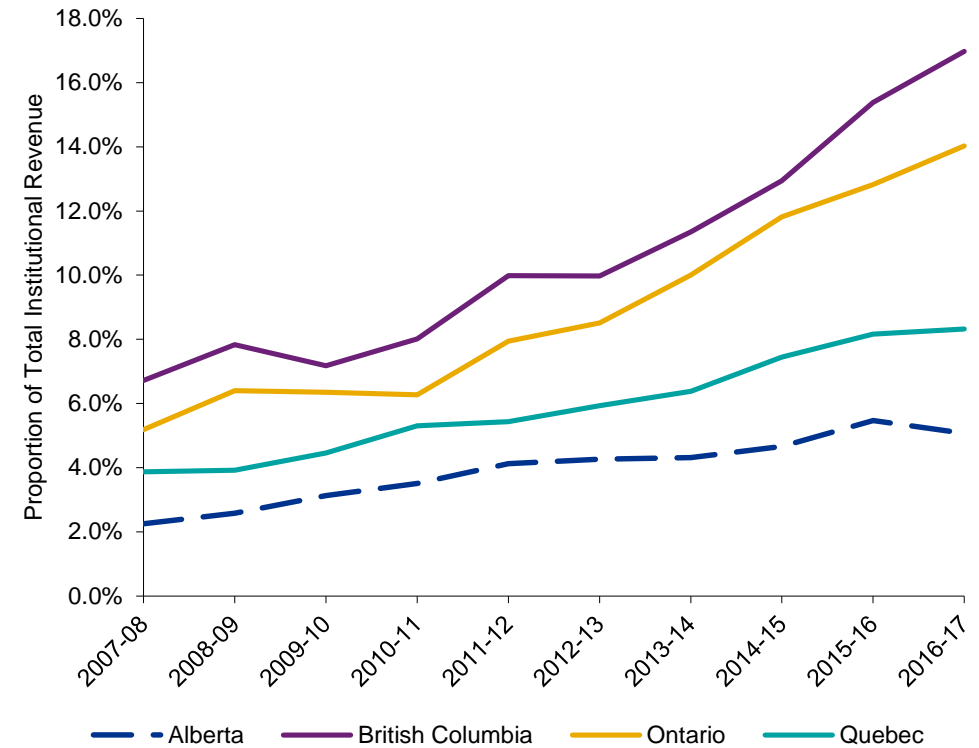
Figure 54: Domestic vs International Student FLE in Alberta



Note: International FLE counts were not provided by the Ministry of Advanced Education. They were derived by taking the total FLEs for each post-secondary institution and subtracting the total domestic FLEs for each post-secondary institution.

Source: 2017-18 FLE count from the Ministry of Advanced Education.





Figure 55: International Tuition Revenue as a Percentage of Total Institutional Revenue



Note: International Tuition Revenue was estimated using the weighted average tuition fees (for between graduate and undergraduate fees) and total international enrolment by province.





Source: International Enrolments from Statistics Canada Table 37-10-0018-01; International tuition fees from Statistics Canada Table 37-10-0045-01; University Revenue from Canadian Association of University Business Officers FIUC database; College from Statistics Canada Table 37-10-0028-01.

Advanced Education Business Model Differences (1 of 2)

				
Organization	Ministry of Advanced Education	Ministry of Advanced Education, Skills and Training	Ministry of Training, Colleges and Universities (combined with Employment Ontario)	Ministry of Education, Recreation and Sports (combined Education and Higher Education)
Funding for Post Secondary Institutions (PSI) / Tuition Fees	Regulated	Regulated	Regulated	De-regulated for Universities, operating grants based on complex formula CGEP fully funded
Core Business	<p>Generally consistent across the four provinces:</p> <ul style="list-style-type: none"> ▪ Encompasses funding for the PSI sector and student financial assistance ▪ Comprehensive range of academic and technical learning options ▪ eLearning or distant learning capacity 			
Common Goals	Affordable and accountable higher education, opportunity for the realization of everyone's full potential			
Variation in Goals	Focus on contribution to the economy	Focus on Indigenous	Focus on market requirements	Mobilization of partners and stakeholders
Number of PSIs in 2018	21	25	44	48 CGEPS 19 Universities
Population per PSIs (excluding CGEPS for QC)	205,100	199,667	325,517	441,605

Source: Business Plans (Service Plans), Annual Reports and Ministry websites; Population data to inform per capita from Statistics Canada Table 17-10-0005-01.

Advanced Education Business Model Differences (2 of 2)

				
Total Expenditures per Student FTE (a)(b)	\$36,510	\$31,299	\$21,536	\$25,822
Total Departmental Expenses per Student FTE (b)(c)(d)	\$417	\$608	\$344	\$286
Departmental Responsibilities / Regulatory Activities	<ul style="list-style-type: none"> Approves all tuition changes Approves all program of studies Receive a report including the audited financial statements from the preceding fiscal year for each institution Approve the statement of mandate of each institution Designate institutions to accept international students 	<ul style="list-style-type: none"> Approves exceptions to tuition policy where substantial changes to a program are necessary Establishes a method by which courses of post-secondary education or training may be accredited Receive an annual report from each institution Issue an annual mandate letter to institutions Sets guidelines for institutions on international students 	<ul style="list-style-type: none"> For Universities, reviews and approves only new program tuition fees. For Colleges, sets the minimum and maximum tuition rates and monitors college adherence. Approves the advertisement and/or offerings of program or parts of a program leading to a degree, or to be known as a university Administer strategic mandate agreements (outlining an institution's mandate) 	<ul style="list-style-type: none"> Approves all tuition changes Approves all program of studies Receive financial statements each year and a performance report

Note: (a) Consolidated expenses per Student FTE based on budget estimates for 2018-19 for Ministry including post-secondary institution expenses. Accounting principles may vary across provinces and institutions.

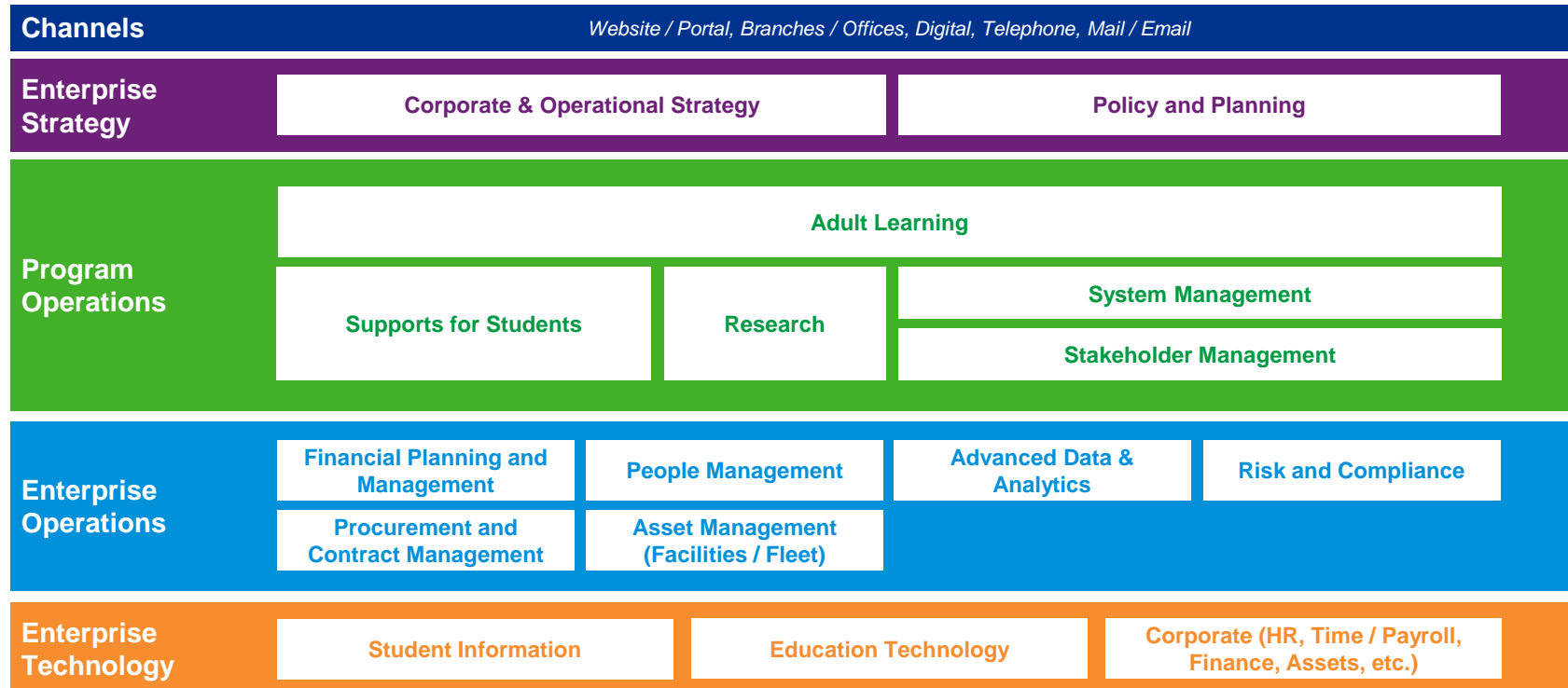
(b) Student FTE data is based on 2016-17 Statistics Canada enrolment. Enrolment data for more recent years was unavailable.

(c) Department costs per FTE based on 2018-19 Estimates for Advanced Education spending with both Operating Grants to post-secondary institutions, other transfers to post-secondary institutions (e.g. Community Education), foundational learning, and Student Aid Grants and administration costs removed.

(d) Due to data availability constraints, Department costs for administering apprenticeship training in Ontario and Quebec have not been captured.

Source: KPMG Analysis of Budget Estimates from 2018-19 for Alberta, BC, Ontario and Quebec; FTE data from Statistics Canada Table 37-10-0015-01; Alberta Tuition Framework; BC Tuition Limit Policy; Ontario Tuition Fee Framework; Ontario Colleges of Applied Arts and Technology Policy Framework.





Connected Enterprise Framework for Advanced Education



Advanced Education Expenditure Comparisons

Table 31: Advanced Education Budget Estimates 2018-19

% of Total Expenses // Per Student FTE Expense

								
Enterprise Strategy	0.05%	\$17	0.01%	\$4	0.05%	\$10	0.3%	\$90
Program Operations	77.9%	\$28,442	86.8%	\$27,161	78.1%	\$16,799	69.7%	\$17,085
Adult Learning	51.8%	\$18,914	59.4%	\$18,584	48.6%	\$10,461	52.6%	\$13,588
Supports for Students	12.3%	\$4,479	13.3%	\$4,151	21.4%	\$4,610	10.3%	\$2,660
System Management	0.8%	\$304	0.3%	\$95	0.8%	\$173	3.0%	\$770
Stakeholder Management	0.2%	\$59	1.6%	\$495	1.6%	\$342	0.1%	\$35
Research	12.8%	\$4,685	12.3%	\$3,838	5.6%	\$1,213	3.6%	\$939
Enterprise Operations	21.6%	\$7,894	13.2%	\$4,134	21.8%	\$4,705	29.7%	\$7,678
Enterprise Technology	0.4%	\$157	-	-	0.1%	\$22	0.2%	\$61
Total Expenditures per Student FTE	\$36,510		\$31,299		\$21,536		\$25,822	

Note: Consolidated views for British Columbia do not exist and for Ontario are limited and not detailed; expenditures by post-secondary institutions for these provinces were included using budgets and prior year actuals and estimating assumptions to allocate expenditures across the Connected Enterprise model.

Source: Analysis of Budget Estimates for 2018-19 for Alberta, British Columbia, Ontario, and Quebec; Student enrolment data to inform per student FTE expenditures from Statistics Canada for 2016-17.

Innovative Models in Advanced Education

The following outlines some practices and innovative models in advanced education systems that have been used to increase efficiencies while driving improved outcomes for students and post secondary institutions.

Model	Description	Known / Identified Results	Further Information / Source
Integration of government oversight, fiscal accountability and policy for advanced education with and skills and labour	<p>Examples of other models being employed focus on enhancing the relationship or role of government to support post-secondary learning, with employment skills and labour. This includes:</p> <ul style="list-style-type: none"> Combining the ministry of employment and labour (or equivalent) with advanced or higher education Increasing the focus and requirement for work-integrated learning into the publicly funded post-secondary environment including for instance: <ul style="list-style-type: none"> Apprenticeship Co-op Internship Applied Research Service Learning 	N/A	Fraser Institute
Alternative sources of revenue	<p>Publicly funded PSIs are increasingly exploring new sources of revenue to supplement public funding. These include both for-profit ventures and cost recovery ventures. At the same time, PSI's are generally not well-equipped to manage these arrangements. More and more, PSI's that do enter into such ventures are creating for-profit or stand alone not-for-profit entities governed by independent boards and management teams to appropriately govern and manage the organization.</p>	N/A	https://open.alberta.ca/dataset/90c5577c-0d5b-440e-84b7-c7101c902b2f/

Note: This information does not represent KPMG's advice or opinion.



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Innovative Models in Advanced Education

Model	Description	Known / Identified Results	Further Information / Source
Incentivizing new behaviours	<p>Various PSI's are introducing various incentives to change education experiences and teaching strategies. These include stipends/additional pay to introduce active learning and online teaching methods including</p> <ul style="list-style-type: none"> • Innovation • The use of technology to reduce physical classroom space • Hybrid classes • Alternative class times 	N/A	https://www.insidehighered.com/digital-learning/article/2017/08/23/colleges-offer-stipends-and-more-encourage-hybrid-courses-and

Note: This information does not represent KPMG's advice or opinion.



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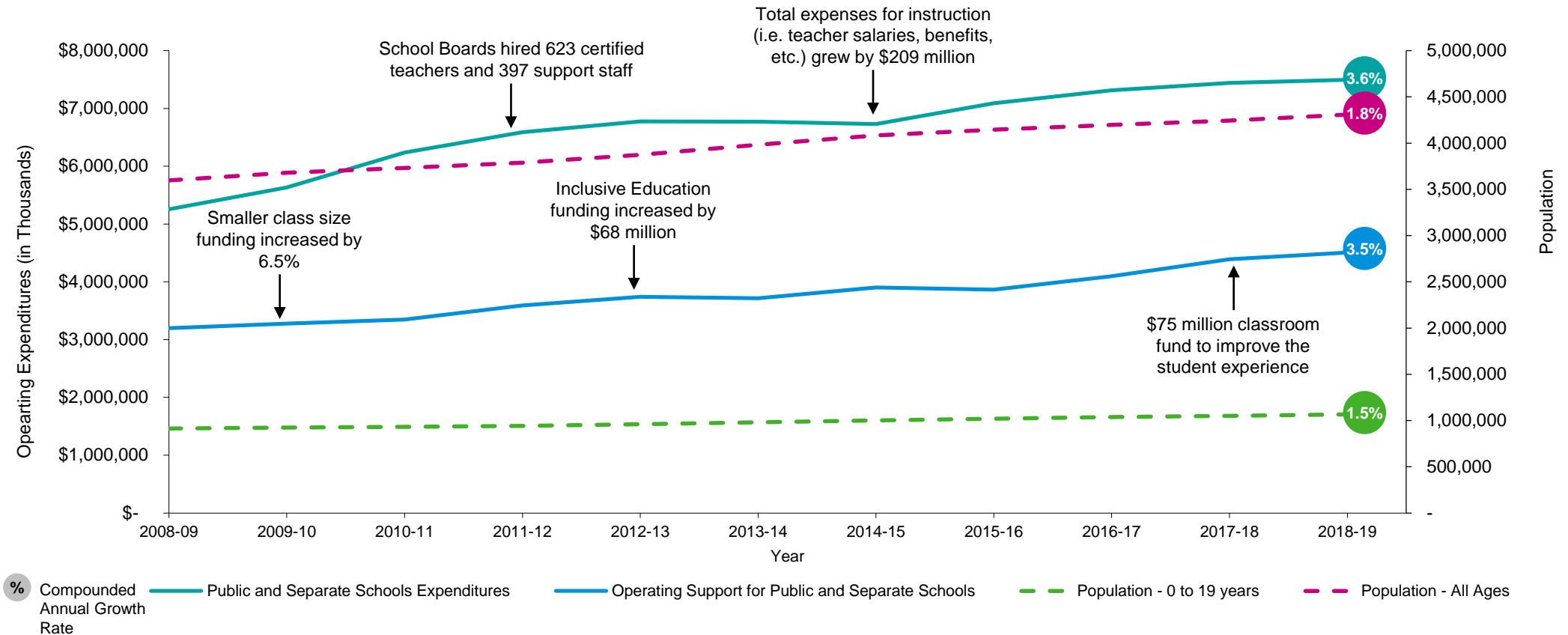


Education



Key Trends for Education in Alberta

Figure 56: 10 Year Trend for Alberta's Major Expenditures in Education



Source: Analysis of Budget Estimates from 2008-09 to 2018-19 for Alberta and Consolidated Actuals for School Board Expenditures 2008-09 to 2017-18; Population data from Statistics Canada Table 17-10-0005-01.

School Board Geography (1 of 3)

Table 32 shows the five year average expenses and enrollment of schools boards in different geographic areas.

Rural-Distant school boards spend the most across all areas but have the least number of student enrolments per school board.

Figure 57 on the following page shows the total school board expenditures by each of these regions from 2010 to 2018. Metro and Rural-Urban school boards saw their expenditures grow the most by 4.4% CAGR and 4.7% CAGR, respectively.

Figure 58 shows the total school board expenditures normalized by the number of student enrolments from 2010 to 2018. Rural-Distant and Rural-Urban saw their per student expenditures grow the most by 2.8% CAGR and 2.1% CAGR, respectively.

Table 32: School Board Expense by Function and Geography

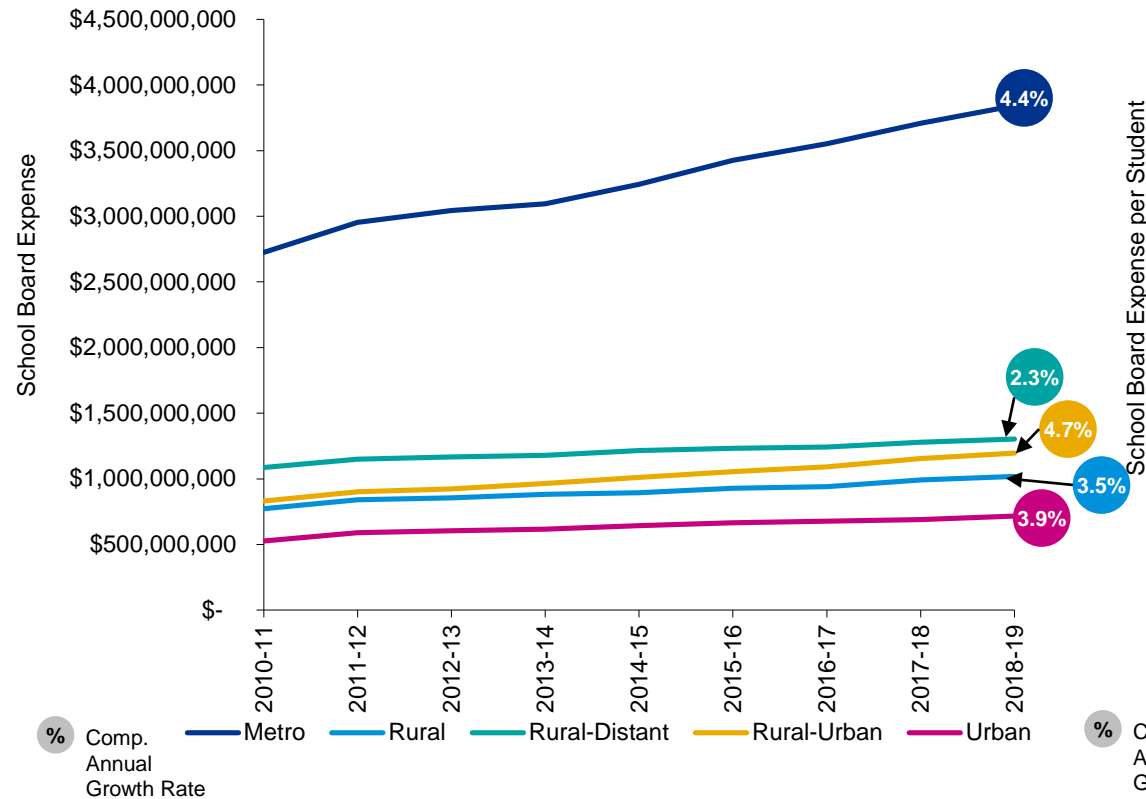
Expense Function	School Board Geography (Five Year Average per Student)				
	Metro	Urban	Rural-Urban	Rural	Rural-Distant
Instruction – ECS to Grade 12	\$9,382	\$10,027	\$9,606	\$9,848	\$11,494
Operations and Maintenance	\$1,541	\$1,618	\$1,532	\$1,557	\$2,074
Transportation	\$439	\$306	\$595	\$680	\$1,081
Board and System Administration	\$336	\$399	\$373	\$479	\$618
External Services	\$179	\$81	\$38	\$81	\$281
Five Year Average Enrolments					
Total	299,031	54,553	90,656	75,455	80,701
Per School Board	74,758	7,793	9,066	5,804	3,509

Note: 2017-18 and 2018-19 figures are based on a forecast of Cost per per Student x Enrolment figures as School Authority level summarized financial statements were not available for those years.

Source: School Authorities Audited Financial Statements; School Board Enrolment from the Ministry of Education.

School Board Geography (2 of 3)

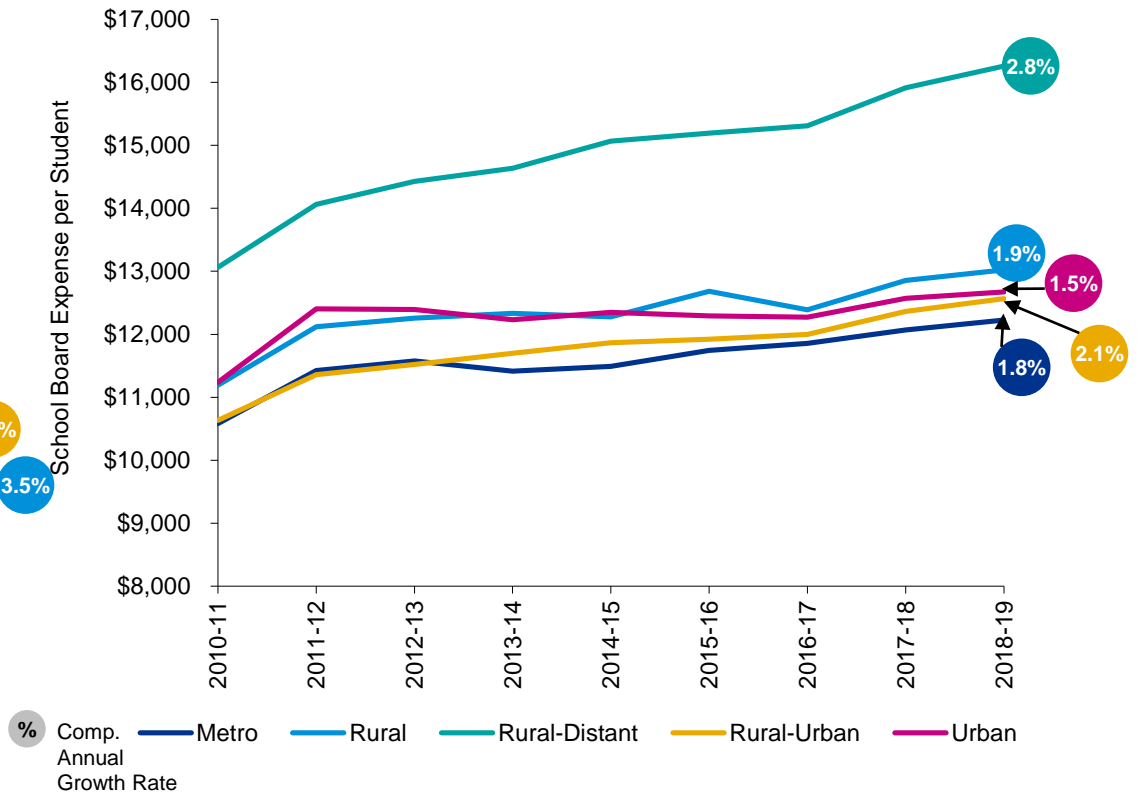
Figure 57: School Board Expense by Geography



Note: Excludes Charter and Francophone schools as only Public and Separate schools are categorized by geography. Due to summary data availability, 2017-18 and 2018-19 total expenses by school board were forecasted.

Source: School Authorities Audited Financial Statements.

Figure 58: School Board Expense by Geography per Student



Note: Excludes Charter and Francophone schools as only Public and Separate schools are categorized by geography. Due to summary data availability, 2017-18 and 2018-19 total expenses by school board were forecasted.

Source: School Authorities Audited Financial Statements; School Board Enrolment from the Ministry of Education.

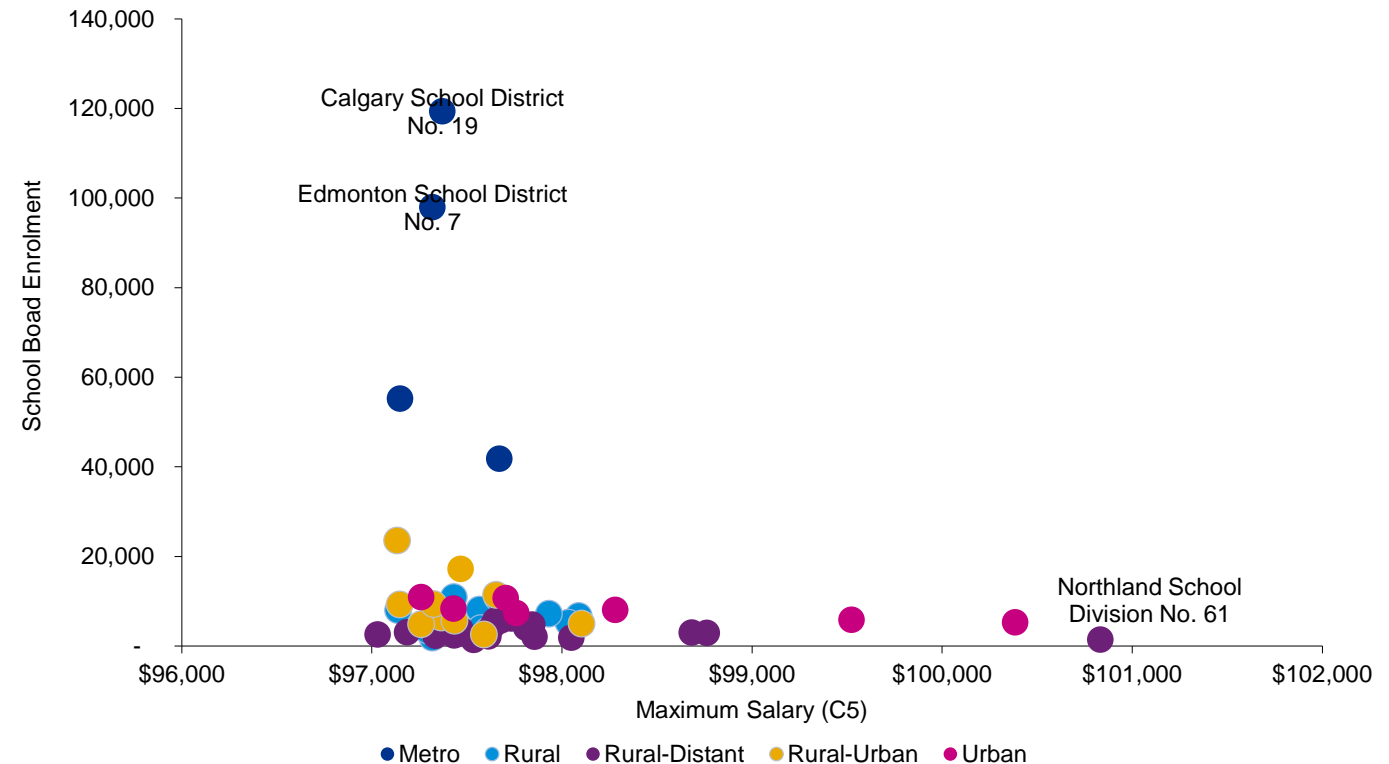
School Board Geography (3 of 3)

There is variation in the teacher salary grids for each school board and geography.

However, based on the analysis in Figure 59, there appears to be no correlation between the teacher maximum salaries, enrolment and geography.

As depicted in Figure 59, most maximum salaries (C5) for teachers in Alberta are between \$97K and \$98K, with a number of outlier school boards over this amount. These outlier school boards are largely from the Northern region of the province, with the top five paying schools boards being: Northland, the two Fort McMurray boards, Fort Vermilion, and Peace River.

Figure 59: Teacher Maximum Salary by Public School Board Geography



Note: Figures are based on C5 maximum salary.

Source: Teacher Salary Grids and School Board Enrolments from the Ministry of Education; School Board Enrolment from the Ministry of Education.

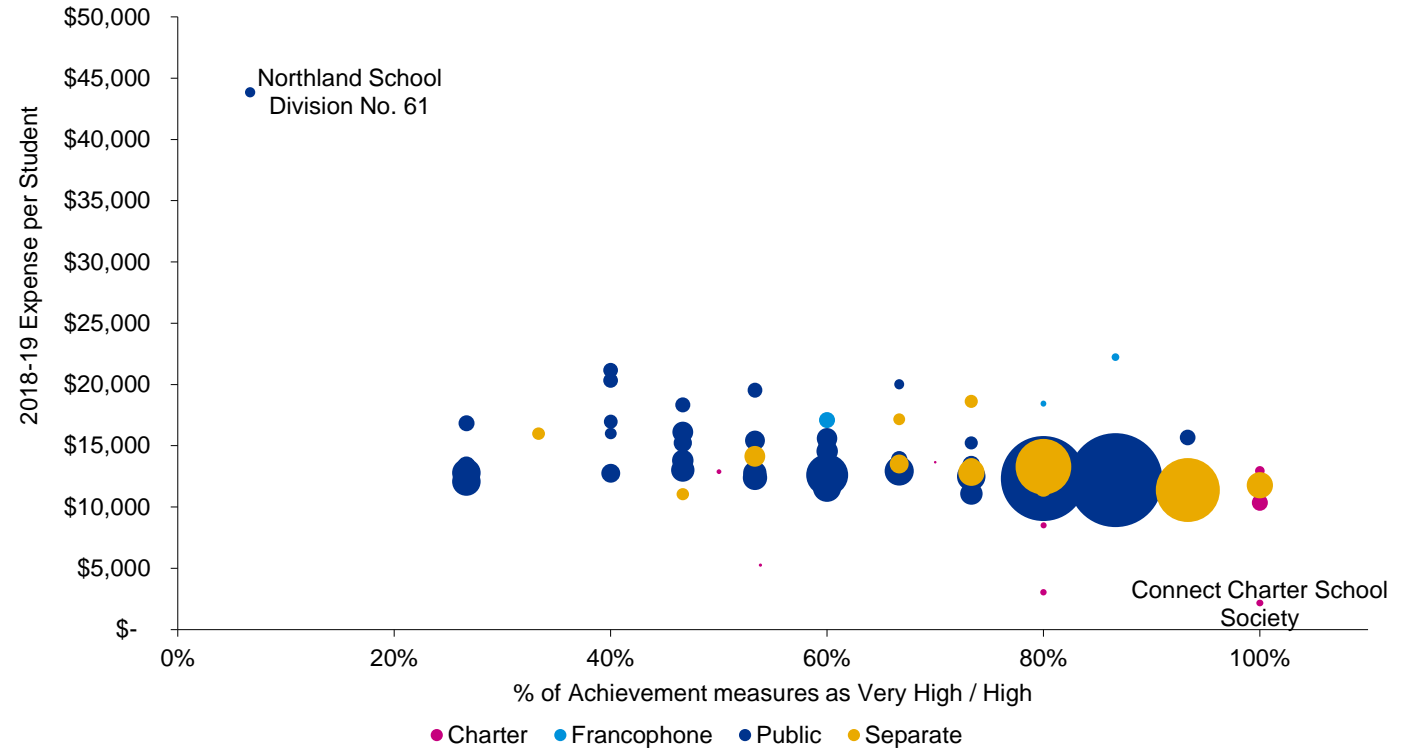
School Board Performance

Alberta Education measures School Board performance using 16 measures that make up their Accountability Pillar. These measures are organized across six categories:

- Safe and caring schools
- Student learning opportunities
- Student achievement learning
- Preparation for lifelong learning, work of work, citizenship
- Parental involvement
- Continuous improvement.

Figure 60 shows the percentage of measures that were rated as very high or high against their total expenses per student from 2018-19.

Figure 60: Percentage of All Achievement Measures Scored as Very High / High per School Board



Note: Bubble size relates to 2018-19 Enrolment. 2018-19 Expense per student is forecasted due to availability of data.

Source: Accountability Pillar Results for Annual Education Results Report (AERR) from the Ministry of Education; School Authorities Audited Financial Statements; School Board Enrolment from the Ministry of Education.

School Board Enrolment (1 of 2)

Since 2007/08, student enrolment growth has been significant in Alberta as compared to the other provinces.

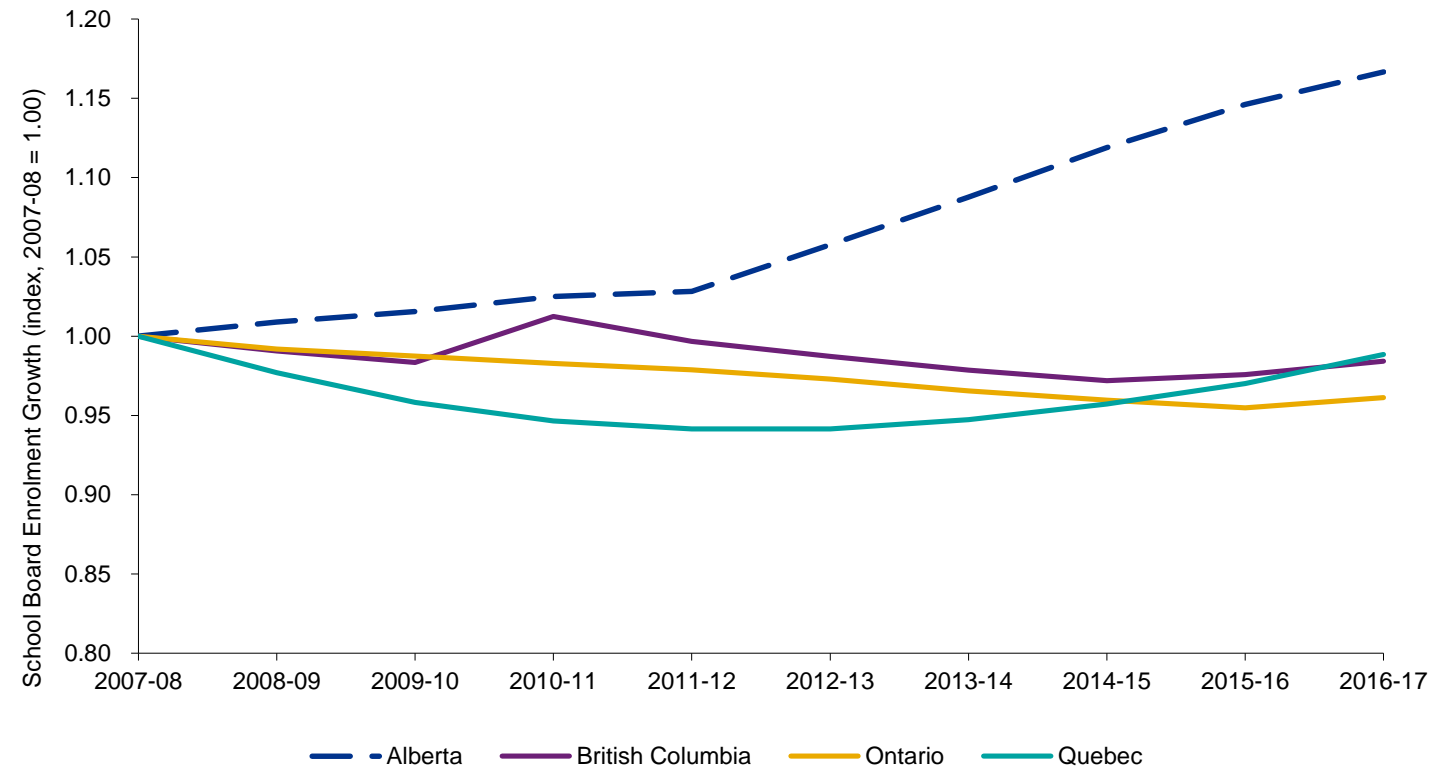
Alberta's enrolment growth was 16.7% in 2016/17 while the other provinces declined: -1.2% in Quebec, -1.6% in British Columbia, and -3.9% in Ontario.

Figure 62 on the following page shows the enrolments from 2016/17 by province broken down by Early Childhood (ECS), Primary, Middle and Secondary.

Some variability will result from differences in the comparator province education systems (e.g. Quebec's secondary education system ends at grade 11).

Alberta's funded enrollments for ECS schools have grown by 3.7% CAGR while primary school enrolments have grown by 2.7% CAGR between 2009/10 and 2018/19. Middle and Secondary school enrolments have grown by 0.9% and 0.6% CAGR, respectively.

Figure 61: School Board Enrolment Growth (Index, 2007-08 = 1.00)

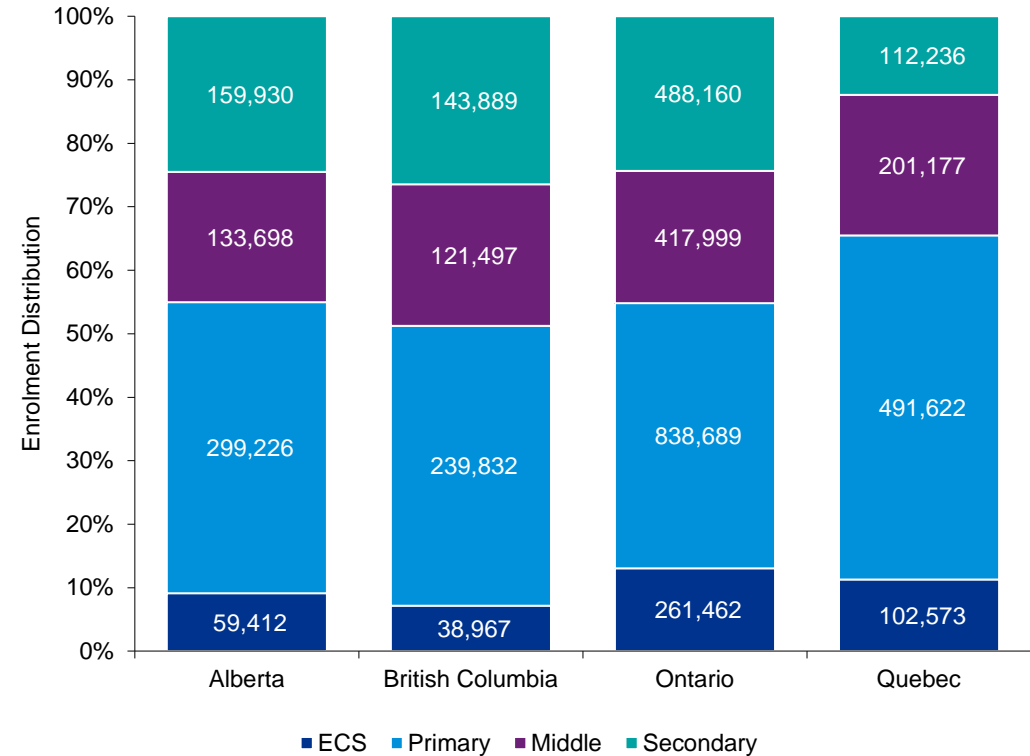


Note: A caveat to note with Quebec enrolments is that their secondary school technically ends after Grade 11.

Source: Provincial enrolments from Statistics Canada Table 37-10-0007-01.

School Board Enrolment (2 of 2)

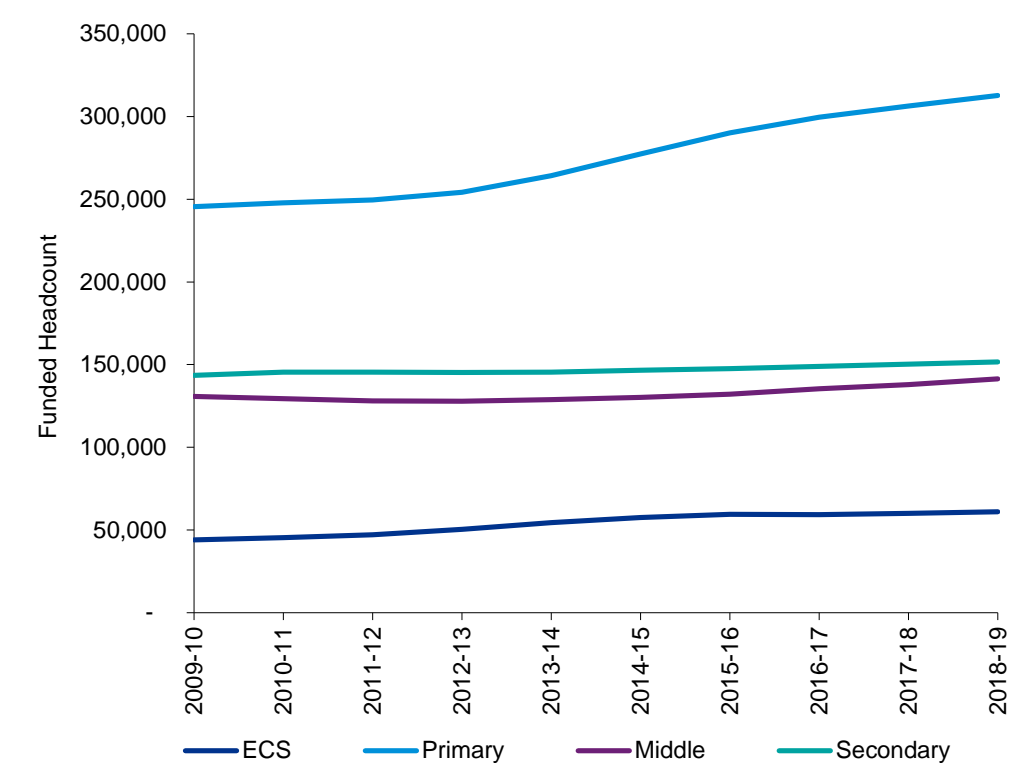
Figure 62: 2016-17 Enrolment Distribution



Note: For the purpose of analysis: ECS is defined as Junior Kindergarten and Kindergarten, Primary School is defined as Grades 1 to 6, Middle School is defined as Grades 7 to 9, and Secondary School is defined as Grades 10 to 13.

Source: Grade classification taken from Scholaro's definition of Canada's Education System; Provincial Enrolment taken from Statistics Canada Table 37-10-0007-01.

Figure 63: Funded Enrolment in Alberta School Boards



Source: Grade classification taken from Scholaro's definition of Canada's Education System; Historical Enrolment from the Ministry of Education.

Education Funding Models

	Alberta	British Columbia	Ontario
Funding Model Summary	Mainly per-student driven	Mainly per-student driven	Mainly per-student driven
Funding Model Components	<ul style="list-style-type: none"> Base funding based on per-student basis Differential funding based on demographic and geographic factors Targeted funding for specific programs Capital funding 	<ul style="list-style-type: none"> Base funding on per-student basis Supplementary grants based on demographic and geographic factors, as well as funding protection against enrolment decline 	<ul style="list-style-type: none"> Base funding on per-student basis School Foundation grant based on benchmarks Special Purpose grants based on demographic and geographic factors
Funding Model Components			
Base Funding	<ul style="list-style-type: none"> ECS Base Instruction Grades 1-12 Base Instruction Home Education 	<ul style="list-style-type: none"> Standard Enrolment Continuing Education Distributed Learning Alternate Schools Home Schooling 	<ul style="list-style-type: none"> Classroom Teachers ECS Educators Education Assistants Textbooks, Learning Materials Classroom Computers and Library
Additional Funding	<ul style="list-style-type: none"> Class Size Grants Early Literacy (Grades 1-2) ECS Administration and Program ESL / Francisation Equity of Opportunity / Inclusive Education First Nations, Metis and Inuit Education Plant Operations and Maintenance Transportation Others including Northern Allowance, Hutterite Colony Schools, Sever Disabilities, Small Board/Schools, Socio-Economic Status 	<ul style="list-style-type: none"> Supplement for Unique Student Needs Classroom Enhancement Special Needs English Language Learning Aboriginal Education Adult Education Newcomer Refugees Supplement for Enrolment Decline Supplement for Salary Differentials Supplement for Unique Geographic Factors Transportation 	<ul style="list-style-type: none"> Special Education Language Indigenous Education Geographic Circumstances Safe and Accepting Schools Continuing Education Cost Adjustment and Teacher Qualifications and Experience Transportation Declining Enrolment School Facility Operations and Administration

Note: Quebec information not available.

Source: Provincial Funding Model Analysis from the Ministry of Education.

School Board Operational Funding

A comparison of grants was completed for Alberta, British Columbia and Ontario.

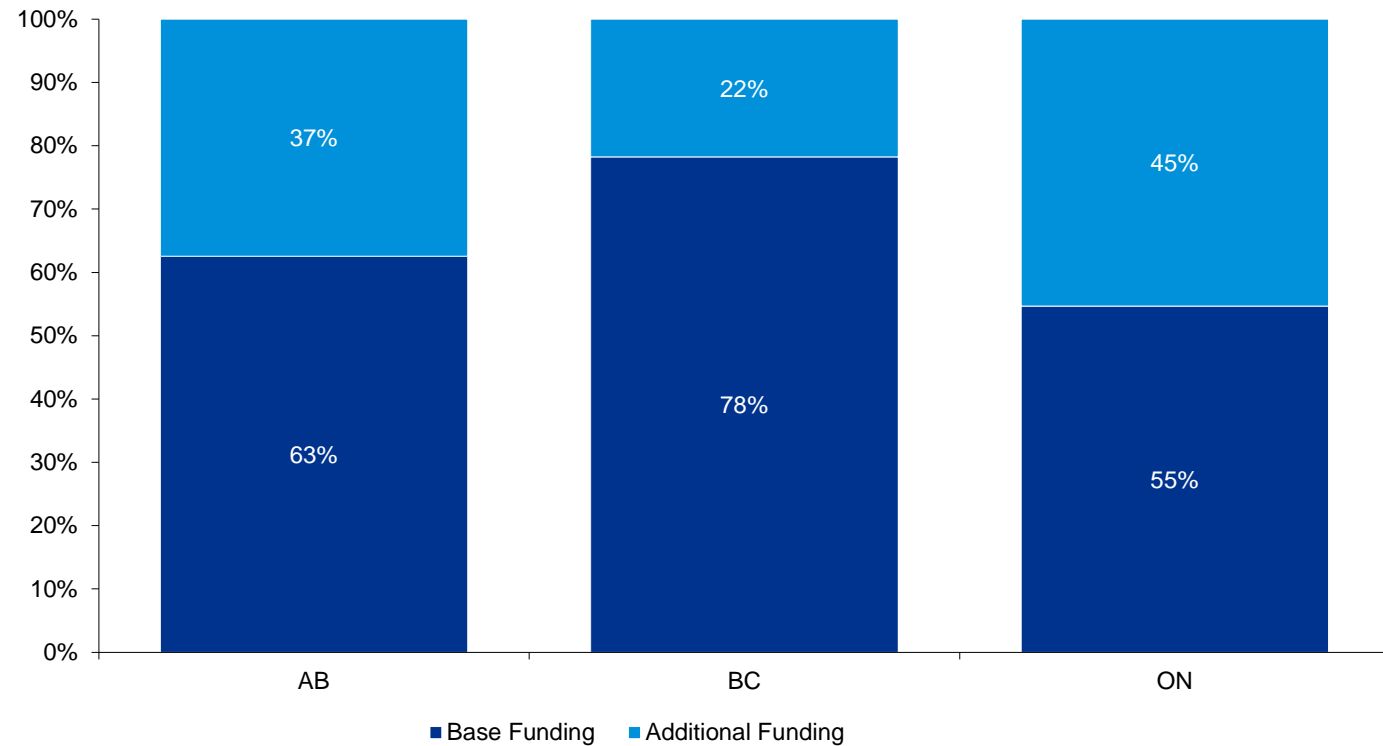
As per Figure 64, Ontario and Alberta use a higher proportion of grants for additional funding, in comparison to British Columbia.

The table below outlines the key categories of these grants for 2018-19.

Table 33: School Board Operational Funding (2018-19)

In Millions	AB	BC	ON
Base Funding Grants	4,208	4,021	12,650
Differential Grants	1,946	-	-
Targeted Grants	530	-	-
Other Provincial Support	42	-	-
Supplementary Funding	-	1,119	-
Special Purpose Grants	-	-	10,484

Figure 64: School Board Operational Funding (2018-19 Estimates)



Note: Quebec information is not available.

Source: Alberta Operational Funding to School Boards from the Ministry of Education; British Columbia Operational Funding to School Boards from BC Government Operating Grants Table; Ontario Operational Funding to School Boards from Ontario: A Guide to the Grants for Student Needs.

Class Size (1 of 2)

One of the key grants that Alberta has been using since 2004/05 is the Class Size Initiative.

Since 2004/05, a total of \$3.3 billion has been spent under this initiative in Alberta (\$295 million was spent in 2018/19).

Table 34 summarizes the comparator Province's use of class size grants / funding to address similar issues. Alberta's class sizes are comparable across the comparator provinces.

Of the comparator provinces, Alberta and British Columbia fund class size initiatives. Ontario and British Columbia legislate class sizes, and Quebec does not use any class size incentives or regulations.

Table 35 on the following page highlights key literature on the use of class size initiatives. The Auditor General of Alberta found that in its review of Alberta's Class Size initiative, the number of school jurisdictions meeting the Department's class size targets in 2017 was lower than in 2004.

Table 34: Class Size Comparison

	Alberta	British Columbia	Ontario	Quebec
Targeted Grant Line – Funding Formula	Yes – Class Size Grants	Yes – Classroom enhancement fund allocation	No – reflected as part of Pupil Foundation Grant and Teacher Qualifications and Experience Grant	N/A
Legislated Class Size	No	Yes	Yes	
Class Size Guidelines	ACOL Guidelines: K-3: 17 students 4-6: 23 students 7-9: 25 students 10-12: 27 students	School Act: K: 22 students 1-3: 24 students 4-12: <30 students	Class Size Regulation: K: 26-29 students 1-3: ≤20 (for 90% of classes, 23 for rest) 4-8: 24.5 students 9-12: 28 students	Provincial Collective Agreement: Junior K: 17 students Senior K: 19 students 1: 22 students 2: 24 students 3-6: 26 students 7: 28 students 8: 29 students 9-11: 32 students
Actual Class Size (2018-19)	K-3: 20.4 students 4-6: 22.8 students 7-9: 23.5 students 10-12: 23.5 students	K: 18 students 1-3: 19.9 students 4-7: 23.9 students 8-12: 22.1 students	*funded class size only given K: 25.6 students 1-3: 19.8 students 4-8: 23.8 students 9-12: 22 students	1: 23 students 2-3: 25 students 4-8: 27 students 9-12: 30 students

Source: Class Size Comparison provided by the Ministry of Education.

Class Size (2 of 2)

Table 35: Class Size Literature Review

	Summary
Drummond Report	<ul style="list-style-type: none"> ▪ The Ontario government has emphasized the importance of smaller classes in promoting improved education outcomes. ▪ Empirical evidence of the benefit of smaller class sizes on education outcomes presents a complicated picture. ▪ Research has suggested that no solid evidence exists to show that smaller classes improve student achievement in the later primary and secondary grades in Canada. Evidence does exist that shows a positive relationship between smaller class sizes in early primary school students. ▪ Evidence suggests that, in terms of value for money, investments in lower class sizes do not provide the greatest possible benefit. ▪ The Programme for International Student Assessment (PISA) finds that raising teacher quality is a more effective route to improved student outcomes than creating smaller classes.
Office of the Auditor General	<ul style="list-style-type: none"> ▪ The OAG examined the design and operating effectiveness of the processes to define the desired results of the Class Size Initiative. ▪ Based on the audit findings, the OAG believes the department has, over time, converted Class Size Initiative funding to additional base instructional funding. ▪ Despite the \$2.7B in funding spent on the initiative since its inception, the number of school jurisdictions that met the department's class size targets in 2017 is lower than in 2004. ▪ The department stopped requiring school jurisdictions, from the 2008-09 school year onwards, to report on how they were using initiative funding. ▪ At the end of the 2010-11 school year, School Jurisdictions felt the department's funding model penalized jurisdictions that had made a conscious effort to reduce class sizes, as jurisdictions with lower class size averages received less funding. In response, the department changed the Class Size Initiative funding formula to look at a per-student allocation vs. the original average class size. The department also changes its funding to focus solely on the grade groups K-3.
Other Findings	<p>Evidence does exist that shows a positive relationship between smaller class sizes in early primary school students (K to 3). Additional Factors that lead to positive educational outcomes include but are not limited to:</p> <ul style="list-style-type: none"> ▪ Parental support ▪ Special education availability ▪ Financial situation ▪ Teacher preparedness and professional development investment ▪ School readiness factors before entering Grade 1 (e.g. physical health and emotional well-being) ▪ Child environment risk reduction and early childhood intervention.

Source: Drummond Report: Commission on the Reform of Ontario's Public Services (2012); Office of the Auditor General: Audit of Alberta Education Processes to Manage the Student Class Size Initiative (2018); Reviewed studies include Government of Quebec: Factors that may affect students academic achievement (2019); Canadian Education Statistics Council: Key factors to support literacy success in school-aged populations (2009); Oxford Academic: The impact of poverty on educational outcomes for children (2007); Balestra, Eugster and Liebert: Class composition, special needs students, and peers' achievement (2016).



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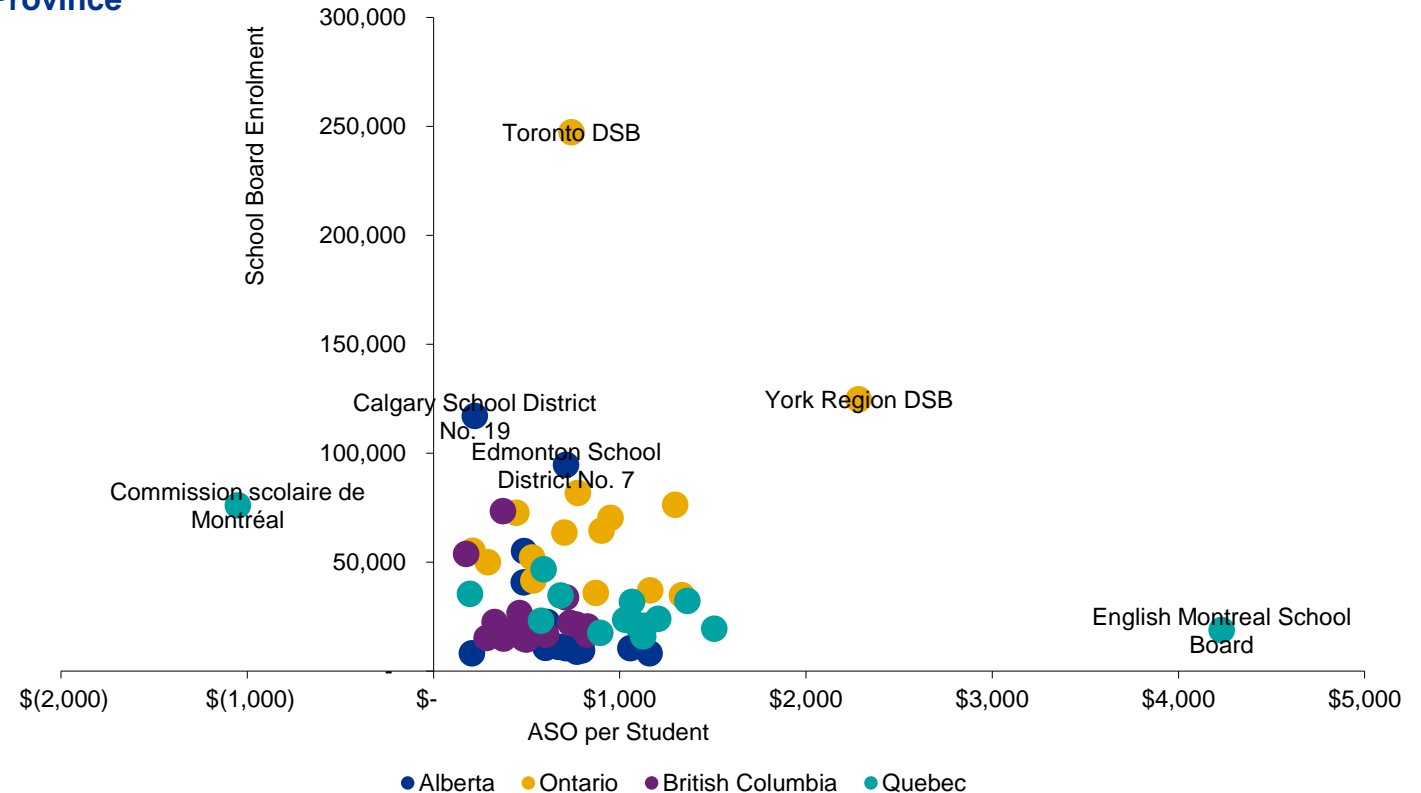
Accumulated Surplus from Operations (1 of 2)

Based on a sample of the 15 largest school boards in the comparator provinces, many school boards have operating reserves that represent government funding not expended in the year it was provided.

Figure 65 shows the accumulated surpluses from a sample of school boards across the comparator provinces on a per student basis.

Many of Alberta's school boards have less than \$1,000 per student in their reserves. This represents \$392 million in available funding across the school boards as of August 31, 2018.

Figure 65: Accumulated Surplus from Operations per 15 largest School Boards in each Province



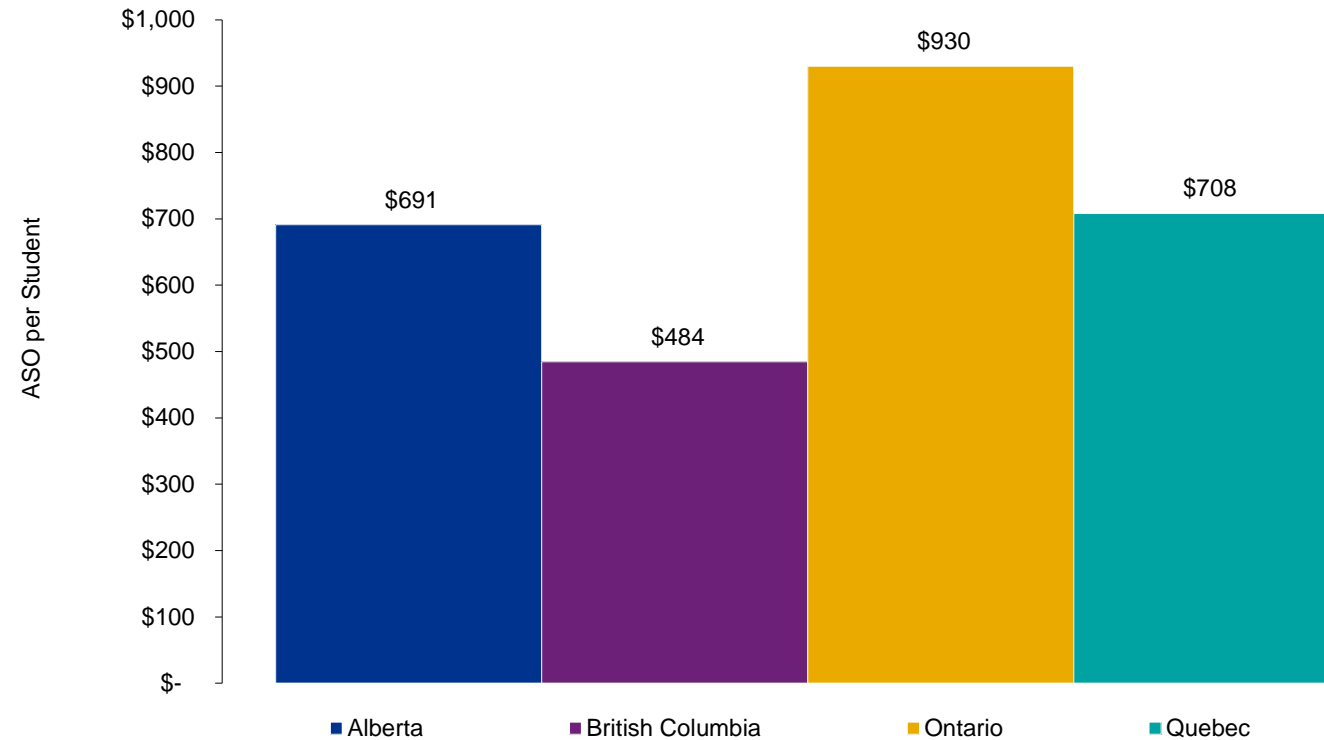
Note: Due to data availability limitations, the Accumulated Surplus of Operations for comparator provinces was gathered for the largest 15 school boards with significant outliers excluded.

Source: 2017-18 Audited Financial Statements per School Board for comparator provinces; 2017-18 Accumulated Surplus from Operations for Alberta from the Ministry of Education; Enrolments for comparator provinces taken from Annual Enrolment Reports; Enrolments for AB from the Ministry of Education.

Accumulated Surplus from Operations (2 of 2)

Based on a sample of the 15 largest school boards in the comparator provinces, on an aggregate basis, the accumulated surpluses from operations in Alberta (on a per student basis) are lower than to Quebec and Ontario's school boards sampled, and higher than the school boards sampled in British Columbia.

Figure 66: Accumulated Surplus from Operations (ASO) per Student by Province



Note: Due to data availability limitations, the Accumulated Surplus of Operations for comparator provinces was gathered for the largest 15 school boards with significant outliers excluded. For Alberta this is representative of all School Boards.

Source: 2017-18 Audited Financial Statements per School Board for comparator provinces; 2017-18 Accumulated Surplus from Operations for Alberta from the Ministry of Education; Enrolments for comparator provinces taken from Annual Enrolment Reports; Enrolments for AB from the Ministry of Education.

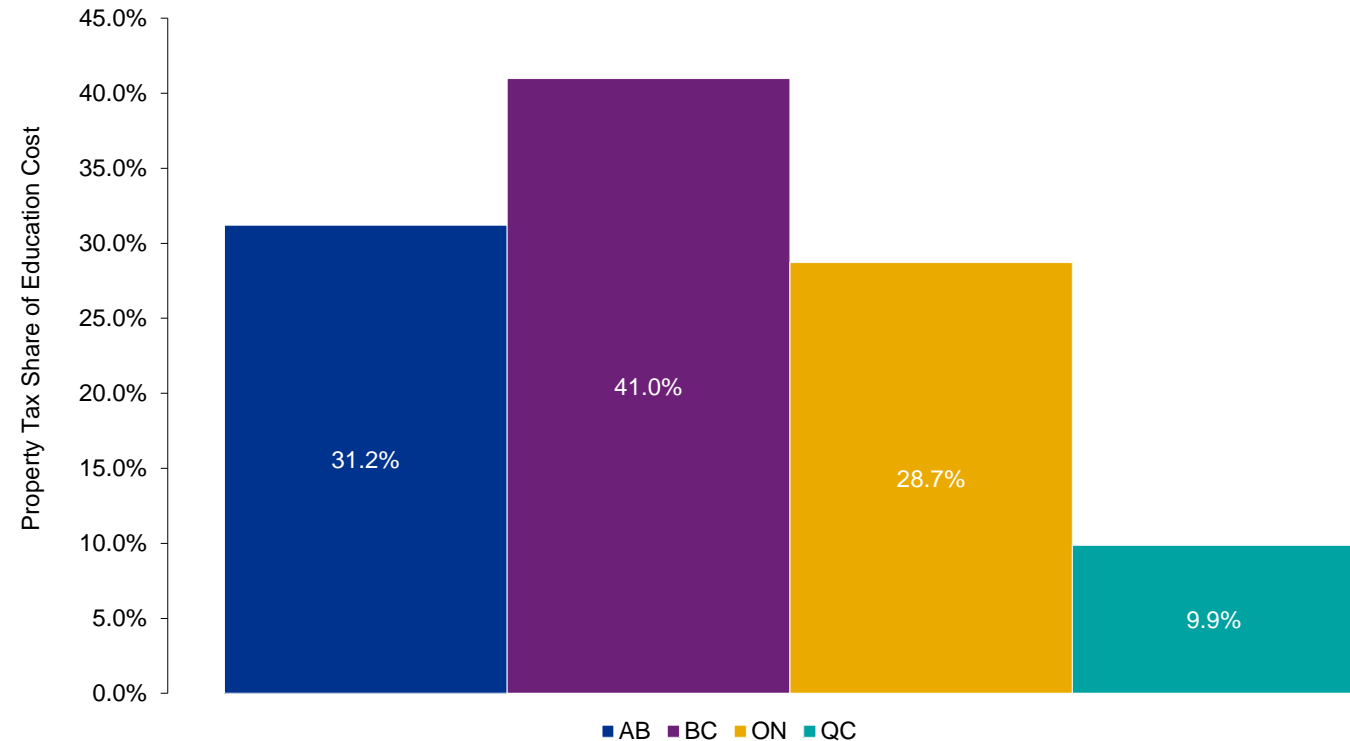
Education Property Tax

The comparator provinces each use the same principles for levying property taxes on assessment to contribute to the K-12 Education system.

Figure 67 shows, proportionately, how other provinces use property taxes as a percentage of general revenues to fund education.

Alberta funds a greater portion of education costs from property taxes when compared to Quebec and Ontario, and less when compared to British Columbia.





Figure 67: Provincial Property Tax as a Share of Education Cost (2017-18)



Note: In Quebec, local school boards collect tax revenue to support education costs and school boards are the only body with the authority to levy property taxes for Education.

Source: 2017-18 Provincial/Territorial Officials Committee (PTOC) on Local Government report.

Education Business Model Differences (1 of 2)

				
Organization	Ministry of Education (includes autonomous school authorities)	Ministry of Education (includes autonomous school authorities)	Ministry of Education (includes autonomous school authorities)	Ministry of Education, Recreation and Support (Includes Governing Boards, school boards, and Community Learning Centres)
Funding	<ul style="list-style-type: none"> Base instruction funding on a per student basis Class size funding Additional funding for specific services / differentials 	<ul style="list-style-type: none"> Base instruction funding per student basis Additional funding for specific services / differentials 	<ul style="list-style-type: none"> Base instruction funding per student basis Additional funding for specific services / differentials 	<ul style="list-style-type: none"> Formula that consists of student allocation plus additional allocations for various administrative services / functions Additional funding based on various differentials
Catholic School Boards Established under Legislation?	Yes	No	Yes	No
Core Business	Each of the four provincial ministries have responsibility for developing curriculum and funding for K – 12 (K - 11 in Quebec); responsibility also encompasses early childhood learning in all four provinces			
Additional Unique Responsibilities	N/A	N/A	Responsible for policy and programs to support child care Operates schools for blind, deaf and deafblind students	Ministry is responsible for both Education and Advanced Education In-school child care is included as part of publicly funded school services Also includes oversight for 37 Community Learning Centres

Source: Business Plans (Service Plans), Annual Reports and Ministry websites.

Education Business Model Differences (1 of 2)

				
Common goals	Student success, focus on Indigenous		N/A	N/A
Variation in Goals	Explicit focus on diversity, inclusion and teaching excellence	N/A	N/A	N/A
Number of School Authorities	74	60	72 School Boards 10 School Authorities	69 School Boards of Which 9 were English Language ^(a)
Total Expenditures per Student ^(b)	\$11,121	\$9,681	\$17,077	\$12,325

Notes: (a) Based on 2008-09 information

(b) Based on Budget Estimates for Operating Expenditures 2018-19 and student data for 2017-18.

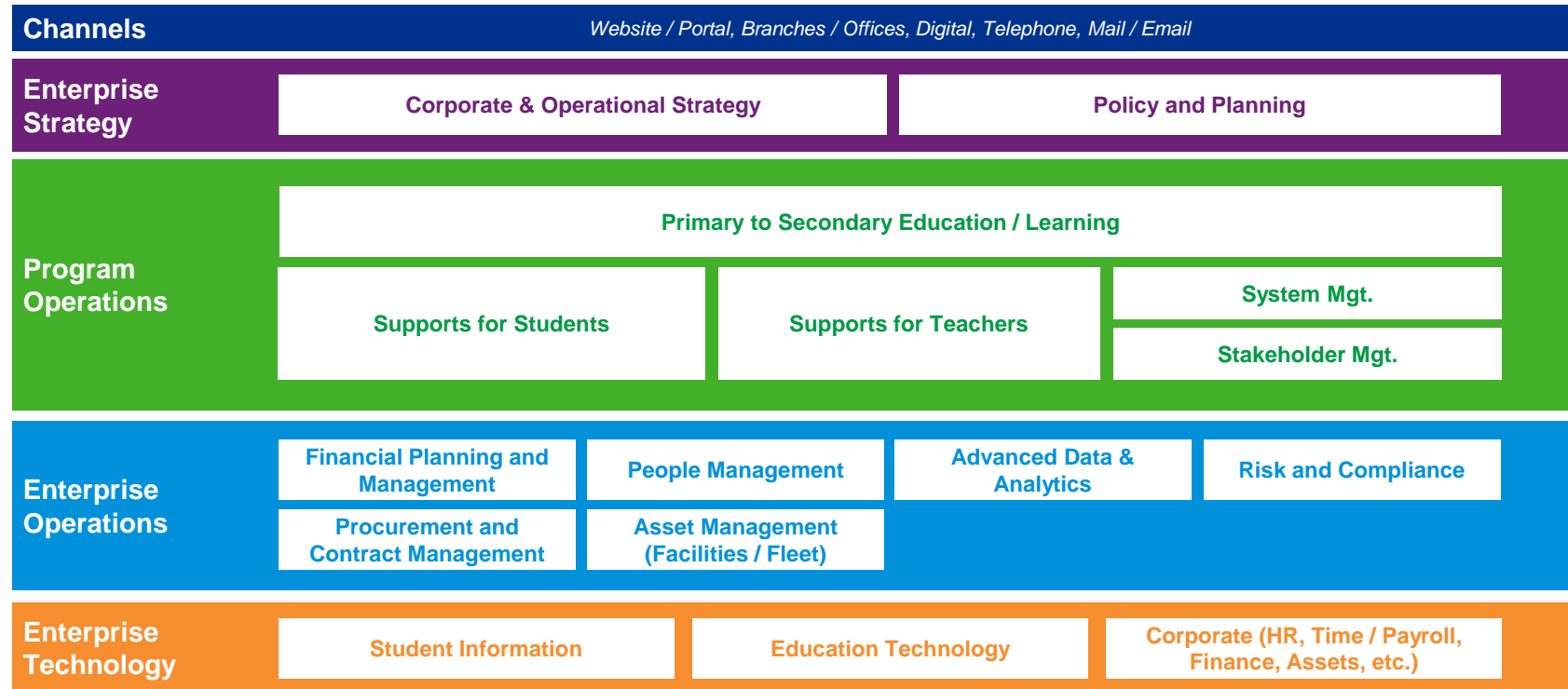
Source: Business Plans (Service Plans), Annual Reports and Ministry websites.



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Connected Enterprise Framework for Education



Education Expenditure Comparisons

**Table 35: Education Budget Estimates
2018-19**

% of Total Expenses // Per Student

								
Enterprise Strategy	1.9%	\$209	0.01%	\$1	0.3%	\$50	0.08%	\$9
Program Operations	82.6%	\$9,184	84.3%	\$8,157	73.1%	\$12,483	76.4%	\$9,415
Primary to Secondary Ed	47.7%	\$5,300	65.3%	\$6,316	47.9%	\$8,174	46.8%	\$5,769
Supports for Students	15.8%	\$1,752	2.4%	\$230	12.4%	\$2,118	12.2%	\$1,509
Supports for Teachers	12.0%	\$1,330	15.4%	\$1,494	12.6%	\$2,152	16.8%	\$2,071
System Management	7.2%	\$804	1.2%	\$116	0.2%	\$39	0.5%	\$66
Enterprise Operations	15.5%	\$1,727	15.7%	\$1,522	26.3%	\$4,491	23.2%	\$2,857
Enterprise Technology	-	-	-	-	0.3%	\$52	0.4%	\$44
Total Expenditures per Student	\$11,121		\$9,681		\$17,077		\$12,325	

Note: Consolidated views for British Columbia and Ontario do not exist; expenditures by school boards for these provinces were included using estimating assumptions.

Source: Analysis of Budget Estimates for 2018-19 for Alberta, British Columbia, Ontario and Quebec; Per student expenditures based on student data for 2017-18.

Innovative Models in Education

The following outlines some practices and innovative models in education systems that have been used to increase efficiencies while driving improved outcomes for students and teachers.

Practice	Description	Known / Identified Results	Further Information / Source
Single vs Multiple Public School Boards	<p>Only three provinces in Canada (Alberta, Ontario and Saskatchewan) fully fund religious schools via separate school boards. Alberta and Saskatchewan also provide partial government funding to independent schools of all religions, helping to keep tuition fees within reach for lower- and middle-income families. Ontario along with Atlantic Canada do not support independent schools families.</p> <p>In contrast BC provides an example of an education system that treats families of all religions equally. B.C.'s public school system is fully secular, with Catholic and other religious schools available to families as independent schools. While BC has been reviewing its funding formula the point is that taxpayer funding is available to qualifying independent schools. This financial support has helped keep tuition fees accessible for more families.</p>	<p>An article published by the Fraser Institute (August 2018) concluded that by removing religious schools from the public system while introducing partial funding for independent schools, would offer greater choice to parents and save money. A 2014 study found that if Ontario moved to B.C.'s model of a single public system with partial funding to independent schools, Ontario taxpayers would save between \$849.1 million and \$1.9 billion annually.</p>	<p>https://www.fraserinstitute.org/article/ontario-should-look-to-bc-as-a-model-for-education-reform</p>

Note: This information does not represent KPMG's advice or opinion.



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Innovative Models in Education

Practice	Description	Known / Identified Results	Further Information / Source
For profit schools	<p>Based on a report by the Fraser Institute, Alberta is the only Canadian province with charter schools, which provide greater diversity, choice and autonomy within the public school system. Alberta is also one of the most generous provinces in supporting parents that choose to homeschool their children and has one of the highest rates of subsidies to families choosing independent schools. And yet, despite the generous subsidies, Alberta's rate of independent school enrolment is less than B.C., Quebec, Manitoba and even Ontario which provides no funding to families choosing independent schools.</p> <p>Current legislation in Alberta, and indeed all Canadians provinces, excludes for-profit independent schools from receiving government operating grants—even if they follow all other school regulations—which limits their ability to participate in the province's education system, since it requires high rates of tuition.</p> <p>Sweden has incorporated for-profits into the mix of education delivery on a level playing field which has enabled greater choice to parents and students but not at a cost to government. Australia has also recently been experimenting with varying values for school vouchers. The idea is to better target support to families in need, to ensure greater school choice for lower-income Australian families.</p>	<p>There is research showing the benefits of school choice for students and families. A recent comparison of standardized test results in British Columbia between public schools and non-elite independent schools (the analysis excluded high tuition or "elite" independent schools) showed that independent schools had better results (statistically significant) than comparable public schools in 10 out of 11 test areas.</p> <p>Sweden experienced a large increase of in for profit providers. Swedish students attending independent schools increased from 2 per cent in 1992 when reforms began, to 14.1 per cent in elementary and lower-secondary grades and 25.1 per cent in upper-secondary grades by 2014.</p>	<p>https://www.fraserinstitute.org/article/alberta-government-should-increase-access-to-for-profit-schools</p>

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Appendix: Quebec Expenditure Comparison of Health & Social Services



Quebec Expenditure Comparisons

Table 36: Health and Community Social Services Total Budget Estimates 2018-19

% of Total Expenses // Per Capita

				
Enterprise Strategy	1.0% \$59	0.04% \$2	0.2% \$8	0.3% \$16
Program Operations	90.1% \$5,462	88.9% \$4,208	95.0% \$4,844	87.8% \$4,500
Enterprise Operations	6.6% \$400	11.0% \$523	4.0% \$202	11.9% \$610
Enterprise Technology	2.3% \$139	- -	0.8% \$43	- -
Total Expenditures per capita	\$6,059	\$4,733	\$5,096	\$5,126

Note: The total consolidated budgets for health and community and social services were totalled for Alberta, British Columbia and Ontario to provide a comparison to Quebec's integrated health and social services model. Based on validation by Alberta Health and Alberta Health Services there is greater reliability in how the budget estimates have been mapped and allocated across the Connected Enterprise model for the health related expenditures. The same level of reliability is not present with the figures for British Columbia, Ontario and Quebec, as this was based on similar line item descriptions to Alberta and / or based on experience.

Source: Analysis of Budget Estimates for 2018-19 for Alberta, British Columbia, Ontario and Quebec; Population data to inform per capita expenditures from Statistics Canada Table 17-10-0005-01.



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Our scope was limited to research and analysis over a very short timeframe. The procedures we performed were limited in nature and extent, and those procedures will not necessarily disclose all matters about finances, functions, policies and operations of a provincial ministry or functional area, or reveal errors in the underlying information. Our role was to provide research, analysis and approaches used in Alberta in comparison primarily to B.C., Ontario and Quebec to manage operating expenditures, and other operating metrics as input for the Panel; KPMG was not contracted for and provides no opinions, conclusions or recommendations on the information included herein.

Our procedures primarily consisted of research, comparison and analysis of Government of Alberta-provided information and data, as well as data and information on other provinces from publically-available sources, which was not exhaustive. Readers are cautioned that, in some cases, estimates are provided based on available information and assumptions for order of magnitude only.

The procedures we performed do not constitute an audit, examination or review in accordance with standards established by the Chartered Professional Accountants of Canada, and we have not otherwise verified the information we obtained or presented in this Document. We express no opinion or any form of assurance on the information presented in the Document, and make no representations concerning its accuracy or completeness.

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