

Why Do Some Provinces Spend More on Health Care Than Others?

Amongst Canadians most important concerns these days is that they receive high quality health care at an affordable cost. Provincial finance ministers have been very clear that health care costs are threatening to become unaffordable. Either taxes will have to be raised, other provincial spending priorities sacrificed, new efficiencies in health care delivery found, listed health services reduced, or provinces will go further into debt.

In spite of the urgent need to better understand this dilemma, we have not made the progress we should have in really understanding the quality and quantity of health care Canadians are now receiving, nor the level of efficiency of health care delivery. This information is essential to make an informed choice about how much restraint in costs is appropriate, where the restraint should be applied and who should do the restraining.

Each province is responsible for the delivery of health care within its territory, subject to some constraints from federal health care standards. There has not been enough comparison of the health care statistics across provinces to try to identify which provinces seem to be delivering the best quantity and quality of health care at the most economical cost. Health care spending per capita varies widely from province to province. However, I have not heard a provincial premier explain that his health care costs were relatively high because his health care delivery system is relatively inefficient compared to other provinces. Nor have I heard a provincial premier explain that his health care costs are relatively low because he is providing relatively fewer services or a lower quality of health care services than other provinces. However, each of these conditions probably apply to many provinces.

Of course the ultimate purpose of these inter-provincial comparisons of health care statistics is to enable the weaker performers to learn from the best practices and policies of the more successful provinces. The Canadian

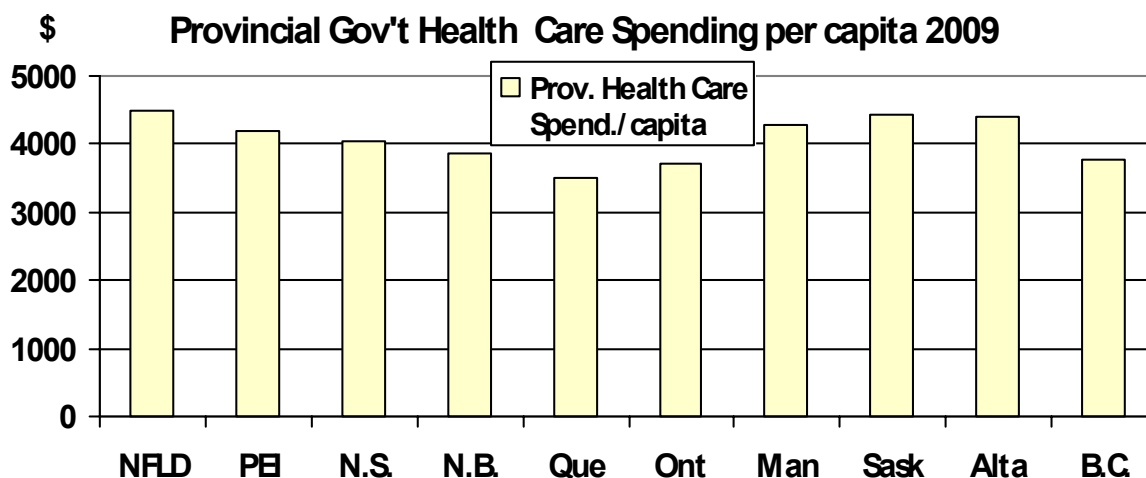
Institute of Health Information (CIHI) has made significant progress in preparing provincial health care data. Certainly progress has been made, more recently than in earlier years, in adapting the successful practices of other provinces. Nevertheless, in a March 2010 note, the President of the CMA emphasized that “Governments have fiercely resisted any attempts to benchmark their performance against each other.”

The purpose of this report is to highlight some of the more striking differences in health care spending patterns between provinces and to examine some of the possible reasons why health care spending varies so much from province to province.

Some Provinces Spend Much More on Health Care Than Others

One of the most striking statistics resulting from the inter-provincial data is that some of the provinces consistently spend more on health care per capita than others. The CIHI 2009 report provided actual provincial health care spending data through 2007, with forecasts through 2009. For 2009, the highest (public spending) spending province, Nfld., spent almost 30%, or \$1,000 dollars, per capita more than the lowest spending province, Quebec. This is a very significant difference considering the “universality” and “portability” that Canadians assume is a requirement of our national health care system.

Chart 1



Data source: CIHI Nat'l Health Exp. Trends, 2009 Table B.3.2

This difference could signify many things. It could signify that the Nfld. government is providing a significantly higher quantity and quality of health care services per Nfld. resident than the Quebec government is to Quebecers. At the other extreme the high spending per capita in Nfld. could be the result of providing an equivalent quantity and quality of health care per person, but at a significantly higher cost due to less efficient health care delivery in Nfld. Most likely, the truth is somewhere between these bookends. However, this points up the importance of identifying and explaining these inter-provincial differences in health care spending patterns.

Since 2009 was an unusual year, it is particularly important to examine whether these significant differences observed in 2009 are typical of the past decade. Over the past decade, as in 2009, the largest spending province spent between 25% and 30% more per capita than the smallest spending province. However, the largest spending province earlier in the decade was Manitoba, not Nfld. while Quebec continued to be the lowest spending (or very close to it) earlier in the decade.

The ranking of health care spending by province has been quite stable over the past decade, except for some of the western provinces. A decade ago Manitoba was Canada's largest spending province on a per capita basis, but in recent years it has fallen to fourth. B.C. was an above average spender a decade ago, but in recent years it has fallen to one of the lower spending provinces.

We proceed from this striking observation on provincial health care spending per capita, to examine some of the most likely reasons why health care spending can vary so much from one province to another.

Do Some Provinces Have to Spend More Due to Demographics?

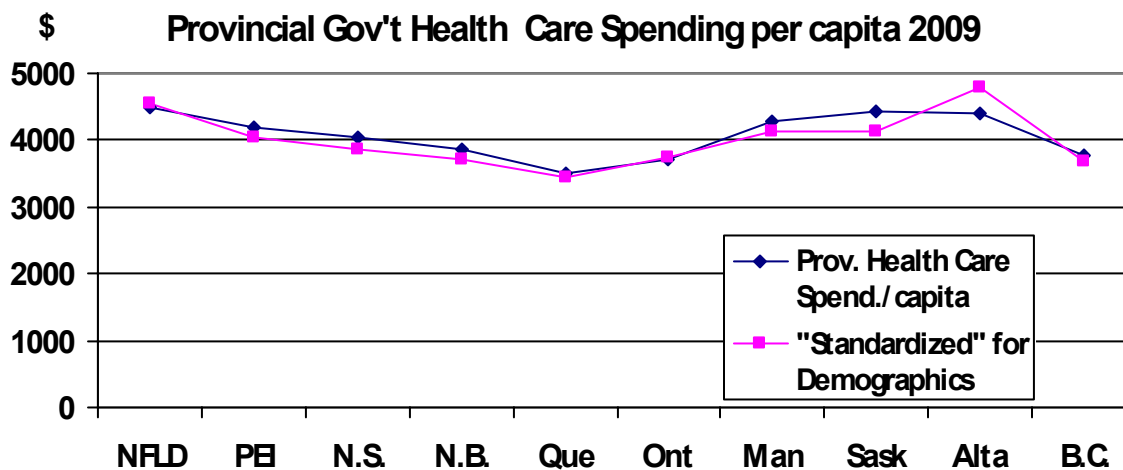
One of the first questions that must be asked when comparing health care spending across jurisdictions is whether the demographics are comparable. It is well known that health care spending rises very sharply with age. Health care (total spending) spending on the typical 75-79 year old is about 10 times greater than on the typical 10-14 year old. And, health care spending on those over 79 rises sharply with age. Health care spending was more than double for the typical person over 85 years old relative to the 74-79 year old.

What is less well known is that (total) health care spending also varies between males and females. Over the child bearing ages (15 - 49) average health care spending per capita is much higher on females than males. Per capita spending on females 30-34 was 86% higher or \$1,170 more than for their male counterparts.

While there may be several reasons for these relationships between demographics and spending, they are usually roughly considered indicative of health care needs which arise due to age and sex. A provincial government with relatively more older people or women of child bearing age can expect more demands on its health care system. That is, if one province has many more older people, or more females of child bearing age, it may have to spend more just to provide the same level of health care “needs.”

In a 2005 report the CIHI provided useful information for standardizing health care expenditures for age and sex differences in the demographics between the provinces. After we have “standardized” the health care expenditures, the remaining differences between provinces are due to inter-provincial differences in utilization of health care services and differences in the prices paid for services by the provinces.

Chart 2



Data source: CIHI Nat'l Health Exp. Trends, 2009 Table B.3.2 and CIHI May 2005 Table 1

Alberta's spending, when “standardized” for demographic differences, is about 8% higher, (due to their relative shortage of older people). On a “standardized” basis, Saskatchewan's is about 7% lower and Nova Scotia's about 5% lower than with the raw data. That is, the most striking adjustment

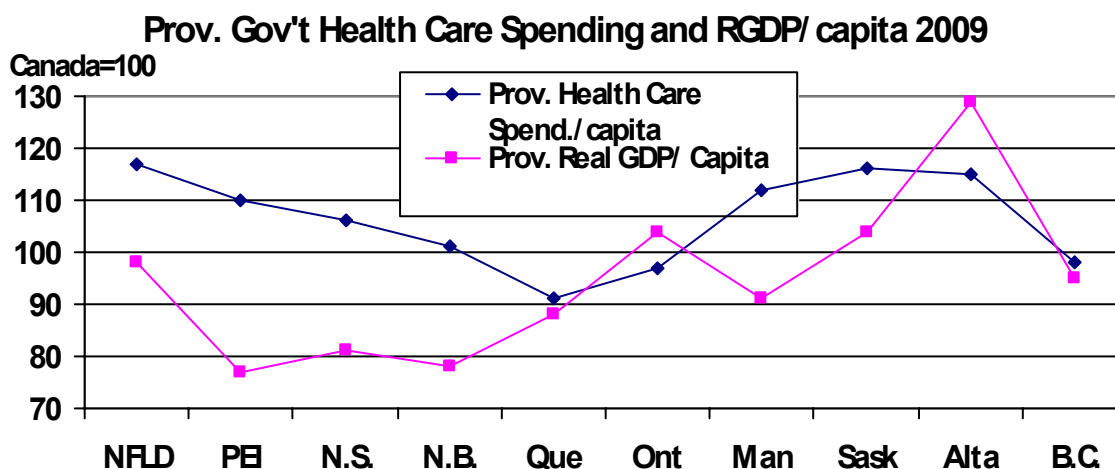
for demographics is that Alberta doesn't have the same demands on its health care system due to its relatively younger population. Differences in demographics have the potential to explain significant differences in health care "needs." However, we find that, apart from a few exceptions, the demographics do not vary significantly between provinces.

In spite of the adjustments of health care spending to account for demographic differences, most provinces maintained their ranking with respect to provincial health care spending per capita. However, on a "standardized" basis Alberta moved from third to first, pushing Nfld. into second place. That is, Alberta's relatively high spending per capita is all the more remarkable after taking account of the fact that its "needs" may be less due to its demographics. After making this allowance for demographic differences Quebec still had the lowest public health care spending per capita amongst the provinces in 2009.

Do the Richer Provinces Spend More on Health Care?

One obvious possible explanation of why some provinces spend more on health care is that they can afford more. Alberta has been Canada's "richest" (GDP per capita) province consistently over the past decade, and by a very

Chart 3



Data source: CIHI Nat'l Health Exp. Trends, 2009 Table B.3.2 and Dale Orr Econ. Insight

wide margin. For example, Alberta's real GDP per capita was almost 30% above the Canadian average in 2009, and the gap was even wider in 2000.

Ontario has consistently been in number two spot over the past decade, but its margin over the Canadian average has fallen from 9% above the Canadian average in 2000, down to about 4% today. PEI has consistently been Canada's poorest province, with real GDP per capita generally about 35% below the Canadian average. New Brunswick and Nova Scotia have shared ninth and eighth spots most years, with per capita income in the 30% range below the Canadian average.

Relative income levels play a significant role in explaining why some provinces spend more on health care per capita than others. Most provinces rankings are very close by most measures, with a few very notable exceptions. Ontario is the outlier in this comparison. While Ontario has consistently had Canada's second highest real GDP per capita, it has consistently had health care spending per capita lower than most other provinces over the past decade, ranking eighth or ninth in recent years.

Table 1.

Ranking of Provinces 2009

	Nfld	PEI	N.S.	N.B.	Que	Ont	Man	Sask	Alta	B.C.
Prov Health Care Spend/capita	1	5	6	7	10	9	4	2	3	8
RGDP per capita	4	10	8	9	7	2	6	3	1	5

While B.C. ranked fifth by per capita income in recent years, its health care spending ranked eighth. This gap has widened over the past decade. In 2000 B.C. ranked about the same in per capita income (fourth) but it ranked third by health care expenditure.

PEI has consistently ranked tenth in per capita income, but in 2009 it ranked fifth in per capita public sector health care spending. However, this relatively middling ranking in health care spending is relatively recent. Until recently its health care spending was decidedly below average.

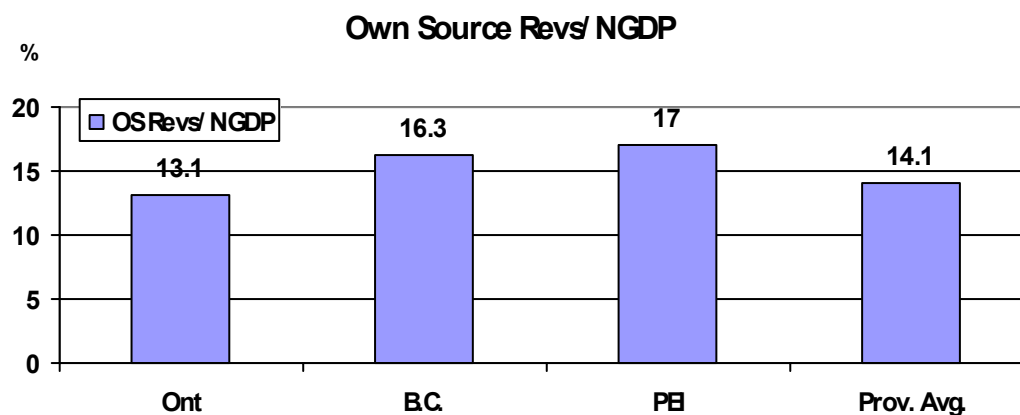
We conclude that public health care spending per capita is quite strongly associated with per capita income levels. There are three provinces who are outliers from this generally strong relationship. Ontario has surprisingly low public health care spending given its income level, and B.C. a bit less so. And in recent years, PEI, has had surprisingly strong health care spending given its relatively low income level.

The levels of public health care spending can be reasonably well explained by the levels of income in most provinces, with the exception of Ontario, B.C. and PEI. We therefore proceed to examine other possible explanations for the differences in the levels of health care spending, with a particular focus on these three provinces.

Maybe Some Provinces are Less Willing and/or Able to Raise Revenues Than Others

A possible explanation for the relatively low levels of public health care spending by some provinces is that they may be less willing or able to raise the tax revenue relative to other provinces. This particularly seems to be an issue in Ontario. Ontario's Own Source revenues/NGDP were below the Canadian average in 2008/9, as they have been consistently over the past decade. This is more due to the lack of energy resources available for royalty payments in Ontario relative to some other provinces, than a reluctance to raise personal,

Chart 4



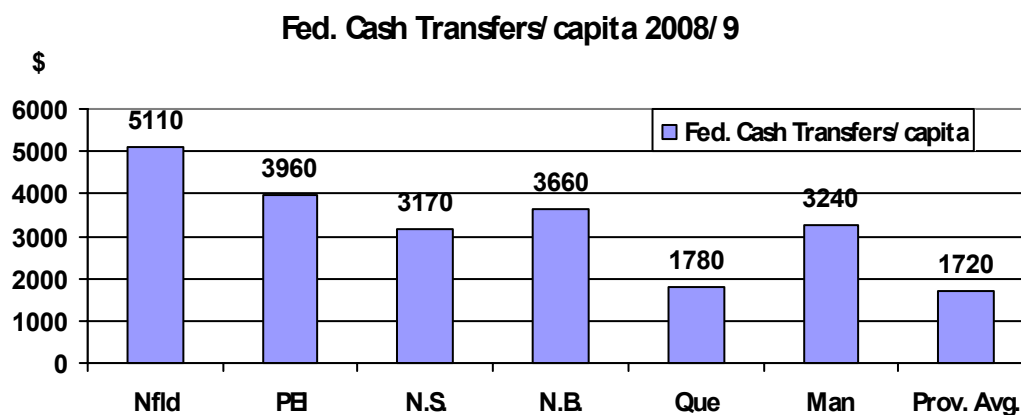
Data Source: Fiscal Reference Tables Oct. 2009

business or sales taxes. B.C., on the other hand, raised more tax revenue relative to the size of its economy in 2008/9 than most provinces, as has been the case consistently over the past decade. Therefore this examination of tax burdens does not contribute to explaining why B.C.'s health care spending is relatively low given its wealth. PEI was a relatively "high tax burden" province in 2008/9, as it has been consistently over the past decade. PEI's relatively high Own Source Revenue/NGDP ratio therefore contributes somewhat to the explanation of why its health care spending is relatively high given its low level of income.

Maybe Some Provinces Don't Have to Raise the Tax Revenue Themselves

As is well known, those "have not" provinces, as defined by the equalization formula, receive transfers from the federal government. Federal cash transfers also include transfers for health, other social services and in some cases, energy royalties. Of course, a province has considerable discretion on where and how to spend the transfers from the federal government, although this has been tightened up in recent years. We note that, in 2008/09, PEI received \$554 million in federal cash transfers. This is a very significant amount of money, about \$3,960 per capita relative to the per capita health care spending by the province in 2008 of \$3,735 and total program spending of \$9,121 per capita.

Chart 5



Data Source: Fiscal Reference Tables Oct. 2009

We conclude that the federal cash transfers are a very significant contributor to PEI's ability to cover its health care spending. Absent these federal cash transfers, to maintain its level of program spending, PEI would have to raise its tax burden from 17% of NGDP to almost 30% of NGDP.

Nfld. received the highest level of federal cash transfers (including energy royalties) per capita in 2008/09, at \$5,110 per capita. This significantly exceeded health care spending per capita by the province in 2008, which was \$4,149, the third highest of any province.

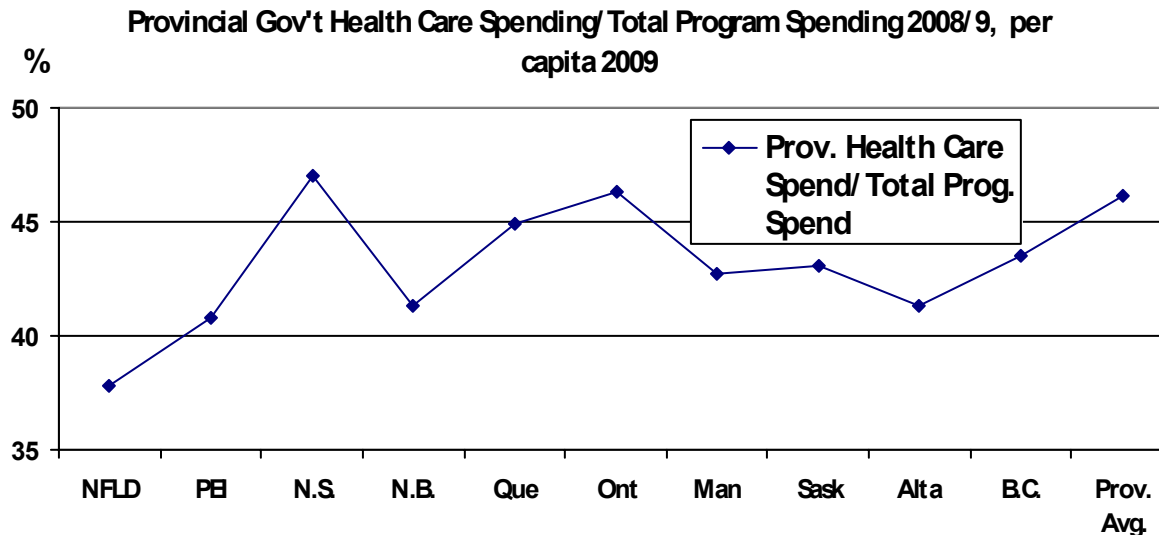
In 2008/9 federal cash transfers per capita were also very high in New Brunswick (\$3,660), Manitoba (\$3,240), and Nova Scotia (\$3,170).

Federal cash transfers in 2008/9 for all Canadians averaged \$1,717 per capita, and were only \$1,297 in Ontario. This puts Ontario in an awkward spot. Ontario has a higher income level than Nfld., PEI, Nova Scotia, New Brunswick and Manitoba, but it has a lower level of public health care spending per capita than any of these "have not" provinces. But, to a considerable extent the generous levels of health care spending in these "have not" provinces are financed by federal cash transfers (only some of which is equalization). This is not a phenomenon of only 2008/9, it has generally been the case for the past several years. These federal cash transfers, being financed out of general federal government revenue, are disproportionately financed by higher income Canadians, whatever province they may live in. However, these Canadians live disproportionately in Ontario (as well as Alberta).

Maybe Some Provinces Place a Higher Priority on Health Care Than Other Spending Priorities

Health care spending consumed about 46% of provincial program budgets in 2008/9. Each province has considerable discretion on how much to allocate to health care spending. Of course, meeting federal health care requirements imposes a constraint, and pressures from other priorities (particularly education) vary from province to province. However, there is potential for a difference in the priority given to health care to explain some of the difference in health care spending across provinces.

Chart 6



Data source: CIHI Nat'l Health Exp. Trends, 2009 Table B.1.1 and Fiscal Reference Tables Oct. 2009

In 2008/09 most of the “have not” provinces allocated a below average fraction of their program expenditures to health care. Against a national average of 46%, Nfld. allocated only 38%, PEI 41%, New Brunswick 41%, Manitoba 43%, and Quebec 45%. From this it appears the generous levels of federal cash transfers also allowed these provinces to allocate more funding to non-health care priorities.

In 2008/9 Ontario's commitment to health care (46.3%) was just slightly above the national average of 46% of its program spending budget. B.C.'s was a bit lower at 43.5%.

Maybe There are Economies of Scale in Health Care Spending

Another plausible explanation of why health care spending per capita is lower in some provinces than others is that there are “economies of scale” in health care spending. There are a lot of fixed costs in setting up a provincial health care system. As the size and the number of hospitals in a province increases, the costs of treating a patient, or serving a population, may not increase proportionately.

This is a complex issue. However, if economies of scale were a very significant factor, and if the quantity and quality of services provided per capita were equal across provinces, per capita health care costs (spending) per capita would be lower in the larger provinces.

As a very rough and preliminary test for the significance of economies of scale we examine the relationship between the population of a province and its per capita health care spending. If the quantity and quality of services delivered are equivalent between provinces, the presence of strong economies of scale would result in an inverse relationship between per capita health care spending and population across provinces.

Table 2

Ranking of Provinces 2009

	Nfld	PEI	N.S.	N.B.	Que	Ont	Man	Sask	Alta	B.C.
Prov Health Care Spend/capita	1	5	6	7	10	9	4	2	3	8
Population	9	10	7	8	2	1	5	6	4	3

We find that economies of scale could well be an important reason why health care spending is relatively higher in some provinces than others (and vice versa). For example, Ontario has the highest population of any province by far, and its health care spending per capita ranks ninth amongst the provinces. This could be because its costs per capita are lower because it is serving more people. Newfoundland and Labrador has the highest health care spending per capita and its population ranks ninth in Canada. Quebec has the lowest health care spending in Canada, and Canada's second highest population. B.C. ranks eighth in health care spending per capita but is Canada third most populous province. While this is far from conclusive evidence on economies of scale, it certainly argues for further examination.

Should economies of scale be found to be very significant, that would argue for the smaller provinces to combine with another province to adopt uniform standards and practices.

Being provinces of roughly equivalent income levels and demographics, and provinces adjacent to each other geographically, the potential of exploiting economies of scale would seem to offer most potential to New Brunswick and Nova Scotia.

Conclusions

- There has not been enough comparison of the health care statistics across provinces to try to identify which provinces seem to be delivering the best quantity and quality of health care at the most economical cost. The ultimate purpose of these inter-provincial comparisons of health care statistics is to enable the weaker performers to learn from the best policies and practices of the more successful provinces.
- The purpose of this report is to highlight some of the more striking differences in health care spending patterns between provinces and to examine some of the possible reasons why per capita public health care spending varies so much from province to province.
- Health care spending per capita varies widely from province to province. For 2009, the highest (public spending) spending province, Nfld., spent almost 30%, or \$1,000 dollars, per capita more than the lowest spending province, Quebec. This is a very significant difference considering the “universality” and “portability” that Canadians assume is a requirement of our national health care system.
- This difference could signify many things. It could signify that the Nfld. government is providing a significantly higher quantity and quality of health care services per Nfld. resident than the Quebec government is to Quebecers. At the other extreme the high spending per capita in Nfld. could be the result of providing an equivalent quantity and quality of health care per person, but at a significantly higher cost due to less efficient health care delivery in Nfld. Most likely, the truth is somewhere between these bookends.
- The largest spending province earlier in the decade was Manitoba, not Nfld. while Quebec continued to be the lowest spending (or very close to it) earlier in the decade. The ranking of health care spending by

province has been quite stable over the past decade, except for some of the western provinces. A decade ago Manitoba was Canada's largest spending province on a per capita basis, but in recent years it has fallen to fourth. B.C. was an above average spender a decade ago, but in recent years it has fallen to one of the lower spending provinces.

- When we adjusted health care spending to account for demographic differences, most provinces maintained their ranking with respect to provincial health care spending per capita. However, on a “standardized” basis Alberta moved from third to first, pushing Nfld. into second place. After making this allowance for demographic differences Quebec still had the lowest public health care spending per capita amongst the provinces in 2009.
- We conclude that public health care spending per capita is quite strongly associated with per capita income levels. There are three provinces who are outliers from this generally strong relationship. Ontario has surprisingly low public health care spending given its income level, and B.C. a bit less so. And in recent years, PEI, has had surprisingly strong health care spending given its relatively low income level.
- From the examination of tax burdens we conclude that, one reason Ontario's health care spending per capita is relatively low, given the wealth of the province, is that Ontario is less willing/able to raise revenues than are many other provinces.
- We conclude that the federal cash transfers are a very significant contributor to PEI's as well as Nfld.'s ability to cover its health care spending. Ontario has a higher income level than Nfld., PEI, Nova Scotia, New Brunswick and Manitoba, but it has a lower level of public health care spending per capita than any of these “have not” provinces. These federal cash transfers, being financed out of general federal government revenue, are disproportionately financed by higher income Canadians, whatever province they may live in. However, these Canadians live disproportionately in Alberta and Ontario.

- We find that economies of scale could well be an important reason why health care spending is relatively higher in some provinces than others (and vice versa). For example, Ontario has the highest population of any province by far, and its health care spending per capita has recently ranked close to last amongst the provinces. Should economies of scale be found to be very significant, that would argue for the smaller provinces to combine with another province to adopt uniform standards and practices.