DALE ORR
ECONOMIC INSIGHT

daleorr@economicinsight.ca

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Is Controlling Spending on Drugs the Key to Controlling the Health Care Budget?

It is well known that spending by governments on health care has far outpaced growth in the tax base in recent years. These pressures are destined to increase. There are the well known upcoming pressures from demographics. More new and improved medical equipment and drugs become available every year. However, taking advantage of these improvements costs money. Health consumers have high expectations for speedier health care. Governments will be very hard pressed to provide the quantity and quality of health care Canadians will be demanding over the next decade.

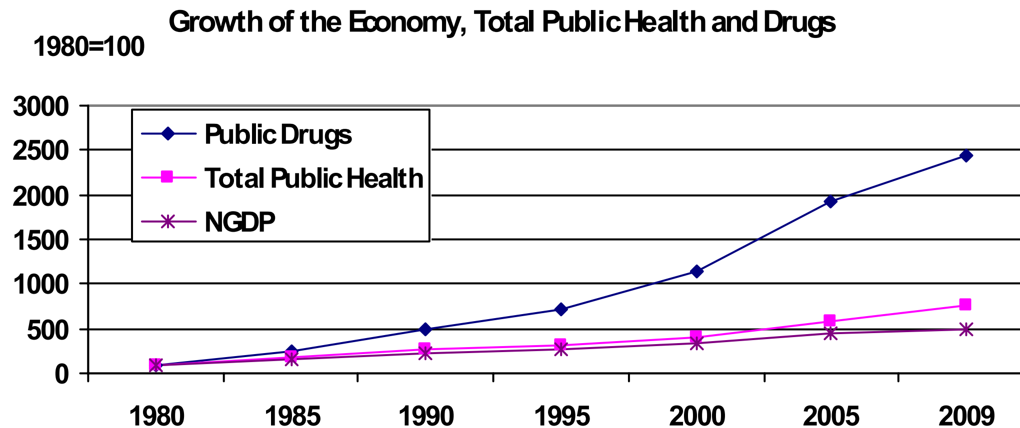
One of the highest profile public policy issues of recent months has been the plan of the Ontario government to control the health care budget by reducing the prices of generic drugs. This issue takes on more importance than otherwise since Ontario's policy is likely to set the precedent for changes in other provinces. This paper examines recent trends in drug spending to put this initiative into context.* Is control of drug spending the key to controlling health care budgets? Why, Why not?

Is Drug Spending Driving Increases in Public Health Care Spending?

There is a wide-spread belief that public spending on health care in Canada, and on drugs in particular, has outpaced growth in the economy for many years. Just to confirm that expectation, consider Chart 1. Since 1980 the Canadian economy has grown almost 5 times its original size in nominal (including inflation) terms. Nominal GDP (NGDP) is often considered the general tax base. Public health care spending is about 7 times larger today than in 1980. However, public spending on drugs is almost 25 times larger than it was in 1980.

**All of the raw data in this report has been sourced from the most recent data bank available from the Canadian Institute for Health Information (CIHI)*

Chart 1.



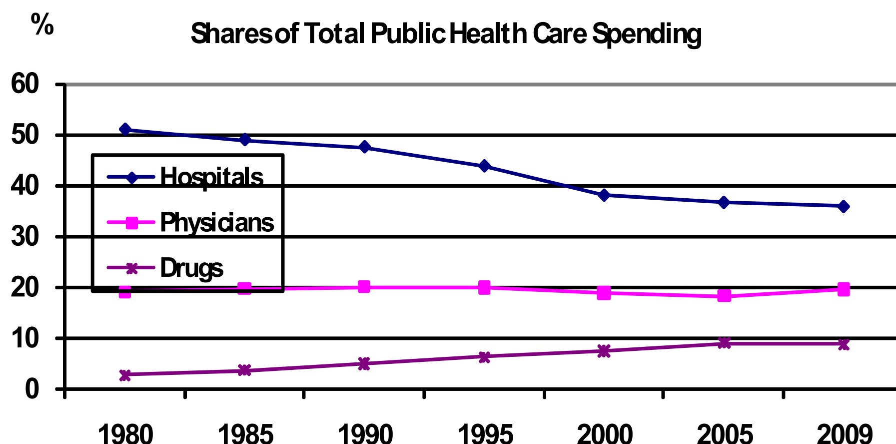
Data Source: CIHI Table A 3.3.1 and D.O. Econ. Insight.

This rapid pace of health care spending growth has been steady since 1980, including over the past decade. Since 2000 public spending on drugs has more than doubled while total health care spending has increased by 85% and the economy has grown by only 42%. So over the past decade public spending on drugs has grown by more than double the pace of the economy and the general tax base.

Spending on drugs was only 2.8% of public health care spending in Canada in 1980. Hospitals accounted for 51% and physicians just under 19%. Since 1980 the share of total public health care spending accounted for by spending on drugs has climbed steadily from the 2.8% of 1980, through 5.0% by 1990, to almost 9% today.

While drugs were accounting for an increasing share of public health care spending, the share spent on physicians has been fairly stable in the 20% range since 1980. However, since 2005 the share spent on physicians has taken an upturn from 18.4% in 2005 to 19.7% in 2009. The share spent on hospitals has been falling steadily from the 51% in 1980 down to only about 36% today.

Chart 2.



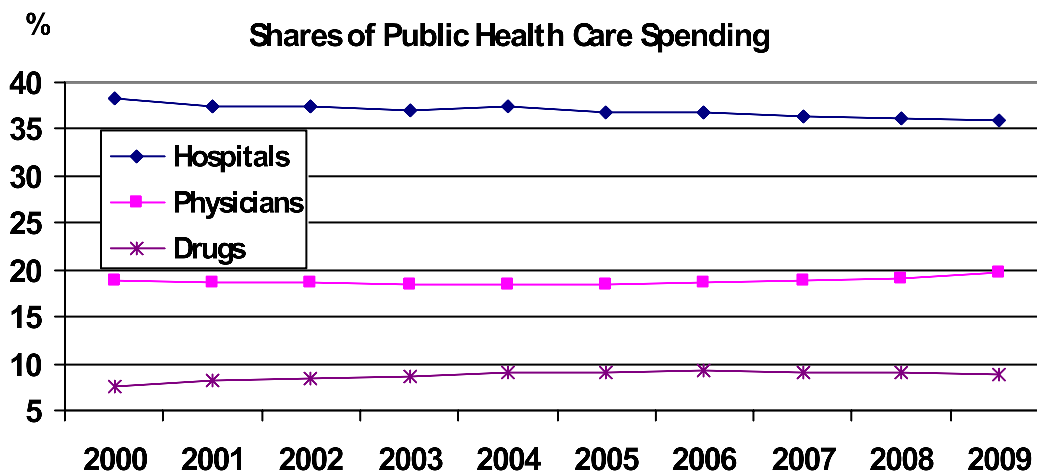
Data Source: CIHI Table A 3.3.2.

I conclude therefore that, if we look at total public health care spending going back several decades, indeed drug spending has been a very significant driver of total health care spending in Canada.

Public Health Care Spending Over the Past Decade

To move closer to the public policy issue at hand we continue to focus on public spending on health care, and drugs in particular, over the past decade.

Chart 3



Data Source CIHI Source: CIHI Tables A 3.3.2.

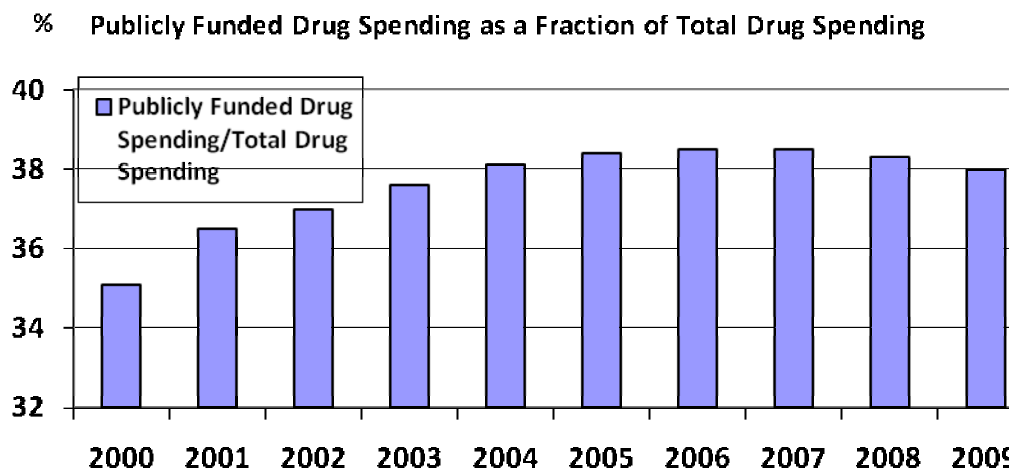
This examination of the major components of public health care spending over the past decade confirms and provides a bit more detail to the earlier conclusion. Of the major components of public health care spending, (hospitals, physicians and drugs), spending on hospitals has been a steadily shrinking share since 2000. The share of public spending on physicians, while falling from 2000 to 2005, has been on the rise in recent years.

I conclude that public spending on drugs was a major driver of increased public health care spending over the 2000 – 2005 period, but that, since 2006, leadership has been ceded to spending on physicians.

While public spending on drugs may have ceded its leadership position to the pace of spending on physicians since 2005, it is important to note that over the 2006 - 2009 period the growth of public spending on drugs, at an average 6.8% pace, still significantly exceeded the average pace of nominal economic growth over the period of only 2.8%.

To put public spending on drugs in another perspective, we note that it has always been less than the amount privately spent. In 2000 about 35% of total spending on drugs in Canada was publicly funded. That portion rose steadily to peak at 38.5% in 2007, and has now fallen to 38%.

Chart 4



Data Source: CIHI Tables A 3.1.1 and A 3.3.1.

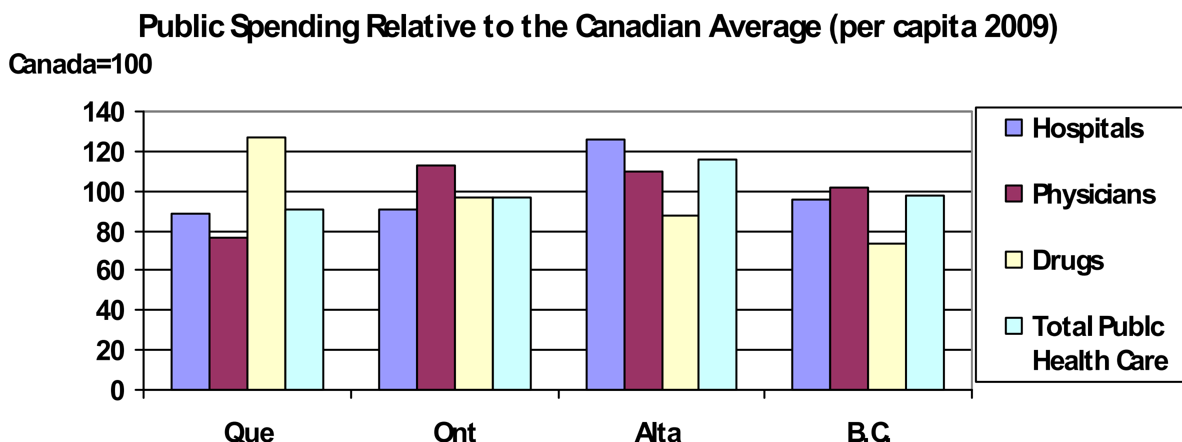
I conclude therefore that drug spending continued to be a major driver of increased total public health care spending from 1980, through 2000, up until 2006. Since 2006 however, the share of total public health care spending accounted for by drug spending has fallen slightly.

Which Provinces Give the Highest Priority to Drug Spending?

We next turn to examine public spending on drugs in the major provinces. To account for the differing sizes of provinces we examine spending on a per capita basis.

My earlier paper "Why Do Some Provinces Spend More on Health Care Than Others" (April 2010) focused on differences in public health care spending per capita across provinces. I found that public health care spending varied surprisingly widely from province to province. Generally, the higher income provinces spent more on publicly funded health care, with a few exceptions. Most notably, the government of Ontario's health care spending per capita was relatively low (ninth amongst provinces) given Ontario ranks second amongst provinces in per capita income. In this present paper I next delve a bit more into the reasons for some of these differences in per capita public health care spending, with particular attention to spending on drugs, particularly in Ontario, given its leadership position.

Chart 5



Data Source CIHI Tables D 3.1.3. – D 3.10.3

In my earlier paper I surmised that an important reason for Ontario's relatively low spending per capita could be economies of scale, that is spreading the fixed costs of capital or program costs over a larger population. It would seem the economies of scale argument would apply more to hospitals than to physicians or drugs. The observation that Ontario ranks near the bottom in per capita spending on hospitals (91% of the provincial average) is therefore consistent with the economies of scale hypothesis. There could, of course, also be other reasons explaining Ontario's relatively low per capita public health care spending.

While Ontario ranked ninth amongst the 10 provinces in 2009 for public health care spending per capita and ninth in hospital spending, it ranked fourth in drug spending and highest in spending on physicians. Why Ontario, whose public health care spending per capita is so low relative to other provinces overall, spends more per capita on physicians (113% of the national average) than any other province, is a surprising observation, worthy of further study. Does Ontario have the best physicians in Canada – or does it overpay them?

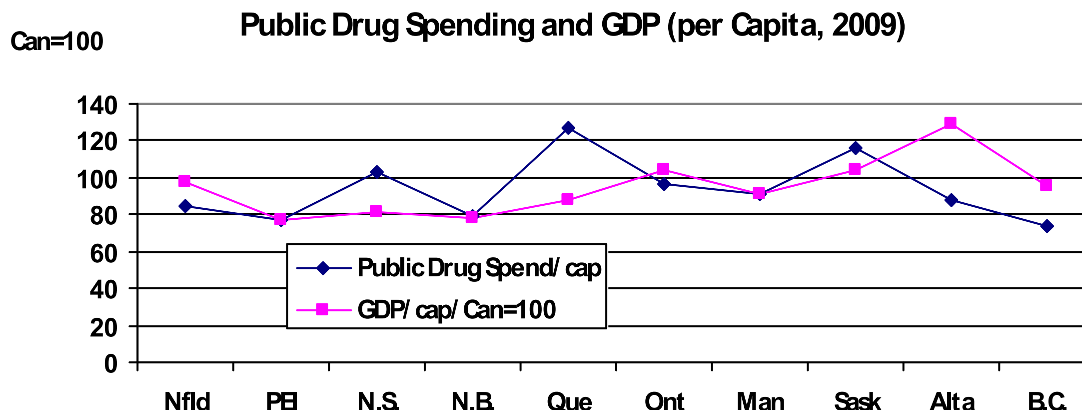
Quebec also has some interesting anomalies. While Quebec ranks dead last in public health care spending per capita (91% of the provincial avg.) and also last in per capita spending on hospitals and physicians, it ranks tops amongst all provinces in per capita drug spending (127% of the national average). Does the typical Quebecer require more drugs to stay as healthy as other Canadians – or does the Quebec drug policy overpay for drugs? Again, a surprising result, requiring further study.

B.C. on the other hand, ranks eighth amongst provinces in public health care spending, and dead last in per capita spending on drugs (only 74% of the provincial average). Why would B.C. spend 8% more per capita on public health care than Quebec, but only about 60% as much per capita on drugs? Are the needs for drugs that much less in B.C. than Quebec? Or - does the B.C. government plan make more effective use of lower priced generic drugs than the Quebec plan?

Do the Richest Provinces Spend the Most on Drugs?

In 2009 the average per capita public spending by the provinces on drugs was $340. Quebec was the highest at $431 followed by Saskatchewan at $396. B.C. was the lowest, at only $250, with PEI and New Brunswick also under $300 per capita. One might expect the wealthiest provinces to be able to afford the highest per capita public drug plans. This relationship is very weak however, with Alberta our richest province (GDP/capita 129% of the national average), having below average public drug spending per capita and Ontario our second richest (104% of the national average) also below average (97% of national average) in public drug spending per capita. PEI and New Brunswick, amongst our poorer provinces, did have below average spending on drugs though.

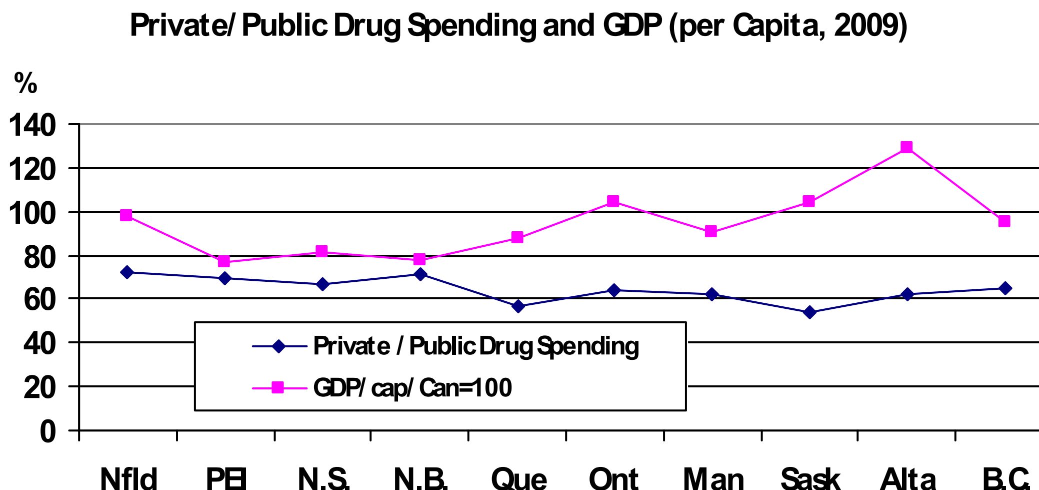
Chart 6



Data Source CIHI Table CIHI Tables D 3.1.3. – D 3.10.3 and Dale Orr Eco. Insight

To put this public spending in context it is interesting to note that the total drug bill was split about 38% public and 62% private in 2009. The "have not" provinces have their public health spending subsidized by federal

Chart 7



Data Source CIHI Table CIHI Tables D 2.1-10.3 and D 3.1-10..3 and Dale Orr Economic Insight

transfers. Therefore we might expect private spending relative to public spending to be highest in the richest provinces, where private spending would be more affordable (and vice versa).

This, however was not the case. Again, in Alberta our richest province, private drug spending was right on the 62% average amongst provinces. The privately funded share is lowest in Saskatchewan (53%), a relatively rich

province. The private share of the total drug spending bill was highest in Newfoundland & Labrador (72%). The private share was relatively high in the poorer provinces of New Brunswick (71%) and PEI (70%).

From this I conclude that public spending on drugs was not higher in the higher income provinces. As well, private spending on drugs was not high relative to public spending in the higher income provinces.

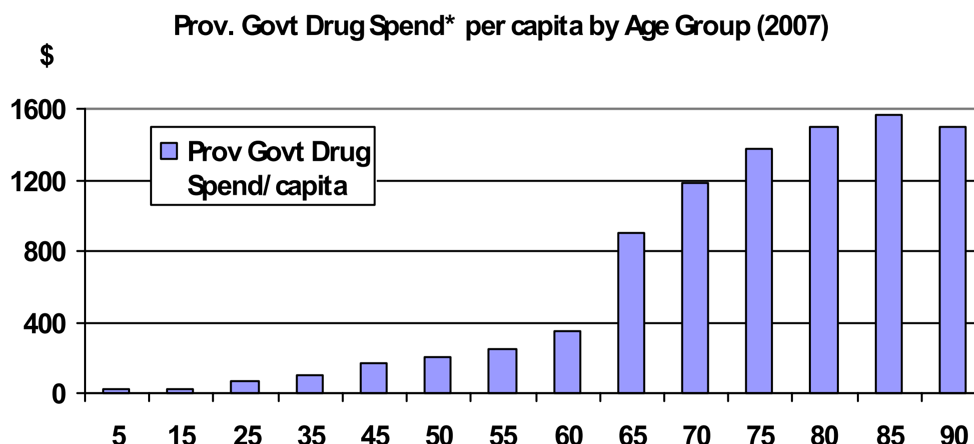
Is Drug Spending by Provincial Governments More Vulnerable to Demographics Than Other Health Costs?

It is well known that the fraction of Canada's population in the older age groups will shoot up sharply over the next few years. The "baby boomers" will begin to hit age 65 in 2011. Ontario's population over the age of 65 will more than double between today and 2030. In Canada health care spending by provincial governments on the typical 75-79 year old is about 10 times greater than on the typical 10-14 year old. And, provincial government health care spending on those over 79 continues to rise sharply with age beyond that. For example, provincial government health care spending per capita was more than double for the typical person over 85 years old relative to the 75-79 year old. Is drug spending even more vulnerable to demographics than other health costs?

In Canada drug spending by provincial governments was under $100 per capita in 2007 (the latest year for which data is available) per year for people under the age of 39. It remains under $350 per capita until age 60. It jumps to over $1000 for the 70-74 age group and ramps up very sharply to the $1500 level for people over 80.

Drug spending by provincial governments rises even more rapidly with age than other forms of health care spending. For people under age 35 spending per capita on drugs by provincial governments is less than 5% of total health care spending. Drug spending rises to 9% of total health care spending for 60 – 64 year olds. It jumps to 16% of total health care spending for the 65-69 year olds, probably due to sudden eligibility for provincial drug care plans more than a sudden jump in health requirements. Drug spending is only above 10% of the provinces' total health care bill for the age groups 65 to 84. Spending per capita by the provinces on drugs does continue to rise for people over the age of 70. However, in these older age groups drug spending does not rise as rapidly as some other categories of health care, such as "other institutions." As needs for other forms of health care intensify, the fraction of the provinces' total health care bill allocated to drugs falls as we consider groups above age 69.

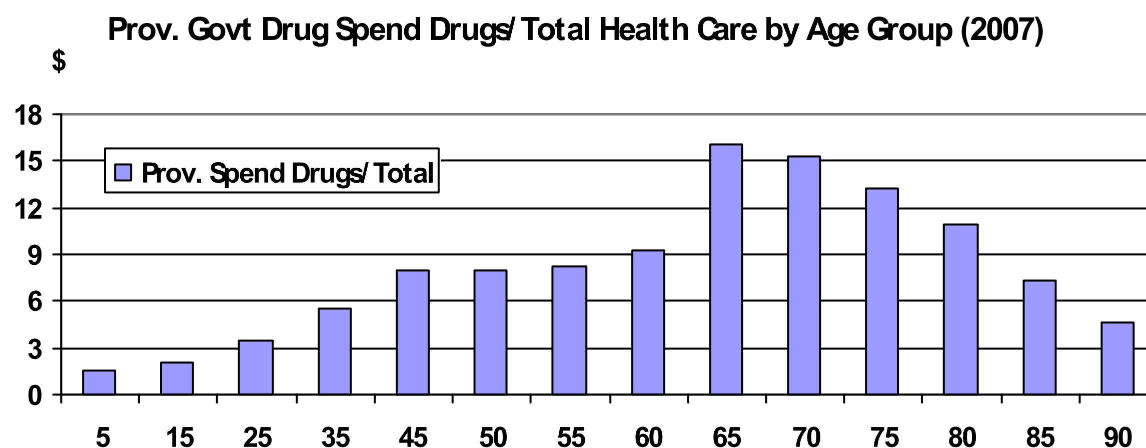
Chart 8



Data Source CIHI Table CIHI Tables E 6.12.
* Note “Provincial Gov’t Spending” is slightly less than “Public Spending” on Heath Care. The demographic data from CIHI is on a “Provincial Gov’t Spending” basis, only up to 2007.

I conclude that spending on drugs by the provinces rises even more rapidly with age than other forms of health care spending, up to the 65 - 69 age group. Drug spending by the provinces is a tiny fraction of their total health care spending for younger people and this fraction peaks for the 65 -69 year old group. While spending per capita on drugs by the provinces continues to rise as we consider age groups above 69, other categories of health care spending rise even more rapidly.

Chart 9



CIHI Table CIHI Tables E 1. 10 and E 6.12.

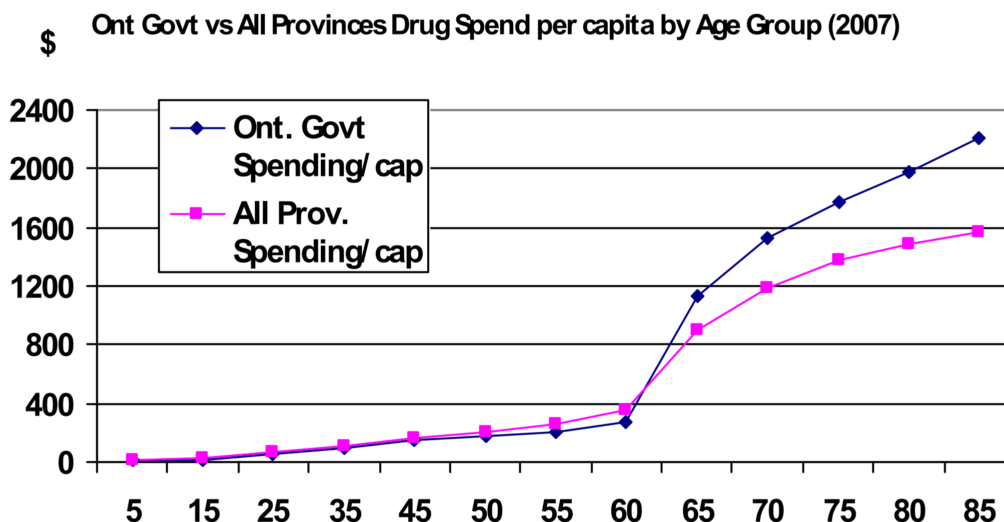
Why Does Ontario Spend So Little on Drugs for Younger People or So Much on Drugs for Older People?

Delving into the data on drug spending by the Ontario government yields a very interesting observation. The Ontario government spent $298 per capita on drugs in 2007, just over the average across all provinces of $265.

However, for every age group under 65-69 Ontario spent less per capita in 2007 than the all provinces average. Conversely, for every age group including and over 65-69 Ontario spent more per capita in 2007 than the all provinces average. Therefore, the government of Ontario's spending on drugs rises much more steeply with age than is the case in other provinces.

This raises the question of whether younger people in Ontario are not well served by Ontario's drug policy. They do receive less per capita than residents in other provinces. Older people in Ontario, on the other hand, are treated more generously than older people in other provinces. Another interesting observation, worthy of further study.

Chart 10



Data Source CIHI Table CIHI Tables E 6.12.

Conclusions

- This paper examines recent trends in drug spending to provide relevant analysis to policy makers and other stakeholders who are attempting to control health care budgets. Is control of drug spending the key to controlling health care budgets? Why, Why not?

- Public spending on drugs was a major driver of increased public health care spending over the 1980 – 2006 period. Over the 2006 – 2009 period public spending on drugs continued to significantly outpace growth in the economy and the tax base. However, over this most recent period, public spending on drugs ceded its spending leadership position to spending on physicians.

- While Ontario ranked ninth amongst the 10 provinces in 2009 for public health care spending per capita and ninth in hospital spending, it ranked fourth in drug spending and highest in spending on physicians. Why does Ontario, whose public health care spending per capita is so low relative to other provinces overall, spend more per capita on physicians than any other province? This is a surprising observation, worthy of further study.

- Quebec ranks dead last in public health care spending per capita and also last in per capita spending on hospitals and physicians. However, it ranks tops amongst all provinces in per capita public drug spending. Another surprising observation, worthy of further study.

- Contrary to reasonable expectations, public spending per capita on drugs was not higher in the higher income provinces. Neither was private spending.

- Spending on drugs by the provinces rises even more rapidly with age than other forms of health care spending, up to the 65 - 69 age group. While spending per capita on drugs by the provinces continues to rise as we consider age groups above 69, other categories of health care spending rise even more rapidly.

- For every age group under 65-69 Ontario spent less per capita in 2007 than the all-provinces average. Conversely, for every age group 65-69 and over, Ontario spent more per capita in 2007 than the all-provinces average. This characteristic of Ontario government drug spending means that the government of Ontario’s spending on drugs rises much more steeply with age than is the case in other provinces. The Ontario government’s drug spending is therefore even more vulnerable to the impending aging of the population than is the case in other provinces. Another surprising observation, worthy of further study.

- This study concludes that the recent pace of public spending on drugs by any and every province, but especially Ontario, is not sustainable. Where and how to restrain health care budgets is a very complex issue and it must be multi-faceted. Increased public spending on drugs is inevitable in the years ahead due to the rapid aging of the population and the likely introduction of new drugs which will be able to improve quality of life, postpone surgeries and prolong life. The necessary restraint in health care budgets must focus on value for money rather than on which categories of spending are the largest or the most rapidly growing. In identifying value for money much more insight can be gained from interprovincial comparisons of data than has been the practice to date.