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INCORPORATING AGE-BASED NEEDS INTO FEDERAL HEALTH TRANSFERS

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Table of Contents

Page

HIGHLIGHTS

- Population age is a significant determinant of the cost of providing public health care services in Canada. As the population ages, therefore, the expenditure burden on governments is expected to rise.

- Due in part to differences in birth rates and interprovincial migration patterns, the age structure of the population varies considerably across the provinces and territories. This has significant implications for provincial government health care spending requirements.

- Federal health transfers to the provinces – currently distributed through the Canada Health and Social Transfer (CHST) – are allocated on an approximately equal-per-capita basis. As such, these transfers could be viewed as indirectly biased in favour of provinces with younger populations.

- This paper examines the question of how incorporating age differences across the provinces might affect the distribution of federal health transfers across Canada.

- The paper determines that such a reallocation would increase federal health transfers to Saskatchewan, Manitoba, British Columbia and the Maritime provinces. Alberta, Ontario, Newfoundland and Labrador and the territories, on the other hand, would see a decrease in transfers.

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INCORPORATING AGE-BASED NEEDS INTO FEDERAL HEALTH TRANSFERS

INTRODUCTION

Population age is a significant determinant of the cost of providing publicly funded health care in Canada. The elderly consume a greater proportion of health care (in terms of both volume and cost) than the younger population. As the population ages, therefore, the cost pressures on the medicare system are expected to increase as well. However, the ageing of the Canadian population has not occurred evenly across the country. Demography and migration patterns have created considerable differences in the age structure of provincial populations. These differences create higher cost pressures in provinces with comparatively older populations and lighten the expenditure burden in younger provinces.

The Standing Senate Committee on Social Affairs, Science and Technology highlighted this point in its October 2002 report, *The Health of Canadians – The Federal Role, Volume Six: Recommendations for Reform*, which presented the Committee's vision of the future of publicly funded health care in Canada. Among its recommendations, the Committee suggested that federal funding for health care be adjusted to reflect the effects that age has on provincial health care expenditure requirements.(1)

The federal government currently provides financial support to provincial health care systems through the Canada Health and Social Transfer (CHST). This transfer assists the provinces in financing their health care expenditures while at the same time allowing the federal government to unite the different provincial medicare systems by administering and enforcing a set of national standards under the *Canada Health Act*.

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(1) The Senate Committee report recommended weighting federal health contributions to each province/territory by the proportion of its population over the age of 70. It did not offer a specific proposal on how to do so.

The CHST is an unconditional grant to the provinces intended for spending on health, post-secondary education and social assistance. Provincial entitlements are distributed on an approximately equal-per-capita basis, and as such do not make allowances for unique cost pressures within the provinces. Factors such as geography and population density, for example, affect the cost of delivering health services, but those effects are inherently difficult to evaluate.

By contrast, the differing age structures of the provinces and territories are an expenditure burden that is unambiguous and relatively easy to quantify. Because the CHST does not account for the effects of age on provincial expenditure obligations, it could be viewed as indirectly biased in favour of provinces with younger populations. A province with a relatively low proportion of its population aged 65 and over will have lower per capita health costs compared to a province with a larger proportion of its population in higher age brackets. All else being equal, the federal contribution to provincial health care spending – on a per capita basis – will be higher in the younger province.

This paper examines how incorporating these age differences might affect the distribution of federal health transfers across the provinces. The intent is not to endorse a specific course of action or method of reform. Rather, it is simply to shed light on the issue by illustrating the magnitude and direction of the redistribution that could be necessary if federal health transfers were to account for age-related cost pressures.

Following this introduction, section one of the paper provides a brief examination of the ageing population in Canada, the differences in age structure across the provinces and some of the factors responsible for these differences. It also looks at the relationship between age and health expenditures in Canada. The second section provides background information on the CHST and explains in detail how federal transfers to the provinces are determined. It also estimates the share of the CHST that can be attributed to health care.

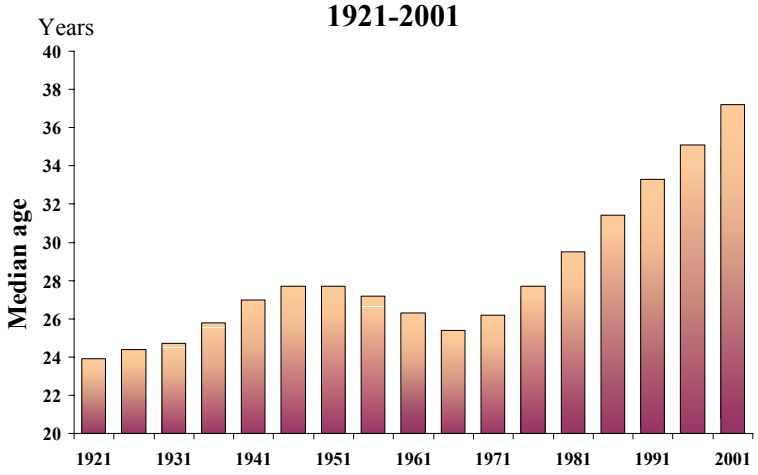
Subsequent to that discussion, section three explores how incorporating age considerations into the health component of the CHST might affect the distribution of the transfer. By dividing provincial populations into discrete age groups and by examining the costs associated with providing health services to each group, an estimate is made of how reflecting differences in provincial age structures would affect the distribution of federal health transfers.

BACKGROUND AND CONTEXT

A. Canada's Ageing Population

The gradual ageing of the Canadian population is not a recent phenomenon. Since the 1920s – the earliest period for which data are available – the average age of the Canadian population has been climbing more or less steadily. In 1921, the median age in Canada (the age of the "middle" person in the population) stood at less than 24 years. A generation later, the median age had risen to 27.

Chart 1 – Canada's Ageing Population, 1921-2001



Source: Statistics Canada.

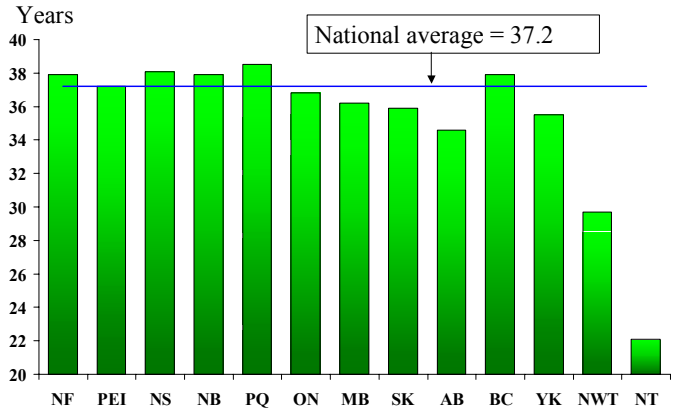
This trend of gradual ageing was temporarily interrupted by the "baby boom" of the late 1940s and the 1950s. The number of children born in Canada during this period rose dramatically, from about 330,000 per year in the immediate post-war period to a peak of nearly 480,000 in 1959. The large number of newborns temporarily drove down the median age to between 25 and 26 years for most of the 1960s.

Since that time, however, the median age has resumed growth. Aided by a dramatic decline in birth rates beginning in the 1960s and the ageing of the baby boom generation, the median age rose rapidly through the 1970s, 1980s and 1990s. By 2001, the median age in Canada had reached 37.2 years.

B. Differences in Population Age Structure Across the Provinces and Territories

Although the average Canadian is older today than his or her counterpart of 30 years ago, the national trend masks considerable differences across the country. Chart 2 shows the median age of Canadians by province in 2001. On average, Quebec has Canada's oldest population, with a median age of 38.1 years. Alberta is Canada's youngest province: the median Albertan is a relatively young 34.6 years of age. However, Nunavut and the Northwest Territories are far younger, at median ages of 22.1 and 29.7 years, respectively.

Chart 2 – Median Age of Canadians by Province and Territory, 2000-2001



Source: Statistics Canada.

Chart 2 also clearly indicates an east-west split. Quebec and the Atlantic provinces are the oldest in Canada, while the populations of Ontario and the prairie provinces are, on average, significantly younger. The sole exception to this east-west split is British Columbia; factors such as a hospitable climate attract the retirement-aged to settle in that province.

The differences in age across the provinces result from a combination of several factors. Perhaps the two most important are birth rates and interprovincial migration trends.[2] Owing in part to their relatively large native populations, the prairie provinces and the three territories have the highest birth rates in Canada. The lowest birth rates in the country are found in Newfoundland and Labrador, British Columbia, Quebec and Nova Scotia.

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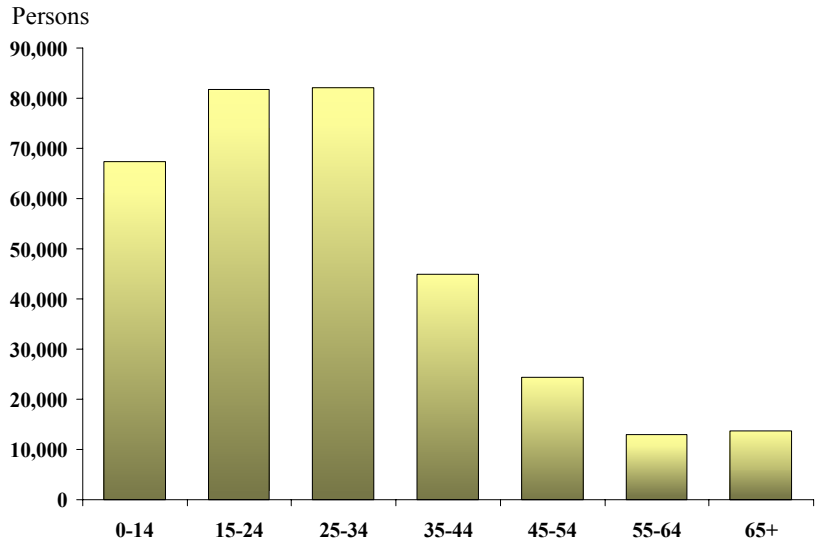
(2) Immigration is another significant factor affecting population age. About 87% of immigrants to Canada in 2001 were under 45 years of age. At the same time, nearly 90% of immigrants settle in Ontario, Quebec and British Columbia.

With regard to interprovincial migration, each year approximately 1% of Canadians move to a new province or territory. In 2001, this was true of 327,119 Canadians – the largest number of interprovincial migrants since 1990. Over the past 30 years, there has been a clear flow of interprovincial migrants out of Quebec, the Atlantic provinces (except Prince Edward Island), Saskatchewan, and Manitoba. The most dramatic outflow has come from Quebec and from Newfoundland and Labrador. British Columbia, Alberta and Ontario have been the primary beneficiaries of these migration flows.

Most interprovincial migrants are relatively young. As shown in Chart 3, about 71% of migrants in 2001 were under the age of 35. Nearly two-fifths were between the ages of 15 and 29. As a result, provinces that are net recipients of interprovincial migrants tend to have younger populations. Alberta and Ontario, in particular, have seen a considerable influx of younger workers in recent years.

Chart 3 – Interprovincial Migrants by Age Group, 2001



Source: Author's calculations using Statistics Canada data.

The combination of differing birth rates and interprovincial migration flows has affected the distribution of the population by age range across the provinces. The five easternmost provinces have a lower-than-average share of their populations in the 25-34 age range, whereas Alberta, in particular, has a large proportion of young working-age residents. Popular retirement destinations such as British Columbia, Prince Edward Island and Nova Scotia have proportionately more residents at retirement age. Thanks to its relatively high birth rate, Saskatchewan has the largest proportion of children under the age of 15 of any province in Canada. At the same time, however, net migration flows have led to a relative absence of middle-aged workers and a very high share of the population aged 75 and over.

Table 1 – Population Distribution by Age Range, 2000
(% of Total)

	<15	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**	**75-84**	**85+**
Nfld and Lab.	17.4	14.9	14.2	16.8	15.6	9.4	6.6	3.9	1.2
PEI	19.8	14.4	13.2	16.1	14.4	9.1	6.9	4.5	1.7
Nova Scotia	18.2	13.4	13.9	17.0	14.7	9.6	7.0	4.6	1.6
New Brunswick	18.0	13.7	14.3	16.8	15.0	9.3	6.8	4.5	1.5
Quebec	17.9	13.3	13.6	17.5	14.9	10.0	7.3	4.2	1.3
Ontario	19.5	13.1	14.7	17.4	13.8	9.0	7.0	4.2	1.3
Manitoba	21.0	13.9	13.8	15.9	13.3	8.6	6.8	4.9	1.8
Saskatchewan	21.6	15.0	12.7	15.4	12.6	8.3	7.2	5.2	2.1
Alberta	20.9	14.8	15.2	17.7	13.5	7.8	5.7	3.3	1.1
British Columbia	18.1	13.3	14.4	17.3	14.8	9.2	7.0	4.5	1.5
Yukon	21.3	14.0	14.9	19.6	16.3	8.5	3.7	1.4	0.3
NWT	27.5	15.4	17.5	18.1	11.9	5.6	2.7	1.1	0.3
Nunavut	37.8	17.9	17.2	12.3	8.6	3.7	1.9	0.5	0.2
Canada	**19.1**	**13.5**	**14.3**	**17.3**	**14.2**	**9.1**	**6.9**	**4.2**	**1.4**

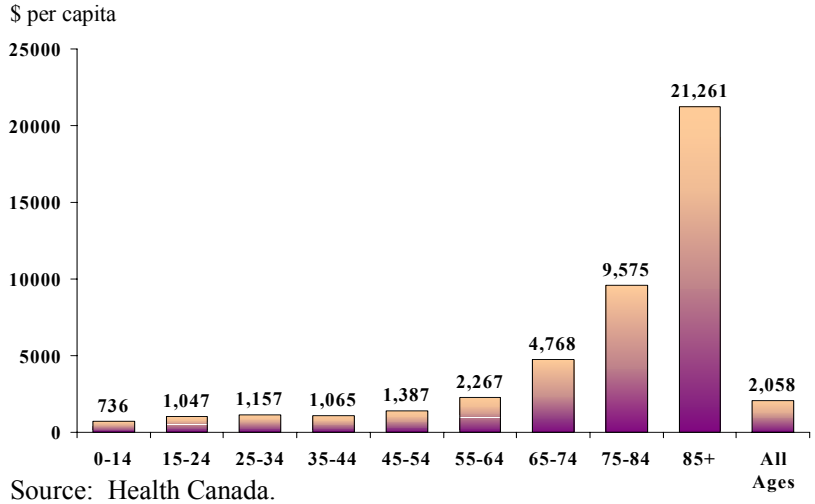
Source: Author's tabulation using Statistics Canada data.
Note: Table uses 2000 data in order to be consistent with most recent health expenditure statistics.

C. The Relationship Between Age and Health Expenditures

These differences in population age structure across the provinces have considerable implications for the overall cost of providing publicly funded health care in Canada. Chart 4 shows average per capita health care expenditures by provincial and territorial governments, by age range, for the 2000-2001 fiscal year – the most recent year for which data are available. Per capita health care costs were lowest for children under 15 years of age and

relatively constant for the vast majority of Canadians – those aged 15 to 54. However, as people approached retirement age, per capita health care expenditures began to increase exponentially. The cost of providing health services to each Canadian over 85 years of age was seven-and-a-half times higher than for those aged 55-64.

Chart 4 – Provincial and Territorial Government Health Expenditures by Age Range, 2000-2001



Source: Health Canada.

In 2000-2001, Canadians aged 65 and over accounted for 12.5% of the national population, but 49.7% of provincial and territorial health care expenditures. By contrast, 13.5% of Canadians were aged 15-24 that year, but that age group accounted for only 6.8% of provincial and territorial health care spending.

FEDERAL CONTRIBUTIONS TO PROVINCIAL HEALTH EXPENDITURES

How would incorporating these age-related cost pressures into federal health transfers to the provinces and territories affect the distribution of those transfers? Before answering this question, a brief detour is necessary to explain how federal health transfers are currently distributed.

A. The Canada Health and Social Transfer

The CHST was introduced in the 1995 federal budget. It merged two previous federal transfer programs – Established Programs Financing (EPF) and the Canada Assistance

Plan (CAP) – into a single block transfer. The scope of the CHST is the same as that of its predecessor programs: it represents the annual federal contribution to provincial spending on health, post-secondary education and social assistance. However, because it is a block transfer, this contribution is only notional; provincial governments are free to distribute the transfer as they see fit.

In terms of structure and distribution, the EPF was the archetype of the CHST. First introduced in 1977, the EPF was a two-part transfer contributing to provincial health and post-secondary education expenditures. The first basic component of the EPF was a one-time tax point transfer: the federal government lowered its personal income tax rate by 13.5 percentage points and its corporate income tax rate by one percentage point. The provinces then raised their taxes by the same amount, filling the vacated room. The end result was that although the total amount of tax paid by Canadians was unchanged, a greater share of that total went to the provinces.

The second component of the EPF was an annual cash transfer from the federal government to the provinces. The value of the cash transfer was roughly equal to that of the tax point transfer in 1977, although it has since declined considerably.

The CHST today is also a two-part transfer. Currently, it is distributed so that the combined value of the tax points and the cash transfer is equal per capita across all provinces.(3) It is important to emphasize that the annual cash payments are the only actual transfers that take place; the tax point transfer was a one-time event in 1977 and cannot be retracted.

However, since the *entire* CHST (cash plus tax points) is distributed on an equal-per-capita basis, the tax point transfer still figures into the federal government's annual calculation of provincial entitlements. Specifically, a rich province such as Alberta is able to generate more revenue per tax point than a less wealthy province such as New Brunswick. The CHST cash transfer is therefore distributed in such a way as to offset these differences and make the *total* transfer equal per capita.

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(3) The CHST completed a gradual transition to an equal-per-capita transfer in 2002-2003. When the program was first introduced, the amount distributed to each province was directly proportional to the amount distributed under the EPF and CAP. The EPF was an equal-per-capita transfer, but CAP was a cost-shared program. At the time the CHST was introduced, CAP transfers to Quebec and the Atlantic provinces were relatively high while those to Ontario, Alberta and British Columbia were relatively low. These differences were reflected in the initial allocation of the CHST.

Within this basic structure of the CHST are contained two other offsets to cash entitlements. The first is equalization payments. Since the transferred tax points generate direct tax income that represents provincial own-source revenue, those tax points are subject to equalization in qualifying provinces.(4) In those provinces, therefore, the value of the tax points is not simply the direct revenues they generate, but the associated equalization as well. The equalization payments that qualifying provinces receive as a result of the tax point transfer are included as part of their overall CHST entitlements.

The second offset to CHST cash is unique to Quebec. In the 1960s, the federal government gave all provinces the opportunity to accept either federal cash for social programs or the equivalent amount in tax point transfers. Only Quebec opted for the latter. Since this tax transfer is essentially a replacement for cash provided to all other provinces, the value of these tax points is subtracted from Quebec's CHST entitlements. This is commonly referred to as the "Quebec abatement."

The amount of the overall CHST transfer varies from year to year according to the value of its two principal components. Economic conditions determine the value of the tax points (and of the associated equalization) in any given year, while the value of the cash transfer is currently set by the federal government in multi-year funding commitments. In 2000-2001, the total value of the CHST, including the tax point transfer and associated equalization, was $31.9 billion.(5) The cash component, which represents the only *actual* transfer that took place that year, was valued at $15.5 billion.

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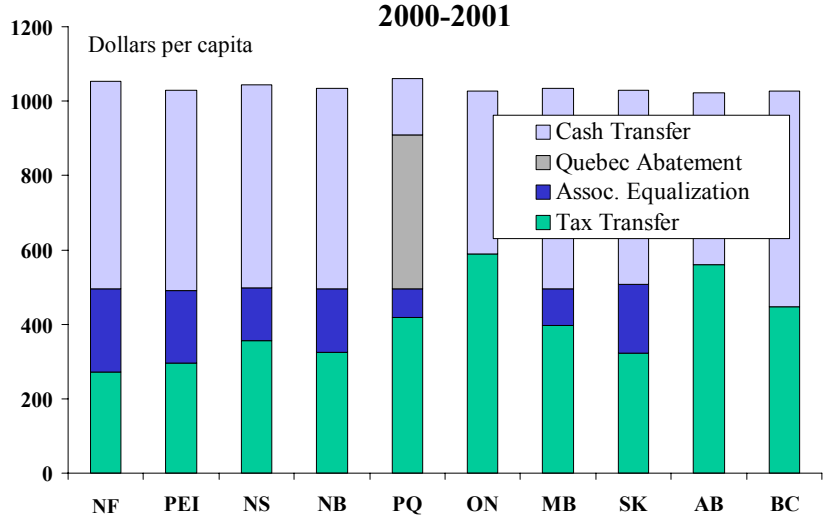
(4) Provinces receive equalization if their ability to generate own-source revenue falls below a national standard. Provincial revenue-generating capacity is measured by testing how much money each province could hypothetically bring in (per capita) if all provinces had identical taxes. These "identical taxes" are in fact the average tax rates across the ten provinces in each provincial revenue category. If a province's total revenue-generating ability falls below the standard, that province qualifies to receive equalization payments to bring it up to that standard. Provinces exceeding the standard are not equalized down.

(5) Estimates of CHST transfers up to and including 2002-2003 are available. However, because the most recent health expenditure data available are for 2000-2001, CHST data for that year are discussed in this section for the sake of consistency.

Chart 5 – The Canada Health and Social Transfer, 2000-2001



Source: Author's calculations using data from Finance Canada and Statistics Canada.

Chart 5 illustrates the allocation of CHST funds in 2000-2001.(6) The most recent estimates indicate that average CHST entitlements across Canada were approximately $1,037 per capita that year.(7) For most equalization-receiving provinces, the combination of tax points and associated equalization payments accounted for a little less than $500 of that total, with cash transfers making up the difference. For Alberta and Ontario the value of the tax points was higher than the combined value of tax points and equalization in all other provinces. As a result, the annual cash transfer to Alberta and Ontario was lower than for the other eight provinces.

B. Estimating the Share of the CHST Going to Health

Isolating the health component of the CHST is a difficult task. Since the CHST is a block grant, the provinces are free to distribute the funds to health, post-secondary education and social assistance in any way they see fit. In fact, since CHST transfer payments enter directly into general provincial revenues, expenditures cannot be directly traced back to CHST

(6) The three territories are not included in this chart because their CHST entitlements are allocated in a different manner.

(7) Because the CHST was still in transition to an equal-per-capita distribution in 2000-2001, the actual value of per capita entitlements varied slightly across the country. Values ranged from a low of $1,020 per capita in Alberta to a high of $1,061 per capita in Quebec.

funding. As a result, it is impossible to concretely determine the federal contribution to health spending in each province.(8)

Nevertheless, a notional estimate can be made of the federal contribution to provincial health expenditures. Prior to the creation of the CHST, or its archetype the EPF, health-related transfers were not part of a block payment but were distinct cost-shared programs. Based on the relative size of pre-EPF transfers, an estimate can be made of the proportion of EPF funding devoted to health. This estimate can then be extended to the CHST.

The federal Department of Finance undertook this exercise in 2000 in a background document entitled *Federal Support for Health in Canada*. In that paper, the federal government estimated that health accounted for about 75% of the cash component of the EPF in 1977, and 67% of the tax component. Although the provinces were free to allocate the funds however they wished, these nominal proportions were assumed to have remained unchanged through the lifetime of the EPF.

When the EPF was merged with CAP to form the CHST, CAP transfers were added to the EPF totals. Since CAP was a cost-shared program, it was entirely composed of cash payments. As a result, under the new CHST, the health component of the tax point transfer remained the same, at 67%. However, with the addition of CAP payments, the health portion of EPF/CAP cash transfers, and therefore CHST cash transfers, became 43%.

This began to change in 1999, however, as the federal government started re-investing in the CHST and explicitly earmarking new cash directly for health spending. As a result, the nominal health portion of the cash transfer began to rise. Changes to the health portion of the CHST since 1999 are documented in Table 2.

As Table 2 shows, the Department of Finance methodology indicated that the federal government contributed an estimated $18.9 billion in cash and tax point transfers to provincial health expenditures in 2000-2001, or about $614 per capita. Of that $18.9 billion total, about $11.0 billion was in the form of notional tax point transfers and $7.9 billion was in the form of cash payments.

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(8) This issue of accountability was a major focal point of the reports recently released by the Romanow Commission on the Future of Health Care in Canada and by the Standing Senate Committee on Social Affairs, Science and Technology.

Table 2 – Estimating the Share of CHST Transfers for Health
(in $billions)

	1999-00	2000-01	2001-02	2002-03	2003-04
Cash Transfer					
From EPF/CAP Allocation					
43% of:	12.5	12.5	12.5	12.5	12.5
equals:	5.4	5.4	5.4	5.4	5.4
Plus					
From Budget 1999:	2.0	2.0	2.5	2.5	2.5
From Budget 2000:		0.5	0.3	0.3	0.3
From Sept. 2000 Agreement:			2.5	3.2	3.8
CHST Cash for Health	**7.4**	**7.9**	**10.6**	**11.3**	**11.9**
Tax Point Transfer					
From EPF/CAP Allocation					
67% of:	15.6	16.4	15.9	16.6	17.2
equals:	10.5	11.0	10.7	11.1	11.5
CHST Tax Points for Health	**10.5**	**11.0**	**10.7**	**11.1**	**11.5**
Total CHST Health Transfers	**17.8**	**18.9**	**21.3**	**22.4**	**23.4**

Source: Author's tabulations using data from Finance Canada.
Note: Numbers may not add up due to rounding.

INCORPORATING AGE CONSIDERATIONS INTO FEDERAL HEALTH TRANSFERS

A. Calculating the Effect of Age on Provincial/Territorial Health Expenditure Requirements

In order to assess the effect of differing age structures on provincial and territorial health care expenditure obligations, a common standard is required against which all provinces and territories can be compared. Although data on provincial and territorial health care expenditures by age range are available, those data are not appropriate for this analysis. To some extent, provincial and territorial health care spending reflects not only expenditure obligations, but also expenditure priorities – provinces and territories are free to determine the size of their annual health budgets. In addition, a host of cost pressures other than age affect health spending. Geography, population density and fiscal strength are but a few factors that influence how much provincial and territorial governments spend on public health services in any given year. These factors must be addressed before meaningful interprovincial comparisons can be made.

One relatively simple way of eliminating, or at least reducing, the effect of these cost pressures is to hypothetically impose a standard expenditure rate for each age category on the provinces and territories (similar to the federal government's equalization program). Suppose that for each major age group, provinces and territories were required to spend the same amount on health care per person – the national average health expenditure (NAHE). The *total* expenditure burden on the provinces and territories would then depend on the age structure of their respective populations.

With a national standard in place (the NAHE), the next step in this exercise is to isolate the influence of age structure on expenditure obligations. In the interests of clarity, this process is described using a specific example – that of Nova Scotia – and is shown in Table 3. The following description of the calculations makes explicit reference to Table 3 throughout.

The first stage in the calculation is to determine the difference between the age distribution of the Nova Scotia population and that of Canada as a whole. The distribution of the Nova Scotia population is shown in row D of Table 3 and that of the national population in row B. In general, a greater proportion of Nova Scotia's population is over the age of 55 compared to the national average. Accordingly, if the Nova Scotia population were to conform to the national average, there would be a larger number of young Nova Scotians and fewer in the higher age brackets than is actually the case. Row E illustrates what the Nova Scotia population (941,000 in 2000) would look like if its age distribution were identical to the national average.

Table 3 – Calculating the Effects of Age Distribution on 2000-2001 Health Expenditures in Nova Scotia

		<15	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	Total
Row	**Population**										
A	**Canada (000s)**	5,870.9	4,152.8	4,392.9	5,306.8	4,364.9	2,811.8	2,135.2	1,298.8	416.0	30,750.1
B	*Distribution (%)*	19.1	13.5	14.3	17.3	14.2	9.1	6.9	4.2	1.4	100
C	**Nova Scotia (000s)**	171.5	126.1	130.4	160.2	138.1	90.5	65.9	43.4	14.9	941.0
D	*Distribution (%)*	18.2	13.4	13.9	17.0	14.7	9.6	7.0	4.6	1.6	100
E (=B x 941,000)	*At National Distrib. (000s)*	179.7	127.1	134.4	162.4	133.6	86.0	65.3	39.7	12.7	941.0
	National Average Health Expenditure (NAHE)*										
F	$ per capita	736	1,047	1,157	1,065	1,387	2,267	4,768	9,575	21,261	2,058
	Nova Scotia Health Care Expenditures at NAHE Rates ($millions)										
G (=C x F)	Using Actual Pop. Distr.	126.2	132.0	150.9	170.6	191.5	205.2	314.0	415.2	317.3	2022.8
H (=E x F)	Using National Pop. Distr.	132.2	133.0	155.5	173.0	185.3	195.0	311.5	380.6	270.6	1936.7
	Effect of Nova Scotia Age Distribution on Provincial Health Costs										
I (=G-H)	$ millions	-6.0	-1.0	-4.6	-2.3	6.3	10.2	2.5	34.6	46.6	86.2
J (=I/C)	$ per capita	-35	-8	-35	-15	45	112	37	799	3126	92

Source: Author's calculations using data from Statistics Canada and Health Canada.

Note: Numbers may not add up due to rounding.

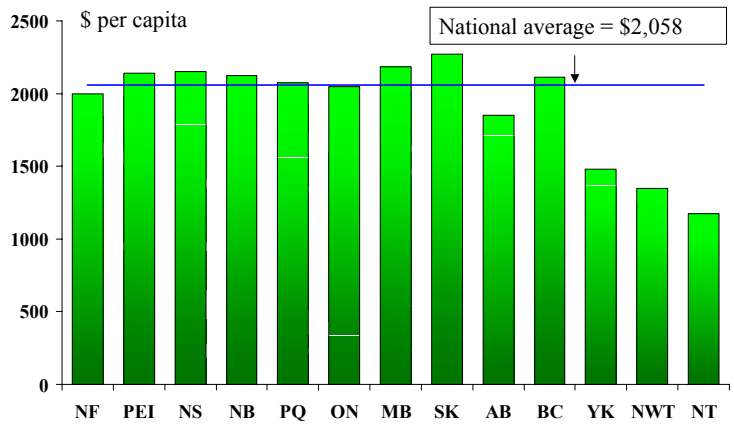
* Refer to Chart 4, p. 7.

The second step is to establish what effect this difference in population distribution has on health expenditure requirements in Nova Scotia. Multiplying the NAHE in row F by row C reveals the "national average" cost of providing health care in Nova Scotia, based on the actual age distribution of the province's population. This is shown in row G. However, if the distribution of Nova Scotia's population were identical to the national average, this would result in a different expenditure burden at each age group. The revised amounts are shown in row H.

Finally, rows I and J show the effect that, according to this methodology, Nova Scotia's age distribution has on its health expenditure requirements. All told, the province's age structure – a greater proportion of people in higher age brackets and relatively fewer children – would add an estimated $86 million onto the cost of providing medicare services in Nova Scotia, all else being equal. On a per capita basis, the added burden of Nova Scotia's population structure on health spending requirements would be $92 over and above the national average, at $2,150 ($2,058 + $92).

Repeating this process for the remaining provinces and territories establishes an estimate of the age-weighted cost of providing health services across Canada. As shown in Chart 6, Saskatchewan is the province where population age places the greatest burden on provincial health spending requirements. Next door, with a relatively young population, Alberta has the lightest burden on health costs of any of the provinces. However, the three northern territories have by far the youngest population age structure in Canada; accordingly, the per capita cost of providing health services (under NAHE rates) in those regions is far below the rest of the country.

Chart 6 – Cost of Providing Health Services at NAHE Rates, 2000-2001



Source: Author's calculations using data from Health Canada and Statistics Canada.

At this juncture, it bears repeating that the objective of this exercise is to illustrate the effect that age distribution has on provincial/territorial health care expenditures. A host of other factors affect health service costs, particularly in the territories, where the population is sparse, and transportation and living costs are high. Per capita health expenditures for Canada as a whole are likely a poor proxy, therefore, for expenditure needs in the territories.

B. "Age-Based Needs" Distribution of the CHST

With an estimate of the age-related cost pressures in each province and territory, estimating the distribution of the CHST along age-based lines is a relatively simple matter. Each province/territory would be entitled to a percentage of the national average per capita transfer, in proportion to whether its age-related cost pressures were higher or lower than the national average. Returning to the Nova Scotia example, per capita health expenditures at national average rates were 104.5% of the national average in 2000-2001 (see column B of Table 4). Consequently, Nova Scotia would receive 104.5% of the national average per capita health transfer. The value of "reallocated" provincial and territorial transfers is shown in column E of Table 4.

Table 4 – Incorporating Differences in Age Structure Into the Health Component of the CHST, 2000-2001

	Age-Weighted Expenditure Needs		**Health Component of CHST**		**CHST Distribution at Age-Based Needs**	**Reallocation of CHST ($ per capita)**	
	$ per capita	% of Cdn. Avg.	$ per capita	At equal-per-capita $	$ per capita	From equal-per-capita	From 2000-01 Actual
	A	B	C	D	E (=BxD)	F (=E-D)	G (=E-C)
Newfoundland and Lab.	1997.77	97.1	615.79	613.87	**595.88**	-17.99	-19.91
Prince Edward Island	2142.44	104.1	603.09	613.87	**639.03**	25.16	35.94
Nova Scotia	2149.69	104.5	611.08	613.87	**641.19**	27.32	30.11
New Brunswick	2123.67	103.2	606.93	613.87	**633.43**	19.56	26.50
Quebec	2072.18	100.7	620.42	613.87	**618.07**	4.20	-2.34
Ontario	2048.11	99.5	618.50	613.87	**610.89**	-2.98	-7.61
Manitoba	2183.79	106.1	606.38	613.87	**651.36**	37.49	44.98
Saskatchewan	2270.66	110.3	605.58	613.87	**677.27**	63.40	71.69
Alberta	1850.84	89.9	610.21	613.87	**552.05**	-61.82	-58.16
British Columbia	2114.47	102.7	595.56	613.87	**630.68**	16.81	35.13
Yukon	1480.84	72.0	578.96	613.87	**441.69**	-172.18	-137.27
NWT	1350.45	65.6	812.65	613.87	**402.80**	-211.07	-409.85
Nunavut	1172.49	57.0	634.25	613.87	**349.72**	-264.15	-284.53
Canada	**2058.10**	**100**	**613.87**	**613.87**	**613.87**	**0.00**	**0.00**

Source: Author's calculations using data from Statistics Canada and Health Canada.

How does this age-weighted allocation of CHST health transfers compare with the current distribution of the transfer? As mentioned above, the CHST has been in transition towards an equal-per-capita distribution over the past few years; the process was completed in the 2002-2003 fiscal year. However, since the most recent information on health expenditures by age is for 2000-2001, the transition was still ongoing in the period analyzed here. Column F of Table 4 shows the per capita gain or loss in payments assuming the CHST had been distributed on an equal-per-capita basis across Canada in 2000-2001. Column G shows the redistribution from the actual 2000-2001 CHST health payments. This distinction complicates the analysis of any age-related reallocation of CHST transfers.

Quebec is the most obvious example of this. Because of the age structure of the Quebec population, that province's health expenditure needs in 2000-2001 were slightly higher than the national average. Therefore, assuming this age structure remains the same into the near future, Quebec would be entitled to slightly more than equal-per-capita health transfers by 2002-2003. In 2000-2001, however, Quebec was already receiving a higher-than-average share of CHST transfers. As a result, the reallocation of the CHST would result in a *decrease* in Quebec's entitlements that year (shown in column G of Table 4). Once the CHST is fully equal-per-capita, Quebec would receive 100.7% of the national average per capita transfer.

Compared to the actual distribution in 2000-2001, the reallocation of CHST health transfers would result in increased payments to the Maritime provinces, Saskatchewan, Manitoba and British Columbia. In addition to Quebec, discussed above, Newfoundland and Labrador, Ontario, Alberta and the three territories would see a drop in their entitlements (columns F and G).

All told, the province that would gain the most (on a per capita basis) from reallocating CHST health transfers to reflect age differences is Saskatchewan. Per capita entitlements would be approximately $677 – an increase of about $72 per person in the province, or about 12% above the existing 2000-2001 allocation. In Alberta, the relatively young population places a light burden on provincial health spending requirements. The reallocation of CHST health transfers would reduce Alberta's entitlements by about $58 per person – a decrease of about 10% in overall entitlements. In terms of the total impact, British Columbia would gain the most. Under this reallocation exercise, British Columbia would gain $143 million in transfers in 2000-2001. Alberta is the province that would lose the most – a total of $174 million that year.

C. Issues and Challenges with Reallocating Transfers

The nature of the CHST – a combination of cash and tax point transfer – is a complicating element in redistributing the transfer to reflect cost pressures associated with age. Because the tax point transfer is notional and cannot be reclaimed by the federal government, the cash component is the sole vehicle through which any redistribution can take place. In other words, the tax point transfer – and associated equalization – would have to be subtracted from the new overall entitlement, and the cash component would be distributed across the provinces and territories in such a way as to ensure that the overall allocation – tax points included – met the age-distribution criteria.

This presents two challenges. The first is that in the case of the three territories, and the Northwest Territories in particular, the populations are young and the cost pressures associated with age are low. As a result, the hypothetical reduction in CHST transfers exceeds the size of the cash transfers. In other words, the federal government would have to reduce the value of its tax point transfer in order to meet the reallocation requirements – something that by definition it cannot do.

The second challenge is that, from the provincial/territorial perspective, the cash transfer is the only actual federal contribution to help offset health spending requirements. As such, in provinces that see a reduction in federal support, the impact will be more severe than the previous section suggests. For example, it was mentioned above that in the case of Alberta, the province would receive approximately 10% less federal support under the hypothetical reallocation. However, this 10% includes the tax point transfer. When only the cash component is considered, the decrease in federal support becomes much more severe – reaching about 25%.

CONCLUSION

Due in large part to the effects of differing birth rates and interprovincial migration patterns, the distribution of the population by age range varies considerably across the provinces and territories. While these age differences can have considerable implications for the costs of delivering health services, they are not reflected in the federal contribution to health care spending.

In the wake of the Standing Senate Committee on Social Affairs, Science and Technology's recommendation that age considerations be incorporated in federal health transfers to the provinces, this paper explores the extent to which health transfers to the provinces and territories could be affected if they reflected the cost pressures associated with the different age structures.

According to the methodology used in this paper, it was found that in general, such a reallocation would shift revenues from Alberta, Ontario, Newfoundland and Labrador, and the three territories to the remaining provinces. Saskatchewan would be the primary beneficiary of this type of reallocation, as the age structure of that province imposes the largest age-related expenditure burden in the country. Alberta, on the other hand, would be the principal benefactor, as it has the lowest age burden of any province.

Given that more substantial reforms would likely accompany any potential reallocation of health transfers (if such a reallocation were, in fact, to take place), this paper's findings should not be considered a recommendation for reform, nor should they reflect a potential policy objective. By illustrating the extent to which reallocation would be necessary in order to reflect age considerations in federal health transfers, this paper lays the groundwork for further study.

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