

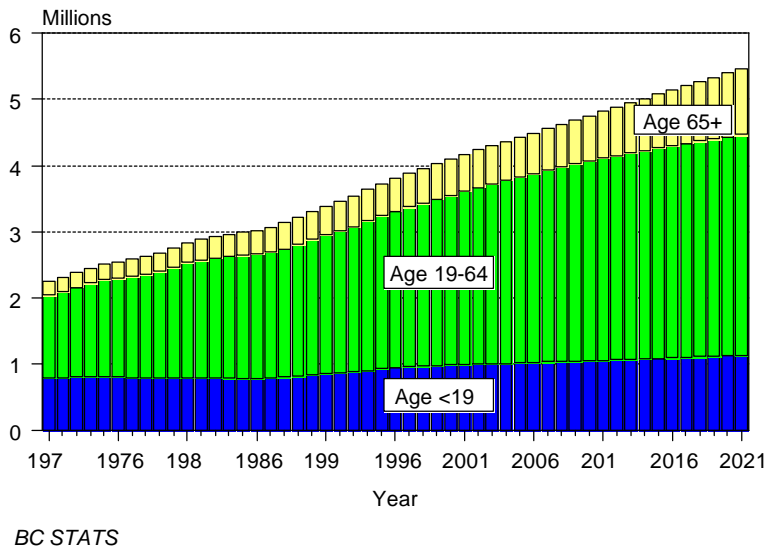
# Consequences of an Aging Population: Can Existing Levels of Social Services be Sustained?

by Dan Schrier <sup>1</sup>

## Changing Demographics

Since the early 1970's the population of British Columbia has been steadily getting older. This trend will continue well into the future as the elderly increase both in number and in terms of percentage of population. This can clearly be seen in Figures 1 through 3. The proportion of the population aged 65 and over has increased dramatically from 9.3 per cent in 1971 to 12.8 per cent in 1993. This segment of the population will further increase to 18.3 per cent by 2021.

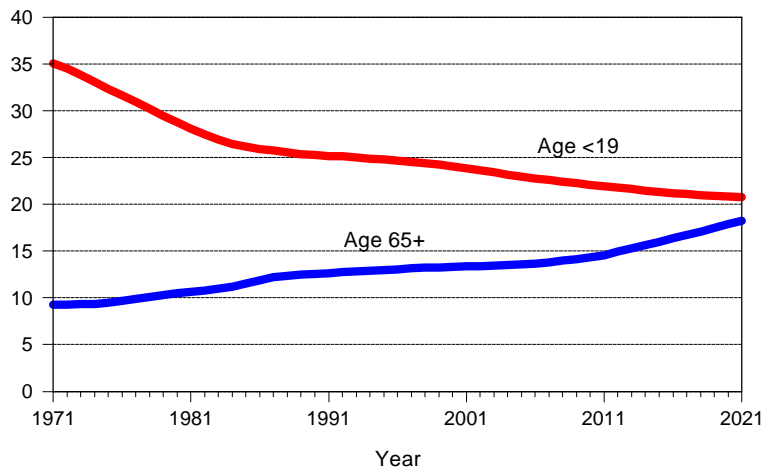
Figure 1  
British Columbia Population



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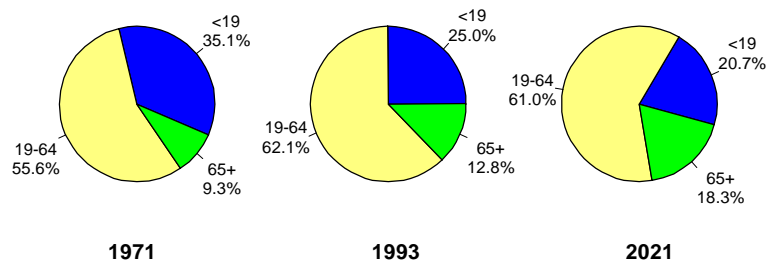
<sup>1</sup> The views expressed are those of the author and are not necessarily shared by the government of British Columbia.

Figure 2  
Seniors and Children as a Per Cent of Total Population



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Figure 3  
B.C.'s Aging Population



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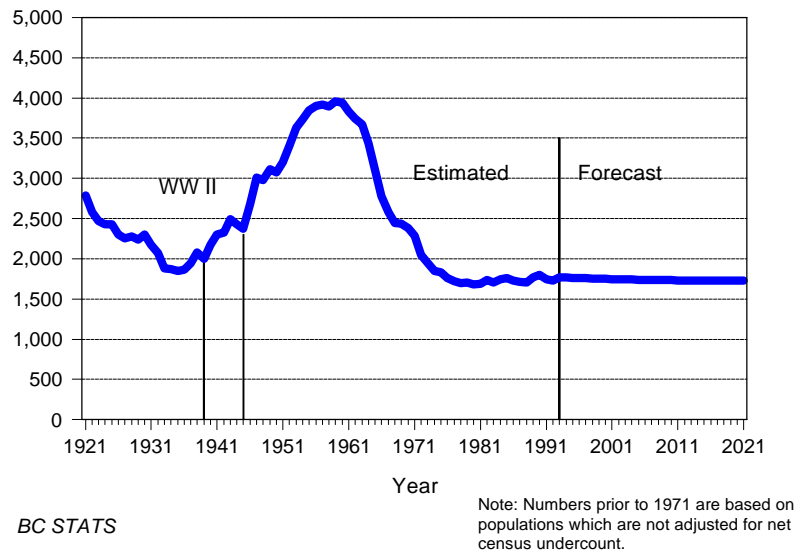
At the same time, the portion of the population aged under 19 has declined even more drastically, falling over 10 percentage points from 1971 to 1993, and is expected to fall over 4 percentage points further by 2021. The over 65 age group is expected to approach the under 19 age group by 2021, in contrast to 1971, where the under 19 group was almost 4 times larger, in terms of percentage of the population.

This shifting age structure of the province will have serious impacts on both the economy of British Columbia and its social organization. Before examining these impacts, we will look at the reasons behind the aging trend and its acceleration.

### *Causes of the Aging of British Columbia's Population*

The British Columbia population is aging in the sense that higher proportions of the future population will be in the older age groups. The basic cause of this aging is the long-term historical decline in the fertility of the population. In other words, the falling birth rate is responsible for fewer children in the population, and this, in turn, means that the older age groups will form a larger share.

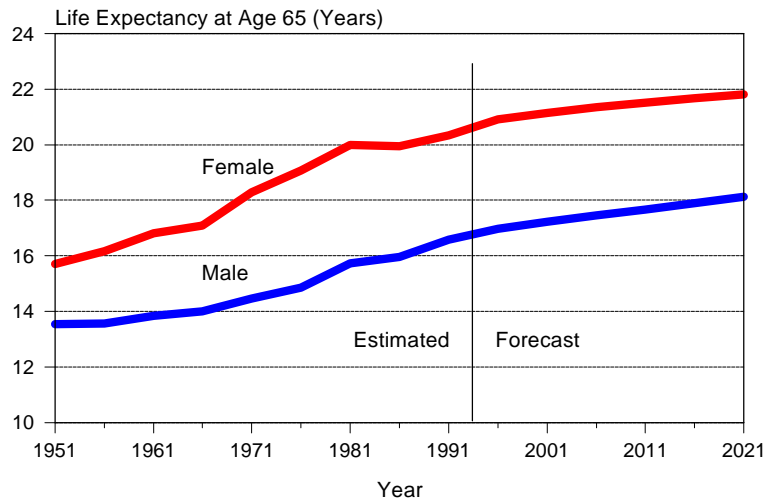
Figure 4  
British Columbia Total Fertility Rate



The baby-boom that occurred after World War II and continued through to the mid-sixties helped delay the full effects of this aging trend. The soaring birth rate, clearly evident in Figure 4, caused a tremendous increase in the number of children, and consequently, in the proportion of the population in the younger age groups. Eventually birth rates reversed and started to plunge, and subsequently, the proportion of children in the population also started to decline.

The baby-boom generation is now starting to age, and accordingly, so too is the population. The same boom that delayed the aging trend is now beginning to exacerbate the problem. As members of the baby-boom generation begin to reach age 65 by 2011, the aging of the population will start to accelerate significantly.

Figure 5  
British Columbia Life Expectancy at Age 65



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In addition to the declining birth rate, the increase in life expectancy will also affect both the number and proportion of the elderly population. Figure 5 shows the British Columbia life expectancy at age 65. As can be seen, life expectancy is increasing, which means the elderly population will live longer and continue to form a larger portion of the population mix. This increase in life expectancy has particularly important implications for health care, which will be examined below.

The dramatically increasing proportion of elderly in the British Columbia population will have wide-ranging impacts throughout our society. These impacts will vary from the innocuous, such as more television commercials directed toward seniors, to the more serious, such as elevated health care needs and costs.

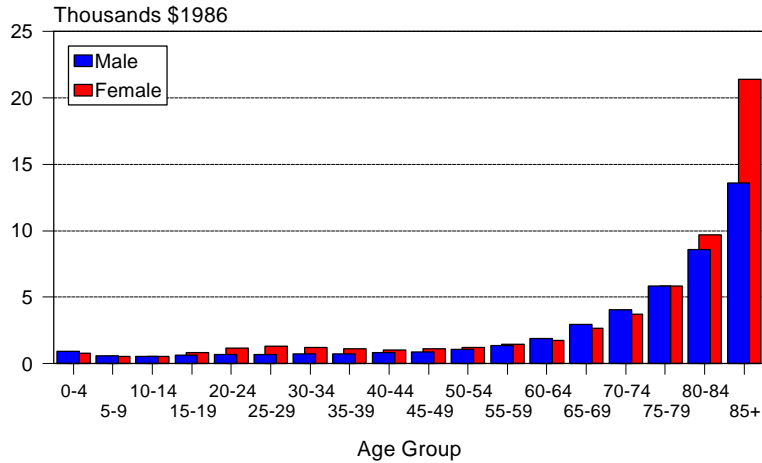
### **The Sustainability of Current Levels of Social Services**

The demand for social services such as health care, education and welfare is determined by many things, including demographic and economic factors. In terms of demographics, both the increasing and aging of the population will affect the demand for social services in British Columbia.

#### ***Health Care***

Health care is one area that is particularly affected by the changing age structure of the population in favour of older age groups. Figure 6 demonstrates the rising costs associated with an aging population.

Figure 6  
British Columbia Per Capita Health  
Care Costs - 1990/91



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The older one gets, the more likely one is to need medical services. As life expectancy continues to rise, the number of people in the higher age ranges will increase as well, and this means greater pressure on our health care system. As demand for health care is increased, so too is the cost.

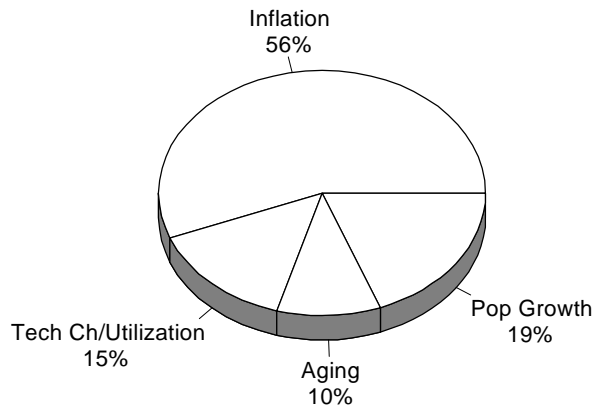
In addition to costs escalating due to a greater proportion of seniors, the growth that is expected in all segments of the population will also expand the demand for medical services, and correspondingly, the cost.

Health care expenditures are rising for reasons other than demographic trends as well. Inflation is an obvious factor in any cost, but there is also the incidence of changes in utilization and technological advances. There have been great strides made in the development of new health care technology, such as magnetic resonance imaging (MRI), for example. These new technologies often tend to be expensive and add to the health care expense. Also, patterns of utilization have changed. Consumption of health care has increased due to greater accessibility. For example, just over twenty years ago there were approximately 1.8 doctors per 1,000 population in British Columbia. This ratio had increased to 2.3 by 1992. This means there is a greater number of doctors available today to provide medical services, but it also means there are an increased number of billings to the Medical Services Plan, which in turn, means greater expenditures on health care.

As can be seen in Figure 7, in the period from 1984/85 to 1990/91, the single largest factor in the increase in health care costs was inflation. Overall,

expenditures on health care by provincial and local governments increased by 60 per cent during that period, of which over a half was due to inflation.<sup>2</sup> In constant dollar terms (i.e. removing the effects of inflation), this translates to a 23 per cent real increase in health care spending. Of this, approximately two thirds was due to the demographic factors of aging and an increasing population. Technology and utilization changes accounted for the remainder. This indicates that demographic changes are not the only factors driving health care costs, but they are significant. It is likely that as the aging of the population accelerates, these demographic factors will become even more important.

Figure 7  
Health Care Cost Drivers  
1984/85 to 1990/91



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It is projected that constant dollar expenditures on health care in British Columbia will more than double from 1990/91 to 2015/16. Since health constitutes the largest portion of government spending in British Columbia, this poses significant problems for current and future governments in terms of budget allocation.

### ***Education***

The changing of the age structure in favour of the older age groups will mean there will be proportionately fewer children in the population in the future. On

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<sup>2</sup> Expenditure data is extracted from: McRae, Don and Dan Schrier (1992), *Can Existing Levels of Social Services be Sustained Given an Aging Population?*, background report prepared for the British Columbia Round Table on the Environment and the Economy by McRae and Schrier, Treasury Board Secretariat, Ministry of Finance and Corporate Relations, Province of British Columbia.

the surface, this would seem to indicate that education costs should decline; however, this is not likely to be the case. As can be seen in Figure 1, despite the fact that the proportion of people under 19 years of age will be declining, the actual population of this age group will still be increasing, albeit at a far slower rate than other age groups. This means the student population will be larger in the future, which means expenditures should also increase.

Apart from the increase in population, there is also a trend toward greater participation rates for some age groups. Students are becoming more aware of the value of an education and the difficulties in finding employment without one, and they are electing to remain in school longer. More people in their late teens are remaining in high school to either get their diploma or upgrade in preparation for university. By the same token, more young people are attending university and college.

It is projected that constant dollar expenditures on education in British Columbia will rise almost 40 per cent from the 1989/90 level by 2015/16.

### ***Social Services***

Economic conditions exert the greatest influence on expenditures on social services, but demographic factors also affect the demand for these services. In a poor economic climate, there is a rise in the level of unemployment, which often translates into a rise in the number of persons on Income Assistance. The opposite is usually the case when the economic conditions are favourable. However, population increases will likely lead to increased demand for social services irrespective of economic conditions. This means that expenditures on social services will likely rise over time as the population grows, but the extent of the increase is dependent on the health of the British Columbia economy, and possibly the economies of surrounding areas. The projection is for almost a 70 per cent rise in social services expenditures from 1990/91 to 2015/16.

### **Outlook**

It is apparent that expenditures on social programs, in real terms, will increase in the future. This raises the question, can social programs be sustained at their existing levels?

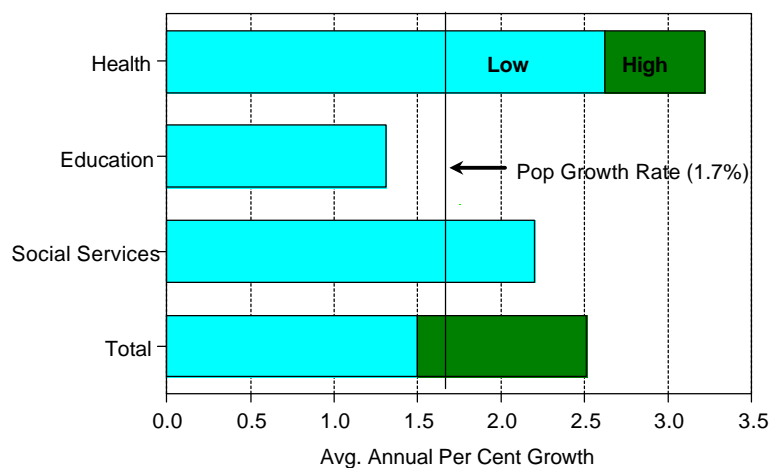
Demographic change is an important factor in the growth in expenditures, but it is not the only factor. The figures presented here for expenditure growth are not etched in stone. Costs can be brought down through changes in the programs

that improve efficiency. Health is one area in particular where changes are being considered that could diminish the expense burden.

There is not much that can effectively be done to control the demographic changes such as aging and growth. The one component of population that could realistically be manipulated is migration. Migration tends to slow the aging of the population since movers to British Columbia tend to be younger, on average, than the existing population. Of course, in the case of a situation where there is net out-migration, the reverse would be true, and the aging of the population would accelerate. In any case, migration can only hope to delay the inevitable, and increasing migration levels would mean increasing the population. Problems caused by an aging population might be ameliorated to some extent, but problems related to population increase would be exacerbated.

The end result, then, is even with efficiency improvements, expenditures will likely increase. This means that in order to sustain social services at their current levels, a commensurate increase in revenues is needed. Revenue increases can be achieved through an expansion in the economy as well as tax increases. The goal is to achieve economic growth in this province at a level that will provide the necessary revenues to sustain the social services demanded by an aging and growing population without raising taxes. One other possibility is to rely on deficit financing, but aside from the political implications of such a move, this is only a short-term solution. In the long-term, deficit financing would lead to a larger debt burden which would lead to further expenditure growth, and would only compound the problem.

Figure 8  
Provincial-Local Real Program Spending\*  
1990/91 to 2015/16



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\* FMS Basis

Figure 8 gives some indication of the average annual per cent growth in projected expenditures, and consequently, the average annual per cent growth in revenues that must be achieved. These levels of 1.5 to 2.5 per cent annually can realistically be attained.

It will likely take a combination of efficiency improvements, increased revenues, and sound fiscal management on the part of the government in order to ensure the sustainability of social services at their current levels in B.C. The absence of any one of these factors will leave British Columbia in a precarious position with respect to the quality and availability of its social services.

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