Premature Mortality

Alberta GPI

Noteworthy:

- Premature mortality rates by cause showed the following percent changes from 1961 to 1997:

  -respiratory disease decreased by 67.7 %
  -congenital anomalies decreased by 62.2%
  -cerebrovascular diseases decreased by 58.1%
  -heart disease decreased by 54.9%
  -accidental deaths decreased by 43.0%
  -all other causes decreased by 33.1%
  -cancers decreased by 11.5%
  -suicide increased by 80.8%

- The rate of mortality from heart disease among both men and women has fallen since 1987, but still represented the major cause of death in Alberta in 1998—201 deaths per 100,000 male population and 176 per 100,000 female population.

- Cancer mortality remains stubbornly high, largely unchanged from 1987 to 1998, with 187 deaths per 100,000 male population and 166 deaths per 100,000 female population in 1998.

Premature Mortality in Alberta: How Much?

The incidence of premature mortality (death before age 75) and disease is an important indicator of human health and well-being. Between 1961 and 1999, premature mortality in Alberta fell by 36.7%. Premature mortality is measured in terms of person years of life lost (PYLL) due to mortality from all causes. While remaining fairly constant through the 1960s, Alberta's PYLL declined from a high of 5,781 PYLL per 100,000 population in 1974 to 3,477 PYLL per 100,000 in 1997. The most important cause of premature mortality in 1997 was accidental deaths (auto crashes, injuries), followed by cancer, all other causes, heart disease, suicide, respiratory disease, cerebrovascular disease, and congenital anomalies. In 1961, the top three causes of premature mortality were accidental deaths, cancer, and all other causes. Virtually every cause of premature mortality, except suicide, decreased from 1961 to 1997. While this is a positive trend in genuine well-being, Alberta's rate of premature mortality in 1997 was 1.58 times higher than the Canadian average.

### Premature Mortality: Alberta vs. Canada, 1961 to 1999
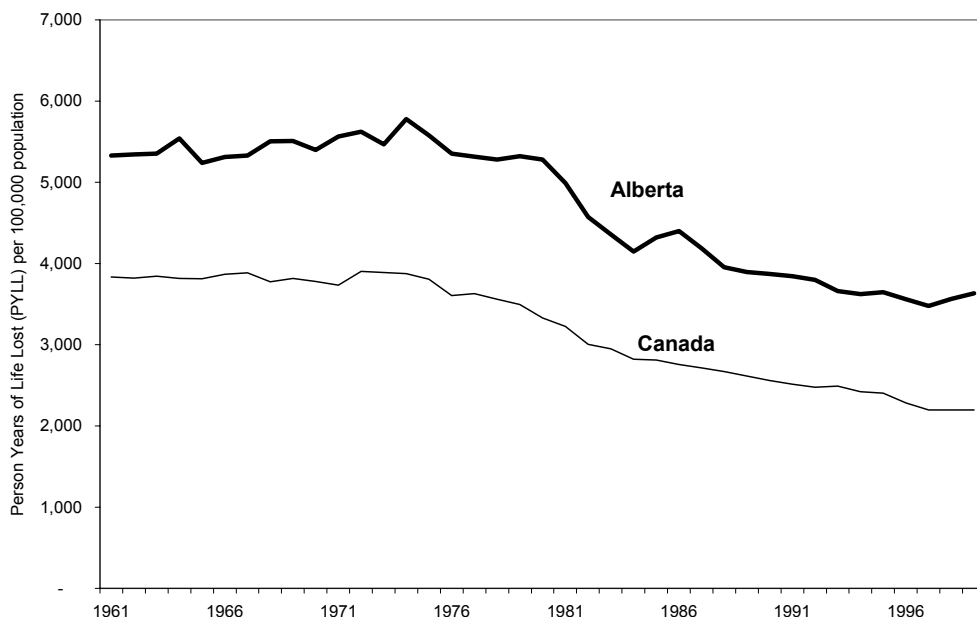
Source: Statistics Canada. Health Statistics at a Glance, Catalogue No. 82F007XCB

So What?

Premature Mortality Index: Where are we today?

Tracking human health indicators, such as premature mortality, is fundamental to assessing the condition of human capital within the GPI Accounting framework. As with the life expectancy index, the premature mortality index shows a progressive improvement (reduced premature mortality) over the past 40 years (see figure). Here we set 100 equal to the lowest rate of premature deaths per 100,000 population over the study period 1961 to 1999. The optimum benchmark year is 1999, which had the lowest rate of premature mortality over the study period; thus our GPI premature mortality index improves over time following a path similar to economic growth (GDP) since 1961. While a dollar value cannot be placed on human life, indicators such as premature mortality, life expectancy and other indicators of human health provide meaningful evidence of the changing condition of human health and wellness. Many factors such as the incidence of disease (e.g., cancer, cardiovascular diseases, asthma, and diabetes); socio-economic profiles of at-risk segments of society; diet; stress (workplace, financial, personal); and environmental stressors (e.g., air quality, water quality) determine health and wellness. These key determinants should be part of a more complete GPI System of Well-Being Accounts in future. Comprehensive and longitudinal data sets of these human health determinants could be developed, providing robust information to measure well-being more completely. The open and transparent GPI accounting architecture allows for such an expansion and would be ideal for examining the complex set of relationships between key determinants of health and wellness.
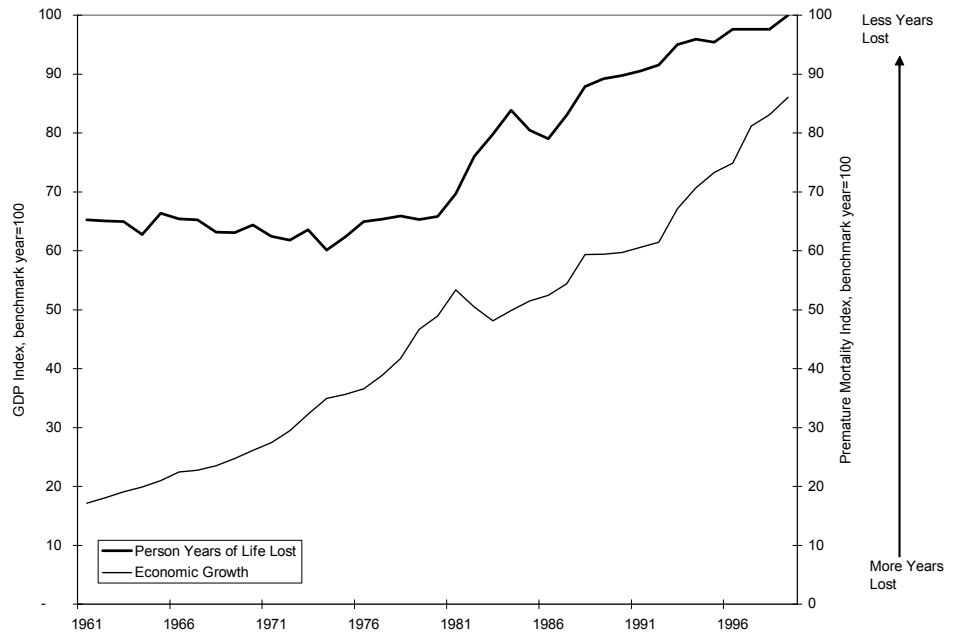
Major Causes of Death in Alberta, 1987 to 1998

Major Causes of Death in Alberta
(standardized mortality rates per 100,000 population)

	Heart Disease		Cancer		Respiratory Disease		Injuries	
	Males	Females	Males	Females	Males	Females	Males	Females
1987	**240**	**193**	**188**	**164**	**73**	**49**	**89**	**38**
1988	236	185	189	167	76	52	86	38
1989	**231**	**176**	**190**	**170**	**78**	**54**	**82**	**38**
1990	220	177	195	165	76	52	81	36
1991	**208**	**178**	**199**	**160**	**74**	**50**	**80**	**34**
1992	208	179	196	168	72	55	78	33
1993	**207**	**180**	**192**	**175**	**70**	**59**	**75**	**31**
1994	204	182	196	171	70	61	76	32
1995	**200**	**183**	**200**	**167**	**70**	**63**	**77**	**32**
1996	197	184	192	168	70	61	74	32
1997	**194**	**184**	**184**	**169**	**70**	**58**	**70**	**31**
1998	**201**	**176**	**187**	**166**	**77**	**66**	**75**	**29**

Source: Alberta Health and Wellness, derived from Alberta Vital Statistics death files and as reported in *Measuring Up*, the 1999-2000 Annual Report, Government of Alberta, p. 55. Bold figures are actual; all other figures are estimates.

There is no price tag or cost attached to premature mortality *per se* in the GPI income statement.

As an index, premature mortality in Alberta in 1999 ranked 100 on a scale of 0 to 100 where 100 is the lowest level of premature mortality recorded over the period 1961 to 1999.