

Section D

chronic disease

and injury

Chronic Disease
and Injury

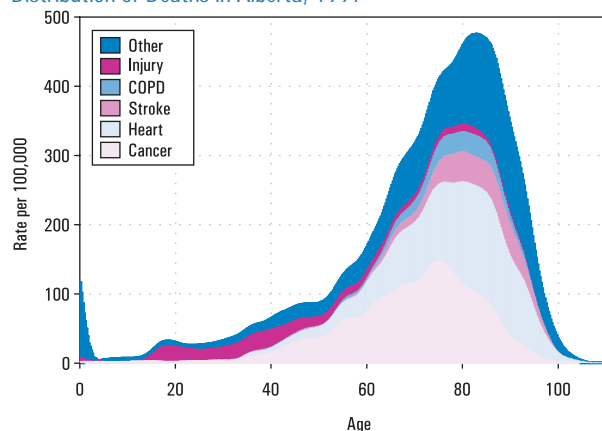
H E A L T H T R E N D S

This section examines the various causes of death in Alberta and compares provincial data to those available for the rest of Canada. Comparisons are possible because there is a common coding system (ICD-9: Ninth International Classification of Diseases) used by every health jurisdiction in the country, and consistently collected data is available from Statistics Canada. Thus, this section relies on Statistics Canada's Health Indicators Database, 1999, when comparing Alberta with other provinces. When drawing comparisons within Alberta, the source is Alberta Vital Statistics. Figures pertaining to Alberta from a given year may vary slightly because of these two different sources.

Figure D.1 illustrates the distribution of deaths in Alberta by major cause (note that COPD is an abbreviation for chronic obstructive pulmonary disease) and by age group. As can be expected, the vast majority of deaths occur in the 50-and-over age categories. Deaths due to injury begin the upward curve at a much earlier age, indicating that determinants other than age are involved, which may make more of these deaths preventable.

Figure D.2 (following page) indicates how Alberta ranks in comparison with other provinces for various causes of death. While the rank is important, we must also note the actual number of deaths in Alberta to understand the impact of a particular cause.

Figure D.1
Distribution of Deaths in Alberta, 1997



Source: Vital Statistics, Death File, April 1997 release

The leading causes of death in each province are compared for 1997, the most recent year for which these data are available. The table shows the cause of death, Alberta's ranking in comparison to the other provinces, and the number of deaths in Alberta. The ranking is determined by first calculating the age- and sex-standardized rates of mortality by cause, and then ordering the provinces so that a rank of one indicates the province with the lowest rate of mortality, and a rank of ten indicates the highest rate of mortality. The territories were excluded from the analysis.

The table lists the causes of death by Alberta's ranking, from best among the provinces to poorest.

Both the number of deaths and the ranking provide important information. For example, more Albertans die from ischaemic heart disease than any other cause. The health system will need to continue to address the consequences of this disease and its prevention. In comparison with other provinces, though, Alberta had the fourth lowest rate of mortality in 1997. This indicates that we may be making progress in our fight against heart disease.

When mortality from motor vehicle collisions is examined, even though there are fewer total deaths (423) in 1997 than for ischaemic heart disease (3,214), Alberta is not doing as well. Alberta has the second highest rate of mortality in the country from motor vehicle collisions. Young Albertans are most at risk for dying in a motor vehicle collision. These deaths are potentially more preventable than those relating to chronic diseases.

Figure D.2

Number of Deaths by Cause and Alberta Ranking, 1997 (1 = lowest, 10 = highest rate of mortality among Canadian provinces)

Selected Causes of Death	Number of Deaths	Alberta Rank
Accidental Falls	140	1
Alzheimer's disease	134	1
Cardiac dysrhythmias and heart failure	486	1
Genito-urinary system other than kidney	64	1
Respiratory system other than pneumonia, influenza, and C.O.P.D.	131	1
Cancer - benign/in situ/uncertain/unspecified	79	2
Cancer of digestive organs and peritoneum	1097	2
Cancer of trachea, bronchus, and lung	1036	2
Other malignant cancer	942	2
Nephritis and nephrosis (kidney)	166	2
Endocrine/nutritional/metabolic/immunity other than diabetes	112	2
All other causes of death	260	3
Diabetes mellitus	346	3
Diseases of the blood and blood-forming organs	51	3
Certain conditions originating in the perinatal period	84	3
Digestive system other than chronic liver disease and cirrhosis	423	3
Parkinson's disease	78	3
Tuberculosis	10	3
Malignant melanoma of the skin	52	4
Congenital anomalies	90	4
Ischemic heart disease	3214	4
Cancer of cervix uteri	36	5
Cancer of lymphatic tissue/leukemia	423	5
C.O.P.D. and allied conditions (excluding asthma)	686	6
Cancer of female breast	389	6
Cancer of prostate	318	6
Homicide and injury purposely inflicted	47	6
Infectious and parasitic disease other than TB and HIV	141	6
Nervous system and sense organs other than Alzheimer's and Parkinson's	203	6
Sudden Infant Death Syndrome (SIDS)	21	6
Asthma	39	7
Human Immunodeficiency Virus (HIV)	38	7
Mental Disorders	412	7
Pneumonia and influenza	652	7
Diseases of arteries, arterioles, and capillaries	454	8
Injury other than motor vehicle collisions, falls, suicide, and homicide	375	8
Cerebrovascular disease (stroke)	1311	9
Chronic liver disease and cirrhosis	179	9
Motor vehicle collisions	423	9
Circulatory system other than ischemic, dysrhythmias, heart failure, stroke, and arteries	907	9
Suicide and self-inflicted injury	403	9
Total	16,452	

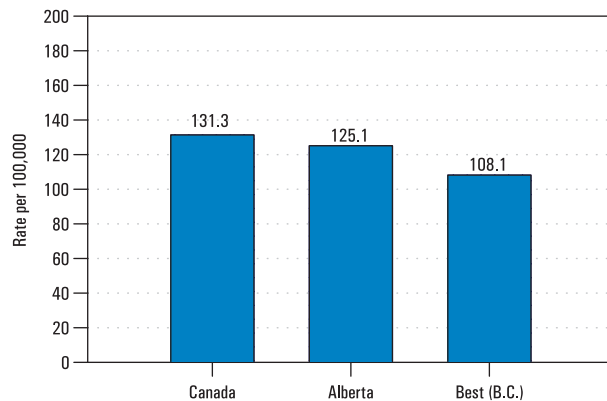
Source: Statistics Canada, Health Indicators Database, 1999

D.1A Ischaemic Heart Disease

Ischaemic heart disease (or coronary artery disease) can cause angina (chest pain), heart failure, or heart attack (acute coronary thrombosis or myocardial infarction).

In Alberta in 1997, the mortality rate for ischaemic heart disease was 125.1 per 100,000 population. This is lower than the national rate of 131.3 per 100,000, but higher than the best province, British Columbia, (108.1 per 100,000 population).

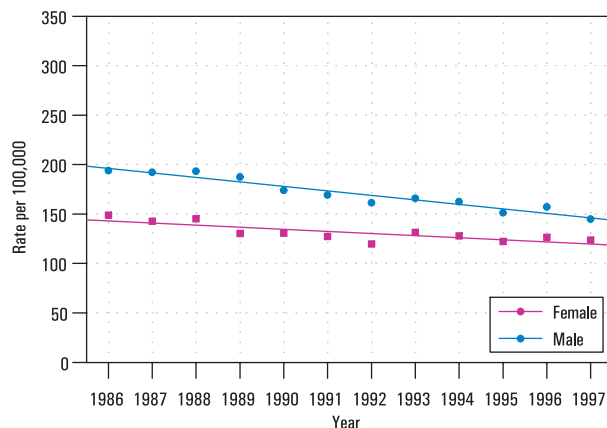
Figure D.1A.1
Mortality Rates for Ischaemic Heart Disease, 1997 (Alberta, Canada, Best Province) (Deaths per 100,000 population, age standardized)



Source: Statistics Canada, Health Indicators Database, 1999

For the past decade in Alberta, the mortality rate for ischaemic heart disease has decreased for both males and females.

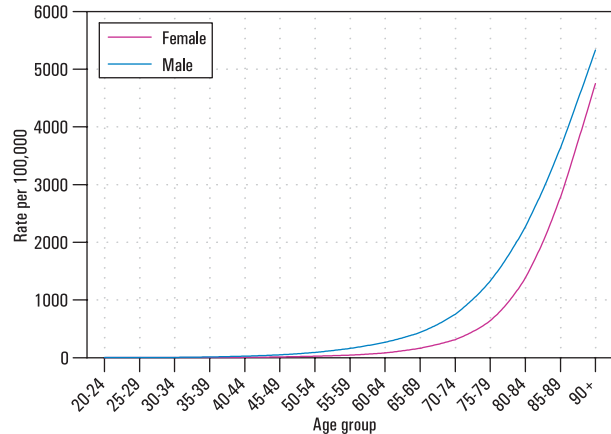
Figure D.1A.2
Mortality Rates for Ischaemic Heart Disease in Alberta, 1986 - 1997 (Deaths per 100,000 population, age standardized)



Source: Alberta Vital Statistics, Death File, May 1999 release

The vast majority of deaths due to ischaemic heart disease occur in Albertans 60 and older. This trend is slightly more pronounced among males than females.

Figure D.1A.3
Age-Specific Death Rates for Ischaemic Heart Disease in Alberta, 1995 - 1997



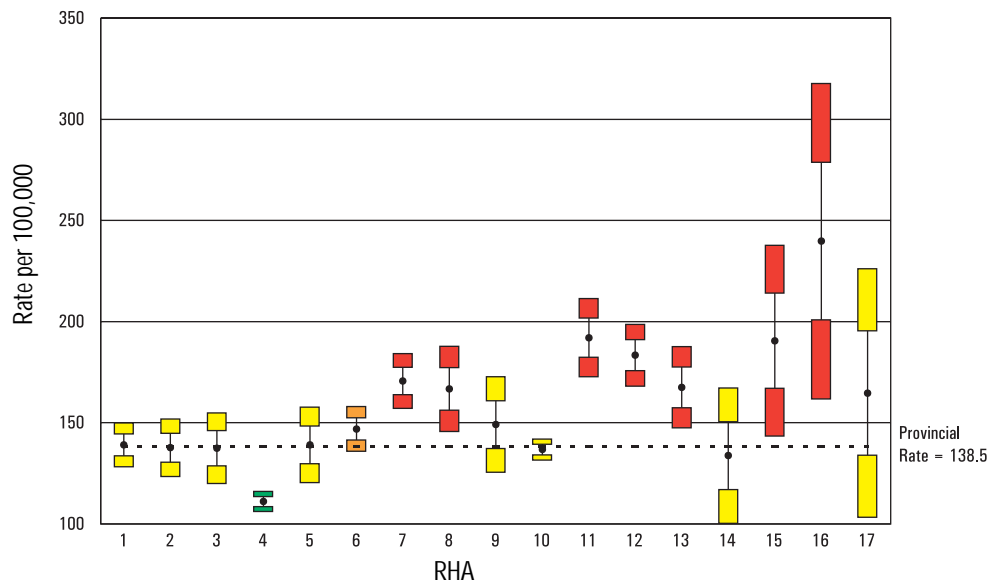
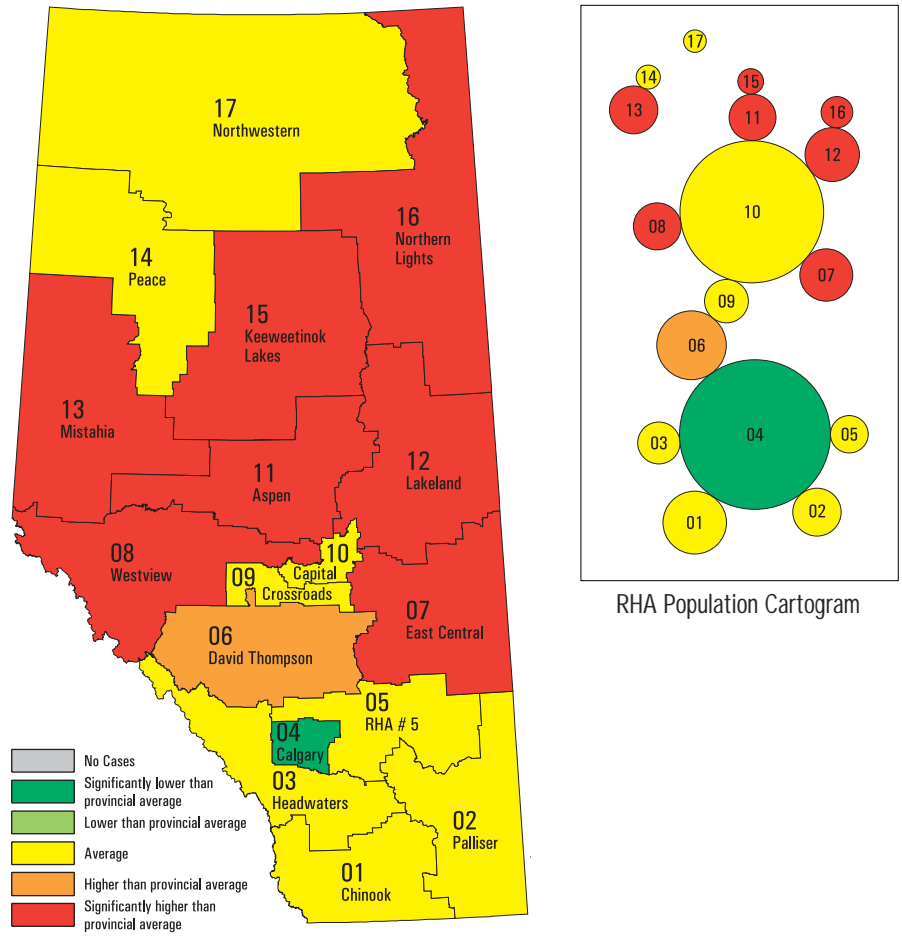
Source: Alberta Vital Statistics, Death File, May 1999 release

Provincial Strategies

Alberta Heart Health Project

- Demonstration phase (1993 - 1997) — Four demonstration projects were implemented in the province. The main objectives were to demonstrate the effectiveness of the community mobilization/development approach in heart health promotion, to document how innovative heart health initiatives can be integrated into a diversity of community settings, and to identify successful implementation strategies.
- Dissemination research phase (1999 - 2004) — This phase will investigate the development of health promotion capacity, collaborating with several regional health authorities to use the knowledge and learning gained from the demonstration phase.

Figure D.1A.4
Regional Differences in Ischaemic Heart Disease Mortality Rates, Alberta, 1995 - 1997



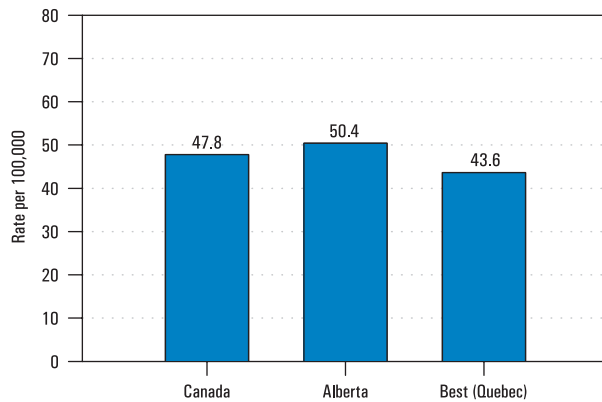
Source: Alberta Vital Statistics, Death File, May 1999 release

D.1B Stroke

Stroke (also known as cerebrovascular disease or a cerebrovascular accident) refers to the death of brain cells resulting from a lack of blood flow to the brain. Inadequate blood flow reduces the flow of oxygen and other nutrients needed for proper brain function. Major risk factors for stroke include high blood pressure, smoking, physical inactivity, atrial fibrillation, heart attack, and diabetes mellitus.

In Alberta, the mortality rate for stroke in 1997 was 50.4 per 100,000 population. This is somewhat higher than the national rate for that year, 47.8 per 100,000. Quebec, at 43.6 per 100,000, had the lowest rate in Canada.

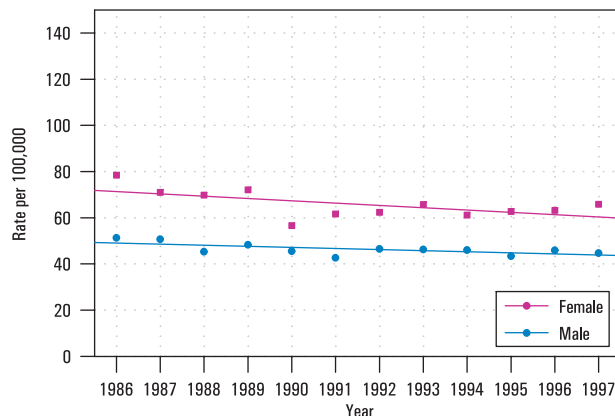
Figure D.1B.1
Mortality Rates for Stroke, 1997 (Alberta, Canada, Best Province)
(Deaths per 100,000 population, age standardized)



Source: Statistics Canada, Health Indicators Database, 1999

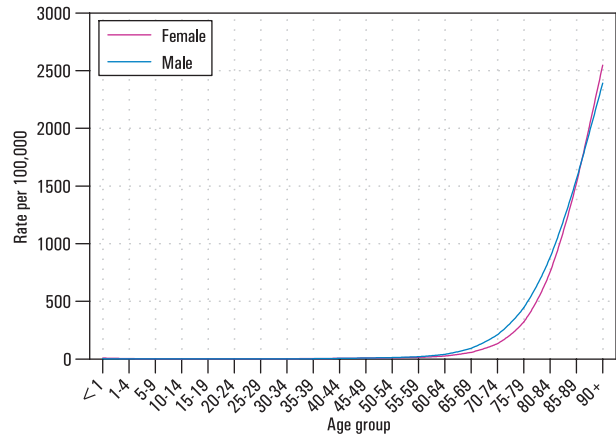
Over the past decade, the mortality rate for stroke has gradually declined in Alberta. This decline was slightly more noticeable for women than for men.

Figure D.1B.2
Mortality Rates for Stroke in Alberta, 1986 - 1997 (Deaths per 100,000 population, age standardized)



Source: Alberta Vital Statistics, Death File, May 1999 release

Figure D.1B.3
Age-Specific Death Rates for Stroke in Alberta, 1995 - 1997

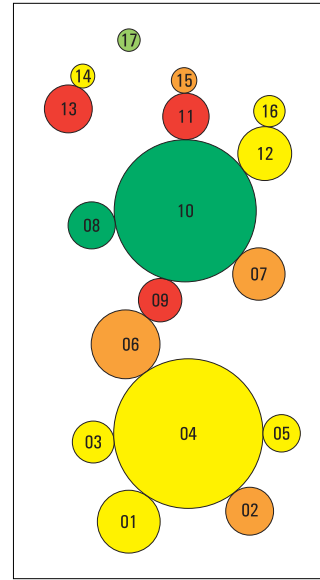
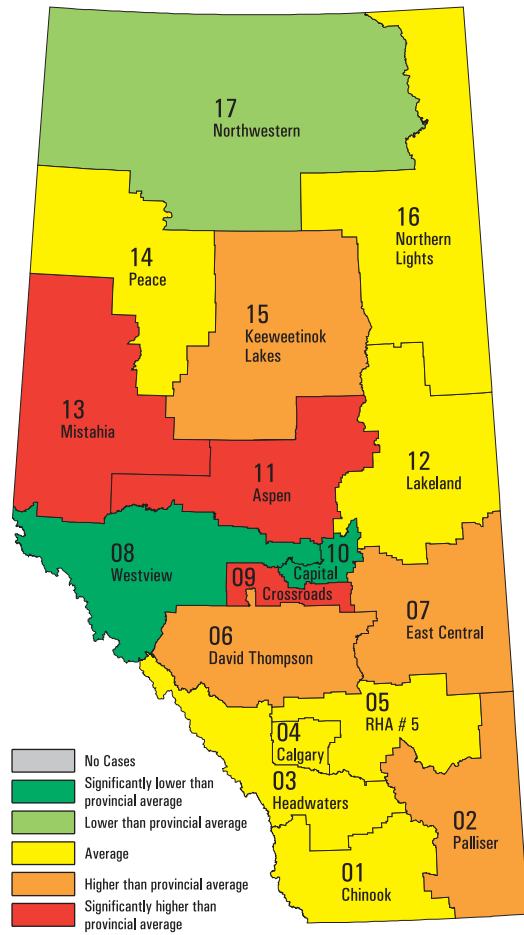


Source: Alberta Vital Statistics, Death File, May 1999 release

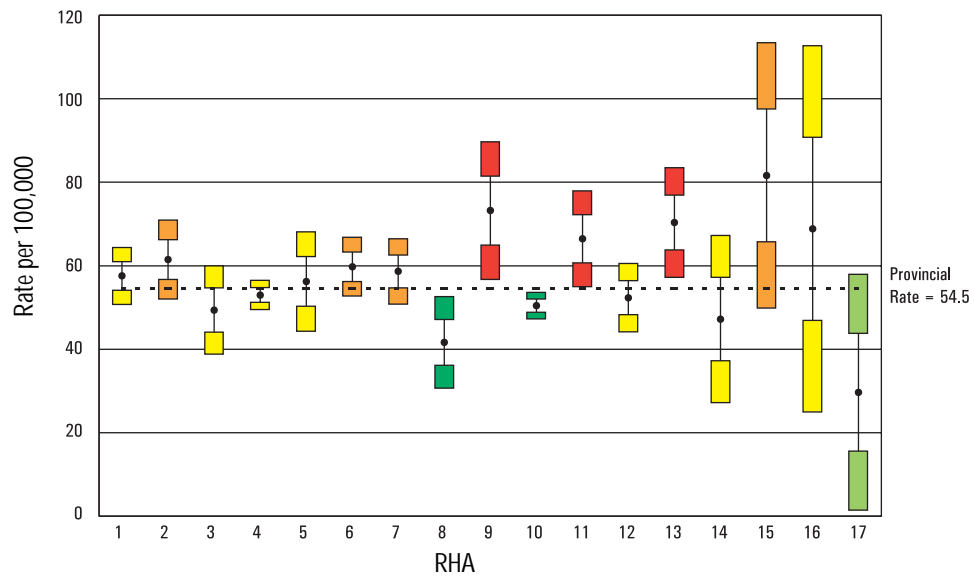
Provincial Strategies

- The Alberta Heart Health Project was described in section D.1A.

Figure D. 1B.4
Regional Differences in Stroke Mortality Rates, Alberta, 1995 - 1997



RHA Population Cartogram

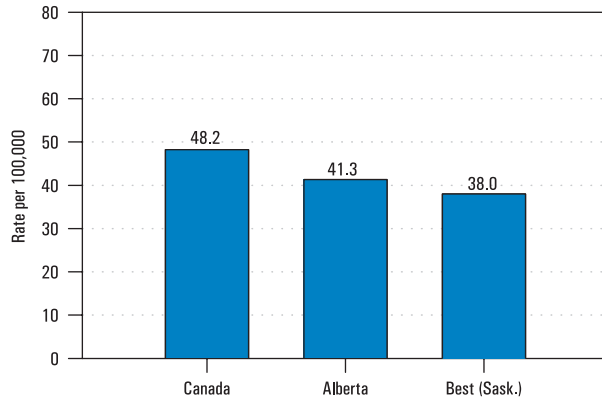


Source: Alberta Vital Statistics, Death File, May 1999 release

D.2A Lung Cancer

Lung cancers are the single leading cause of death among all cancers in Alberta. In 1997, Alberta's mortality rate for lung cancer was the second lowest in Canada at 41.3 per 100,000 (Saskatchewan had the lowest rate at 38.0). The national rate was 48.2.

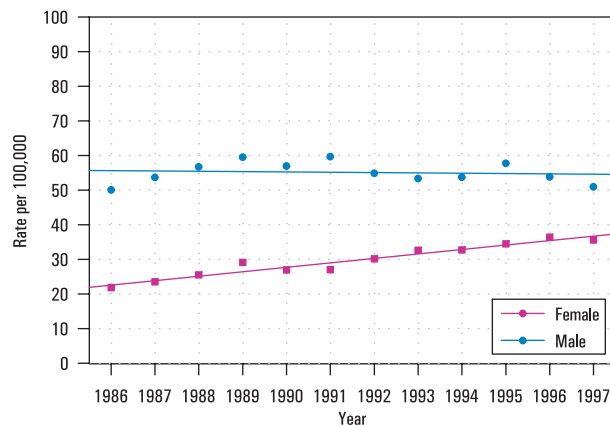
Figure D.2A.1
Mortality Rates for Lung Cancer, 1997 (Alberta, Canada, Best Province) (Deaths per 100,000 population, age standardized)



Source: Statistics Canada, Health Indicators Database, 1999

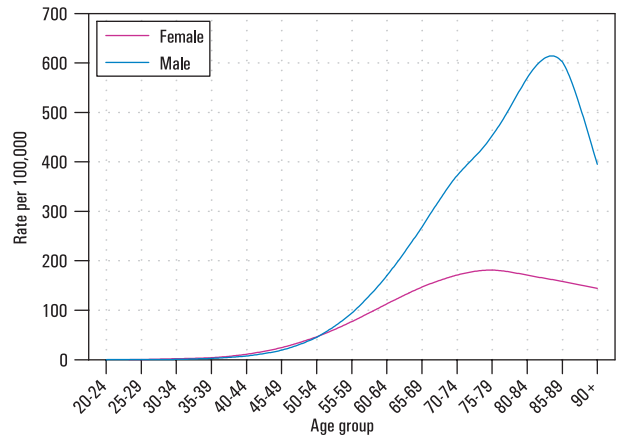
While there has been a marked difference between male and female mortality from lung cancer, the gap is now narrowing — the rate for men is stabilizing while increasing for women. Most deaths from lung cancer occur in men and women over 55.

Figure D.2A.2
Mortality Rates for Lung Cancer in Alberta, 1986 - 1997 (Deaths per 100,000 population, age standardized)



Source: Alberta Vital Statistics, Death File, May 1999 release

Figure D.2A.3
Age-Specific Mortality Rates for Lung Cancer in Alberta, 1995 - 1997

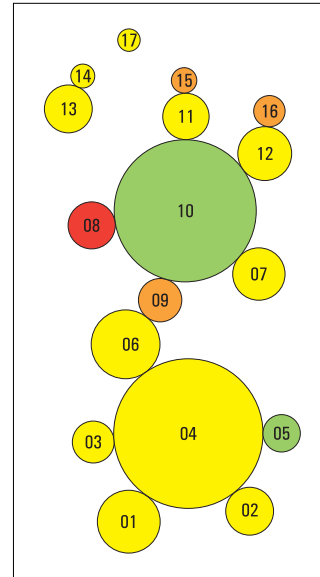
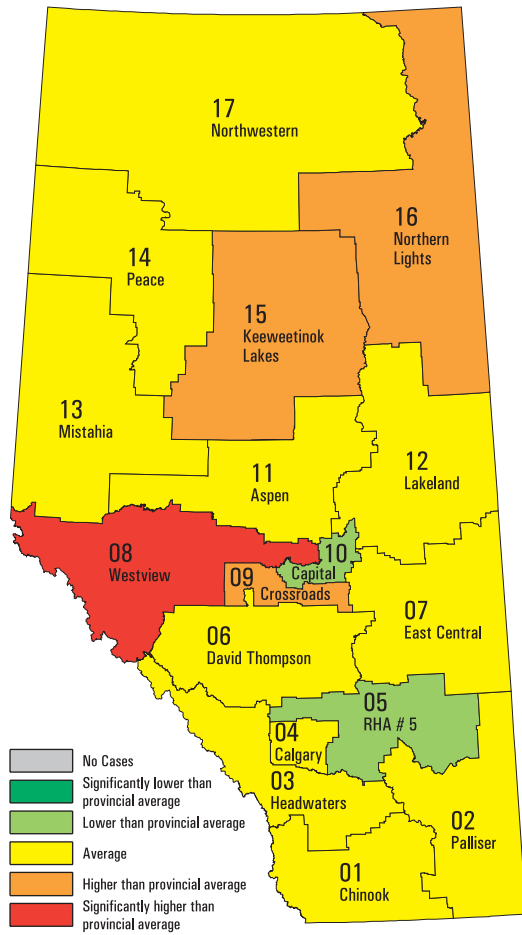


Source: Alberta Vital Statistics, Death File, May 1999 release

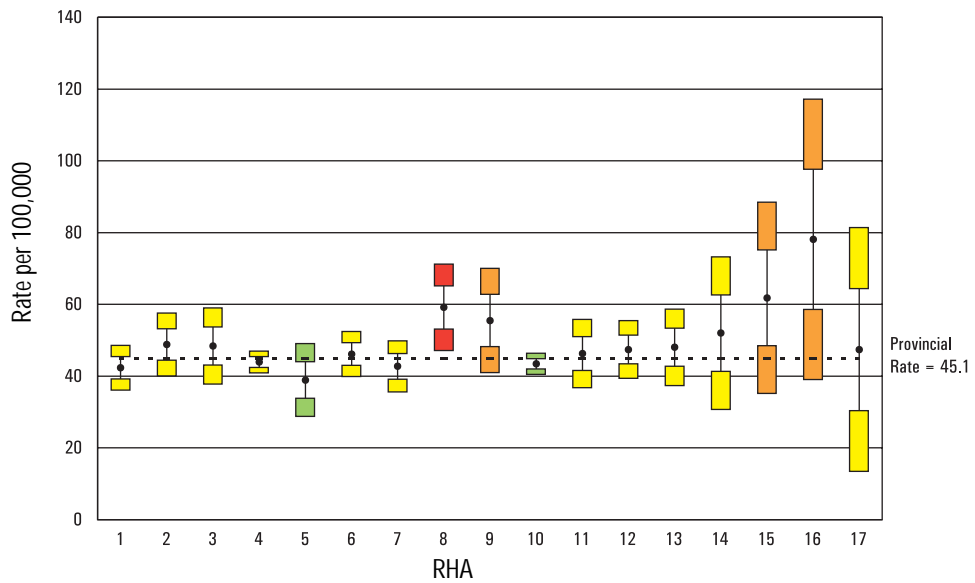
Provincial Strategies

- The Alberta Tobacco Reduction Plan was described in section C.7.

Figure D.2A.4
Regional Differences in Lung Cancer Mortality Rates, Alberta, 1995 - 1997



RHA Population Cartogram

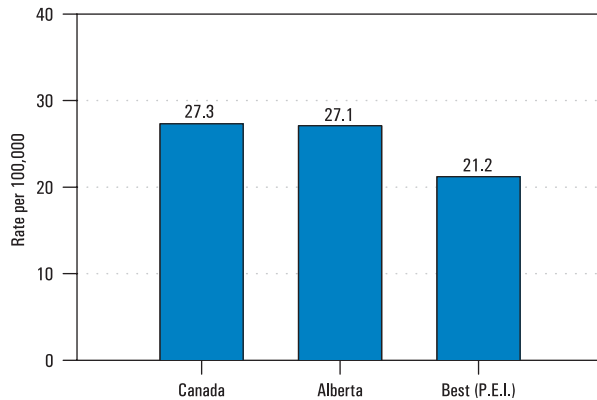


Source: Alberta Vital Statistics, Death File, May 1999 release

D.2B Breast Cancer

Breast cancer continues to be the most common form of cancer in women, and the leading cause of cancer deaths in women. In Alberta, the female mortality rate for breast cancer was 27.1 per 100,000 in 1997, almost identical to the national rate of 27.3. Prince Edward Island, with a rate of 21.2 per 100,000, had the lowest mortality rate from breast cancer.

Figure D.2B.1
Mortality Rates for Breast Cancer, 1997 (Alberta, Canada, Best Province) (Deaths per 100,000 population, age standardized)

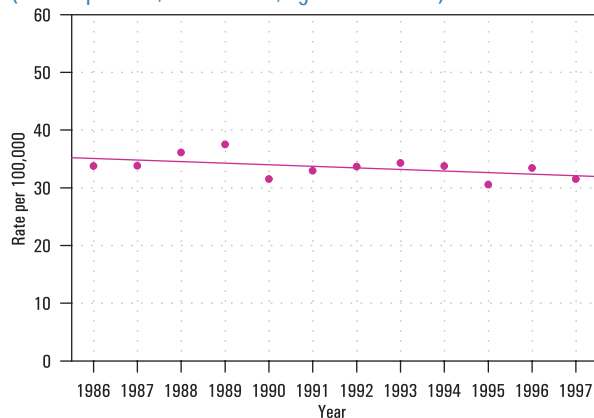


Source: Statistics Canada, Health Indicators Database, 1999

Note: Statistics Canada standardizes to the weight of both sexes together.

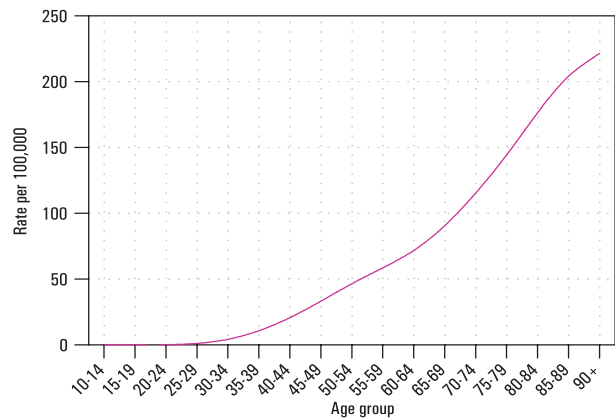
Over the past decade, the mortality rate for breast cancer for women in Alberta has remained fairly constant, although a slight decrease in the trend in recent years can be noted.

Figure D.2B.2
Mortality Rates for Breast Cancer in Alberta, 1986 - 1997 (Deaths per 100,000 females, age standardized)



Source: Alberta Vital Statistics, Death File, May 1999 release

Figure D.2B.3
Age - Specific Mortality Rates for Breast Cancer in Alberta, 1995 - 1997



Source: Alberta Vital Statistics, Death File, May 1999 release

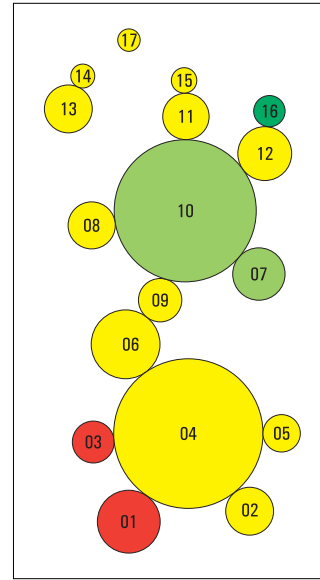
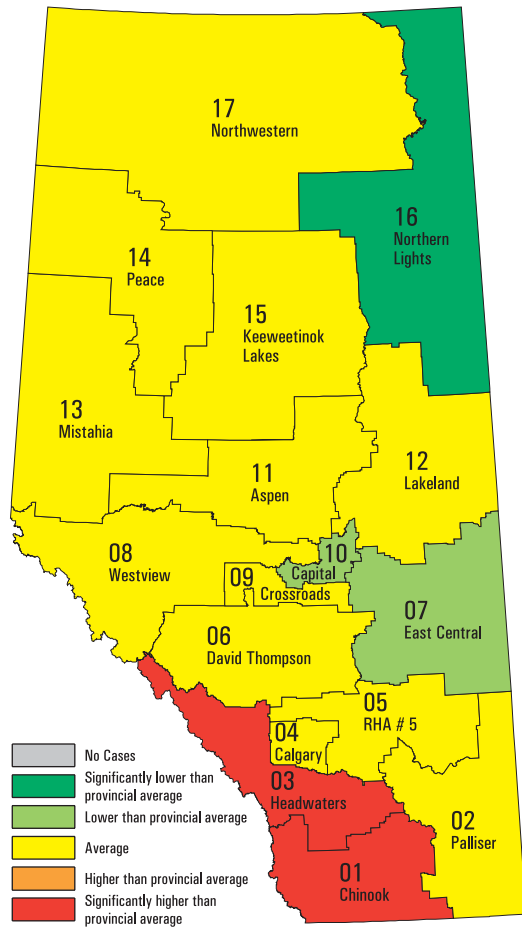
Provincial Business Plan Targets

Mammograms are recommended for breast cancer screening for women between the ages of 50 and 69. The provincial target for 2000 is that 75 per cent of women between the ages of 50 and 69 will report receiving mammograms every two years.

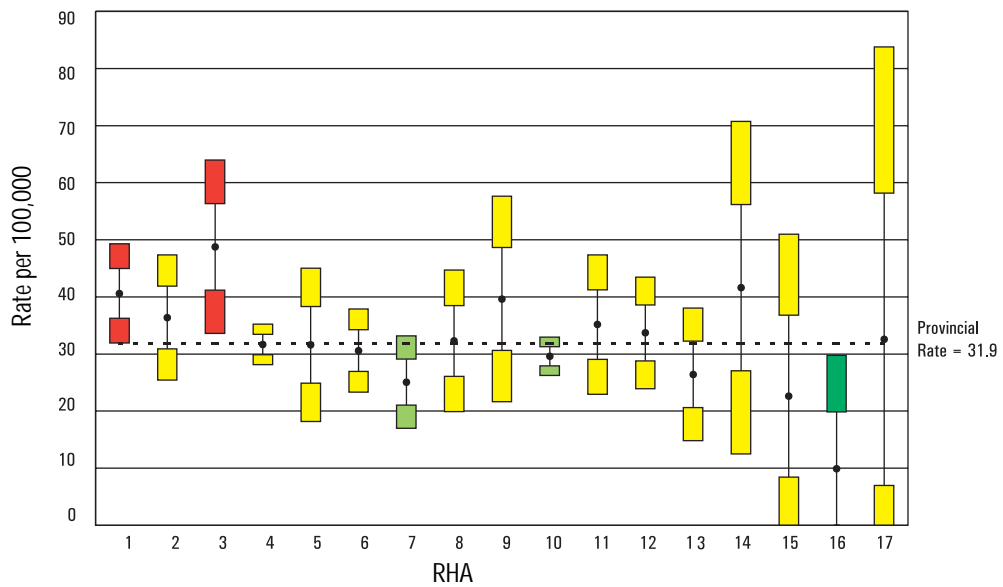
Provincial Strategies

- Screening mammography is available to women aged 50 to 69 years through the Alberta Cancer Board. The **Alberta Cancer Board Screen Test Program** offers the service through two fixed sites and three mobile units serving rural Alberta. Screening mammography is also available through private radiology clinics and through a number of regional health authorities.

Figure D.2B.4
Regional Differences in Breast Cancer Mortality Rates, Alberta, 1995 - 1997



RHA Population Cartogram

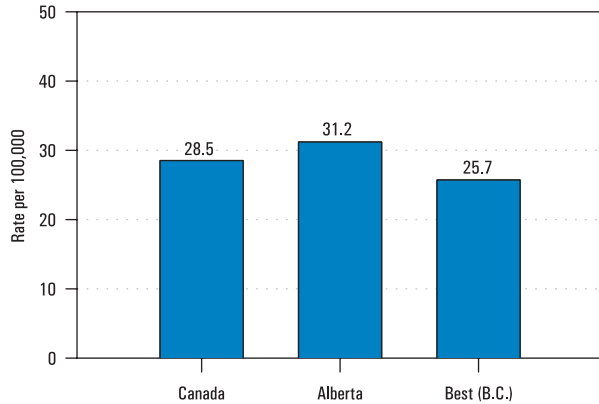


Source: Alberta Vital Statistics, Death File, May 1999 release

D.2C Prostate Cancer

Prostate cancer is the most frequently occurring tumor in males. It is most commonly found in older men. In 1997, the male mortality rate from prostate cancer in Alberta was 31.2 per 100,000. Alberta's rate is higher than the Canadian average of 28.5 and the rate of the best province, British Columbia (25.7).

Figure D.2C.1
Mortality Rates for Prostate Cancer, 1997 (Alberta, Canada, Best Province) (Deaths per 100,000 population, age standardized).

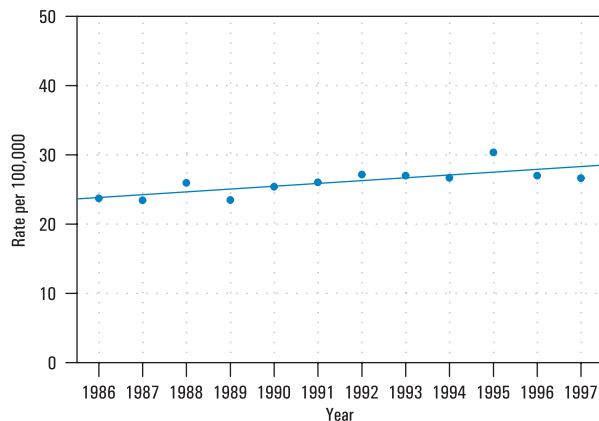


Source: Statistics Canada, Health Indicators Database, 1999

Note: Statistics Canada standardizes to the weight of both sexes together.

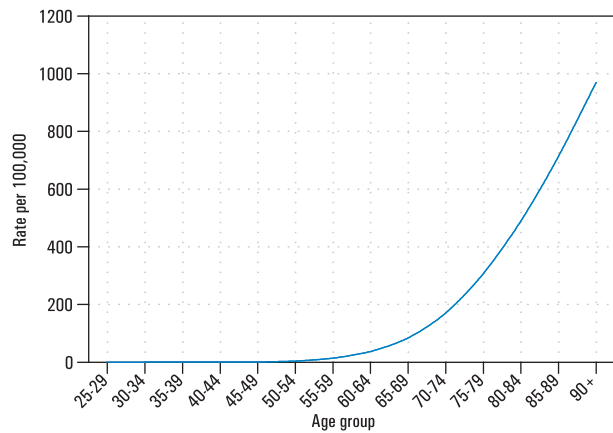
Over the past decade, the mortality rate for prostate cancer for men in Alberta has increased slightly.

Figure D.2C.2
Mortality Rates for Prostate Cancer in Alberta, 1986 - 1997 (Deaths per 100,000 males, age standardized)



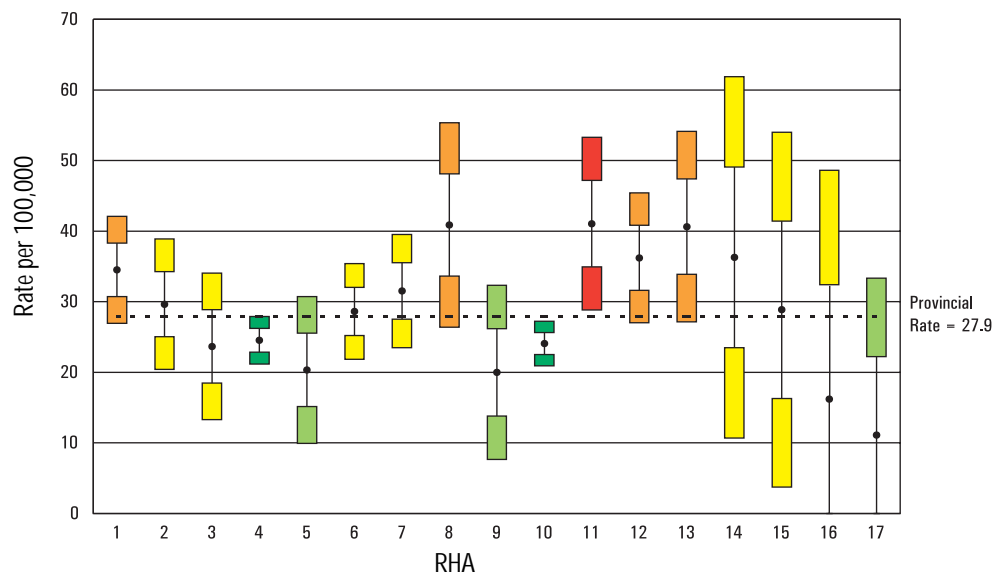
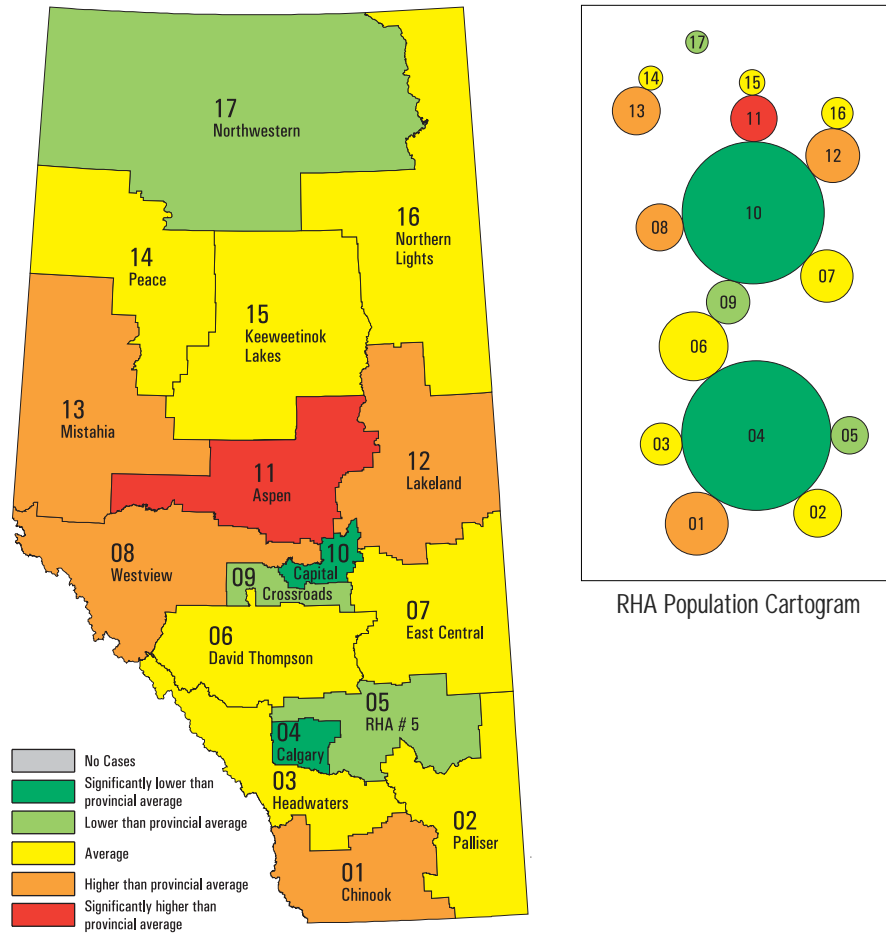
Source: Alberta Vital Statistics, Death File, May 1999 release

Figure D.2C.3
Age - Specific Mortality Rates for Prostate Cancer in Alberta, 1995 - 1997



Source: Alberta Vital Statistics, Death File, May 1999 release

Figure D.2C.4
Regional Differences in Prostate Cancer Mortality Rates, Alberta, 1995 - 1997

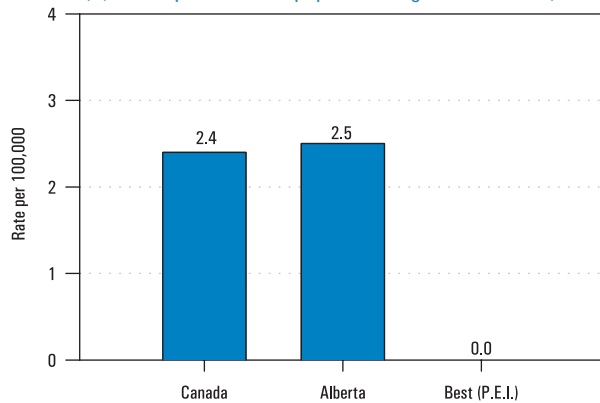


Source: Alberta Vital Statistics, Death File, May 1999 release

D.2D Cervical Cancer

Considering that mortality from invasive cancers of the cervix is largely preventable through early detection and treatment, the mortality rate from cervical cancer is unacceptably high. Far too many women in Alberta are dying from this disease. In 1997, the mortality rate from cervical cancer in Alberta was 2.5 per 100,000. This is slightly higher than the Canadian rate of 2.4. There were no cases of cervical cancer reported in Prince Edward Island in 1997.

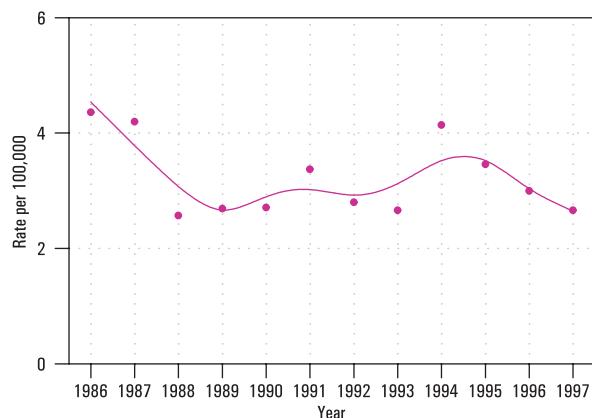
Figure D.2D.1
Mortality Rates for Cervical Cancer, 1997 (Alberta, Canada, Best Province) (Deaths per 100,000 population, age standardized).



Source: Statistics Canada, Health Indicators Database, 1999
Note: Statistics Canada standardizes to the weight of both sexes together.

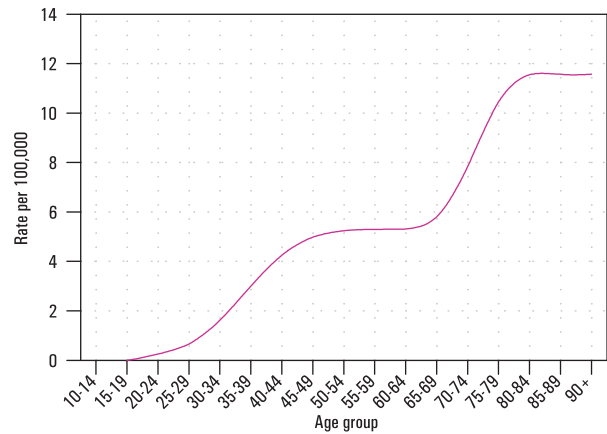
Over the past decade, despite large year-to-year fluctuations, the mortality rate for cervical cancer for women in Alberta has remained fairly constant.

Figure D.2D.2
Mortality Rates for Cervical Cancer in Alberta, 1986 - 1997 (Deaths per 100,000 population, age standardized)



Source: Alberta Vital Statistics, Death File, May 1999 release

Figure D.2D.3
Age - Specific Mortality Rates for Cervical Cancer in Alberta, 1995 - 1997



Source: Alberta Vital Statistics, Death File, May 1999 release

Provincial Business Plan Targets

The PAP test is an excellent screening test for pre-cancerous conditions. The provincial target for the year 2000 is that 90 per cent of women (age 15 and older) will report having had a PAP test in the previous three years.

A provincial target has also been set for the year 2000 to limit the number of deaths in Alberta due to cervical cancer to 15 or fewer. This represents a rate of less than one per 100,000.

Provincial Strategies

- A provincial strategy framework for cervical cancer is currently being developed.

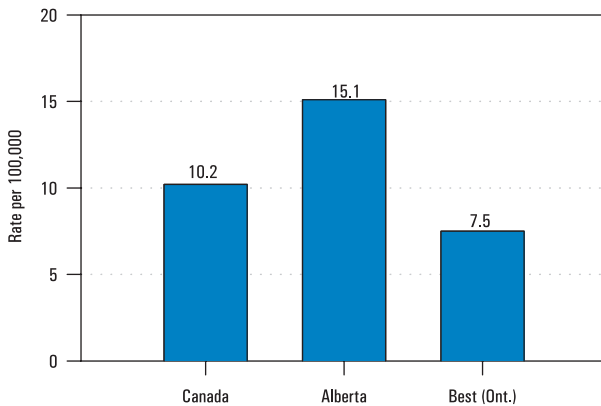
Provincial rates are so low that regional comparisons are unstable and have not been shown in a map.

D.3A Motor Vehicle Collisions

(Please note that the Motor Vehicle Collisions category for this update reflects a different ICD-9-CM grouping than that used in the 1998 edition of the report.)

The rate of deaths due to injuries from motor vehicle collisions was 15.1 per 100,000 in Alberta in 1997. The national average for that year was 10.2. Alberta's rate is second highest in Canada and double that of the best province, Ontario (7.5 per 100,000).

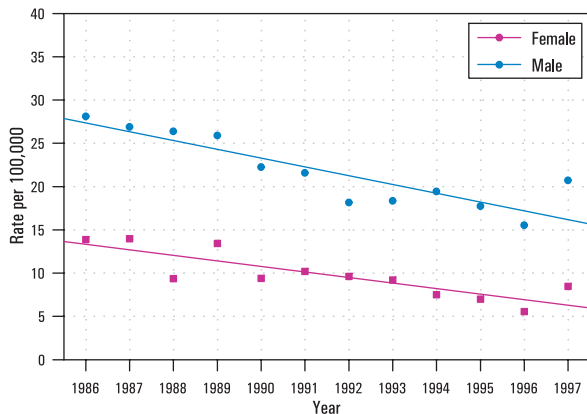
Figure D.3A.1
Mortality Rates for Injury in Motor Vehicle Collisions, 1997
(Alberta, Canada, Best Province) (Deaths per 100,000 population, age standardized).



Source: Statistics Canada, Health Indicators Database, 1999

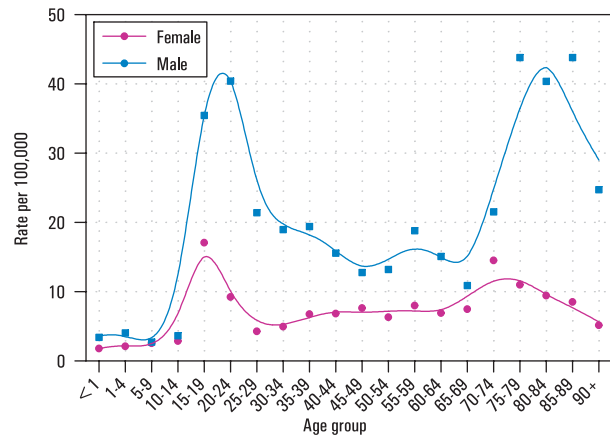
In Alberta, male and female mortality rates due to motor vehicle collisions decreased between 1986 and 1997.

Figure D.3A.2
Mortality Rates for Injury in Motor Vehicle Collisions in Alberta, 1986 - 1997 (Deaths per 100,000 population, age standardized)



Source: Alberta Vital Statistics, Death File, May 1999 release

Figure D.3A.3
Age-Specific Mortality Rates for Motor Vehicle Collisions in Alberta, 1995 - 1997



Source: Alberta Vital Statistics, Death File, May 1999 release

Most motor vehicle collision deaths involve teenage and young adult males. Seatbelt legislation in Alberta has increased the use of seatbelts by drivers and has, in turn, resulted in decreased numbers of deaths. Still, there is great concern that while motor vehicle collision mortality rates are continually decreasing in the rest of Canada, Alberta's rates are beginning to increase again. There is also a concern that while motor vehicle collision-related mortality is decreasing, there may be increases in morbidity.

In 1997, 423 people died in motor vehicle collisions in Alberta. Most of these deaths happened on Saturdays. Alcohol is a well-documented risk factor for motor vehicle collisions; in many cases, however, alcohol is not involved. Initiatives such as the Alberta Motor Association's "Mission Possible" are alerting the public to the number of collisions that occur in Alberta and their economic impact.

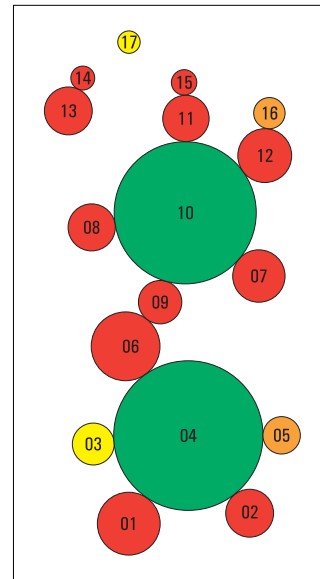
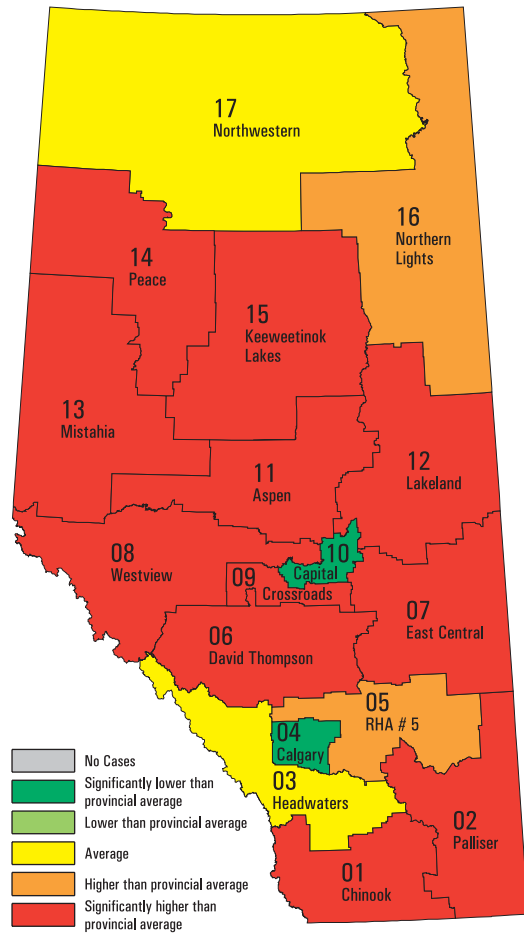
Provincial Business Plan Targets

The provincial target for 2002 is that the age-standardized rate of deaths due to all injury (including homicide and suicide) will be at or below 45 per 100,000 population.

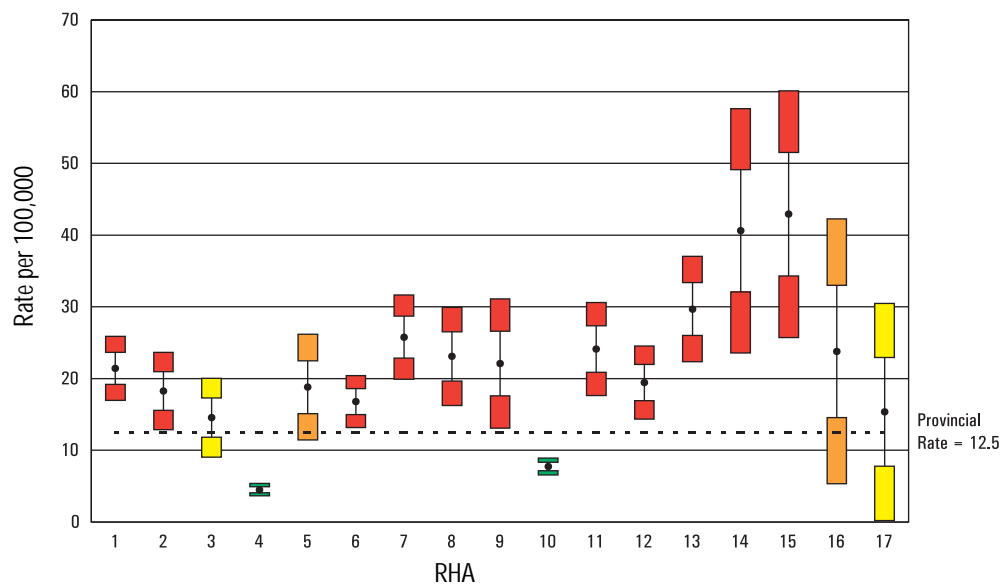
Provincial Strategies

- Alberta Health and Wellness provides funding to support the **Alberta Centre for Injury Control and Research (ACICR)**. It addresses intentional and non-intentional injuries within the contexts of prevention, the emergency medical system, acute care, rehabilitation and research.
- A number of partnership-based initiatives are underway related to the prevention of motor vehicle injuries. The **Alberta Occupant Restraint Program** uses a combination of enforcement and the provision of education to address nonuse and misuse of passenger restraints. “**Think and Drive**” and “**Mission Possible**” are provincial traffic related initiatives to prevent motor vehicle collisions.

Figure D.3A.4
Regional Differences in Motor Vehicle Collision Mortality Rates, Alberta, 1995 - 1997



RHA Population Cartogram



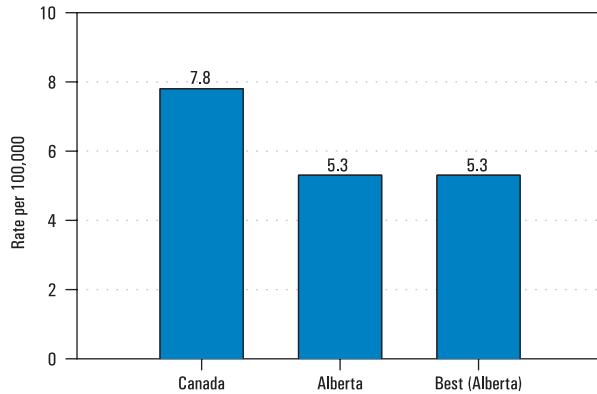
Source: Alberta Vital Statistics, Death File, May 1999 release

D.3B Falls

Alberta's mortality rate for injury due to falls is the lowest in Canada. Most deaths due to falls occur in old age, and are slightly more frequent in females.

In 1997, the rate was 5.3 per 100,000, substantially lower than the national average (7.8 per 100,000).

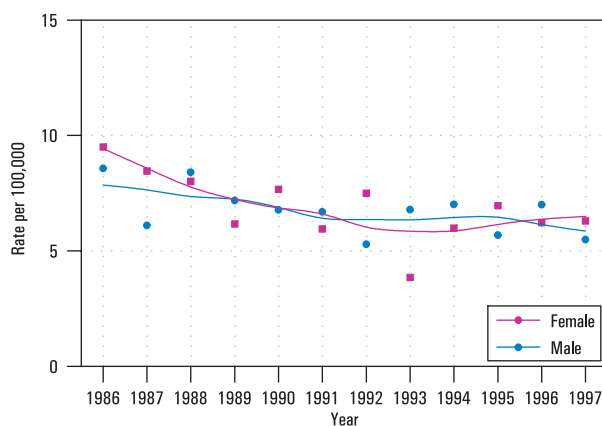
Figure D.3B.1
Mortality Rates for Falls, 1997 (Alberta, Canada, Best Province)
(Deaths per 100,000 population, age standardized)



Source: Statistics Canada, Health Indicators Database, 1999

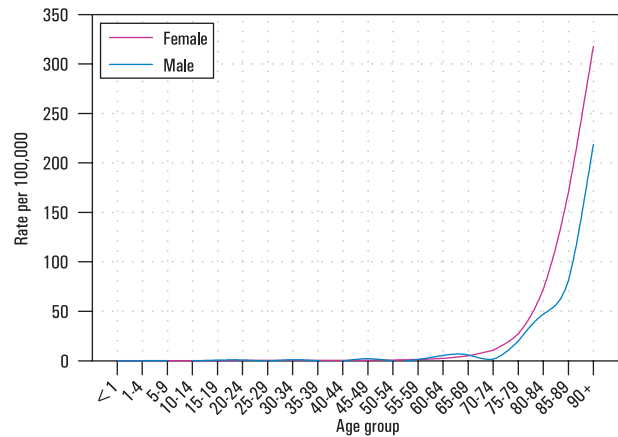
Between 1986 and 1997, male and female mortality rates for deaths due to falls decreased in Alberta. Falls are classified in three types: anticipated physiological; unanticipated physiological; and accidental. It is important that falls be categorized correctly, as there are different prevention strategies for each type.

Figure D.3B.2
Mortality Rates for Falls in Alberta, 1986 - 1997 (Deaths per 100,000 population, age standardized)



Source: Alberta Vital Statistics, Death File, May 1999 release

Figure D.3B.3
Age - Specific Mortality Rates for Falls in Alberta, 1995 - 1997



Source: Alberta Vital Statistics, Death File, May 1999 release

One prevention strategy involves the Morse Fall Scale, a quick and simple method of assessing patients to determine their likelihood of falling. Approximately three-quarters of all falls occur with patients who have been identified by the Morse Fall Scale as “at risk of falling.”

Coordination of administrative support, environmental safety, monitoring systems, and staff preparation in health care facilities will contribute to effective fall prevention programs.

In younger age groups, many deaths from falls are farm or work related. Prevention strategies involve emphasizing proper operation of farm equipment (especially tractors), ladder safety, and use of safety equipment (e.g., footwear, harness, ropes). Workers need to consider the “fall potential” of situations and take proper measures to reduce risks.

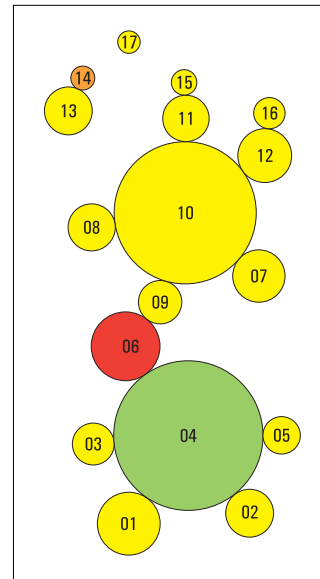
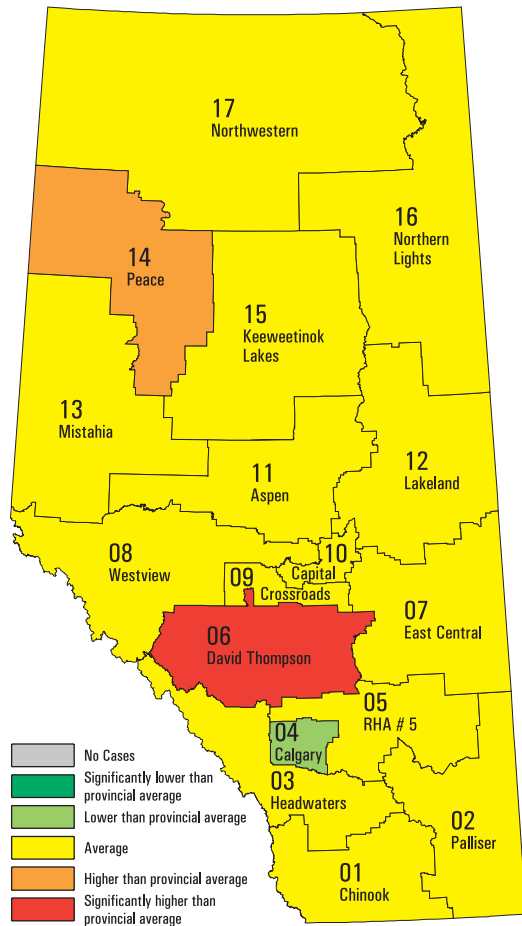
Provincial Business Plan Targets

The provincial target for 2002 is that the age-standardized rate of deaths due to all injury (including homicide and suicide) will be at or below 45 per 100,000 population.

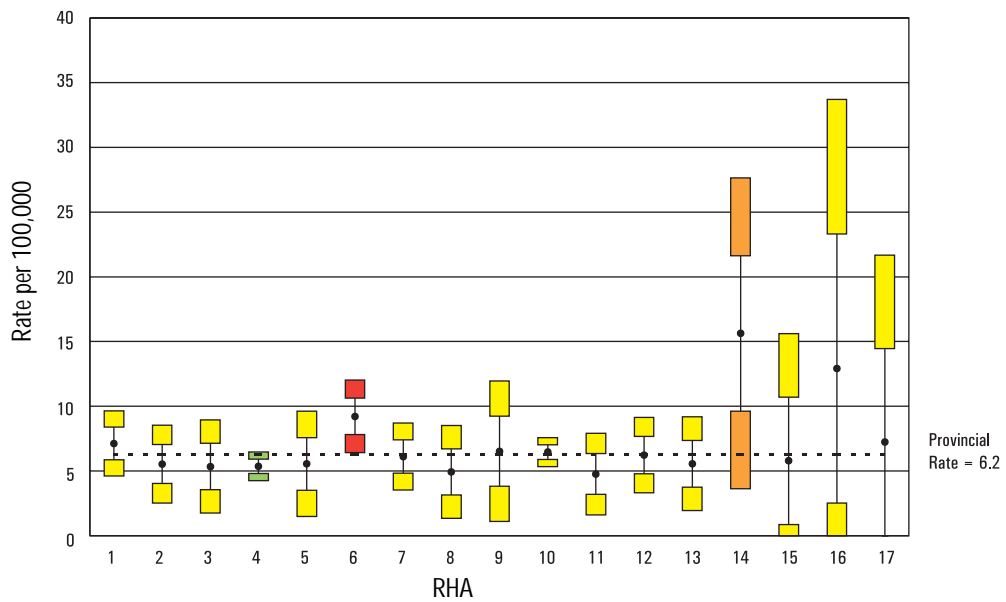
Provincial Strategies

- The Alberta Centre for Injury Control and Research (ACICR) was described in section D.3A.

Figure D.3B.4
Regional Differences in Mortality Rates for Falls, Alberta, 1995 - 1997



RHA Population Cartogram

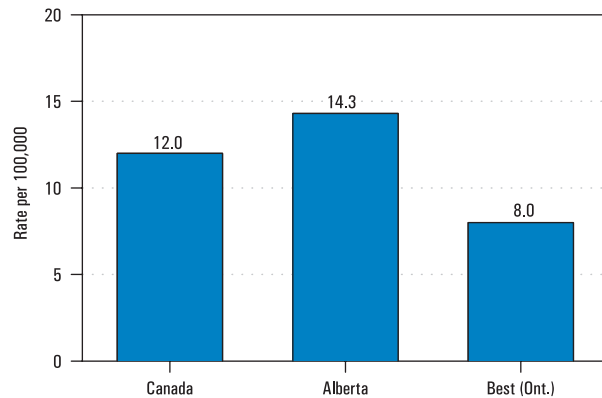


Source: Alberta Vital Statistics, Death File, May 1999 release

D.3C Suicide

The rate of deaths due to suicide was 14.3 per 100,000 in Alberta in 1997. The national average for that year was 12 per 100,000. Alberta's rate is the second highest in Canada and far higher than that of the best province, Ontario (eight per 100,000).

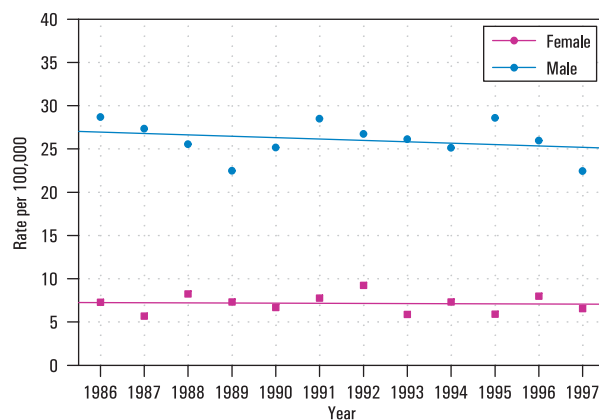
Figure D.3C.1
Mortality Rates for Suicide, 1997 (Alberta, Canada, Best Province) (Deaths per 100,000 population, age standardized)



Source: Statistics Canada, Health Indicators Database, 1999

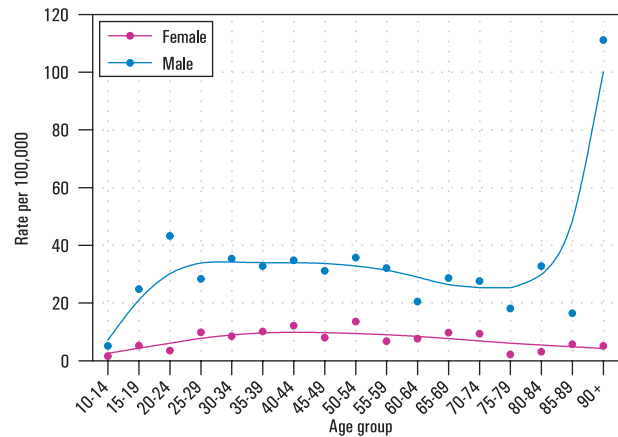
In Alberta, male and female mortality rates for deaths due to suicide remained fairly constant between 1986 and 1997.

Figure D.3C.2
Mortality Rates for Suicide in Alberta, 1986 - 1997 (Deaths per 100,000 population, age standardized)



Source: Alberta Vital Statistics, Death File, May 1999 release

Figure D.3C.3
Age Specific Death Rates for Suicide in Alberta, 1995 - 1997



Source: Alberta Vital Statistics, Death File, May 1999 release

Most suicide deaths involve teenage or young adult males. However, attempted suicide (parasuicide) is more evenly distributed between the sexes. It has been suggested that young males are more likely to die because they use more violent methods (e.g., firearms, hanging, falls). Females usually attempt suicide by methods such as poisoning and are often saved. In most attempted suicides, the individual is searching for help.

The sex and age patterns of suicide rates parallel the onset and prevalence of certain mental disorders particularly in youth, making suicide a major ongoing concern for professionals in mental health.

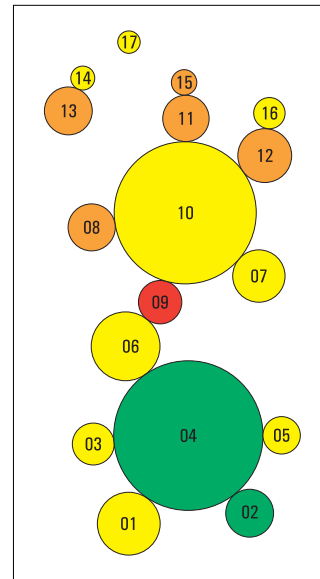
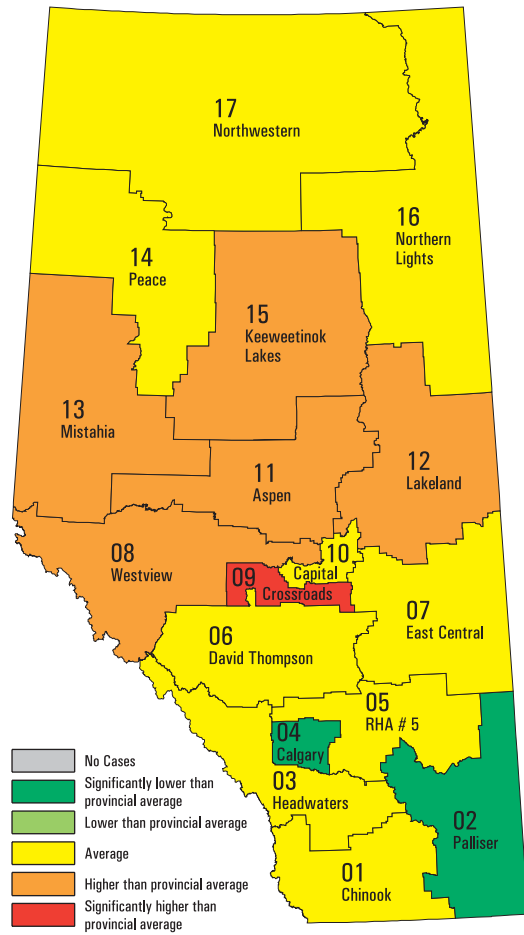
Provincial Business Plan Targets

The provincial target for 2002 is that the age-standardized rate of deaths due to suicide will be at or below 13 per 100,000 population.

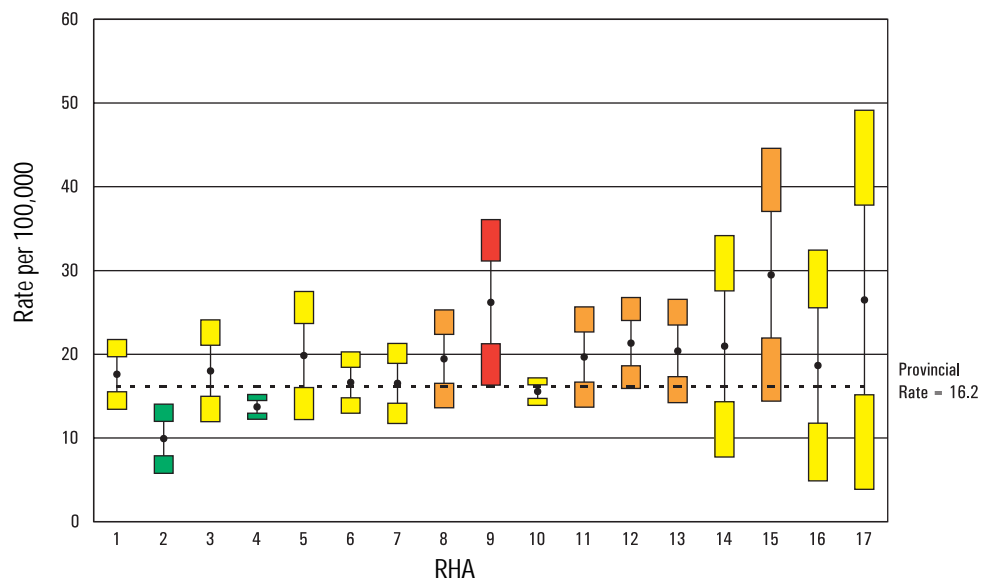
Provincial Strategies

- Alberta Health and Wellness provides funding for the **Suicide Prevention Training Program**, which offers training in suicide awareness, intervention, bereavement counseling and other related issues.
- The department also provides funding for the **Suicide Information and Education Centre**, which assists and supports 11 regional suicide prevention programs as well as other individuals, agencies and organizations requesting educational materials.
- The **Alberta Centre for Injury Control and Research (ACICR)** was described in section D.3A.

Figure D.3C.4
Regional Differences in Mortality Rates for Suicides Alberta, 1995 -1997



RHA Population Cartogram

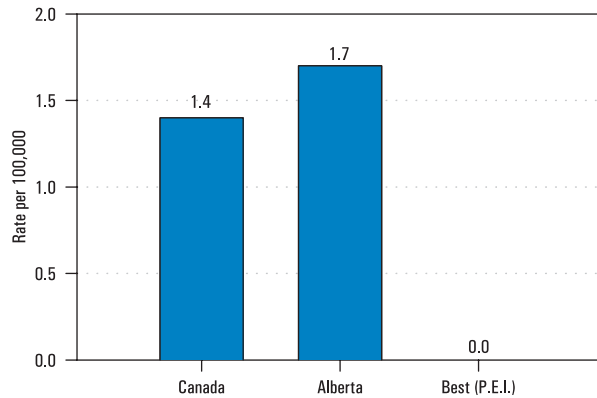


Source: Alberta Vital Statistics, Death File, May 1999 release

D.3D Homicide

The rate of deaths due to homicide was 1.7 per 100,000 in Alberta in 1997 — somewhat higher than the national average for that year (1.4 per 100,000). Prince Edward Island did not record any deaths due to homicide in 1997.

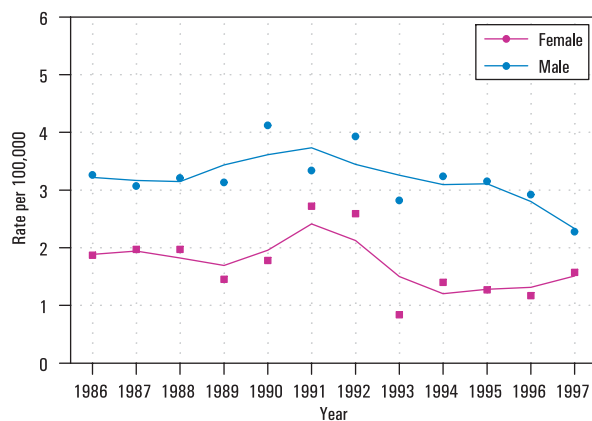
Figure D.3D.1
Mortality Rates for Homicide, 1997 (Alberta, Canada, Best Province) (Deaths per 100,000 population, age standardized)



Source: Statistics Canada, Health Indicators Database, 1999

In Alberta, male and female mortality rates for deaths due to homicide decreased slightly overall between 1986 and 1997. A total of 55 deaths (including three non-residents) were attributed to homicide in Alberta in 1997.

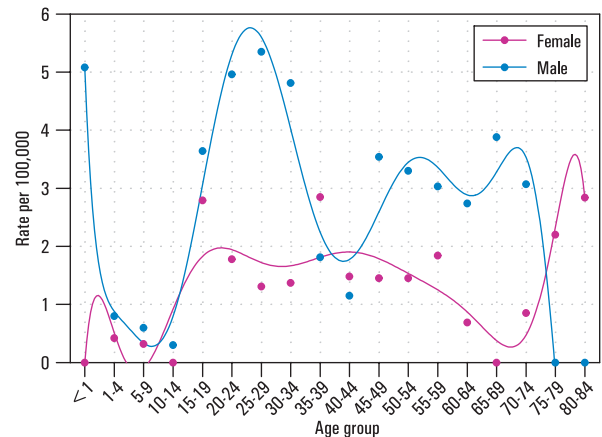
Figure D.3D.2
Mortality Rates for Homicide in Alberta, 1986 - 1997 (Deaths per 100,000 population, age standardized)



Source: Alberta Vital Statistics, Death File, May 1999 release

Although Alberta's homicide rate is higher than most provinces in Canada, it is lower than the lowest rates found in any part of the United States. Homicide deaths occur most frequently in young adult and middle age groups, and victims are twice as likely to be male than female. In most cases, victims know their killers.

Figure D.3D.3
Age - Specific Mortality Rates for Homicide in Alberta, 1995 - 1997



Source: Alberta Vital Statistics, Death File, May 1999 release

Provincial Business Plan Targets

The provincial target for 2002 is that the age-standardized rate of deaths due to all injury (including homicide and suicide) will be at or below 45 per 100,000 population.

Provincial Strategies

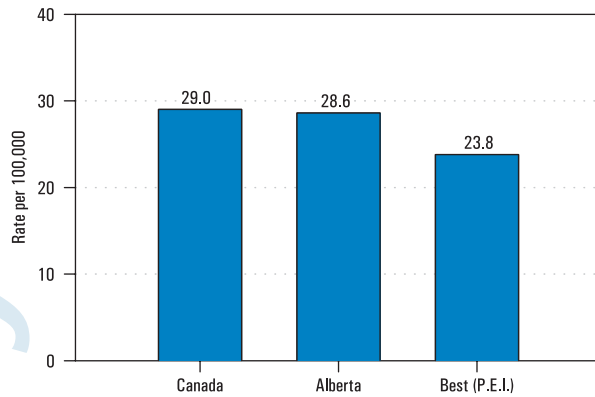
- The Alberta Centre for Injury Control and Research (ACICR) was described in section D.3A.

Provincial rates are so low that regional comparisons are unstable and have not been shown in a map.

D.4A Chronic Obstructive Pulmonary Disease

Chronic obstructive pulmonary disease includes emphysema and chronic bronchitis. Asthma deaths have been excluded. In Alberta, the 1997 mortality rate from COPD was 28.6 per 100,000. This is slightly lower than the national average (29 per 100,000), and higher than the best province, P.E.I. (23.8 per 100,000).

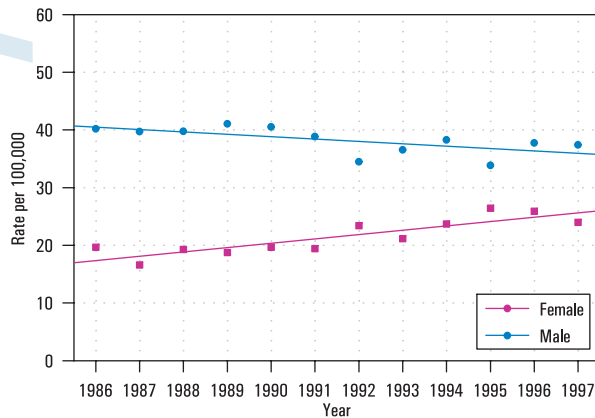
Figure D.4A.1
Mortality Rates for COPD, 1997 (Alberta, Canada, Best Province)
(Deaths per 100,000 population, age standardized)



Source: Statistics Canada, Health Indicators Database, 1999

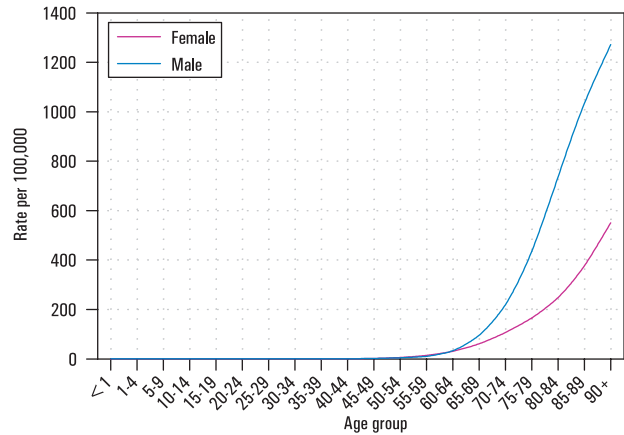
Males are at higher risk of dying from COPD than females, although this is changing. The 10-year trend shows the mortality rate decreasing for males and increasing for females. Changing patterns of smoking may account for some of this change.

Figure D.4A.2
Mortality Rates for COPD in Alberta, 1986 - 1997 (Deaths per 100,000 population, age standardized)



Source: Alberta Vital Statistics, Death File, May 1999 release

Figure D.4A.3
Age - Specific Mortality Rates for COPD in Alberta, 1995 - 1997

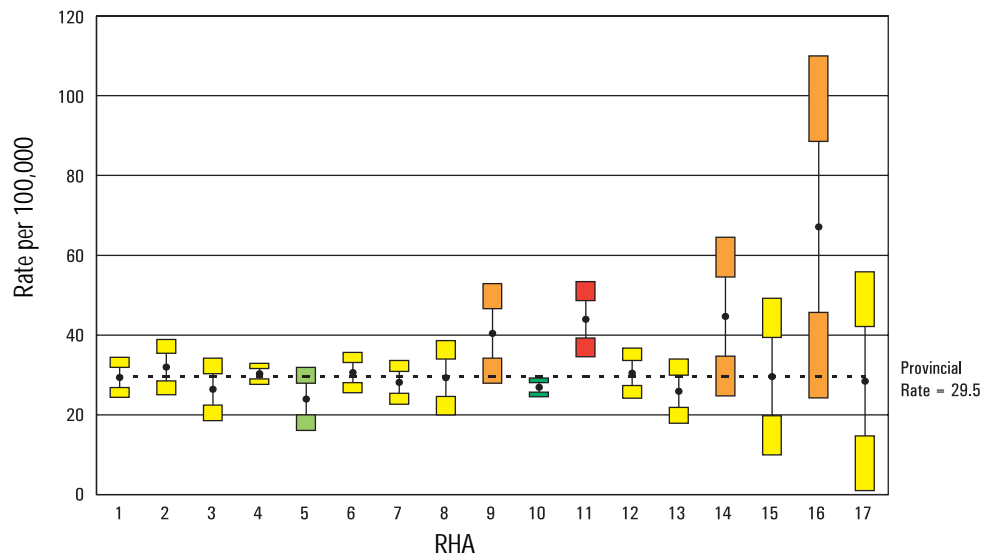
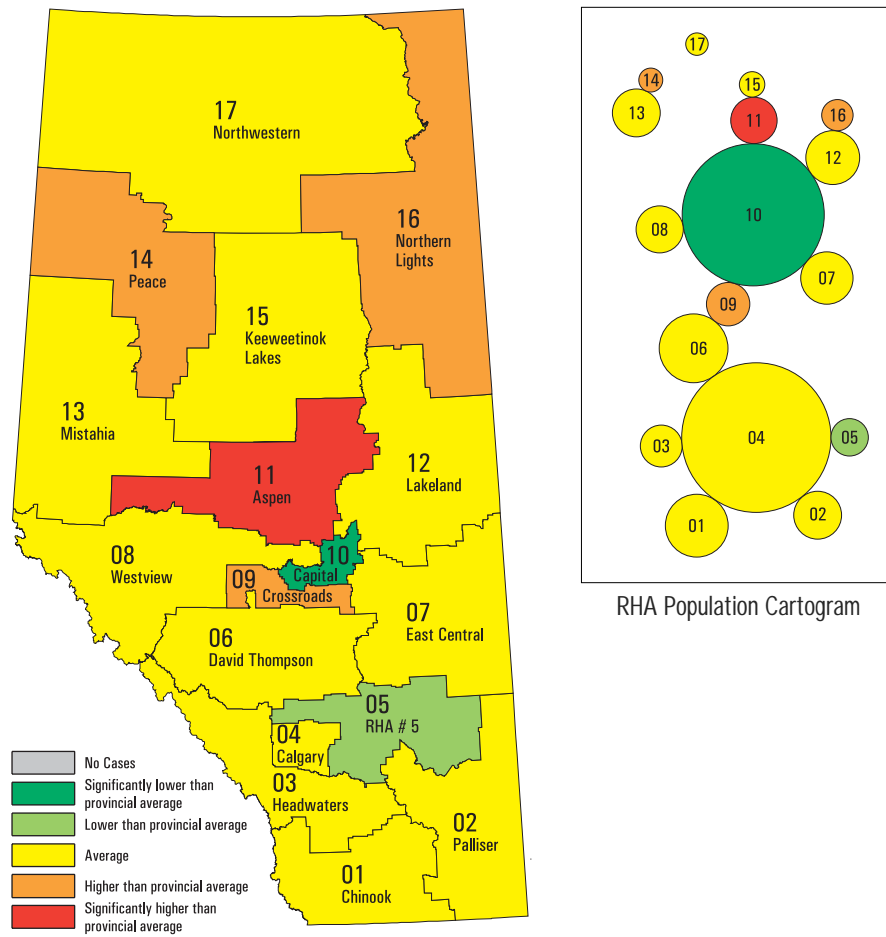


Source: Alberta Vital Statistics, Death File, May 1999 release

Provincial Strategies

- The **Alberta Tobacco Reduction Plan** was described in section C.7.

Figure D.4A.4
Regional Differences in COPD Mortality Rates, Alberta, 1995 - 1997

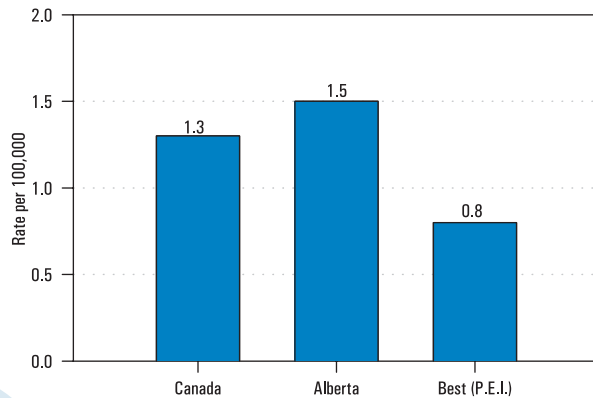


Source: Alberta Vital Statistics, Death File, May 1999 release

D.4B Asthma

Concerns have been raised frequently about rates of asthma in Alberta. This respiratory disease often first appears in childhood and can have a significant impact on physical activities.

Figure D.4B.1
Mortality Rates for Asthma, 1997 (Alberta, Canada, Best Province) (Deaths per 100,000 population, age standardized)

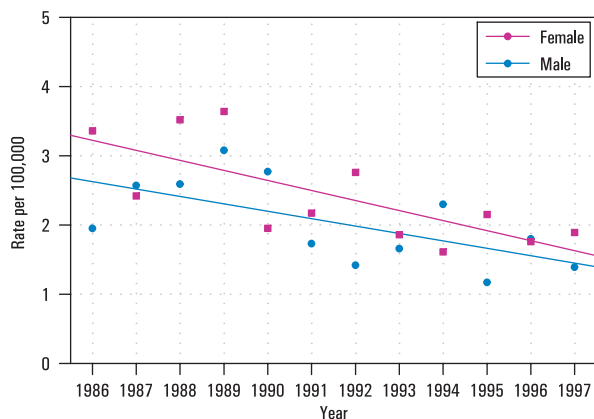


Source: Statistics Canada, Health Indicators Database, 1999

Rates of mortality, though, are generally quite low. In Alberta in 1997, the mortality rate from asthma was 1.5 per 100,000. This rate is higher than the Canadian average (1.3 per 100,000) and that of the best province, Prince Edward Island (0.8 per 100,000).

The difference between mortality rates for males and females is slight, with mortality decreasing for both sexes. Females have a slightly higher risk of dying from asthma than males. Improved medications are making it easier to live successfully with this disease.

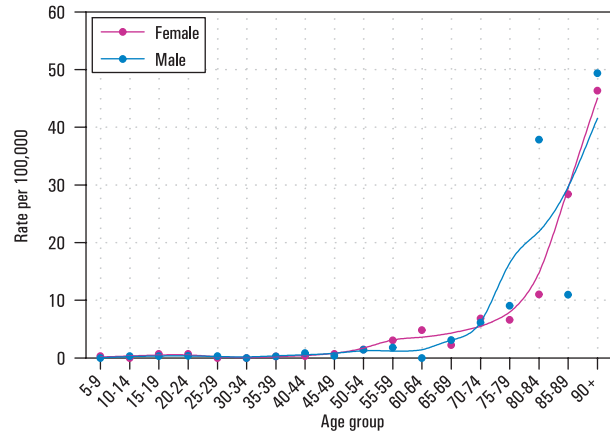
Figure D.4B.2
Mortality Rates for Asthma in Alberta, 1986 - 1997 (Deaths per 100,000 population, age standardized)



Source: Alberta Vital Statistics, Death File, May 1999 release

Mortality rates for males and females are comparable throughout most of the life span and increase dramatically for both groups after the age of 70.

Figure D.4B.3
Age - Specific Mortality Rates for Asthma in Alberta, 1995 -1997



Source: Alberta Vital Statistics, Death File, May 1999 release

Provincial Strategies

- The **Alberta Tobacco Reduction Plan** was described in section C.7.
- Alberta Health and Wellness is a member of a provincial committee of the **Clean Air Strategic Alliance (CASA)**, which is establishing air quality guidelines.
- Alberta Health and Wellness is a member of the **Alberta Strategy to Help Manage Asthma Study (ASTHMA)** led by the Division of Pulmonary Medicine, Faculty of Medicine and Dentistry, University of Alberta. ASTHMA will develop strategies to improve the management of asthma, thereby reducing complications.
- Alberta Health and Wellness participated in the development of clinical practice guidelines (CPGs) through the **Alberta Clinical Practice Guidelines Program**.

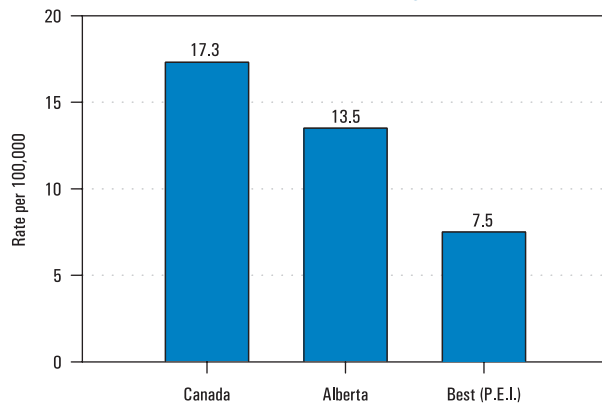
Provincial rates are so low that regional comparisons are unstable and have not been shown in a map.

D.5 Diabetes

Diabetes mellitus - involving fluctuations in blood sugar level resulting from insufficient insulin production or the inadequate use of insulin produced- has two major forms. Type 1 is insulin dependent and tends to occur in young people between the ages of 12 and 14. Type 2 is not insulin dependent and tends to affect older age groups and those who are obese.

Alberta's 1997 diabetes mortality rate was 13.5 per 100,000, lower than the Canadian average (17.3) but higher than the best province, P.E.I. (7.5). It should be noted that diabetes is likely to be under-reported as a cause of death, because its complications can include heart disease, kidney failure, and stroke.

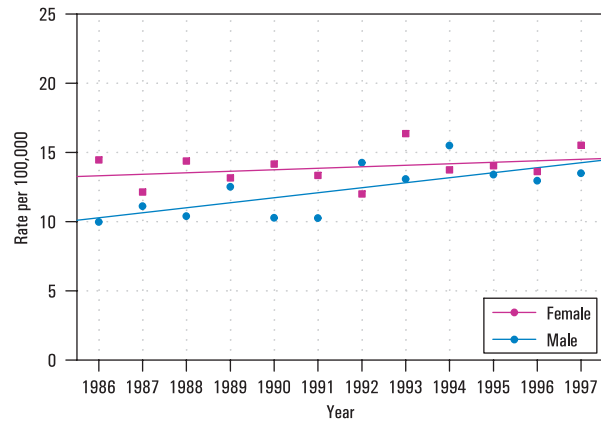
Figure D.5.1
Mortality Rates for Diabetes, 1997 (Alberta, Canada, Best Province) (Deaths per 100,000 population, age standardized)



Source: Statistics Canada, Health Indicators Database, 1999

Overall, diabetes mortality rates are relatively low. They are slightly higher for females than males over the last 10 years, but the rates for males have increased.

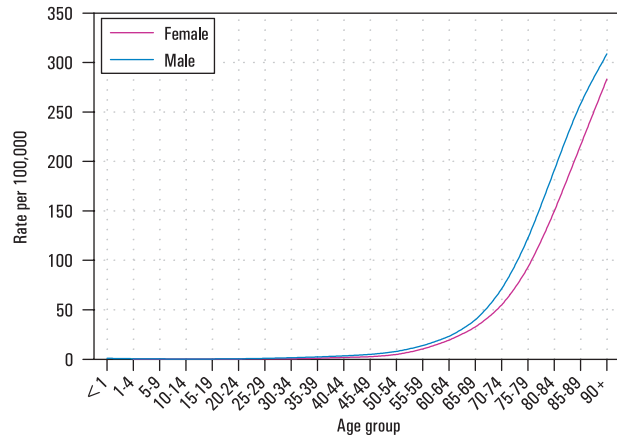
Figure D.5.2
Mortality Rates for Diabetes in Alberta, 1986 - 1997 (Deaths per 100,000 population, age standardized)



Source: Alberta Vital Statistics, Death File, May 1999 release

Over the course of the human lifespan, there is very little difference between the sexes in mortality rates except at older age groups, where males are more vulnerable than females.

Figure D.5.3
Age-Specific Mortality Rates for Diabetes in Alberta, 1995 - 1997

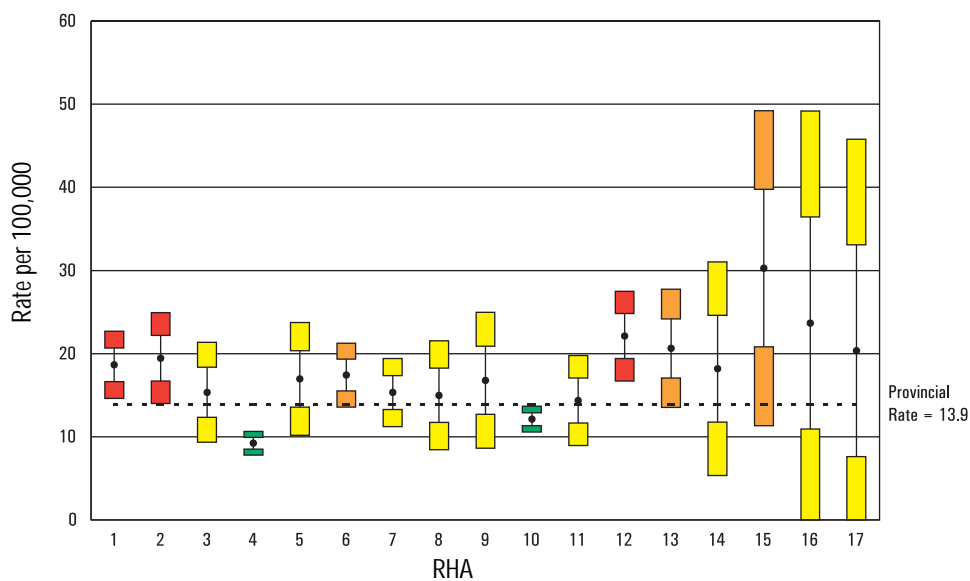
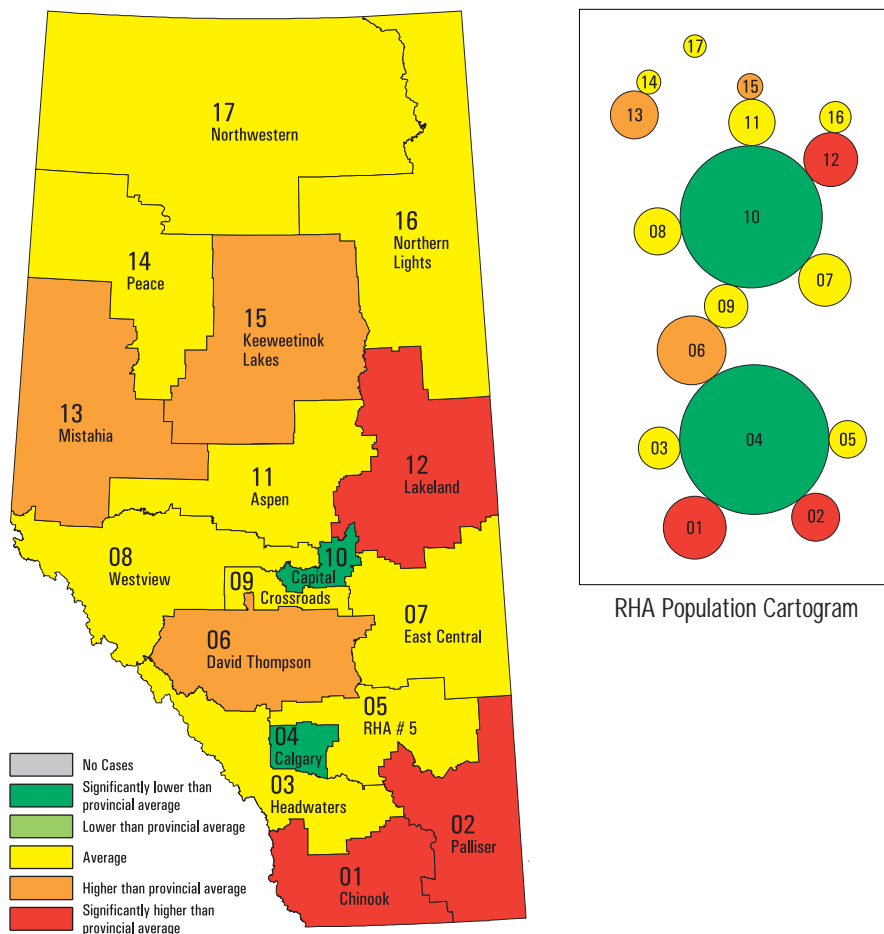


Source: Alberta Vital Statistics, Death File, May 1999 release

Provincial Strategies

- A provincial strategy for diabetes is in the preliminary stage of development.

Figure D.5.4
Regional Differences in Diabetes Mortality Rates, Alberta, 1995 - 1997



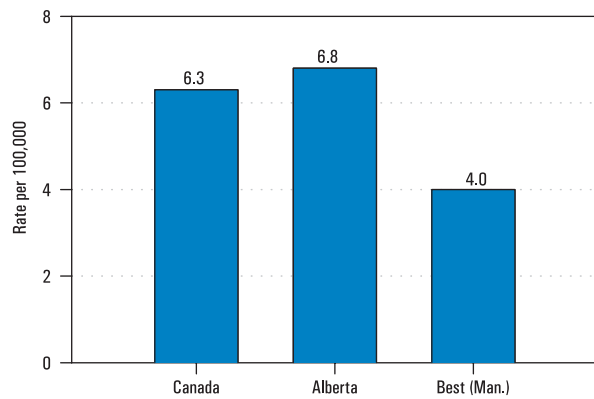
Source: Alberta Vital Statistics, Death File, May 1999 release

D.6 Chronic Liver Disease and Cirrhosis

The liver manufactures enzymes necessary for body functions and for detoxifying poisons, including alcohol, that enter the blood stream. The term cirrhosis applies when normal liver tissue is destroyed and replaced by scar tissue. This impedes the circulation of the blood through the liver and reduces its detoxifying powers. The most common cause of cirrhosis is chronic alcoholism; however, it may also be caused by hepatitis and other diseases.

The 1997 Alberta mortality rate from chronic liver disease and cirrhosis was 6.8 per 100,000 population. This was somewhat higher than the national average (6.3 per 100,000). The best province was Manitoba (four per 100,000).

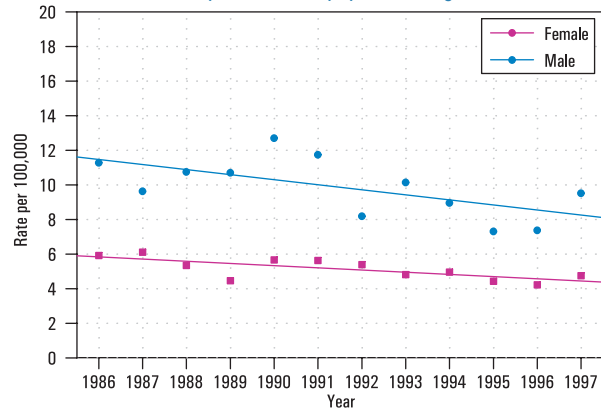
Figure D.6.1
Mortality Rates for Chronic Liver Disease and Cirrhosis, 1997 (Alberta, Canada, Best Province) (Deaths per 100,000 population, age standardized)



Source: Statistics Canada, Health Indicators Database, 1999

The actual number of deaths in Alberta from this cause is low (181, including three non-residents in 1997).

Figure D.6.2
Mortality Rates for Chronic Liver Disease and Cirrhosis in Alberta, 1986 - 1997 (Deaths per 100,000 population, age standardized)

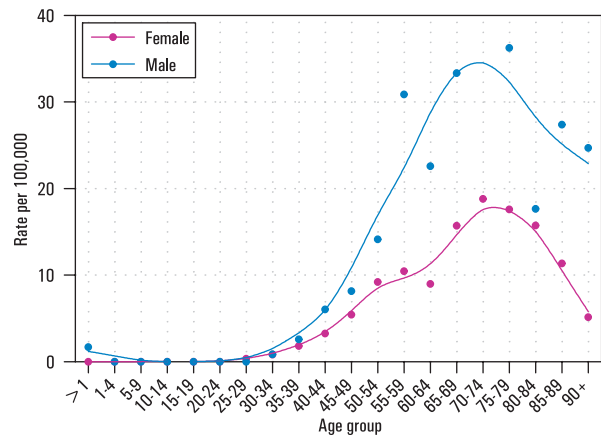


Source: Alberta Vital Statistics, Death File, May 1999 release

Rates of mortality for both males and females are decreasing slightly, but the likelihood of dying from cirrhosis and liver disease remains higher for males than for females.

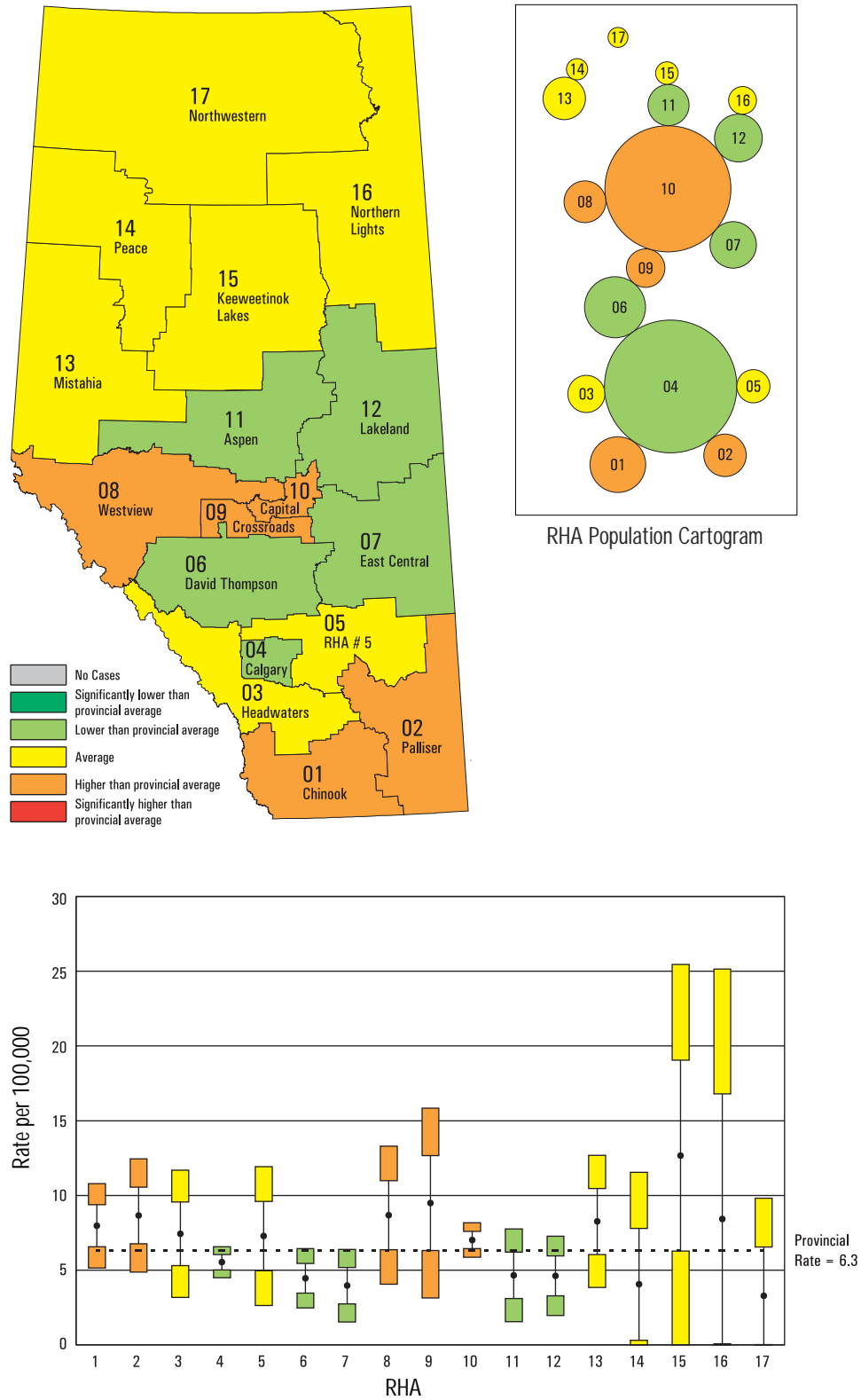
Cirrhosis and chronic liver disease attack a younger population than respiratory and circulatory diseases. Obstructive liver disease causes mortality in infants; other liver diseases begin to take their toll on people in their late 20s. Mortality from this cause peaks in the mid 70s for both males and females.

Figure D.6.3
Age-Specific Mortality Rates for Chronic Liver Disease and Cirrhosis in Alberta, 1995 - 1997



Source: Alberta Vital Statistics, Death File, May 1999 release

Figure D.6.4
Regional Differences in Chronic Liver Disease and Cirrhosis Mortality Rates, Alberta, 1995 - 1997



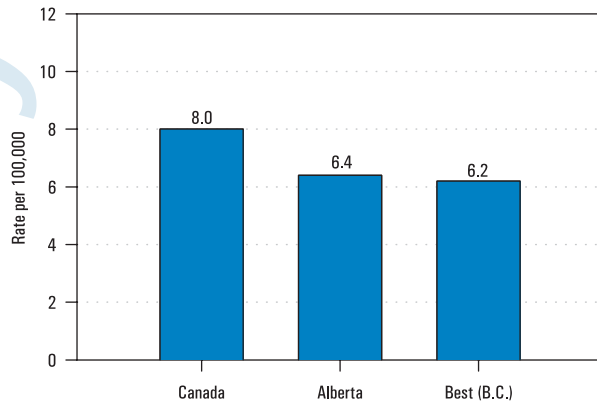
Source: Alberta Vital Statistics, Death File, May 1999 release

D.7 Kidney Disease

The most common forms of kidney disease are nephritis and nephrosis, which involve inflammation of the kidney. While kidney failure may be the end result of an infectious process, other causes include exposure to toxic substances, congenital anomalies, high blood pressure and diabetes.

In 1997, Alberta's mortality rate for nephritis and nephrosis was 6.4 per 100,000. This is less than the national average (eight per 100,000), but higher than the best province, British Columbia (6.2 per 100,000).

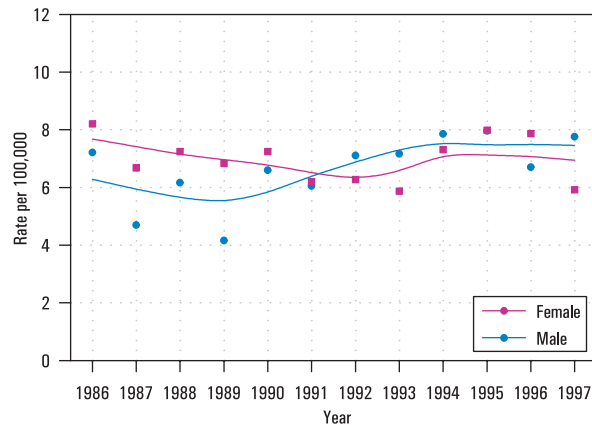
Figure D.7.1 Mortality Rates for Kidney Disease, 1997 (Alberta, Canada, Best Province) (Deaths per 100,000 population, age standardized)



Source: Statistics Canada, Health Indicators Database, 1999

Rates of mortality from this disease have remained fairly constant for both males and females, though mortality for males appears to be increasing in the last few years.

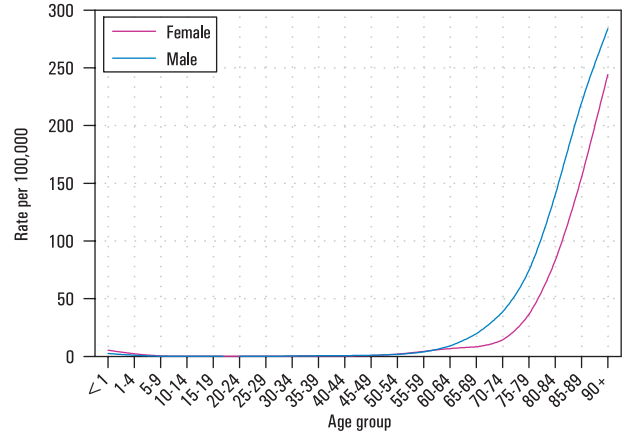
Figure D.7.2 Mortality Rates for Kidney Disease in Alberta, 1986 - 1997 (Deaths per 100,000 population, age standardized)



Source: Alberta Vital Statistics, Death File, May 1999 release

Rates are relatively constant for males and females by age group, except for the older age groups. Males are more likely than females to succumb to kidney disease after age 65.

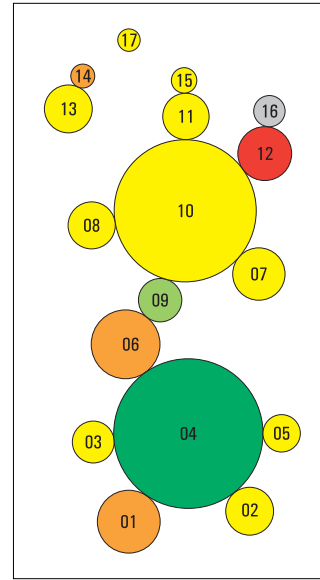
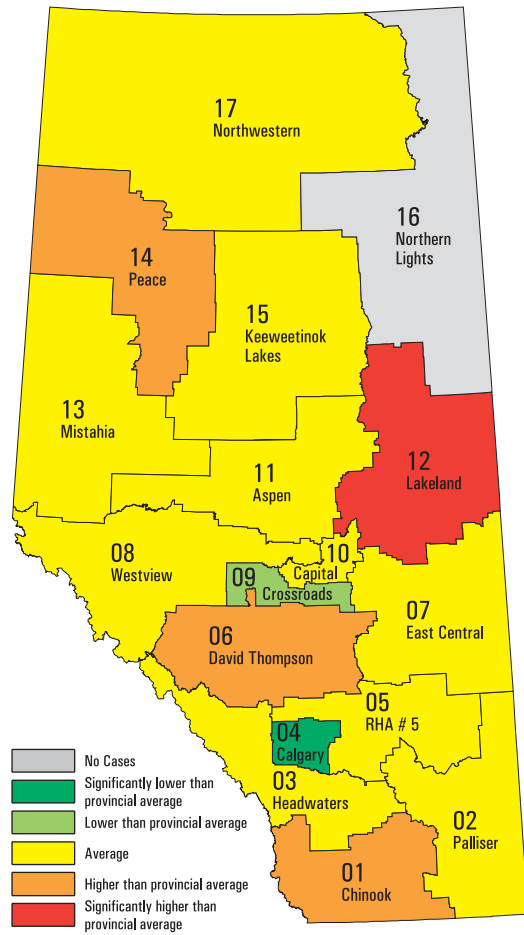
Figure D.7.3 Age-Specific Mortality Rates for Kidney Disease in Alberta, 1995 - 1997



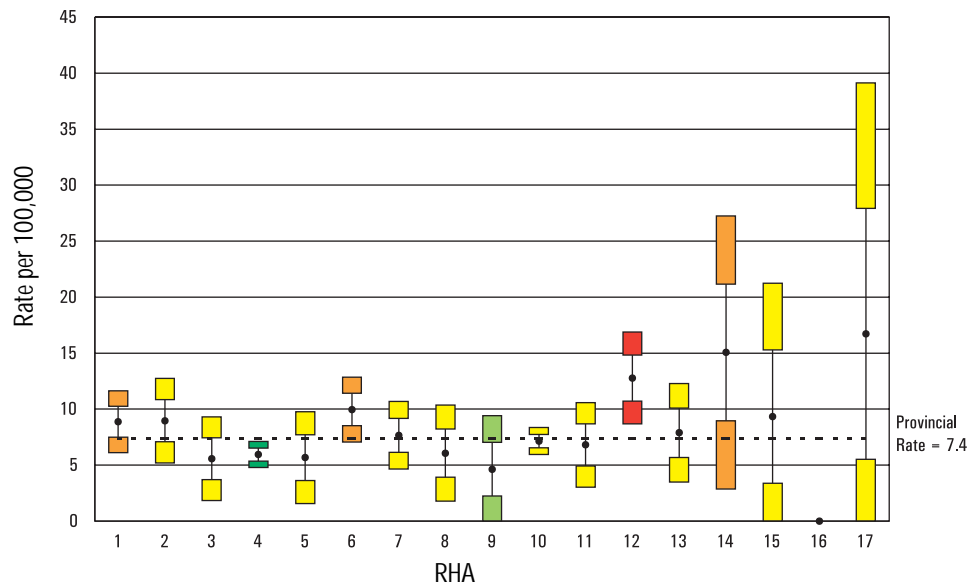
Source: Alberta Vital Statistics, Death File, May 1999 release

kidney disease

Figure D.7.4
Regional Difference in Kidney Disease Mortality Rates, Alberta, 1995 - 1997



RHA Population Cartogram



Source: Alberta Vital Statistics, Death File, May 1999 release