

D: Chronic Disease and Injury



Health Trends in Alberta:

A Working Document

SECTION D: CHRONIC DISEASE AND INJURY

Two main sources were utilized for the data in this section.

National data come from Statistics Canada's Canadian Vital Statistics database.

Data used to report age-and-sex specific provincial mortality rates from different causes were obtained from the Alberta Vital Statistics database.

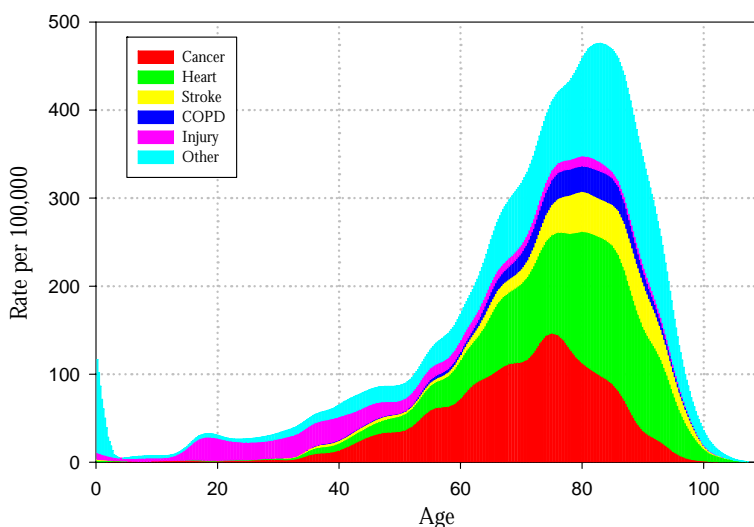
The specific database source is indicated for each graph.

Causes of Death

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 and ICD-10: *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 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 62 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; however deaths due to injury begin at a much earlier age.

Figure 62: Distribution of Deaths in Alberta, 2005



Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 63 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.

A selection of some of the leading causes of death in each province is compared for 2004. The table shows the cause of death, number of deaths, age-standardized mortality rate per 100,000 population, and Alberta's ranking in comparison to the other provinces. 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.

Figure 63: Number of Deaths by Cause and Alberta Ranking, 2004
(1 = lowest, 10 = highest rate of mortality among Canadian provinces)

Selected Causes of Death [ICD-10 code]	Number of Deaths	Rate per 100,000 population	Alberta Rank
Total, All Causes of Death [A00-Y89]	18,675	567.8	3
Kidney Disease [N00-N07, N17-N19, N25-N27]	253	7.6	2
Cancer (All Cancers) [C00-C97]	5256	164.6	2
Cancer of the Lung [C33-C34]	1277	41.1	2
Parkinson's Disease [G20-G21]	93	2.8	2
Falls [W00-W19]	120	3.6	3
Influenza and Pneumonia [J10-J18]	415	12.1	3
Tuberculosis [A16-A19]	6	0.2	3 (SK, PEI, NS had 0 mortality)
Alzheimer's Disease [G30]	341	9.7	3
Liver Disease and Cirrhosis [K70, K73-K74]	169	5.2	3
Cancer of the Colon [C18-C21]	546	17.1	4
HIV infection [B20-B24]	30	0.9	4 (tied with ON and PEI)
Major Cardiovascular Diseases [I00-I78]	6511	194.5	5
Cerebrovascular Disease [I60-I69]	1266	37.3	5
Chronic Lower Respiratory Diseases [J40-J47]	786	24.1	5
Complications of medical and surgical care [Y40-Y84, Y88]	20	0.6	5
Congenital Anomalies [Q00-Q99]	112	3.8	8
Homicide [X85-Y09, Y87.1]	79	2.5	8
Ischaemic Heart Disease [I20-I25]	3711	112	8
Motor Vehicle Collisions [V01-V99, Y85]	435	13.4	9
Suicide [X60-X84, Y87.0]	450	13.6	9

Source: Statistics Canada, Canadian Vital Statistics Database

Both the number of deaths and the ranking provide important information. For example, more Albertans died from major cardiovascular diseases than any other cause, followed by cancer (all cancers combined). The health system will need to continue to address the consequences of these diseases and their prevention.

When mortality from homicide, ischaemic heart disease, motor vehicle collisions, and suicide is examined, even though there are fewer total deaths in 2004 than from cancer, Alberta is not doing as well. Alberta had the second lowest rate of cancer deaths in Canada; however it had the second and third highest rate of mortality in the country from those four causes.

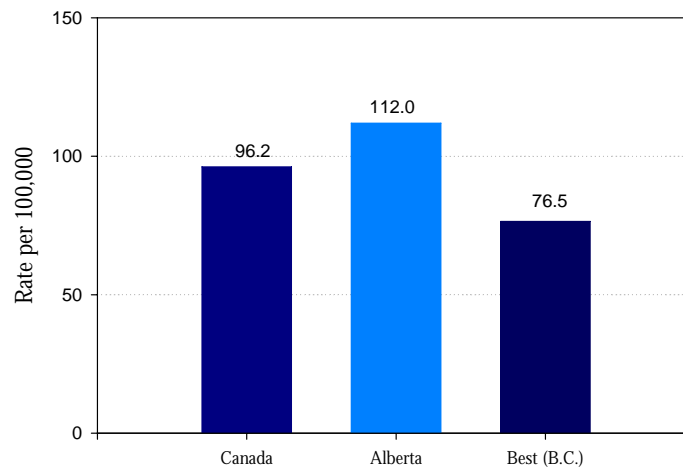
CARDIOVASCULAR DISEASE

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 2004), there were 3711 deaths due to ischaemic heart disease. The age-standardized mortality rate was 112.0 per 100,000 population. This is higher than the national rate of 96.2 per 100,000, and higher than the best province, British Columbia, (76.5 per 100,000 population).

Figure 64: Mortality from Ischaemic Heart Disease, 2004 (Alberta, Canada, Best Province)

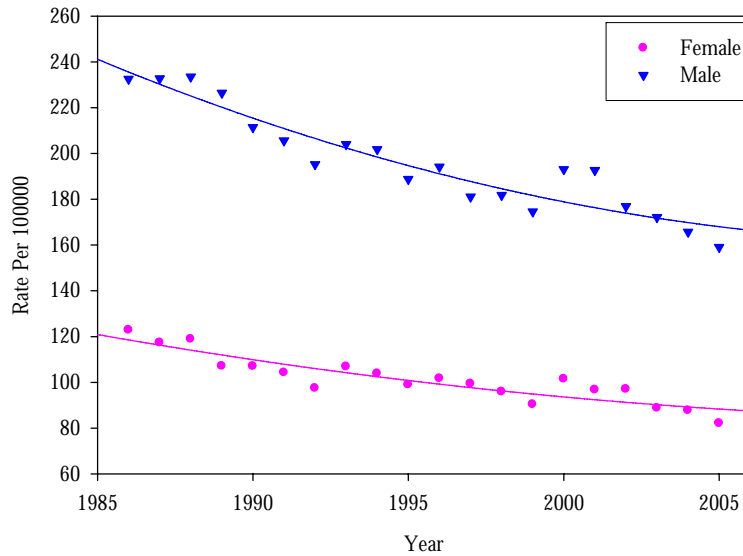


Source: Statistics Canada, Canadian Vital Statistics Database

For the past nearly two decades in Alberta, the mortality rate for ischaemic heart disease has decreased for both males and females. Mortality from ischaemic heart disease is higher in men than women.

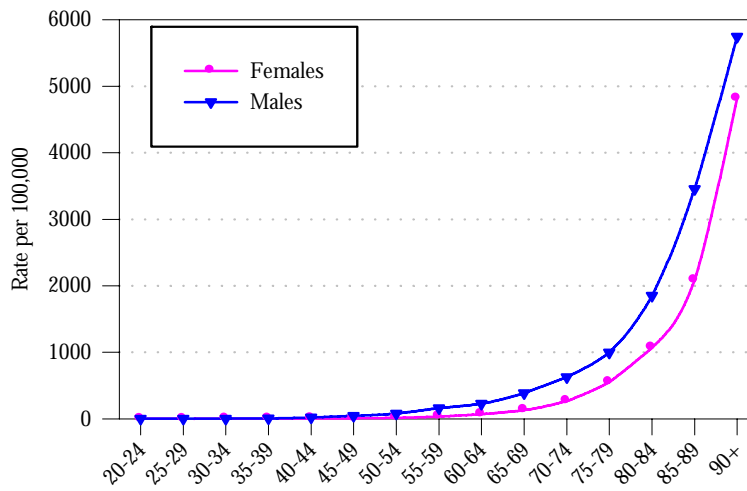
The vast majority of deaths due to ischaemic heart disease occur in Albertans 60 years and older. The decreasing trend is slightly more pronounced among males than females.

Figure 65: Mortality from Ischaemic Heart Disease in Alberta, 1986 - 2005



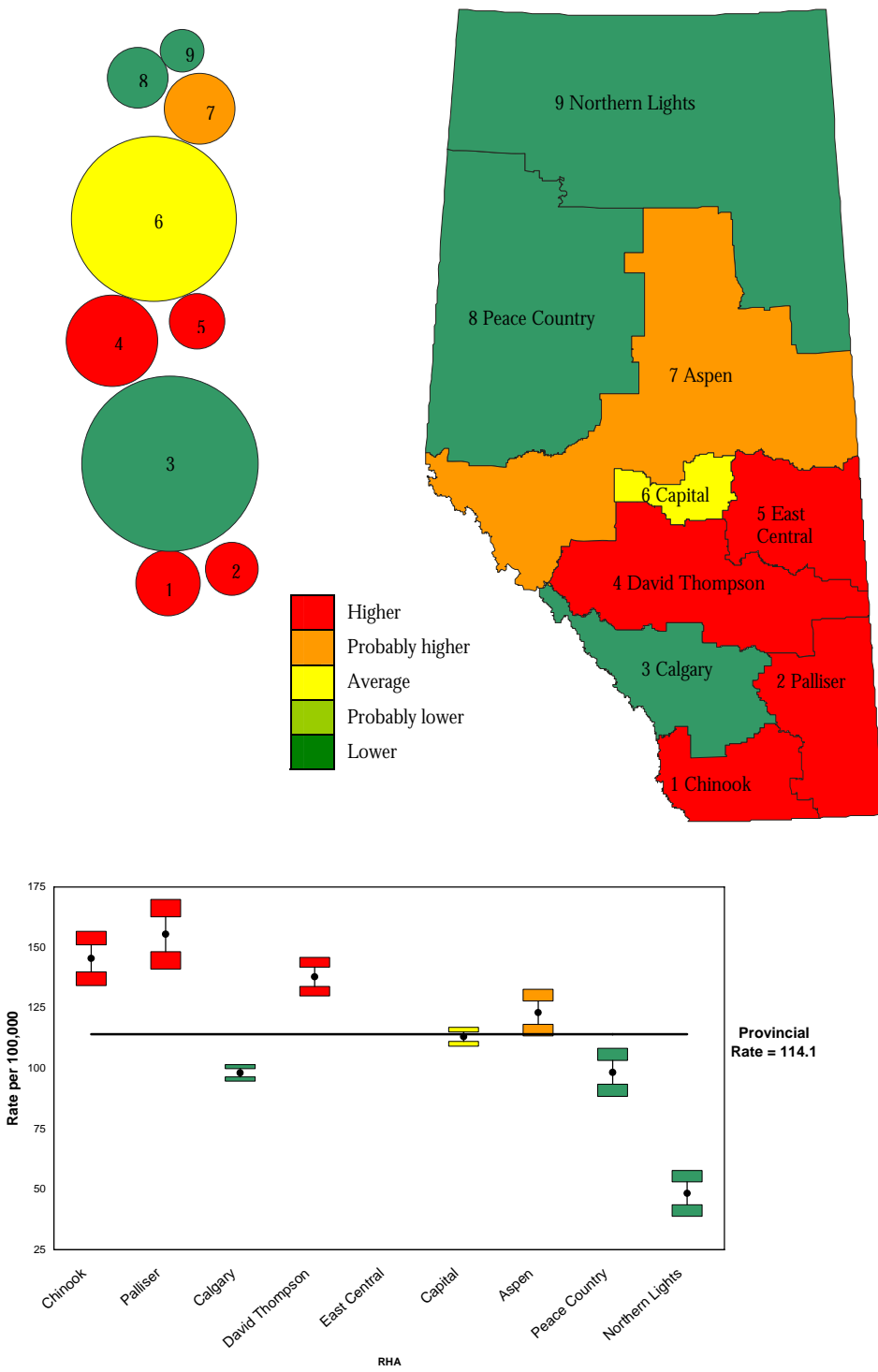
Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 66: Age-Specific Mortality from Ischaemic Heart Disease in Alberta, 2003–05



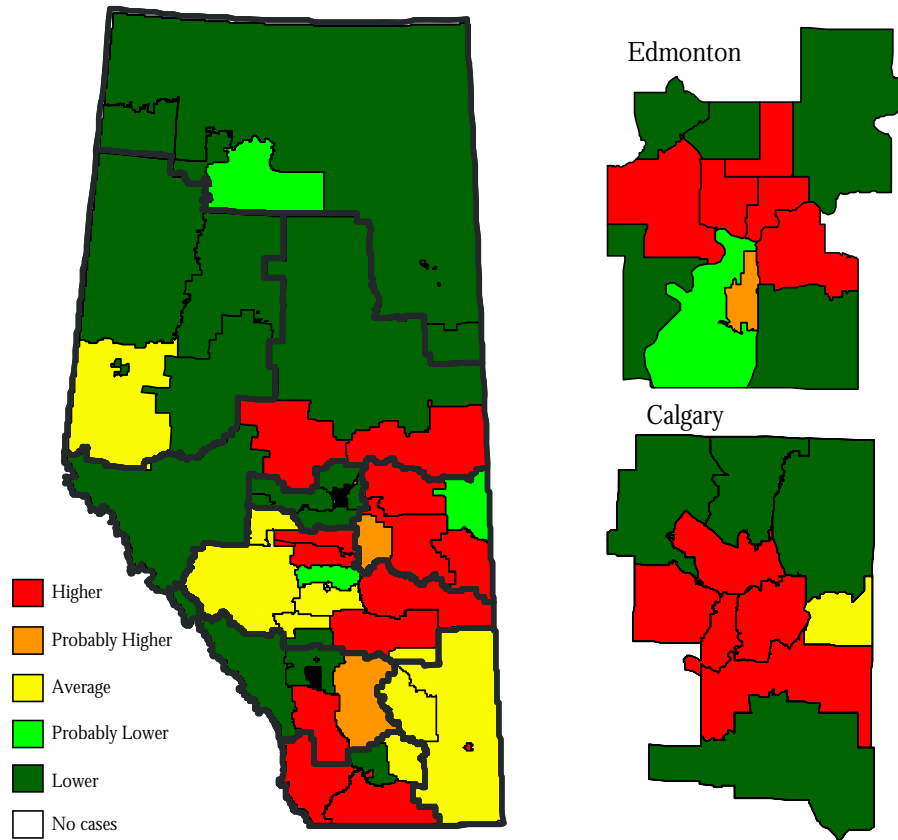
Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 67: Regional Differences in Ischaemic Heart Disease Mortality, 2003 – 05



Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 68: Sub-regional Differences in Ischaemic Heart Disease Mortality, 2003-05



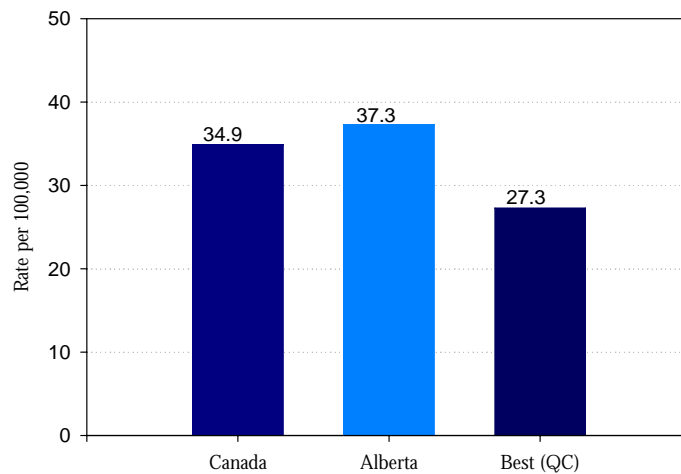
Source: Alberta Vital Statistics, Death File, October 2006 release

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, there were 1266 deaths due to stroke in 2004. The age-standardized mortality rate in 2004 was 37.3 per 100,000 population. This is somewhat higher than the national rate for that year, 34.9 per 100,000. Quebec, at 27.3 per 100,000, had the lowest rate in Canada.

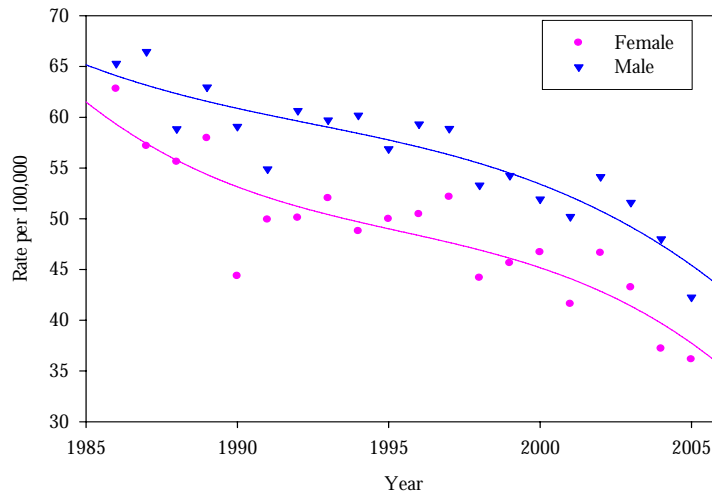
Figure 69: Mortality from Stroke, 2004 (Alberta, Canada, Best Province)



Source: Statistics Canada, Canadian Vital Statistics Database

A greater proportion of men die from stroke than women in Alberta. Over the past two decades, the mortality rate for stroke has gradually declined for both men and women.

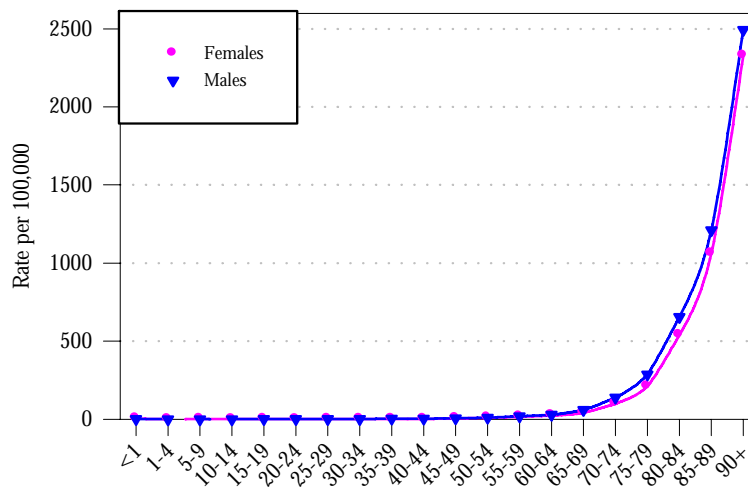
Figure 70: Mortality from Stroke in Alberta, 1986 - 2005



Source: Alberta Vital Statistics, Death File, October 2006 release

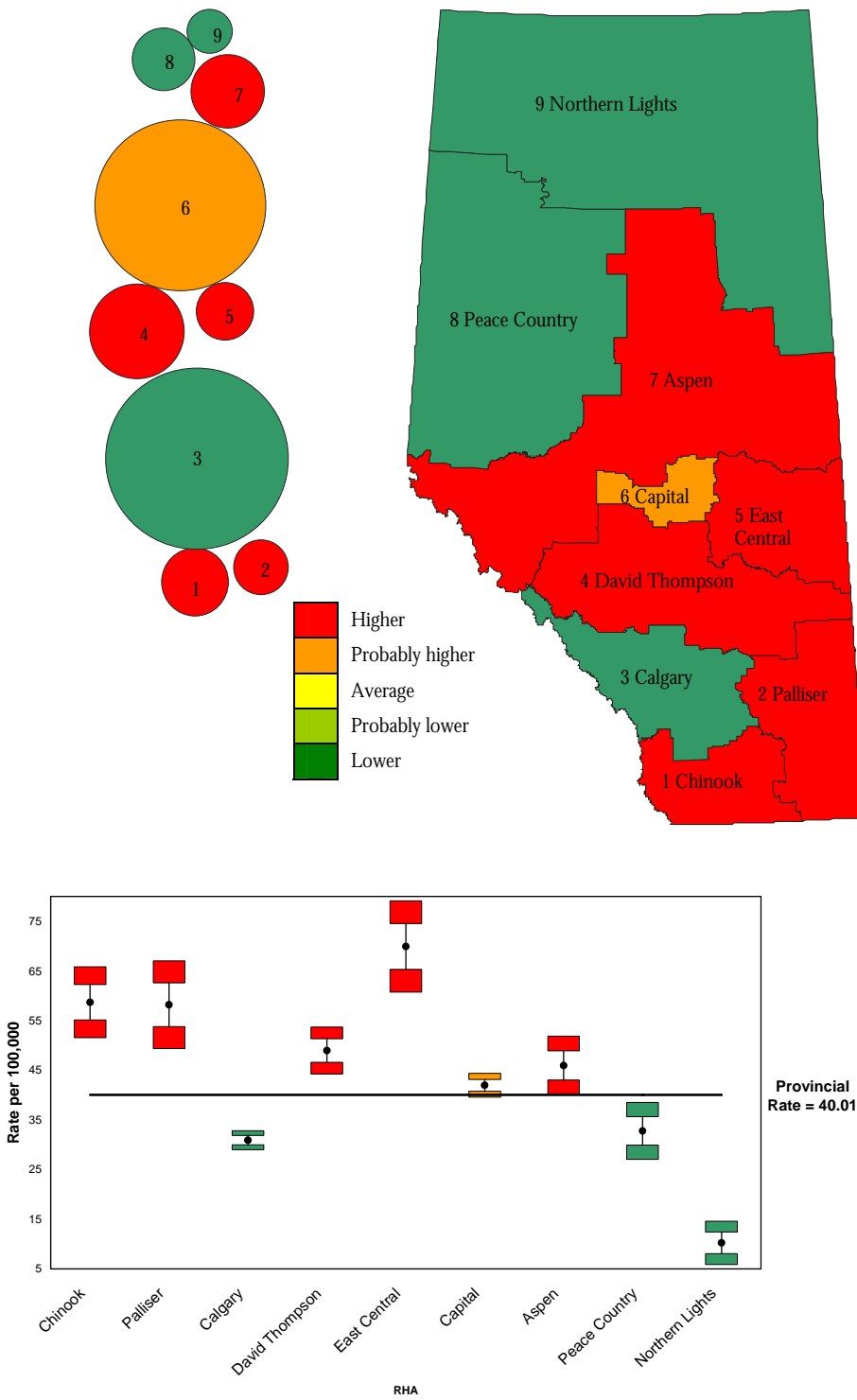
The pattern of mortality from stroke is similar for men and women. Mortality from stroke is low across the lifespan until after the seventh decade of life where it increases dramatically.

Figure 71: Age-Specific Mortality from Stroke in Alberta, 2003-05



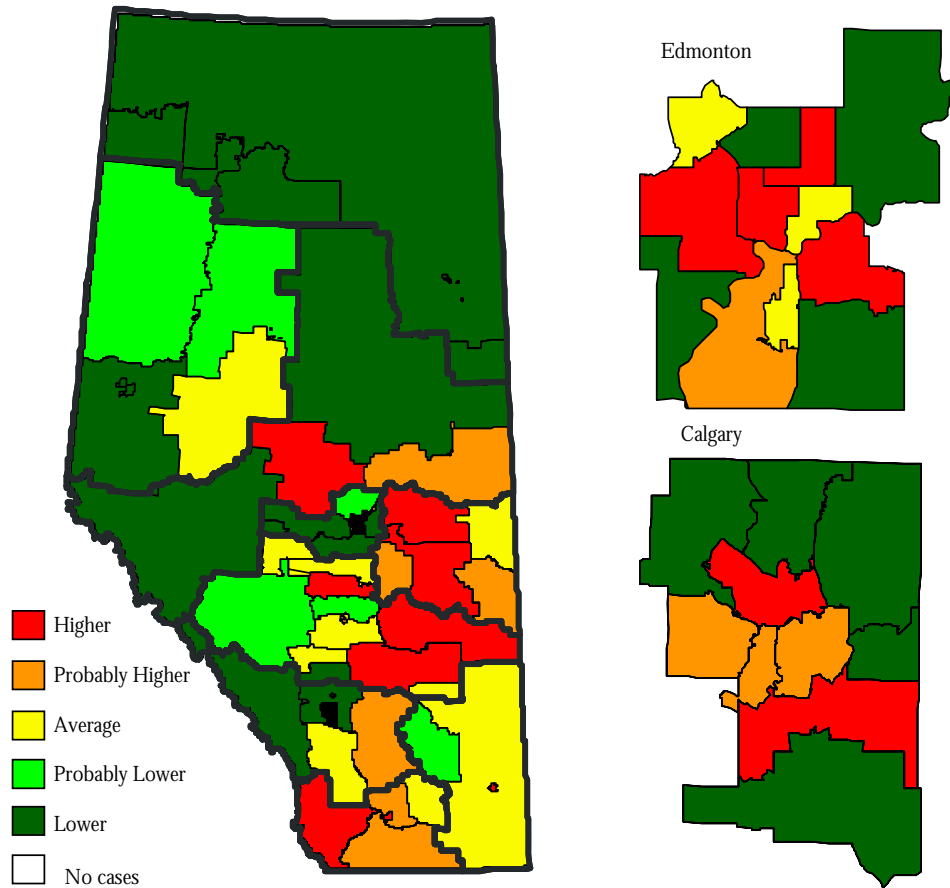
Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 72: Regional Differences in Stroke Mortality Rates, 2003 – 05



Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 73: Sub-regional Differences in Stroke Mortality Rates, 2003-05



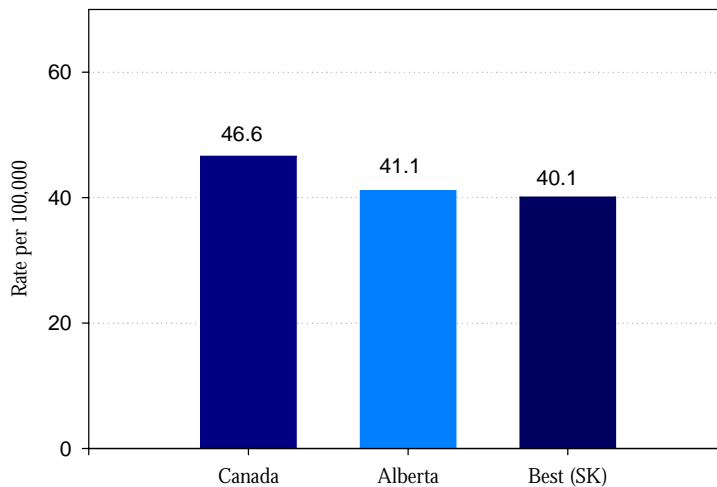
Source: Alberta Vital Statistics, Death File, October 2006 release

CANCER

Lung Cancer

Lung cancers are the leading cause of death among all cancers in Alberta. In 2004, there were 1277 deaths due to lung cancer in Alberta. Alberta's age-standardized mortality rate for lung cancer was the second lowest in Canada at 41.1 per 100,000 (Saskatchewan had the lowest rate at 40.1). The national rate was 46.6.

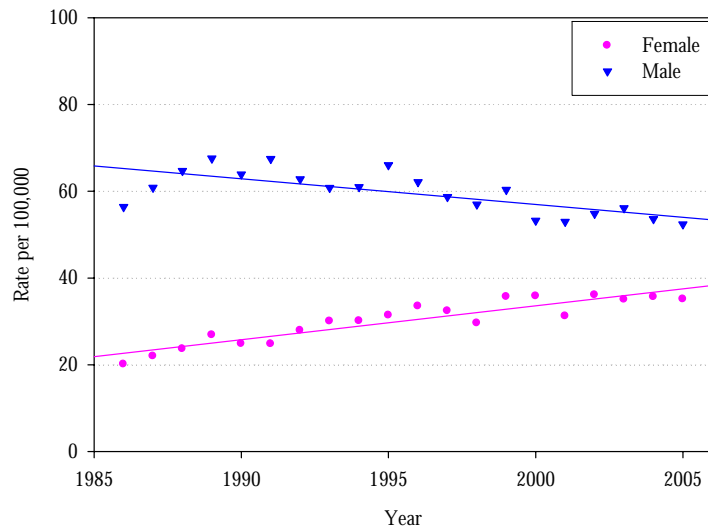
Figure 74: Mortality Rates for Lung Cancer, 2004 (Alberta, Canada, Best Province)



Source: Statistics Canada, Canadian Vital Statistics Database

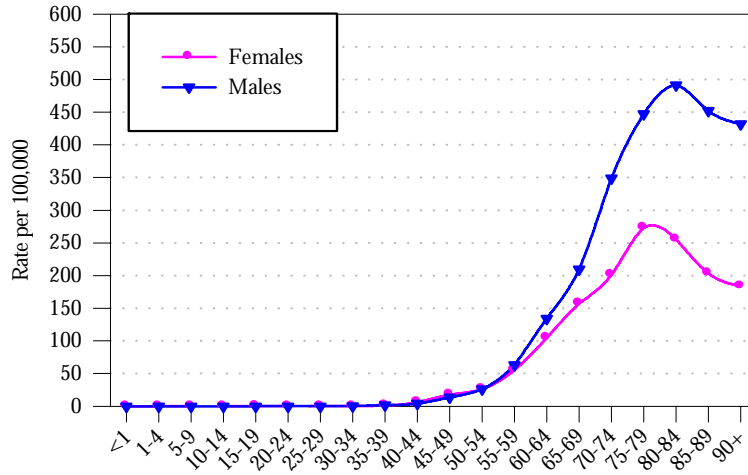
While there has been a marked difference between male and female mortality from lung cancer in the past, the gap has narrowed -- the rate for men has slightly decreased while it has increased for women. This trend may be related to changing smoking patterns in the population. The mortality rate from lung cancer in women now surpasses that of breast cancer. Most deaths from lung cancer occur in men and women over 55 years of age.

Figure 75: Mortality Rates for Lung Cancer in Alberta, 1986 - 2005



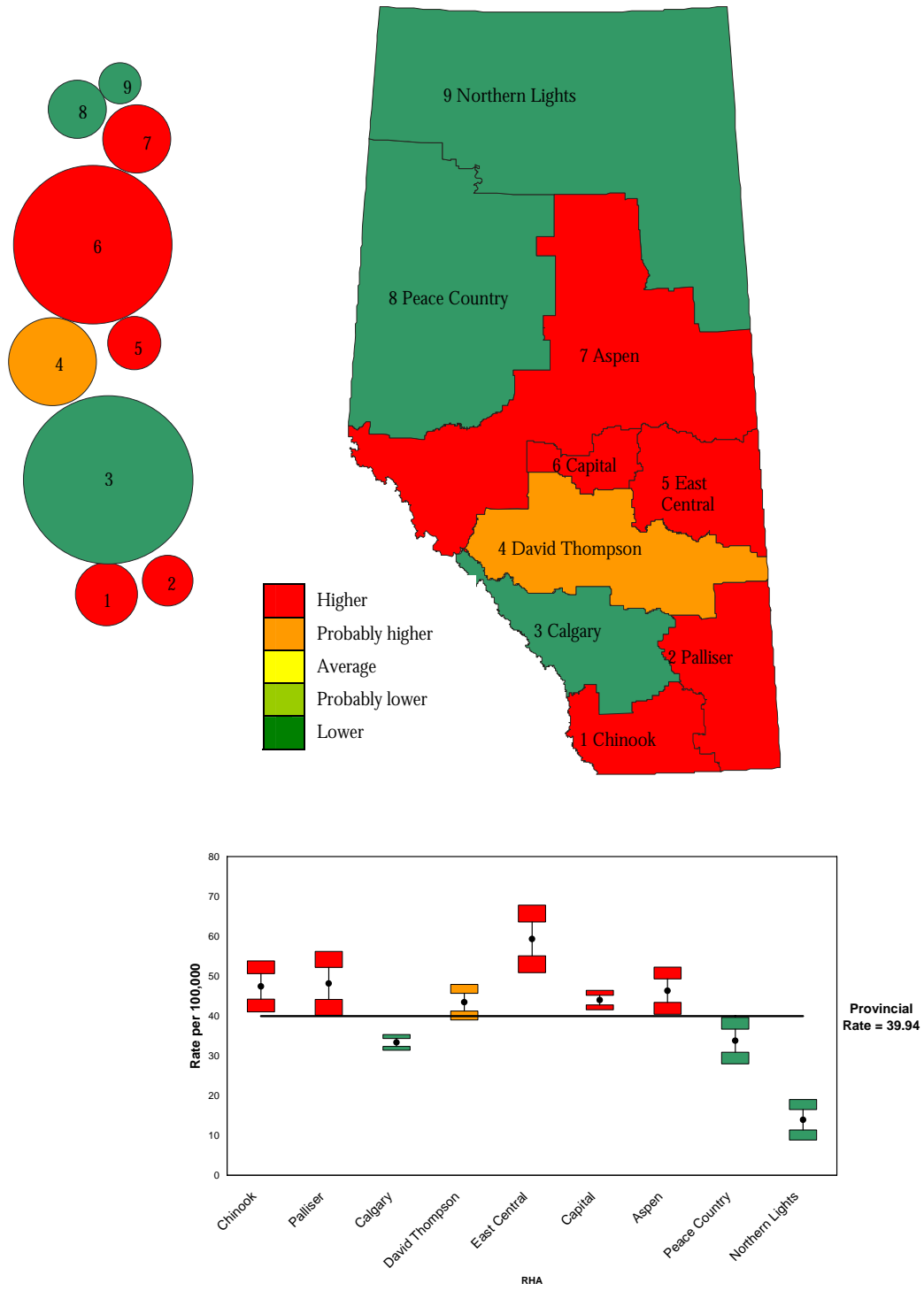
Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 76: Age-Specific Death Rates for Lung Cancer in Alberta, 2003-05



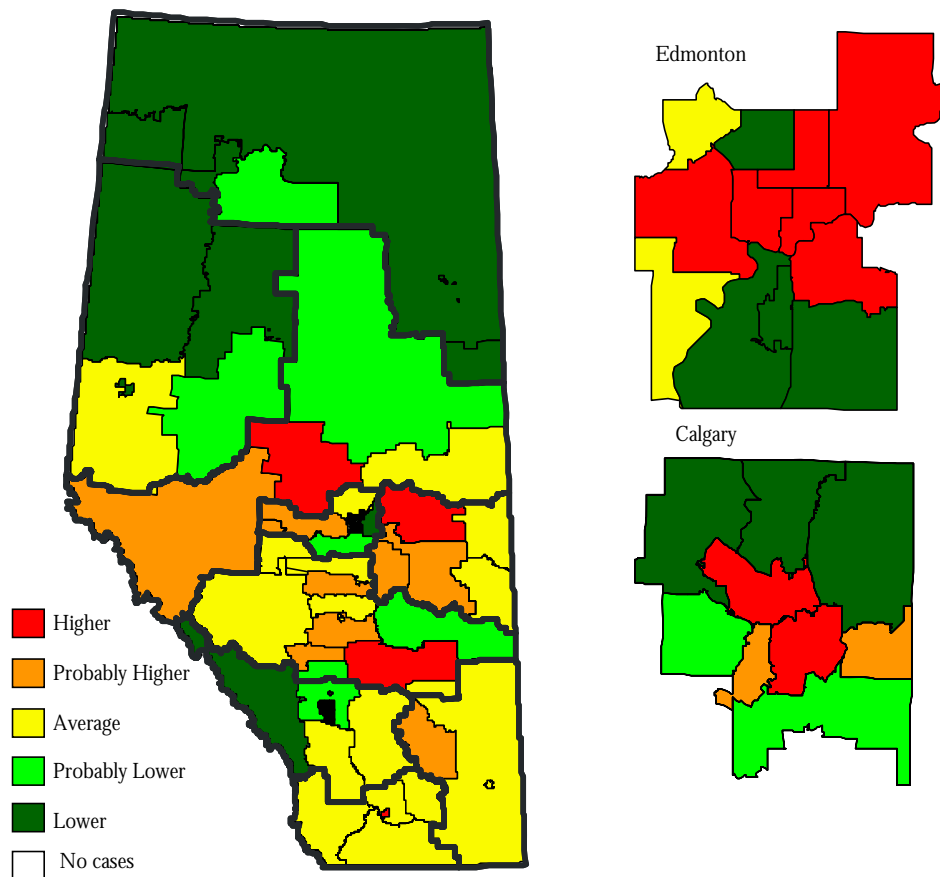
Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 77: Regional Differences in Lung Cancer Mortality Rates, 2003-05



Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 78: Sub-Regional Differences in Lung Cancer Mortality Rates, 2003–05

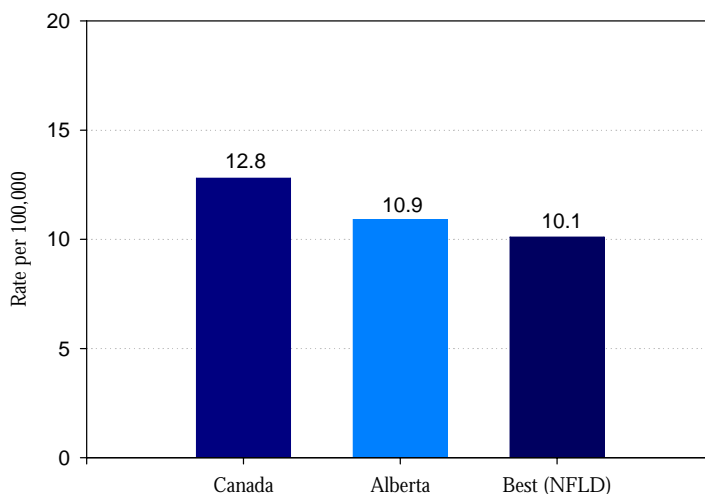


Source: Alberta Vital Statistics, Death File, October 2006 release

Breast Cancer

Breast cancer is no longer the leading cause of cancer deaths in women; however it is still a significant cause of mortality. In Alberta, there were 361 deaths due to breast cancer in 2004. The Alberta age-standardized mortality rate for breast cancer was 10.9 per 100,000; slightly lower than the national rate of 12.8. Newfoundland and Labrador, with a rate of 10.1 per 100,000, had the lowest rate of breast cancer mortality across the provinces in 2004.

Figure 79: Mortality Rates for Female Breast Cancer, 2004 (Alberta, Canada, Best Province)

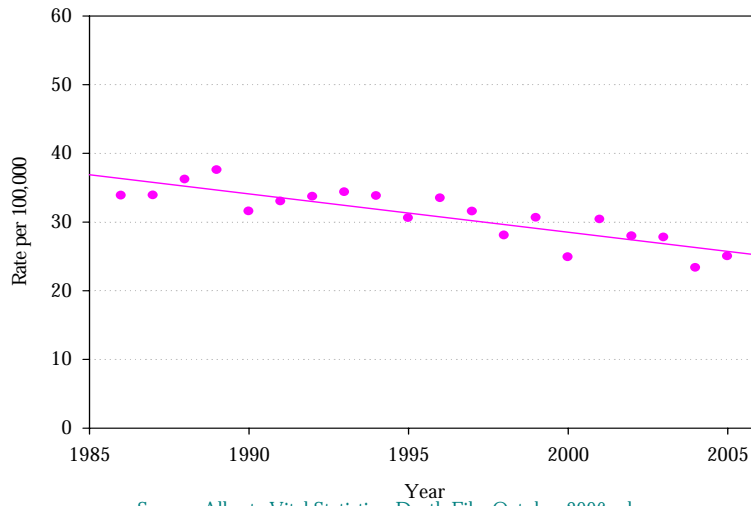


Source: Statistics Canada, Canadian Vital Statistics Database
Note: Statistics Canada standardizes the weight of both sexes together.

Over the past nearly two decades, the overall mortality rate for breast cancer for women in Alberta has followed a decreasing trend.

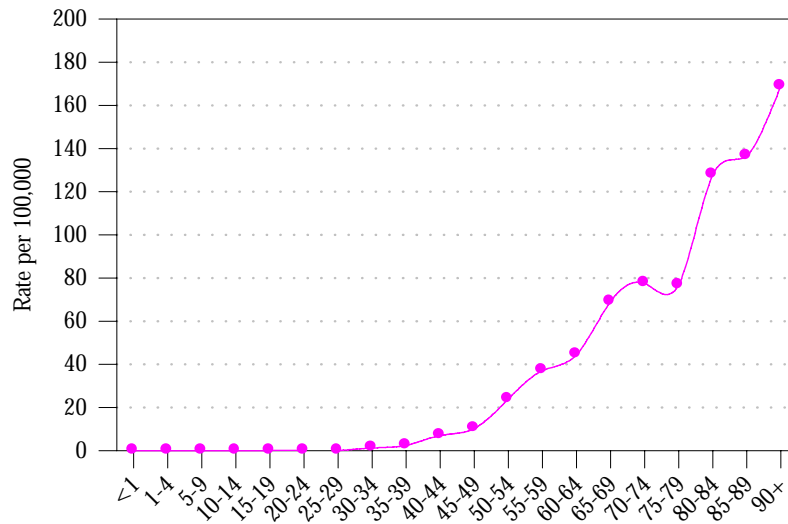
In regards to age specific mortality, rates begin increasing around the fourth decade of life, and increase quite dramatically with increasing age.

Figure 80: Mortality Rates for Breast Cancer in Alberta, 1986 - 2005



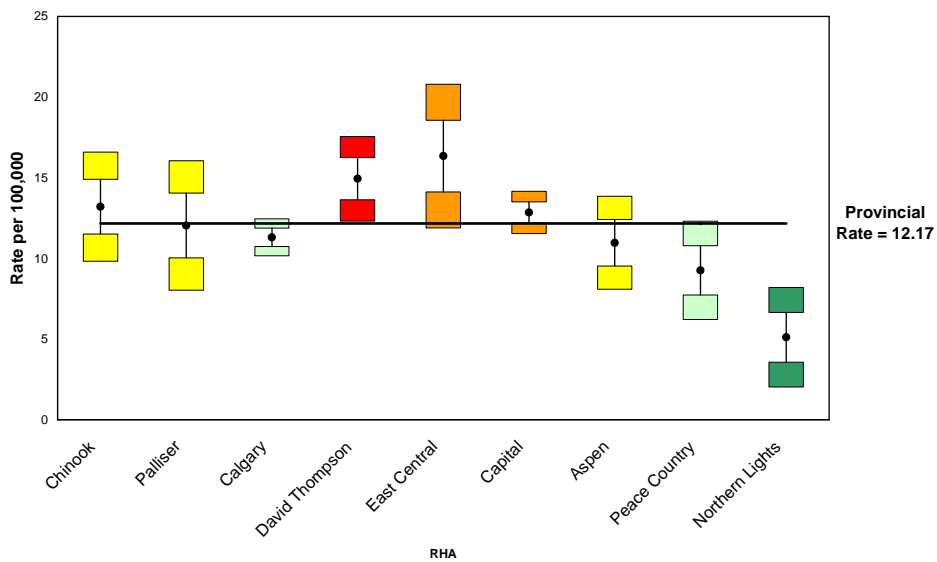
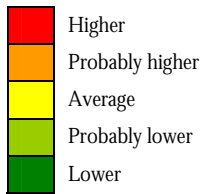
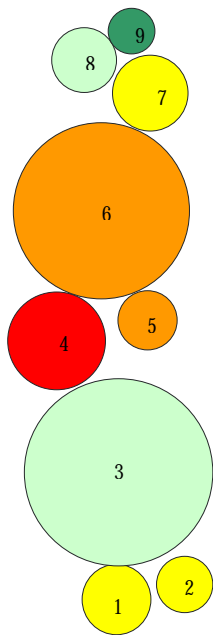
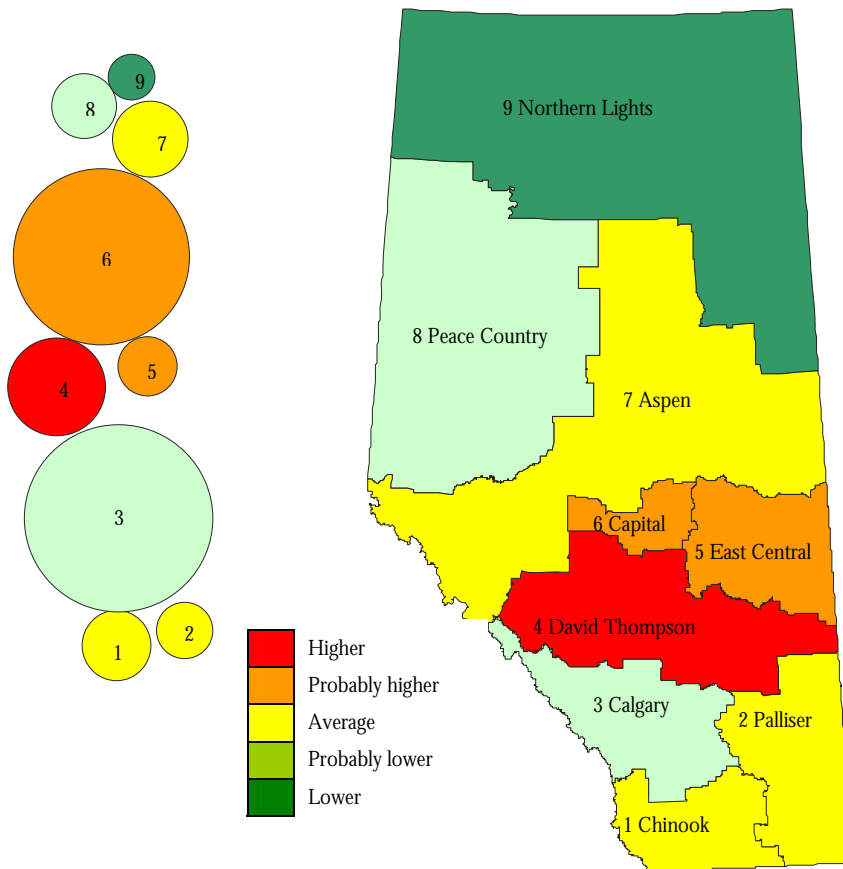
Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 81: Age Specific Death Rates for Breast Cancer in Alberta, 2003-05



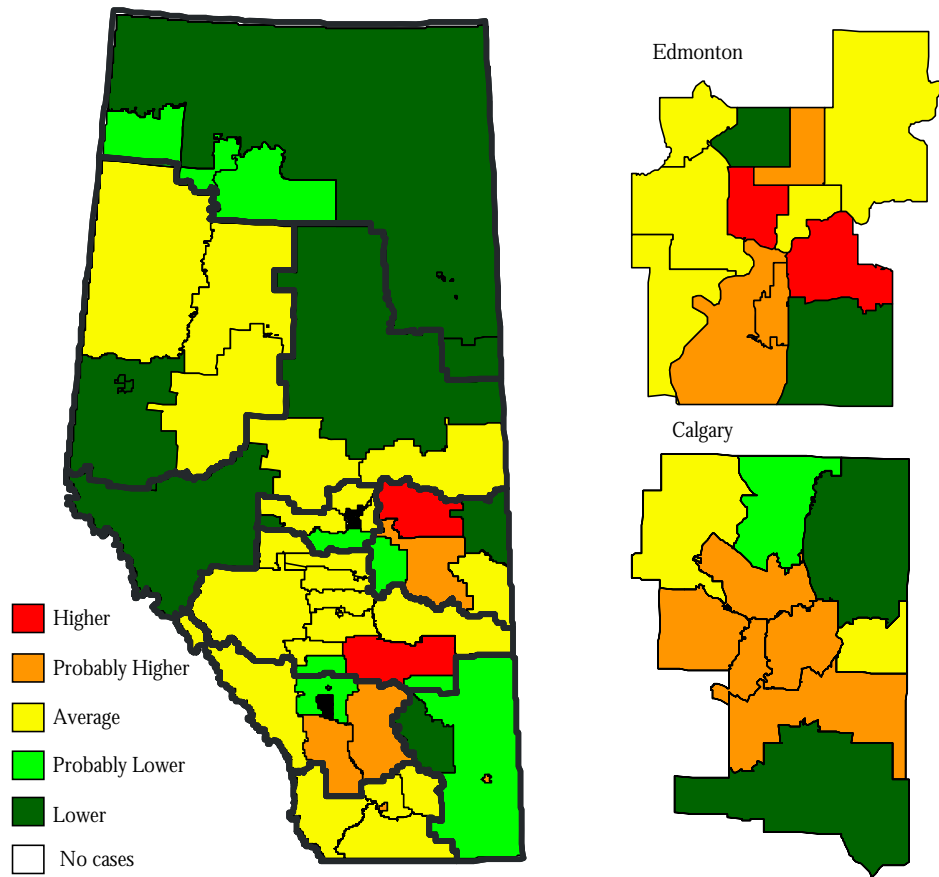
Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 82: Regional Differences in Breast Cancer Mortality Rates, 2003-05



Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 83: Sub-Regional Differences in Breast Cancer Mortality Rates, 2003–05

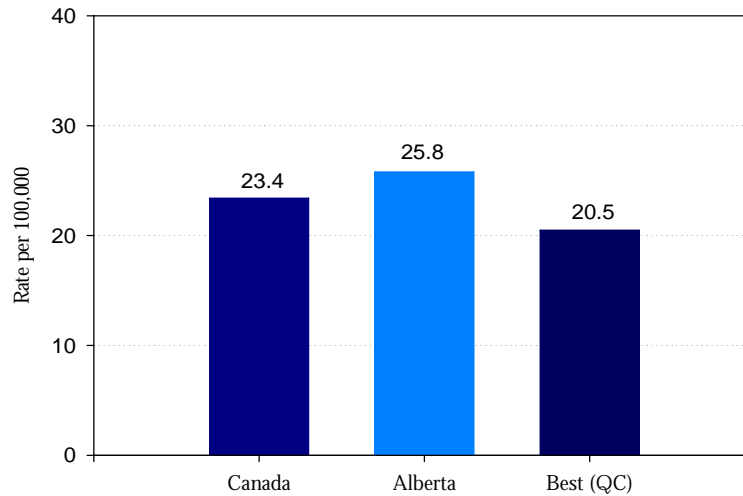


Source: Alberta Vital Statistics, Death File, October 2006 release

Prostate Cancer

Prostate cancer is the most frequently occurring tumor in males. It is most commonly found in older men. In Alberta in 2004, there were 334 deaths due to prostate cancer. The age-standardized mortality rate in Alberta was 25.8 per 100,000. Alberta's rate is higher than the Canadian average of 23.4 and the rate of the best province, Quebec (20.5).

Figure 84: Mortality Rates for Prostate Cancer, 2004 (Alberta, Canada, Best Province)

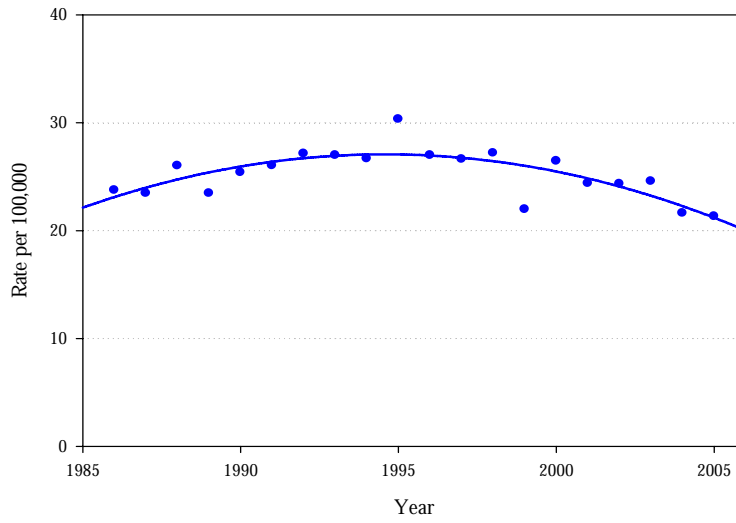


Source: Statistics Canada, Canadian Vital Statistics Database

Over the past 20 years, the mortality rate for prostate cancer for men in Alberta has remained fairly stable. Prostate cancer is highly treatable if caught early making screening important.

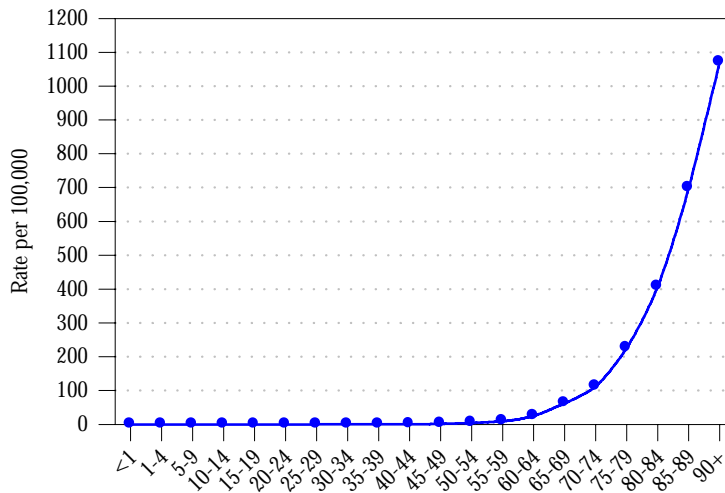
Prostate cancer generally causes mortality in later life with mortality rates dramatically increasing around the seventh decade of life.

Figure 85: Mortality Rates for Prostate Cancer in Alberta, 1986 - 2005



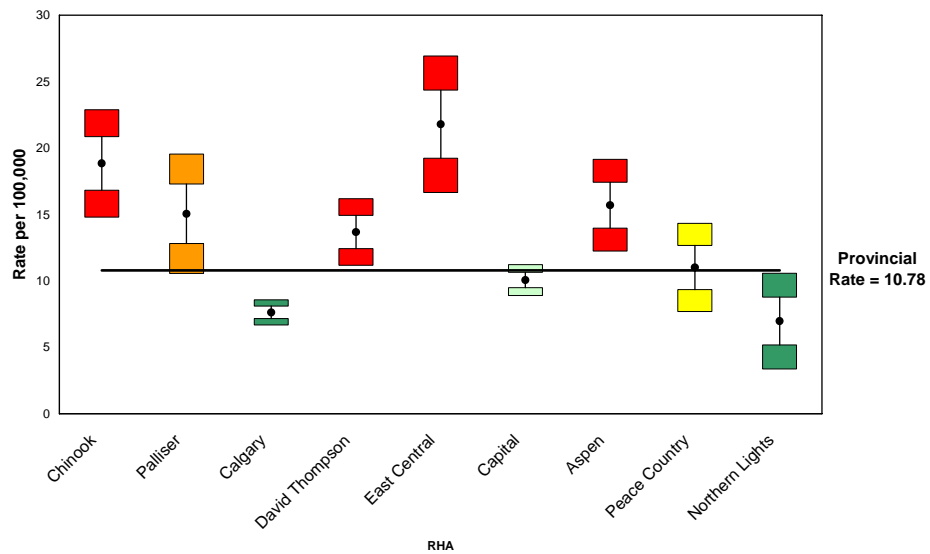
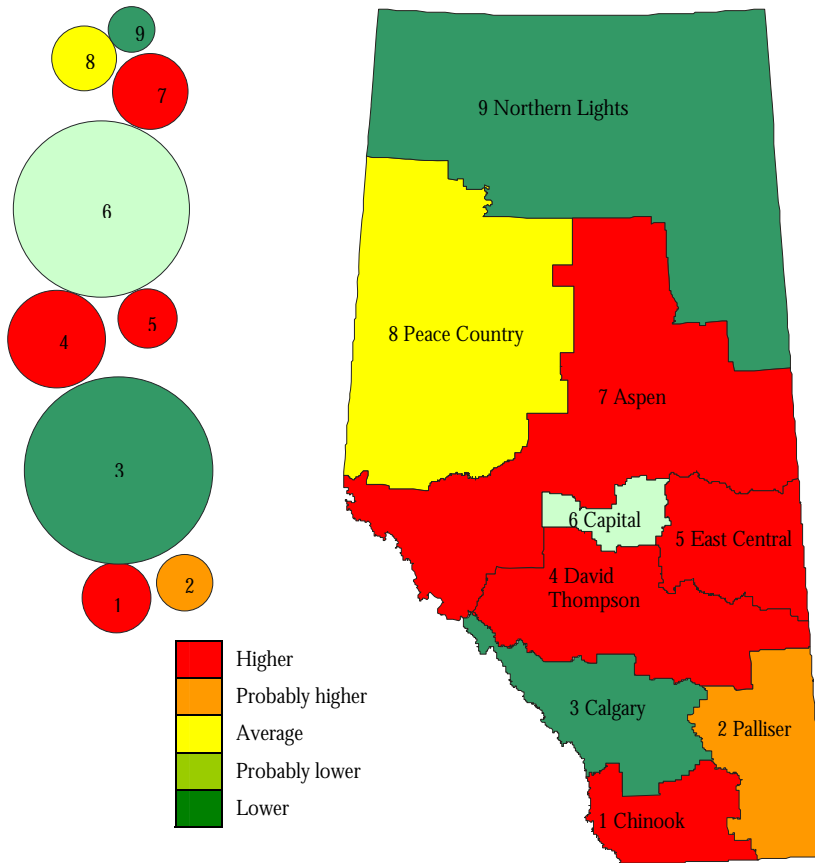
Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 86: Age Specific Death Rates for Prostate Cancer in Alberta, 2003-05



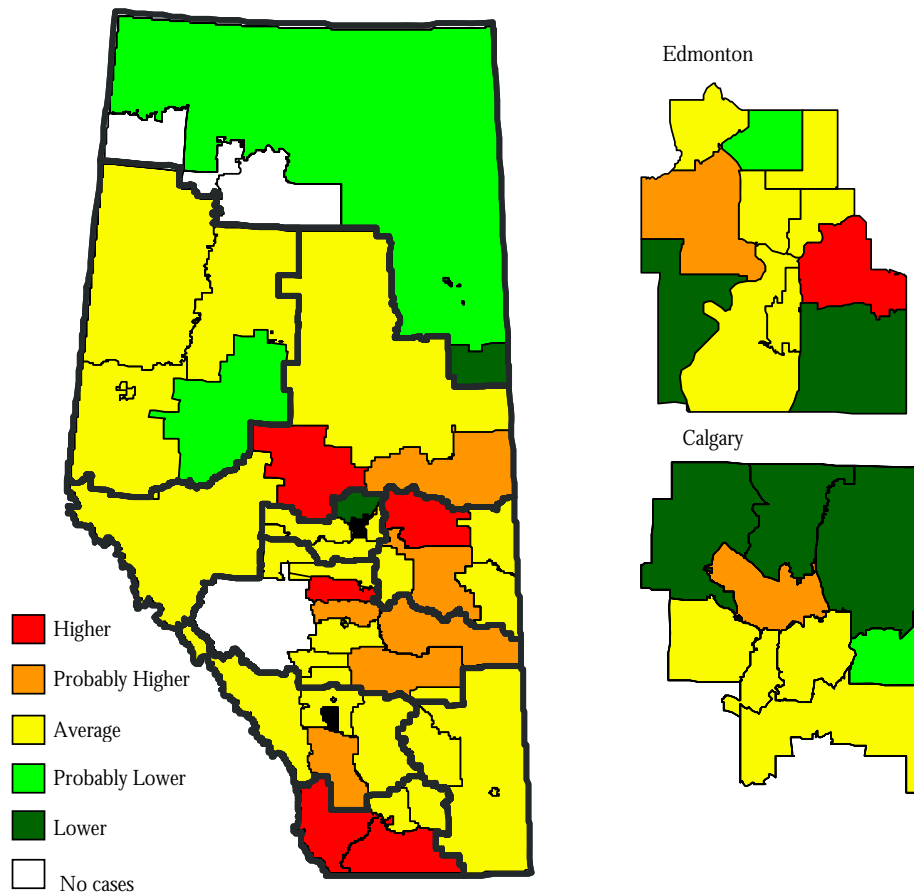
Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 87: Regional Differences in Prostate Cancer Mortality Rates, 2003-05



Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 88: Sub-Regional Differences in Prostate Cancer Mortality Rates, 2003-05

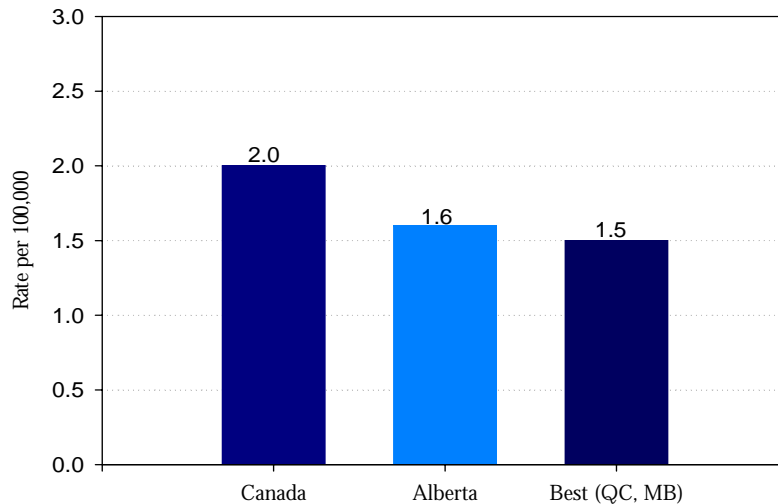


Source: Alberta Vital Statistics, Death File, October 2006 release

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. In 2004 in Alberta there were 31 deaths due to cervical cancer. The age-standardized mortality rate for Alberta was 1.6 per 100,000. This is lower than the Canadian rate of 2.0. Manitoba and Quebec were tied with the lowest rate of 1.5 per 100,000.

Figure 89: Mortality Rates for Cervical Cancer, 2004 (Alberta, Canada, Best Province)



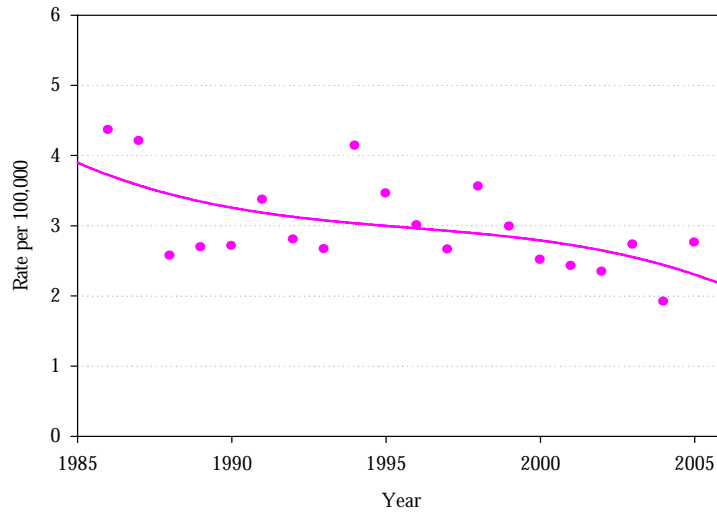
Source: Statistics Canada, Canadian Vital Statistics Database

Over the past nearly two decades, despite large year-to-year fluctuations, the mortality rate for cervical cancer for women in Alberta has followed a decreasing trend.

Across the life span cervical cancer begins to cause mortality in women around their mid thirties and gradually increases until the 8th decade of life after which it follows a more dramatic increase.

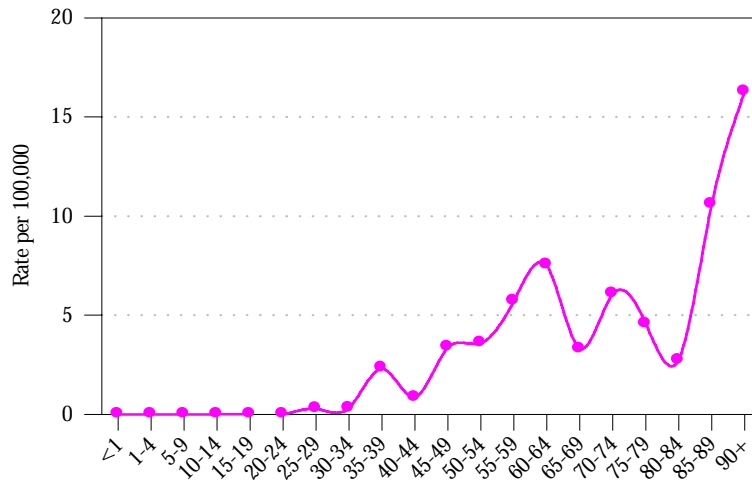
The provincial map shows little variation between the regions, however Peace Country region had a lower rate than the provincial average, and Northern Lights region had zero mortality from cervical cancer. Provincial rates are so low that sub-regional comparisons are unstable and have not been shown in a map.

Figure 90: Mortality Rates for Cervical Cancer in Alberta, 1986 - 2005



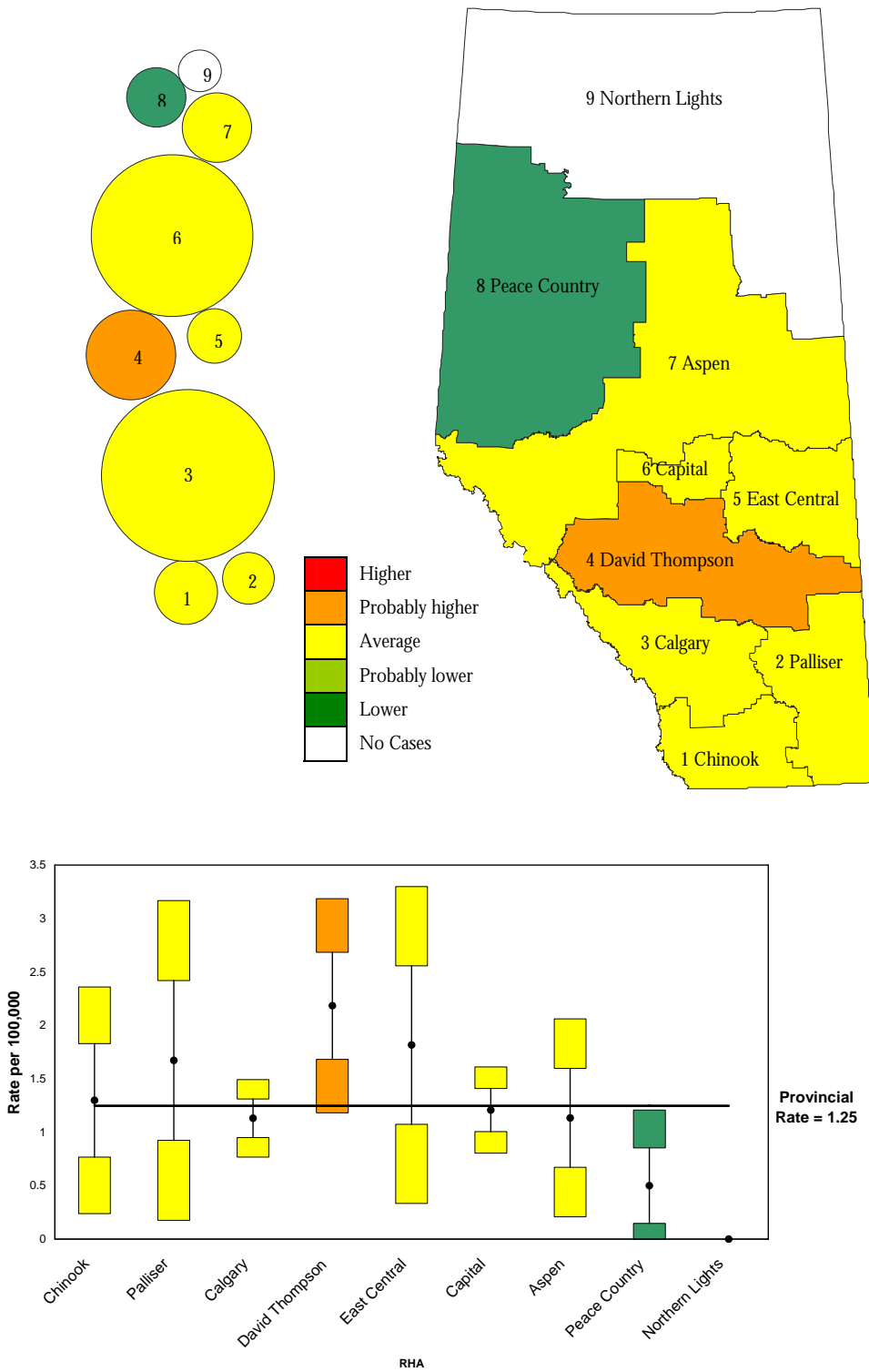
Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 91: Age Specific Death Rates for Cervical Cancer in Alberta, 2003-05



Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 92: Regional Differences in Cervical Cancer Mortality Rates, 2003-05



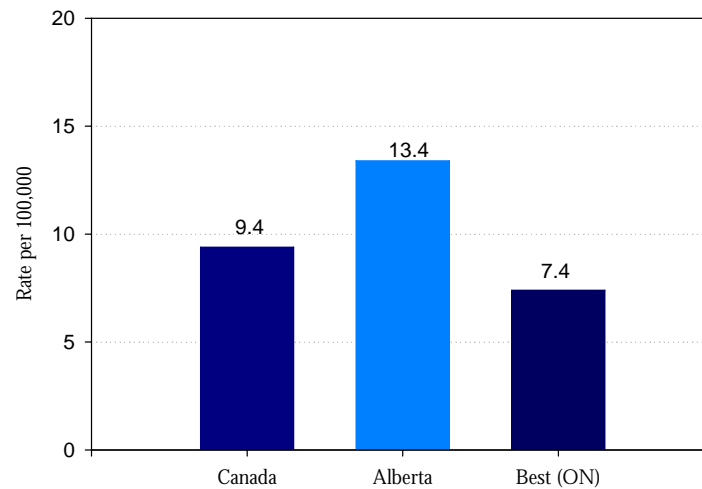
Source: Alberta Vital Statistics, Death File, October 2006 release

INJURY

Motor Vehicle Collisions

In Alberta there were 435 deaths due to motor vehicle collisions in 2004. The age-standardized rate of deaths due to injuries from motor vehicle collisions was 13.4 per 100,000 in Alberta in 2004. The national average for that year was 9.4. Alberta's rate ranks second highest out of the provinces, and almost double Ontario who had the lowest rate in Canada (7.4 per 100,000).

Figure 93: Mortality Rates from Motor Vehicle Collisions, 2004
(Alberta, Canada, Best Province)



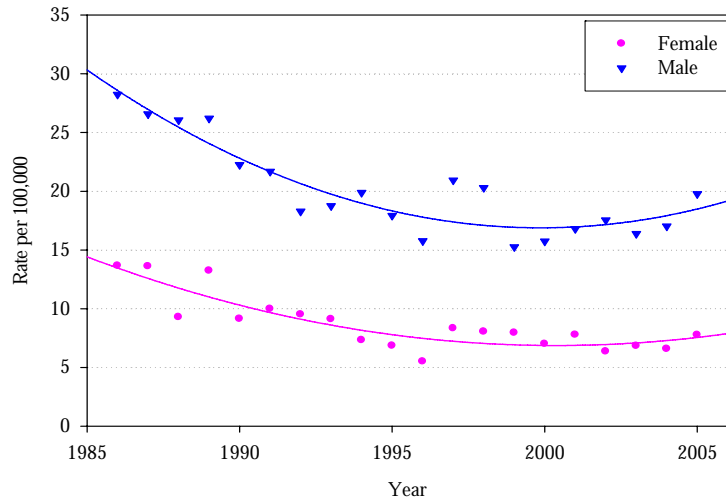
Source: Statistics Canada, Canadian Vital Statistics Database

In Alberta, male and female mortality rates due to motor vehicle collisions have decreased since 1986, however they now appear to be rising again.

Most motor vehicle collision deaths involve teenage and young adult females and males and higher mortality rates are seen in rural regions of Alberta. 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 concern that 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.

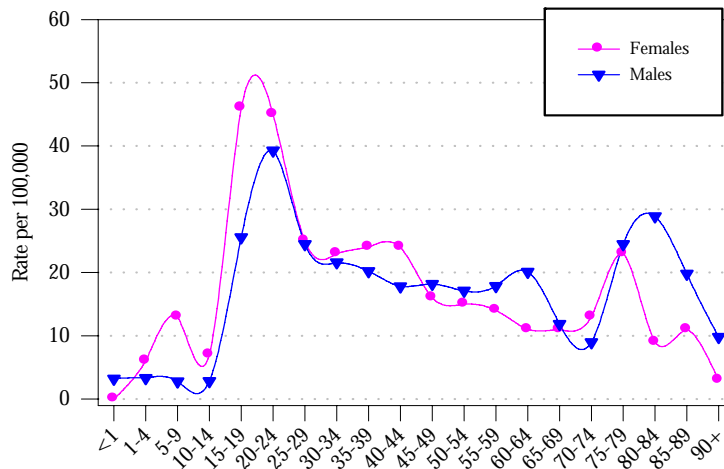
Alcohol is a well-documented risk factor for motor vehicle collisions; in many cases, however, alcohol is not involved. Initiatives such as the Alberta Motor Association’s “Mission Possible” are alerting the public to the number of collisions that occur in Alberta.

Figure 94: Mortality Rates for Injury in Motor Vehicle Collisions in Alberta, 1986 - 2005



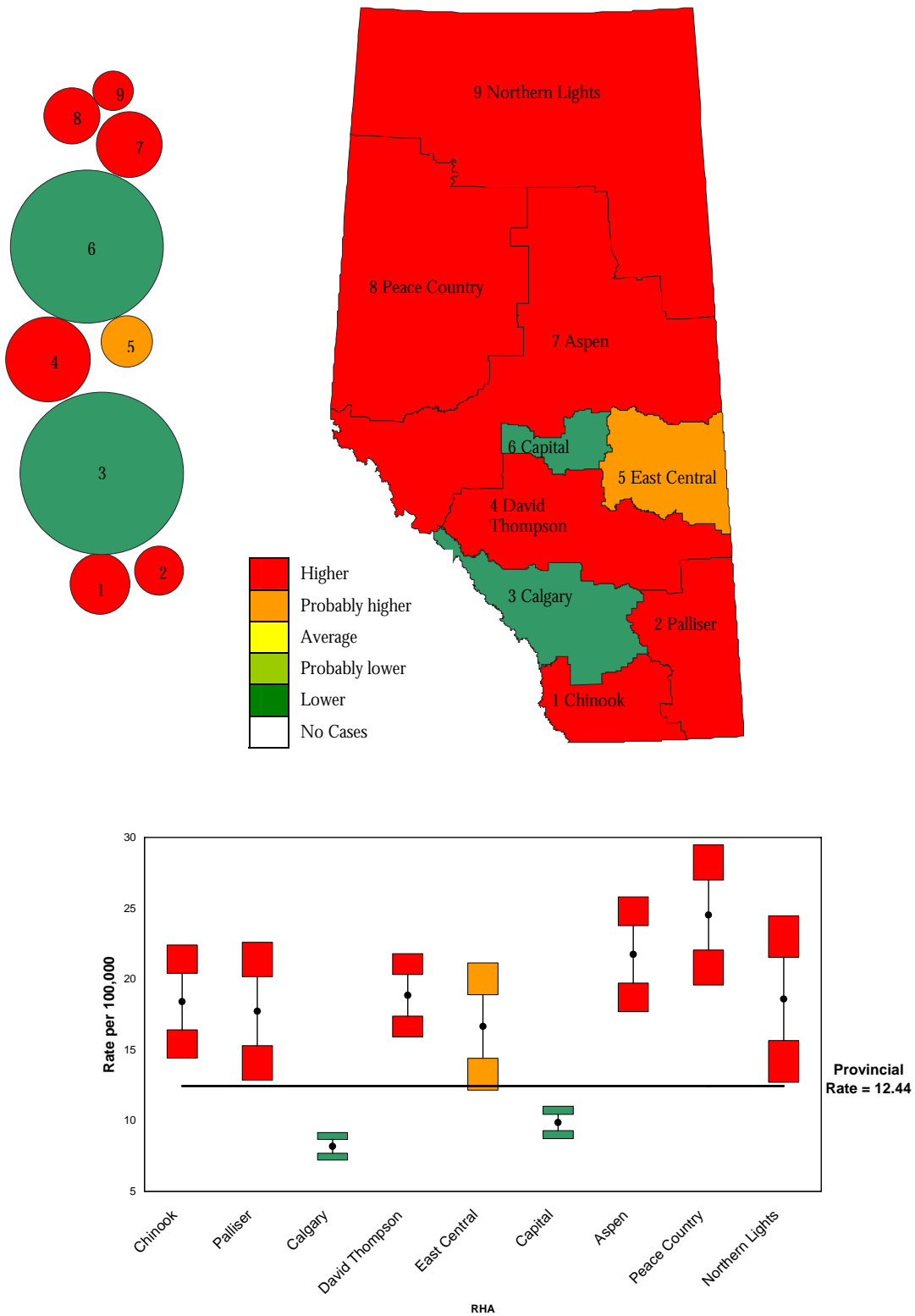
Source: Alberta Vital Statistics, Death File

Figure 95: Age-Specific Mortality Rates for Motor Vehicle Collisions in Alberta, 2003-05



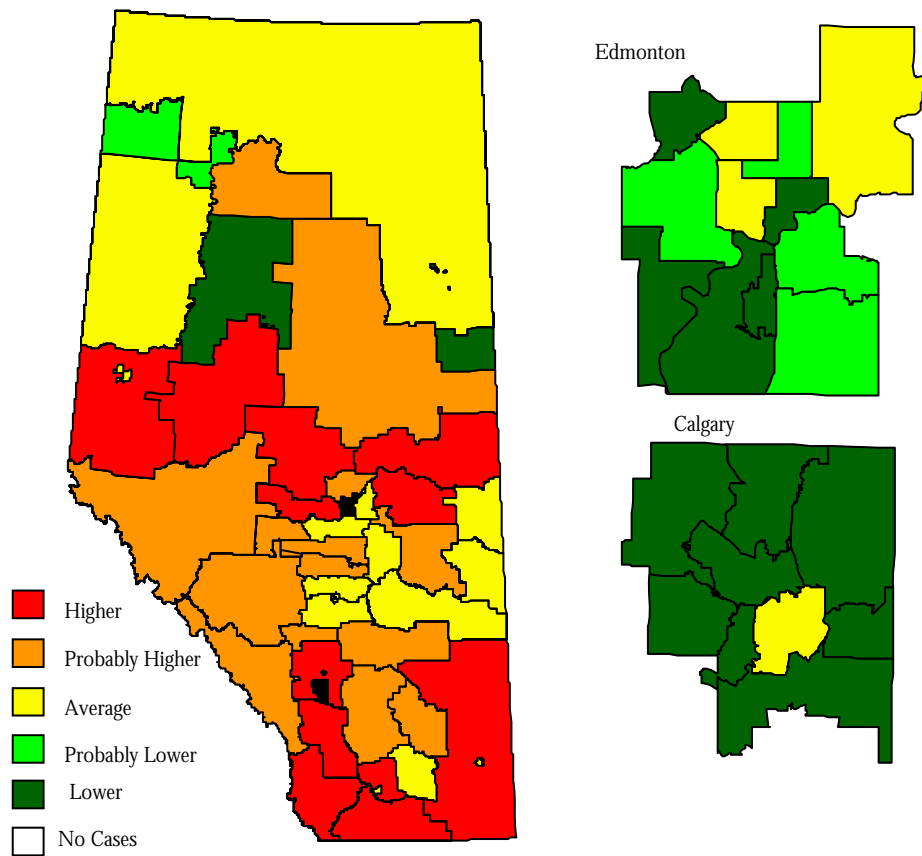
Source: Alberta Vital Statistics, Death File

Figure 96: Regional Differences in Motor Vehicle Collision Mortality Rates, 2003-05



Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 97: Sub-Regional Differences in Motor Vehicle Collision Mortality Rates, 2003 – 05

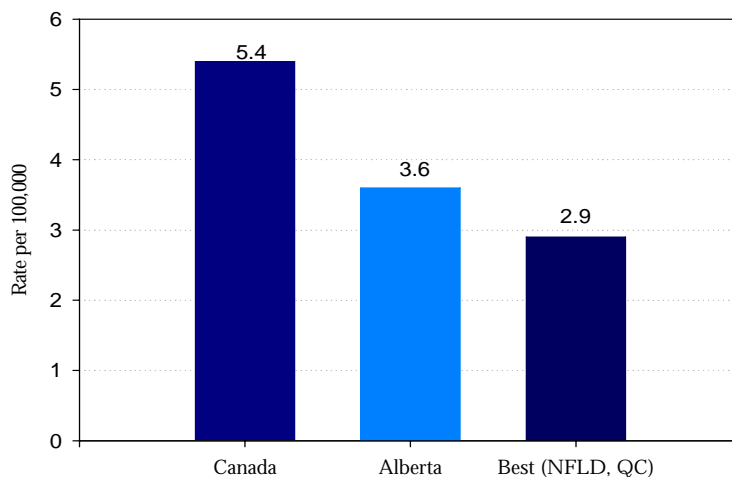


Source: Alberta Vital Statistics, Death File, October 2006 release

Falls

Falls are classified in three types: anticipated physiological; unanticipated physiological; and accidental. Most deaths due to falls occur in old age. In 2004, there were 120 deaths due to falls in Alberta. The age-standardized rate of deaths due to falls in Alberta was 3.6 per 100,000, lower than the national average (5.4 per 100,000). Newfoundland and Labrador and Quebec were tied with the lowest rate in Canada at 2.9.

Figure 98: Mortality Rates from Falls, 2004 (Alberta, Canada, Best Province)



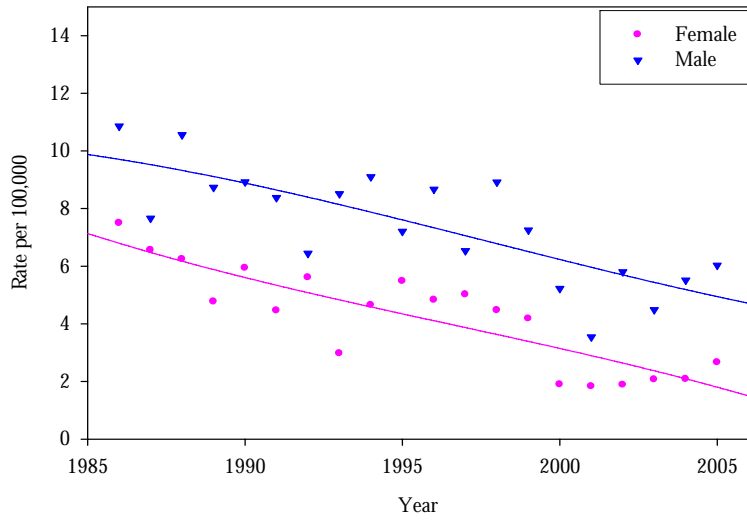
Source: Statistics Canada, Canadian Vital Statistics Database

Between 1986 and 2005, male and female mortality rates for deaths due to falls decreased in Alberta. The mortality rate for females is lower than for males.

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

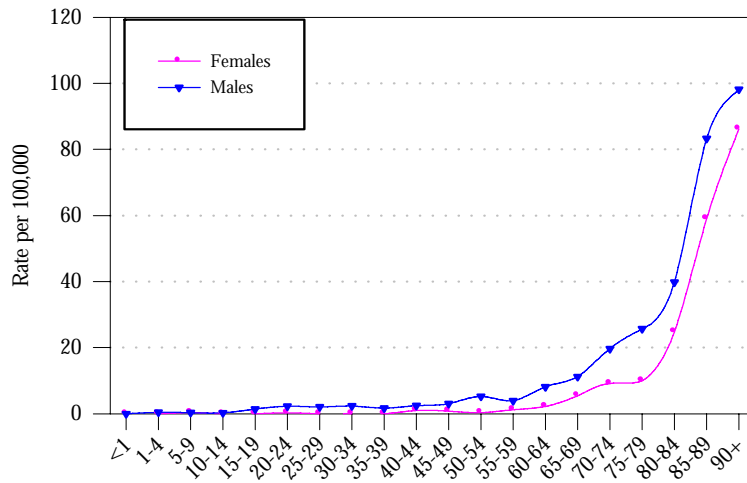
In younger age groups, many deaths from falls are work related. Prevention strategies involve emphasizing proper operation of farm equipment, ladder safety, and use of safety equipment (e.g., footwear, harness, ropes). Workers need to consider the “fall potential” of situations and take proper measures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

Figure 99: Mortality from Falls in Alberta, 1986 - 2005



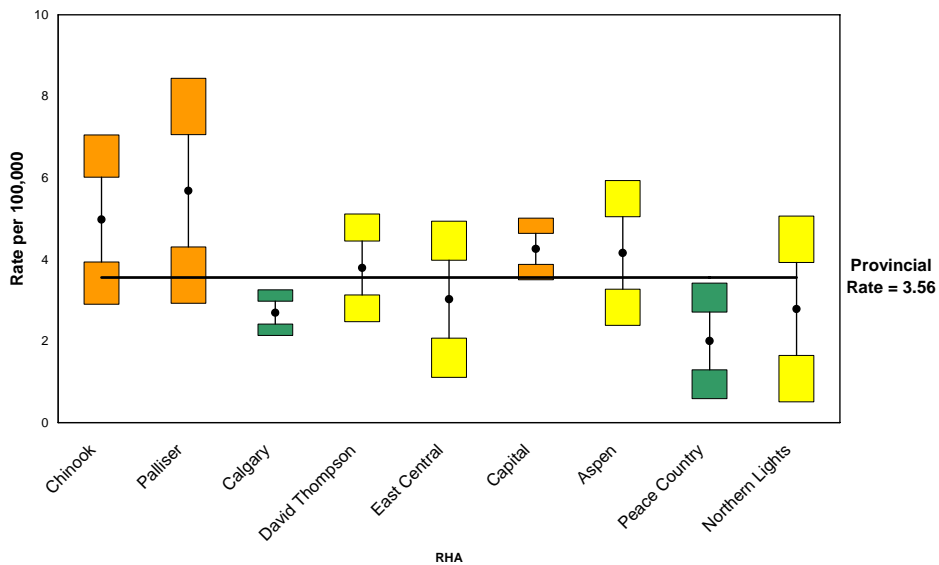
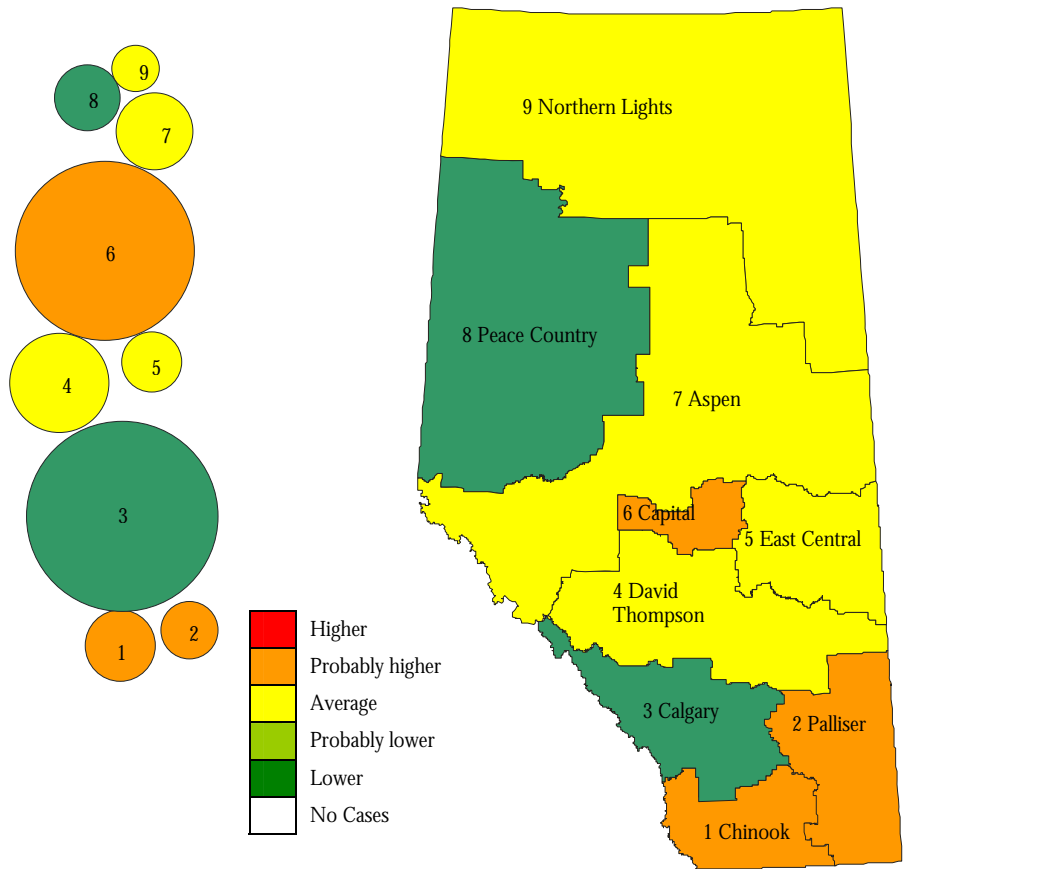
Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 100: Age Specific Mortality from Falls in Alberta, 2003-05



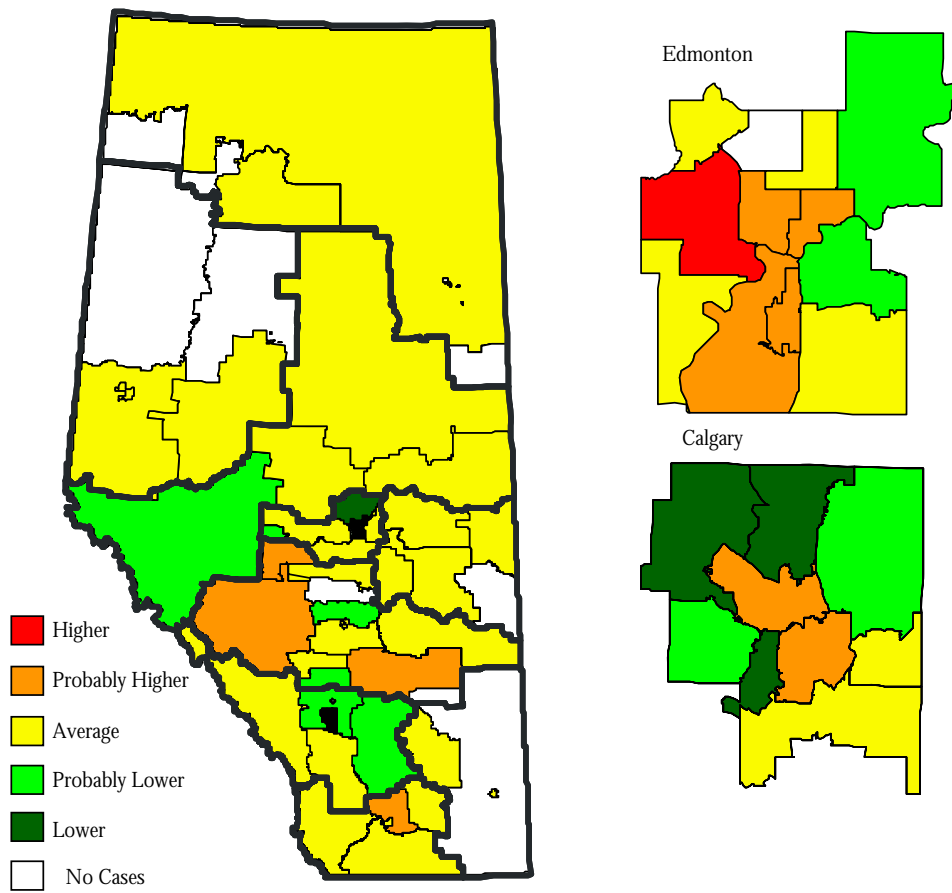
Source: Alberta Vital Statistics, Death File

Figure 101: Regional Differences in Mortality Rates from Falls, 2003 - 05



Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 102: Sub-Regional Differences in Mortality Rates from Falls, 2003 – 05

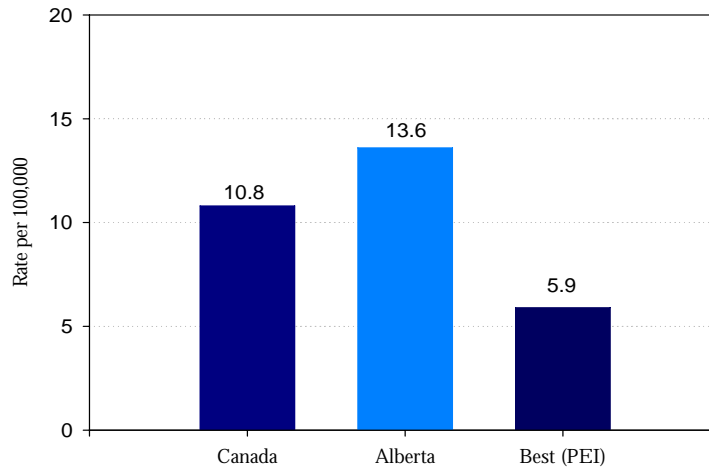


Source: Alberta Vital Statistics, Death File, October 2006 release

Suicide

The rate of suicide in Alberta is unacceptably high. In Alberta there were 450 deaths due to suicide in 2004. As a comparison, there were more deaths from suicide than from motor vehicle accidents in Alberta in 2004. The provincial age-standardized rate of deaths due to suicide was 13.6 per 100,000. The national average for that year was 10.8 per 100,000. Alberta's rate is the second highest across the provinces and far higher than that of the best province, Prince Edward Island (5.9 per 100,000).

Figure 103: Mortality from Suicide, 2004 (Alberta, Canada, Best Province)



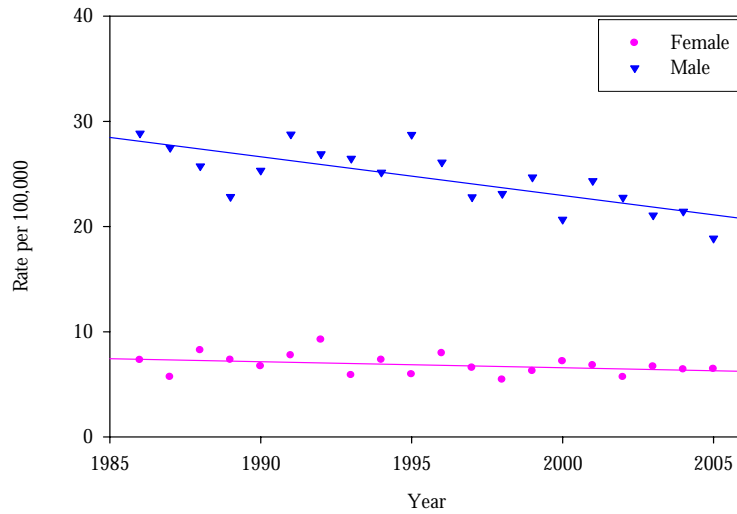
Source: Statistics Canada, Canadian Vital Statistics Database

In Alberta, male and female mortality rates for deaths due to suicide remained fairly constant over the last nearly two decades. There has been a gradual decreasing trend for males that is less apparent in females.

Most suicide deaths involve middle and senior aged males. However, attempted suicide (parasuicide) is more evenly distributed between the sexes. It has been suggested that 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.

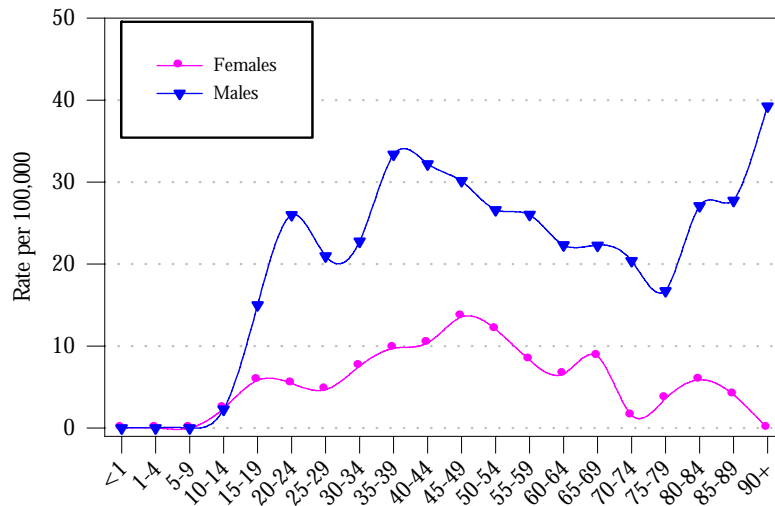
The sex and age patterns of suicide rates parallel the onset and prevalence of certain mental disorders particularly in youth, making suicide a major ongoing concern for professionals in mental health.

Figure 104: Mortality from Suicide in Alberta, 1985 - 2005



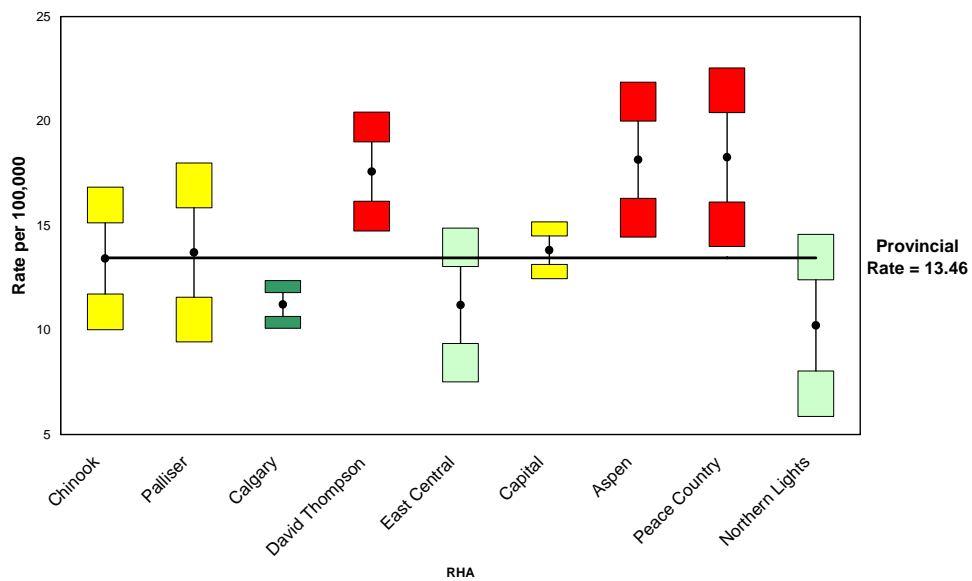
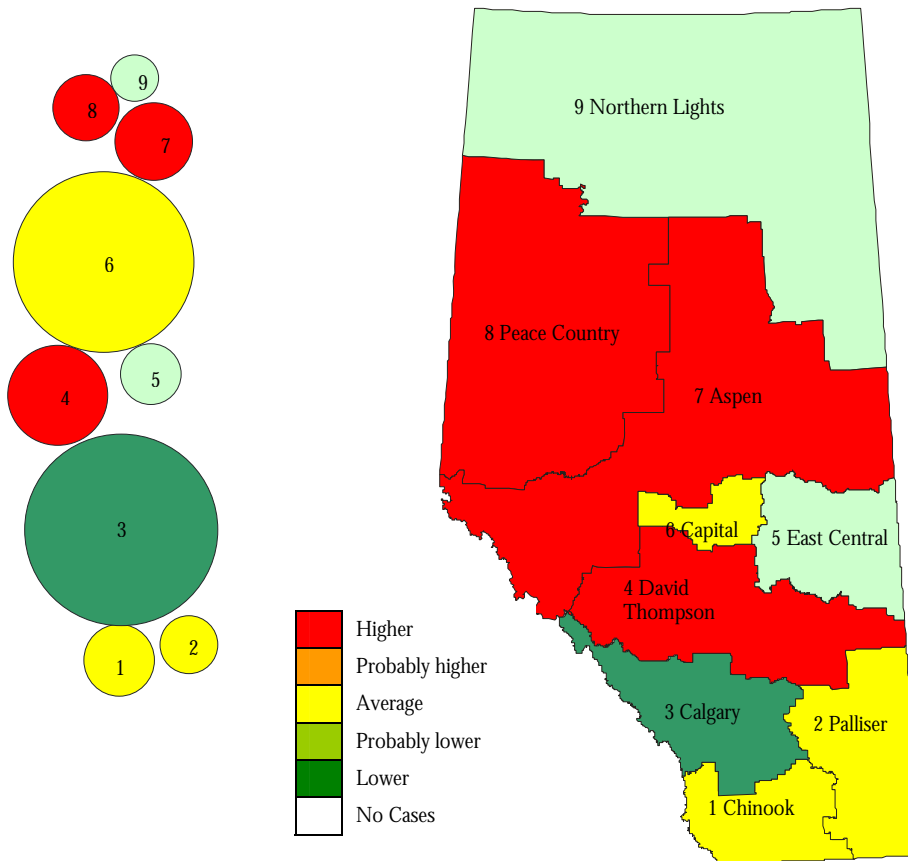
Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 105: Age Specific Mortality from Suicide in Alberta, 2003-05



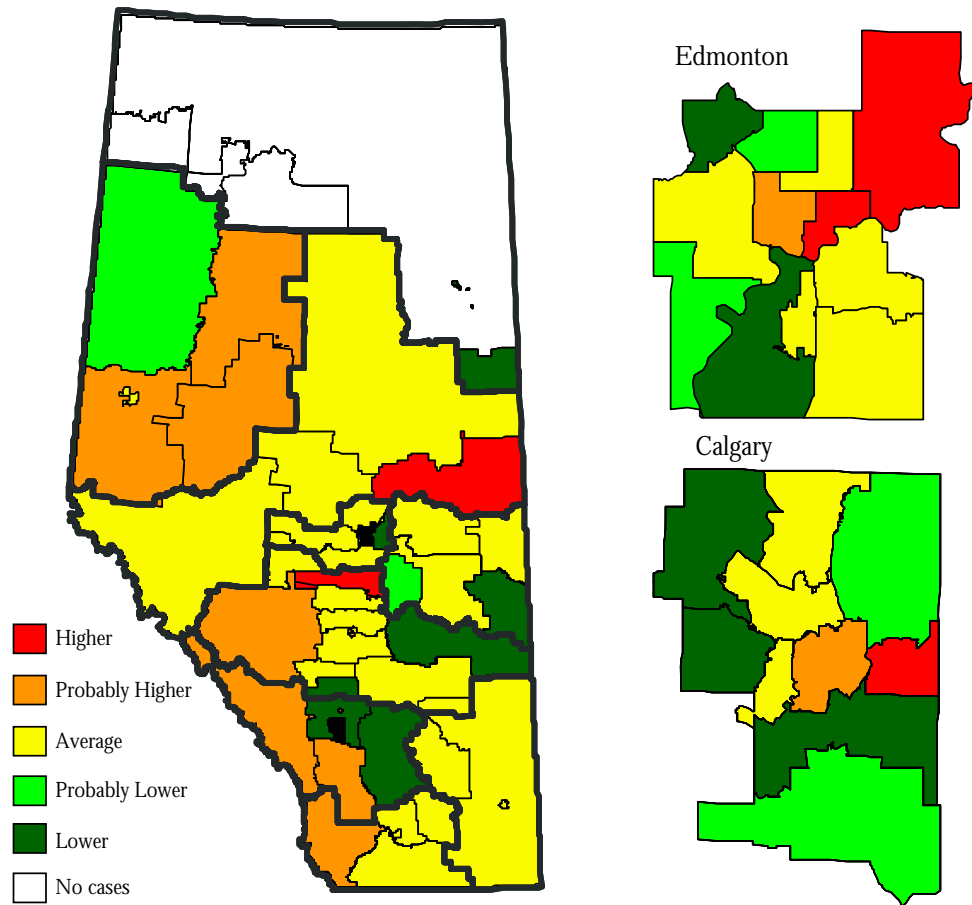
Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 106: Regional Differences in Mortality Rates from Suicide, 2003 – 05



Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 107: Sub-Regional Differences in Mortality Rates from Suicide, 2003 – 05

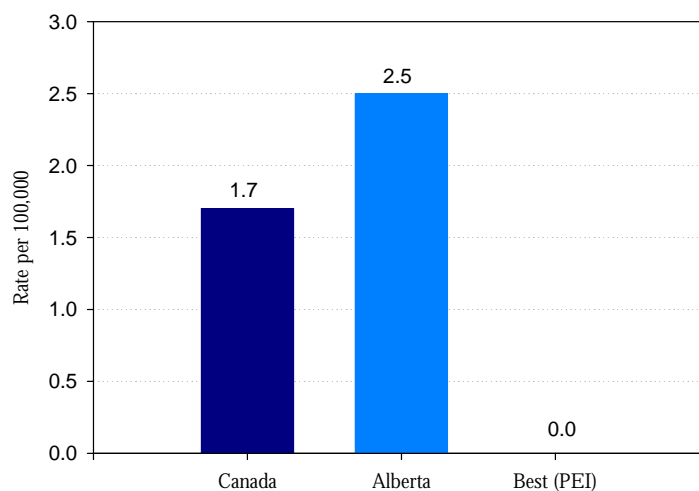


Source: Alberta Vital Statistics, Death File, October 2006 release

Homicide

In Alberta there were 79 deaths due to homicide in 2004. The provincial age-standardized rate of deaths due to homicide was 2.5 per 100,000 in 2004 -- somewhat higher than the national average for that year (1.7 per 100,000). Prince Edward Island was the only province with no homicides in 2004.

Figure 108: Mortality from Homicide, 2004 (Alberta, Canada, Best Province)

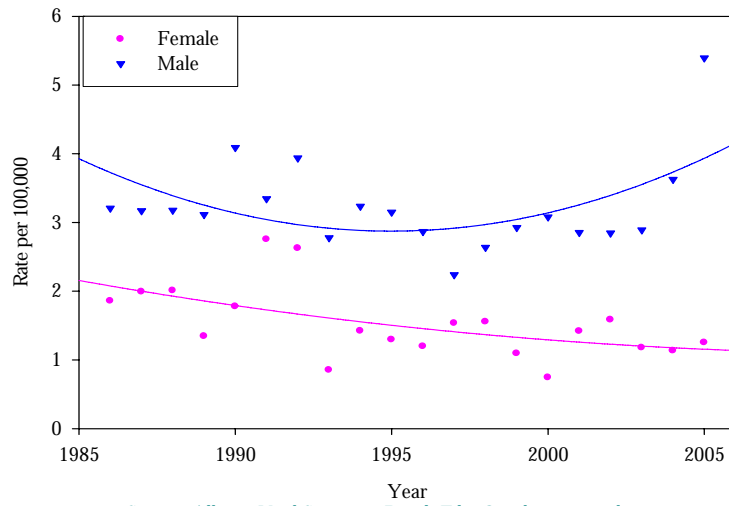


Source: Statistics Canada, Canadian Vital Statistics Database

In Alberta, from 1986 to 2005 female mortality rates for deaths due to homicide decreased slightly overall, while for males it increased. A total of 108 deaths were attributed to homicide in Alberta in 2005, up from 79 in 2004.

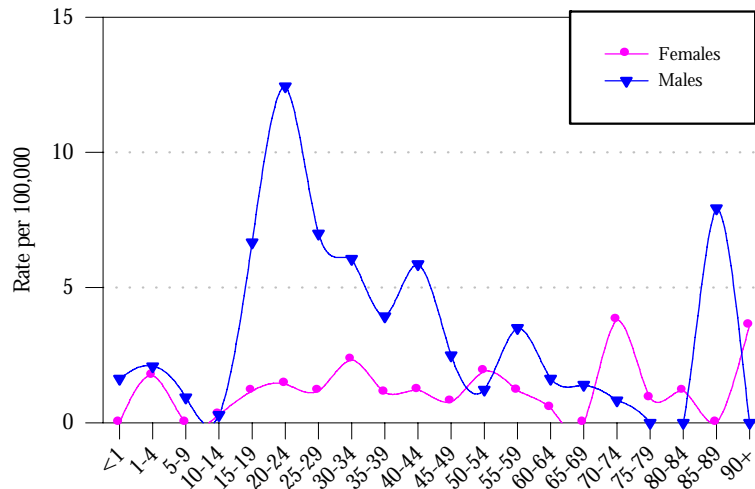
Homicide deaths occur most frequently in young adult and middle age groups, and victims are twice as likely to be male than female. In most cases, victims know their killers; they are often family members.

Figure 109: Mortality from Homicide in Alberta, 1985 - 2005



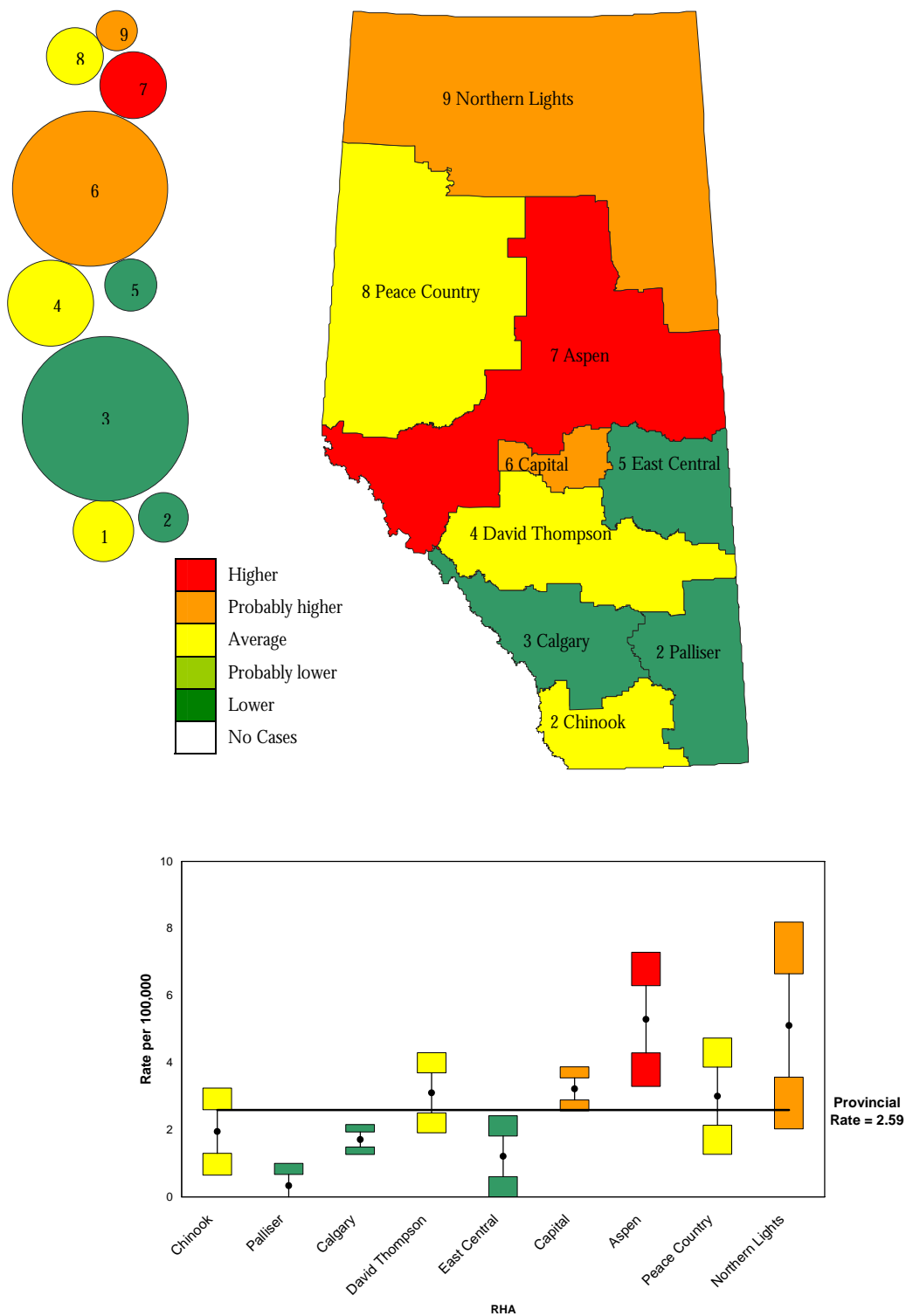
Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 110: Age Specific Mortality from Homicide in Alberta, 2003-05



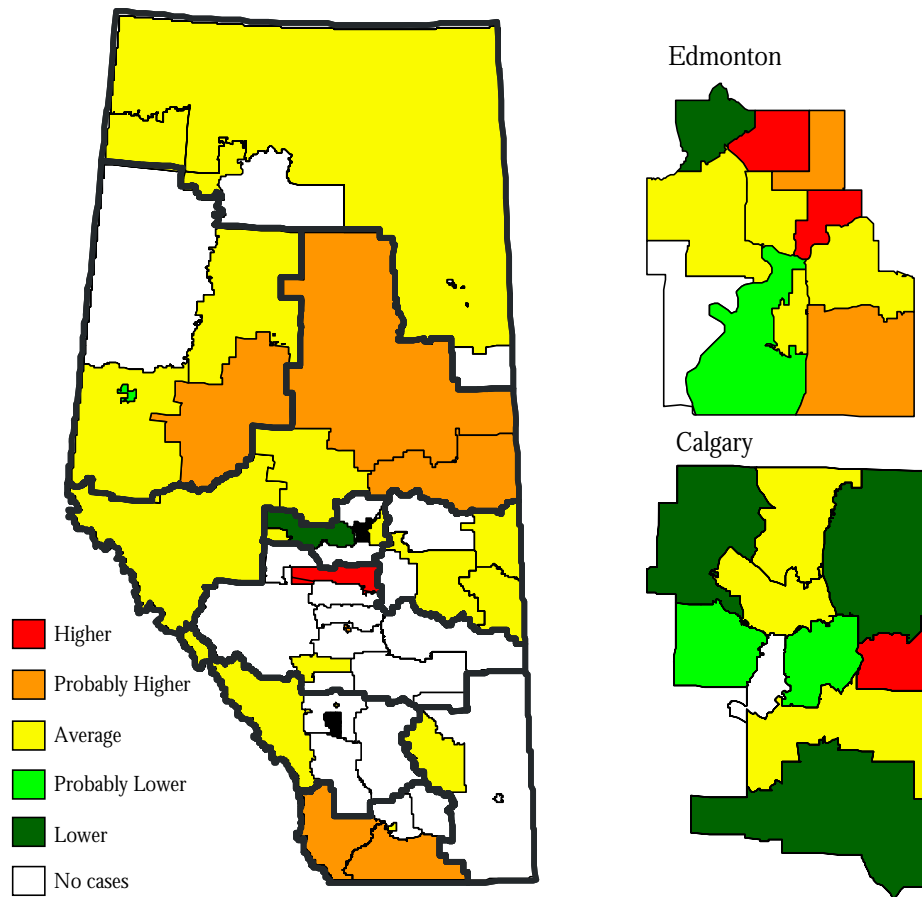
Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 111: Regional Differences in Homicide Mortality Rates, 2003 - 05



Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 112: Sub-Regional Differences in Homicide Mortality Rates, 2003 – 05



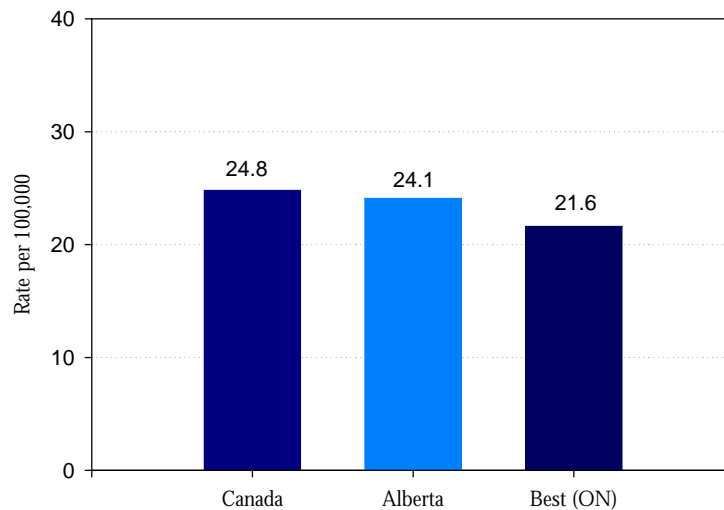
Source: Alberta Vital Statistics, Death File, October 2006 release

RESPIRATORY DISEASES

Chronic Obstructive Pulmonary Disease (COPD)

Chronic obstructive pulmonary disease includes emphysema and chronic bronchitis. In Alberta in 2004 there were 786 deaths due to COPD. The age-standardized mortality rate from COPD was 24.1 per 100,000. This is similar to the national average (24.8 per 100,000), and higher than the best province, Ontario (21.6 per 100,000).

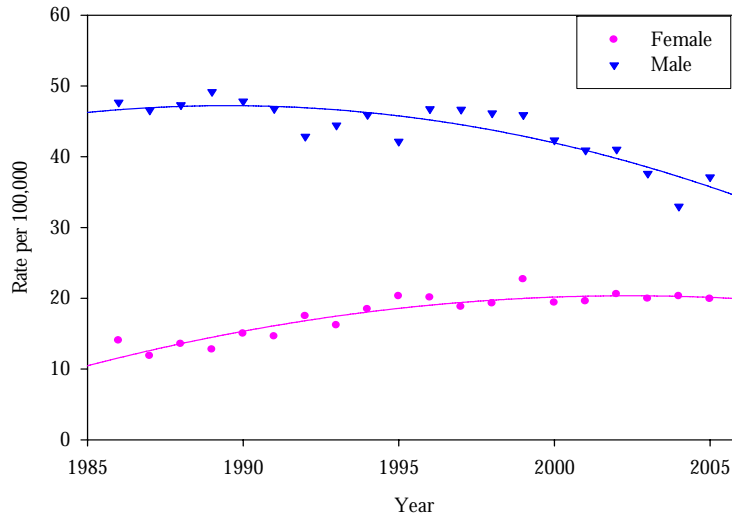
Figure 113: Mortality from COPD, 2004 (Alberta, Canada, Best Province)



Source: Statistics Canada, Canadian Vital Statistics Database

Males have a higher mortality rate from COPD than females, although this is changing. Between 1986 and 2005, the trend shows the mortality rate decreasing for males and increasing for females. A similar trend has also been observed for lung cancer and changing patterns of smoking may account for this observed trend.

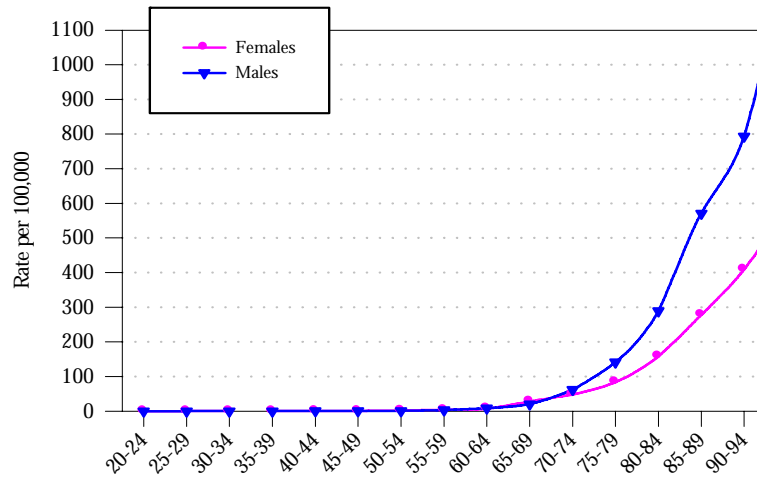
Figure 114: Mortality from COPD in Alberta 1986 - 2005



Source: Alberta Vital Statistics, Death File, October 2006 release

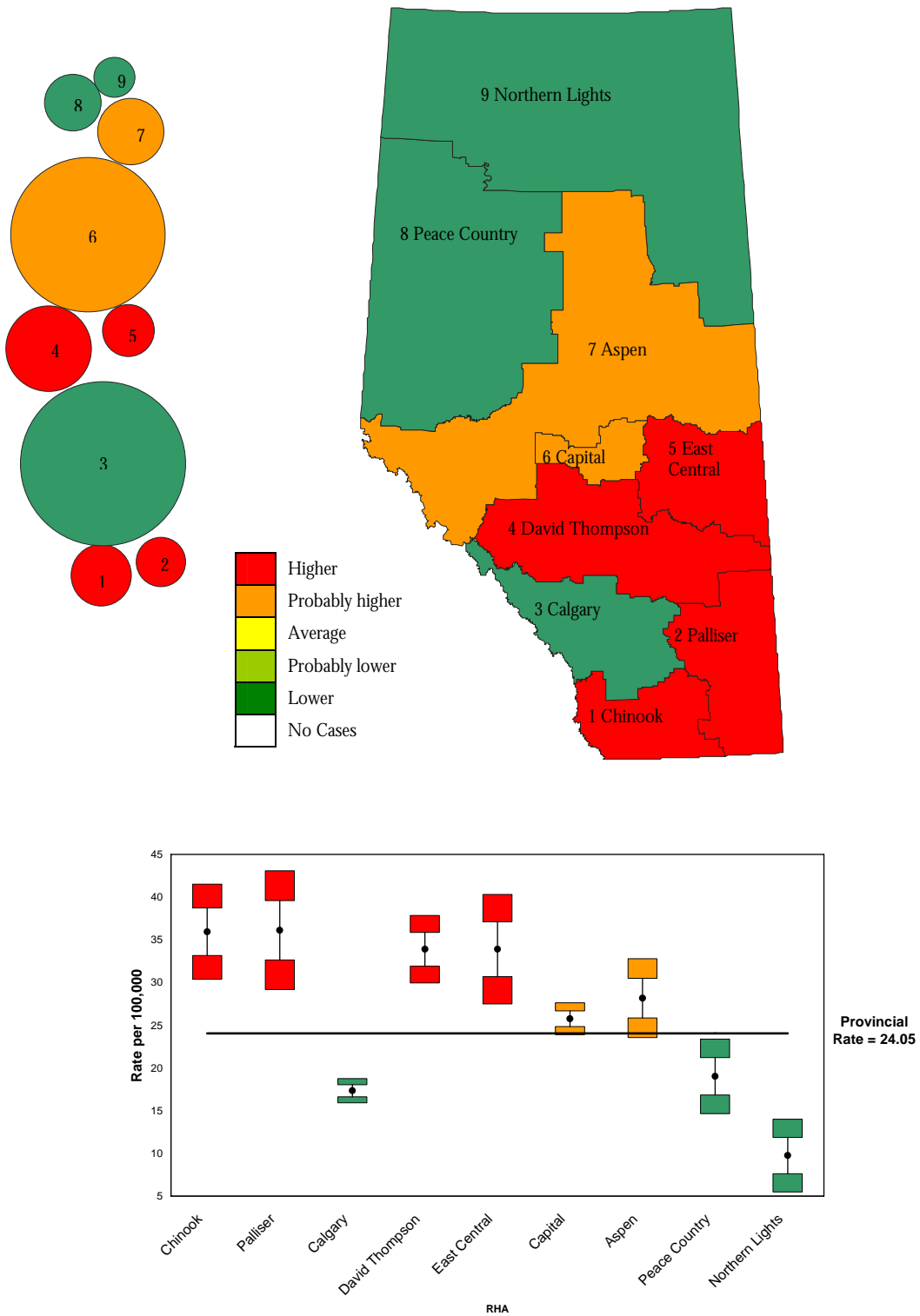
Most deaths from COPD occur in adults over 70 years of age.

Figure 115: Age-Specific Mortality from COPD in Alberta, 2003-05



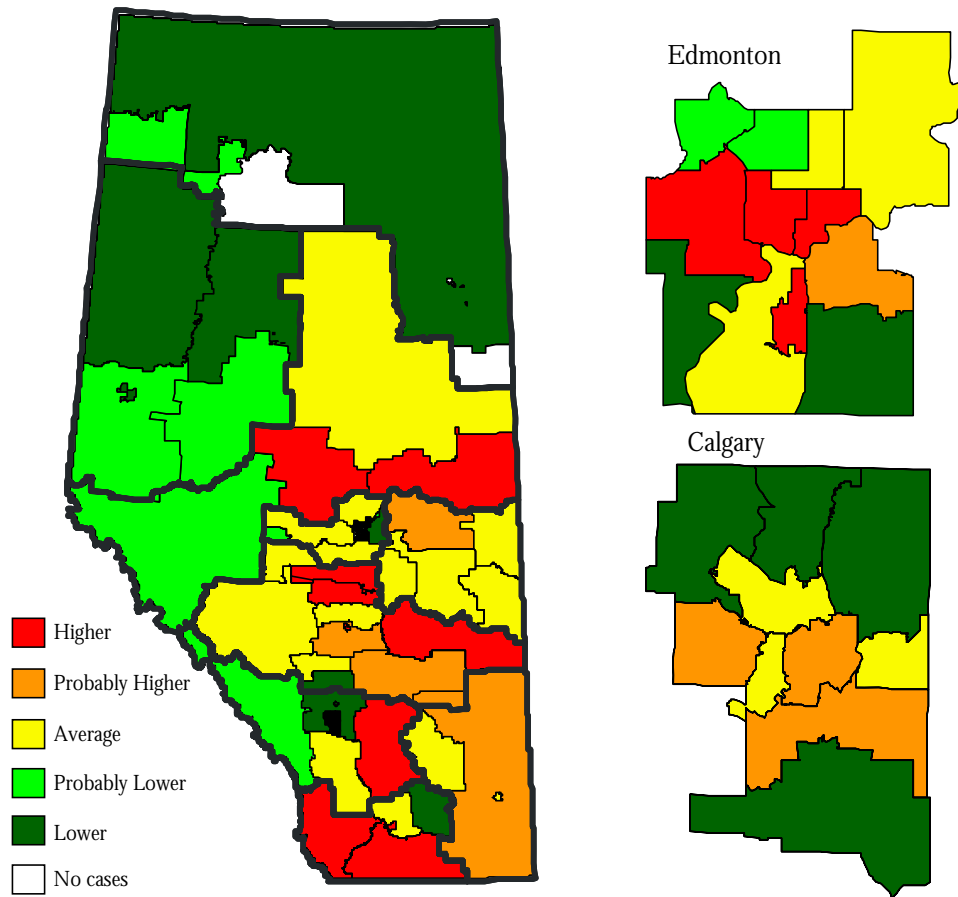
Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 116: Regional Differences in COPD Mortality Rates, 2003 - 05



Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 117: Sub-Regional Differences in COPD Mortality Rates, 2003 – 05

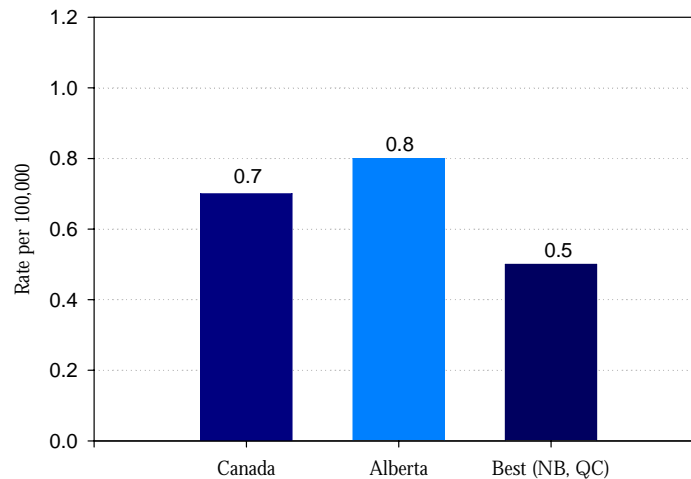


Source: Alberta Vital Statistics, Death File, October 2006 release

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. Rates of mortality, though, are generally quite low. In Alberta in 2004 there were 27 deaths due to asthma. The age-standardized mortality rate from asthma was 0.8 per 100,000. This rate is slightly higher than the Canadian average (0.7 per 100,000) and New Brunswick and Quebec were tied with the lowest rate for the provinces (0.5 per 100,000).

Figure 118: Mortality from Asthma, 2004 (Alberta, Canada, Best Province)



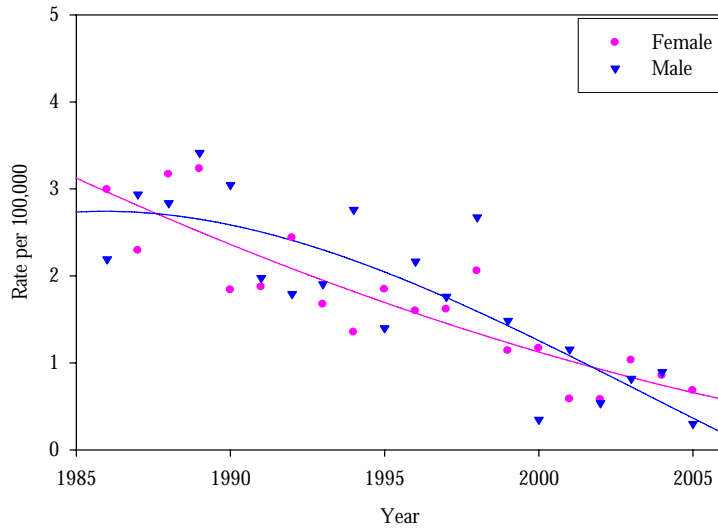
Source: Statistics Canada, Canadian Vital Statistics Database

The difference between mortality rates for males and females is slight, with mortality decreasing for both sexes from 1986 to 2005. Improved medications are making it easier to live successfully with this disease.

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.

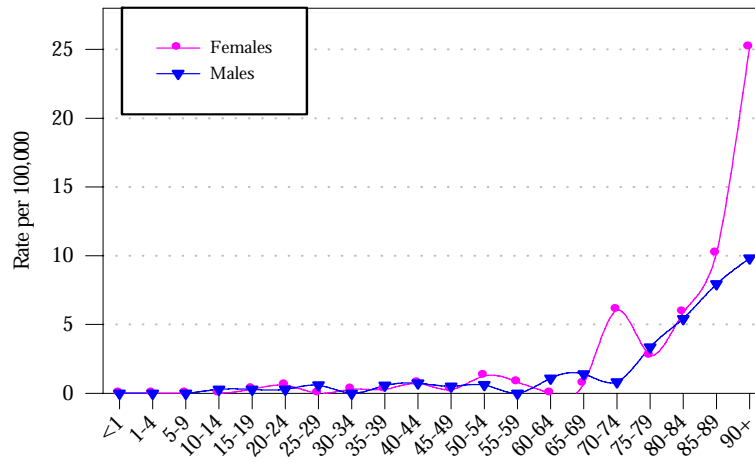
The provincial map shows that Peace Country and Northern Lights region had zero mortality from asthma. Provincial rates are so low that sub-regional comparisons are unstable and have not been shown in a map.

Figure 119: Mortality from Asthma in Alberta 1986 - 2005



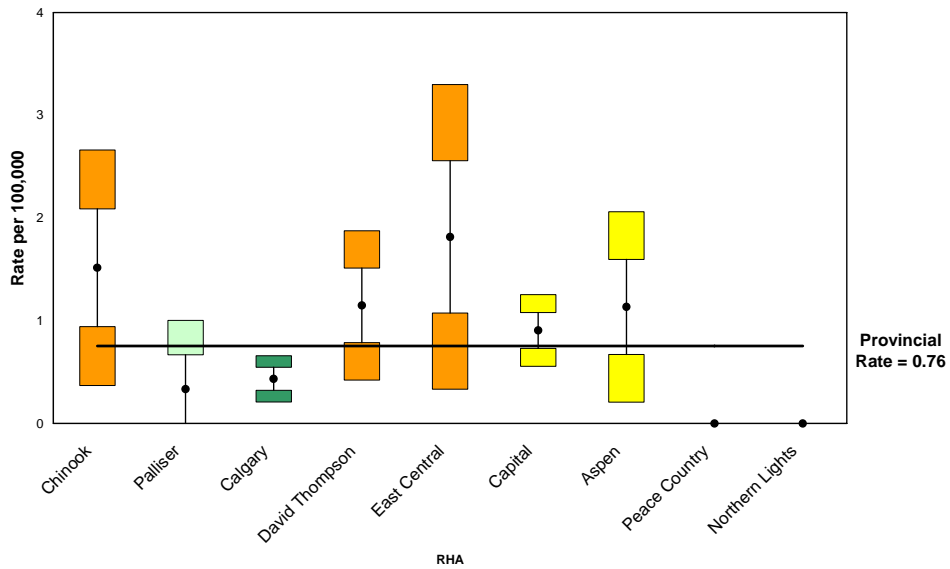
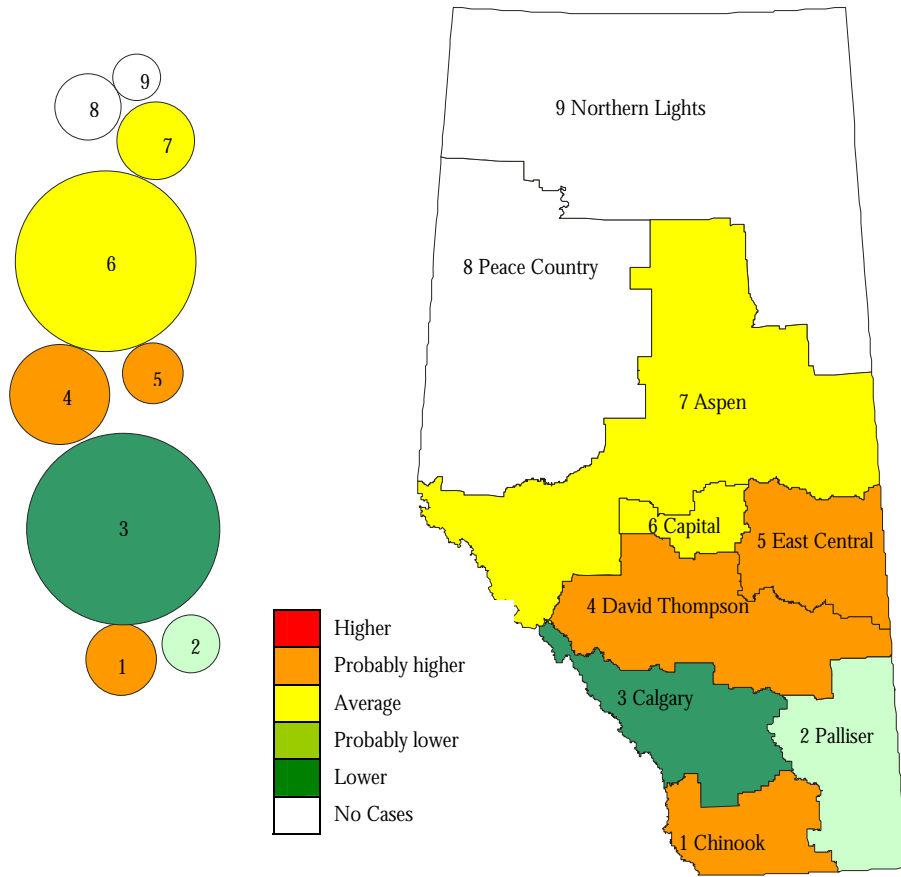
Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 120: Age Specific Mortality from Asthma in Alberta, 2003-05



Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 121: Regional Differences in Asthma Mortality Rates, 2003 – 05



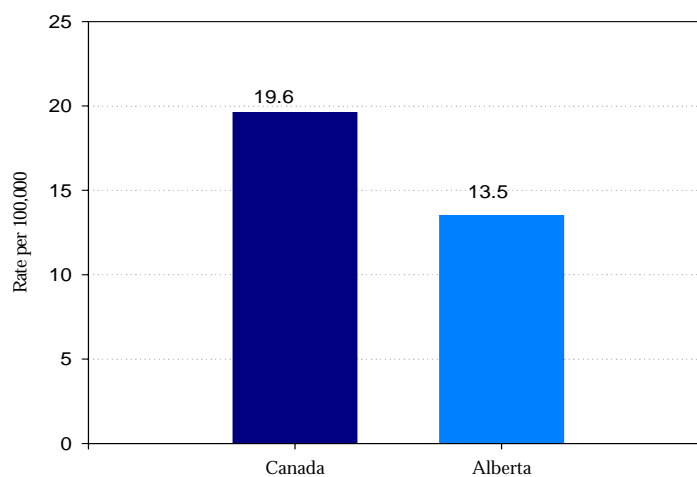
Source: Alberta Vital Statistics, Death File, October 2006 release

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 overweight and obese. Type 2 diabetes accounts for the large majority of diabetes cases and is a preventable disease.

In Alberta in 2004 there were 437 deaths due to diabetes. Alberta had the lowest age-standardized mortality rate across the provinces in 2004 at 13.5 per 100,000. The Canadian average was 19.6. It should be noted that diabetes is likely to be underreported as a cause of death, because its complications can include heart disease, kidney failure, and stroke.

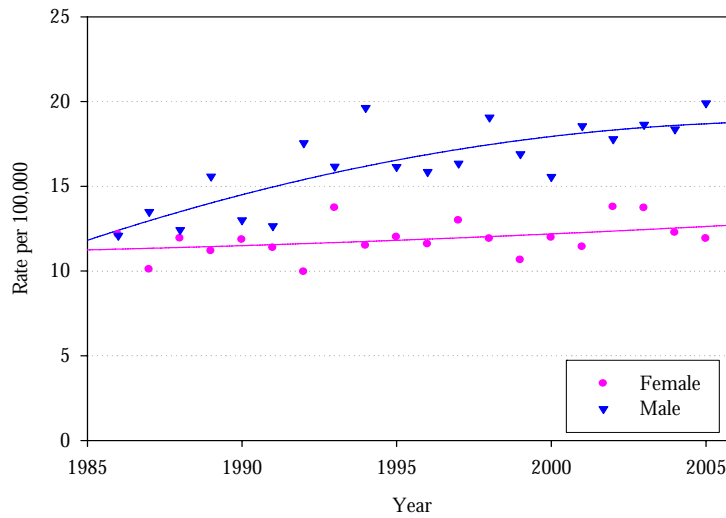
Figure 122: Mortality Rates for Diabetes, 2004 (Alberta, Canada, Best Province)



Source: Statistics Canada, Canadian Vital Statistics Database

Diabetes mortality rates have been increasing over the last nearly two decades. Rates used to be similar between the sexes, but recently this has changed with men having higher mortality rates than women from diabetes.

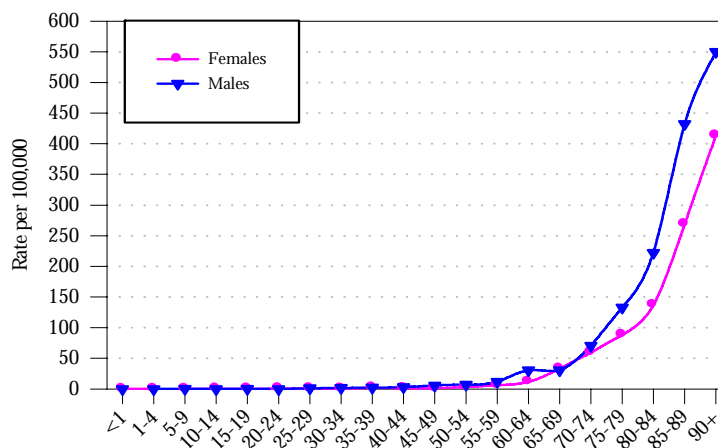
Figure 123: Mortality Rates for Diabetes in Alberta, 1986 - 2005



Source: Alberta Vital Statistics, Death File, October 2006 release

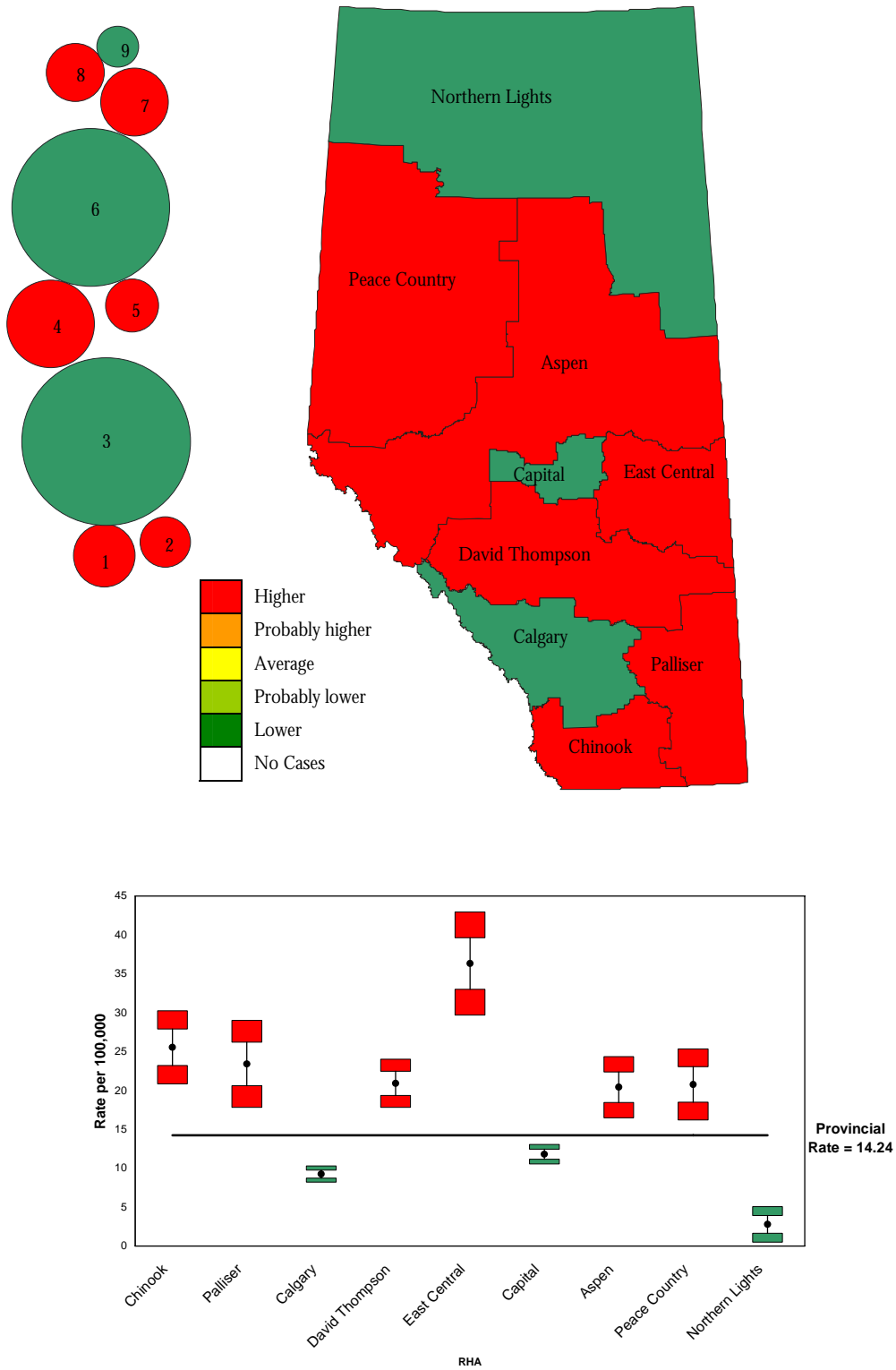
Over the course of the human lifespan, there is very little difference between the sexes in mortality rates until around age 70 when there is a dramatic increase, more markedly in men.

Figure 124: Age-Specific Death Rates for Diabetes in Alberta, 2003-05



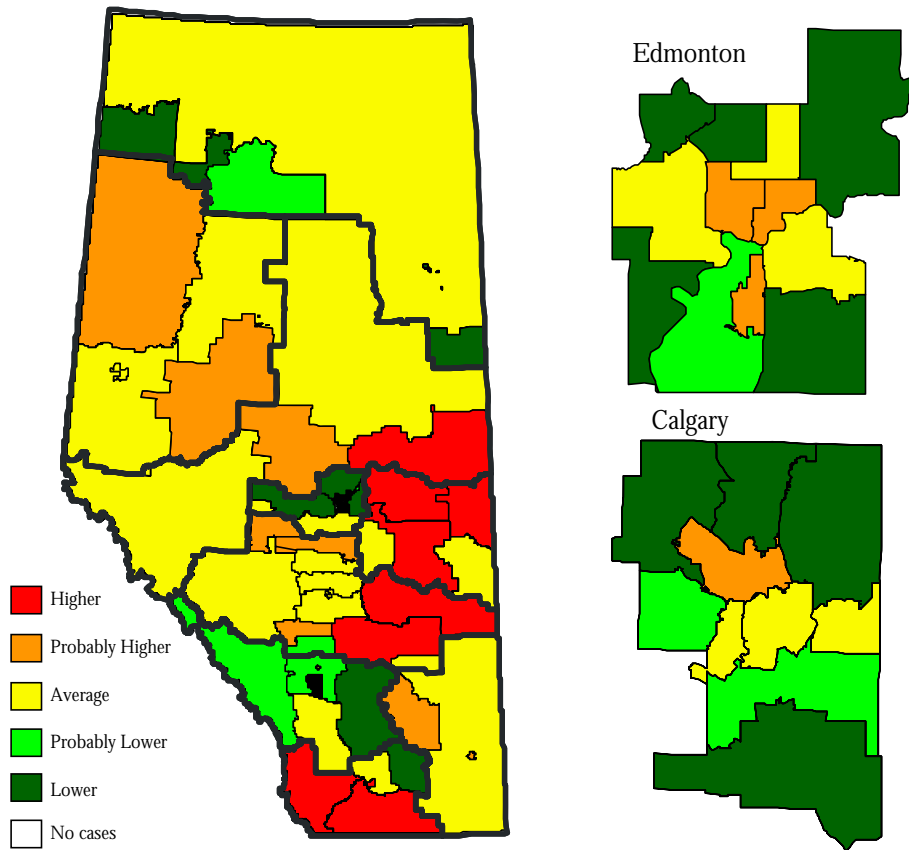
Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 125: Regional Differences in Diabetes Mortality Rates, 2003-05



Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 126: Sub-Regional Differences in Diabetes Mortality Rates, 2003-05



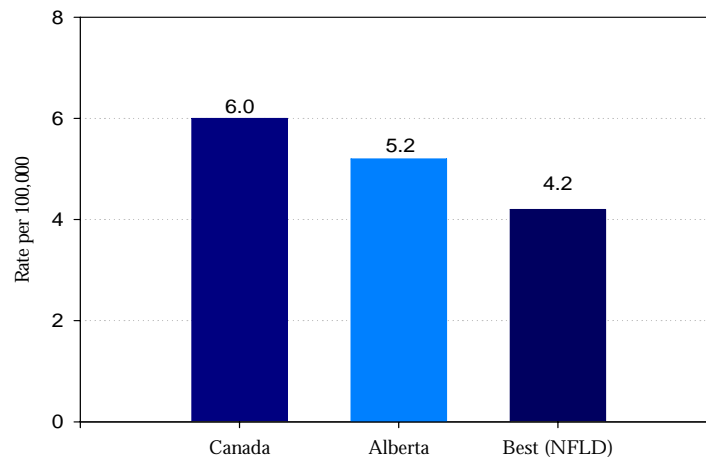
Source: Alberta Vital Statistics, Death File, October 2006 release

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.

In 2004 in Alberta there were 169 deaths due to chronic liver disease and cirrhosis. The age-standardized mortality rate was 5.2 per 100,000 population, slightly lower than the national average of 6.0. The lowest provincial rate was Newfoundland and Labrador at (4.2 per 100,000).

Figure 127: Mortality from Chronic Liver Disease and Cirrhosis, 2004
(Alberta, Canada, Best Province)

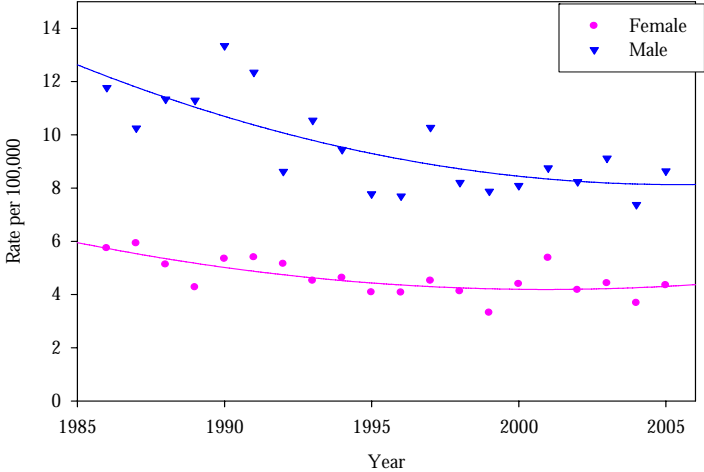


Source: Statistics Canada, Canadian Vital Statistics Database

The actual number of deaths in Alberta from this cause is relatively low (203 deaths in 2005). 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.

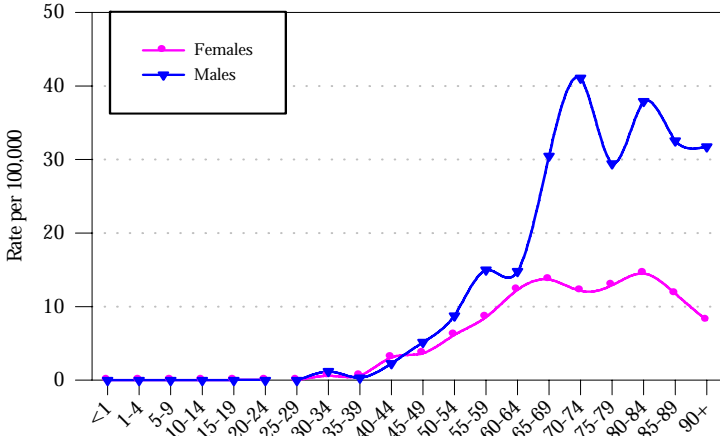
Cirrhosis and chronic liver disease attack a younger population than respiratory and circulatory diseases. Obstructive liver disease causes mortality in infants; other liver diseases begin to take their toll on people in their late twenties. Mortality from this cause peaks in the mid 70s for both males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

Figure 128: Mortality from Chronic Liver Disease and Cirrhosis in Alberta, 1986 - 2005



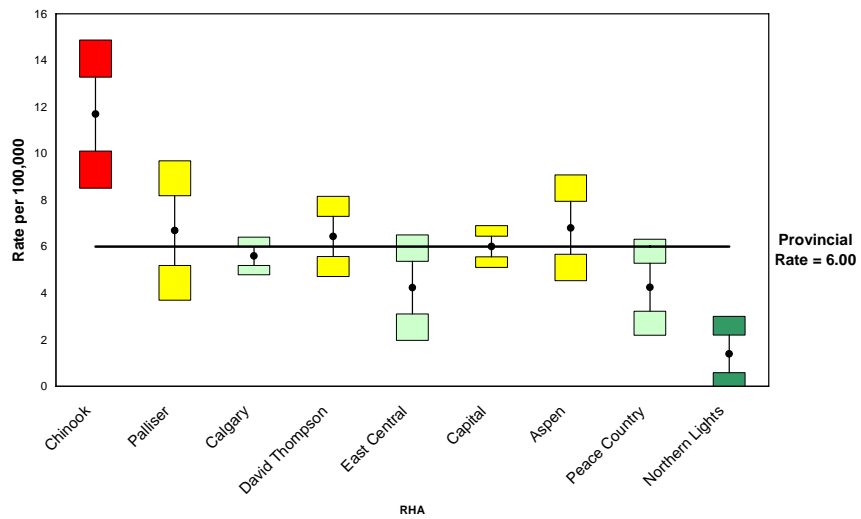
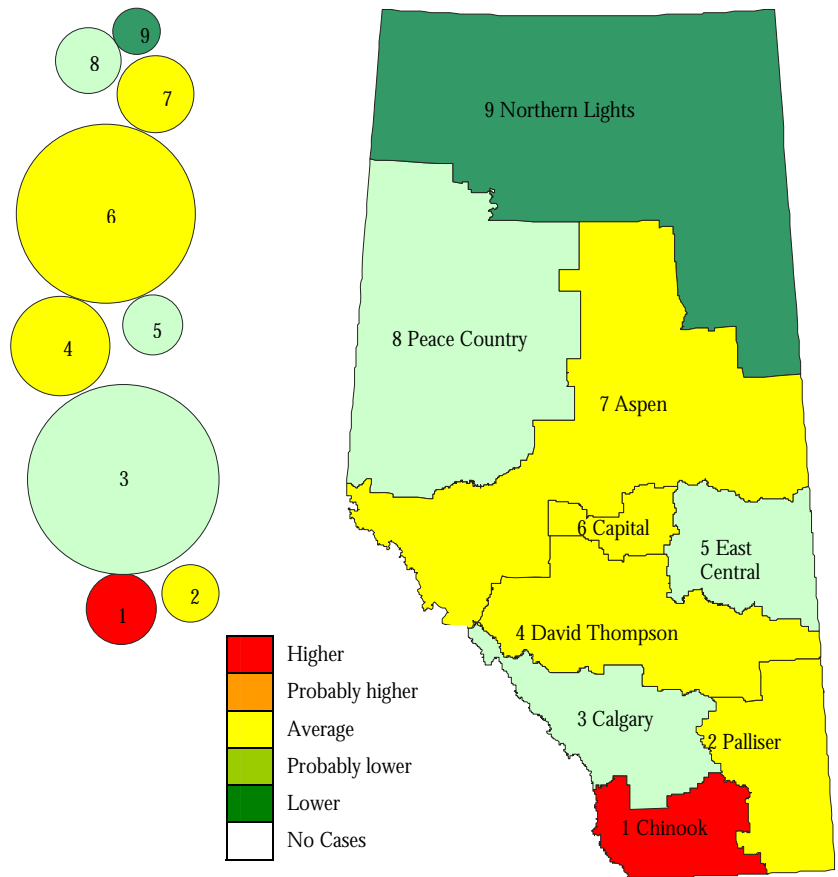
Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 129: Age-Specific Mortality from Chronic Liver Disease and Cirrhosis, 2003-05



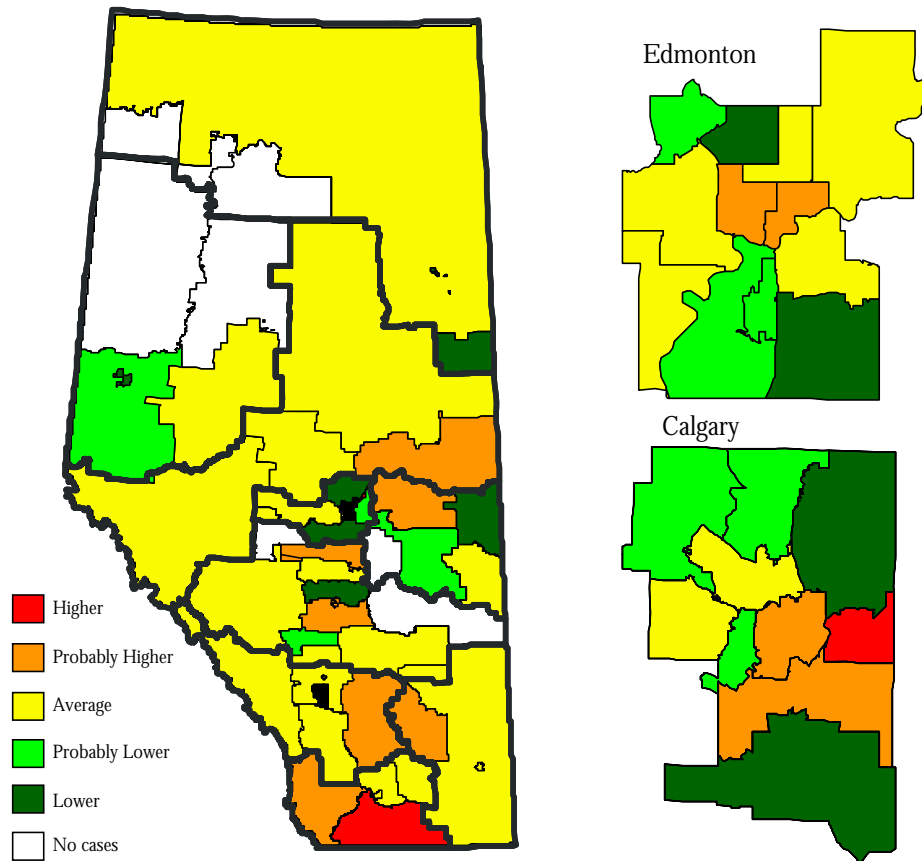
Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 130: Regional Differences in Chronic Liver Disease & Cirrhosis Mortality Rates, 2003-05



Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 131: Sub-Regional Differences in Chronic Liver Disease & Cirrhosis Mortality Rates, 2003–05



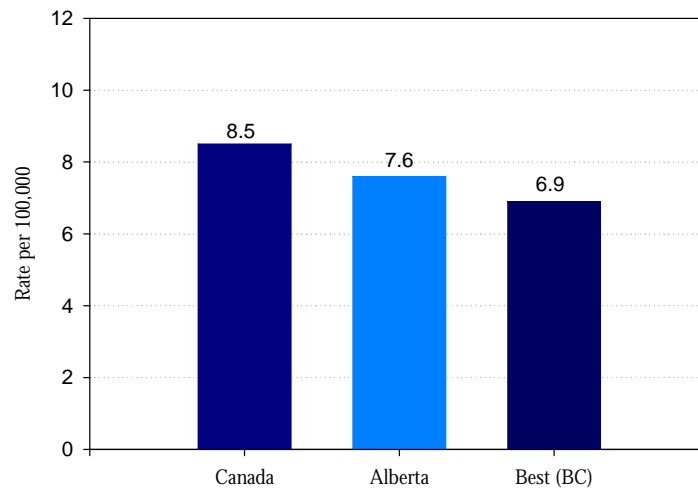
Source: Alberta Vital Statistics, Death File, October 2006 release

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 major causes include high blood pressure, diabetes, exposure to toxic substances and congenital anomalies.

In 2004, there were 253 deaths due to kidney disease in Alberta. The age-standardized mortality rate for Alberta was 7.6 per 100,000. This is less than the national average (8.5 per 100,000). British Columbia had the lowest provincial rate in Canada at 6.9 per 100,000.

Figure 132: Mortality Rates from Kidney Disease, 2004 (Alberta, Canada, Best Province)

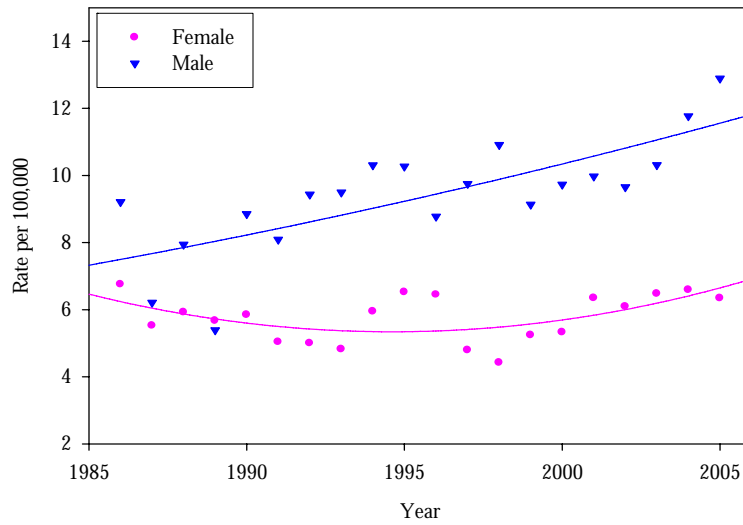


Source: Statistics Canada, Canadian Vital Statistics Database

Rates of mortality from kidney disease have been increasing for both males and females, though mortality for males has increased more than females. This increasing trend could be due to increasing rates of diabetes in the population. End-stage kidney disease requires a patient to be treated with dialysis or to undergo a kidney transplant.

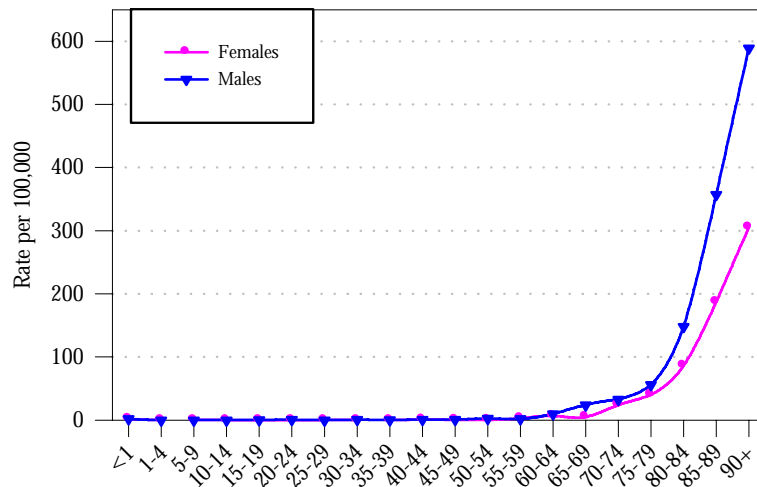
Rates are relatively constant for males and females by age group, except for the older age groups. Males are more likely than females to succumb to kidney disease after age 65.

Figure 133: Mortality Rates from Kidney Disease in Alberta, 1986 - 2005



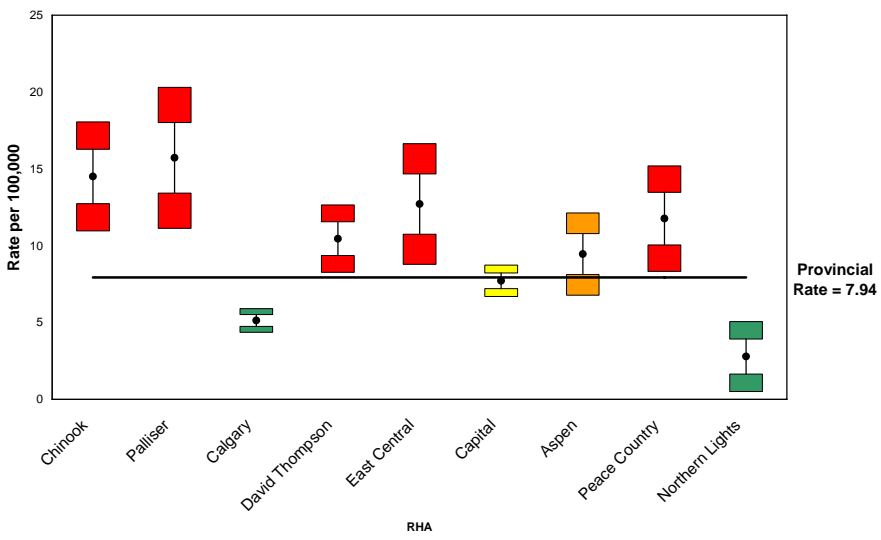
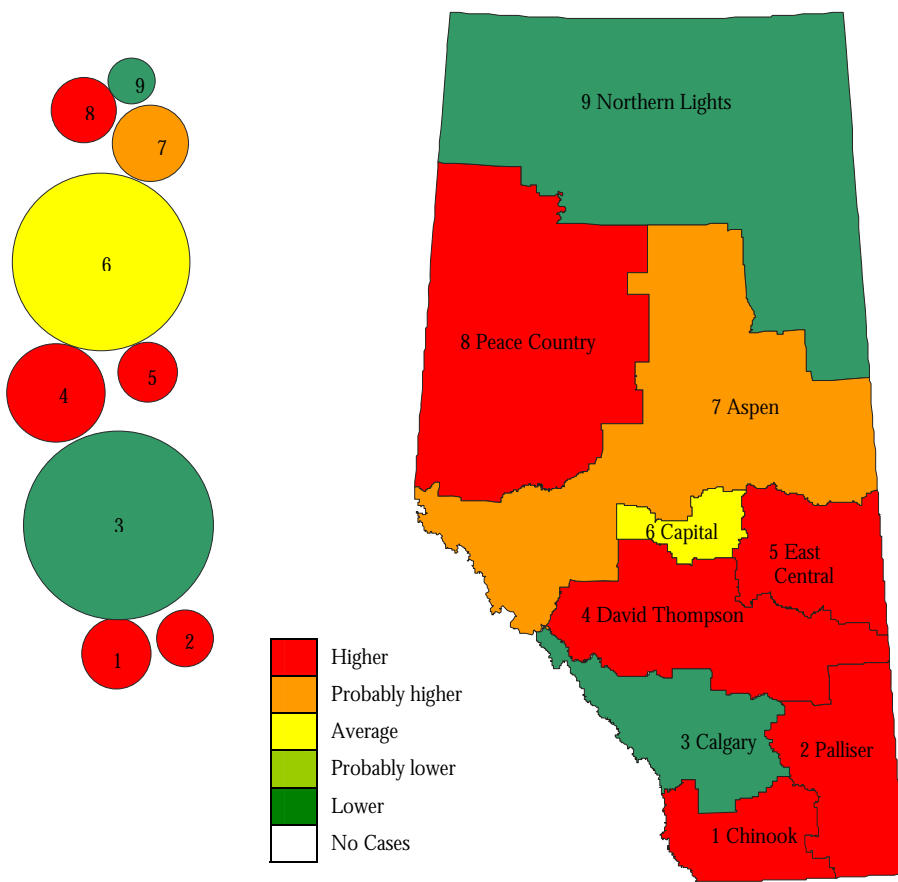
Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 134: Age-Specific Death Rates from Kidney Disease in Alberta, 2003-05



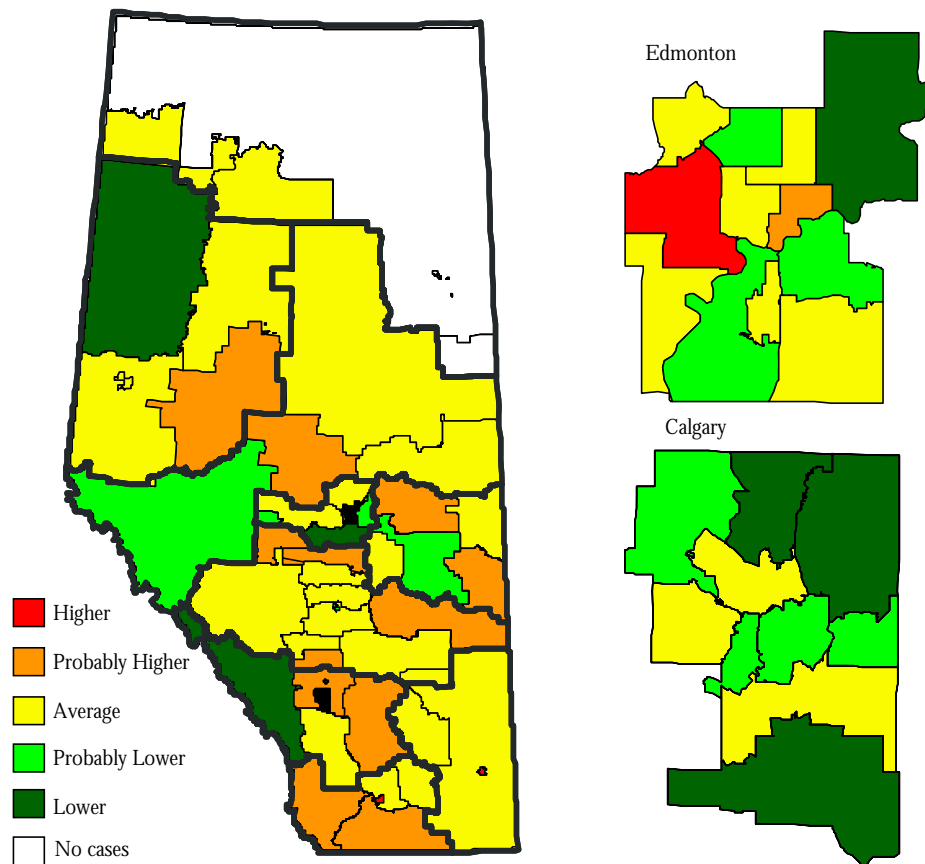
Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 135: Regional Difference in Kidney Disease Mortality Rates, 2003 - 05



Source: Alberta Vital Statistics, Death File, October 2006 release

Figure 136: Sub-Regional Difference in Kidney Disease Mortality Rates, 2003 – 05



Source: Alberta Vital Statistics, Death File, October 2006 release