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Morbidity and Mortality in Ottawa, 2012

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Executive summary

This report is one of a series of health status reports published by Ottawa Public Health (OPH). These comprehensive reports are an important part of the public health mandate to report on population health status. They provide the evidence necessary to identify trends and health issues of public health significance in Ottawa. Local evidence helps tailor planning and decision-making to enhance the health of the Ottawa population.

This particular report is an epidemiological overview of morbidity and mortality in the City of Ottawa, where possible compared to the rest of Ontario. These data support the Population Health Assessment and Surveillance Protocol of the Ontario Public Health Standards requirement to assess causes of mortality and morbidity. Indicators of morbidity and mortality include hospitalization rates, life expectancy and mortality rates.

Summary of findings

Ottawa residents tend to have lower risk of morbidity and mortality (illness and death) than do people living in the rest of Ontario. There have been reductions in Ottawa hospitalizations and deaths over the past decade for many health-related states. Despite this promising trend, many public health challenges remain, including high hospitalization rates for young children with asthma; mortality rates of pneumonia/influenza and Alzheimer's/dementia in seniors; and hospitalization rates for diabetes across all ages.

Morbidity

All-cause hospitalization rates (including chronic and infectious diseases, acute conditions and injuries) steadily decreased from 2002 to 2010, and were significantly lower in Ottawa than in the rest of Ontario.

- The highest proportion of hospitalizations from 2006 to 2010 came from women during pregnancy, childbirth and the postnatal period. Diseases of the circulatory system were the leading cause of hospitalization in men, and were the third leading cause in women following diseases of the digestive system.
- Hospitalizations from all cardiovascular diseases, ischemic heart disease (IHD), cerebrovascular disease, stroke, chronic obstructive pulmonary disease (COPD), diabetes, pneumonia/influenza and Alzheimer's/dementia were less common in Ottawa than in the rest of Ontario for both sexes in 2010.
- Hospitalizations from all cardiovascular diseases, IHD, cerebrovascular disease, stroke, diabetes, and pneumonia/influenza were significantly higher in Ottawa males than in Ottawa females in 2010. No sex differences were observed for asthma, COPD or Alzheimer's/dementia.
- Hospitalization rates increased with age and were highest in the oldest age groups for all profiled conditions except asthma, which had the highest hospitalization rates in children 1–4 years.

Executive summary

Life expectancy

In Ottawa in 2007, life expectancy at birth for females was 83.6 years and for males 79.6 years, and has increased over time for both sexes. These Ottawa estimates are similar to those for Ontario (83.0 years for women and 78.3 years for men).[1]

- At age 65, the life expectancy for females was 21.5 years and for males 18.6 years.
- The health-adjusted life expectancy (HALE) for Ottawa residents was 58.4 years for females and 57.2 years for males at 15 years. At 65 years, females were expected to live another 16.3 years in good health and males were expected to live 14.7 years in good health.

Mortality

There were 5,261 deaths in Ottawa in 2007. The age-standardized, all-cause mortality rate was 485.2 deaths per 100,000 persons in Ottawa in 2007, down 30% since 1986. Ottawa residents have had lower age-standardized rates of death, on average, than the rest of Ontario over this time.

- Between 1986 and 2007, age-standardized all-cause mortality rates among males were significantly higher than among females. However, sex differences in mortality are narrowing because male mortality rates are decreasing more rapidly than are female rates.
- Between 2003 and 2007, deaths from all cancers (defined as malignant neoplasms; ICD-10-CA: C00-C97) were greater than deaths from heart disease (ICD-10-CA: I00-I99, I11, I13, I20-I51).
- Between 2003 and 2007, IHD was the single leading cause of death in Ottawa for both males and females. Alzheimer's/dementia and lung cancer were in the top three causes of female death in 2006 and 2007, but from 2003 to 2005 they dropped from third to fourth leading causes. From 2003 to 2007, lung cancer and cerebrovascular disease remained the second and third leading causes of death in Ottawa males.
- Between 2003 and 2007, various conditions during the perinatal (pre- and post-childbirth) period were the leading cause of death in Ottawa children 0–4 years. Intentional self-harm (suicide) was the leading cause of death in both sexes 20–44 years. The leading cause of death in males 45–64 years was IHD; in females of the same age, it was lung cancer. The leading causes of death for seniors 65+ years mirrored overall mortality patterns, led by IHD in both sexes.
- Deaths from IHD, cerebrovascular disease, stroke and diabetes were less common in Ottawa than in the rest of Ontario. However, mortality rates were similar for Ottawa and the rest of Ontario for all cardiovascular diseases, COPD, pneumonia/influenza and Alzheimer's/dementia.
- In 2007, deaths from all cardiovascular diseases, IHD and diabetes were significantly higher in Ottawa males than in Ottawa females. No sex differences were observed for cerebrovascular disease, COPD, pneumonia/influenza or Alzheimer's/dementia in Ottawa. Prior to 2000, mortality rates for stroke were the same for both sexes. From 2000 to 2005, rates were higher in Ottawa males and, most recently (2006 –2007); rates were significantly higher in Ottawa females.

Guide to this report

Please see the glossary at the end of this document for a list of abbreviations and for definitions of terms and disease conditions. Please note that a "rest of Ontario rate" is not the same as an overall rate for the entire province, as it does not include Ottawa.

This report addresses overall morbidity and mortality in the City of Ottawa, and profiles selected chronic and infectious diseases. All data are presented using the most updated data sets available.

Age-standardized rates are used to compare trends for Ottawa with those in the rest of Ontario, and to compare rates for females with males over time. Rates are standardized to the 1991 Canadian population. Age-standardized rates allow us to compare Ottawa meaningfully with the rest of Ontario (i.e., Ontario-less-Ottawa) by accounting for differences in age distributions between populations. It is important to note that these rates do not represent the actual observed rate in Ottawa or the rest of Ontario, and therefore are not an accurate indicator of risk. Crude rates should be used to assess actual risk in Ottawa.

Age- and sex-specific crude rates describe differences between age groups and sexes within Ottawa. An average of the last five years of available data has been used to compare ages and sexes. Age-specific groups for hospitalization and mortality were chosen based on statistical and clinical significance between five-year age groups and therefore may differ for the profiled diseases. Rates and counts were not reported when there were fewer than five cases.

Data presentation

Chronic and infectious diseases reported on reflect the leading causes of morbidity and mortality in Ottawa. However, this report does not include major conditions that merit special topic-specific reports such as cancers, injuries (including self-harm/suicide), sexually transmitted diseases and tuberculosis. (Recent health status reports on these conditions are available from Ottawa Public Health).

Each disease profile in this report summarizes important characteristics, and addresses any significant changes in morbidity or mortality over time, in comparison with the rest of Ontario, and by sex and age. The following tables and graphs are included in the report:

Leading causes of hospitalization, City of Ottawa

These tables provide the top 10 leading causes of hospitalizations overall (male and female), by sex, and by sex and age group, and also provide the overall proportion of all hospitalizations from each cause using the last five years of available data.

Leading causes of death, City of Ottawa

These tables provide the top 10 leading causes of death overall (male and female), by sex, and by sex and age group, and also provide the overall proportion of all deaths from each cause using the last five years of available data.

Executive summary

Age-standardized hospitalization ratios for selected chronic conditions and infectious diseases by sex, Ottawa, 2010

These figures provide age-standardized hospitalization ratios (SHRs) for the selected chronic conditions and infectious diseases in both females and males in the City of Ottawa in 2010. The figures compare the hospitalization rates in the City of Ottawa with rates in the rest of Ontario. If the confidence intervals (CIs) include 1.0, Ottawa rates are not meaningfully different from those in the rest of Ontario. When the SHRs and their CIs are above or below the 1.0, there are significant differences (higher or lower) between rates in Ottawa and in the rest of Ontario.

Age-standardized mortality ratios for selected chronic conditions and infectious diseases by sex, Ottawa, 2007

These figures provide age-standardized mortality ratios (SMRs) for the selected chronic conditions and infectious diseases in both females and males in the City of Ottawa in 2007. The figures compare the mortality rates in the City of Ottawa with those in the rest of Ontario. If the confidence intervals (CIs) include 1.0, mortality rates are not meaningfully different from those in the rest of Ontario. When either the ratio or the CIs equal 1.0, Ottawa rates are not meaningfully different from those in the rest of Ontario. When the SMRs and their CIs are above or below the 1.0, there are significant differences (higher or lower) between rates in Ottawa and in the rest of Ontario.

Age-standardized hospitalization rates, City of Ottawa and the rest of Ontario, 2002–2010

These figures compare the age-standardized rates of hospitalization in Ottawa with the rest of Ontario over an eight-year period. Case counts in the rest of Ontario were calculated by subtracting the number of Ottawa cases from the total number of Ontario cases and then used to calculate rates. Any significant changes over time are discussed in the text. Significant differences were determined using rates and confidence limits.

Age-standardized mortality rates, City of Ottawa and the rest of Ontario, 1986–2007

These figures compare the age-standardized rates of mortality in Ottawa with the rest of Ontario over a 21-year period (where possible). Case counts in the rest of Ontario were calculated by subtracting the number of Ottawa cases from the total number of Ontario cases and were used to calculate rates. Any significant changes over time are discussed in the text. Significant differences were determined using rates and confidence limits.

Age-standardized hospitalization rates by sex, City of Ottawa, 2002–2010

These figures compare the age-standardized rates of hospitalization in Ottawa males to the rates in Ottawa females over an eight-year period. Any significant differences between sexes and over time are discussed in the text, and are determined using rates and their confidence limits.

Executive summary

Age-standardized mortality rates by sex, City of Ottawa and the rest of Ontario, 1986–2007

These figures compare age-standardized mortality rates in Ottawa males to the rates in Ottawa females over a 21-year period (when possible). Any significant differences between sexes and over time are discussed in the text and are determined using rates and their confidence limits.

Age-specific hospitalization rates by sex, City of Ottawa, 2006–2010 average

These figures compare crude (i.e., observed) rates of hospitalization across age groups and by sex (female and male). Age groups were chosen based on statistical and clinical meaningfulness. The rates are presented using an average of the last five years of available data (2006–2010). Case counts are presented below the graph. Any significant differences (as determined by rates and confidence limits) between age groups or sexes are discussed in the text.

Age-specific mortality rates by sex, City of Ottawa, 2003–2007 average

These figures compare crude (i.e. observed) rates of mortality across age groups and by sex (male and female). Age groups were chosen based on statistical and clinical meaningfulness. The rates are presented using an average of the last five years of available data (2003–2007). Case counts are presented below the graph. Any significant differences (as determined by rates and confidence limits) between age groups or sexes are discussed in the text.

Premature Mortality (Potential Years of Life Lost)

These figures compare the potential years of life lost (PYLL) due to the leading causes of death in Ottawa for males and females individually. PYLL is a measure of premature mortality. It represents the number of years not lived by an individual who died before age 75, and gives better insight into the causes of early death.

Data sources

Hospitalization rates are derived from the Discharge Abstract Database (Canadian Institute of Health Information), which gives data by fiscal year (March 01–April 30) for 2002/2003 to 2010/2011. Mortality data (1986–2007) are from the Vital Statistics database (Office of the Registrar General).

Prevalence of selected chronic conditions and health status data used to calculate health-adjusted life expectancy are based on data from 2009/2010 captured in the Canadian Community Health Survey (CCHS) of Statistics Canada. These data are based on self-reports.

To protect the confidentiality of all Ottawa residents, small numbers (fewer than five cases) that would make it possible to identify any individual were suppressed.

Executive summary

Data considerations and limitations

The morbidity and mortality data in this report should be considered separately. Persons who are admitted to hospital and die while in hospital are not removed from the hospitalization data. Thus, it would not be appropriate to add together hospitalization and death data as presented in this report.

Live births (newborns) and still-births are excluded from hospitalization data.

Hospitalization data for self-harm acts, Alzheimer's/dementia and other mental-health-related illness are incomplete due to changes in reporting mental disorders. Since the fiscal year 2006/2007, patients with mental disorders who occupy psychiatric beds in hospitals have not been reported in the Discharge Abstract Database but instead have been reported to the Ontario Mental Health Reporting System.

Leading causes of hospitalization are categorized using ICD-10 chapter from fiscal years 2006/2007 to 2010/2011. Leading causes of death are categorized using the Association of Public Health Epidemiologists in Ontario's Leading Cause Groups for Mortality. They are coded using the 10th version of the International Classification of Diseases (ICD-10) codes from 2003 to 2007.[2] For the select profiled chronic conditions and injuries, hospitalization data is presented using ICD-9 prior to fiscal year 2002/2003 and ICD-10 for 2002/2003 to 2010/2011. Mortality data is presented using ICD-9 from 1986 to 1999 and ICD-10 from 2000 onwards. ICD codes were changed to provide more detailed information about the type or site of diseases. Changes in the codes can have important implications for the analysis of trends over time and differences between ICD-9 and ICD-10 categorizations should be considered accordingly.[3]

Overall morbidity

Morbidity refers to any departure from health or well-being, but often refers to a state of illness, disease or injury in a population.[4] Overall morbidity is difficult to quantify since no single indicator captures all aspects. Nevertheless, several sources of information can depict the extent of morbidity in a community. This report uses self-reported prevalence of chronic conditions, health-adjusted life expectancy (HALE), all-cause hospitalization rates and standardized hospitalization ratios (SHRs) to report the burden of morbidity in Ottawa. It is important to note that hospitalizations as defined in this report are based on inpatient data and do not include day procedures. Hospitalization data can include multiple admissions; therefore data can be influenced by the availability of services in an area and the practice patterns of the service providers. Hospitalizations as a measure of morbidity mainly reflect the middle to most severe range of morbidity.

Prevalence of selected chronic conditions

Approximately 413,000 or 54.4% (± 3.2%) of Ottawa residents aged 12 and older reported having at least one chronic condition in 2009/2010. Females (59% ± 4.5%) were significantly more likely than males (49.5% ± 4.7%) to report having at least one chronic disease. Many (86% ± 4.5%) Ottawa seniors (65+ years) reported having at least one chronic condition.

Among Ottawa residents aged 12 and older, the five most common self-reported chronic conditions are back problems, arthritis, high blood pressure, asthma, and migraine headaches (Table 1). The proportion of Ottawa residents reporting asthma was significantly higher than the proportion in the rest of Ontario, while heart disease and high blood pressure were significantly lower in Ottawa than in the rest of Ontario.

A different picture emerges for the most commonly reported chronic conditions among Ottawa seniors 65+ years (Table 2). While arthritis, high blood pressure and back problems continue to be prevalent, diabetes and heart disease replace asthma and migraine headaches in the top five most common chronic conditions. In 2009/2010, there were no statistically significant differences in self-reported chronic diseases between Ottawa seniors and those living in the rest of Ontario.

Overall morbidity

Table 1: Prevalence of select chronic conditions 12+ years, Ottawa and the rest of Ontario, 2009/2010

Chronic Condition	Ottawa		Ontario less Ottawa
	% (±95% CI)	Population prevalence	% (±95% CI)
Back problems	19.0 (±2.6)	144,200	19.4 (±0.7)
Arthritis	16.9 (±1.9)	128,100	16.7 (±0.6)
High blood pressure	14.5 (±1.9)	110,000	17.6 (±0.6)
Asthma	11.3 (±2.3)	85,500	8.2 (±0.5)
Migraine	10.6 (±9.6)	80,800	11.2 (±0.6)
Diabetes	6.0 (±1.7)	45,300	6.9 (±0.4)
Bowel	5.8 (±1.4)	44,100	4.1 (±0.3)
Heart disease	3.5 (±1.0)	26,600	5.0 (±0.3)
Cancer	2.4 (±0.9)*	18,200	1.8 (±0.2)
Bronchitis, emphysema, COPD	2.3 (±0.9)*	17,500	2.8 (±0.2)
Ulcers	2.2 (±0.8)*	16,800	2.8 (±0.3)
Effects of stroke	0.7 (±0.4)*	4,900	1.1 (±0.1)

Data source: Canadian Community Health Survey, 2009/2010
*Interpret with caution; high sampling variability, COPD – chronic obstructive pulmonary disease

Overall morbidity

Table 2. Prevalence of select chronic conditions 65+ years, Ottawa and the rest of Ontario, 2009/2010

Chronic Condition	Ottawa		Ontario less Ottawa
	% (±95% CI)	Population prevalence	% (±95% CI)
Arthritis	51.2 (±6.5)	53,600	46.3 (±1.6)
High blood pressure	43.3 (±6.3)	45,300	49.8 (±1.7)
Back problems	29.5 (±6.7)	30,900	28.9 (±1.4)
Diabetes	14.9 (±4.3)	15,500	19.7 (±1.4)
Heart disease	13.9 (±4.3)	14,500	19.2 (±1.2)
Bowel	10.2 (±4.4)*	10,600	6.4 (±0.7)
Bronchitis, emphysema, COPD	7.3 (±3.2)*	7,600	7.2 (±0.7)
Cancer	6.5 (±2.9)	6,800	6.9 (±0.8)
Asthma	6.4 (±2.9)*	6,700	7.8 (±0.7)
Migraine	5.8 (±2.9)*	6,000	4.4 (±0.7)
Ulcers	4.3 (±2.4)*	4,400	3.8 (±0.6)
Effects of stroke	2.8 (±1.6)*	3,000	4.5 (±0.6)

Data source: Canadian Community Health Survey, 2009/2010
*Interpret with caution; high sampling variability, COPD – Chronic Obstructive Pulmonary Disease

Hospitalization

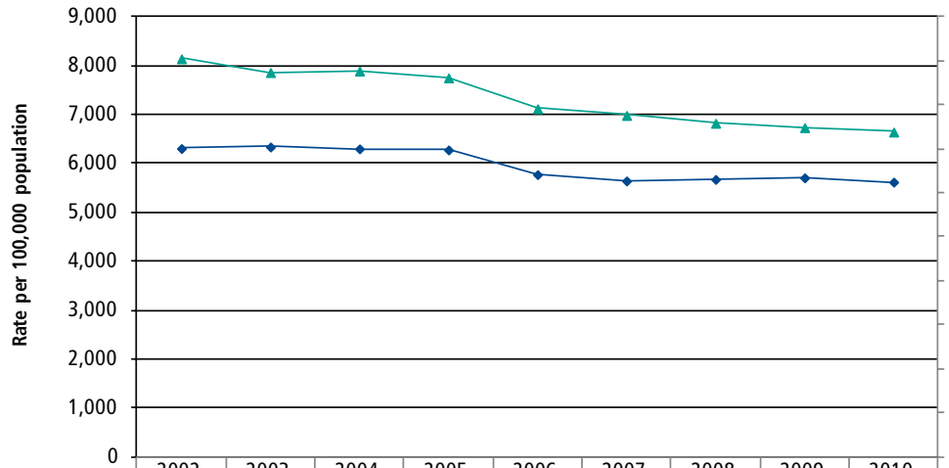
All-cause hospitalization

From 2002 to 2010, all-cause hospitalization rates (including all chronic and infectious diseases, acute conditions and injuries) steadily decreased by 11% and were significantly lower in Ottawa than in the rest of Ontario (Figure 1). In 2010, the all-cause hospitalization rate in Ottawa was 5,619.1 per 100,000 population (53,585 hospitalizations).

In Ottawa, female hospitalization rates have historically been significantly higher than male rates (Figure 2). In 2010, the female hospitalization rate from all causes was 6,768.8 per 100,000 population and the male rate was 4,506.6 per 100,000 population. Overall hospitalization rates are generally higher in females than males, as a high proportion of hospitalizations are due to pregnancy, childbirth and the postpartum period.

Five-year average (2006-2010) hospitalization rates from all causes show that females 20–54 years had significantly higher rates of hospitalization than did males of the same age, whereas males had significantly higher hospitalization rates within all other age groups (Figure 3).

Figure 1. Age-standardized hospitalization rates and counts of all causes, Ottawa and the rest of Ontario, 2002–2010



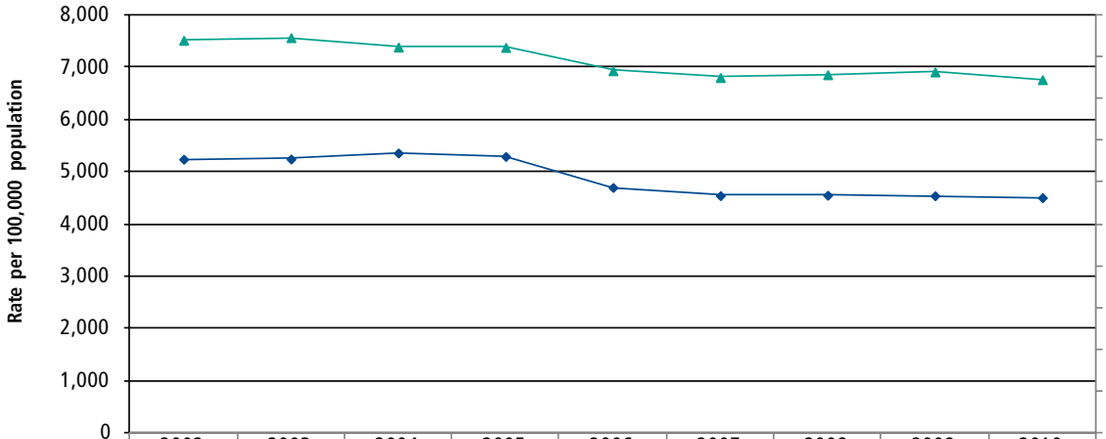
	2002	2003	2004	2005	2006	2007	2008	2009	2010
Ottawa rate	6,305.7	6,336.8	6,299.2	6,276.8	5,772.5	5,643.3	5,674.6	5,706.5	5,619.1
Ontario less Ottawa rate	8,138.6	7,858.5	7,888.2	7,748.8	7,118.2	6,981.5	6,821.4	6,731.7	6,641.7
Ottawa hospitalizations	52,134	53,004	53,546	54,003	50,471	50,209	51,648	53,016	53,585
Ontario-less-Ottawa hospitalizations	945,499	927,884	949,496	947,629	889,156	886,047	882,890	886,147	893,283

Year

Source: Ontario inpatient discharges 2002-2010, IntelliHEALTH, Extracted November 3, 2011
Ontario MOHLTC All Cause Hospitalizations (ICD-10-CA: All Chapters)
Data note: Hospitalization rates are age-standardized to the 1991 Canadian population

Overall morbidity

Figure 2. Age-standardized hospitalization rates and counts of all causes by sex, Ottawa, 2002–2010

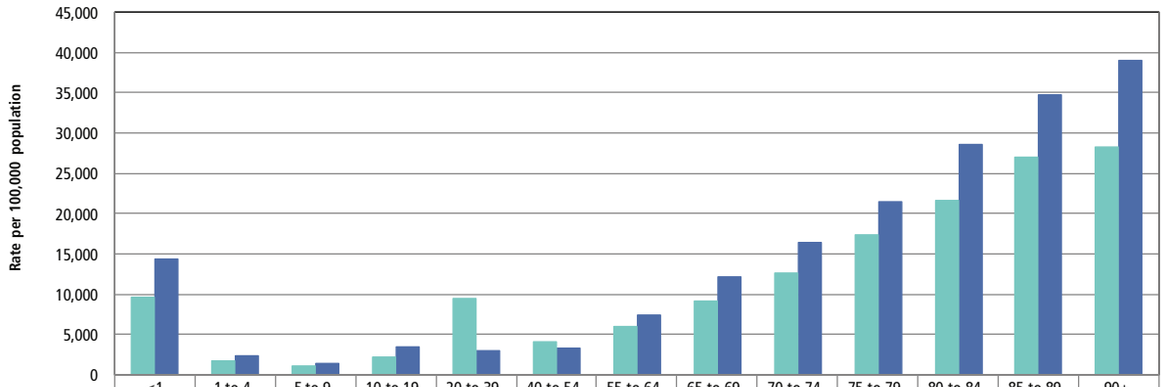


	2002	2003	2004	2005	2006	2007	2008	2009	2010
Female rate	7,522.0	7,573.0	7,392.9	7,385.2	6,939.0	6,809.4	6,862.9	6,915.5	6,768.8
Male rate	5,244.3	5,247.0	5,362.3	5,296.6	4,702.0	4,545.6	4,553.7	4,543.4	4,506.6
Female counts	32,057	32,612	32,206	32,451	30,885	30,785	31,582	32,578	32,791
Male counts	20,077	20,392	21,340	21,552	19,586	19,424	20,066	20,438	20,794

Year

Source: Ontario inpatient discharges 2002-2010, IntelliHEALTH, Extracted November 3, 2011
Ontario MOHLTC All Cause Hospitalizations (ICD-10-CA: All Chapters)
Data note: Hospitalization rates are age-standardized to the 1991 Canadian population

Figure 3. Age-specific hospitalization rates and counts of all causes by sex, Ottawa, 2006–2010 average



	<1	1 to 4	5 to 9	10 to 19	20 to 39	40 to 54	55 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90+
Female rate	9,554.4	1,682.9	1,073.1	2,184.6	9,420.0	4,001.7	6,034.1	9,156.9	12,542.2	17,303.1	21,678.5	27,068.6	28,294.3
Male rate	14,344.9	2,284.4	1,346.2	3,472.6	3,024.4	3,264.0	7,361.7	12,153.4	16,456.3	21,432.0	28,500.0	34,706.6	39,019.0
Female counts	2,170	1,536	1,242	5,863	60,382	20,835	15,162	7,554	8,363	10,145	10,454	9,124	5,791
Male counts	3,392	2,163	1,602	4,524	9,545	16,753	17,517	8,967	9,272	9,513	8,556	5,855	2,649

Age group

Source: Ontario inpatient discharges 2002-2010, IntelliHEALTH, Extracted November 3, 2011
Ontario MOHLTC All Cause Hospitalizations (ICD-10-CA: All Chapters)

Overall morbidity

Leading causes of hospitalization

Tables 3, 4, 5 and 6 depict leading causes of hospitalization.

From 2006 to 2010, the leading cause of hospitalization in Ottawa was pregnancy, childbirth and the puerperium (the period immediately after childbirth when the womb is returning to its normal size, lasting approximately six weeks), followed by diseases of the circulatory system and diseases of the digestive system (Table 3).

Diseases of the circulatory system were the leading cause of hospitalization in men followed by diseases of the digestive system, and injury, poisoning and other consequences of external causes (Table 5). After pregnancy, childbirth and the puerperium, diseases of the digestive system and diseases of the circulatory system rounded out the top three reasons for women being hospitalized in Ottawa (Table 4).

Table 6 displays leading causes of hospitalization by age and sex. In infants and children 0–4 years, the highest proportion of hospitalizations has historically been attributed to conditions occurring during the puerperium and diseases of the respiratory system.

From 2006 to 2010, Ottawa males 5–19 years were most frequently hospitalized because of diseases of the digestive system, injury, poisoning and other consequences of external causes. Diseases of the respiratory system, and mental and behavioural disorders were also responsible for a high proportion of male hospitalizations in this age group. From 2006 to 2009, Ottawa females 5–19 years were most frequently hospitalized because of pregnancy, childbirth and the puerperium. In 2010, the leading cause of hospitalization for females in this age group was mental and behavioural disorders. ***Note:*** *mental health hospitalizations are incomplete due to changes in reporting, and underrepresent the true burden of illness*.

Excluding female hospitalizations for pregnancy, childbirth and the puerperium, males and females 20–44 years were most frequently hospitalized because of diseases of the digestive system. Injury, poisoning and other consequences of external causes, and diseases of the circulatory system have consistently been in the top three causes of male hospitalization in this age group. “Factors influencing health status and contacts with health services” (a catchall category that includes routine health investigations and procedures, including reproductive consultations) has been in the top three causes of female hospitalizations in this age group.

Among males 45–64 years, the leading cause of hospitalization in 2006–2010 was diseases of the circulatory system, with diseases of the digestive system and neoplasms rounding out the top three causes. From 2006 to 2010, the leading cause of hospitalization in females 45–64 years was neoplasms, followed by diseases of the digestive system.

From 2006 to 2010, diseases of the circulatory system were the leading cause of hospitalization in seniors aged 65+ years for both sexes. The top three causes of hospitalization in seniors mirror the three leading causes of death for this age group.

Overall morbidity

Key to tables 3, 4, 5, 6

- **Blood/immune**=Diseases of blood & blood-forming organs and disorders involving the immune mechanism
- **Circulatory**=Diseases of the circulatory system
- **Congenital**=Congenital malformations, deformations and chromosomal anomalies
- **Digestive**=Diseases of the digestive system
- **Genitourinary**=Diseases of the genitourinary system
- **Health factors**=Factors influencing health status and contacts with health services
- **Infectious**=Certain infectious and parasitic diseases
- **Injury/external**=Injury, poisoning and other consequences of external causes
- **Mental**=Mental & behavioural disorders
- **Metabolic**=Endocrine, nutritional and metabolic diseases
- **Musculoskeletal**=Diseases of the musculoskeletal system & connective tissue
- **Neoplasms**=Neoplasms
- **Nervous**=Diseases of the nervous system
- **Obstetrical**=Pregnancy, childbirth and the puerperium
- **Perinatal**=Certain conditions originating in perinatal period
- **Respiratory**=Diseases of the respiratory system
- **Signs/symptoms**=Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified
- **Skin**=Diseases of skin and subcutaneous tissue

T **Denotes a tie**

Overall morbidity

Table 3: Leading causes of hospitalization,* all ages, Ottawa, 2006–2010

	2006		2007		2008		2009		2010	
Rank	**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**	
1	Obstetrical	9,841 (19.5%)	Obstetrical	9,869 (19.7%)	Obstetrical	10,341 (20.0%)	Obstetrical	10,449 (19.7%)	Obstetrical	10,303 (19.2%)
2	Circulatory	6,496 (12.9%)	Circulatory	6,324 (12.6%)	Circulatory	6,119 (11.8%)	Circulatory	6,163 (11.6%)	Circulatory	6,300 (11.8%)
3	Digestive	5,189 (10.3%)	Digestive	5,022 (10.0%)	Digestive	5,227 (10.1%)	Digestive	5,509 (10.4%)	Digestive	5,600 (10.5%)
4	Injury/external	4,535 (9.0%)	Injury/external	4,599 (9.2%)	Injury/external	4,678 (9.1%)	Injury/external	4,618 (8.7%)	Injury/external	4,532 (8.5%)
5	Neoplasms	4,352 (8.6%)	Neoplasms	4,335 (8.6%)	Neoplasms	4,249 (8.2%)	Neoplasms	4,145 (7.8%)	Neoplasms	4,228 (7.9%)
6	Respiratory	3,768 (7.5%)	Respiratory	3,365 (6.7%)	Respiratory	3,589 (6.9%)	Respiratory	3,966 (7.5%)	Respiratory	3,824 (7.1%)
7	Musculoskeletal	3,246 (6.4%)	Musculoskeletal	3,211 (6.4%)	Musculoskeletal	3,450 (6.7%)	Musculoskeletal	3,231 (6.1%)	Musculoskeletal	3,288 (6.1%)
8	Genitourinary	2,966 (5.9%)	Genitourinary	3,016 (6.0%)	Health factors	3,143 (6.1%)	Health factors	3,200 (6.0%)	Health factors	3,277 (6.1%)
9	Health factors	2,802 (5.6%)	Health factors	2,970 (5.9%)	Genitourinary	3,102 (6.0%)	Genitourinary	3,120 (5.9%)	Genitourinary	3,189 (6.0%)
10	Signs/symptoms	1,879 (3.8%)	Signs/symptoms	1,949 (3.9%)	Signs/symptoms	2,059 (4.0%)	Signs/symptoms	2,388 (4.5%)	Signs/symptoms	2,533 (4.7%)
Total	**50,471**		**50,209**		**51,649**		**53,018**		**53,585**	

Source: Ontario Hospitalization Data 2006-2010, IntelliHEALTH, Extracted December 2, 2011, Health Planning Branch, Ontario MOHLTC
*External causes of injury (e.g., falls, MVTCs, etc.) are excluded from the leading causes of hospitalization.

Table 4: Leading causes of hospitalization,* females, Ottawa, 2006–2010

	2006		2007		2008		2009		2010	
Rank	**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**	
1	Obstetrical	9,841 (31.9%)	Obstetrical	9,869 (32.1%)	Obstetrical	10,341 (32.7%)	Obstetrical	10,449 (32.1%)	Obstetrical	10,303 (31.4%)
2	Circulatory	2,711 (8.8%)	Circulatory	2,626 (8.5%)	Digestive	2,596 (8.2%)	Digestive	2,737 (8.4%)	Digestive	2,741 (8.4%)
3	Digestive	2,615 (8.5%)	Digestive	2,544 (8.3%)	Injury/external	2,505 (7.9%)	Circulatory	2,570 (7.9%)	Circulatory	2,684 (8.2%)
4	Neoplasms	2,334 (7.6%)	Injury/external	2,376 (7.7%)	Circulatory	2,477 (7.8%)	Injury/external	2,394 (7.3%)	Injury/external	2,381 (7.3%)
5	Injury/external	2,294 (7.4%)	Neoplasms	2,376 (7.7%)	Neoplasms	2,319 (7.3%)	Neoplasms	2,338 (7.2%)	Neoplasms	2,342 (7.1%)
6	Respiratory	1,931 (6.3%)	Health factors	1,864 (6.1%)	Musculoskeletal	1,964 (6.2%)	Respiratory	2,056 (6.3%)	Health factors	1,926 (5.9%)
7	Genitourinary	1,859 (6.0%)	Musculoskeletal	1,834 (6.0%)	Health factors	1,889 (6.0%)	Health factors	1,979 (6.1%)	Genitourinary	1,920 (5.9%)
8	Musculoskeletal	1,787 (5.8%)	Genitourinary	1,820 (5.9%)	Genitourinary	1,855 (5.9%)	Musculoskeletal	1,870 (5.7%)	Musculoskeletal	1,908 (5.8%)
9	Health factors	1,755 (5.7%)	Respiratory	1,689 (5.5%)	Respiratory	1,767 (5.6%)	Genitourinary	1,832 (5.6%)	Respiratory	1,853 (5.7%)
10	Signs/symptoms	975 (3.2%)	Signs/symptoms	1,002 (3.3%)	Signs/symptoms	1,005 (3.2%)	Signs/symptoms	1,216 (3.7%)	Signs/symptoms	1,322 (4.0%)
Total	**30,885**		**30,782**		**31,581**		**32,578**		**32,791**	

Source: Ontario Hospitalization Data 2006-2010, IntelliHEALTH, Extracted December 2, 2011, Health Planning Branch, Ontario MOHLTC
*External causes of injury (e.g., falls, MVTCs, etc.) are excluded from the leading causes of hospitalization.

Table 5: Leading causes of hospitalization,* males, Ottawa, 2006–2010

	2006		2007		2008		2009		2010	
Rank	**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**	
1	Circulatory	3,785 (19.3%)	Circulatory	3,698 (19.0%)	Circulatory	3,642 (18.2%)	Circulatory	3,593 (17.6%)	Circulatory	3,616 (17.4%)
2	Digestive	2,574 (13.1%)	Digestive	2,478 (12.8%)	Digestive	2,631 (13.1%)	Digestive	2,772 (13.6%)	Digestive	2,859 (13.7%)
3	Injury/external	2,241 (11.4%)	Injury/external	2,223 (11.4%)	Injury/external	2,173 (10.8%)	Injury/external	2,224 (10.9%)	Injury/external	2,151 (10.3%)
4	Neoplasms	2,018 (10.3%)	Neoplasms	1,959 (10.1%)	Neoplasms	1,930 (9.6%)	Respiratory	1,910 (9.3%)	Respiratory	1,971 (9.5%)
5	Respiratory	1,837 (9.4%)	Respiratory	1,676 (8.6%)	Respiratory	1,822 (9.1%)	Neoplasms	1,807 (8.8%)	Neoplasms	1,886 (9.1%)
6	Musculoskeletal	1,459 (7.4%)	Musculoskeletal	1,377 (7.1%)	Musculoskeletal	1,486 (7.4%)	Musculoskeletal	1,361 (6.7%)	Musculoskeletal	1,380 (6.6%)
7	Genitourinary	1,107 (5.7%)	Genitourinary	1,196 (6.2%)	Health factors	1,254 (6.3%)	Genitourinary	1,288 (6.3%)	Health factors	1,351 (6.5%)
8	Health factors	1,047 (5.3%)	Health factors	1,106 (5.7%)	Genitourinary	1,247 (6.2%)	Health factors	1,221 (6.0%)	Genitourinary	1,269 (6.1%)
9	Signs/symptoms	904 (4.6%)	Signs/symptoms	947 (4.9%)	Signs/symptoms	1,054 (5.3%)	Signs/symptoms	1,172 (5.7%)	Signs/symptoms	1,211 (5.8%)
10	Metabolic	503 (2.6%)	Metabolic	546 (2.8%)	Metabolic	550 (2.7%)	Infectious	520 (2.5%)	Infectious	571 (2.7%)
Total	**19,586**		**19,420**		**20,063**		**20,438**		**20,793**	

Source: Ontario Hospitalization Data 2006-2010, IntelliHEALTH, Extracted December 2, 2011, Health Planning Branch, Ontario MOHLTC
*External causes of injury (e.g., falls, MVTCs, etc.) are excluded from the leading causes of hospitalization.

Table 6a: Leading causes of hospitalization, females, 0–4 years, Ottawa, 2006–2010

	2006		2007		2008		2009		2010	
Rank	**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**	
1	Respiratory	282 (27.8%)	Respiratory	258 (25.3%)	Respiratory	260 (24.4%)	Perinatal	331 (26.3%)	Perinatal	301 (25.2%)
2	Perinatal	191 (18.8%)	Perinatal	219 (21.5%)	Perinatal	247 (23.2%)	Respiratory	306 (24.3%)	Respiratory	290 (24.3%)
3	Congenital	101 (10.0%)	Congenital	119 (11.7%)	Congenital	114 (10.7%)	Congenital	139 (11.0%)	Congenital	130 (10.9%)
4	Digestive	80 (7.9%)	Digestive	83 (8.2%)	Digestive	75 (7.0%)	Digestive	68 (5.4%)	Health factors	74 (6.2%)
5	Injury/external	63 (6.2%)	Injury/external	53 (5.2%)	Injury/external	58 (5.4%)	Health factors	66 (5.2%)	Digestive	68 (5.7%)
6	Genitourinary	50 (4.9%)	Infectious	42 (4.1%)	Signs/symptoms	57 (5.3%)	Injury/external	57 (4.5%)	Injury/external	56 (4.7%)
7	Signs/symptoms	49 (4.8%)	Genitourinary	40 (3.9%)	Infectious	50 (4.7%)	Infectious	56 (4.4%)	Infectious	49 (4.1%)
8	Infectious	41 (4.0%)	Signs/symptoms	39 (3.8%)	Genitourinary	43 (4.0%)	Signs/symptoms	53 (4.2%)	Signs/symptoms	48 (4.0%)
9	Health factors	36 (3.5%)	Health factors	37 (3.6%)	Health factors	42 (3.9%)	Genitourinary	42 (3.3%)	Nervous	43 (3.6%)
10	Nervous	36 (3.5%)	Nervous	31 (3.0%)	Blood/immune	22 (2.1%)	Nervous	39 (3.1%)	Blood/immune	27 (2.3%)
Total	**1,015**		**1,018**		**1,066**		**1,259**		**1,194**	

Table 6b: Leading causes of hospitalization, males, 0–4 years, Ottawa, 2006–2010

	2006		2007		2008		2009		2010	
Rank	**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**	
1	Respiratory	202 (28.8%)	Perinatal	145 (21.7%)	Respiratory	185 (24.6%)	Respiratory	202 (25.4%)	Perinatal	216 (27.4%)
2	Perinatal	117 (16.7%)	Respiratory	134 (20.1%)	Perinatal	179 (23.8%)	Perinatal	192 (24.2%)	Respiratory	190 (24.1%)
3	Congenital	84 (12.0%)	Congenital	61 (9.1%)	Congenital	75 (10.0%)	Congenital	82 (10.3%)	Congenital	74 (9.4%)
4	Digestive	42 (6.0%)	Health factors	47 (7.0%)	Digestive	45 (6.0%)	Signs/symptoms	52 (6.5%)	Health factors	46 (5.8%)
5	Signs/ symptoms	41 (5.8%)	Infectious	42 (6.3%)	Health factors	38 (5.1%)[T]	Digestive	44 (5.5%)	Infectious	45 (5.7%)
5					Genitourinary	38 (5.1%)[T]				
6	Injury/ external	35 (5.0%)[T]	Digestive	41 (6.1%)	Signs/ symptoms	37 (4.9%)	Infectious	42 (5.3%)	Signs/symptoms	44 (5.6%)
6	Genitourinary	35 (5.0%)[T]								
7	Health factors	32 (4.6%)	Injury/external	37 (5.5%)	Injury/ external	33 (4.4%)	Injury/external	39 (4.9%)	Nervous	31 (3.9%)
8	Infectious	25 (3.6%)	Genitourinary	31 (4.6%)	Infectious	30 (4%)	Health factors	31 (3.9%)	Injury/external	28 (3.5%)
9	Skin	24 (3.4%)	Signs/symptoms	30 (4.5%)	Nervous	21 (2.8%)	Genitourinary	29 (3.6%)	Digestive	25 (3.2%)
10	Nervous	18 (2.6%)	Blood/immune	24 (3.6%)	Metabolic	18 (2.4%)	Skin	18 (2.3%)	Genitourinary	18 (2.3%)
Total	**701**		**668**		**752**		**795**		**789**	

Table 6c: Leading causes of hospitalization, females, 5–19 years, Ottawa, 2006–2010

	2006		2007		2008		2009		2010	
Rank	**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**	
1	Obstetrical	265 (18.5%)	Obstetrical	215 (15.9%)	Obstetrical	255 (17.6%)	Obstetrical	244 (17.5%)	Mental	222 (15.1%)[¥]
2	Digestive	198 (13.8%)	Mental	186 (13.8%)[¥]	Mental	185 (12.7%)[T ¥]	Mental	201 (14.4%)[¥]	Digestive	217 (14.7%)
2					Digestive	185 (12.7%)[T]				
3	Mental	172 (12.0%)[¥]	Digestive	179 (13.3%)	Injury/external	171 (11.8%)	Digestive	194 (13.9%)	Obstetrical	211 (14.3%)
4	Injury/external	134 (9.3%)	Injury/external	157 (11.6%)	Respiratory	102 (7.0%)	Injury/external	147 (10.5%)	Injury/external	159 (10.8%)
5	Respiratory	102 (7.1%)	Respiratory	88 (6.5%)	Health factors	93 (6.4%)	Respiratory	117 (8.4%)	Respiratory	85 (5.8%)
6	Health factors	97 (6.8%)	Signs/symptoms	65 (4.8%)	Signs/symptoms	67 (4.6%)	Musculoskeletal	64 (4.6%)	Health factors	81 (5.5%)
7	Musculoskeletal	72 (5.0%)	Genitourinary	61 (4.5%)	Musculoskeletal	64 (4.4%)	Signs/symptoms	61 (4.4%)	Signs/symptoms	78 (5.3%)
8	Genitourinary	60 (4.2%)	Health factors	60 (4.4%)	Genitourinary	52 (3.6%)	Health factors	60 (4.3%)	Musculoskeletal	61 (4.1%)
9	Blood/immune	57 (4.0%)	Musculoskeletal	55 (4.1%)	Blood/immune	45 (3.1%)[T]	Genitourinary	54 (3.9%)	Genitourinary	51 (3.5%)
9					Metabolic	45 (3.1%)[T]				
10	Signs/symptoms	52 (3.6%)	Congenital	44 (3.3%)	Congenital	38 (2.6%)	Metabolic	49 (3.5%)	Blood/immune	49 (3.3%)
Total	**1,436**		**1,349**		**1,451**		**1,394**		**1,472**	

Table 6d: Leading causes of hospitalization, males, 5–19 years, Ottawa, 2006–2010

	2006		2007		2008		2009		2010	
Rank	**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**	
1	Injury/external	265 (21.7%)	Injury/external	265 (21.2%)	Injury/external	237 (20.3%)	Digestive	244 (20.1%)	Digestive	227 (17.8%)
2	Digestive	206 (16.9%)	Digestive	230 (18.4%)	Digestive	205 (17.6%)	Injury/external	242 (19.9%)	Injury/external	216 (17.0%)
3	Respiratory	149 (12.2%)	Mental	111 (8.9%)[¥]	Mental	111 (9.5%)[¥]	Respiratory	154 (12.7%)	Respiratory	146 (11.5%)
4	Mental	136 (11.1%)[¥]	Health factors	110 (8.8%)	Respiratory	108 (9.3%)	Mental	116 (9.5%)[¥]	Mental	119 (9.4%)[¥]
5	Health factors	82 (6.7%)	Respiratory	106 (8.5%)	Health factors	99 (8.5%)	Health factors	63 (5.2%)	Health factors	104 (8.2%)
6	Musculoskeletal	69 (5.7%)	Musculoskeletal	77 (6.2%)	Signs/symptoms	62 (5.3%)	Musculoskeletal	62 (5.1%)	Signs/symptoms	69 (5.4%)
7	Signs/symptoms	54 (4.4%)	Signs/symptoms	56 (4.5%)	Musculoskeletal	61 (5.2%)	Signs/symptoms	47 (3.9%)	Musculoskeletal	55 (4.3%)
8	Genitourinary	38 (3.1%)	Genitourinary	46 (3.7%)	Blood/immune	46 (3.9%)	Genitourinary	43 (3.5%)	Blood/immune	44 (3.5%)[T]
8									Nervous	44 (3.5%)[T]
9	Neoplasms	35 (2.9%)	Blood/immune	41 (3.3%)	Genitourinary	41 (3.5%)	Nervous	41 (3.4%)	Neoplasms	43 (3.4%)
10	Infectious	33 (2.7%)	Infectious	33 (2.6%)	Nervous	30 (2.6%)	Infectious	31 (2.6%)	Infectious	39 (3.1%)
Total	**1,221**		**1,248**		**1,167**		**1,215**		**1,272**	

Table 6e: Leading causes of hospitalization, females, 20–44 years, Ottawa, 2006–2010

	2006		2007		2008		2009		2010	
Rank	**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**	
1	Obstetrical	9,557 (72.3%)	Obstetrical	9,637 (72.0%)	Obstetrical	10,060 (74.5%)	Obstetrical	10,172 (73.6%)	Obstetrical	10,066 (73.6%)
2	Health factors	667 (5.0%)	Health factors	806 (6.0%)	Health factors	646 (4.8%)	Health factors	632 (4.6%)	Digestive	643 (4.7%)
3	Digestive	653 (4.9%)	Digestive	586 (4.4%)	Digestive	603 (4.5%)	Digestive	625 (4.5%)	Health factors	609 (4.5%)
4	Genitourinary	562 (4.3%)	Genitourinary	544 (4.1%)	Genitourinary	513 (3.8%)	Genitourinary	540 (3.9%)	Genitourinary	510 (3.7%)
5	Injury/external	376 (2.8%)	Injury/external	439 (3.3%)	Injury/external	385 (2.8%)	Injury/external	373 (2.7%)	Neoplasms	383 (2.8%)
6	Neoplasms	375 (2.8%)	Neoplasms	374 (2.8%)	Neoplasms	359 (2.7%)	Neoplasms	356 (2.6%)	Injury/external	350 (2.6%)
7	Respiratory	182 (1.4%)	Signs/symptoms	157 (1.2%)	Musculoskeletal	145 (1.1%)	Respiratory	193 (1.4%)	Signs/symptoms	175 (1.3%)
8	Musculoskeletal	149 (1.1%)	Musculoskeletal	149 (1.1%)	Signs/symptoms	142 (1.1%)	Signs/symptoms	146 (1.1%)	Metabolic	154 (1.1%)
9	Signs/symptoms	136 (1.0%)	Respiratory	140 (1.0%)	Respiratory	132 (1.0%)	Musculoskeletal	142 (1.0%)	Respiratory	141 (1.0%)
10	Metabolic	118 (0.9%)	Circulatory	110 (0.8%)	Metabolic	123 (0.9%)	Metabolic	140 (1.0%)	Musculoskeletal	111 (0.8%)
Total	**13,212**		**13,387**		**13,511**		**13,812**		**13,668**	

Table 6f: Leading causes of hospitalization, males, 20–44 years, Ottawa, 2006–2010

	2006		2007		2008		2009		2010	
Rank	**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**	
1	Injury/external	655 (24.1%)	Injury/external	660 (24.4%)	Digestive	611 (22.5%)	Digestive	636 (23.2%)	Digestive	669 (25.3%)
2	Digestive	582 (21.4%)	Digestive	539 (19.9%)	Injury/external	590 (21.7%)	Injury/external	575 (20.9%)	Injury/external	536 (20.3%)
3	Circulatory	198 (7.3%)	Circulatory	194 (7.2%)	Circulatory	225 (8.3%)	Circulatory	221 (8.1%)	Circulatory	187 (7.1%)
4	Musculoskeletal	174 (6.4%)	Musculoskeletal	162 (6.0%)	Musculoskeletal	167 (6.2%)	Respiratory	168 (6.1%)	Musculoskeletal	151 (5.7%)
5	Respiratory	158 (5.8%)	Neoplasms	149 (5.5%)	Respiratory	150 (5.5%)	Musculoskeletal	144 (5.2%)	Respiratory	150 (5.7%)
6	Neoplasms	157 (5.8%)	Respiratory	142 (5.2%)	Health factors	142 (5.2%)	Genitourinary	135 (4.9%)	Neoplasms	143 (5.4%)
7	Health factors	130 (4.8%)	Metabolic	134 (5.0%)	Neoplasms	132 (4.9%)	Mental	130 (4.7%)[¥]	Genitourinary	141 (5.3%)
8	Genitourinary	119 (4.4%)	Signs/symptoms	133 (4.9%)	Genitourinary	122 (4.5%)	Health factors	128 (4.7%)	Signs/symptoms	125 (4.7%)
9	Signs/symptoms	114 (4.2%)	Genitourinary	132 (4.9%)	Metabolic	116 (4.3%)[†]	Neoplasms	126 (4.6%)	Health factors	104 (3.9%)
9					Signs/symptoms	116 (4.3%)[†]				
10	Mental	103 (3.8%)[¥]	Health factors	110 (4.1%)	Mental	85 (3.1%)[¥]	Signs/symptoms	114 (4.2%)	Metabolic	101 (3.8%)
Total	**2,716**		**2,706**		**2,713**		**2,745**		**2,640**	

Table 6g: Leading causes of hospitalization, females, 45–64 years, Ottawa, 2006–2010

	2006		2007		2008		2009		2010	
Rank	**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**	
1	Neoplasms	900 (16.2%)	Neoplasms	904 (16.7%)	Neoplasms	964 (16.6%)	Neoplasms	972 (16.5%)	Neoplasms	1,012 (16.5%)
2	Digestive	711 (12.8%)	Digestive	726 (13.4%)	Digestive	749 (12.9%)	Digestive	844 (14.3%)	Digestive	826 (13.4%)
3	Genitourinary	641 (11.5%)	Genitourinary	643 (11.9%)	Injury/external	678 (11.7%)	Musculoskeletal	590 (10.0%)	Genitourinary	666 (10.8%)
4	Injury/external	589 (10.6%)	Injury/external	596 (11.0%)	Musculoskeletal	653 (11.3%)	Genitourinary	574 (9.8%)	Musculoskeletal	663 (10.8%)
5	Musculoskeletal	569 (10.3%)	Musculoskeletal	550 (10.2%)	Genitourinary	644 (11.1%)	Injury/external	554 (9.4%)	Injury/external	606 (9.9%)
6	Circulatory	562 (10.1%)	Circulatory	504 (9.3%)	Circulatory	524 (9.0%)	Circulatory	551 (9.4%)	Circulatory	587 (9.5%)
7	Health factors	382 (6.9%)	Health factors	340 (6.3%)	Health factors	391 (6.7%)	Health factors	469 (8.0%)	Health factors	402 (6.5%)
8	Respiratory	343 (6.2%)	Respiratory	305 (5.7%)	Respiratory	336 (5.8%)	Respiratory	369 (6.3%)	Respiratory	344 (5.6%)
9	Signs/symptoms	231 (4.2%)	Signs/symptoms	220 (4.1%)	Signs/symptoms	254 (4.4%)	Signs/symptoms	266 (4.5%)	Signs/symptoms	331 (5.4%)
10	Metabolic	149 (2.7%)	Metabolic	137 (2.5%)	Metabolic	133 (2.3%)	Metabolic	167 (2.8%)	Metabolic	226 (3.7%)
Total	**5,550**		**5,398**		**5,804**		**5,886**		**6,151**	

Overall morbidity

Table 6h: Leading causes of hospitalization, males, 45–64 years, Ottawa, 2006–2010

	2006		2007		2008		2009		2010	
Rank	**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**	
1	Circulatory	1,347 (23.0%)	Circulatory	1,347 (23.0%)	Circulatory	1,322 (21.5%)	Circulatory	1,321 (21.4%)	Circulatory	1,273 (20.4%)
2	Digestive	807 (13.8%)	Neoplasms	780 (13.3%)	Digestive	854 (13.9%)	Digestive	899 (14.6%)	Digestive	937 (15.0%)
3	Neoplasms	723 (12.3%)	Digestive	773 (13.2%)	Neoplasms	784 (12.7%)	Neoplasms	704 (11.4%)	Neoplasms	684 (10.9%)
4	Injury/external	617 (10.5%)	Injury/external	575 (9.8%)	Injury/external	631 (10.3%)	Injury/external	609 (9.9%)	Injury/external	604 (9.7%)
5	Musculoskeletal	541 (9.2%)	Musculoskeletal	529 (9.0%)	Musculoskeletal	550 (8.9%)	Musculoskeletal	537 (8.7%)	Musculoskeletal	569 (9.1%)
6	Respiratory	330 (5.6%)	Genitourinary	330 (5.6%)	Genitourinary	349 (5.7%)	Genitourinary	393 (6.4%)	Genitourinary	397 (6.3%)
7	Health factors	308 (5.3%)	Health factors	307 (5.2%)	Respiratory	347 (5.6%)	Respiratory	348 (5.6%)	Respiratory	383 (6.1%)
8	Genitourinary	302 (5.2%)	Respiratory	295 (5.0%)	Health factors	332 (5.4%)	Signs/symptoms	330 (5.3%)	Health factors	376 (6.0%)
9	Signs/symptoms	263 (4.5%)	Signs/symptoms	284 (4.9%)	Signs/symptoms	299 (4.9%)	Health factors	310 (5.0%)	Signs/symptoms	327 (5.2%)
10	Metabolic	159 (2.7%)	Metabolic	155 (2.6%)	Metabolic	173 (2.8%)	Metabolic	168 (2.7%)	Metabolic	166 (2.7%)
Total	**5,862**		**5,854**		**6,151**		**6,176**		**6,252**	

Table 6i: Leading causes of hospitalization, females, 65+ years, Ottawa, 2006–2010

	2006		2007		2008		2009		2010	
Rank	**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**	
1	Obstetrical	9,841 (19.5%)	Obstetrical	9,869 (19.7%)	Obstetrical	10,341 (20.0%)	Obstetrical	10,449 (19.7%)	Obstetrical	10,303 (19.2%)
2	Circulatory	6,496 (12.9%)	Circulatory	6,324 (12.6%)	Circulatory	6,119 (11.8%)	Circulatory	6,163 (11.6%)	Circulatory	6,300 (11.8%)
3	Digestive	5,189 (10.3%)	Digestive	5,022 (10.0%)	Digestive	5,227 (10.1%)	Digestive	5,509 (10.4%)	Digestive	5,600 (10.5%)
4	Injury/external	4,535 (9.0%)	Injury/external	4,599 (9.2%)	Injury/external	4,678 (9.1%)	Injury/external	4,618 (8.7%)	Injury/external	4,532 (8.5%)
5	Neoplasms	4,352 (8.6%)	Neoplasms	4,335 (8.6%)	Neoplasms	4,249 (8.2%)	Neoplasms	4,145 (7.8%)	Neoplasms	4,228 (7.9%)
6	Respiratory	3,768 (7.5%)	Respiratory	3,365 (6.7%)	Respiratory	3,589 (6.9%)	Respiratory	3,966 (7.5%)	Respiratory	3,824 (7.1%)
7	Musculoskeletal	3,246 (6.4%)	Musculoskeletal	3,211 (6.4%)	Musculoskeletal	3,450 (6.7%)	Musculoskeletal	3,231 (6.1%)	Musculoskeletal	3,288 (6.1%)
8	Genitourinary	2,966 (5.9%)	Genitourinary	3,016 (6.0%)	Health factors	3,143 (6.1%)	Health factors	3,200 (6.0%)	Health factors	3,277 (6.1%)
9	Health factors	2,802 (5.6%)	Health factors	2,970 (5.9%)	Genitourinary	3,102 (6.0%)	Genitourinary	3,120 (5.9%)	Genitourinary	3,189 (6.0%)
10	Signs/symptoms	1,879 (3.8%)	Signs/symptoms	1,949 (3.9%)	Signs/symptoms	2,059 (4.0%)	Signs/symptoms	2,388 (4.5%)	Signs/symptoms	2,533 (4.7%)
Total	**9,985**		**9,980**		**10,064**		**10,691**		**10,711**	

Table 6j: Leading causes of hospitalization, males, 65+ years, Ottawa, 2006–2010

	2006		2007		2008		2009		2010	
Rank	**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**		**Condition/ Hospitalizations (%)**	
1	Circulatory	2,208 (25.2%)	Circulatory	2,123 (24.7%)	Circulatory	2,069 (23.1%)	Circulatory	2,022 (22.4%)	Circulatory	2,118 (22.4%)
2	Neoplasms	1,096 (12.5%)	Neoplasms	986 (11.5%)	Neoplasms	978 (10.9%)	Neoplasms	935 (10.3%)	Circulatory	1,002 (10.6%)[T]
2									Respiratory	1,002 (10.6%)[T]
3	Respiratory	918 (10.5%)	Respiratory	875 (10.2%)	Respiratory	957 (10.7%)	Respiratory	934 (10.3%)	Digestive	958 (10.2%)
4	Digestive	899 (10.2%)	Digestive	853 (9.9%)	Digestive	886 (9.9%)	Digestive	925 (10.2%)	Injury/external	739 (7.8%)
5	Musculoskeletal	661 (7.5%)	Injury/external	670 (7.8%)	Musculoskeletal	698 (7.8%)	Injury/external	741 (8.2%)	Health factors	693 (7.3%)
6	Injury/external	641 (7.3%)	Genitourinary	648 (7.5%)	Genitourinary	692 (7.7%)	Genitourinary	675 (7.5%)	Genitourinary	682 (7.2%)
7	Genitourinary	598 (6.8%)	Musculoskeletal	599 (7.0%)	Injury/external	657 (7.3%)	Health factors	654 (7.2%)	Signs/symptoms	642 (6.8%)
8	Health factors	491 (5.6%)	Health factors	542 (6.3%)	Health factors	639 (7.1%)	Signs/symptoms	628 (6.9%)	Musculoskeletal	591 (6.3%)
9	Signs/symptoms	424 (4.8%)	Signs/symptoms	435 (5.1%)	Signs/symptoms	520 (5.8%)	Musculoskeletal	608 (6.7%)	Infectious	242 (2.6%)
10	Metabolic	226 (2.6%)	Metabolic	216 (2.5%)	Metabolic	222 (2.5%)	Metabolic	212 (2.3%)	Metabolic	228 (2.4%)
Total	**8,771**		**8,598**		**8,966**		**9,042**		**9,435**	

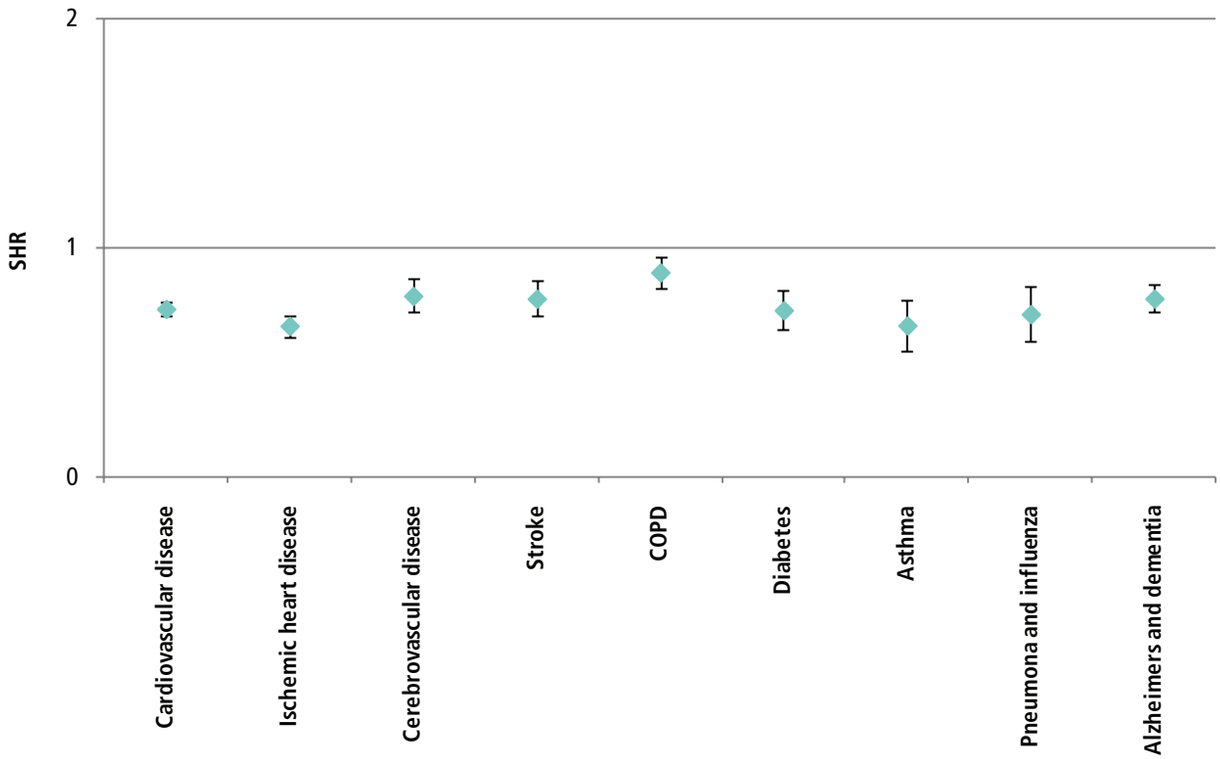
Source: Ontario Hospitalization Data 2006-2010, IntelliHEALTH, Extracted December 2, 2011, Health Planning Branch, Ontario MOHLTC
*External causes of injury (e.g., falls, MVTCs, etc.) are excluded from the leading causes of hospitalization.
¥ Mental and behavioural disorder hospitalizations are incomplete due to changes in reporting and underrepresent the true burden of illness.

Standardized hospitalization ratio

This section discusses the standardized hospitalization ratios (SHRs) resulting from selected causes of chronic and infectious diseases. In 2010, hospitalizations from cardiovascular disease, IHD, cerebrovascular disease, stroke, COPD, diabetes, asthma, pneumonia/influenza and Alzheimer's/ dementia contributed to less morbidity in Ottawa than in Ontario for both sexes (Figures 4 and 5).

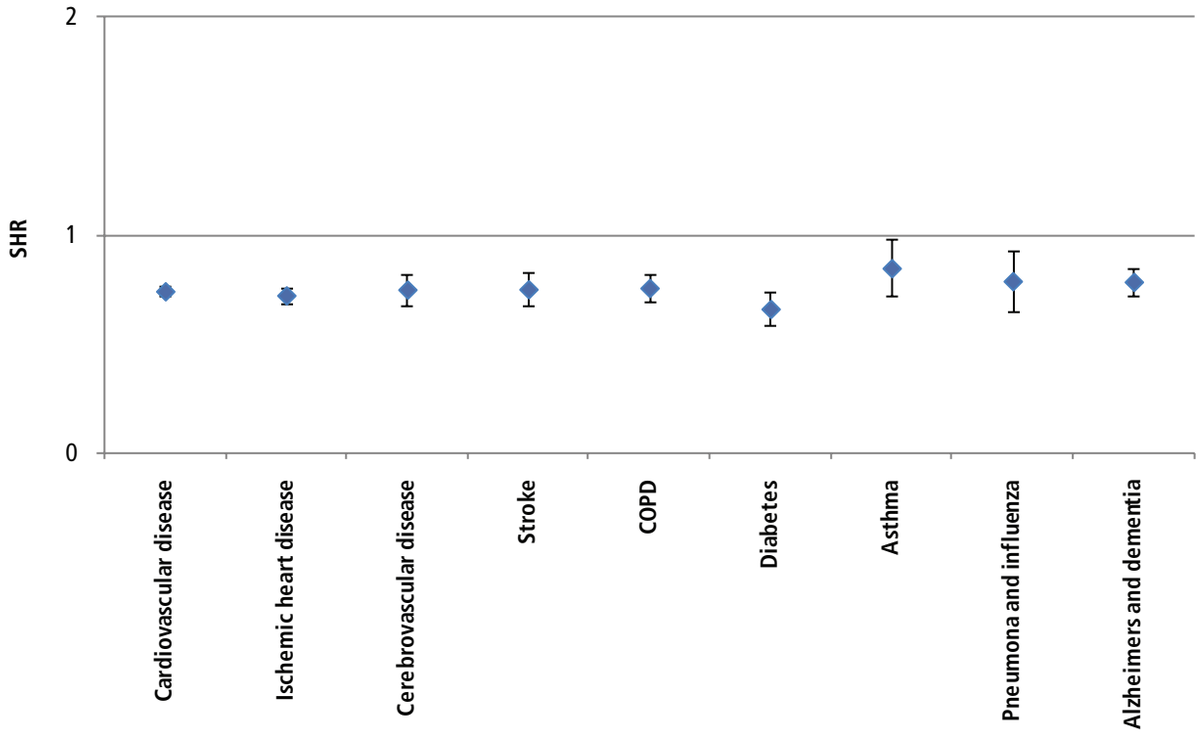
Note: *The SHR is the ratio of the number of hospitalizations in the population of interest relative to the number of expected hospitalizations, assuming that the population has the same age-specific rates as a reference population. In this report the population of interest is Ottawa and the reference population is the rest of Ontario. If the confidence intervals (CIs) include 1.0, then the hospitalization rate for that particular condition in Ottawa is no different than the rate in the rest of Ontario. If the SHR and its CIs are both greater than 1.0, this indicates that the hospitalization rate for that condition is significantly greater for Ottawa than in the rest of Ontario. Alternatively, if the SHR and its CIs are both below 1.0, then the hospitalization rates in Ottawa for that condition are significantly lower than those in the rest of Ontario. Within these figures the diamonds represent the point estimates, and the lines the 95% CIs.*

Figure 4. Standardized hospitalization ratios (SHRs) for selected chronic conditions and infectious diseases, females, Ottawa, 2010



Source: Ontario Hospitalization Data 2010, IntelliHEALTH Extracted November 21, 2011, Health Planning Branch, Ontario MOHLTC

Figure 5. Standardized hospitalization ratios (SHRs) for selected chronic conditions and infectious diseases, males, Ottawa, 2010



Source: Ontario Hospitalization Data 2010, IntelliHEALTH Extracted November 21, 2011, Health Planning Branch, Ontario MOHLTC

Overall mortality

Ontario public health goals are aimed at increasing the length and quality of life by preventing illness and injury, and decreasing disability, morbidity and death resulting from illness or injury.[5] This section of the report focuses on indicators that describe the nature and extent of overall mortality trends in Ottawa and, where possible, compared to the rest of Ontario.

Life expectancy

Life expectancy measures the average number of years of life remaining to people of a particular age, and reflects the mortality conditions of the period at which it was calculated.[4] In Ottawa in 2007, the life expectancy at birth for females was 83.6 years and for males 79.6 years.

At age 65, the life expectancy for females was 21.5 years and for males 18.6 years. Compared with 2002, life expectancies at birth for females and males living in Ottawa have increased from 82.3 and 78.6 years, respectively. In 2007, life expectancy in Ottawa was very similar to life expectancy in Ontario (83.0 years for women and 78.3 years for men).[1]

Health-adjusted life expectancy

Health-adjusted life expectancy (HALE) measures health expectancy. It represents health-related quality of life and the burden of morbidity in a community. HALE is the number of expected years lived in full health, based on the current health status of the population. The health status of the population is quantified using the Health Utilities Index (a health indicator based on six different attributes: sensory, mobility, emotion, cognition, dexterity and pain), as surveyed by Statistics Canada using the Canadian Community Health Survey.[6] The difference between estimates of life expectancy and HALE represent the burden of ill health in the population.

In 2007, at age 15, the HALE for Ottawa residents was 58.4 years for females and 57.2 years for males. At age 65 years, females were expected to live another 16.3 years in good health, and males were expected to live 14.7 years in good health.

All-cause mortality

Overall or all-cause mortality indicates the burden associated with mortality and overall health status of a community. Trends in overall mortality over time may indicate changes in health status, conditions or events in a community. A decline in mortality rates may reflect improvements in overall standards of living, medical advancements in diagnosis and treatment of disease, changes in the environment or socioeconomic conditions, or awareness and change of health behaviour risks.

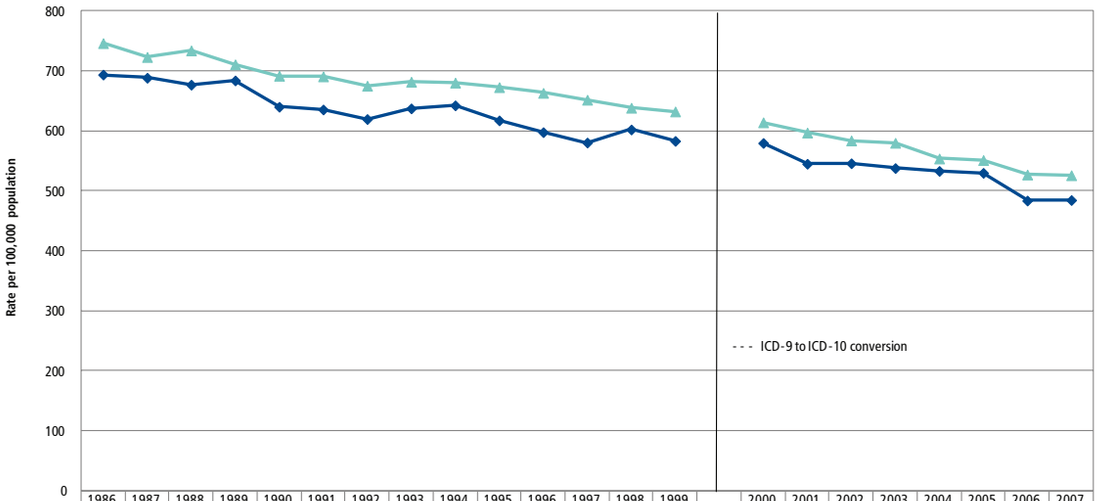
All-cause mortality rates have declined significantly in Ottawa since 1986, when they were 693.7 per 100,000 population. In 2007, there were 5,261 deaths from all causes in Ottawa, which represents a mortality rate of 485.2 deaths per 100,000 population. Ottawa rates have been significantly lower than rates for the rest of the Ontario population (except in 1989 when there was no significant difference) (Figure 6).

Overall mortality

The risk of death is generally higher in males than females; however, the sex gap in mortality is narrowing as a result of male mortality rates decreasing more rapidly over time. Since 1986, male all-cause mortality rates have been significantly higher than female rates (Figure 7). In 2007, the male age-standardized mortality rate was 593.1 deaths per 100,000 in the population (2,505 deaths), and the female age-standardized mortality rate was 405.8 deaths per 100,000 in the population (2,756 deaths).

Age-specific mortality rates for box sexes follow a 'J-shape' pattern, with rates in infants significantly higher than rates in children and young adults. Mortality is lowest for children and young adults (1–44 years) and increases significantly with older age, with the highest mortality rates occurring at 90+ years (Figure 8). Mortality rates were significantly higher in males 20–39 years and 45+ years than for females.

Figure 6. Age-standardized mortality rates and counts of all causes, Ottawa and the rest of Ontario, 1986–2007

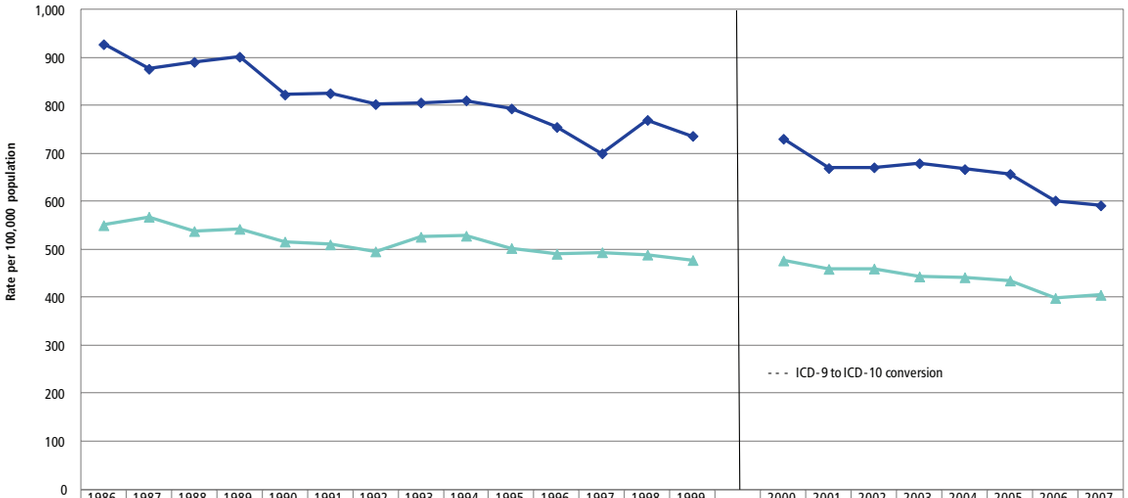


	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Ottawa rate	693.7	688.4	676.9	683.9	640.1	635.5	619.6	637.4	642.4	617.3	597.7	580.4	602.1	583.1	579.7	544.9	545.8	537.8	533.0	529.8	483.6	484.4
Ontario-less-Ottawa rate	746.2	723.1	734.0	710.8	691.8	690.7	675.1	681.8	680.3	672.8	663.2	651.8	638.4	632.2	614.1	596.9	583.8	579.9	553.7	551.1	527.0	525.8
Ottawa deaths	3,758	3,860	3,913	4,086	3,966	4,065	4,087	4,319	4,450	4,423	4,408	4,409	4,697	4,715	4,816	4,683	4,887	4,970	5,076	5,273	5,046	5,261
Ontario-less-Ottawa deaths	63,417	63,536	66,198	66,193	66,387	68,393	68,550	70,969	72,565	73,563	74,217	74,705	75,004	76,223	76,055	76,143	76,913	78,861	77,674	79,948	79,184	81,678

Years

Source: Ontario Mortality Data 1986 - 2007, IntelliHEALTH Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
All Cause mortality (ICD-9 and ICD-10-CA: All Chapters)
Data note: Mortality rates are age-standardized to the 1991 Canadian population

Figure 7. Age-standardized mortality rates of all causes by sex, Ottawa, 1986–2007

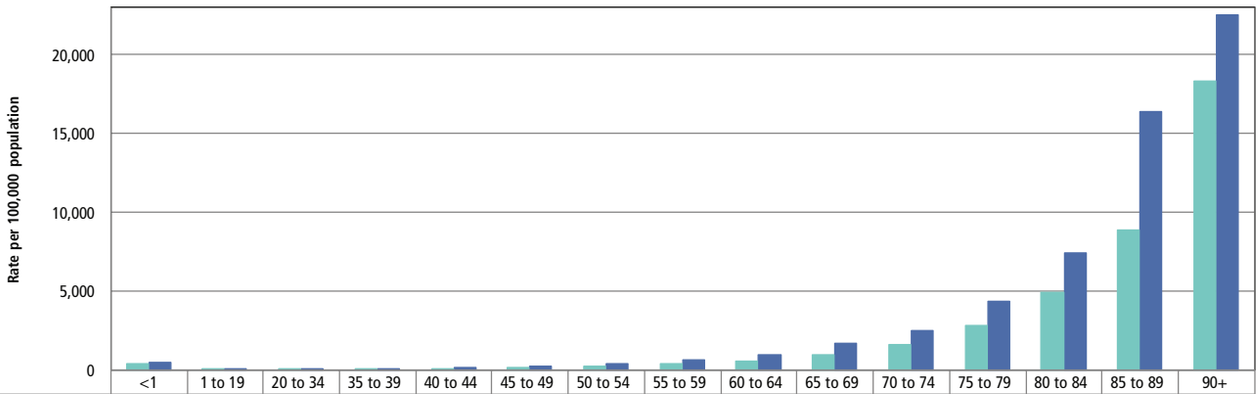


	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Ottawa female rate	550.5	568.1	538.2	542.8	516.3	510.3	495.8	526.3	528.5	502.8	490.9	494.1	489.1	477.8	476.9	459.4	460.1	443.6	441.9	435.1	398.7	405.2
Ottawa male rate	927.8	876.5	890.9	901.8	822.9	825.7	802.9	806.3	810.8	793.8	755.3	700.2	770.0	736.7	730.7	669.6	671.2	679.6	667.4	657.3	601.9	591.7
Ottawa female deaths	1,875	2,006	1,952	2,037	1,997	2,039	2,041	2,222	2,297	2,237	2,266	2,348	2,364	2,429	2,451	2,453	2,557	2,542	2,606	2,726	2,596	2,756
Ottawa male deaths	1,883	1,854	1,961	2,049	1,969	2,026	2,046	2,097	2,153	2,186	2,142	2,061	2,333	2,286	2,365	2,230	2,330	2,428	2,470	2,547	2,450	2,505

Years

Source: Ontario Mortality Data 1986 - 2007, IntelliHEALTH Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
All Cause mortality (ICD-9 and ICD-10-CA: All Chapters)
Data note: Mortality rates are age-standardized to the 1991 Canadian population

Figure 8. Age-specific mortality rates of all causes by sex, Ottawa, 2003–2007 average



	<1	1 to 19	20 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90+
Female rate	421.8	12.5	23.8	59.1	100.2	155.4	247.5	374.7	587.9	921.9	1,580.9	2,791.1	4,888.4	8,849.1	18,307.8
Male rate	500.5	17.8	45.3	87.3	125.6	216.8	387.9	597.5	959.3	1,654.3	2,504.4	4,345.2	7,453.9	16,420.7	22,552.7
Female deaths	94	60	109	96	183	267	373	483	556	676	1,014	1,600	2,359	2,489	2,867
Male deaths	116	88	209	144	232	364	559	743	851	1,079	1,356	1,801	2,136	2,136	1,092

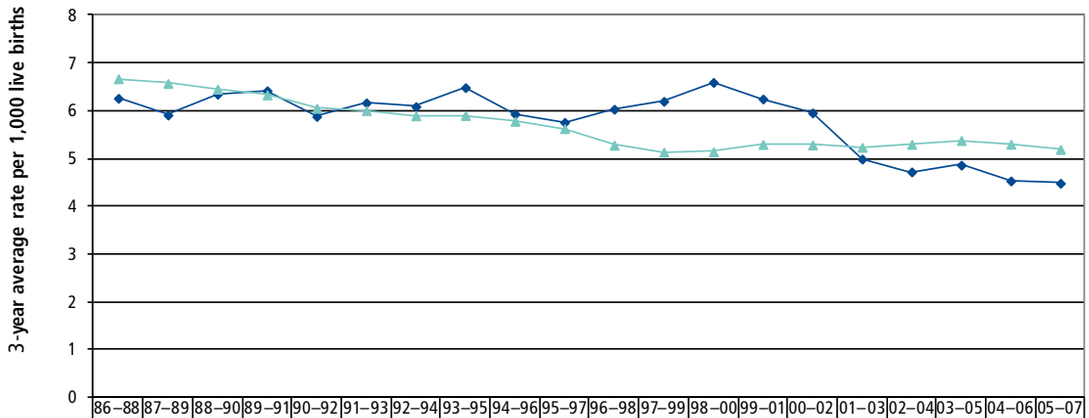
Age groups

Source: Ontario Mortality Data 2007, IntelliHEALTH Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
All Cause Mortality (ICD-10-CA: All Chapters)
Data note: Crude mortality rates for <1 were calculated using population estimates and not live births

Infant mortality

Infant mortality refers to deaths in infants less than 1 year old. Infant mortality rates are indicators of overall health, and reflect the economic and social determinates of health for the community. High rates of infant mortality may reflect poor population nutrition, education, sanitation, or maternal and child health care.[7] Infant mortality in Ottawa has been somewhat variable since 1986, but has declined since 2000. The average infant mortality rate in Ottawa for 2005–2007 was 4.5 deaths per 1,000 live births (Figure 9).

Figure 9. Infant mortality rates, three-year moving averages, Ottawa and the rest of Ontario, 1986–2007



	86–88	87–89	88–90	89–91	90–92	91–93	92–94	93–95	94–96	95–97	96–98	97–99	98–00	99–01	00–02	01–03	02–04	03–05	04–06	05–07
Ottawa	6.3	5.9	6.3	6.4	5.9	6.2	6.1	6.5	5.9	5.8	6.0	6.2	6.6	6.2	6.0	5.0	4.7	4.9	4.5	4.5
Ontario-less-Ottawa	6.7	6.6	6.5	6.3	6.1	6.0	5.9	5.9	5.8	5.6	5.3	5.1	5.1	5.3	5.3	5.2	5.3	5.4	5.3	5.2

Source: Ontario Mortality and Live Birth Data 1986-2007, IntelliHEALTH Extracted December 2, 2011
Data note: Data points are based on a three-year moving average

Leading causes of death

From 2003 to 2007 in Ottawa, deaths from all cancers (defined as malignant neoplasms; ICD-10-CA: C00-C97) were greater than deaths from heart disease (ICD-10-CA: I00-I99, I11, I13, I20-I51).

However, over the same time period (2003 to 2007), the single leading cause of death in Ottawa was IHD (Table 7). Lung cancer was the second single leading cause of death from 2003 to 2006, but became the third leading cause in 2007 when it was replaced by Alzheimer's/dementia.

From 2003 to 2007, IHD was the number one killer of men and women in Ottawa (Tables 8 and 9). Alzheimer's/dementia and lung cancer rounded out the top three causes of female death in 2006–2007, but in 2003–2005 they dropped to third and fourth leading causes. From 2003 to 2007, lung cancer and cerebrovascular disease remained the second and third leading causes of death in Ottawa males.

As most deaths occur in older age, a different pattern emerges when leading causes of death in Ottawa are stratified by age group (Table 10). In Ottawa children aged 0 to 4 years, the leading cause of death in 2003–2007 was various perinatal conditions (mainly fetuses and newborns affected by maternal factors or complications of pregnancy, labour and delivery). The leading cause of death is not reportable for children and youth 5–19 years, as very few deaths occurred in this age group.

From 2003 to 2007, intentional self-harm (suicide) was the leading cause of death in both sexes 20–44 years.

In males 45–64 years, IHD remained the leading cause of death in 2003–2007, followed by lung cancer. In females 45–64 years, lung cancer was the leading cause of death in 2003–2007. IHD was the second leading cause in 2003 and 2005–2007.

In both sexes 65+ years, the leading causes of death mirror overall mortality patterns: IHD, Alzheimer's/dementia and lung cancer. In 2003–2007, IHD was the leading cause of death for both sexes. Lung cancer was the second leading cause over this time for males, followed by cerebrovascular disease (2003–2006) and Alzheimer's/dementia (2007). Alzheimer's/dementia and cerebrovascular disease were the second and third leading causes of death in 2003–2007 for females 65+ years.

Overall mortality

Key to tables 7, 8, 9, 10

- **AIDS**=Acquired Immune Deficiency Syndrome
- **Assault**=Assault
- **Atherosclerosis**=atherosclerosis
- **Breast cancer**=Breast cancer
- **Cancer-bladder**=Cancer of the bladder
- **Cancer-blood**=Cancer of the lymph, blood & related
- **Cancer-brain**=Cancer of the brain and nervous system
- **Cancer-kidney**=Cancer of the kidney
- **Cancer-liver**=Cancer of the liver & intrahepatic bile ducts
- **Cancer-oesophagus**=Cancer of the oesophagus
- **Cancer-oral**=Cancer of the oral cavity & pharynx
- **Cancer-skin**=Cancer of the skin
- **Cancer-stomach**=Cancer of the stomach
- **Cerebrovascular**=Cerebrovascular disease (including stroke)
- **Colorectal cancer**=colorectal cancer
- **Congenital**=Congenital malformations, deformations, chromosomal
- **Dementia**=Alzheimer's/dementia
- **Diabetes**=Diabetes
- **Flu/pneumonia**=Influenza/pneumonia
- **Heart failure**=Heart failure & complications
- **IHD**=Ischemic heart disease
- **Lower respiratory**=Chronic lower respiratory disease
- **Liver**=Cirrhosis & other liver diseases
- **Lung cancer**=lung cancer
- **Pancreatic cancer**=Pancreatic cancer
- **Perinatal**=Perinatal conditions
- **Poisoning**=Unintentional poisoning
- **Prostate cancer**=Prostate cancer
- **Road collisions**=Transport collisions
- **Self-harm**=Intentional self-harm
- **Substance abuse**=Mental, behavioural disorders from psychoactive substance abuse
- T **Denotes a tie**
- **Urinary**=Diseases of the urinary system

Table 7: Leading causes of death, all ages, Ottawa, 2003–2007

	2003		2004		2005		2006		2007	
Rank	**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**	
1	IHD	957 (19.3%)	IHD	910 (17.9%)	IHD	953 (18.1%)	IHD	869 (17.2%)	IHD	848 (16.1%)
2	Lung cancer	373 (7.5%)	Lung cancer	400 (7.9%)	Lung cancer	426 (8.1%)	Lung cancer	392 (7.8%)	Dementia	384 (7.3%)
3	Cerebrovascular	332 (6.7%)	Cerebrovascular	370 (7.3%)	Cerebrovascular	331 (6.3%)	Dementia	352 (7.0%)	Lung cancer	370 (7.0%)
4	Dementia	219 (4.4%)	Dementia	268 (5.3%)	Dementia	302 (5.7%)	Cerebrovascular	302 (6.0%)	Cerebrovascular	304 (5.8%)
5	Colorectal cancer	191 (3.8%)	Lower respiratory	198 (3.9%)	Colorectal cancer	216 (4.1%)	Colorectal cancer	192 (3.8%)	Lower respiratory	202 (3.8%)
6	Lower respiratory	190 (3.8%)	Colorectal cancer	175 (3.5%)	Lower respiratory	211 (4.0%)	Lower respiratory	178 (3.5%)	Cancer-blood	177 (3.4%)
7	Diabetes	168 (3.4%)	Cancer-blood	162 (3.2%)	Cancer-blood	161 (3.0%)	Cancer-blood	149 (3.0%)	Colorectal cancer	175 (3.3%)
8	Cancer-blood	151 (3.0%)	Breast cancer	130 (2.6%)	Diabetes	147 (2.8%)	Urinary	139 (2.8%)	Urinary	146 (2.8%)
9	Breast cancer	145 (2.9%)	Urinary	122 (2.4%)	Flu/pneumonia	134 (2.5%)	Breast cancer	138 (2.7%)	Diabetes	125 (2.4%)
10	Urinary	125 (2.5%)	Flu/pneumonia	117 (2.3%)	Urinary	116 (2.2%)	Diabetes	116 (2.3%)[T]	Breast cancer	125 (2.3%)
10							Flu/pneumonia	116 (2.3%)[T]		
Total	**4,970**		**5,076**		**5,273**		**5,050**		**5,262**	

Source: Ontario Mortality Data 2003–2007, IntelliHEALTH, Extracted December 1, 2011, Health Planning Branch, Ontario MOHLTC

Table 8: Leading causes of death, females, Ottawa, 2003–2007

	2003		2004		2005		2006		2007	
Rank	**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**	
1	IHD	439 (17.3%)	IHD	424 (16.3%)	IHD	448 (16.4%)	IHD	407 (15.7%)	IHD	398 (14.4%)
2	Cerebrovascular	188 (7.4%)	Cerebrovascular	235 (9.0%)	Cerebrovascular	221 (8.1%)	Dementia	231 (8.9%)	Dementia	265 (9.6%)
3	Dementia	164 (6.5%)	Lung cancer	180 (6.9%)	Dementia	219 (8.0%)	Lung cancer	189 (7.3%)	Lung cancer	185 (6.7%)
4	Lung cancer	157 (6.2%)	Dementia	173 (6.6%)	Lung cancer	187 (6.9%)	Cerebrovascular	170 (6.6%)	Cerebrovascular	182 (6.6%)
5	Breast cancer	142 (5.6%)	Breast cancer	129 (5.0%)	Lower respiratory	111 (4.0%)	Breast cancer	137 (5.3%)	Breast cancer	123 (4.5%)
6	Lower respiratory	105 (4.1%)	Lower respiratory	102 (3.9%)	Breast cancer	109 (4.0%)	Lower respiratory	97 (3.7%)	Lower respiratory	223 (4.0%)
7	Colorectal cancer	94 (3.7%)	Colorectal cancer	79 (3.0%)	Colorectal cancer	106 (3.9%)	Colorectal cancer	77 (3.0%)	Colorectal cancer	89 (3.2%)
8	Diabetes	79 (3.1%)	Cancer-blood	78 (3.0%)	Flu/pneumonia	71 (2.6%)	Urinary	75 (2.9%)	Cancer-blood	83 (3.0%)
9	Urinary	74 (2.9%)	Urinary	69 (2.7%)	Heart failure	68 (2.5%)	Cancer-blood	70 (2.7%)	Urinary	82 (3.0%)
10	Flu/pneumonia	71 (2.8%)	Flu/pneumonia	62 (2.4%)	Cancer-blood	67 (2.5%)	Heart failure	67 (2.6%)	Flu/pneumonia	67 (2.4%)
Total	**2,428**		**2,606**		**2,726**		**2,597**		**2,757**	

Source: Ontario Mortality Data 2003–2007, IntelliHEALTH, Extracted December 1, 2011, Health Planning Branch, Ontario MOHLTC

Table 9: Leading causes of death, males, Ottawa, 2003–2007

	2003		2004		2005		2006		2007	
Rank	**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**	
1	IHD	518 (21.3%)	IHD	486 (19.7%)	IHD	505 (19.8%)	IHD	462 (18.8%)	IHD	450 (18.0%)
2	Lung cancer	216 (8.9%)	Lung cancer	220 (8.9%)	Lung cancer	239 (9.4%)	Lung cancer	203 (8.3%)	Lung cancer	185 (7.4%)
3	Cerebrovascular	144 (5.9%)	Cerebrovascular	135 (5.5%)	Colorectal cancer	110 (4.3%)[T]	Cerebrovascular	132 (5.4%)	Cerebrovascular	122 (4.9%)
3					Cerebrovascular	110 (4.3%)[T]				
4	Colorectal cancer	97 (4.0%)	Colorectal cancer	96 (3.9%)[T]	Lower respiratory	100 (3.9%)	Dementia	121 (4.9%)	Dementia	119 (4.8%)
4			Lower respiratory	96 (3.9%)[T]						
5	Diabetes	89 (3.7%)	Dementia	95 (3.9%)	Cancer-blood	94 (3.7%)	Colorectal cancer	115 (4.7%)	Cancer-blood	94 (3.8%)
6	Cancer-blood	85 (3.5%)[T]	Cancer-blood	84 (3.4%)	Diabetes	86 (3.4%)	Lower respiratory	81 (3.3%)	Lower respiratory	90 (3.6%)
6	Lower respiratory	85 (3.5%)[T]								
7	Prostate cancer	71 (2.9%)	Prostate cancer	76 (3.1%)	Dementia	83 (3.3%)	Cancer-blood	79 (3.2%)	Colorectal cancer	86 (3.4%)
8	Dementia	55 (2.7%)	Flu/pneumonia	55 (2.2%)	Prostate cancer	74 (2.9%)	Prostate cancer	77 (3.1%)	Diabetes	65 (2.6%)
9	Flu/pneumonia	52 (2.3%)	Urinary	53 (2.2%)	Flu/pneumonia	63 (2.5%)	Urinary	64 (2.6%)	Prostate cancer	64 (2.6%)
10	Urinary	51 (2.1%)	Diabetes	50 (2.0%)	Liver	52 (2.0%)	Diabetes	53 (2.2%)	Urinary	64 (2.6%)[T]
10									Pancreatic cancer	64 (2.6%)[T]
Total	**2,428**		**2,470**		**2,547**		**2,453**		**2,505**	

Source: Ontario Mortality Data 2003–2007, IntelliHEALTH, Extracted December 1, 2011, Health Planning Branch, Ontario MOHLTC

Table 10a: Leading causes of death, females, 0–4 years, Ottawa, 2003–2007

	2003		2004		2005		2006		2007	
Rank	**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**	
1	Perinatal	8 (40.0%)	Perinatal	20 (74.1%)	Perinatal	12 (52.2%)	Congenital	6 (50.0%)	Perinatal	7 (33.3%)[T]
1									Congenital	7 (33.3%)[T]
2	Congenital	7 (35.0%)	Congenital	6 (22.2%)	Congenital	7 (30.4%)				
Total	**20**		**27**		**23**		**12**		**21**	

Table 10b: Leading causes of death, males, 0–4 years, Ottawa, 2003–2007

	2003		2004		2005		2006		2007	
Rank	**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**	
1	Perinatal	12 (63.2%)	Perinatal	14 (58.3%)	Perinatal	18 (69.2%)	Perinatal	13 (65.0%)	Perinatal	20 (55.6%)
2	Congenital	5 (26.3%)	Congenital	6 (25.0%)	Congenital	5 (19.2%)	Congenital	6 (30.0%)	Congenital	8 (22.2%)
Total	**19**		**24**		**26**		**20**		**36**	

Table 10c: Leading causes of death, females, 20–44 years, Ottawa, 2003–2007

	2003		2004		2005		2006		2007	
Rank	**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**	
1	Self-harm	6 (9.4%)[T]	Self-harm	7 (12.3%)[T]	Self-harm	7 (13.2%)	Self-harm	7 (13.7%)	Self-harm	7 (15.2%)
1	Cancer-blood	6 (9.4%)[T]	Cancer-blood	7 (12.3%)[T]						
2	IHD	5 (7.8%)[T]	Lung cancer	5 (8.8%)			AIDS	5 (9.8%)		
2	Road collisions	5 (7.8%)[T]								
2	Lung cancer	5 (7.8%)[T]								
Total	**64**		**57**		**53**		**51**		**46**	

Table 10d: Leading causes of death, males, 20–44 years, Ottawa, 2003–2007

	2003		2004		2005		2006		2007	
Rank	**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**	
1	Road collisions	14 (15.1%)	Self-harm	20 (18.5%)	Self-harm	15 (14.4%)	Self-harm	24 (22.9%)	Self-harm	22 (19.3%)
2	IHD	11 (11.8%)	IHD	13 (12.0%)	IHD	10 (9.6%)[T]	Road collisions	12 (11.4%)	Poisoning	10 (8.8%)
2					Road collisions	10 (9.6%)[T]				
3	Self-harm	8 (8.6%)	Road collissions	12 (11.1%)	Poisoning	9 (8.7%)	IHD	10 (9.5%)	IHD	7 (6.1%)
4	Poisoning	6 (6.5%)[T]	AIDS	10 (9.3%)	AIDS	6 (5.8%)	Assault	9 (8.6%)	Cancer-blood	5 (4.4%)[T]
4	Cancer-blood	6 (6.5%)[T]							Road collisions	5 (4.4%)[T]
5	Assault	5 (5.4%)	Poisoning	7 (6.5%)	Substance abuse	5 (4.8%)	Poisoning	6 (5.7%)		
6			Cancer-blood	6 (5.6%)[T]			Cancer-brain	5 (4.8%)		
6			Lung cancer	6 (5.6%)[T]						
Total	**93**		**108**		**104**		**105**		**114**	

Table 10e: Leading causes of death, females, 45–64 years, Ottawa, 2003–2007

	2003		2004		2005		2006		2007	
Rank	**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**	
1	Lung cancer	53 (21.9%)	Lung cancer	48 (17.8%)	Lung cancer	48 (19.2%)	Lung cancer	43 (16.7%)	Lung cancer	46 (16.6%)
2	IHD	25 (10.3%)	Colorectal cancer	22 (8.1%)	IHD	26 (10.4%)	IHD	29 (11.3%)	IHD	32 (11.6%)
3	Colorectal cancer	16 (16.6%)	IHD	20 (7.4%)	Colorectal cancer	23 (9.2%)	Cancer-blood	15 (5.8%)	Cancer-blood	14 (5.1%)[T]
3									Pancreatic cancer	14 (5.1%)[T]
4	Cerebrovascular	14 (5.8%)	Cancer-blood	15 (5.5%)[T]	Liver	10 (4.0%)[T]	Colorectal cancer	13 (5.1%)	Colorectal cancer	12 (4.3%)[T]
4			Cerebrovascular	15 (5.5%)[T]	Cancer-blood	10 (4.0%)[T]			Liver	12 (4.3%)[T]
5	Cancer-blood	8 (3.3%)	Pancreatic cancer	10 (3.7%)[T]	Lower respiratory	7 (2.8%)[T]	Pancreatic cancer	11 (4.3%)	Self-harm	10 (3.6%)
5			Cancer-brain	10 (3.7%)[T]	Cerebrovascular	7 (2.8%)[T]				
6	Liver	6 (2.5%)[T]	Self-harm	8 (3.0%)[T]	Self-harm	6 (2.4%)[T]	Cerebrovascular	9 (3.5%)	Cancer-brain	9 (3.2%)[T]
6	Self-harm	6 (2.5%)[T]	Diabetes	8 (3.0%)[T]	Pancreatic cancer	6 (2.4%)[T]			Cerebrovascular	9 (3.2%)[T]
6	Pancreatic cancer	6 (2.5%)[T]			Cancer-brain	6 (2.4%)[T]				
7	Lower respiratory	5 (2.1%)[T]	Liver	7 (2.6%)	Cancer-stomach	5 (2.0%)[T]	Liver	8 (3.1%)[T]	Diabetes	6 (2.2%)
7	Cancer-brain	5 (2.1%)[T]			Cancer-liver	5 (2.0%)[T]	Self-harm	8 (3.1%)[T]		
8			Flu/pneumonia	5 (1.9%)			Lower respiratory	7 (2.7%)	Road collisions	5 (1.8%)[T]
8									Substance abuse	5 (1.8%)[T]

	2003		2004		2005		2006		2007	
Rank	Condition/Deaths (%)		Condition/Deaths (%)		Condition/Deaths (%)		Condition/Deaths (%)		Condition/Deaths (%)	
9							Diabetes	5 (2.0%)[T]		
9							Cancer-brain	5 (2.0%)[T]		
9							Cancer-skin	5 (2.0%)[T]		
Total	242		271		250		257		277	

Table 10f: Leading causes of death, males, 45–64 years, Ottawa, 2003–2007

	2003		2004		2005		2006		2007	
Rank	Condition/Deaths (%)		Condition/Deaths (%)		Condition/Deaths (%)		Condition/Deaths (%)		Condition/Deaths (%)	
1	IHD	94 (19.7%)	IHD	103 (20.2%)	IHD	91 (17.7%)	IHD	108 (21.4%)	IHD	101 (20.9%)
2	Lung cancer	56 (11.7%)	Lung cancer	60 (11.8%)	Lung cancer	67 (13.0%)	Lung cancer	54 (10.7%)	Lung cancer	42 (8.7%)
3	Colorectal cancer	26 (5.4%)[T]	Liver	20 (3.9%)	Colorectal cancer	28 (5.4%)	Colorectal cancer	27 (5.4%)	Colorectal cancer	23 (4.8%)[T]
3	Diabetes	26 (5.4%)[T]							Liver	23 (4.8%)[T]
4	Cancer-blood	22 (4.6%)	Colorectal cancer	19 (3.7%)	Liver	26 (5.1%)	Liver	26 (5.2%)	Self-harm	18 (3.7%)
5	Liver	18 (3.8%)	Pancreatic cancer	18 (3.5%)	Cancer-blood	23 (4.5%)	Self-harm	18 (3.6%)	Cancer-blood	17 (3.5%)
6	Self-harm	12 (2.5%)	Cancer-blood	17 (3.3%)	Diabetes	21 (4.1%)	Cancer-blood	16 (3.2%)[T]	Pancreatic cancer	16 (3.3%)
6							Pancreatic cancer	16 (3.2%)[T]		
7	Cancer-liver	10 (2.1%)	Self-harm	15 (2.9%)	Cancer-brain	18 (3.5%)	Liver	13 (2.6%)	AIDS	13 (2.7%)[T]
7									Cancer-oesophagus	13 (2.7%)[T]

Overall mortality

	2003		2004		2005		2006		2007	
Rank	**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**	
8	Cerebrovascular	9 (1.9%)[T]	Diabetes	14 (2.8%)	Cerebrovascular	17 (3.3%)	Lower respiratory	12 (2.4%)	Lower respiratory	12 (2.5%)[T]
8	Cancer- bladder	9 (1.9%)[T]							Road collisions	12 (2.5%)[T]
9	Pancreatic cancer	8 (1.7%)[T]	Lower respiratory	12 (2.4%)[T]	Self-harm	12 (2.5%)	Diabetes	11 (2.2%)[T]	Cancer-kidney	9 (1.9%)[T]
9	Cancer-brain	8 (1.7%)[T]	Cancer-kidney	12 (2.4%)[T]			Cancer-brain	11 (2.2%)[T]	Diabetes	9 (1.9%)[T]
9	Cancer-skin	8 (1.7%)[T]	Cerebrovascular	12 (2.4%)[T]						
10	Cancer-oesophagus	7 (1.5%)[T]	Cancer-liver	11 (2.2%)	Pancreatic cancer	12 (2.3%)[T]	Cerebrovascular	10 (2.0%)[T]		
10	Cancer-oral	7 (1.5%)[T]			Cancer-liver	12 (2.3%)[T]	Cancer-stomach	10 (2.0%)[T]		
Total	**478**		**510**		**515**		**504**		**484**	

Table 10g: Leading causes of death, females, 65+ years, Ottawa, 2003–2007

	2003		2004		2005		2006		2007	
Rank	**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**	
1	IHD	409 (20.8%)	IHD	402 (19.9%)	IHD	418 (19.0%)	IHD	374 (18.2%)	IHD	362 (16.6%)
2	Cerebrovascular	172 (8.7%)	Cerebrovascular	216 (10.7%)	Dementia	219 (10.0%)	Dementia	231 (11.2%)	Dementia	263 (12.0%)
3	Dementia	163 (8.3%)	Dementia	171 (8.5%)	Cerebrovascular	211 (9.6%)	Cerebrovascular	160 (7.8%)	Cerebrovascular	172 (7.9%)
4	Lower respiratory	100 (5.1%)	Lung cancer	128 (6.3%)	Lung cancer	136 (6.2%)	Lung cancer	144 (7.0%)	Lung cancer	136 (6.2%)
5	Lung cancer	99 (5.0%)	Lower respiratory	98 (4.8%)	Lower respiratory	104 (4.8%)	Lower respiratory	89 (4.3%)	Lower respiratory	110 (5.0%)
6	Colorectal cancer	75 (3.8%)	Urinary	66 (3.3%)	Colorectal cancer	80 (3.6%)	Urinary	71 (3.5%)	Urinary	82 (3.8%)
7	Diabetes	72 (3.7%)	Flu/pneumonia	57 (2.8%)	Flu/pneumonia	70 (3.2%)	Heart failure	64 (3.1%)	Colorectal cancer	77 (3.5%)
8	Urinary	69 (3.5%)[T]	Cancer-blood	56 (2.8%)[T]	Heart failure	67 (3.0%)	Colorectal cancer	60 (2.9%)[T]	Cancer-blood	67 (3.1%)
8	Flu/pneumonia	69 (3.5%)[T]	Colorectal cancer	56 (2.8%)[T]			Flu/pneumonia	60 (2.9%)[T]		
9	Cancer-blood	52 (2.6%)	Diabetes	53 (2.6%)	Atherosclerosis	38 (1.7%)	Diabetes	57 (2.8%)	Flu/pneumonia	62 (2.8%)
10	Heart failure	45 (2.3%)	Heart failure	42 (2.1%)	Pancreatic cancer	35 (1.6%)	Cancer-blood	53 (2.6%)	Diabetes	53 (2.4%)
Total	**1,971**		**2,024**		**2,197**		**2,056**		**2,187**	

Table 10h: Leading causes of death, males, 65+ years, Ottawa, 2003–2007

	2003		2004		2005		2006		2007	
Rank	**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**		**Condition/Deaths (%)**	
1	IHD	413 (23.0%)	IHD	370 (20.7%)	IHD	404 (21.7%)	IHD	343 (19.3%)	IHD	342 (18.4%)
2	Lung cancer	156 (8.7%)	Lung cancer	154 (8.6%)	Lung cancer	168 (9.0%)	Lung cancer	148 (8.3%)	Lung cancer	139 (7.5%)
3	Cerebrovascular	132 (7.4%)	Cerebrovascular	120 (6.7%)	Cerebrovascular	93 (5.0%)	Cerebrovascular	122 (6.9%)	Dementia	118 (6.4%)
4	Lower respiratory	79 (4.4%)	Dementia	94 (5.3%)	Lower respiratory	90 (4.8%)	Dementia	118 (6.6%)	Cerebrovascular	113 (6.1%)
5	Colorectal cancer	67 (3.7%)	Lower respiratory	82 (4.6%)	Dementia	80 (4.3%)	Colorectal cancer	84 (4.7%)	Lower respiratory	78 (4.2%)
6	Prostate cancer	65 (3.6%)	Colorectal cancer	75 (4.2%)	Colorectal cancer	79 (4.3%)	Prostate cancer	72 (4.1%)	Cancer-blood	69 (3.7%)
7	Diabetes	63 (3.5%)	Prostate cancer	73 (4.1%)	Prostate cancer	71 (3.8%)	Lower respiratory	68 (3.8%)	Colorectal cancer	63 (3.4%)
8	Cancer-blood	57 (3.2%)	Cancer-blood	60 (3.4%)	Cancer-blood	66 (3.6%)	Cancer-blood	60 (3.4%)	Prostate cancer	62 (3.3%)
9	Dementia	54 (3.0%)	Flu/pneumonia	53 (3.0%)	Diabetes	61 (3.3%)	Urinary	57 (3.2%)	Urinary	58 (3.1%)
10	Flu/pneumonia	49 (2.7%)	Urinary	50 (2.8%)	Flu/pneumonia	52 (2.8%)	Flu/pneumonia	43 (2.4%)	Diabetes	53 (2.9%)
Total	**1,793**		**1,787**		**1,858**		**1,776**		**1,856**	

Source: Ontario Mortality Data 2003–2007, IntelliHEALTH, Extracted December 1, 2011, Health Planning Branch, Ontario MOHLTC

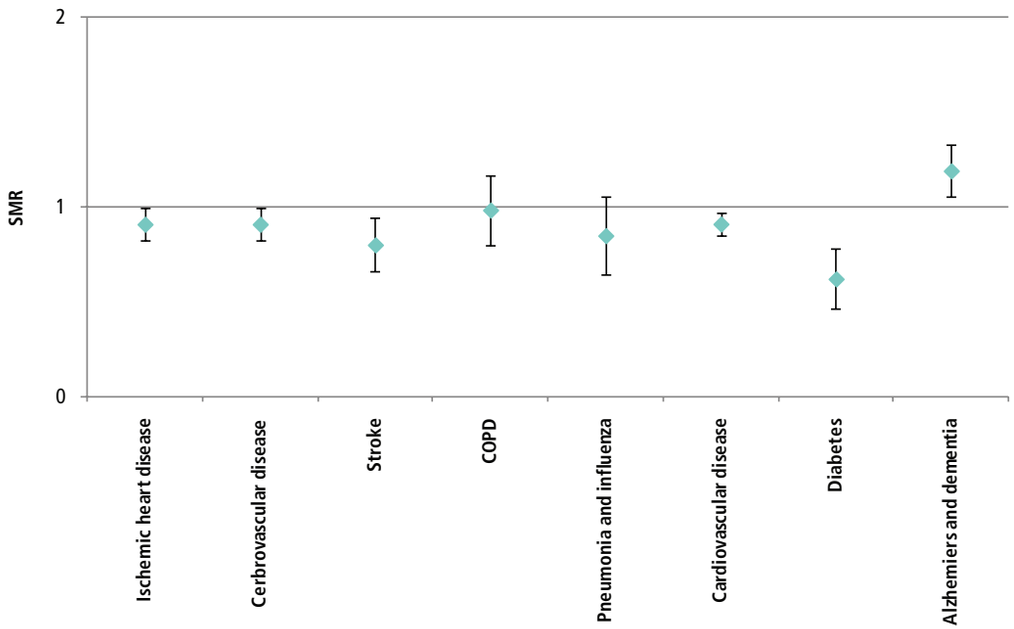
Standardized mortality ratio

This section discusses the standardized mortality ratios (SMRs) resulting from selected causes of chronic and infectious diseases. In 2007, the risk of mortality from stroke, cardiovascular disease and diabetes was lower in Ottawa females than for females in the rest of Ontario. Mortality risk from Alzheimer's/dementia was significantly greater in Ottawa females than in females in the rest of Ontario. Mortality risk from IHD, cerebrovascular disease, COPD and pneumonia/influenza was not significantly different for Ottawa females than for those in the rest of Ontario (Figure 10).

In 2007, the risk of mortality from diabetes and COPD was lower in Ottawa males than in rest-of-Ontario males (Figure 11). Mortality risk from IHD, cerebrovascular disease, stroke, pneumonia/influenza, cardiovascular disease and Alzheimer's/dementia was not statistically different for Ottawa males than for males in the rest of Ontario.

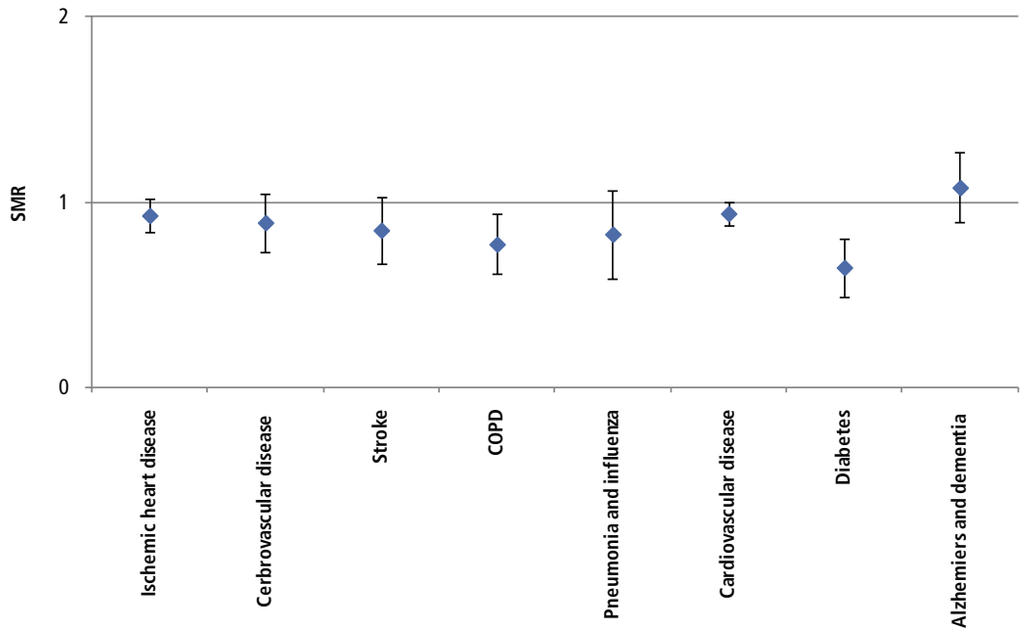
Note: *The standardized mortality ratio is the ratio of the number of deaths in the population of interest relative to the number expected if that population had the same age-specific rates as a reference or standard population.[4] In this report, the population of interest is Ottawa and the reference population is the rest of Ontario. If the confidence intervals (CIs) equal 1.0, then the mortality rate for that particular condition in Ottawa is no different than the rate in Ontario. If the SMR and its CIs are both greater than 1.0, this indicates that the mortality rate for that condition is significantly greater for Ottawa than in the rest of Ontario. Alternatively, if the SMR and its CIs are both below 1.0, then the mortality rates in Ottawa for that condition are significantly lower than those for the rest of Ontario. Within these figures, the diamonds represent point estimates and the lines 95% CIs.*

Figure 10. Age-standardized mortality ratios (SMRs) for selected chronic conditions and infectious diseases, females, Ottawa, 2007



Source: Ontario Mortality Data 2010, IntelliHEALTH Extracted September 9, 2011, Health Planning Branch, Ontario MOHLT
COPD – chronic obstructive pulmonary diseases

Figure 11. Age-standardized mortality ratios (SMRs) for selected chronic conditions and infectious diseases, males, Ottawa, 2007



Source: Ontario Mortality Data 2010, IntelliHEALTH Extracted September 9, 2011, Health Planning Branch, Ontario MOHLTC
COPD – chronic obstructive pulmonary diseases

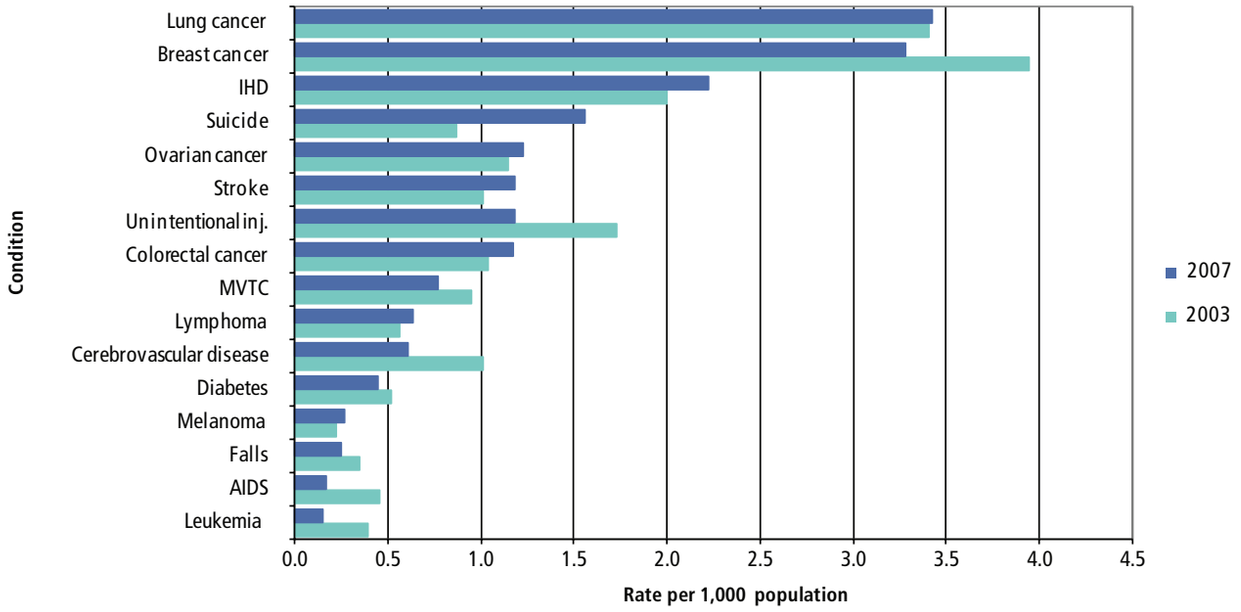
Premature mortality (potential years of life lost)

Potential years of life lost (PYLL) measures premature mortality. PYLL is the number of years not lived by an individual who died before age 75 years and tells us more about causes of death in younger populations.

In 2007, the greatest cause of premature mortality in Ottawa females was lung cancer, followed by breast cancer, IHD and suicide (Figure 12). In 2003, the greatest cause of premature mortality was breast cancer, followed by lung cancer, IHD and unintentional injuries.

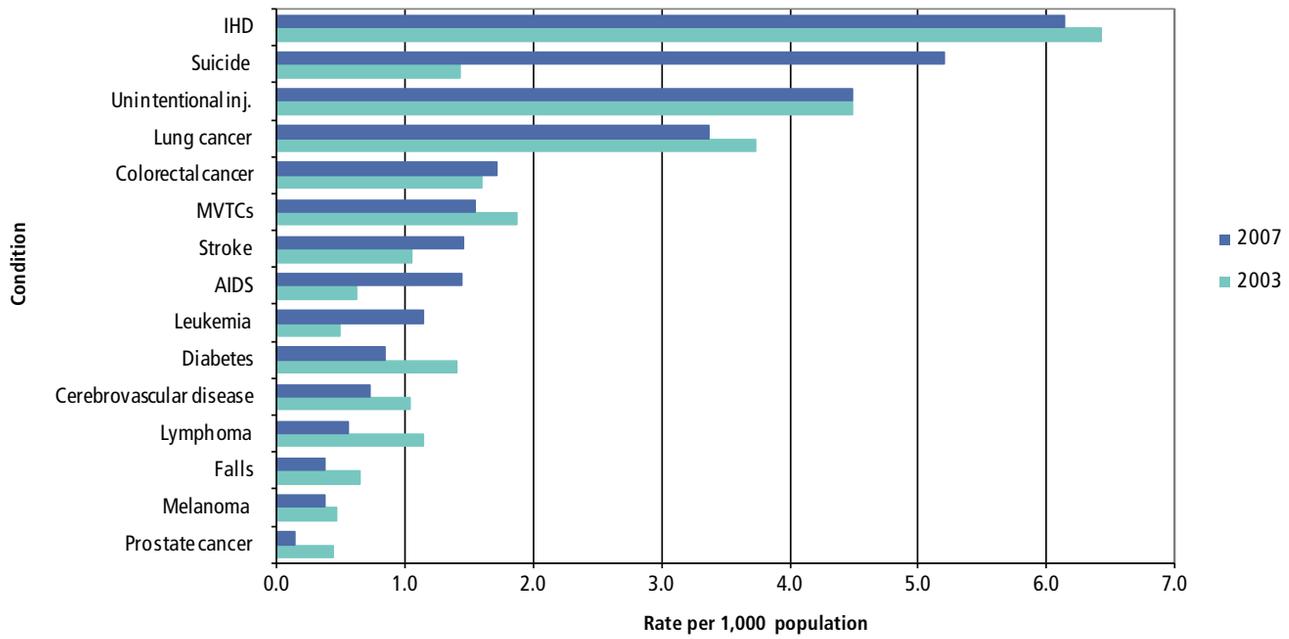
In 2007, the greatest cause of premature mortality in Ottawa males was IHD, followed by suicide, unintentional injuries and lung cancer (Figure 13). In 2003, the greatest cause of premature mortality was also IHD, but was followed by unintentional injuries, lung cancer and motor vehicle traffic collisions (MVTCs).

Figure 12. Potential years of life lost for selected causes of death, females, 0–74 years, Ottawa, 2003 and 2007



Source: Ontario Mortality Data 2003–2007, IntelliHEALTH Extracted September 9, 2011, Health Planning Branch, Ontario MOHLTC
AIDS – Acquired Immune Deficiency Syndrome, COPD – chronic obstructive pulmonary disease, IHD – ischemic heart disease, MVTC – motor vehicle traffic collision

Figure 13. Potential years of life lost for selected causes of death, males, 0–74 years, Ottawa, 2003 and 2007



Source: Ontario Mortality Data 2003–2007, IntelliHEALTH Extracted September 9, 2011, Health Planning Branch, Ontario MOHLTC
Note: AIDS – acquired immune deficiency syndrome, COPD – chronic obstructive pulmonary disease, IHD – ischemic heart disease, MVTC – motor vehicle traffic collision

This section presents morbidity and mortality statistics for selected chronic conditions and infectious diseases. The conditions and diseases chosen are associated with the greatest burden of morbidity and mortality in Ottawa (according to leading causes), with the exception of cancer. For information on other leading causes such as cancers and injuries (including intentional self-harm/suicide) please refer to the other topic-specific-reports on these diseases and conditions that have recently been produced by Ottawa Public Health.

Cardiovascular disease

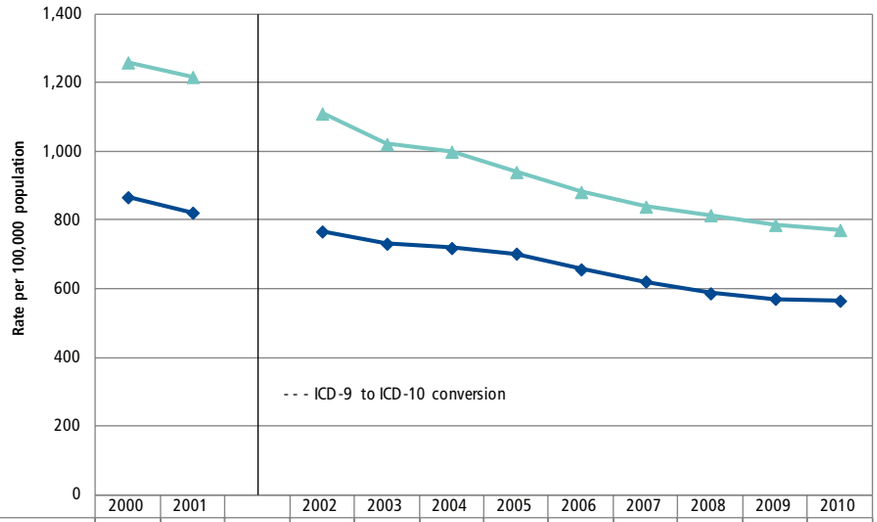
There are many types of cardiovascular diseases (also known as circulatory disease), including myocardial infarction, IHD, valvular heart disease, peripheral vascular disease, arrhythmias, high blood pressure and stroke. Each type of cardiovascular disease has different characteristics, causes and risk factors. Together, cardiovascular diseases are a major cause of illness, disability and death in Ottawa. Major risk factors for CVD include tobacco use, physical inactivity and unhealthy eating (including high sodium, fat and caloric intake, and low fruit and vegetable intake). Intermediate risk factors include high blood pressure, high total blood cholesterol, overweight/obesity and stress. Risk of cardiovascular disease is also increased by other chronic diseases such as diabetes and by a family history of cardiovascular disease (genetics).[8]

Morbidity

Since 2000, in-patient hospitalization rates from all cardiovascular diseases in Ottawa and the rest of Ontario have declined significantly. Ottawa rates are significantly lower than those for the rest of Ontario (Figure 14). In 2010, the hospitalization rate in Ottawa was 564.9 per 100,000 population (6,300 hospitalizations). Hospitalization rates from all cardiovascular diseases in 2010 were significantly higher in Ottawa males (746.4 per 100,000) than in Ottawa females (416.8 per 100,000 population), and have been so since 2000 (Figure 15).

Hospitalization rates significantly increase with age. From 35+ years, males have significantly higher hospitalization rates than do females (Figure 16).

Figure 14. Age-standardized hospitalization rates and hospitalization counts of all cardiovascular disease, Ottawa and the rest of Ontario, 2000–2010

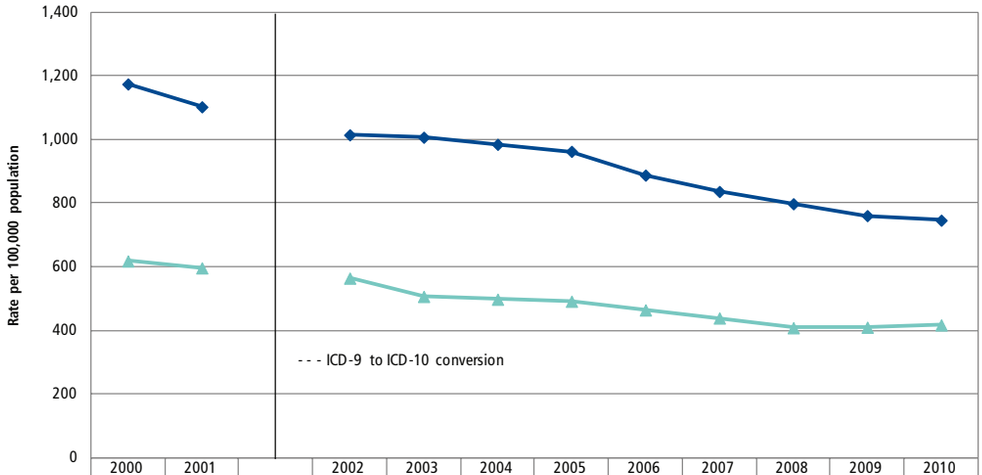


	2000	2001		2002	2003	2004	2005	2006	2007	2008	2009	2010
Ottawa rate	866.9	821.9		767.1	731.3	718.8	702.5	656.6	621.2	586.7	570.8	564.9
Ontario-less-Ottawa rate	1,260.0	1,217.6		1,110.9	1,021.6	999.4	940.5	882.1	839.5	814.6	786.2	771.4
Ottawa counts	7,120	6,945		6,707	6,584	6,669	6,688	6,496	6,324	6,119	6,163	6,300
Ontario-less-Ottawa counts	153,779	152,613		143,428	135,664	136,477	131,734	127,402	124,630	124,148	123,044	124,052

Years

Source: Ontario inpatient discharges 2000-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC Cardiovascular Disease (ICD-9:390-459, ICD-10-CA: I00-I99)
Data note: Hospitalization rates are age-standardized to the 1991 Canadian population

Figure 15. Age-standardized hospitalization rates and hospitalization counts of all cardiovascular disease, by sex, Ottawa, 2000–2010

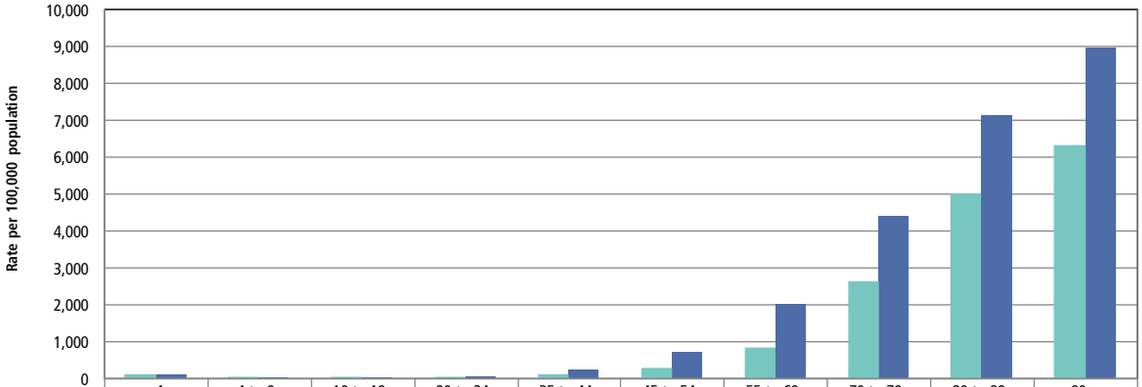


	2000	2001		2002	2003	2004	2005	2006	2007	2008	2009	2010
Female rate	617.94	596.35		564.12	506.44	497.66	491.35	463.94	438.61	407.93	409.54	416.78
Male rate	1,175.06	1,103.27		1,015.11	1,007.45	985.16	962.97	888.17	836.66	798.11	760.80	746.36
Female counts	2,961	2,922		2,865	2,672	2,726	2,739	2,711	2,626	2,477	2,570	2,684
Male counts	4,159	4,023		3,842	3,912	3,943	3,949	3,785	3,698	3,642	3,593	3,616

Years

Source: Ontario inpatient discharges 2000-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC Cardiovascular Disease (ICD-9:390-459, ICD-10-CA: I00-I99)
Data note: Hospitalization rates are age-standardized to the 1991 Canadian population

Figure 16. Age-specific hospitalization rates of all cardiovascular disease by sex, Ottawa, 2006–2010 average



	<1	1 to 9	10 to 19	20 to 34	35 to 44	45 to 54	55 to 69	70 to 79	80 to 89	90+
Female rate	105.7	13.5	26.5	38.3	92.2	282.3	837.1	2,627.9	5,006.7	6,297.9
Male rate	110.0	14.0	37.4	59.1	221.6	731.0	2,016.2	4,402.9,	7,154.9	8,985.1
Female counts	24	28	71	184	310	973	2794	3,293	4,102	1,289
Male counts	26	30	103	281	744	2,465	6,285	4,435	3,355	610

Age Group

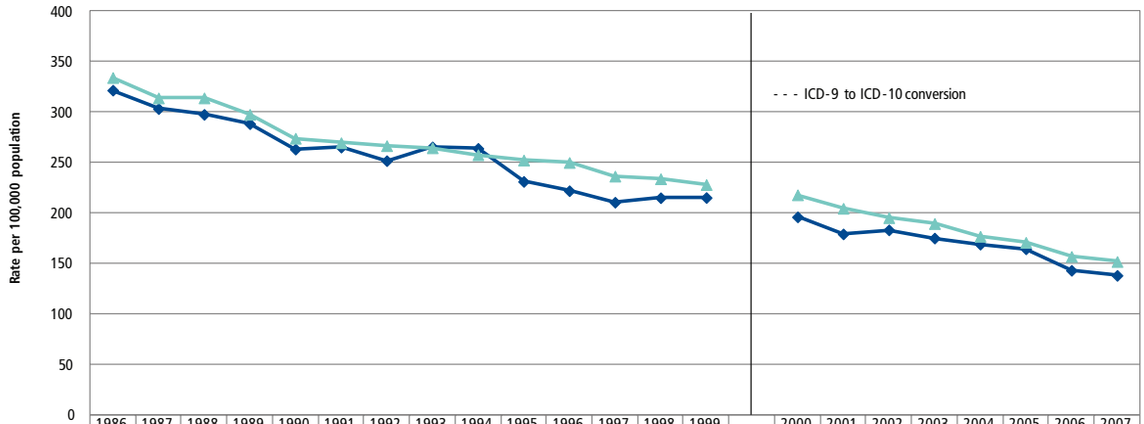
Source: Ontario inpatient discharges 2000-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC Cardiovascular Disease (ICD-9:390-459, ICD-10-CA: I00-I99)
Data note: Hospitalization rates are age-standardized to the 1991 Canadian population.

Mortality

Mortality rates from all cardiovascular diseases have declined significantly (by 58%) in Ottawa since 1986, similar to the rates in the rest of Ontario. In general, mortality rates in Ottawa are lower than those in the rest of Ontario (statistically significant in 1988, 1992, 1995–2003 and 2006–2007) (Figure 17). In 2007, the mortality rate from all cardiovascular diseases in Ottawa was 138.0 deaths per 100,000 (1,571 deaths). Over the past 21 years, mortality rates have been significantly higher in males than in females (Figure 18).

Ottawa males 40–89 years had significantly higher rates of death from all cardiovascular disease than did females in the same age group (Figure 19).

Figure 17. Age-standardized mortality rates and death counts of all cardiovascular disease, Ottawa and the rest of Ontario, 1986–2007

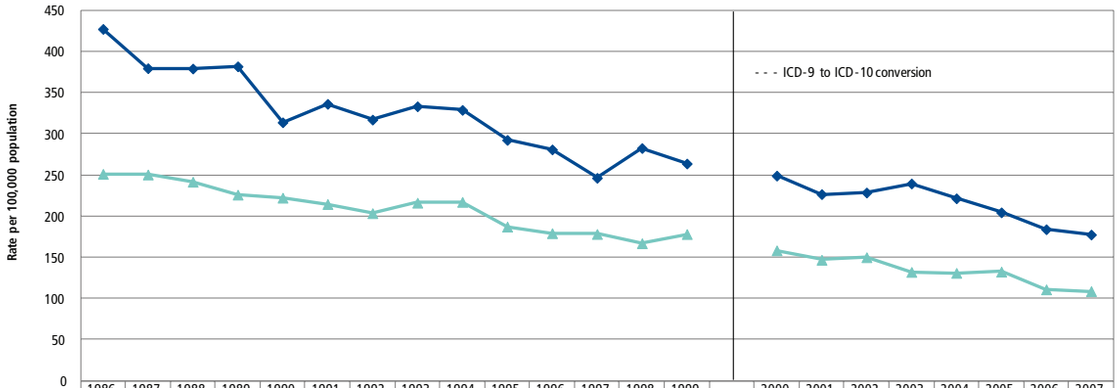


	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Ottawa rate	321.2	302.9	297.2	288.0	262.8	264.7	251.3	265.0	263.5	230.7	221.5	210.2	214.6	214.8	195.6	178.7	182.7	174.6	168.6	164.0	142.7	137.7
Ontario-less-Ottawa rate	333.7	313.5	313.5	297.3	273.5	269.1	266.2	264.1	257.2	251.9	249.5	236.0	233.4	227.6	217.5	204.1	194.9	189.0	176.4	170.4	156.4	151.4
Ottawa deaths	1,693	1,652	1,679	1,688	1,597	1,669	1,637	1,776	1,809	1,647	1,635	1,608	1,692	1,750	1,651	1,569	1,679	1,641	1,643	1,688	1,555	1,571
Ontario-less-Ottawa deaths	28,088	27,352	28,108	27,567	26,191	26,686	27,131	27,659	27,656	27,797	28,228	27,413	27,815	27,886	27,466	26,639	26,376	26,472	25,542	25,608	24,461	24,531

Years

Source: Ontario Mortality Data 2007, IntelliHEALTH, Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
All Cardiovascular Diseases (formerly Circulatory Disease) (ICD-9: 390-459, ICD-10-CA: I00-I99)
Data note: Mortality rates are age-standardized to the 1991 Canadian population

Figure 18. Age-standardized mortality rates and death counts of all cardiovascular disease by sex, Ottawa, 1986–2007

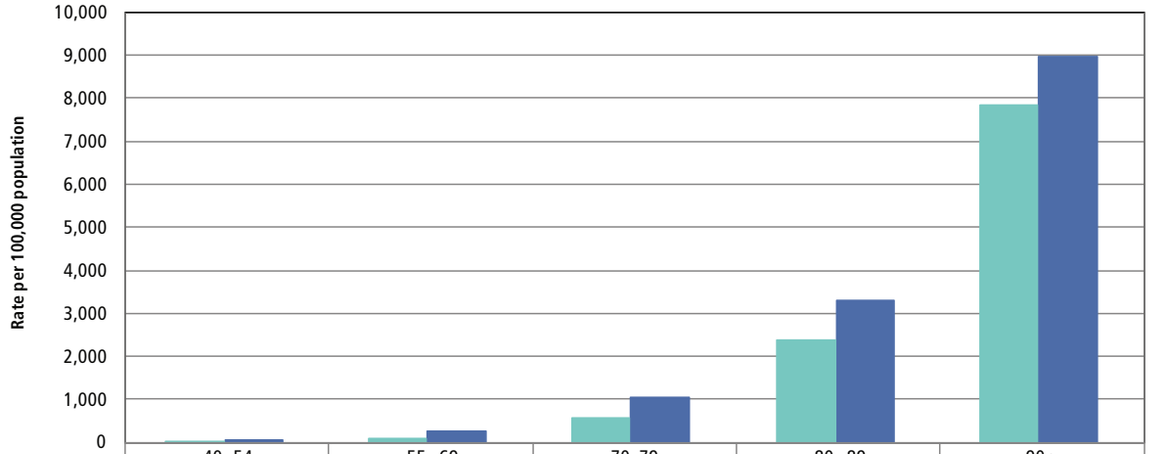


	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Female rate	251.2	250.5	241.7	226.0	222.3	214.6	203.5	216.2	217.2	187.1	179.2	178.2	166.9	178.1	158.3	146.8	149.9	132.0	130.9	132.4	110.8	108.7
Male rate	427.5	379.8	379.3	382.1	314.0	336.4	317.3	333.4	329.0	292.5	281.0	246.4	282.6	263.8	249.1	226.6	228.6	239.5	221.5	204.4	183.9	177.5
Female deaths	879	915	905	884	900	902	877	960	987	888	876	905	863	957	871	847	904	813	846	907	812	813
Male deaths	814	737	774	804	697	767	760	816	822	759	759	703	829	793	780	722	775	828	797	781	743	758

Years

Source: Ontario Mortality Data 2007, IntelliHEALTH, Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
All Cardiovascular Diseases (formerly Circulatory Disease) (ICD-9: 390-459, ICD-10-CA: I00-I99)
Data note: Mortality rates are age-standardized to the 1991 Canadian population

Figure 19. Age-specific mortality rates of all cardiovascular diseases by sex, Ottawa, 2003–2007 average



	40–54	55–69	70–79	80–89	90+
Female rate	22.2	100.7	580.4	2,386.6	7,848.0
Male rate	57.6	271.3	1,057.6	3,302.6	8,983.9
Female deaths	112	299	705	1,823	1,229
Male deaths	286	755	1,011	1,376	435

Age group

Source: Ontario Mortality Data 2007, IntelliHEALTH, Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
All Cardiovascular Disease (formerly Circulatory Disease) (ICD-9: 390-459, ICD-10-CA: I00-I99)

Ischemic heart disease (IHD)

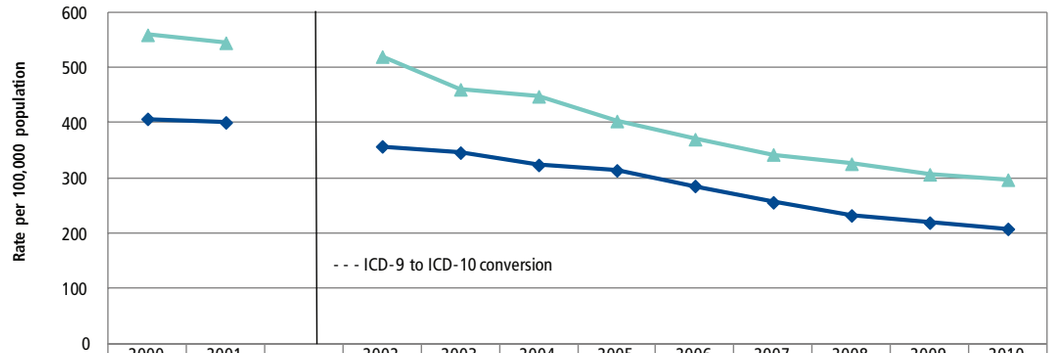
Ischemic heart disease (IHD) is damage to the heart muscle caused by an absence or deficiency in its blood supply, resulting in the heart being unable to work efficiently. IHD can lead to a heart attack, angina (chest pain) and/or sudden death. It is often referred to as coronary artery disease or coronary heart disease because it is characterized by a thickening of the inner lining of the blood vessels to the heart (coronary vessels) from fat deposits and other materials (atherosclerosis), which reduces poor blood flow to the heart muscle.[9]

Morbidity

Ottawa hospitalization rates for IHD have decreased significantly—by almost 50% since 1986. In 2010, hospitalization rates of IHD in Ottawa were significantly lower (207.9 per 100,000 population) than were rates in the rest of Ontario (297.1 per 100,000 population) (Figure 20). Historically, male hospitalization rates have been significantly higher than have female rates (Figure 21). In 2010, the male hospitalization rate for IHD was double the rate for females (316.0 versus 118.0 per 100,000 population).

Hospitalization rates significantly increased with age. From 40+ years, males had significantly higher hospitalization rates than did females (Figure 22).

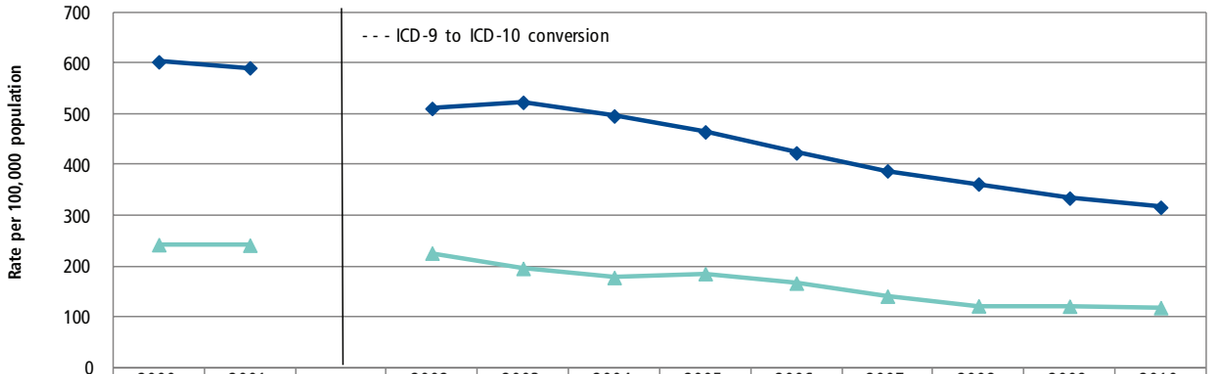
Figure 20. Age-standardized hospitalization rates of ischemic heart disease, Ottawa and the rest of Ontario, 2000–2010



	2000	2001		2002	2003	2004	2005	2006	2007	2008	2009	2010
Ottawa rate	407.2	400.8		357.4	346.0	323.7	313.9	285.6	256.0	232.2	219.2	207.9
Ontario-less-Ottawa rate	559.5	545.1		520.2	460.7	448.1	403.3	370.4	342.8	325.9	306.7	297.1
Ottawa count	3,357	3,389		3,127	3,114	2,994	2,986	2,790	2,576	2,416	2,364	2,303
Ontario-less-Ottawa count	68,264	68,274		67,146	61,163	61,147	56,431	53,394	50,892	49,673	47,996	47,814

Source: Ontario inpatient discharges 2000-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC.
Ischemic Heart Disease (ICD-9: 410-414, ICD-10-CA: I20-I25)
Data note: Hospitalization rates are age-standardized to the 1991 Canadian population

Figure 21. Age-standardized hospitalization rates and hospitalization counts of ischemic heart disease by sex, 2000–2010

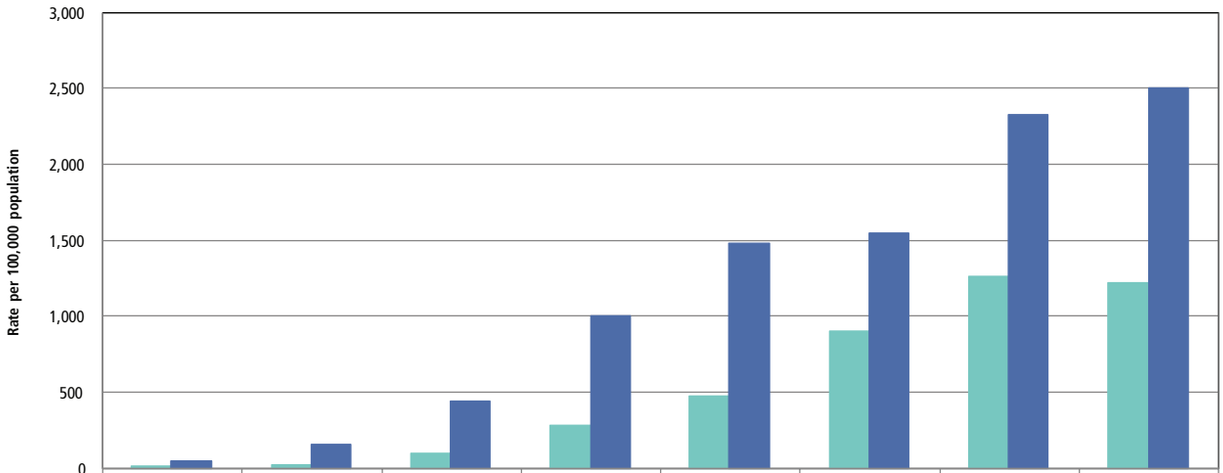


	2000	2001		2002	2003	2004	2005	2006	2007	2008	2009	2010
Female rate	242.3	241.3		225.7	195.3	177.5	185.1	166.4	140.7	121.5	120.7	118.0
Male rate	603.0	591.1		511.0	523.1	496.1	464.7	423.3	387.7	361.9	334.0	316.0
Female counts	1,288	1,163		1,147	1,159	1,122	1,012	941	1,020	931	821	714
Male counts	2,210	2,230		2,005	2,102	2,053	1,966	1,859	1,755	1,702	1,623	1,572

Years

Source: Ontario inpatient discharges 2000-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC
Ischemic Heart Disease (ICD-9: 410-414, ICD-10-CA: I20-I25)
Data note: Hospitalization rates are age-standardized to the 1991 Canadian population

Figure 22. Age-specific hospitalization rates of ischemic heart disease by sex Ottawa, 2006–2010 average



	35–39	40–44	45–54	55–64	65–69	70–79	80–89	90+
Female rate	13.8	26.7	101.3	281.8	476.4	903.4	1,260.8	1,221.5
Male rate	47.6	156.2	442.2	1,003.6	1,481.4	1,548.8	2,328.8	2,504.1
Female counts	22	47	349	708	393	1,132	1,033	250
Male counts	76	275	1,491	2,388	1,093	1,894	1,092	170

Age group

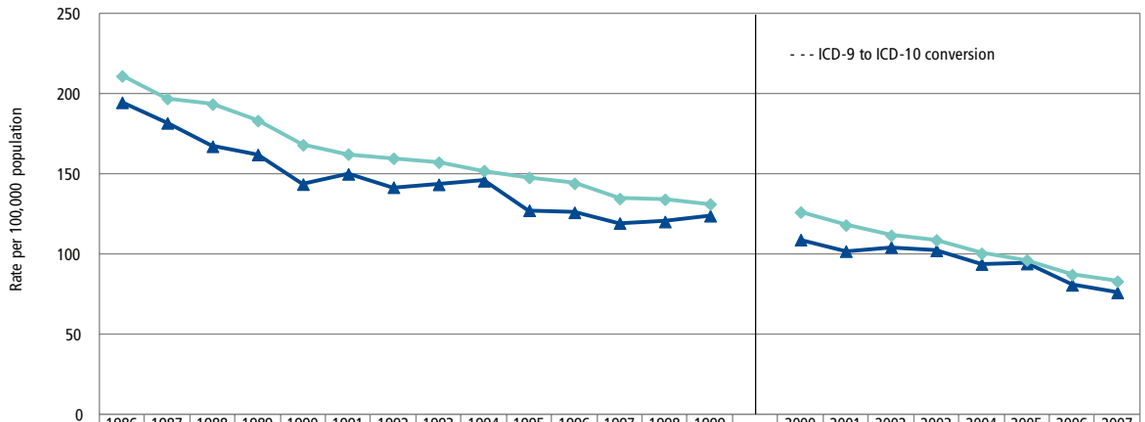
Source: Ontario inpatient discharges 2006-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC
Ischemic Heart Disease (ICD-10-CA: I20-I25)

Mortality

In 2007, IHD was the number one killer in Ottawa (848 deaths). However, mortality rates of IHD have declined significantly since 1986 (Figure 23). In 2007, mortality rates from IHD in Ottawa were 76.2 deaths per 100,000, significantly lower than the rate of 83.1 deaths per 100,000 observed in the rest of Ontario. Historically, IHD mortality rates have been significantly higher in males than in females, except in 2006 when rates were significantly higher in females (Figure 24).

Mortality rates of IHD significantly increased with age (Figure 25). Mortality rates from IHD were significantly higher in males than in females for all age groups before 90 years.

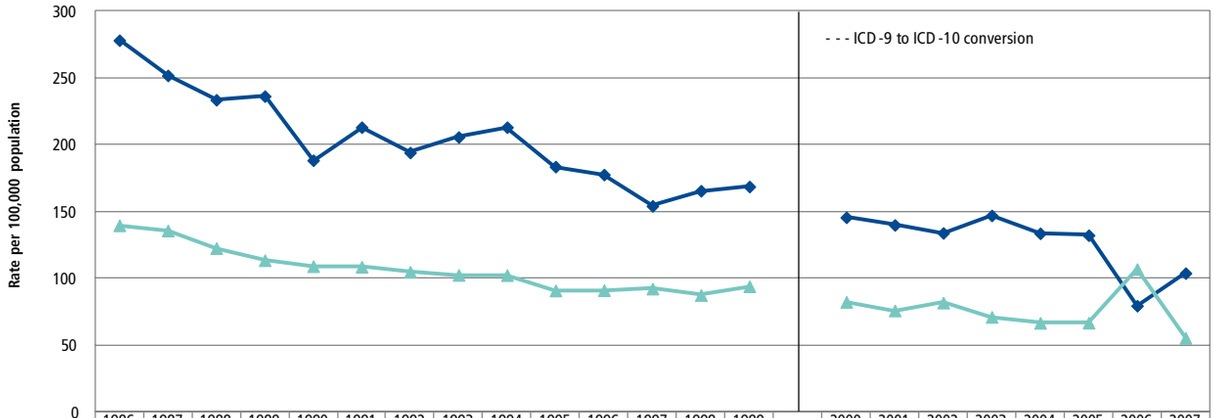
Figure 23. Age-standardized mortality rates and death counts of ischemic heart disease, Ottawa and the rest of Ontario, 1986–2007



	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Ottawa rate	194.6	181.8	167.2	162.1	143.6	150.0	141.7	143.5	145.7	127.3	126.1	119.4	120.3	123.9	109.1	101.9	104.4	102.4	93.8	94.1	80.9	76.2
Ontario-less-Ottawa rate	211.0	197.0	193.4	183.2	168.1	162.3	159.7	157.2	152.0	147.7	144.1	134.6	134.2	131.2	126.2	118.1	111.7	108.9	100.5	96.4	87.3	83.1
Ottawa deaths	1,034	999	951	955	876	948	925	964	1,001	905	928	910	945	1,008	916	892	956	957	910	953	868	847
Ontario-less-Ottawa deaths	17,820	17,233	17,377	17,010	16,108	16,094	16,267	16,452	16,320	16,271	16,266	15,606	15,960	16,032	15,866	15,363	15,069	15,172	14,472	14,407	13,558	13,332

Source: Source: Ontario Mortality Data 2007, IntelliHEALTH Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
Ischemic Heart Disease (ICD-9: 410-414, ICD-10-CA: I20-I25)
Data note: Mortality rates are age-standardized to the 1991 Canadian population

Figure 24. Age-standardized mortality rates and death counts of ischemic heart disease by sex, Ottawa, 1986–2007

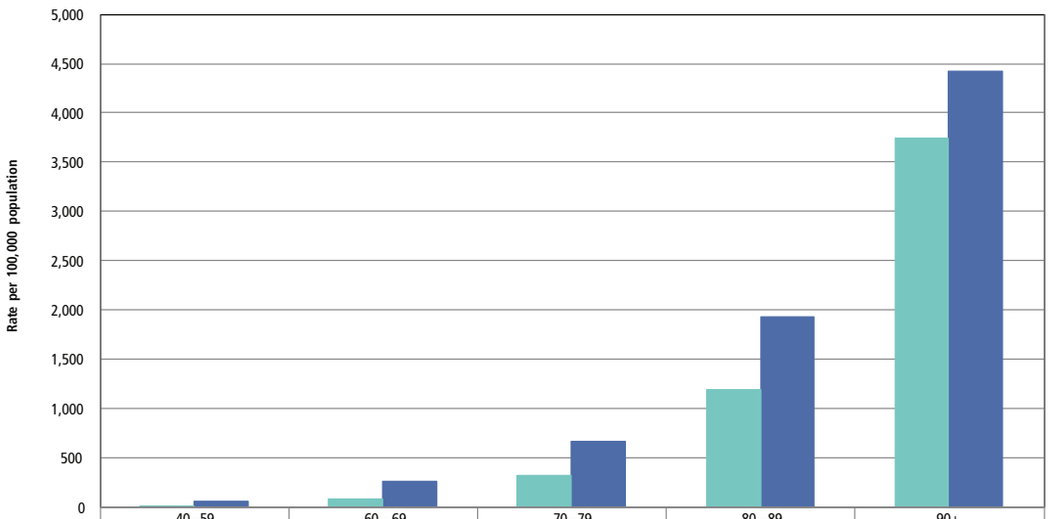


	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Female rate	139.5	135.6	122.4	113.4	108.9	108.5	104.7	102.4	102.2	90.8	91.0	92.1	87.4	93.9	82.2	75.8	81.7	71.0	66.5	66.7	106.8	55.2
Male rate	277.8	251.5	233.3	236.0	188.1	212.8	193.9	205.5	212.8	183.3	177.4	154.0	165.3	168.5	145.4	139.7	133.8	146.8	133.5	132.1	79.4	103.7
Female deaths	480	488	447	432	430	444	439	442	455	418	438	458	453	502	451	435	492	439	424	448	407	397
Male deaths	554	511	504	523	446	504	486	522	546	487	490	452	492	506	465	457	464	518	486	505	461	450

Years

Source: Ontario Mortality Data 2007, IntelliHEALTH Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
Ischemic Heart Disease (ICD-9: 410-414, ICD-10-CA: I20-I25)
Data note: Mortality rates are age-standardized to the 1991 Canadian population

Figure 25. Age-specific mortality rates of ischemic heart disease by sex, Ottawa, 2003–2007 average



	40–59	60–69	70–79	80–89	90+
Female rate	13.5	85.2	317.8	1,188.7	3,748.4
Male rate	55.6	260.5	669.5	1,929.7	4,419.7
Female deaths	84	143	386	908	587
Male deaths	345	401	640	804	214

Age group

Source: Ontario Mortality Data, IntelliHEALTH Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
Ischemic Heart Disease (ICD-10-CA: I20-I25)

Cerebrovascular disease

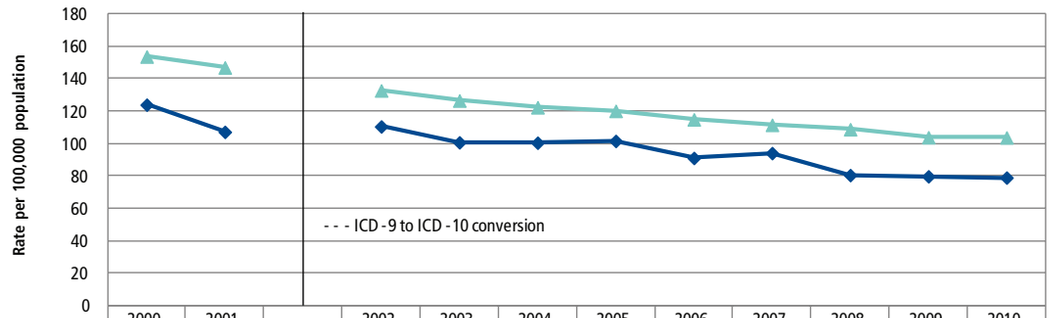
Cerebrovascular diseases are conditions that involve blood vessels inside the brain. Cerebrovascular disease and stroke are often used interchangeably; however, stroke is a more specific condition and a subset of cerebrovascular disease. The most common types of cerebrovascular disease are stroke, transient ischemic attack (TIA), subarachnoid haemorrhage and vascular dementia.[10]

Morbidity

Hospitalization rates of cerebrovascular disease in Ottawa have significantly declined since 2000 (Figure 26). In 2010, there were 893 hospitalizations of cerebrovascular disease, representing a rate of 78.9 per 100,000 population, significantly lower than for the rest of Ontario (103.6 per 100,000 population). Ottawa males had significantly higher rates of cerebrovascular disease than did females (Figure 27). The 2010 male hospitalization rate for cerebrovascular disease was 91.0 per 100,000 population, which is significantly higher than the female rate of 68.0 per 100,000 population.

Hospitalization rates of cerebrovascular disease significantly increased with age. The average rates for 2006–2010, show that males had significantly higher rates than did females in all age categories from 55 to 79 years (Figure 28).

Figure 26. Age-standardized hospitalization rates and hospitalization counts of cerebrovascular disease, Ottawa and the rest of Ontario, 2000–2010

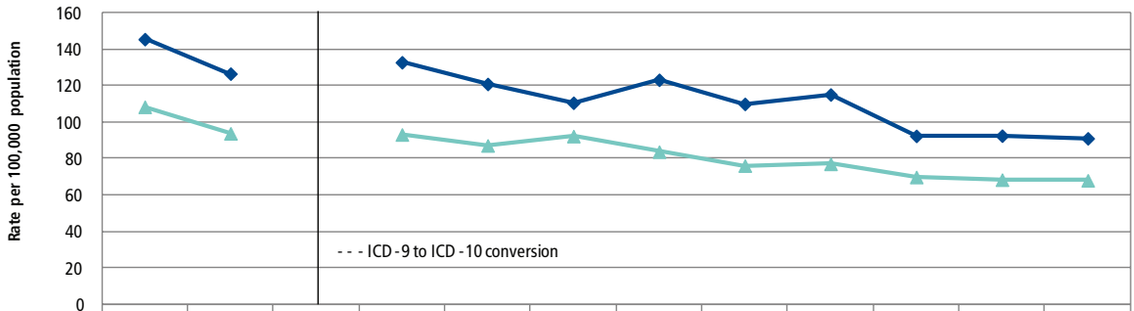


	2000	2001		2002	2003	2004	2005	2006	2007	2008	2009	2010
Ottawa rate	123.8	107.1		110.4	100.6	100.4	101.5	91.0	94.0	80.4	79.6	78.9
Ontario-less-Ottawa rate	153.6	146.8		132.6	126.4	122.2	120.0	114.8	111.4	108.7	103.7	103.6
Ottawa count	1,018	911		967	920	950	971	921	968	854	871	893
Ontario-less-Ottawa count	18,918	18,623		17,324	16,999	16,937	17,097	16,796	16,742	16,770	16,580	16,887

Years

Source: Ontario inpatient discharges 2000-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC
Cerebrovascular Disease (ICD-9: 430-434,436-438; ICD-10-CA: I60-I69)
Data note: Hospitalization rates are age-standardized to the 1991 Canadian population

Figure 27. Age-standardized hospitalization rates and hospitalization counts of cerebrovascular disease by sex, Ottawa, 2000–2010

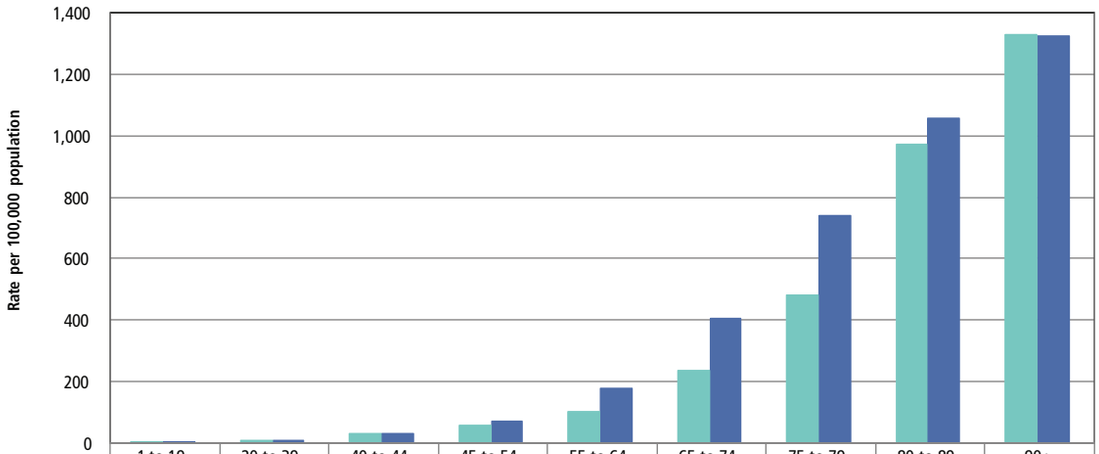


	2000	2001		2002	2003	2004	2005	2006	2007	2008	2009	2010
Female rate	108.3	93.8		93.1	87.1	92.2	83.7	76.1	77.0	69.8	68.4	68.0
Male rate	145.4	126.5		132.7	120.8	110.5	123.1	109.9	115.1	92.4	92.5	91.0
Female counts	530	470		486	475	526	487	469	475	433	441	457
Male counts	488	441		481	445	424	484	452	493	421	430	436

Years

Source: Ontario inpatient discharges 2000-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC
Cerebrovascular Disease (ICD-9: 430-434,436-438; ICD-10-CA: I60-I69)
Data note: Hospitalization rates are age-standardized to the 1991 Canadian population

Figure 28. Age-specific hospitalization rates and hospitalization counts of cerebrovascular disease by sex, Ottawa, 2006–2010 average



	1 to 19	20 to 39	40 to 44	45 to 54	55 to 64	65 to 74	75 to 79	80 to 89	90+
Female rate	4.0	7.3	30.1	56.9	100.7	235.3	481.0	972.8	1,329.0
Male rate	2.9	9.4	30.1	70.3	177.8	405.8	741.2	1,057.8	1,325.7
Female counts	19	47	53	196	253	351	282	797	272
Male counts	14	60	53	237	423	528	329	496	90

Age group

Source: Ontario inpatient discharges 2000-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC
Cerebrovascular Disease (ICD-9: 430-434,436-438; ICD-10-CA: I60-I69)

Mortality

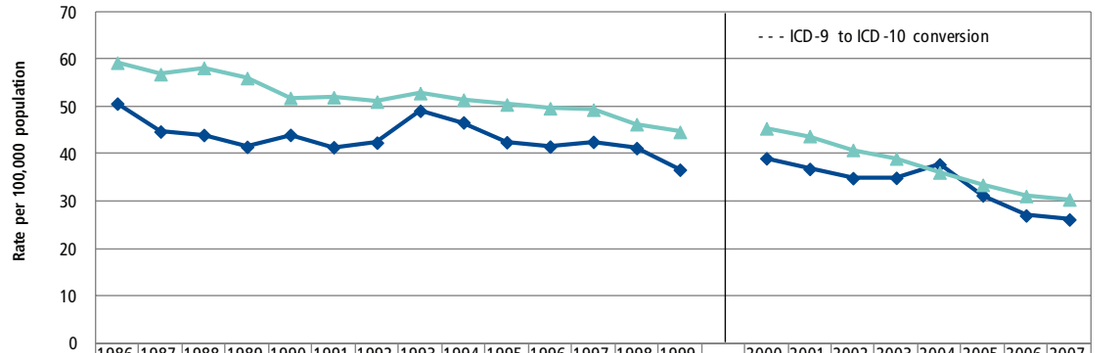
In 2007, cerebrovascular disease (including stroke) was the fourth leading cause of death in Ottawa residents (304 deaths). Mortality rates of cerebrovascular disease in Ottawa were almost 50% lower in 2007 (26.1 deaths per 100,000 population) than in 1986 (50.6 deaths per 100,000 population) (Figure 29).

Historically Ottawa's rates have been lower than the rest of Ontario, but the difference has not always been significant. Ottawa's mortality rate for cerebrovascular disease in 2007 was also significantly lower than the rate in the rest of Ontario (26.1 versus 30.4 per 100,000 population).

Although crude mortality rates of stroke were higher in Ottawa females than in Ottawa males, age-standardized mortality rates revealed no significant differences between sexes except in 2006, when the age-standardized rate was greater in females than males (44.4 versus 20.7 per 100,000 population) (Figure 30).

Deaths due to cerebrovascular disease largely occur in the oldest age groups (Figure 31). Very few deaths due to cerebrovascular disease are reported before 50 years. Five-year average rates showed only one significant difference between males and females: within the 70–79 age group, men had significantly higher mortality from cerebrovascular disease than did women.

Figure 29. Age-standardized mortality rates and death counts of cerebrovascular disease, Ottawa and the rest of Ontario, 1986–2007

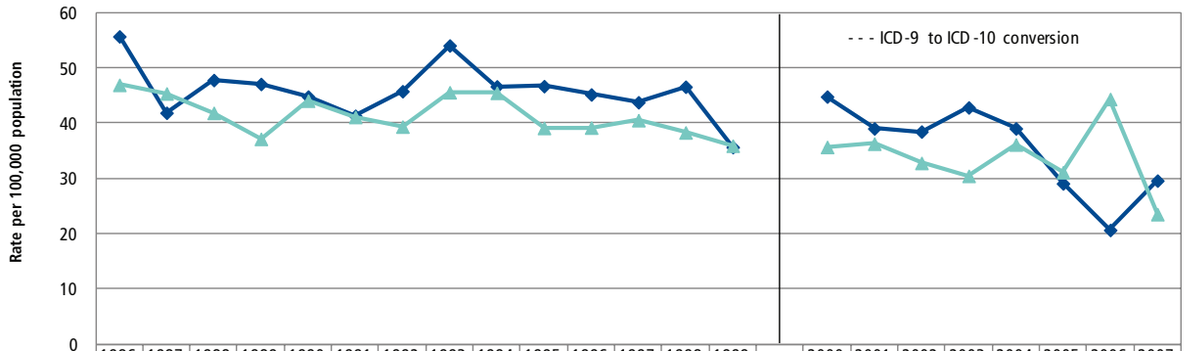


	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Ottawa rate	50.6	44.7	44.0	41.5	44.0	41.4	42.4	49.1	46.6	42.5	41.5	42.5	41.2	36.6	39.1	36.8	34.9	34.9	37.8	31.2	27.0	26.1
Ontario-less-Ottawa rate	59.3	56.8	58.2	56.0	51.8	52.0	51.0	52.8	51.5	50.4	49.6	49.3	46.3	44.6	45.4	43.8	40.8	39.0	36.1	33.5	31.1	30.4
Ottawa deaths	263	243	246	241	265	261	275	328	321	305	309	328	328	300	333	325	322	332	370	331	302	304
Ontario-less-Ottawa deaths	4,949	4,923	5,187	5,176	4,953	5,153	5,207	5,544	5,551	5,593	5,641	5,761	5,547	5,510	5,786	5,757	5,583	5,541	5,303	5,093	4,945	5,010

Year

Source: Ontario Mortality Data 1986-2007, IntelliHEALTH Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
Cerebrovascular Disease (ICD-9: 390-459, ICD-10-CA: I60-I69)
Data note: Mortality rates are age-standardized to the 1991 Canadian population

Figure 30. Age-standardized mortality rates and death counts of cerebrovascular disease by sex, Ottawa, 1986–2007

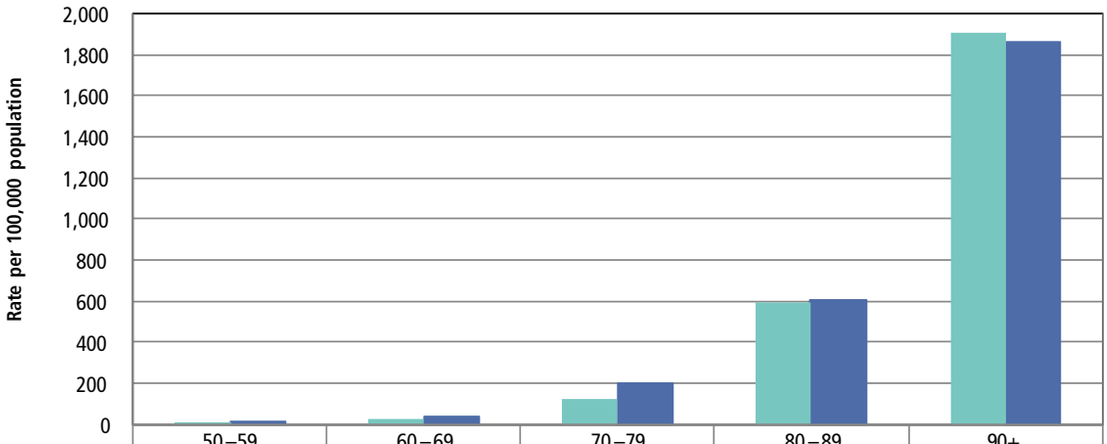


	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999		2000	2001	2002	2003	2004	2005	2006	2007
Female rate	47.0	45.4	41.9	37.2	44.1	41.1	39.4	45.6	45.5	39.2	39.2	40.6	38.3	35.9		35.7	36.3	32.8	30.5	36.2	31.1	44.4	23.5
Male rate	55.7	41.9	47.8	47.1	44.8	41.4	45.8	54.1	46.7	46.7	45.2	43.8	46.6	35.7		44.8	39.1	38.5	42.9	39.1	29.1	20.7	29.6
Female deaths	165	165	154	145	176	172	170	204	206	189	194	210	196	194		199	210	198	188	235	221	170	182
Male deaths	98	78	92	96	89	89	105	124	115	116	115	118	132	106		134	115	124	144	135	110	132	122

Year

Source: Ontario Mortality Data 1986-2007, IntelliHEALTH Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
Cerebrovascular Disease (ICD-9: 390-459, ICD-10-CA: I60-I69)
Data note: Mortality rates are age-standardized to the 1991 Canadian population

Figure 31. Age-specific mortality rates of cerebrovascular disease by sex, Ottawa, 2003–2007 average



	50–59	60–69	70–79	80–89	90+
Female rate	10.4	29.8	121.0	594.4	1,902.9
Male rate	11.5	39.6	197.7	609.6	1,858.7
Female deaths	28	50	147	454	298
Male deaths	31	61	189	254	90

Age group

Source: Ontario Mortality Data 2003–2007, IntelliHEALTH Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
Cerebrovascular Disease (ICD-10-CA: I60-I69)

Stroke

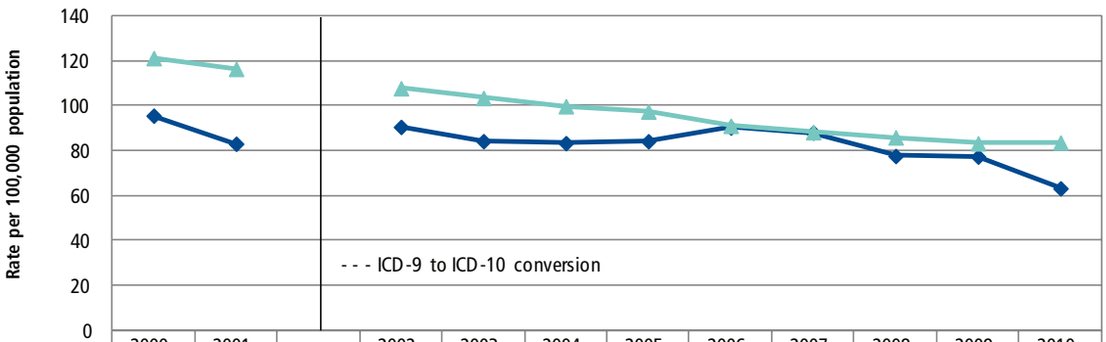
A stroke is caused by interruption of blood flow to the brain (also known as ischemic stroke), or the rupture of blood vessels within the brain (hemorrhagic stroke). It kills brain cells in the affected area by restricting blood flow.[11] Strokes do occur in the paediatric population, but there were too few cases to report in Ottawa.

Morbidity

Hospitalization rates of stroke have decreased significantly since 2000—approximately 44% (Figure 32). In 2010, the age-standardized hospitalization rate of stroke in Ottawa (63.2 per 100,000 population) was significantly lower than for the rest of Ontario (83.6 per 100,000 population). Hospitalization rates of stroke were significantly lower than rates in the rest of Ontario in 2000–2005, 2008 and 2010. Although crude hospitalization rates of stroke show higher rates in females than in males, age-standardized hospitalization rates indicate that males had significantly higher rates or rates that were no different than for females (Figure 33). From 2002 to 2005 and in 2010, males had significantly higher hospitalization rates than did females.

Hospitalization rates of stroke increased significantly with age (Figure 34). Average hospitalization rates for 2006–2010 show that males 45–79 years had significantly higher rates than did females of the same age.

Figure 32. Age-standardized hospitalization rates of stroke, Ottawa and the rest of Ontario, 2000–2010

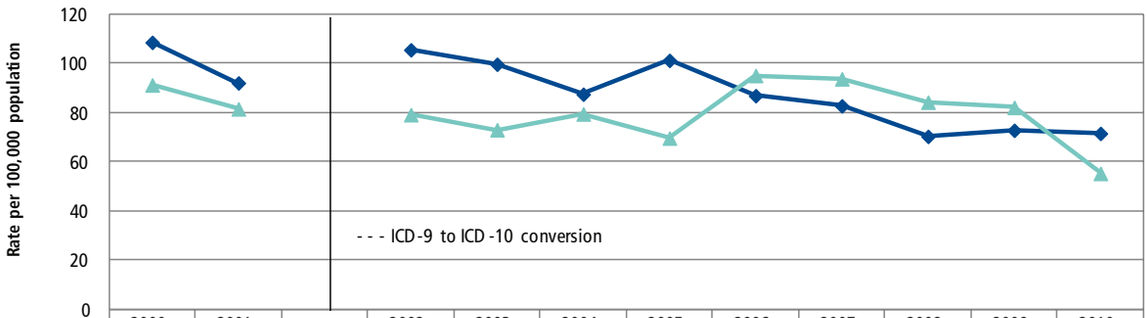


	2000	2001		2002	2003	2004	2005	2006	2007	2008	2009	2010
Ottawa rate	95.6	83.1		90.6	84.2	83.4	84.2	90.3	88.0	77.6	77.4	63.2
Ontario-less-Ottawa rate	121.2	116.4		107.8	103.5	99.8	97.4	91.1	88.3	85.9	83.3	83.6
Ottawa counts	778	700		796	769	791	810	884	886	804	821	725
Ontario-less-Ottawa counts	15,001	14,856		14,166	14,010	13,912	13,977	13,474	13,411	13,427	13,470	13,763

Years

Source: Ontario Inpatient discharges 2000-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC
Stroke (ICD-9:430-431, 434, 436; ICD-10-CA: I60-I61, I63-I64)
Data note: Hospitalization rates are age-standardized to the 1991 Canadian population.

Figure 33. Age-standardized hospitalization rates and hospitalization counts of stroke by sex, Ottawa, 2000–2010

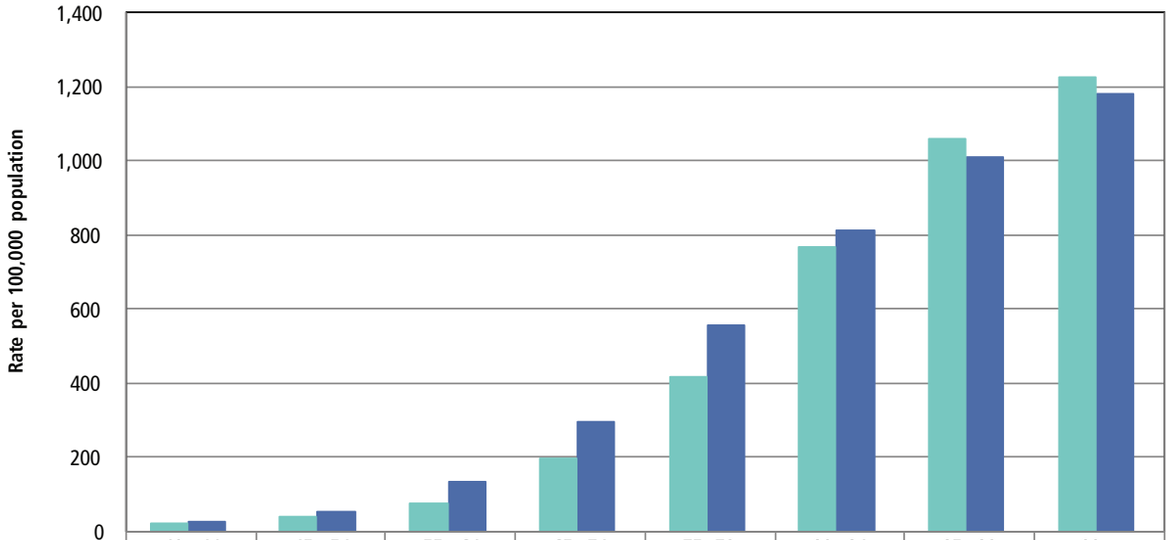


	2000	2001		2002	2003	2004	2005	2006	2007	2008	2009	2010
Female rate	91.3	81.6		79.2	73.1	79.5	69.7	95.1	93.8	84.3	82.2	55.3
Male rate	108.6	92.1		105.6	99.7	87.5	101.3	86.9	82.8	70.4	72.8	71.6
Female counts	7,816	7,743		7,349	7,089	7,199	7,218	6,779	6,651	6,673	6,731	6,891
Male counts	360	320		379	366	332	398	359	358	318	338	345

Years

Source: Ontario Inpatient discharges 2000-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC
Stroke (ICD-9:430-431, 434, 436; ICD-10-CA: I60-I61, I63-I64)
Data note: Hospitalization rates are age-standardized to the 1991 Canadian population

Figure 34. Age-specific hospitalization rates of stroke by sex, Ottawa, 2006–2010 average



	40–44	45–54	55–64	65–74	75–79	80–84	85–89	90+
Female rate	22.2	38.9	74.8	195.7	417.9	765.2	1,059.1	1,226.4
Male rate	25.0	54.6	132.0	293.6	554.2	812.8	1,007.7	1,178.4
Female counts	39	134	188	292	245	369	357	251
Male counts	44	184	314	382	246	244	170	80

Age group

Source: Ontario Inpatient discharges 2000-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC
Stroke (ICD-10-CA: I60-I61, I63-I64)

Mortality

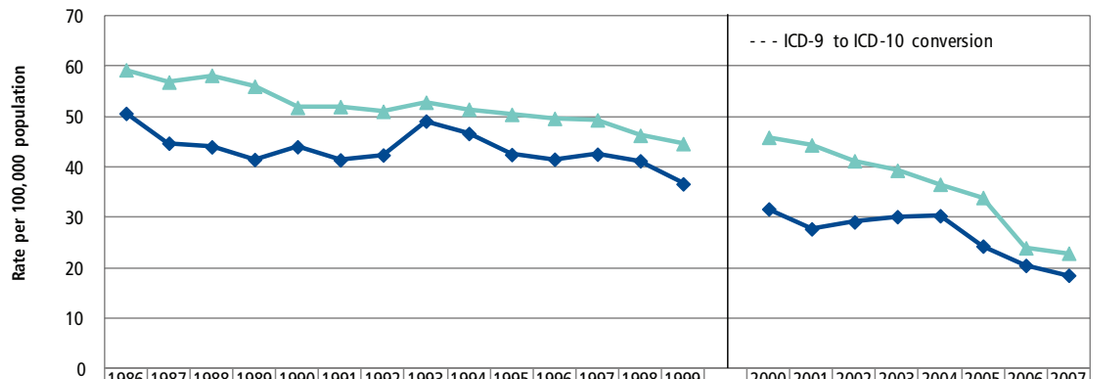
Historically, mortality rates of stroke have been, on average, significantly lower in Ottawa than in the rest of Ontario. In 2007, there were 216 stroke deaths in Ottawa; the age-standardized mortality rate was 18.5 per 100,000 population. This is a significant (63%) decrease from 1986, when the rate was 50.6 per 100,000 population (Figure 35). In Ontario, by comparison, the 2007 rate was 22.9 per 100,000 population.

Combined Ottawa male and female rates were not significantly different from the rest of Ontario in 1993–1994, 1998 and 2006 (Figure 35). Prior to 2000, mortality rates from stroke were the same for both sexes. Since 1986, mortality rates of stroke have either been no different or significantly lower for Ottawa males than for males in the rest of Ontario. The same pattern has been true for females, except in 2006 when Ottawa female mortality rates were significantly higher than those observed in the rest of the province.

From 2000 to 2005, mortality rates for stroke were significantly higher in males than females; however, in 2006–2007 female rates were significantly higher than were male rates (Figure 36).

Deaths due to stroke predominantly occurred in the oldest age groups (Figure 37). Very few deaths due to stroke were reported before 50 years. The five-year average for 2003–2007 showed significant difference between males and females 70–79 years and 80–89 years, with men having significantly higher mortality rates of stroke than did women.

Figure 35. Age-standardized mortality rates and deaths of stroke, Ottawa and the rest of Ontario, 1986–2007

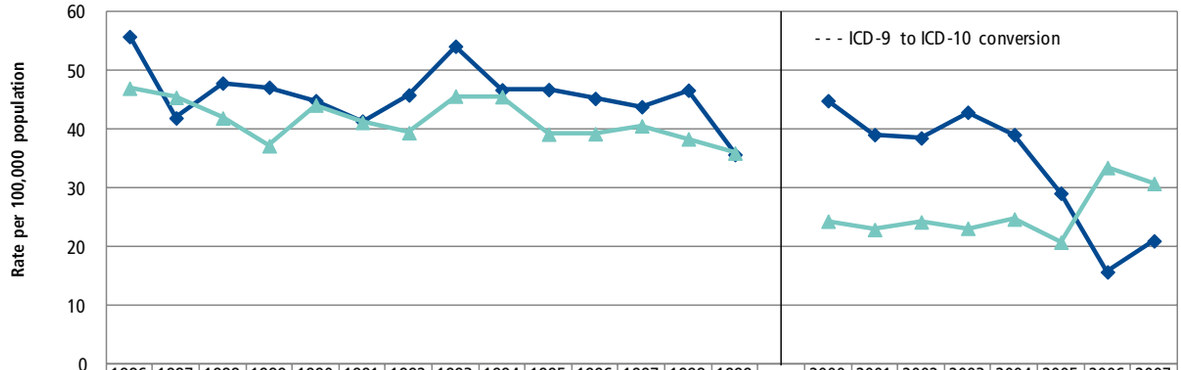


	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Ottawa rate	50.6	44.7	44.0	41.5	44.0	41.4	42.4	49.1	46.6	42.5	41.5	42.5	41.2	36.6	31.7	27.7	29.1	30.1	30.3	24.3	20.5	18.5
Ontario-less-Ottawa rate	59.3	56.8	58.2	56.0	51.8	52.0	51.0	52.8	51.5	50.4	49.6	49.3	46.3	44.6	45.9	44.4	41.2	39.3	36.6	33.9	24.0	22.9
Ottawa deaths	263	243	246	241	265	261	275	328	321	305	309	328	328	300	270	243	267	285	295	255	229	216
Ontario-less-Ottawa deaths	4,949	4,923	5,187	5,176	4,953	5,153	5,207	5,544	5,551	5,593	5,641	5,761	5,547	5,510	5,849	5,839	5,638	5,588	5,378	5,169	3,797	3,765

Years

Source: Ontario Mortality Data 1986-2007, IntelliHEALTH Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
Stroke (ICD-9: 430, 431, 434, 436, ICD-10-CA: I60-I61, I63-I64)
Data note: Mortality rates are age-standardized to the 1991 Canadian population.

Figure 36. Age-standardized mortality rates and deaths of stroke by sex, Ottawa, 1986–2007

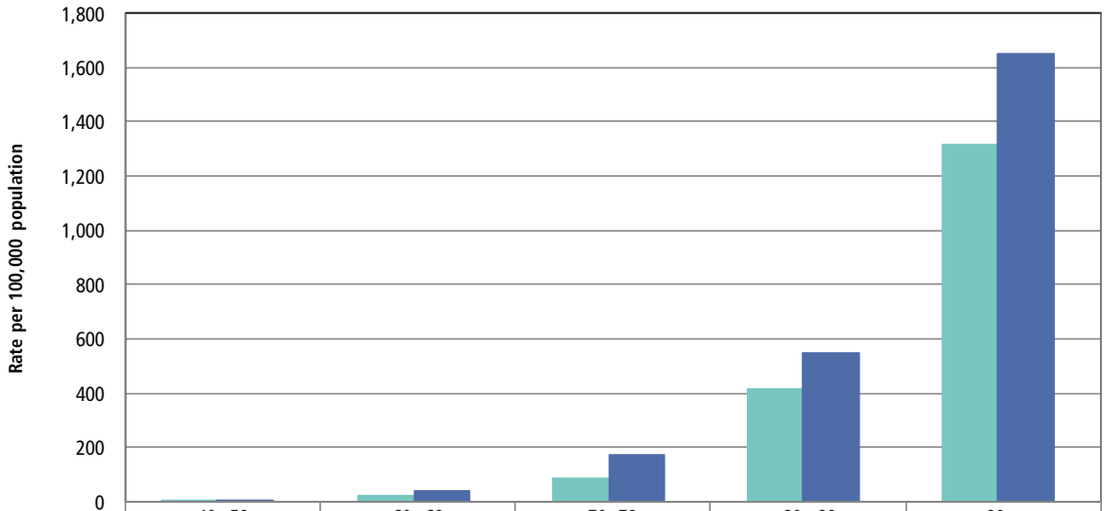


	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Female rate	47.0	45.4	41.9	37.2	44.1	41.1	39.4	45.6	45.5	39.2	39.2	40.6	38.3	35.9	24.4	22.9	24.2	23.1	24.7	20.8	33.5	30.8
Male rate	55.7	41.9	47.8	47.1	44.8	41.4	45.8	54.1	46.7	46.7	45.2	43.8	46.6	35.7	44.8	39.1	38.5	42.9	39.1	29.1	15.7	21.0
Female deaths	165	165	154	145	176	172	170	204	206	189	194	210	196	194	136	128	143	141	160	145	128	129
Male deaths	98	78	92	96	89	89	105	124	115	116	115	118	132	106	134	115	124	144	135	110	101	87

Years

Source: Ontario Mortality Data 1986-2007, IntelliHEALTH Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
Stroke (ICD-9: 430, 431, 434, 436, ICD-10-CA: I60-I61, I63-I64)
Data note: Mortality rates are age-standardized to the 1991 Canadian population

Figure 37. Age-specific mortality rates and deaths of stroke by sex, Ottawa, 2003–2007 average



	40–59	60–69	70–79	80–89	90+
Female rate	6.1	21.4	86.4	412.4	1,315.5
Male rate	6.6	37.7	174.7	544.8	1,652.2
Female deaths	38	36	105	315	206
Male deaths	41	58	167	227	80

Age group

Source: Ontario Mortality Data 2003–2007, IntelliHEALTH Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
Stroke (ICD-10-CA: I60-I61, I63-I64)

Diabetes

Diabetes (type 1 and type 2) is a chronic condition that occurs when the body is not capable of producing sufficient insulin and/or properly using insulin, a hormone required to convert dietary sugar into energy. Diabetes can lead to serious complications and premature death, but those with the condition can take steps to manage the disease, lowering their risk of further complications.[12]

Type 2 diabetes accounts for 90%–95% of diabetes cases and usually affects adults. It is associated with older age, obesity and physical inactivity, family history of type 2 diabetes, or a personal history of gestational diabetes. It can be delayed or prevented by regular exercise, maintaining a healthy weight and eating a healthy, balanced diet. The cause of Type I diabetes remains unknown. It is an autoimmune disease that is not preventable and not caused by lifestyle factors. Type I diabetes is generally first diagnosed before the age of 30, most often during the childhood or teenage years.[13]

It is not possible to distinguish between type 1 and type 2 diabetes from administrative data.[14] In the past, researchers had used 30 years of age as a cut-off point for distinguishing between the two types; however, increasing prevalence of early-onset type 2 diabetes has made this distinction less reliable.[14] Recent evidence regarding the benefits of aggressive management of type 2 diabetes may mean that the distinction is less critical from a planning and policy perspective.[14]

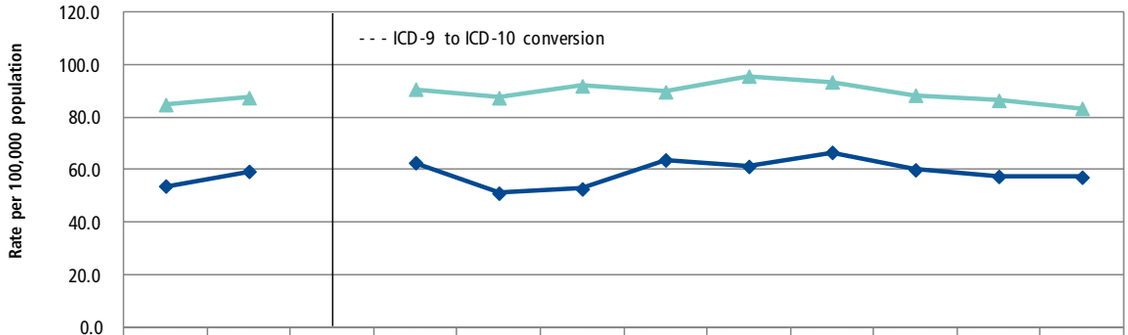
Morbidity

Hospitalization rates of type 1 and type 2 diabetes in Ottawa remained fairly stable from 2000 to 2010, although these rates were consistently significantly lower than those in the rest of Ontario (Figure 38). In 2010, the age-standardized hospitalization rate of diabetes in Ottawa was 57.2 per 100,000 population (571 hospitalizations), which was significantly lower than the Ontario rate of 83.3 per 100,000 population.

Males living in Ottawa had significantly higher hospitalization rates of diabetes than did females, though this gap appears to be narrowing (Figure 39).

Diabetes can occur across the life course. In Ottawa, hospitalizations attributed to diabetes increased with age. The 2006–2010 average hospitalization rates for females 10–19 years were significantly higher than for males (Figure 40). Starting at 20+ years, males had significantly higher hospitalization rates of diabetes than did females of all ages. This difference widened at 60+ years.

Figure 38. Age-standardized hospitalization rates of diabetes, Ottawa and the rest of Ontario, 2000–2010

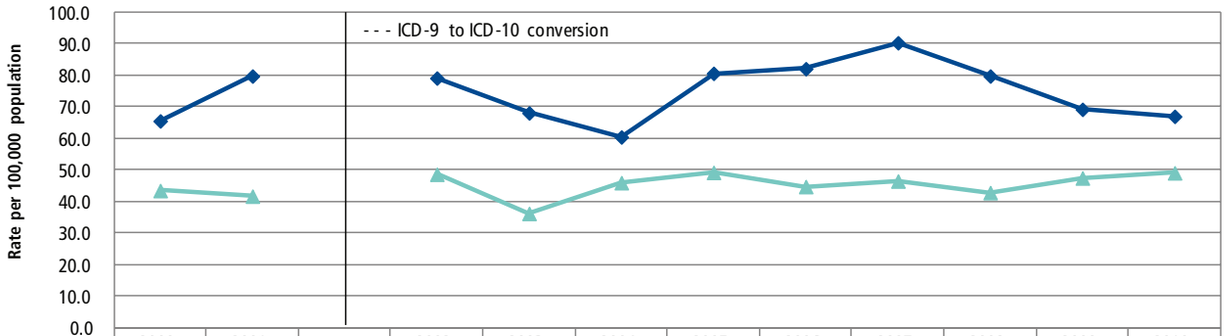


	2000	2001		2002	2003	2004	2005	2006	2007	2008	2009	2010
Ottawa rate	53.8	59.4		62.7	51.1	52.7	63.7	61.2	66.6	60.0	57.4	57.2
Ontario-less-Ottawa rate	84.8	87.4		90.6	87.4	91.9	89.6	95.6	93.4	88.3	86.4	83.3
Ottawa counts	437	489		529	447	472	574	569	623	577	572	571
Ontario-less-Ottawa counts	9,795	10,350		11,047	10,823	11,631	11,593	12,647	12,543	12,067	12,014	11,732

Years

Source: Ontario inpatient discharges 2000-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC
Diabetes (ICD-9:250, ICD-10-CA: E10-E14)
Data note: Hospitalization rates are age-standardized to the 1991 Canadian population

Figure 39. Age-standardized hospitalization rates of diabetes by sex, Ottawa, 2000–2010

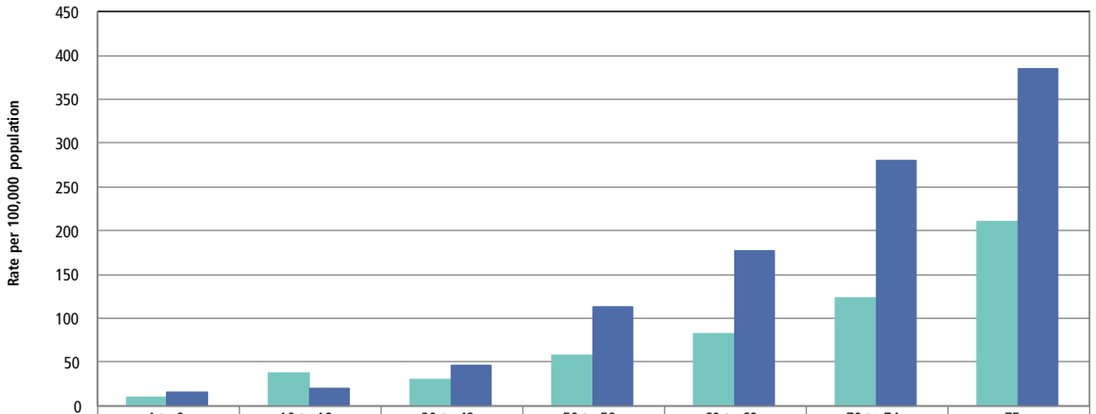


	2000	2001		2002	2003	2004	2005	2006	2007	2008	2009	2010
Female rate	43.5	41.7		48.7	36.3	46.0	49.3	44.8	46.5	42.9	47.5	49.1
Male rate	65.6	79.8		79.2	68.1	60.5	80.7	82.1	90.3	79.8	69.2	67.0
Female counts	191	188		225	175	222	238	220	232	218	248	263
Male counts	246	301		304	272	250	336	349	391	359	324	308

Years

Source: Ontario inpatient discharges 2000-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC
Diabetes (ICD-9:250, ICD-10-CA: E10-E14)
Data note: Hospitalization rates are age-standardized to the 1991 Canadian population.

Figure 40. Age-specific hospitalization rates and hospitalization counts of diabetes by sex, Ottawa, 2006–2010 average



	1 to 9	10 to 19	20 to 49	50 to 59	60 to 69	70 to 74	75+
Female rate	9.7	37.3	30.5	57.4	83.0	123.0	210.5
Male rate	15.4	19.9	46.7	112.4	177.4	280.4	385.5
Female counts	20	100	305	173	162	82	339
Male counts	33	55	463	324	319	158	378

Age group

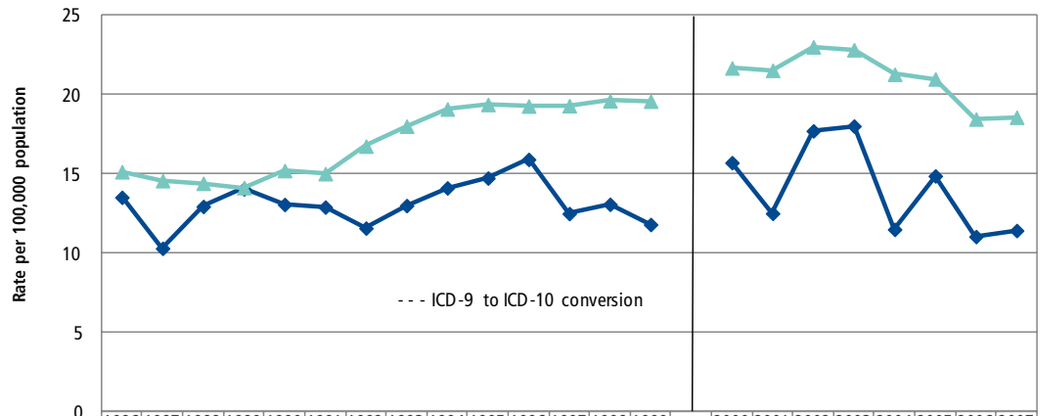
Source: Ontario inpatient discharges 2006-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC Diabetes (ICD-10-CA: E10-E14)

Mortality

In 2007, the mortality rate of diabetes in Ottawa was 11.4 per 100,000 population (125 deaths), which was not significantly different than the rate in 1986 (13.5 per 100,000 population). Since 1992, mortality rates of diabetes have been significantly lower in Ottawa residents than in the rest of the Ontario population (Figure 41).

Generally, mortality rates of diabetes were lower in Ottawa females than Ottawa males, though not always significantly (Figure 42). Five-year average mortality rates of diabetes identified that mortality within age categories between of 45 and 79 years were significantly lower in Ottawa females than in Ottawa males (Figure 43).

Figure 41. Age-standardized mortality rates of diabetes, Ottawa and the rest of Ontario, 1986–2007

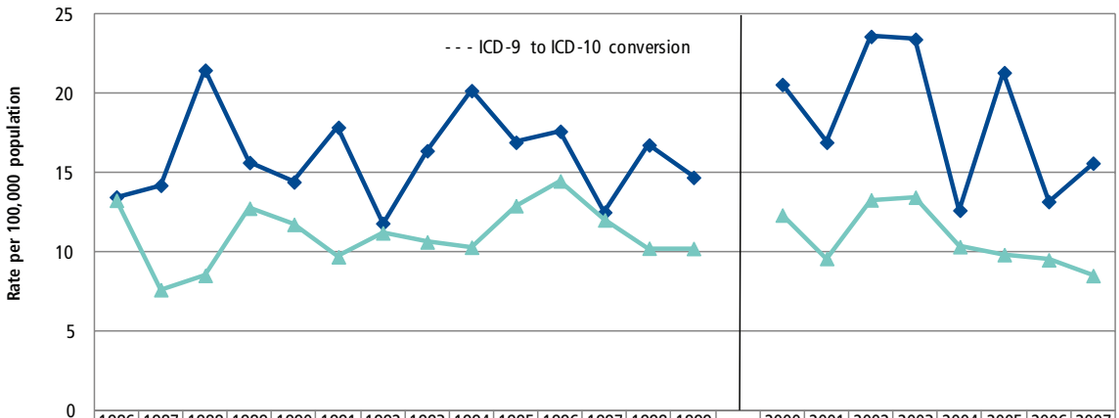


	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Ottawa rate	13.5	10.3	12.9	14.0	13.1	12.9	11.6	13.0	14.1	14.7	15.9	12.5	13.1	11.8	15.7	12.5	17.7	18.0	11.5	14.9	11.0	11.4
Ontario-less-Ottawa rate	15.1	14.6	14.4	14.1	15.2	15.0	16.7	18.0	19.1	19.4	19.3	19.3	19.6	19.6	21.7	21.5	23.0	22.8	21.3	21.0	18.4	18.6
Ottawa deaths	72	58	74	83	80	82	76	88	98	105	117	94	102	96	129	105	157	168	111	147	116	125
Ontario-less-Ottawa-deaths	1,276	1,273	1,293	1,313	1,453	1,484	1,697	1,879	2,039	2,123	2,164	2,221	2,310	2,374	2,693	2,761	3,050	3,129	3,006	3,074	2,788	2,887

Years

Source: Ontario Mortality Data 1986-2007, IntelliHEALTH Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
Diabetes (ICD-9:250, ICD-10-CA:E10-E14)
Data note: Mortality rates are age-standardized to the 1991 Canadian population

Figure 42. Age-standardized mortality rates and death counts of diabetes by sex, Ottawa, 1986–2007

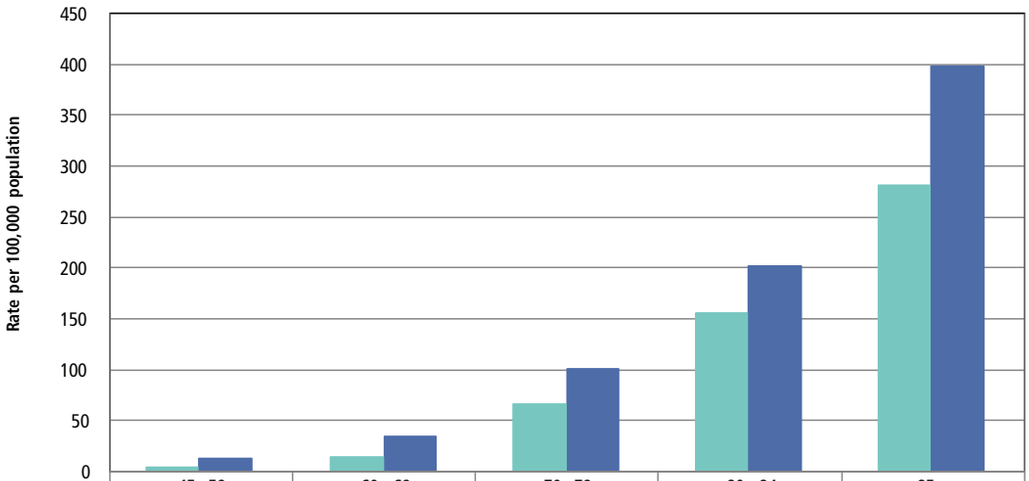


	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999		2000	2001	2002	2003	2004	2005	2006	2007
Female rate	13.3	7.6	8.5	12.8	11.7	9.7	11.2	10.6	10.3	12.9	14.5	12.0	10.2	10.2		12.3	9.6	13.3	13.5	10.3	9.8	9.5	8.5
Male rate	13.5	14.2	21.5	15.6	14.4	17.8	11.8	16.4	20.2	16.9	17.6	12.5	16.7	14.7		20.5	16.9	23.6	23.4	12.6	21.3	13.2	15.6
Female deaths	45	26	31	46	44	38	46	45	43	56	66	56	49	52		63	49	75	79	61	61	63	60
Male deaths	27	32	43	37	36	44	30	43	55	49	51	38	53	44		66	56	82	89	50	86	53	65

Years

Source: Ontario Mortality Data 1986-2007, IntelliHEALTH Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
Diabetes (ICD-9:250, ICD-10-CA: E10-E14)
Data note: Mortality rates are age-standardized to the 1991 Canadian population

Figure 43. Age-specific mortality rates and deaths of diabetes by sex, Ottawa, 2003–2007 average



	45–59	60–69	70–79	80–84	85+
Female rate	3.8	14.3	65.9	155.4	280.9
Male rate	12.6	35.1	101.5	202.4	397.8
Female deaths	17	24	80	75	123
Male deaths	55	54	97	58	71

Age group

Source: Ontario Mortality Data 2003–2007, IntelliHEALTH Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
Diabetes (ICD-10-CA: E10-E14)

Asthma

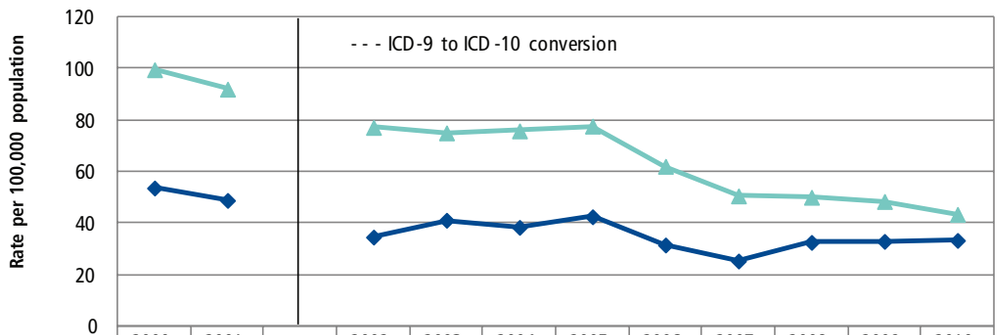
Asthma is a chronic condition that affects both adults and children, and results in inflammation and narrowing of the airway.[15] Symptoms of asthma include coughing, shortness of breath, chest tightness and wheezing. Attacks can occur following exercise, or exposure to allergens, viral respiratory infections, irritants or gases.[15] Possible causes of asthma include a family history, high exposure to airborne allergens in the first years of life, exposure to tobacco smoke, numerous respiratory infections in early life, and/or low birth weight and respiratory distress syndrome.[15]

Morbidity

Since 2000, hospitalization rates of asthma have significantly decreased in both Ottawa and the rest of Ontario—38% and 56% respectively (Figure 44). In 2010, there were 258 hospitalizations for asthma, representing a rate of 33.2 per 100,000 population in Ottawa. This was significantly lower than the rate for the rest of Ontario (43.3 per 100,000 population). Hospitalization rates for asthma in Ottawa did not differ significantly between sexes (Figure 45).

Hospitalization rates of asthma in Ottawa are highest in young children 1–4 years and decline until they rise again at 65 years of age (Figure 46). Sex differences existed across all age groups. Males had significantly higher hospitalization rates of asthma than did females from 0–19 years. Females had significantly higher rates at 20+ years.

Figure 44. Age-standardized hospitalization rates and hospitalization counts of asthma, Ottawa and the rest of Ontario, 2000–2010

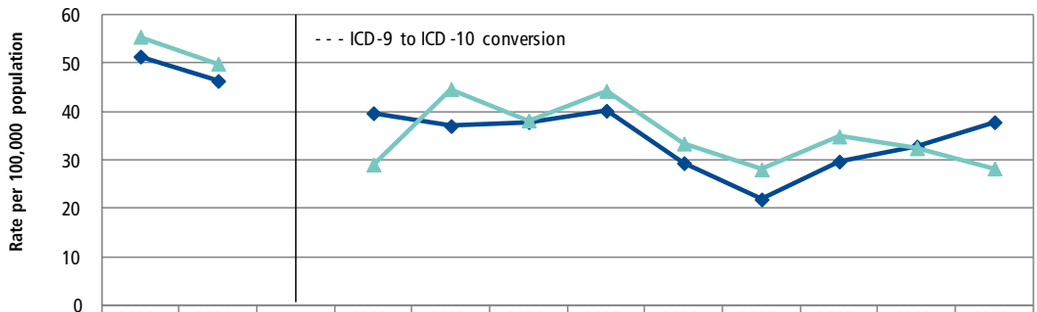


	2000	2001		2002	2003	2004	2005	2006	2007	2008	2009	2010
Ottawa rate	53.6	48.8		34.5	41.0	38.3	42.4	31.4	25.2	32.5	32.8	33.2
Ontario-less-Ottawa rate	99.5	91.9		77.1	75.0	75.7	77.6	62.0	50.5	50.0	48.3	43.3
Ottawa counts	403	376		262	309	286	313	235	195	250	249	258
Ontario-less-Ottawa counts	10,434	9,720		8,059	7,839	7,957	8,046	6,566	5,429	5,403	5,276	4,773

Years

Source: Ontario inpatient discharges 2000-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC
Asthma (ICD9-493; ICD-10-CA: J45-J46)
Data note: Hospitalization rates are age-standardized to the 1991 Canadian population

Figure 45. Age-standardized hospitalization rates and hospitalization counts of asthma by sex, Ottawa, 2000–2010

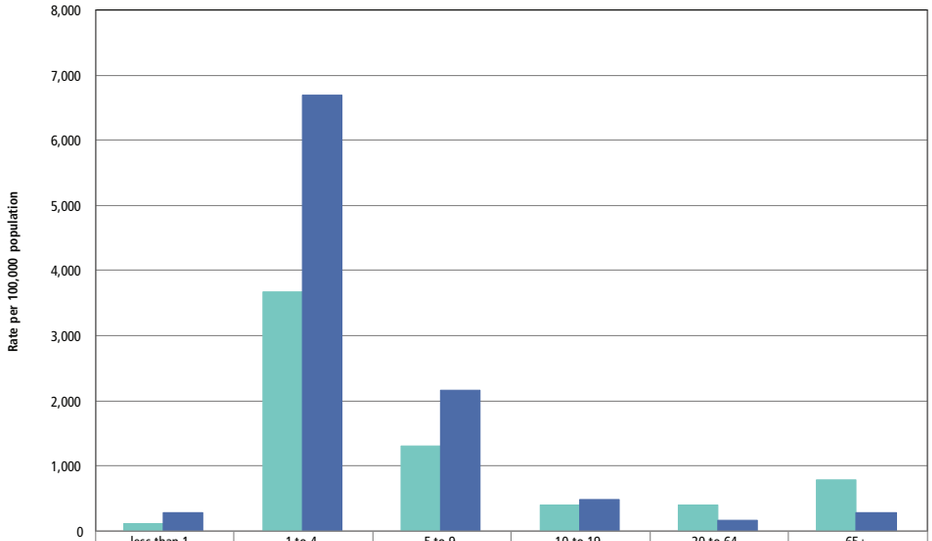


	2000	2001		2002	2003	2004	2005	2006	2007	2008	2009	2010
Female rate	55.5	49.9		29.1	44.6	38.2	44.3	33.4	28.0	34.9	32.4	28.2
Male rate	51.4	46.3		39.7	37.0	37.8	40.2	29.3	21.8	29.7	32.8	37.8
Female counts	5,547	5,022		4,084	4,171	4,064	3,941	3,388	2,800	2,906	2,761	2,585
Male counts	188	172		147	135	134	145	106	79	110	119	139

Years

Source: Ontario inpatient discharges 2000-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC
Asthma (ICD9-493; ICD-10-CA: J45-J46)
Data note: Hospitalization rates are age-standardized to the 1991 Canadian population

Figure 46. Age-specific hospitalization rates of asthma by sex, Ottawa, 2006–2010 average



	less than 1	1 to 4	5 to 9	10 to 19	20 to 64	65+
Female rate	120.9	3,663.9	1,312.4	406.9	400.1	782.7
Male rate	277.1	6,700.0	2,158.8	475.2	168.3	287.9
Female counts	404	3,344	1,519	1,092	5,653	2,428
Male counts	980	6,344	2,569	1,310	2,334	657

Age group

Source: Ontario inpatient discharges 2000-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC
Asthma (ICD9-493; ICD-10-CA: J45-J46)

Mortality

Very few deaths are attributable to asthma; rates in Ottawa are not reportable after 2002. Since 2000, deaths from asthma have also declined in the rest of Ontario.

Chronic obstructive pulmonary disease

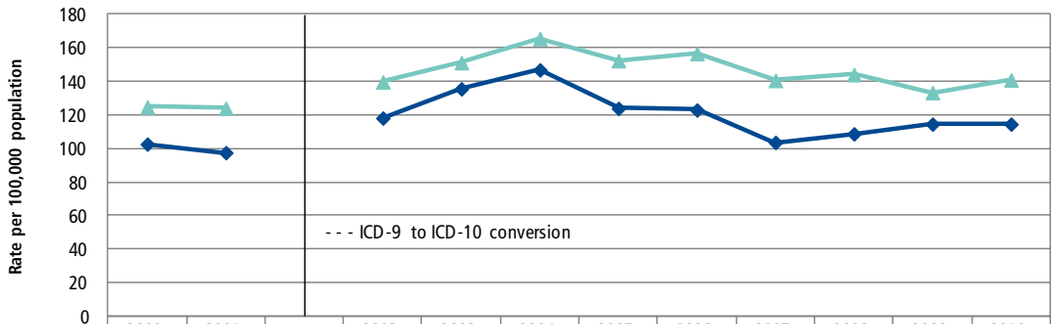
Chronic obstructive pulmonary disease (COPD) is a chronic disease characterized by shortness of breath, coughing and the production of excess mucus.[16] COPD is a subset of lung disease. Symptoms are seldom seen in individuals younger than 55 years, but physiologic changes to the lung can occur earlier.[16] COPD encompasses several lung conditions, including bronchitis and emphysema.[16] The majority of COPD cases are caused by first-hand cigarette smoking; however, second-hand smoke is also a contributor. Outdoor air pollution can exacerbate COPD symptoms.[16]

Morbidity

Lung disease is a major cause of morbidity and mortality in Ottawa. In 2010, diseases of the respiratory system were the sixth leading cause of hospitalization in Ottawa. Hospitalization rates of COPD have remained fairly stable over time, despite some year-to-year variability. Since 2000, hospitalization rates in Ottawa have been significantly lower than the rates observed in the rest of the Ontario (Figure 47). In 2010, there were 1,282 hospitalizations attributed to COPD in Ottawa (114.5 per 100,000 population), significantly lower than the rate for the rest of Ontario (140.9 per 100,000 population). Hospitalization rates of COPD in Ottawa were the same for both sexes (Figure 48).

Hospitalization rates of COPD significantly increased at 45+ years, with the greatest rate at 80+ years. Based on 2006–2010 average rates, females 40–44 years had significantly higher rates than did males the same age, but males had significantly higher rates at 80+ years (Figure 49).

Figure 47. Age-standardized hospitalization rates and hospitalization counts of chronic obstructive pulmonary disease, Ottawa and the rest of Ontario, 2000–2010

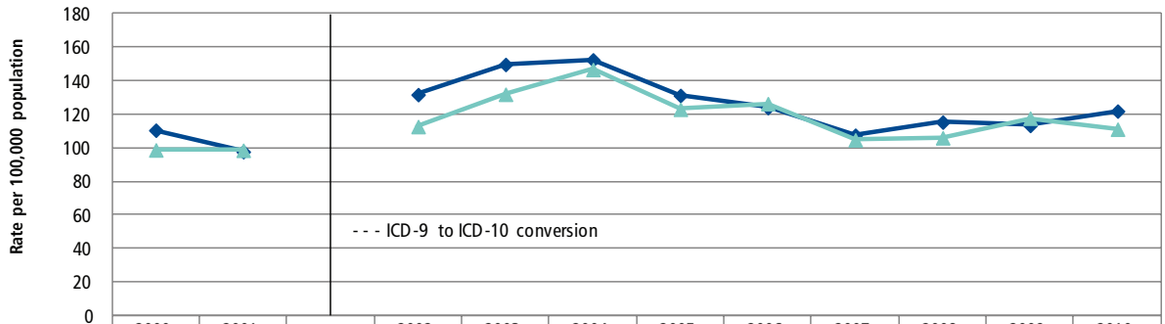


	2000	2001		2002	2003	2004	2005	2006	2007	2008	2009	2010
Ottawa rate	102.6	97.5		118.1	135.6	146.9	123.9	123.0	103.6	108.7	114.5	114.5
Ontario-less-Ottawa rate	124.7	124.0		139.7	151.2	165.6	152.4	156.7	140.6	144.1	133.4	140.9
Ottawa counts	831	806		1,026	1,207	1,353	1,176	1,214	1,056	1,145	1,264	1,282
Ontario-less-Ottawa counts	15,170	15,492		18,039	20,171	22,788	21,602	22,808	21,091	22,201	21,044	22,916

Years

Source: Ontario inpatient discharges 2000-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC
COPD (ICD-9: 460-519, ICD-10-CA: J000-J99999)
Data note: Hospitalization rates are age-standardized to the 1991 Canadian population

Figure 48. Age-standardized hospitalization rates and hospitalization counts of chronic obstructive pulmonary disease by sex, Ottawa, 2000–2010

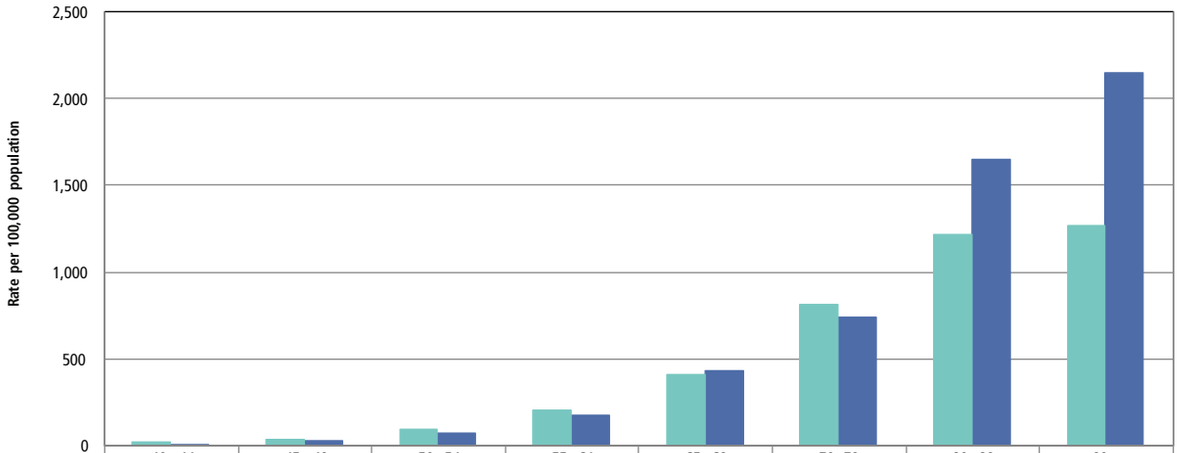


	2000	2001		2002	2003	2004	2005	2006	2007	2008	2009	2010
Female rate	98.7	98.5		112.7	131.9	146.7	123.0	126.3	104.7	105.9	117.6	111.1
Male rate	110.5	97.7		131.7	149.7	152.4	131.2	123.9	107.5	115.3	113.3	121.9
Female counts	459	469		561	666	774	658	706	598	636	748	702
Male counts	372	337		465	541	579	518	508	458	509	516	580

Years

Source: Ontario inpatient discharges 2000-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC
COPD (ICD-9: 460-519, ICD-10-CA: J000-J99999)
Data note: Hospitalization rates are age-standardized to the 1991 Canadian population

Figure 49. Age-specific hospitalization rates and hospitalization counts of chronic obstructive pulmonary disease by sex, Ottawa, 2006–2010 average



	40–44	45–49	50–54	55–64	65–69	70–79	80–89	90+
Female rate	17.0	36.8	93.5	205.8	409.7	810.0	1,219.3	1,265.5
Male rate	4.0	24.3	74.1	174.0	429.6	736.6	1,650.6	2,150.5
Female counts	30	67	152	517	338	1,015	999	259
Male counts	7	44	116	414	317	742	774	146

Age group

Source: Ontario inpatient discharges 2000-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC
COPD (ICD-10-CA: J40-J44)

Mortality

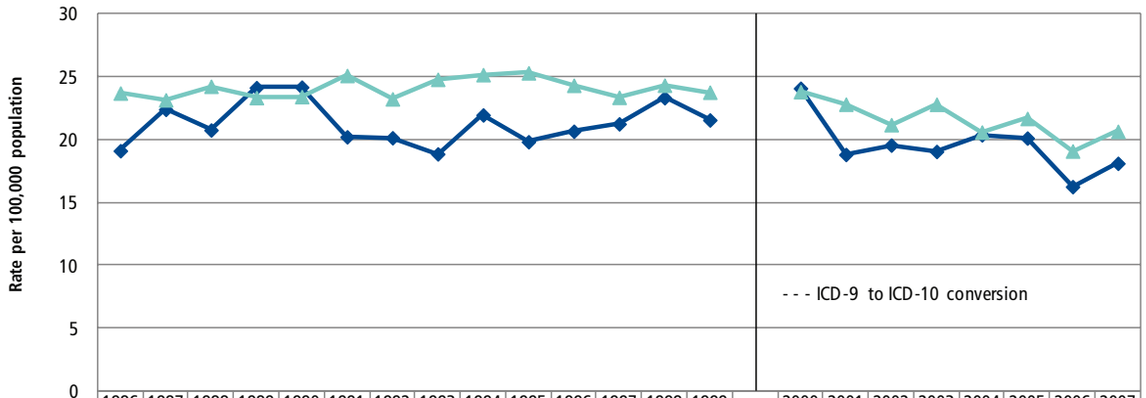
In 2007, chronic lower-respiratory diseases were the fifth leading cause of death in Ottawa residents. Although crude mortality rates have been on the rise since 1986, age-standardized mortality rates suggest that deaths from COPD have remained fairly stable over time.

Mortality rates for Ottawa and the rest of Ontario have historically followed a similar trend (Figure 50). In 2007, the Ottawa COPD mortality rate was 18.1 per 100,000 population (196 deaths), not significantly different than the 1986 rate of 19.1 per 100,000 population or the 2007 rate in the rest of Ontario (20.6 per 100,000 population).

COPD mortality rates in females have risen since 1986 and have narrowed the sex mortality gap (Figure 51). In 2007, mortality rates of COPD in Ottawa were not significantly different between males and females (20.8 versus 16.8 per 100,000 population).

Deaths due to COPD in Ottawa predominantly occurred in the oldest age groups—65+ years (Figure 52). The majority of deaths due to COPD reported before 65 years occur in males. The five-year average for 2003–2007 showed that men had significantly higher mortality rates from COPD than did women at 80–84 years and 90+ years.

Figure 50. Age-standardized mortality rates and death counts of chronic obstructive pulmonary disease, Ottawa and the rest of Ontario, 1986–2007

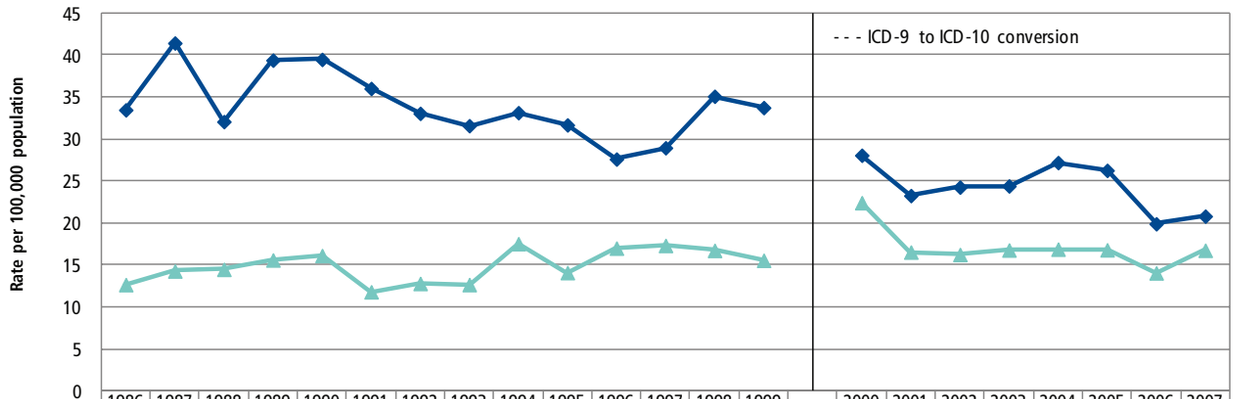


	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Ottawa rate	19.1	22.4	20.7	24.1	24.1	20.2	20.1	18.8	21.9	19.8	20.6	21.2	23.3	21.5	24.1	18.8	19.5	19.0	20.4	20.1	16.2	18.1
Ontario-less-Ottawa rate	23.7	23.1	24.2	23.3	23.4	25.1	23.2	24.8	25.1	25.3	24.3	23.3	24.3	23.7	23.8	22.8	21.2	22.8	20.6	21.7	19.1	20.6
Ottawa deaths	99	120	117	140	145	126	130	125	151	142	151	161	180	175	200	162	179	183	193	202	168	196
Ontario-less-Ottawa deaths	1,990	2,019	2,164	2,154	2,233	2,478	2,360	2,584	2,686	2,782	2,741	2,710	2,894	2,900	3,002	2,962	2,844	3,166	2,949	3,215	2,932	3,291

Years

Source: Ontario Mortality Data 1986-2007, IntelliHEALTH Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
COPD (ICD-9:490-492,496: ICD-10-CA: J40-J44)
Data note: Mortality rates are age-standardized to the 1991 Canadian population.

Figure 51. Age-standardized mortality rates and death counts of chronic obstructive pulmonary disease by sex, Ottawa, 1986–2007

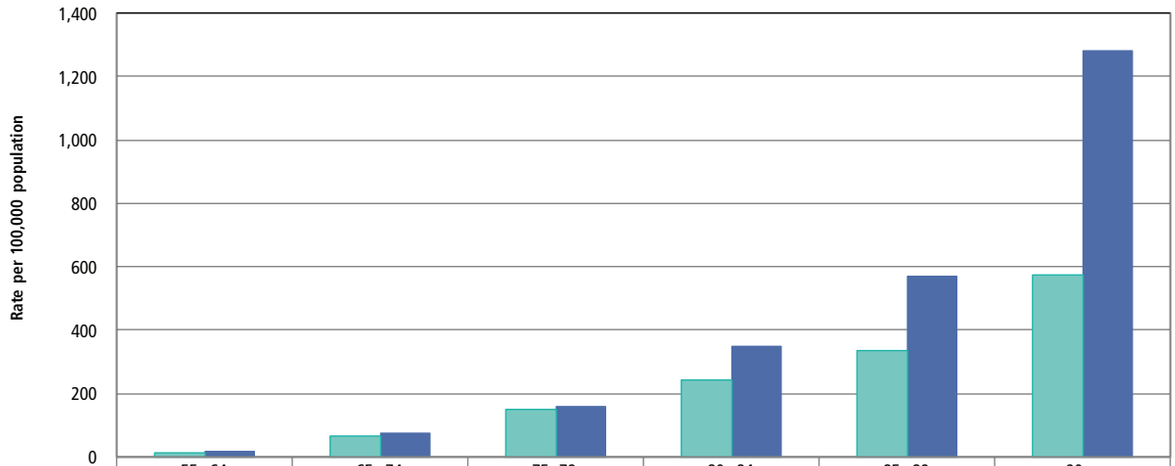


	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Female rate	12.7	14.3	14.5	15.6	16.1	11.8	12.8	12.7	17.5	14.1	17.0	17.3	16.7	15.6	22.4	16.6	16.3	16.8	16.9	16.8	14.1	16.8
Male rate	33.5	41.4	32.1	39.4	39.5	36.0	33.1	31.6	33.1	31.7	27.6	29.0	35.1	33.8	28.1	23.3	24.3	24.4	27.2	26.3	19.9	20.8
Female deaths	42	49	51	59	61	45	53	52	75	63	78	81	81	80	115	90	99	100	98	105	90	109
Male deaths	57	71	66	81	84	81	77	73	76	79	73	80	99	95	85	72	80	83	95	97	78	87

Years

Source: Ontario Mortality Data 1986-2007, IntelliHEALTH Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
COPD (ICD-9:490-492,496: ICD-10-CA: J40-J44)
Data note: Mortality rates are age-standardized to the 1991 Canadian population

Figure 52. Age-specific mortality rates and deaths of chronic obstructive pulmonary disease by sex, Ottawa, 2003–2007 average



	55–64	65–74	75–79	80–84	85–89	90+
Female rate	13.2	67.7	148.3	240.4	334.2	574.7
Male rate	16.3	72.9	159.2	349.0	568.9	1,280.5
Female deaths	415	93	85	116	94	90
Male deaths	492	87	66	100	74	62

Age group

Source: Ontario Mortality Data 1986-2007, IntelliHEALTH Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
COPD (ICD-10-CA: J40-J44)

Influenza and pneumonia

Influenza is a seasonal respiratory infection that usually peaks between January and March each year. Rates can vary substantially from year to year.[17] Influenza can result in pneumonia and death in the elderly population, and those with pre-existing cardiovascular and pulmonary conditions.[17] Influenza and pneumonia are treated as a combined health condition, as it is difficult to identify influenza as the primary cause of death and using influenza alone would likely underestimate attributable deaths.[17]

Morbidity

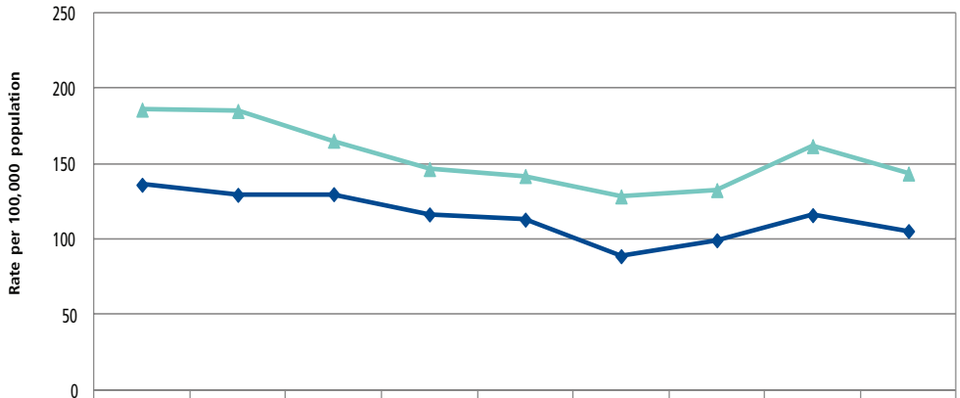
Hospitalization rates for influenza and pneumonia in Ottawa declined by 23% from 2002 to 2010. While there was a fairly steady decline in 2002–2006, rate increases in most recent years are likely attributable to the H1N1 outbreak in 2009 and early 2010, which echoes trends in the rest of the province.

Historically, hospitalization rates of influenza and pneumonia in Ottawa have been significantly lower than rates observed in the rest of the Ontario (Figure 53). In 2010, the Ottawa hospitalization rate was 105.5 per 100,000 population (21,877 hospitalizations), significantly lower than the rate in the rest of Ontario (143.6 per 100,000 population).

Hospitalization rates of influenza and pneumonia were generally significantly lower in Ottawa females than in Ottawa males; however, in 2006 and 2009 these sex differences were not significant (Figure 54).

Age-specific hospitalization rates from influenza and pneumonia follow a 'J-shaped' pattern. Hospitalization rates due to influenza and pneumonia were significantly higher in infants and children 0–4 years than in children 5–9 years. Hospitalization rates were lowest at 10–19 years and increased significantly with age. Five-year average rates show that males had higher hospitalization rates than females between the ages of 5–19 years and 65+ years (Figure 55).

Figure 53. Age-standardized hospitalization rates and hospitalization counts of pneumonia and influenza, Ottawa and the rest of Ontario, 2002–2010

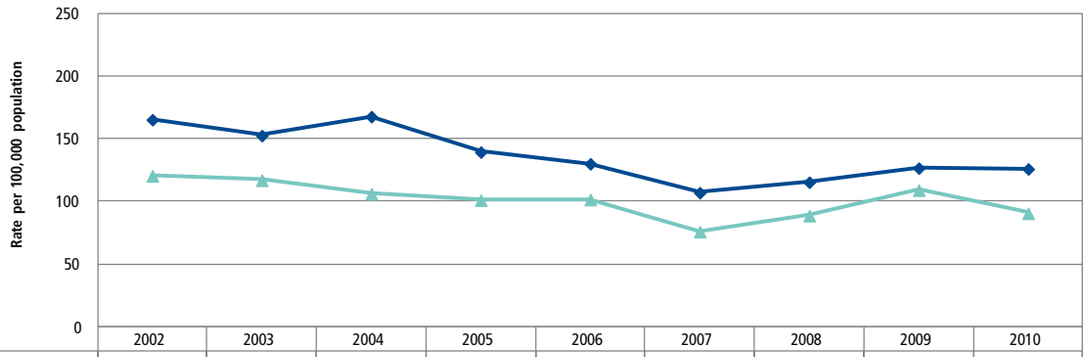


	2002	2003	2004	2005	2006	2007	2008	2009	2010
Ottawa rate	136.1	129.5	129.9	116.5	113.0	88.8	99.3	116.0	105.5
Ontario-less-Ottawa rate	186.0	185.1	165.4	146.6	142.0	128.4	132.7	161.8	143.6
Ottawa counts	1,166	1,124	1,172	1,067	1,066	900	988	1,163	1,093
Ontario-less-Ottawa counts	22,709	22,926	20,947	18,850	18,860	17,436	18,499	21,963	20,784

Years

Source: Ontario inpatient discharges 2002-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC
Pneumonia and Influenza (ICD-10-CA: J09-J18)
Data note: Hospitalization rates are age-standardized to the 1991 Canadian population

Figure 54. Age-standardized hospitalization rates and hospitalization counts of pneumonia and influenza by sex, Ottawa, 2002–2010

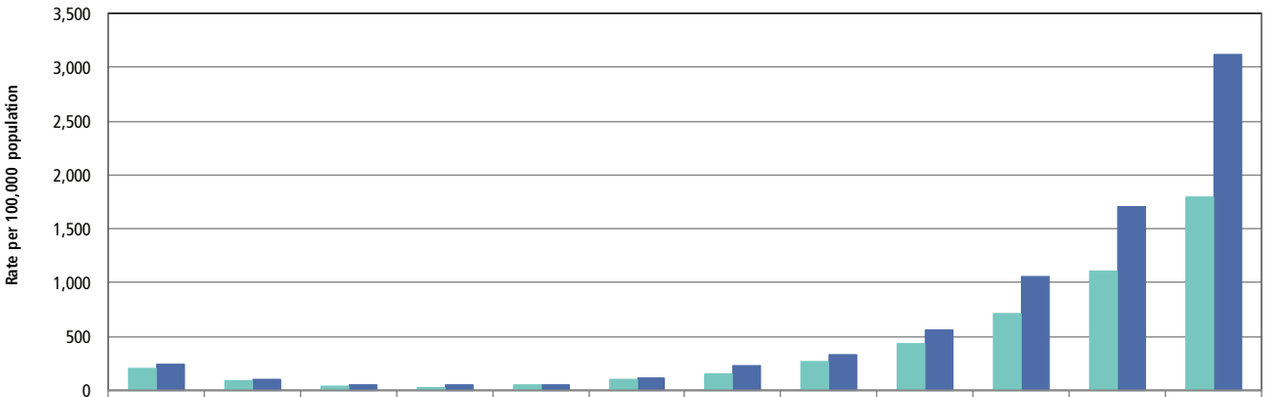


	2002	2003	2004	2005	2006	2007	2008	2009	2010
Female rate	120.7	117.1	106.3	101.2	101.8	76.1	88.9	109.2	90.8
Male rate	165.4	152.7	167.8	139.6	130.2	107.2	115.5	126.8	126.1
Female counts	588	572	558	537	551	456	500	611	529
Male counts	578	552	614	530	515	444	488	552	564

Years

Source: Ontario inpatient discharges 2002-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC
Pneumonia and Influenza (ICD-10-CA: J09-J18)
Data note: Hospitalization rates are age-standardized to the 1991 Canadian population.

Figure 55. Age-specific hospitalization rates and counts of pneumonia and influenza by sex, Ottawa, 2006–2010 average



	0 to 4	5 to 9	10 to 19	20 to 39	40 to 54	55 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90+
Female rate	200.9	81.2	31.3	19.0	47.2	96.3	145.5	262.5	429.8	711.3	1,106.6	1,793.1
Male rate	241.7	98.3	52.2	43.1	53.8	109.7	223.6	333.7	563.2	1,052.6	1,707.2	3,122.7
Female counts	229	94	84	122	246	242	120	175	252	343	373	367
Male counts	286	117	68	136	276	261	165	188	250	316	288	212

Age group

Source: Ontario inpatient discharges 2002-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC
Pneumonia and Influenza (ICD-10-CA: J09-J18)

Mortality

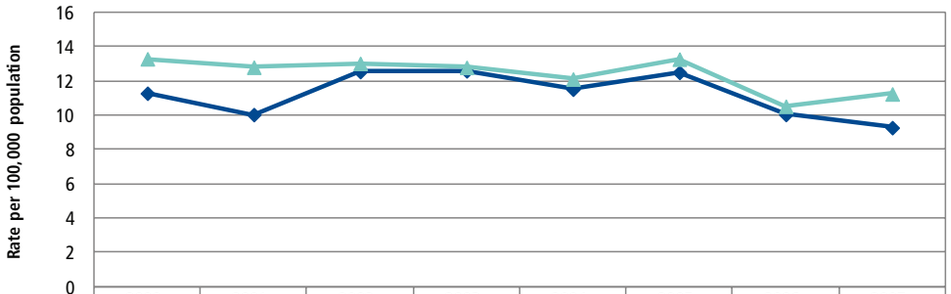
Mortality rates for Ottawa were similar to rates observed in the rest of Ontario (Figure 56). Since 2000, deaths from pneumonia and influenza have remained fairly stable in both Ottawa and the rest of Ontario.

In Ottawa in 2007, a total of 114 deaths were attributed to pneumonia and influenza. The 2007 mortality rate for pneumonia and influenza was 9.3 per 100,000 population, not significantly different than the rate for 2000 (11.3 per 100,000 population).

Male mortality rates were generally not significantly different than female rates, except in 2004–2005 when male rates were significantly greater than those for females (Figure 57).

The majority of deaths attributable to pneumonia and influenza did not occur before age 80 and increased significantly with age (Figure 58). Five-year average mortality rates revealed that males 90+ years had significantly higher mortality rates than did females of the same age.

Figure 56. Age-standardized mortality rates and death counts of pneumonia and influenza, Ottawa and the rest of Ontario, 2000–2007

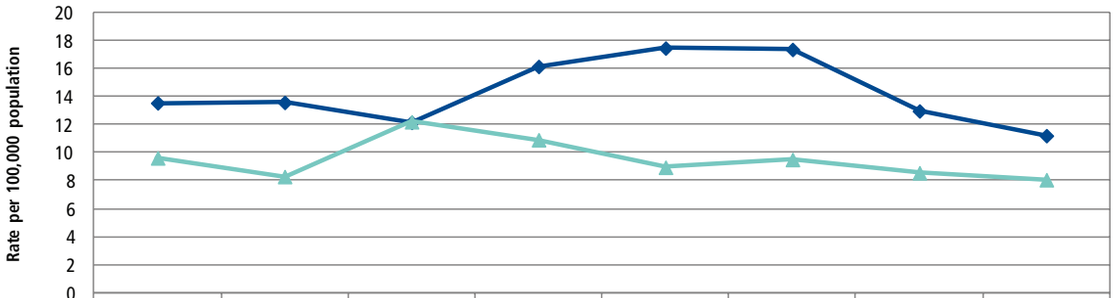


	2000	2001	2002	2003	2004	2005	2006	2007
Ottawa rate	11.3	10.0	12.6	12.6	11.5	12.5	10.0	9.3
Ontario-less-Ottawa rate	13.3	12.8	13.0	12.8	12.1	13.3	10.5	11.2
Ottawa deaths	95	89	117	123	117	134	116	114
Ontario-less-Ottawa deaths	1,706	1,704	1,795	1,839	1,809	2,065	1,698	1,907

Years

Source: Ontario Mortality Data 2000-2007, IntelliHEALTH Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
Pneumonia and Influenza (ICD-10-CA: J09-J18)
Data note: Mortality rates are age-standardized to the 1991 Canadian population.

Figure 57. Age-standardized mortality rates and death counts of pneumonia and influenza by sex, Ottawa, 2000–2007

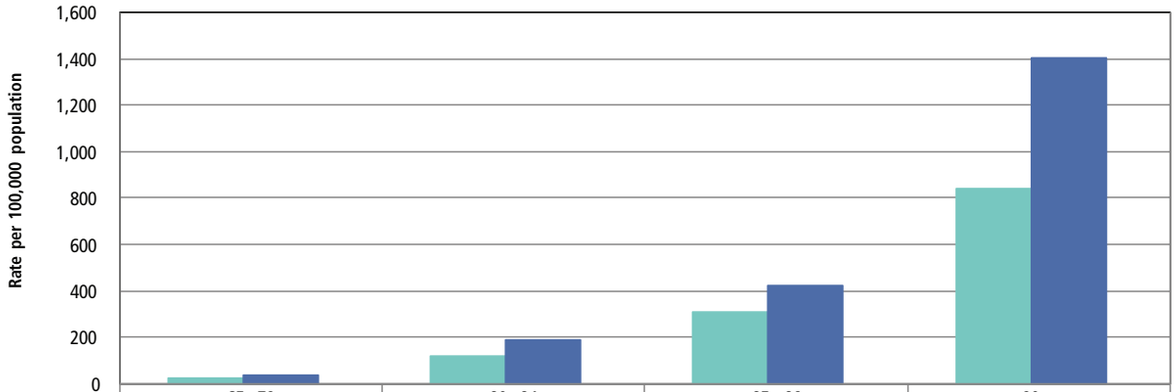


	2000	2001	2002	2003	2004	2005	2006	2007
Female rate	9.6	8.3	12.2	10.9	9.0	9.5	8.6	8.1
Male rate	13.5	13.6	12.2	16.1	17.5	17.4	13.0	11.2
Female deaths	55	48	77	71	62	71	66	67
Male deaths	40	41	40	52	55	63	50	47

Years

Source: Ontario Mortality Data 2000-2007, IntelliHEALTH Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
Pneumonia and Influenza (ICD-10-CA: J09-J18)
Data note: Mortality rates are age-standardized to the 1991 Canadian population.

Figure 58. Age-specific mortality rates and deaths of pneumonia and influenza by sex, Ottawa, 2006–2010 average



	65–79	80–84	85–89	90+
Female rate	21.0	120.2	309.3	842.9
Male rate	36.1	188.4	422.8	1,404.4
Female deaths	41	58	87	132
Male deaths	58	54	55	68

Age group

Source: Ontario Mortality Data 2000-2007, IntelliHEALTH Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
Pneumonia and Influenza (ICD-10-CA: J09-J18)

Alzheimer's and dementia

Alzheimer's and dementia are progressive, degenerative diseases of the brain that affect an individual's thinking processes. These diseases cause loss of memory, impairment of judgement and reasoning, and changes in mood, behaviour and communication skills.[18] The causes of Alzheimer's disease are unknown, however, the risk increases with age in both men and women.[18] Modifiable risk factors for Alzheimer's and/or dementia include high blood pressure, mild cognitive impairment, chronic inflammatory conditions, history of clinical depression, Type 2 diabetes, head injury, stroke, high cholesterol, inadequate intellectual stimulation, and obesity.[19]

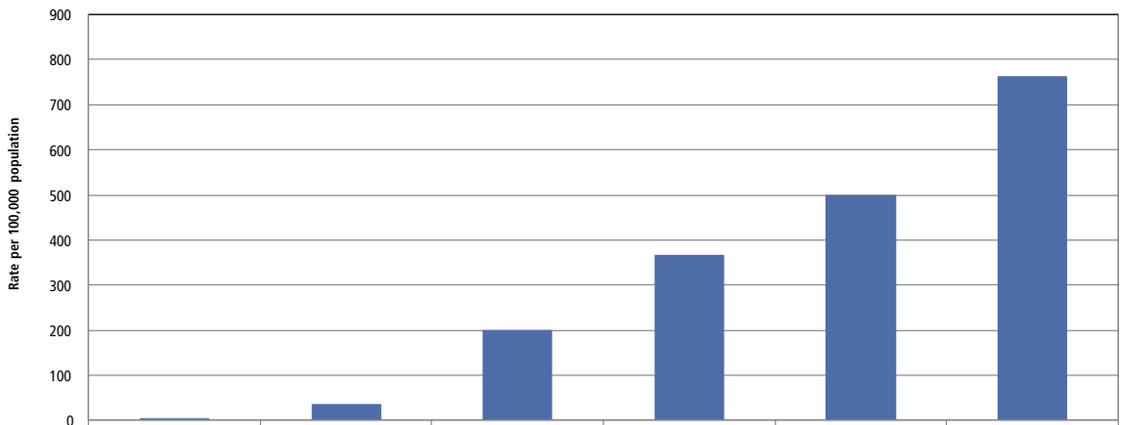
Morbidity

Hospitalizations for mental health disorders are incomplete due to changes in reporting mental disorders. Beginning in the fiscal year 2006/2007, patients with mental disorders (including Alzheimer's and dementia), who occupy psychiatric beds in hospitals are no longer reported in hospitalization data. As such, Alzheimer's and dementia hospitalization records do not completely describe the true burden of these conditions in Ottawa over time and time trending is excluded from this report.

In 2010, the hospitalization rate of Alzheimer's and dementia was 17.4 per 100,000 population. Hospitalization rates for Alzheimer's and dementia in Ottawa did not differ significantly between males and females.

Hospitalization rates of Alzheimer's and dementia were not reportable prior to the age of 55 years due to too few cases. Rates increased significantly with older age. No significant sex differences were observed at any age group and, as a result, age-specific rates are presented using combined male and female data (Figure 59).

Figure 59. Age-specific hospitalization rates and counts of Alzheimer's and dementia, Ottawa, 2006–2010 average



	55–64	65–74	75–79	80–84	85–89	90+
Female and male rate	4.5	35.4	199.0	365.5	498.3	763.1
Female and male counts	22	99	205	286	252	208

Age group

Source: Ontario inpatient discharges 2006-2010, IntelliHEALTH, Extracted November 3, 2011, Health Planning Branch, Ontario MOHLTC
Alzheimer's and dementia (ICD-10: F01-F03, F05.1, G30-G30.9)

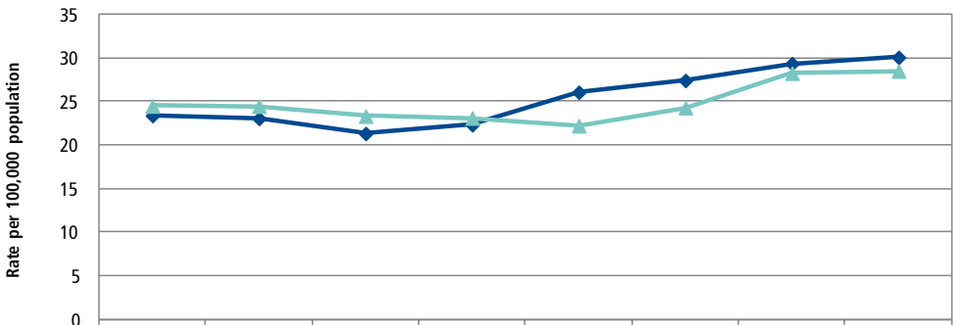
Mortality

In 2007, Alzheimer's and dementia was the second leading cause of death in Ottawa (385 deaths). The 2007 mortality rate for Alzheimer's and dementia in Ottawa was 30.1 per 100,000 population, significantly higher than the 2000 rate of 23.4 per 100,000 population. Mortality rates for Ottawa and the rest of Ontario were not significantly different and followed a similar trend over time (Figure 60).

Crude mortality rates differed significantly between males and females. However, once the rates were age-standardized, there were no longer significant differences between males and females. In 2007, the mortality rate from Alzheimer's and dementia in males was 29.2 per 100,000 population, and in females 30.2 per 100,000 population (Figure 61).

Mortality rates of Alzheimer's and dementia in 2007 were not reportable prior to 65 years and increased significantly with age. Only one significant sex difference was observed. Based on the five-year average, males 75–79 years had significantly higher mortality rates than did females of the same age (Figure 62).

Figure 60. Age-standardized mortality rates and death counts of Alzheimer's and dementia, Ottawa and the rest of Ontario, 2000–2007

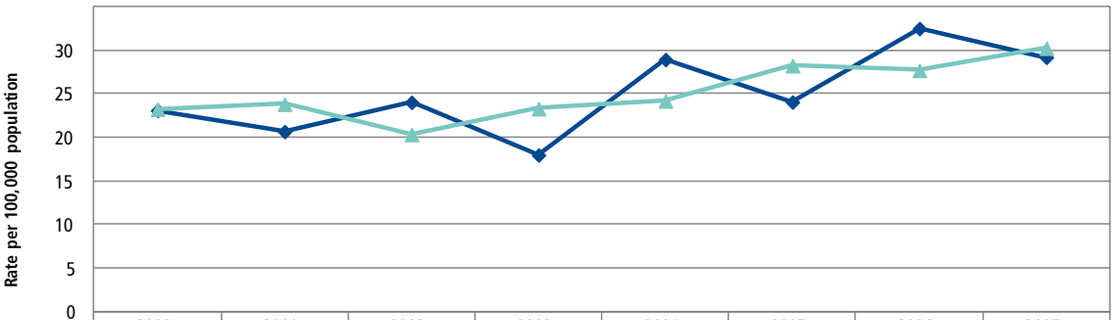


	2000	2001	2002	2003	2004	2005	2006	2007
Ottawa rate	23.4	23.0	21.3	22.3	26.1	27.4	29.3	30.1
Ontario-less-Ottawa rate	24.5	24.5	23.3	23.1	22.2	24.3	28.2	28.5
Ottawa deaths	201	209	202	219	268	303	353	385
Ontario-less-Ottawa deaths	3,186	3,297	3,272	3,382	3,392	3,887	4,759	5,014

Years

Source: Ontario Mortality Data 2000-2007, IntelliHEALTH Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
Alzheimer's and Dementia (ICD-10: F01-F03, F05.1, G30-G30.9)
Data note: Mortality rates age-standardized to the 1991 Canadian population

Figure 61. Age-standardized mortality rates and death counts of Alzheimer's and dementia by sex, Ottawa, 2000–2007

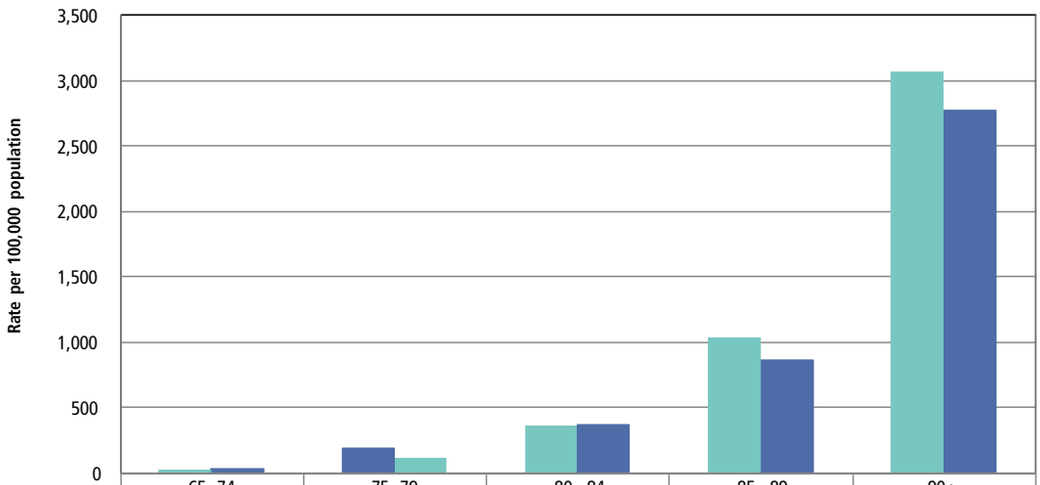


	2000	2001	2002	2003	2004	2005	2006	2007
Female rate	23.2	23.8	20.3	23.3	24.2	28.2	27.7	30.2
Male rate	23.1	20.7	24.0	18.0	28.9	24.1	32.5	29.2
Female deaths	138	150	130	164	173	219	231	265
Male deaths	63	59	72	55	95	84	122	120

Years

Source: Ontario Mortality Data 2000-2007, IntelliHEALTH Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
Alzheimer's and Dementia (ICD-10: F01-F03, F05.1, G30-G30.9)
Data note: Mortality rates age-standardized to the 1991 Canadian population.

Figure 62. Age-specific mortality rates and deaths of Alzheimer's and dementia by sex, Ottawa, 2003–2007 average



	65–74	75–79	80–84	85–89	90+
Female rate	23.3	118.6	360.6	1,041.7	3,065.1
Male rate	29.3	190.6	373.4	861.0	2,767.5
Female deaths	32	68	174	293	480
Male deaths	35	79	107	112	134

Age group

Source: Ontario Mortality Data 2000-2007, IntelliHEALTH Extracted September 7, 2011, Health Planning Branch, Ontario MOHLTC
Alzheimer's and Dementia (ICD-10: F01-F03, F05.1, G30-G30.9)

Abbreviations

AIDS—Acquired immune deficiency syndrome

CI—Confidence interval

COPD—Chronic obstructive pulmonary disease

HALE—Health-adjusted life expectancy

ICD—International Classification of Diseases

IHD—Ischemic Heart Disease

MVTC—Motor vehicle traffic collision

MOHLTC—Ministry of Health and Long-Term Care

PYLL—Potential years of life lost

SHR—Standardized hospitalization ratio

SMR—Standardized mortality ratio

Glossary

Age-specific mortality rate

Number of deaths attributed to a specific condition or disease for a particular age group during a specified time period divided by the number of people in that age group at risk from dying from the condition or disease. In this report, the number is multiplied by 100,000 and is expressed as a rate per 100,000 persons in that age group for the specified time period. The age groups were developed based on clinical and statistical significance.

Age-specific hospitalization rate

Number of hospitalizations attributed to a specific condition or disease for a particular age group during a specified time period divided by the number of people in that age group at risk of hospitalization from the condition or disease. In this report, the number is multiplied by 100,000 and is expressed as a rate per 100,000 population in that age group for the specified time period. The age groups were developed based on clinical and statistical significance.

Age-standardized mortality rate

Number of deaths attributed to a specific condition per 100,000 population that would occur if the observed age-specific rates of the study population are assumed by the standard population. This technique produces an arbitrary rate that is used to make comparisons between different populations over time by accounting for differences in age distributions. In this report, the 1991 Canadian population is used as the standard population and the Ottawa population and the Ontario less Ottawa population are the study populations.

Age-standardized hospitalization rate

Number of hospitalizations attributed to a specific condition per 100,000 population that would occur if the observed age-specific rates of the study population are assumed by the standard population. This technique produces an arbitrary rate that is used to make comparisons between different populations over time by accounting for differences in age distributions. In this report, the 1991 Canadian population is used as the standard population and the Ottawa population and the Ontario less Ottawa population are the study populations.

Age-standardized mortality ratio

Ratio of number deaths from a particular condition in the study population to the number of deaths expected in the study population if it had the same age-specific rates as the standard population (1991 Canadian population). If the ratio and its confidence interval (CI) include 1.0, then the rate is not statistically different in Ottawa compared to the rest of Ontario (Ontario less Ottawa). If the ratio and its CI are above 1.0, then the rate in Ottawa is significantly higher than the rate in the rest of Ontario. If the ratio and its CI are below 1.0, then the rate in Ottawa is significantly lower than the rate in the rest of Ontario. In this report, Ottawa is the study population and Ontario less Ottawa is the standard population.

Glossary

Age-standardized hospitalization ratio

Ratio of number hospitalizations from a particular condition in the study population to the number of hospitalizations expected in the study population if it had the same age-specific rates as the standard population. If the ratio and its confidence interval (CI) include 1.0, then the rate is not statistically different in Ottawa compared to the rest of Ontario (Ontario less Ottawa). If the ratio and its CI are above 1.0, then the rate in Ottawa is significantly higher than the rate in the rest of Ontario. If the ratio and its CI are below 1.0, then the rate in Ottawa is significantly lower than the rate in the rest of Ontario. In this report, Ottawa is the study population and Ontario less Ottawa is the standard population.

Certain conditions originating in the perinatal period

These conditions are included in Chapter XVI (P00-P96) of the ICD-10-CA classification system. They include: "conditions that have their origin in the perinatal period even though death or morbidity occurs later."[20]

Confidence interval

Range of values around an estimate of a particular variable within which the true value of the variable in the population is contained with a given probability[4]. In this report, 95% confidence intervals are calculated where appropriate. With a 95% confidence interval it can be said that one is 95% confident that the range of values shown will contain the true value of the variable of interest.

Crude mortality rate

Number of deaths attributed to a specific condition relative to the population at risk of dying from the condition. In this report, it shows the true or actual picture of death from a specified condition in Ottawa and the rest of Ontario, respectively. Crude rates cannot be compared between populations and over time because they do not take into consideration the underlying age and sex distribution of populations which influence observed rates.

Factors influencing health status & contacts with health services

These conditions are included in Chapter XXI of the ICD-10-CA classification system.
This classification is used for "occasions when circumstances other than a disease, injury or external cause classifiable to categories A00-Y89 are recorded as "diagnoses" or "problems." This can arise in two main ways: (a) When a person who may or may not be sick encounters the health services for some specific purpose, such as to receive limited care or service for a current condition, to donate an organ or tissue, to receive prophylactic vaccination or to discuss a problem which is in itself not a disease or injury; or (b) When some circumstance or problem is present which influences the person's health status but is not in itself a current illness or injury. Such factors may be elicited during population surveys, when the person may or may not be currently sick, or be recorded as an additional factor to be borne in mind when the person is receiving care for some illness or injury."[20]

Glossary

International Classification of Diseases (ICD)

The ICD is the international standard diagnostic classification system for all general epidemiological and many health management purposes. It is used to classify diseases and other types of health problems. The current version is ICD-10 that was endorsed by the World Health Organization (WHO) in 1990 and came into use by the WHO member states in 1994. In Canada, there is a subset of the international system known as ICD 10-CA.

Morbidity

the presence of illness or disease, or any or a departure from health and well being

Mortality (death rate)

the number of deaths that occur at a specific time, in a specific group, or from a specific cause

Mortality rate

Mortality rate is the rate at which deaths occur in a defined population. It is the total number of deaths divided by the total number of people at risk of dying from the specified condition in a defined population during a defined time period. In this report, the results are multiplied by 100,000 and expressed as a mortality rate per 100,000 persons for the defined time period.

Moving average

A method for smoothing irregularities in trend data. Graphical display of 3-year moving averages makes it easier to discern long-term trends in rates that otherwise might be obscured by short-term fluctuations[4].

Potential Years of Life Lost (PYLL)

Potential years of life lost (PYLL) are measures of premature mortality. This measure represents the number of years not lived by an individual from birth who died before the age of 75 years and gives more importance to the causes of early death than those at old age.

Standardized Hospitalization Ratio (SHR)

The age-standardized hospitalization ratio is the ratio of the number of hospitalizations in the population of interest to the number of expected hospitalizations if that population had the same age-specific rates as a reference population.

Standardized Mortality Ratio (SMR)

The age-standardized mortality ratio is the ratio of the number of deaths in the population of interest to the number of expected deaths if that population had the same age-specific rates as a reference population.

Glossary

Statistical significance

Refers to a situation where an observed difference between two groups is a true difference and is unlikely because of a chance occurrence. In this report, the difference is calculated to the 95% probability of a true difference being observed. Significance is achieved when rates and their 95% confidence intervals do not overlap.

Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified

These conditions are included in Chapter XVIII (R00-R99) of the ICD-10-CA classification system. This classification is used for: "Signs and symptoms that point rather definitely to a given diagnosis have been assigned to a category in other chapters of the classification. In general, categories in this chapter include the less well-defined conditions and symptoms that, without the necessary study of the case to establish a final diagnosis, point perhaps equally to two or more diseases or to two or more systems of the body. Practically all categories in the chapter could be designated "not otherwise specified," "unknown etiology" or "transient"."[20]

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