Services de santé du TIMISKAMING Health Unit

Timiskaming Health Status Report

Highlights for the Timiskaming Health Unit Area

May 2020

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Report Highlights

This Health Status report provides highlights of the general health of people who live in the Timiskaming Health Unit area. It can be used to try to understand the areas where we are doing well and where there are health challenges.

Compared to Ontario, Timiskaming residents rated themselves similarly on their sense of belonging to the local community, amount of life stress, mental health, and general life satisfaction.[8]

In contrast, fewer Timiskaming residents rate their health as very good or excellent compared to Ontario.[8] In addition, a higher percentage of Timiskaming residents report being limited in selected activities at home, work, school, or other activities because of a physical or mental condition or health problem.[9]

Timiskaming residents also had a higher percentage of people with arthritis, back problems, chronic obstructive pulmonary disease, diabetes, high blood pressure, obesity, osteoporosis, and sleep apnea compared to Ontario.[10,11]

Timiskaming residents are expected to live 78.8 years, which is lower than the 82.5 years that Ontario residents are expected to live.[15]

Ontario's mortality rate over time is generally decreasing and Timiskaming's rate fluctuates by year, which is normal for areas with smaller populations.[20] Timiskaming's mortality rates are statistically higher than Ontario's rates for almost every year over the last 15 years.[20] The leading causes of mortality are ischaemic heart disease, lung cancer, and dementia and Alzheimers.[20]

Amenable mortality measures the deaths that could have been prevented given timely and appropriate intervention. Timiskaming has the highest rate of amenable mortality of all the health units in the province, which means that Timiskaming residents are more likely to die from causes that are avoidable and preventable.[19]

The relative index of inequality describes the relative disadvantage associated with low socioeconomic status in a population. Timiskaming residents in the lowest socioeconomic status group are 1.5 times more likely to die prematurely compared to people in the highest socioeconomic status group.[15]

The leading cause of emergency department visits in Timiskaming is 'injuries and poisonings', followed by visits due to 'diseases of the respiratory system'.[22]

Overall, we have a higher injury-related death rate compared to Ontario. The most common injuries deaths were due to falls, followed by transport collisions and accidental poisoning.[23]

Introduction

Health is a state that is represented not only by the absense of disease or injury, but also by complete physical, mental and social well-being. This report contains indicators such as life expectancy, mortality, chronic conditions, and hospitalizations that can be used to assess the general health of Timiskaming residents. Understanding local population health status, outcomes, and trends can help with identifying strategic priorities and inform programs, services and public policy to in turnaddress the most significant health issues in Timiskaming.

Health is influenced by complex interactions among a broad range of factors across the lifespan. For example, approximately 50% of overall health and well-being can be explained by socioeconomic factors such as education level, income, and employment, and an additional 10% is attributed to physical environment. Only 15% of health can be explained by biology and genetics, and 25% of health is attributable to the health care system.[1]

The social determinants of health (SDOH) are factors beyond a person's biology and behaviours: the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life. Key SDOH as they relate to health equity include:[2]

- Access to health services
- Culture, race, and ethnicity
- Disability
- Early childhood development
- Education, literacy, and skills
- Employment, job security, and working conditions
- Food Insecurity
- Social inclusion/exclusion
- Gender identity and expression
- Housing
- Income and income distribution
- Indigenous status
- Personal health practices and resiliency
- Physical environments
- Sexual orientation and attraction
- Social support networks

The SDOH are experienced by everyone differently. Individuals who are socially or economically marginalized such as the unemployed, underemployed, people with disabilities, immigrants, refugees, ethno-cultural and

A few examples to highlight the importance of the social determinants of health:

- "The poorest 20% of Canadians have more than double the chance of having chronic health conditions like heart disease and diabetes than the richest 20%".[5]
- Woolf et. al. (2007) estimates that having quality education available to all could save eight times as many lives as medical advances. This is part of the growing body of evidence that investing in education is a highly effective step we can take to improve health outcomes.[6]
- "Living in unsafe, unaffordable or insecure housing increases the risk of many health problems".[7]**Error! Bookmark not defined.**

racialized groups, Indigenous populations, and single parents and their children are often at a disadvantage due to the impact of SDOH. These factors can interact with one another and accumulate over the life course.

Timiskaming residents report lower income and education levels, as well as higher rates of poverty and employment compared to residents across Ontario. Timiskaming residents are also more likely to practice various risky health behaviours such as smoking.[3,4]

Physical built environment factors such as housing, indoor air quality, and the design of communities and transportation systems can significantly impact both our physical and psychological well-being.[1] Other physical environment factors relate to climate change such as contaminants in our air, water, food and soil; at certain levels of exposure they can cause a variety of adverse health effects.[1] More information on climate change and health can be found near the end of this report.

Demonstrating the relationship between the social determinants of health, health behaviours and health outcomes within the population of Timiskaming is complex and beyond the scope of this report. However, there will be a complementary report to explain these relationships in more depth at a later date.

Methodology and Interpretation

In this report, reference to Timiskaming means the Timiskaming Health Unit area, which includes the District of Temiskaming and the Municipality of Temagami. Northeastern Ontario refers to the area covered by the North East Local Integration Network boundaries.

All rates are calculated by dividing the number of events (such as injuries) by the total number of people in that population (such as Timiskaming, in this case). They are useful for the comparison of different populations. All rates in this report are age-standardized to the 2016 standard Canadian population to allow for comparison across the Timiskaming population accounting for the differences among age structures.

In this report a statistical difference is one that is likely not due to chance alone, more specifically that there is only a one in twenty chance that the difference is not true. Smaller sample sizes, as often seen in Timiskaming, make it more difficult to detect statistical differences as there is more uncertainty around the precision of the estimate.

Since Timiskaming has a small population, in some instances these analyses have combined several years of data to increase sample sizes. When the sample size is small and there is uncertainty around the estimate, it is marked with an [E] to encourage the reader to interpret the estimate with caution. When sample sizes are too small for the results to be released, it is indicated with an [F].

Further details on the data sources can be found at the end of this report.

General Health

Health is a state that is represented not only by the absence of disease or injury, but also by complete physical, mental and social well-being. *Table 1* outlines how Timiskaming residents (12 and over) rated themselves according to various health indicators between 2015 and 2016 and how they compare to residents of Ontario. Overall, Timiskaming residents self-rated several aspects of their general health similarly to residents of Ontario.

Table 1: Summary of general health indicators, Timiskaming, Ontario, 2015/2016

		THU statistically different from ON?
Overall health	In Timiskaming, **50.8%** of residents rate their overall health as very good or excellent. This is statistically less than Ontario's residents, where **61.0%** rate their overall health as very good or excellent.[8] In Ontario, as education level increases, perceived overall health also increases.[9] The same trend is evident in the case of increased income. Other characterisitics that are associated with lower self-rated overall health include being unattached and living alone and those who have a mood disorder.[9]	**Y**
Mental health	In Timiskaming, **70.7%** of residents rate their mental health as very good or excellent in 2015/2016. This is not statistically different from Ontario's rate of **71.1%.**[8]	**N**
Life stress	Life stress refers to the amount of stress in the person's life, on most days. In Timiskaming, **18.2%** of residents peceive most days to be quite a bit or extremely stressful, which is not statistically different from Ontario's rate of **22.0%.**[8]	**N**
Sense of belonging to the local community	In Timiskaming, **73.4%** of residents report that they have a somewhat strong, or very strong sense of belonging to the local community in 2015/2016. This is not statistically different from Ontario's rate of **70.9%.**[8]	**N**
Life satisfaction	In Timiskaming, **93.1%** of residents indicate that they are satisfied or very satisfied, with their life. This is not statistically different from Ontario's rate of **92.6%.**[8]	**N**
Activity limitation	In 2015/2016, **42.4%** of Timiskaming residents report being limited in selected activities at home, work, school, or other activities because of a physical or mental condition or health problem. This is higher than Ontario's rate of **31.7%.**[10]	**Y**
Health care provider/doctor	In 2015/2016, **82.1%** of Timiskaming residents reported having a regular healthcare provider, which is lower than the **89.9%** of Ontario residents.[8] Similarly, only **61.7%** of Timiskaming residents report having had contact with a medical doctor in the past year, which is also lower than the **73.7%** of Ontario residents.[8]	**Y**

Chronic Conditions

Chronic conditions affect a person's physical or mental functions as well as a person's quality of life. A chronic condition is an illness diagnosed by a health professional that is considered long-term and expected to last, or have already lasted, six months or more. In 2003, the leading cause of death and disability became chronic diseases, which had overtaken infectious diseases worldwide and remains true today.[11]

The rates of select chronic conditions among Timiskaming and Ontario residents (aged 12 and over) are summarized in *Table* . All of the rates are estimates based on self-reported information for each chronic condition. In 2015 and 2016, Timiskaming's rates are statistically higher than Ontario for arthritis (residents 15+), back problems, chronic obstructive pulmonary disease, diabetes, high blood pressure, obesity (adults 18+), osteoporosis (adults 40+), and sleep apnea.[12,13]

Table 2: Rate of select chronic conditions (per 100,000), Timiskaming, Ontario, 2015/2016[12,13]

	Timiskaming	Ontario
Anxiety disorder *(such as phobia, obsessive-compulsive disorder or panic disorder)*	**10.1[E]**	**8.5**
Arthritis (15 and over)	**30.5***	**21.4**
Asthma	**8.2[E]**	**8.6**
Back problems	**27.7***	**18.5**
Cancer	**2.2[E]**	**1.3**
Chronic fatigue syndrome *(profound fatigue that is not improved by bed rest and includes myalgic encephalomyelitis)*	**2.7[E]**	**2.0**
Chronic obstructive pulmonary disease *(COPD) (35 and over)*	**7.4[E]***	**4.1**
Diabetes	**12.1[E]***	**7.4**
Fibromyalgia	**3.0[E]**	**1.8**
Heart disease	**6.5[E]**	**4.6**
High blood pressure	**24.6***	**18.2**
Migraines	**12.2[E]**	**11.1**
Mood disoder *(such as depression, bipolar disorder, mania or dysthymia)*	**11.6**	**8.7**
Obesity *(18 and over)*	**42.0***	**26.2**
Osteoporosis *(40 and over)*	**13.5[E]***	**9.1**
Sleep apnea	**15.4[E]***	**5.8**
Scoliosis	**3.0[E]**	**3.0**

**Statistically different from Ontario*
[E] Interpret with caution

Life Expectancy

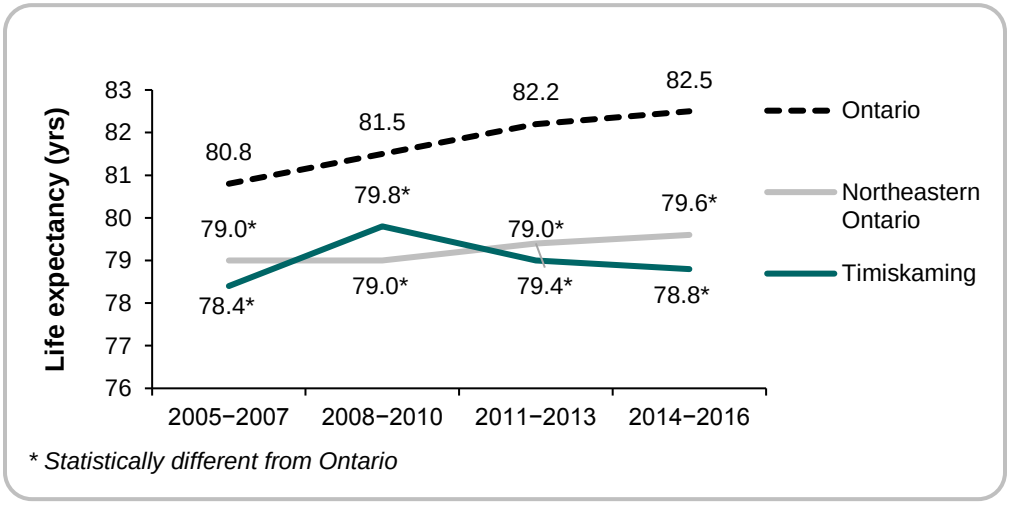
Life expectancy at birth refers to the average number of years a newborn is expected to live if the current death trends continue. Individuals with low income and living in poorer neighbourhoods tend to have shorter life expectancies.[14]

Timiskaming residents live almost *4 years less* than Ontario residents.

A resident in Timiskaming can expect to live 78.8 years, which is not statistically different from the 79.6 years of Northeastern Ontario residents. However, the life expectancy in Timiskaming is statistically lower than the 82.5 years that an Ontario resident can expect to live.[15]

Overall, life expectancy in Ontario is increasing over time. Timiskaming's life expectancy in 2014-16 was higher than it was in 2005-07 and has fluctuated over time. The general pattern of increased life expectancy over time can be attributed to improved nutrition, decreases in infant and child mortality, focuses on health promotion and advocacy, and other medical interventions.[14]

Figure 1: Life expectancy at birth, Timiskaming, Northeastern Ontario, Ontario, 2005–2016[15]



** Statistically different from Ontario*

The impact of behavioural health risks on life expectancy

Behavioural health risks such as smoking, drinking alcohol, being sedentary or having an unbalanced diet, have been associated with an overall decrease in life expectancy.[16] For instance, by eliminating smoking, residents in the Timiskaming District could expect to live approximately 4.3 years longer. Overall, eliminating all four of these behaviour health risks and having lower perceived life-stress could add 9.4 years to a person's life in the Timiskaming District.[16] This is higher compared to the 7.5 years than can be gained from eliminating all these behaviour health risks across Ontario.[16]

Mortality

All deaths in Ontario are registered and coded according to the cause of death. In this report, deaths are classified by leading cause of death based on Becker et. al's (2006) recommendations, with modifications by the Association of Public Health Epidemiologists in Ontario.[17,18]

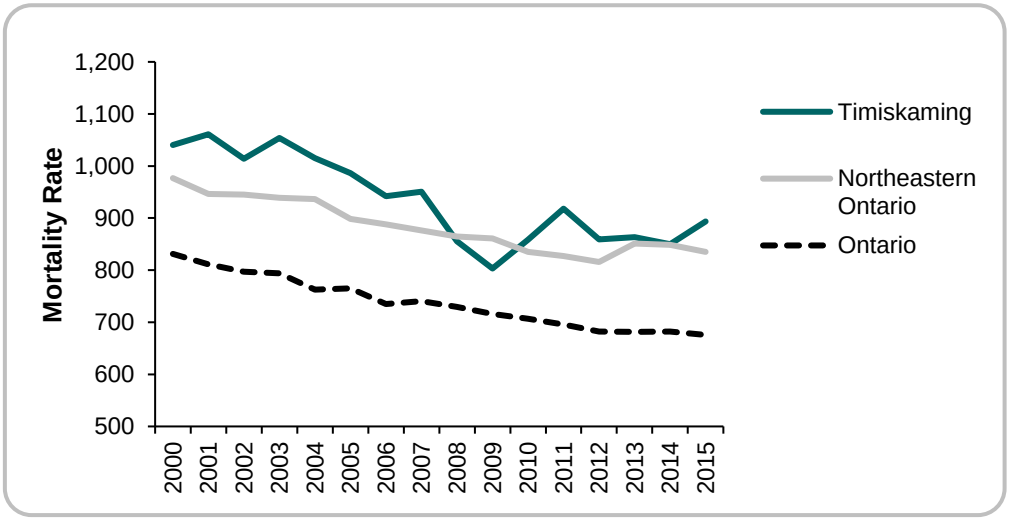
Mortality over time

Due to the aging population, the number of deaths across Ontario is increasing each year. However, a rate adjusts for age and shows a different trend; the death rate is decreasing over time in Ontario and Timiskaming alike. This decreasing rate shows that the health of our society overall is improving. According to a mortality report by Population Health Analytics Laboratory, "Ontario's health systems and broader policies around the determinants of health have been increasingly successful and prevented deaths, particularly early deaths, over time".[19] The decrease in mortality rate differs based on various factors like sex, geography, and socioeconomic status.[19]

As with life expectancy, Timiskaming's mortality rate also fluctuates over time, which is normal for areas with smaller populations.[20] Overall, the mortality rate is decreasing, however not as fast as other regions in the province. For instance, between 1992–1999, Timiskaming's rate decreased by approximately 25%, whereas York Health Unit's' rate decreased approximately 41%.[19]

Both Timiskaming's and Northeastern Ontario's mortality rates are statistically higher than Ontario's every year with the exception of Timiskaming's rate in 2009 (*Figure 2*).

Figure 2: Mortality rate (per 100,000), Timiskaming, Northeastern Ontario, Ontario, 2000–2015[20]



Lead causes of mortality

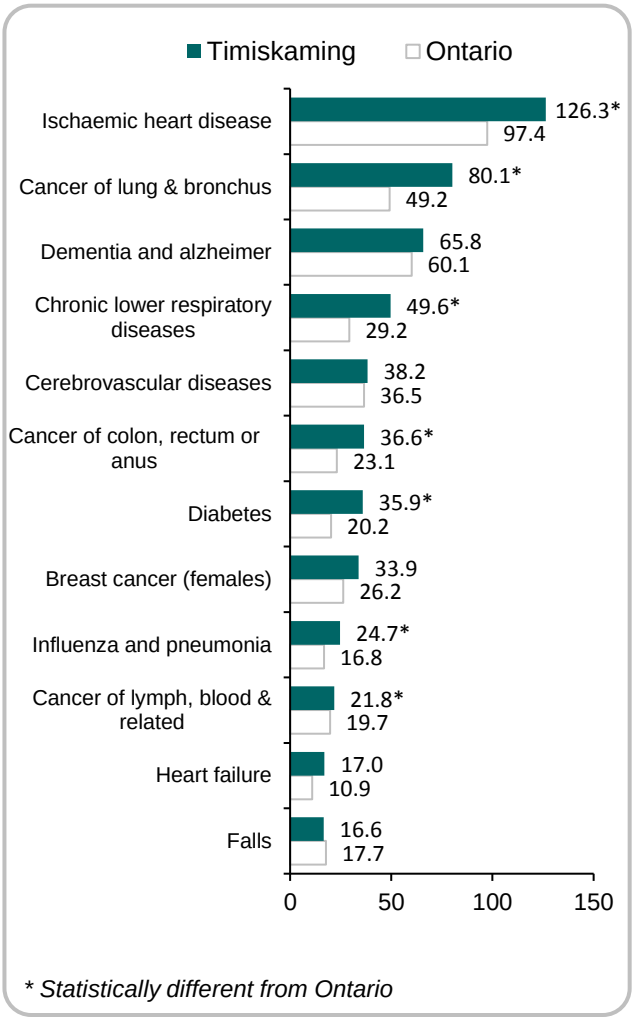
Between 2011 and 2015, there were 1,912 deaths in Timiskaming, an average of 382 deaths per year.[20] The lead cause of death in Timiskaming is ischaemic heart disease, accounting for 14.6% of all deaths or 56 deaths per year. The next leading cause of death is cancer of the lung and bronchus, accounting for 9.3% or 35 deaths per year.[20] *Table 3* outlines percentages and average number of deaths due to each leading cause of death in Timiskaming.

Overall, Timiskaming's rates of death are statistically higher than Ontario's rates for many lead causes of death (*Figure 3*). These include some national leading causes of death such as ischaemic heart disease, cancer of the lung, chronic lower respiratory diseases, influenza and pneumonia, and cancer of the lymph, blood and other related systems.[20]

Table 3: Average number per year and percentage of deaths from lead causes, Timiskaming, 2011–2015[20]

	Average number of deaths	Percentage
Ischaemic heart disease	56	14.6%
Cancer of the lung and bronchus	35	9.3%
Dementia and alzheimer	30	7.7%
Chronic lower respiratory diseases	22	5.9%
Cerebrovascular diseases	17	4.5%
Cancer of the colon, rectum and anus	16	4.2%
Diabetes	16	4.1%
Influenza and pneumonia	11	2.9%
Cancer of the lymph, blood, & related	10	2.5%
Cancer of the breast (females only)	8	2.1%
Heart failure & complications	8	2.0%
Falls	7	1.9%

Figure 3: Mortality rates (per 100,000), by lead causes, Timiskaming, Ontario, 2011–2015[20]



** Statistically different from Ontario*

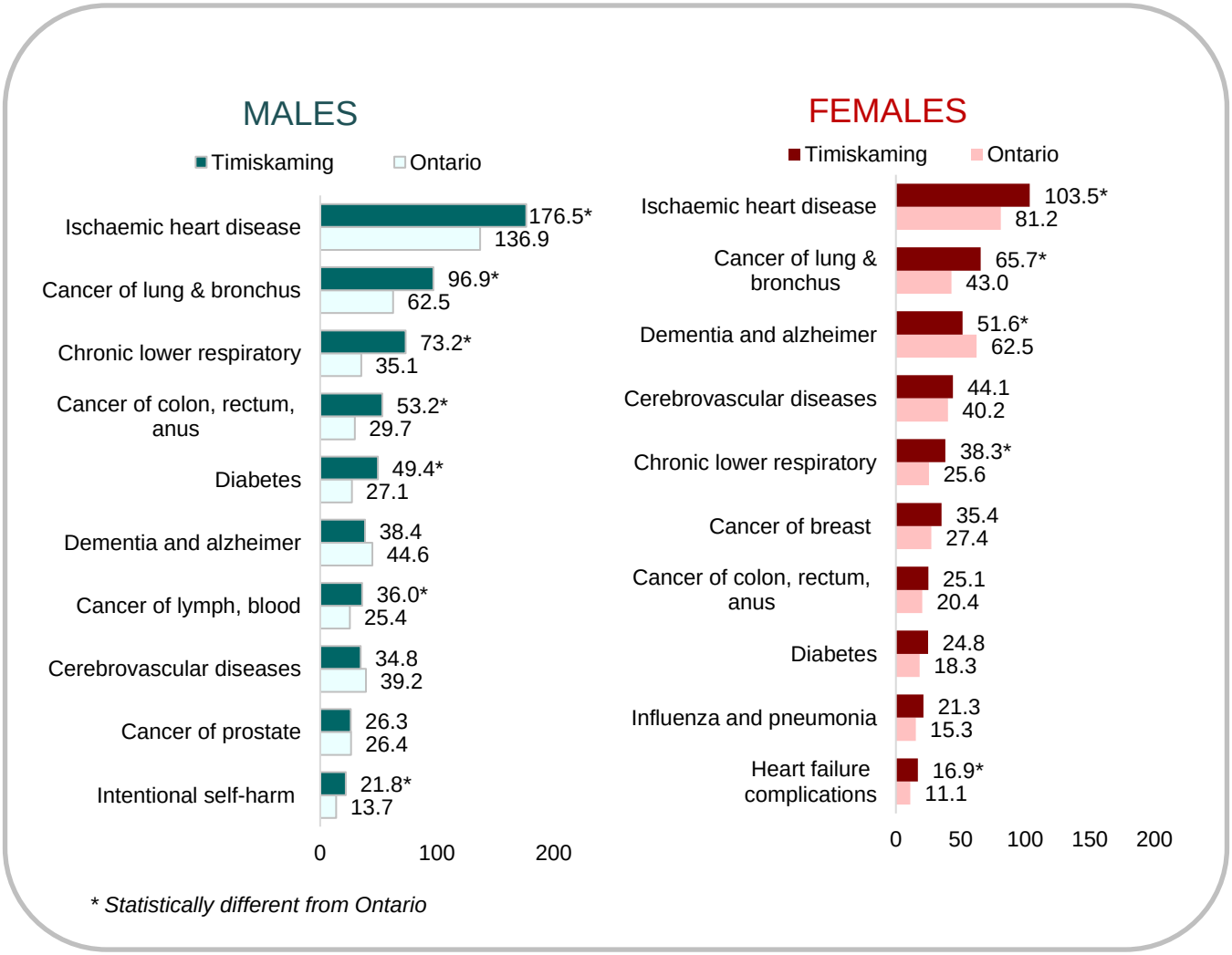
Lead causes of mortality by sex

The leading cause of death for both males and females is ischaemic heart diseases followed by lung cancer. The third leading cause of death differs between sexes with chronic lower respiratory diseases more commonly leading to death in males and dementia and Alzheimer disease for females.[20] Mortality rates for all leading causes in Timiskaming and Ontario can be found in *Figure 4*.

For males, ischaemic heart disease makes up 27.4% of all deaths, an average of 34 deaths per year.[20] Lung cancer makes up 15.8% of male deaths, an average of 19 deaths per year.[20]

For females, ischaemic heart disease makes up 24.0% of all deaths, an average of 25 deaths per year.[20] Lung cancer makes up 14.3% of all deaths, an average of 15 deaths per year. [20]

Figure 4: Rates of leading causes of mortality (per 100,000), by sex, Timiskaming, Ontario, 2006–2015[20]



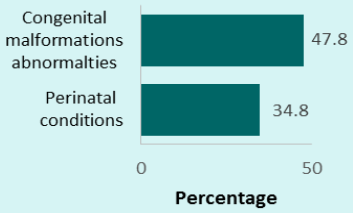
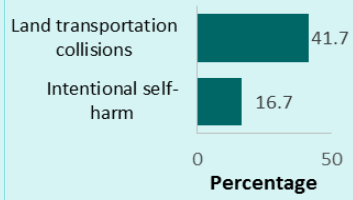
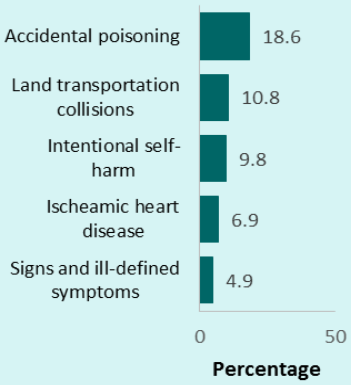
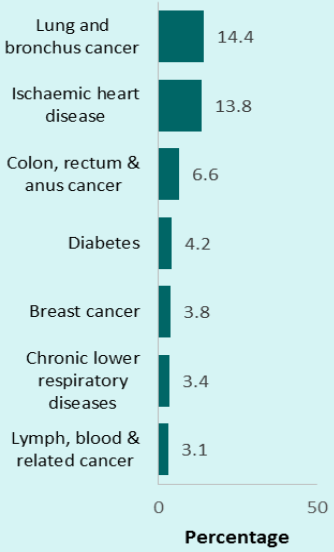
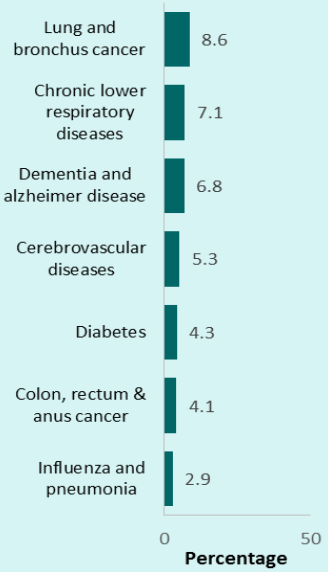
Lead causes of mortality by age group

As with sex, the leading causes of mortality also differ by age group in Timiskaming:[20]

- Children (aged 1−19 years) are more likely to die in land transportation collisions, which account for 41.7% of all deaths in this age group
- Adults (aged 20−44) are more likely to die from accidental poisoning (including drug overdose), which accounts for 18.6% of all deaths in this age group and
- Older adults (aged 45−64 years and aged 65+) are more likely to die from lung and bronchus cancer, which accounts for 14.4% and 8.6% of all deaths in these age groups, respectively.

As might be expected, older adults (aged 65+) make up the highest percentage of deaths in Timiskaming (79%) and children (aged 19 and under) made up the least (2%).[20] The average number of deaths and percentages per year, and lead causes of death by age group in Timiskaming are outlined in *Table 4* on the next page.

Table 4: Rates of leading causes of mortality, by age group, Timiskaming, 2006–2015[20]

Age Group	Less than 1 year	1 to 19 years	20-44 years	45-64 years	65 years and over
Average number of deaths per year	2	2	10	64	293
Percentage of deaths	1%	1%	3%	17%	79%
Lead causes of death					

Amenable Mortality

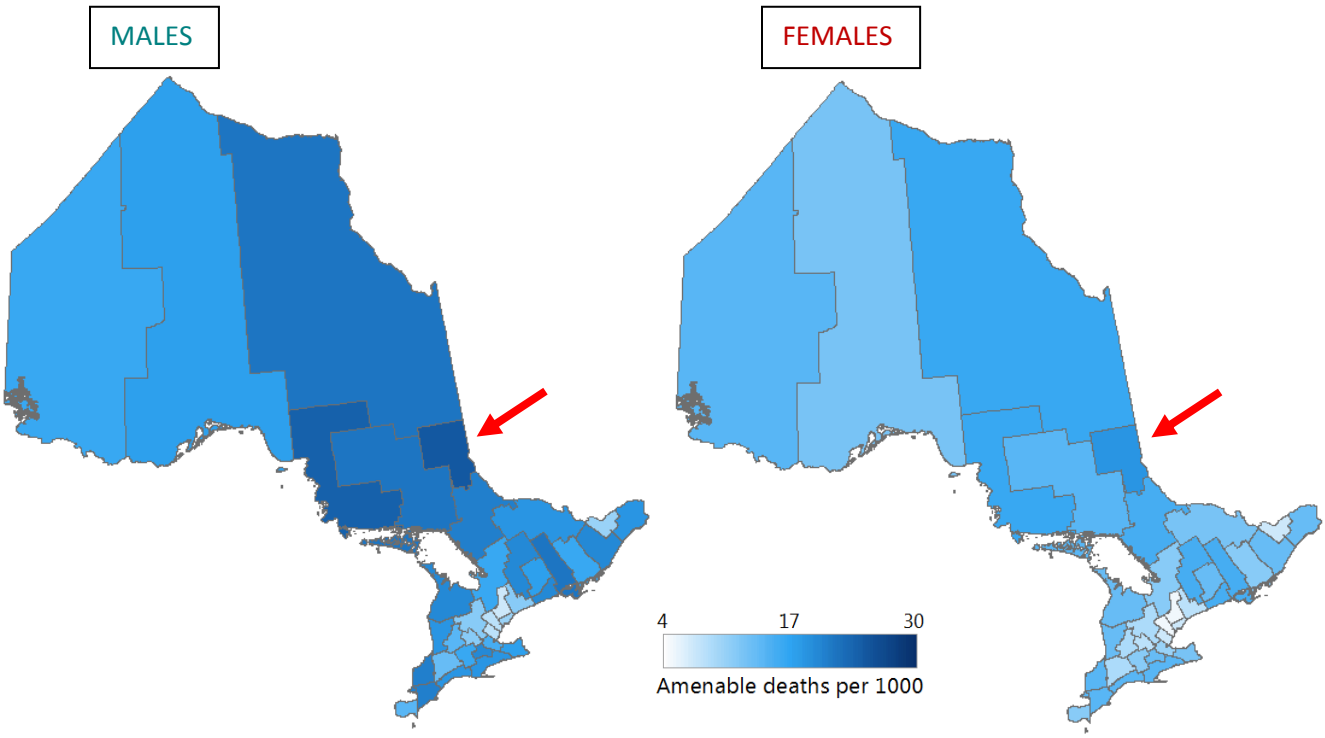
Amenable mortality consists of all the causes of death that are preventable through appropriate public health intervention and/or medical care.[19] Deaths included in the amenable mortality rate are ones registered in Ontario and ones with an age at time of death between 18 and 74 years.[19]

53% of male deaths and 60% of female deaths in Timiskaming are due to causes that are preventable.[19]

In comparison to other health units in Ontario, the Timiskaming district had the highest rate of amenable mortality between 2006 and 2012. This means that Timiskaming residents are more likely to die from causes that are avoidable (*Figure 5*).[19]

In Timiskaming, 53% of male deaths and 60% of female deaths are associated with causes that are preventable by public health or medical care intervention between 2006 and 2012. This is considerably higher than the percentage of amenable deaths in Ontario, which was 47% for males and 52% for females during the same period.[19] A limitation of this data is the lack of amenable mortality data overall, rather than by sex. Due to missing data by sex and different denominators, it is not as simple as adding together male and female rates.

Figure 5: Cumulative amenable mortality rate (per 1,000), by sex, Ontario*, 2006–2012[19]



*Timiskaming shown with arrow

Relative index of inequality

The relative index of inequality is used to describe relative disadvantage in regards to premature mortality associated with low socioeconomic status in a given population. This measure is preferable when assessing health inequalities, as it can be compared between different groups and health outcomes.[19]

As of 2014, Timiskaming residents have a relative index of inequality of approximately 1.5, which means that those in the lowest socioeconomic status group are 1.5 times more likely to die prematurely compared to individuals in the highest socioeconomic status group.[21] This has decreased overtime, from approximately 3.0 between 1994−2004, and 2.0 between 2001−2007.

Timiskaming residents in the lowest socioeconomic status group are

1.5 times

more likely to die prematurely than residents in the highest socioeconomic status group[21]

Provincially, the relative index of inequality is increasing over time, rising from approximately 1.9 between 1992 and 1999 to 2.4 between 2008 and 2015. This indicates a growing gap of premature mortality between the lowest and highest socioeconomic status groups, thus inequality is increasing over time in Ontario.[19]

Emergency Department Visits

Emergency department (ED) visits are counted based on the main condition assessed and diagnosed during the visit. This condition is then classified into health categories using the International Classification of Diseases codes, tenth revision (ICD-10), and the International Shortlist for Hospital Morbidity Tabulation (ISHMT). It is important to note that data may include the same person several times if they returned to the ED or visited another hospital for the same reason. Data does not include those who had health issues but did not seek treatment in the emergency department.

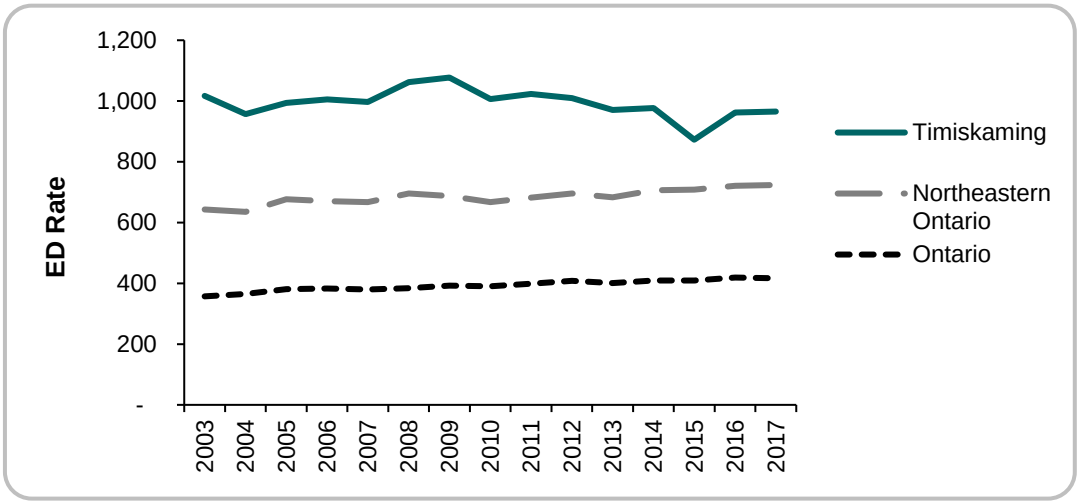
When interpreting and comparing Timiskaming's to Ontario's rates, it is necessary to do so carefully as differences in health service delivery can influence the rates. For instance, Timiskaming residents may be more likely to visit the ED as there are limited options for seeking out care, whereas residents in city centers may have access to other medical services such as walk-in clinics.

Emergency department visits over time

In 2017, there were 32,172 emergency department visits in Timiskaming's hospitals, an ED visit rate of 965.8 per 1,000 population. Residents between the ages of 50-59 and 60-69 had the highest number of visits to the ED (not shown).

As with life expectancy and mortality rates, it is normal for the ED visit rate in an area with a small population to fluctuate over time, which is the case in Timiskaming. Northeastern Ontario and Ontario generally have an ED rate that increases from year to year, with a few exceptions where there were fluctuations.[22] Both Timiskaming's and Northeastern Ontario's ED rates are statistically higher than Ontario's (*Figure 6*).

Figure 6: ED visit rate (per 1,000), Timiskaming, Northeastern Ontario, Ontario, 2003–2017.[22]



Emergency department visits overall and by lead cause

Timiskaming's ED rates by lead cause are all statistically higher than Ontario's, with the exception of the following two categories where there are no statistical differences found: 'congenital malformations, deformations and chromosomal anomalies', and 'certain conditions originating in perinatal period' (*Table 5)*.[22]

In 2017, injury and poisoning was the lead cause of ED visits in both Timiskaming (176.2 visits per 1,000 population) and Ontario (100.7 visits per 1,000 population).

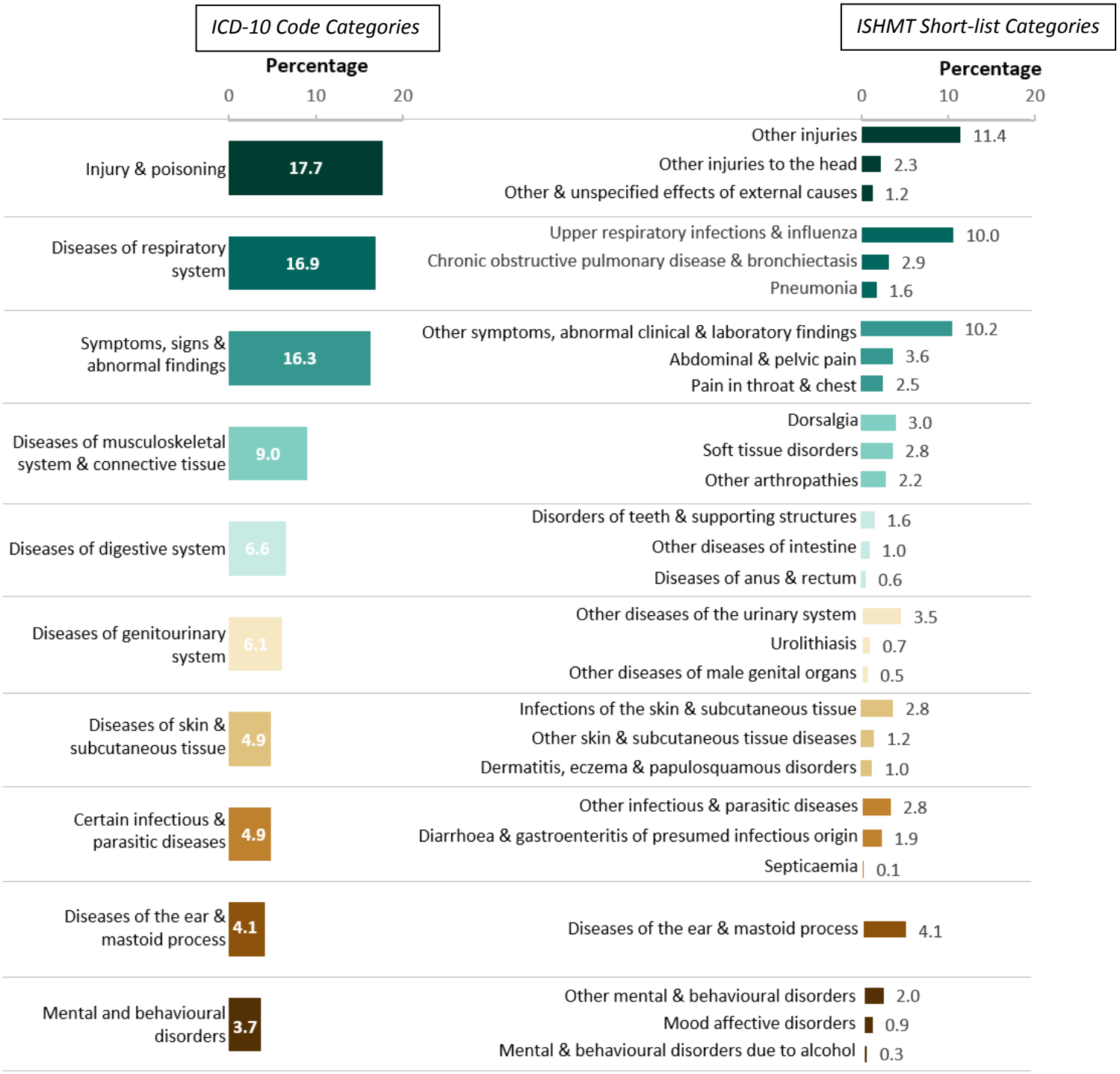
Table *5*: ED visit rates (per 1,000), by lead cause (ICD-10), Timiskaming, Ontario, 2017[22]

Lead Cause	**Timiskaming**	**Ontario**
Injury & poisoning	176.2*	100.7
Diseases of respiratory system	166.2*	44.1
Symptoms, signs & abnormal findings	152.3*	89.1
Diseases of musculoskeletal system & connective tissue	84.1*	28.1
Diseases of digestive system	62.8*	24.3
Diseases of genitourinary system	58.9*	22.8
Certain infectious & parasitic diseases	49.6*	18.1
Diseases of skin & subcutaneous tissue	47.1*	16.7
Diseases of the ear & mastoid process	42.5*	10.1
Mental and behavioural disorders	38.4*	19.8
Diseases of circulatory system	27.1*	15.3
Diseases of the eye and adnexa	17.9*	6.5
Diseases of nervous system	16.8*	6.7
Pregnancy, childbirth & the puerperium	10.2*	5.1
Endocrine, nutritional & metabolic diseases	9.3*	4.4
Diseases of blood & blood-forming organs & immune mechanism	2.8*	1.9
Neoplasms	2.7*	1.9
Certain conditions originating in perinatal period	0.6	0.6
Congenital malformations, deformations & chromosomal anomalies	0.3	0.2

**Statistically higher than Ontario's rate*

Figure 7 illustrates ED visits by lead cause as percentage of total ED visits rather than rate of ED visits. As touched upon above, the leading cause of ED visits in Timiskaming is injury and poisonings, accounting for 17.7% of all ED visits. Diseases of the respiratory system is the next leading cause, accounting for 16.9% of ED visits, followed by a general category called 'symptoms, signs, and abnormal findings' that made up 16.3% of the visits.[22]

Figure 7: Leading cause of ED visits, Timiskaming, 2017[22]



Injuries

This section presents an overview of injuries sustained by Timiskaming residents that resulted in death or harm. Injury-related harm not only affects the individual, but also other members of the family, community and society. The economic burden of injuries includes healthcare-related expenditure as well as lost productivity in the labour force.[23]

Injuries are not considered accidents over which there is little control, but predictable and therefore preventable occurrences. An injury is associated with a series of events and interconnected factors related to unsafe environments and conditions and behaviours, all of which can be influenced.[24]

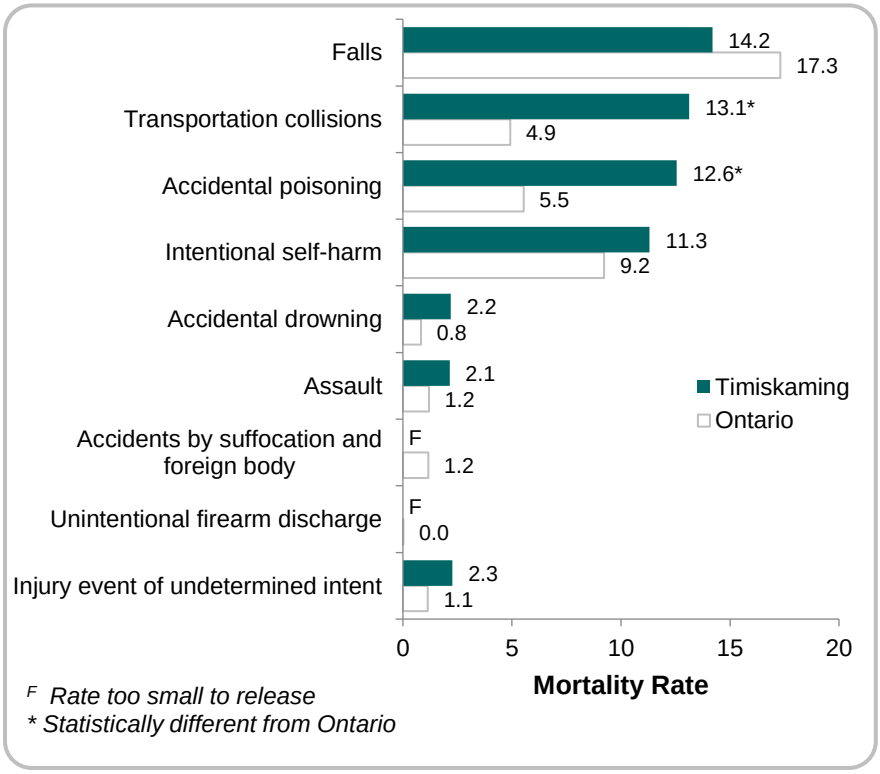
Injury-Related Mortality

All deaths in Ontario are registered and coded according to the cause and the circumstances surrounding the event. In this report, deaths are classified by leading cause based on recommendations from Becker el. al. (2006), with modifications by the Association of Public Health Epidemiologists in Ontario.[17,25] The following injuries categories were not included in this analysis: complications from medical procedures and medical care, adverse drug events, and injuries from legal intervention such as operations of war.

Overall injury-related mortality

There were on average 22 deaths in Timiskaming per year between 2009 and 2015.[26] This equates to a rate of injury causing death of 57.8 deaths a year (per 100,000 population), which is statistically higher than the provincial rate of 41.3 (per 100,000 population).[26]

Figure 8: Injury-related mortality rate (per 100,000), by leading cause, Timiskaming, Ontario, 2009–2015[26]



Injury-related mortality by lead cause

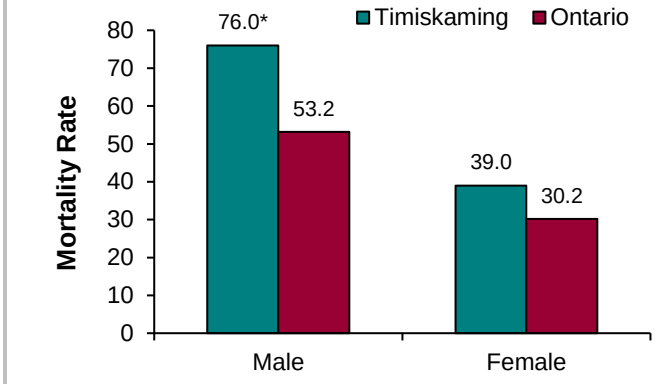
The leading causes of injury-related mortality in Timiskaming and Ontario are illustrated in *Figure 8.* The leading cause of injury-related mortality in Timiskaming is falls with an average of six deaths per year, followed by transport accidents with an average of five deaths per year. Timiskaming's rate of injury-related mortality due to assault and suffocation has too few deaths over the seven-year span to calculate a rate.[26] Timiskaming's rates are statistically higher than Ontario for both transportation collisions and accidental poisonings.[26]

Injury-related mortality by sex

In Timiskaming, males have almost two times the rate of death by an injury compared to females. Specifically, males have an overall death rate of 76.0 per 100,000 population, which is statistically higher than the female rate of 39.0 per 100,000 population.[26]

In comparison to Ontario, Timiskaming male residents have a statistically higher injury-related mortality rate. In contrast, Timiskaming female residents are not statistically different from females in Ontario (*Figure 9*).[26]

Figure 9: Injury-related mortality rate (per 100,000), by sex, Timiskaming, Ontario, 2009–2015[26]



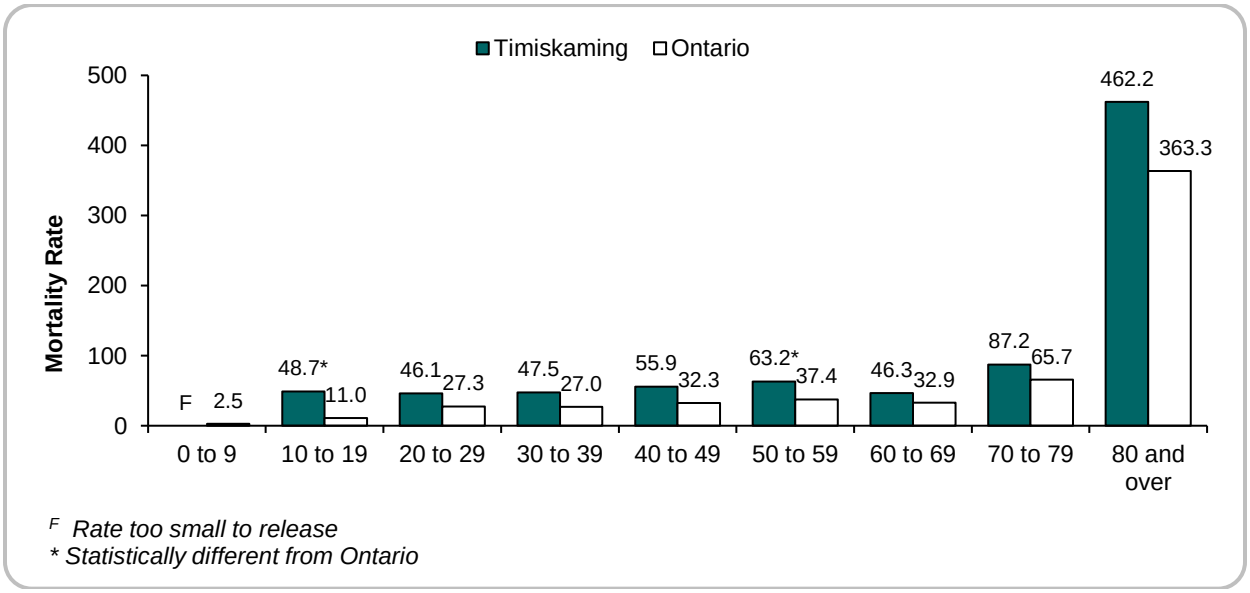
** Statistically different from Ontario*

Injury-related mortality by age group

In Timiskaming, the 80 years and over age group has the highest rate of death due to injury with a rate of 462.2 per 100,000 population. This age group has more than five times the injury rate than each of the other age groups (*Figure 10*).[26]

Timiskaming's 10 to 19 year and 50 to 59 year age group has statistically higher rates than Ontario's.[26] Timiskaming's 0 to 9 year age group has too few deaths to calculate a rate.

Figure 10: Injury-related mortality rate (per 100,000), by age group, Timiskaming, Ontario, 2009–2015[26]



F Rate too small to release
** Statistically different from Ontario*

Injury-related emergency department visits

Data in this section offer a rough estimate of general injury rates by providing the rate of ED visits for each injury category, not including injured individuals who did not seek treatment. The data may include the same person several times if they returned to the ED or visited another hospital for the same injury. Unlike the previous ED visit section, which used the code for the first condition diagnosed for each visit, in this section an individual can have more than one diagnosis code for each ED visit. For instance, a single ED visit can be due to both a fall and a cut/pierce injury and is recorded as such.

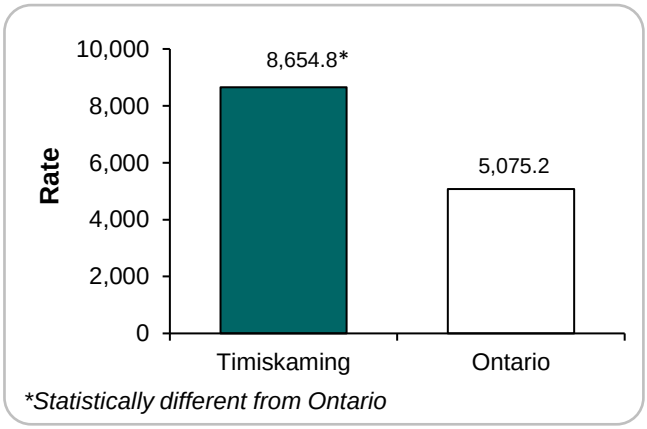
As with injury-related mortality, it is necessary to exercise caution when interpreting and comparing Timiskaming's to Ontario's rates, as differences in health service delivery can influence the injury-related ED rates as well.

The following injuries were not included in this analysis: complications from medical procedures and medical care, adverse drug events, injuries that were from an event of undetermined intent, injuries due to legal intervention (for instance, police using a firearm to maintain order) or operations of war (military action).

Injury-related emergency department visits overall

Overall, there are 5,641 injury-related ED visits in Timiskaming per year.[27] This equates to a rate of 8,654.8 per 100,000 population, which is statistically higher than Ontario's rate of 5,075.2 per 100,000 population *(**Error! Reference source not found.**11*). As mentioned above, consider comparing these rates carefully because of the differences in services available in Timiskaming compared to areas that have access to other medical services.

Figure 11: Injury-related ED visit rate (per 100,000), Timiskaming, Ontario, 2016–2017[27]

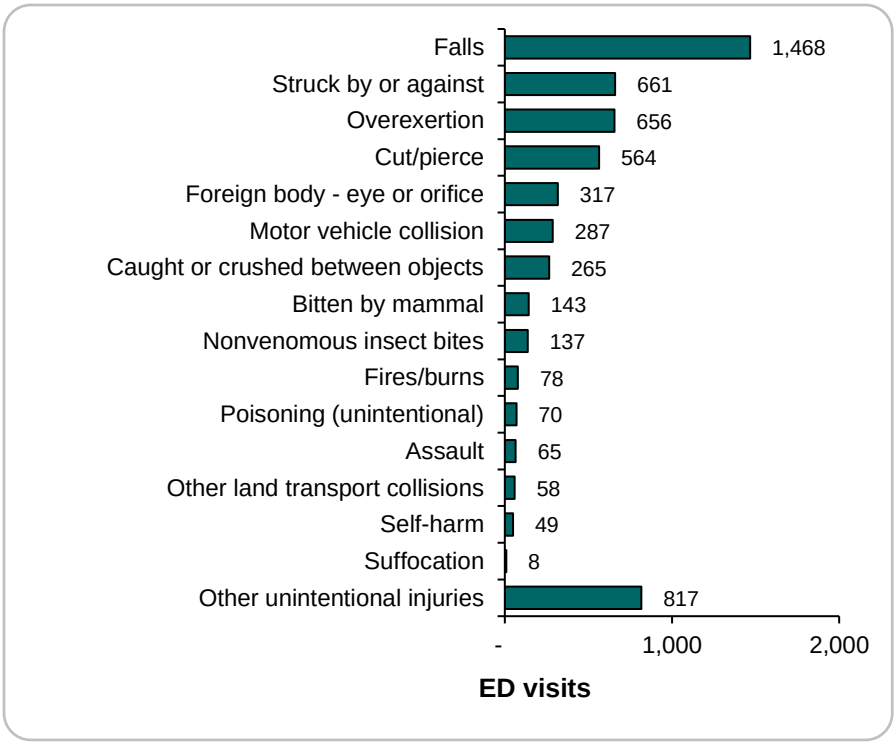


**Statistically different from Ontario*

Injury-related emergency department visits by lead cause

Figure 12 outlines the leading causes of injury-related ED visits. On average, there are 1,468 ED visits per year for falls, 661 ED visits due to being struck by or against an object (excluding assaults), followed by overexertion (includes injuries from strain, like lifting heavy objects, repetitive movements and lack of food and water) with 656 ED visits per year.[27]

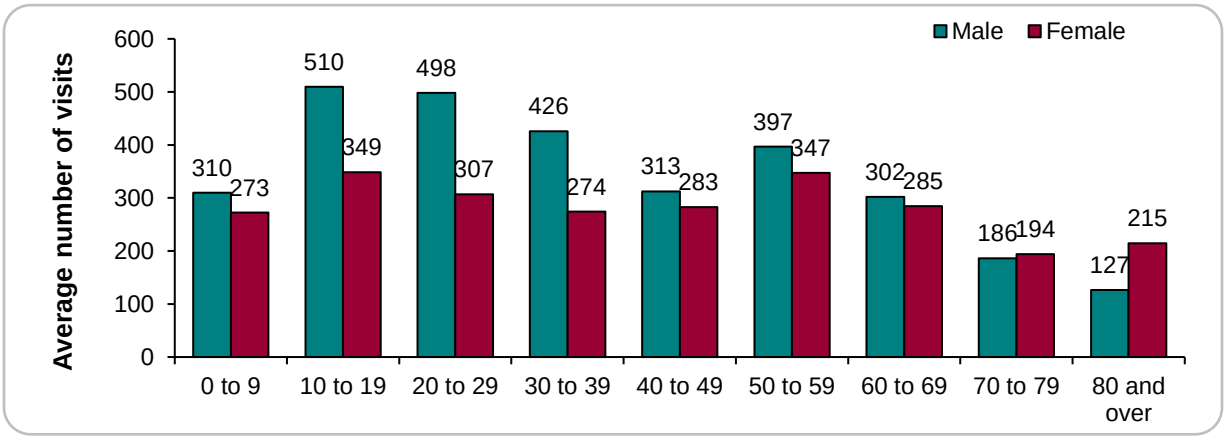
Figure 12: Average injury-related ED visits (per year), by lead cause, Timiskaming, 2016–2017[27]



Injury-related emergency department visits by sex and age group

In Timiskaming, approximately 3,068 males and 2,525 females visit the emergency department each year for injury-related reasons. The average number of injury-related ED visits by age group and sex is illustrated in *Figure 13*. The age groups with the highest ED rates are males aged 10 to 19 (510 visits/yr), followed by males aged 20 to 29 (498 visits/yr), and males aged 30 to 39 (426 visits/yr).[27]

Figure 13: Average injury-related ED visits (per year), by sex and age group, Timiskaming, 2016–2017[27]



Climate Change and Health Status

Climate change is considered "the greatest threat to health in the 21st century."[28,29] It is described as a long-term shift in weather conditions that is identifiable by changes in temperature, extreme weather event occurrence, patterns of disease vectors, precipitation levels, wind level, and other indicators.

Climate change has cumulative and ongoing effects in both direct and indirect ways. For example, a direct consequence of climate change is the increased risk of heat-related illnesses. Some indirect consequences include increasing food insecurity, air pollution, and reduced access to clean water (*Figure 14*).[28-30] These effects can actually lead to significant changes in the health status of a population. The increased risk for heat-related illnesses increases the incidence of respiratory and cardiovascular disease, premature deaths, and mental health concerns.[30, 31]

As with other factors touched on throughout this report, vulnerable populations, such as the poor, elderly, young, chronically ill, people who are socially disadvantaged, and people living in vulnerable geographic areas are at a particular risk for the negative health effects of climate change.[32]

Provincially, the average temperature increased by 1.5°C between 1948 and 2008 and is expected to rise by as much as 3 to 8°C over the next century.[32] The greatest increases in temperature are projected to happen in the far north.[32]

Climate change is projected to affect the health of Timiskaming residents by 2050 in the following ways:[29]

- A 16% increase in skin cancer from exposure to UV radiation from the sun
- An increased risk of exposure to West Nile Virus as mosquitoes that spread West Nile Virus will be able to survive in Timiskaming's climate, and
- More than five times as many heat waves.

Data Source Details

Mortality data
The injury mortality data originates from the Ontario Office of the Registrar General and is distributed by intelliHEALTH. All deaths in Ontario are registered and coded according to the cause of death and the circumstances surrounding the death. In this report deaths are classified by leading cause of death based on Becker et. al's (2006) recommendations, with modifications by the Association of Public Health Epidemiologists in Ontario. See each mortality section for more details. This data source does not contain demographic information like income or education therefore; data cannot be analyzed by socio-demographic factors. Data for 2016 will be made available by the Fall 2020.

Emergency department visit data
The emergency department visit data are from the Ambulatory Visits database originally provided by the Canadian Institute for Health Information (CIHI). The emergency department visits are counted based on the main problem diagnosed by a physician during an emergency department visit and classified into health categories using the International Classification of Diseases codes, tenth revision (ICD-10), and the International Shortlist for Hospital Morbidity Tabulation (ISHMT). Data may include the same person several times if they returned to the emergency department or visited another emergency department for the same reason. Data does not include those who had health issues but did not seek treatment in the emergency department. Furthermore, consider comparing Timiskaming's and Ontario's rates carefully as differences in health service delivery most likely influence the rates. For instance, Timiskaming residents may be more likely to visit the emergency department whereas individuals from urban city centers may have access to other medical services such as walk-in clinics. This data source does not contain demographic information like income or education therefore; data cannot be analyzed by socio-demographic factors. Data for 2019 will be made available by Fall 2020.

Canadian Community Health Survey
The Canadian Community Health Survey is a cross sectional survey by Statistics Canada which collects health information about the Canadian population. It surveys a large number of respondents and is designed to provide reliable estimates at the health region level. These data are collected from persons aged 12 and over living in private dwellings. These results are based on self-reported data collected by phone or in-person interviews and may contain self-reported bias (based on social desirability), recall bias, under-coverage bias, etc. The survey excludes individuals living on Indian Reserves and on Crown lands, institutional residents, full-time members of the Canadian Forces, and residents of certain remote regions. For more information, visit www.statcan.gc.ca. CCHS 2017/2018 data currently available and will be used to update this report by the end of 2020.

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