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Adult Mortality in the Health Unit Region

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Contents

Background

Between 1992 and 2015, the number of deaths per population (i.e., mortality rate) in Ontario have declined significantly. However, analyses by the Population Health Analytics Lab show mortality rates varying by sex, geography, and levels of socioeconomic status. Mortality and premature mortality rates were consistently highest in northeastern Ontario, and gaps in mortality rates among those who live in the least materially deprived compared to the most materially deprived areas have stayed the same or widened in northeastern Ontario. This report summarizes how mortality rates in the North Bay Parry Sound District Health Unit (Health Unit) region compare to the rates in Ontario. Understanding the health of our community helps us to better work towards achieving our vision of a healthy life for everyone.

Key Highlights

- Between 2008 and 2015, the number of adult deaths per population (i.e., adult mortality rate) and the number of adult deaths before age 75 per population (i.e., adult premature mortality rate) in the Health Unit region were among the highest in the province.
- Between 2006 and 2012, the adult mortality rates due to injury or diseases of the circulatory system in the Health Unit region were among the highest in the province, among both males and females.
- Mortality rates were consistently higher in northeastern Ontario, and this region experienced the smallest improvements in mortality rates between 1992 and 2015 of all regions in Ontario (Buajitti et al., 2018).

Mortality (Death) Rates

Population Trends

Between 2008 and 2015, the number of adult deaths per population (i.e., adult mortality rate), regardless of cause of death and adjusted for age structure, in the Health Unit region for both males and females was higher than the Ontario rate. The mortality rate among males in the Health Unit region was the 8th highest of all 36 health unit regions in Ontario, with 71.5 deaths per 1,000 adult male population. The death rate among females in the Health Unit region was the 9th highest in the province, with 50.8 deaths per 1,000 adult female population. Mortality rates among males and females living in the Health Unit region have not improved considerably since 1992 (Figure 1; Table 1).

Between 1992 and 2015, the mortality rate among females in Ontario improved at a faster rate compared to females in the Health Unit region. In 2015, the mortality rate for Ontario females decreased by 26.4% and in the Health Unit region, the rate decreased by 17.2% across the same time period.

Selected Causes of Mortality

Injury

Between 2006 and 2012, the mortality rate due to injuries was the 6th highest among males and the 4th highest among females in the Health Unit region, of all 36 health unit regions in Ontario (Table 2).

- Between 2008 and 2012, accidental poisoning and transport accidents resulted in significantly higher mortality rates among adults aged 20 to 44 years in the Health Unit region compared to the same population in Ontario.
- Between 2008 and 2012, falls resulted in significantly higher mortality rates among seniors aged 65 years or older in the Health Unit region compared to the same population in Ontario.

Circulatory system

Between 2006 and 2012, the mortality rate due to diseases of the circulatory system were 8th highest among males, and 8th highest among females, of all 36 health unit regions in Ontario.

Between 2008 and 2012, ischaemic heart disease resulted in significantly higher mortality rates among adults aged 45 years or older in the Health Unit region compared to the same population in Ontario.

Cancer

Between 2006 and 2012, the mortality rate due to cancers was the 10th highest among males and 9th highest among females, of all 36 health unit regions in Ontario.

- Between 2008 and 2012, lung or bronchial cancers resulted in significantly higher mortality rates among populations aged 20 years or older in the Health Unit region compared to Ontario.
- Between 2008 and 2012, colorectal and pancreatic cancers resulted in significantly higher mortality rates among seniors aged 65 years or older in the Health Unit region compared to Ontario.

Respiratory System

Between 2006 and 2012, the mortality rate due to diseases of the respiratory system were 10th highest among males, and 12th highest among females, of all 36 health unit regions in Ontario.

- Between 2008 and 2012, chronic lower respiratory diseases resulted in significantly higher mortality rates among adults aged 45 years or older in the Health Unit region compared to Ontario.

Figure 1. Adult Mortality Rate per 1,000 Population, By Sex & Health Region, 1992-1999, 2000-2007, & 2008-2015

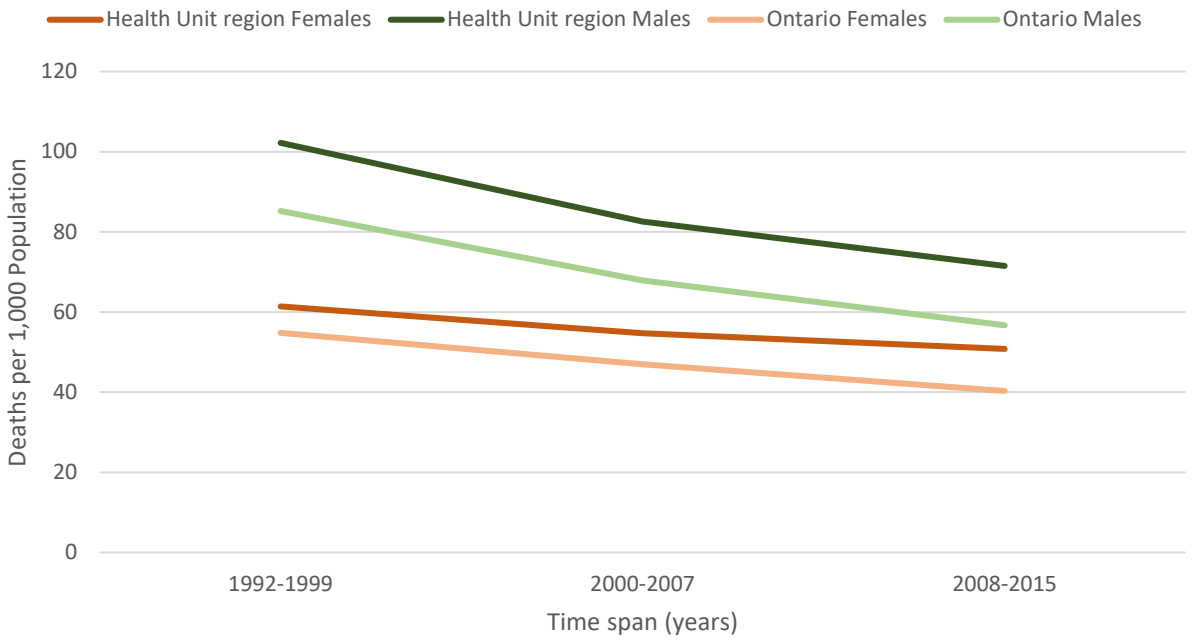

Table 2. Adult Mortality Rate per 1,000 Population, By Sex & Health Region, 1992-1999, 2000-2007, & 2008-2015

Time Period (Years)	Health Region – Males	Ontario – Males	Health Region – Females	Ontario – Females
1992-1999	102.2	85.2	61.4	54.8
2000-2007	82.6	67.9	54.7	47.0
2008-2015	71.5	56.7	50.8	40.3

Table 2. Adult Mortality Rate by Cause per 1,000 Population, By Sex & Health Region, 2006-2012

Cause	Health Region – Males	Ontario – Males	Health Region – Females	Ontario – Females
Cancer	20.5	17.3	15.0	12.8
Diseases of the circulatory system	20.2	15.6	15.6	10.1
External causes of injury and poisoning	5.8	4.1	3.0	2.0
Diseases of the respiratory system	6.1	4.6	3.7	3.0

Premature Mortality (Death)

The premature mortality rate includes the number of adult deaths before the age of 75 years per population. Between 2008 and 2015, the premature mortality rate, adjusted for age structure and regardless of cause, in the Health Unit region for both males and females was higher than the Ontario rate. The premature mortality rate among males in the Health Unit region was the 7th highest of all 36 health unit regions in Ontario. The premature mortality rate among females in the Health Unit region was the 5th highest of all 36 health unit regions in Ontario (Figure 2 & Table 3).

Premature mortality rates for males and females in Ontario are generally declining. Since 1992, the premature mortality rate for females in the Health Unit region has declined slightly, while the premature mortality rate for males in the Health Unit region has declined at a faster rate compared to females.

Figure 2. Adult Premature Mortality Rate per 1,000 Population, By Sex & Health Region, 1992-1999, 2000-2007, & 2008-2015

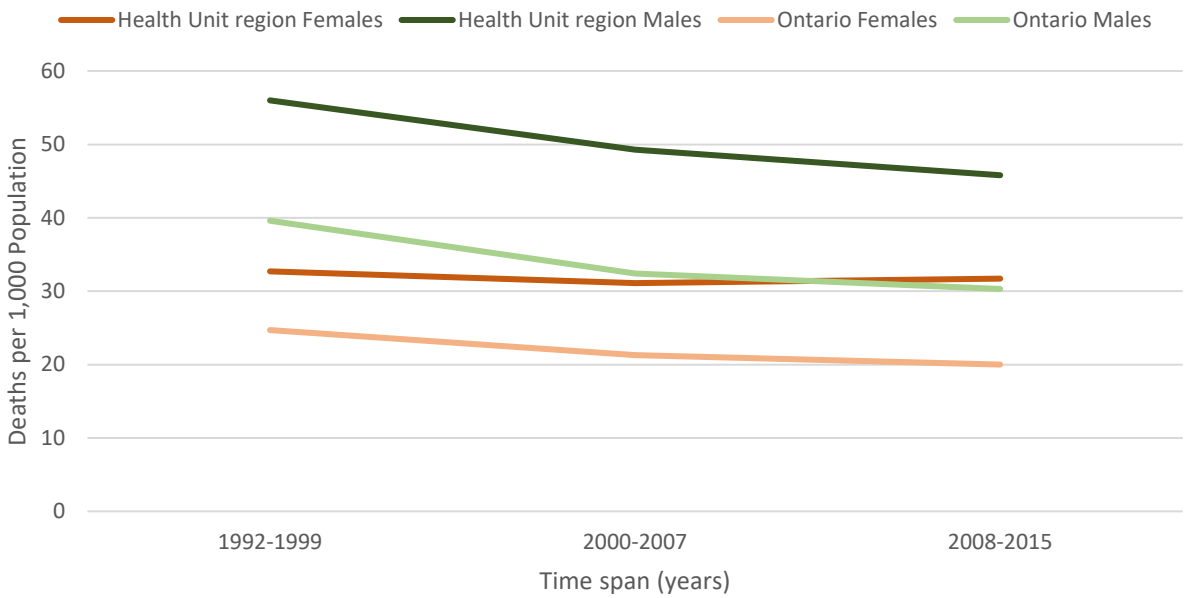

Table 3. Adult Premature Mortality Rate per 1,000 Population, By Sex & Health Region, 1992-1999, 2000-2007, & 2008-2015

Time Period (Years)	Health Region – Males	Ontario – Males	Health Region – Females	Ontario – Females
1992-1999	56.0	39.6	32.7	24.7
2000-2007	49.3	32.4	31.1	21.3
2008-2015	45.8	30.3	31.7	20.0

Definitions and data sources

Definition

Mortality:
Age-standardized rate of all adult (i.e., aged 18 years or older) deaths per 100,000 population.

Premature Mortality:
Age-standardized rate of all adult (i.e., aged 18 years or older) deaths before age 75 per 100,000 population.

Data sources:

Mortality & premature mortality:
Buajitti E, Watson T, Kornas K, Bornbaum C, Henry D, Rosella LC. Ontario atlas of adult mortality, 1992-2015, Version 2.0: Trends in Public Health Units. Toronto, ON: Population Health Analytics Lab; 2018.

Mortality rates due to specific causes for deaths between 2008 and 2012:
Ontario Mortality Data [2008-2012], Ontario Ministry of Health and Long-Term care, IntelliHEALTH Ontario, Data Extracted [2017/10/4]. Data analyzed by decedent's place of residence.

Analysis:

Cause- and age-specific mortality rates were calculated by dividing the total number of deaths among the estimated population of the same age group using STATA IC (version 14.2).

All other analyses were performed as per Buajitti et al. (2018).

Confidence intervals: Confidence intervals (CI) and variances were estimated using the poisson distribution in STATA IC/14.2 (2014) for cause- and age-specific mortality rates.

Interpretation of a significant difference:

A statistic interpreted as 'significantly different' from another is an estimate found to be statistically meaningful; the difference is unlikely due to chance. Error ranges noted in tables within this report illustrate 95% confidence intervals. If there is no overlap in range between confidence intervals, the difference can be described as statistically significant.