

Asthma in the Region of Peel

HIGHLIGHTS

- In 2000/2001, 8.3% of Peel residents aged 12 years and older reported that a physician had diagnosed them with asthma.
- Hospitalization rates for asthma are declining. In 2000 in Peel, there were 1,200 asthma-related hospitalizations.
- Since 1997, hospitalization rates for asthma in Peel region have been slightly higher than provincial rates.
- In the ten years from 1987 to 1996, there were 85 deaths in Peel due to asthma. Mortality rates for asthma are highest in the population aged 65 years and older.



ASTHMA PREVALENCE

Preliminary results from the recently released *2000/01 Canadian Community Health Survey* indicate that among those aged 12 and older, nearly 72,000 (or 8.3%) of Peel residents had been told they had asthma by a health care professional. Proportions for Ontario and Canada were 8.5% and 8.4%, respectively. Similarly, data from the *2001 Peel Community Health Survey* indicated 7% of Peel residents aged 18 years and older had been diagnosed with asthma by a health professional.

Detailed information from the *1996/97 Ontario Health Survey* showed over half (55% for Peel and 58% for Ontario) of respondents with self-reported asthma had asthma symptoms or asthma attacks in the previous 12 months. Over three-quarters of respondents reported using asthma medications such as inhalers, nebulizers, pills, liquids or injections in the past year (76% for Peel and 78% for Ontario), and 74% of those with asthma in Peel reported asthma medication use in the past month (70% in Ontario). Overall, 5% of the Peel population currently use asthma medication to control their illness, a proportion similar to that found in Ontario and Canada.⁷

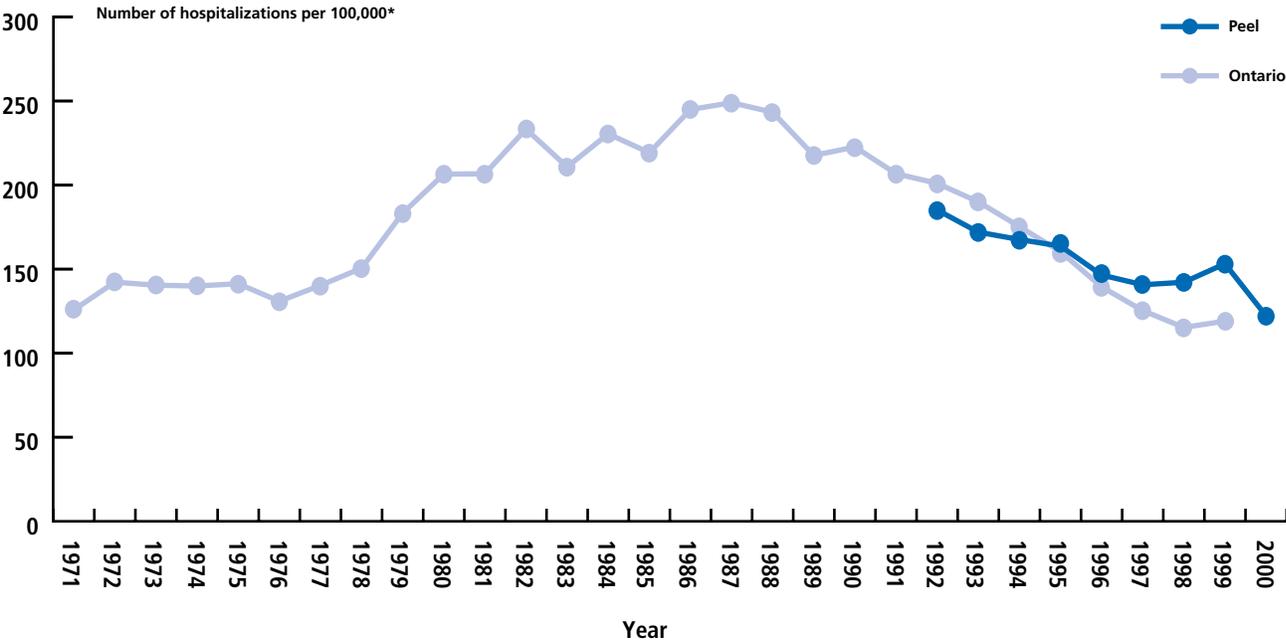
HOSPITALIZATION DUE TO ASTHMA

Hospital statistics are collected for the number of times people enter and subsequently leave hospital with a diagnosis of asthma. Although these statistics do not tell us whether one person entered hospital numerous times, or numerous people entered once, they nevertheless provide an indicator of the burden of illness due to asthma.

In Ontario, hospitalization rates for asthma increased from the early 1970s to the late 1980s (see Figure 2). Since that time, rates have declined back to levels seen in the early 1970s. This decline may reflect improved control of the disease by asthmatics and their caregivers, reduced availability of hospital beds or increased use of outpatient management approaches.

From 1995 to 2000, rates of hospitalization for asthma were slightly higher in Peel than in Ontario. Rates of hospitalization for asthma showed a more pronounced decline in Ontario than in Peel over this time period.

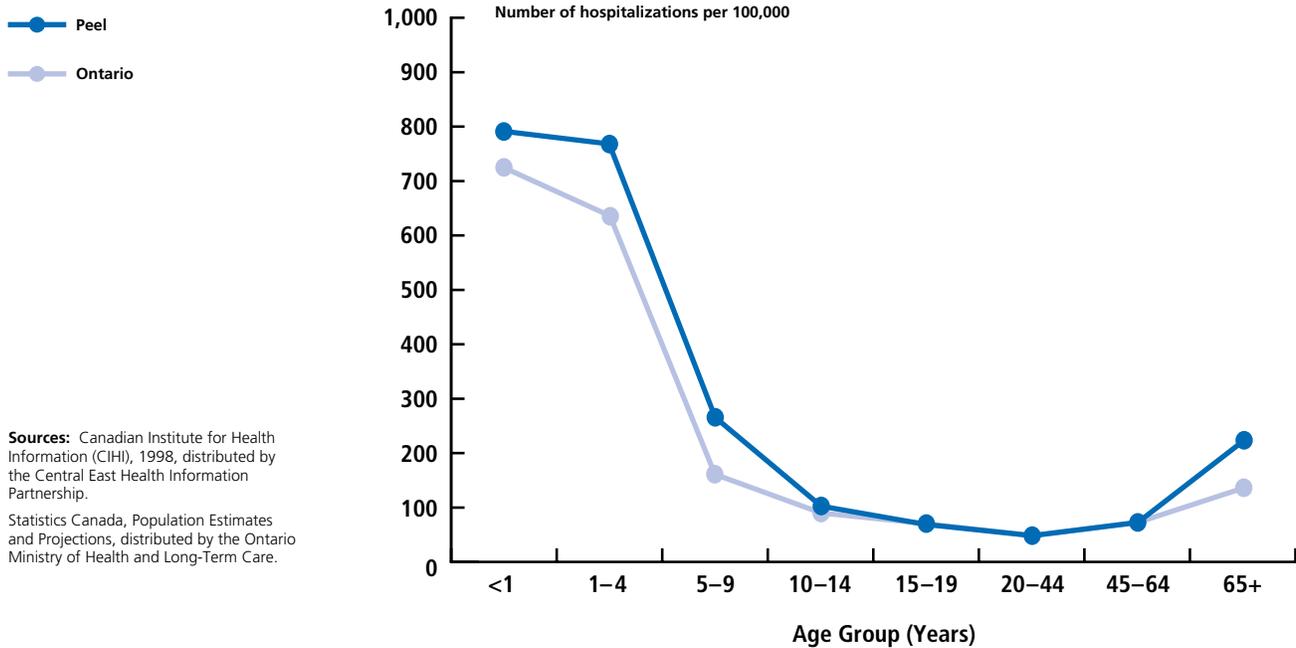
Figure 2: Hospitalization for Asthma, Ontario and Region of Peel, 1971–2000



Sources: Ontario data from Centre for Chronic Disease Prevention and Control, Health Canada, using Canadian Institute for Health Information data for the years 1971–1999. Peel data from Northern Health Information Partnership (1998), Hospital Morbidity Rates Program Version 2.2., Provincial Health Planning Database, for the years 1992–2000.
 * Standardized to 1991 Canadian population

In 2000, there were 1,200 asthma-related hospitalizations in Peel. In 1998, asthma was the leading cause of hospitalization among children aged one to nine years and the second-leading cause among children 10–19 years of age in both Peel and Ontario.⁸ Age-specific hospitalization rates for 1998 were highest in the younger age groups (ages one to nine years) and in those aged 65 years and older (see Figure 3). These patterns were similar in both Peel and Ontario.

Figure 3: Hospitalization for Asthma by Age Group, Region of Peel and Ontario, 1998

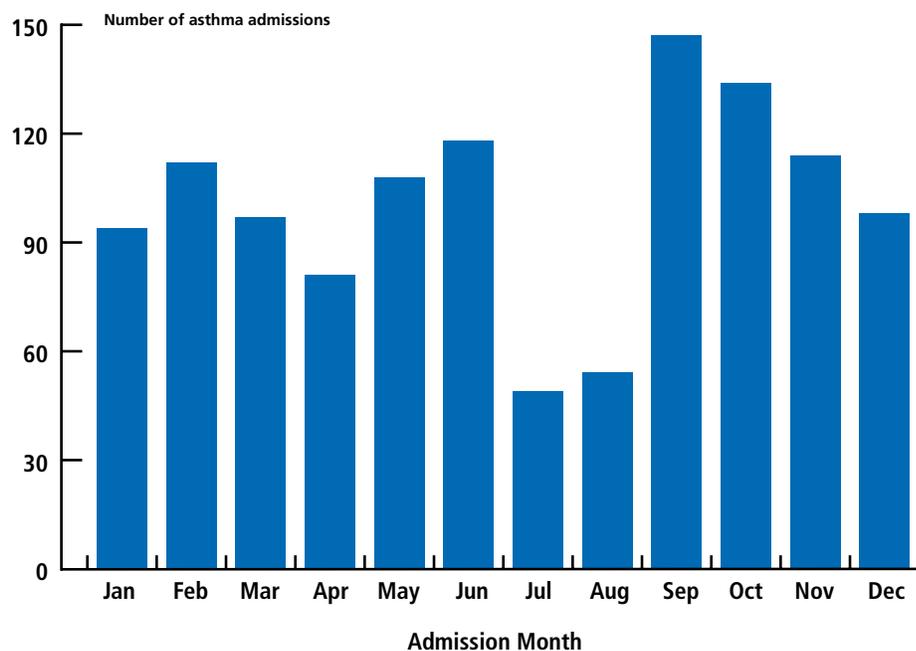


Sources: Canadian Institute for Health Information (CIHI), 1998, distributed by the Central East Health Information Partnership.
 Statistics Canada, Population Estimates and Projections, distributed by the Ontario Ministry of Health and Long-Term Care.

Although not shown, hospitalization rates were similar for males and females in both Peel and Ontario for the period between 1995 and 1998.

An analysis of hospital separation data by date of admission was conducted to determine whether any seasonal variations were apparent. Peel data for 2000 are shown in Figure 4 (see following page). These data show a trough during the summer months of July and August, followed by a large peak in the autumn months of September and October. Although not depicted here, an analysis of the years 1997 to 1999 showed a similar trend.

Figure 4: Hospitalization for Asthma by Month of Admission, Region of Peel, 2000



Source: Hospital Separations, Canadian Institute for Health Information (CIHI), 2000, obtained through the Provincial Health Planning Database, Ontario Ministry of Health and Long-Term Care

Similar findings have been reported in a previous Canadian study³, as well as in a recent study of the seasonal variation of asthma hospitalization in Ontario between 1988 and 2000.⁹ The authors of the most recent survey report that a summer trough and fall peak have been documented in countries around the world that have different climates, levels of air pollution and types of air-borne allergens than those found in Canada.

One possible explanation for this widely observed seasonal pattern is the role of viral respiratory infections. The authors of this study propose that the synergistic effect of children returning to school, with increased exposure to respiratory viruses in indoor settings, as well as exposure to fall allergens, could explain the regular peak in asthma hospitalizations in September and October.⁹ However, further research is needed to confirm this hypothesis.

The authors also suggested that the increased rates among pre-school children might be the result of exposure to respiratory viruses transmitted from their school-age siblings⁹ or from their return to day care settings following summer absences.

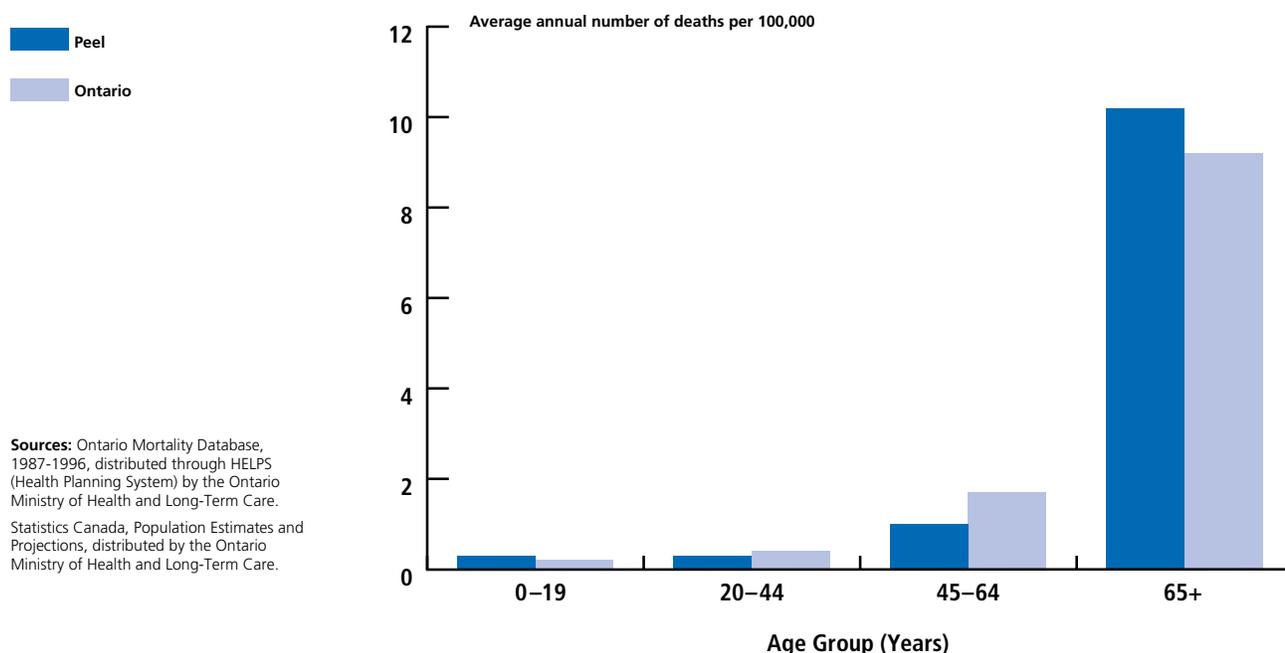
MORTALITY DUE TO ASTHMA

Between 1987 and 1996, there were 85 deaths due to asthma in Peel, for an average annual age-adjusted rate of 1.7 deaths per 100,000 population. In Ontario, there were 1,712 asthma deaths over this same period, yielding a rate of 1.6 deaths per 100,000 population per year.

In Peel and Ontario, age-specific asthma mortality rates were highest for those aged 65 and older (see Figure 5).

Although not shown, rates of death due to asthma were slightly higher among females than males in both Peel and Ontario. From 1987 to 1996, the average annual age-adjusted asthma death rate for Peel females was 1.8 per 100,000, compared to 1.6 per 100,000 for males. This finding was similar to rates for Ontario at 1.7 deaths per 100,000 for females and 1.5 deaths per 100,000 for males.

Figure 5: Asthma Related Deaths by Age Group, Region of Peel and Ontario, 1987–1996 Combined



Sources: Ontario Mortality Database, 1987-1996, distributed through HELPS (Health Planning System) by the Ontario Ministry of Health and Long-Term Care. Statistics Canada, Population Estimates and Projections, distributed by the Ontario Ministry of Health and Long-Term Care.