

Executive Summary

Communicable diseases are illnesses caused by living organisms or the toxins they produce. They are spread directly from an infected person, animal or environmental source. Sometimes spread occurs indirectly by contaminated animals and objects.

The *Communicable Disease Report 1994-2003* on communicable diseases in the Region of Peel is based mainly on the information provided from the mandated reporting of specific “Reportable Diseases” to the local Medical Officer of Health by health care professionals, hospitals, laboratories and schools for the ten years ending in 2003.

This report focuses on influenza, but also contains basic information on a selected list of communicable diseases that are organized by mode of transmission (sexually transmitted and bloodborne diseases; vaccine preventable diseases; diseases spread by food and water; diseases spread by close personal contact and diseases spread by insects). In addition, there is an appendix section providing the number of cases and incidence rates of all communicable diseases reported in Peel and Ontario. Diseases not reported in Peel during the time period covered in this report were not included in the appendix.

The report is intended to be a resource for individuals and organizations for whom communicable diseases are a concern. Further information on communicable diseases in Peel may be obtained by contacting the Region of Peel Health Department.

The key findings of the report are summarized below.

Influenza

Influenza is a highly contagious acute viral disease of the respiratory tract, and continues to be a major cause of preventable illness and death in the Region of Peel and worldwide.

Influenza occurs between October to April each year with most activity in a one or two month period within this time, that varies from year to year. Influenza activity in Peel peaked in the last two weeks of 2003, similar to the rest of Ontario. In Peel and Ontario, the incidence of influenza in the 2003/2004 season was the highest it has been in the last nine influenza seasons. This is most likely due to increased use of newly available and convenient rapid tests for influenza

and increased monitoring of respiratory infections in response to Severe Acute Respiratory Syndrome (SARS).

The predominant strain of influenza that circulated in Ontario and Canada during the 2003/2004 influenza season was A/Fujian/411/02-like.

In Peel, the reported incidence of influenza was highest in those aged less than five years and those 60 years and older. This may reflect the fact that these age groups are more likely to have a serious illness from influenza and be tested.

During the 2003/2004 influenza season, there were 21 outbreaks of influenza A in institutions reported in the Region of Peel. The number of outbreaks for 2003/2004 was the highest it has been since reporting began during the 1997/1998 influenza season; however, the number of institutions in Peel has also grown substantially and reporting of influenza has increased as a function of testing and monitoring, as was previously discussed.

Over 370,000 doses of influenza vaccine were distributed by Peel Health in 2003/2004 with only four adverse events reported (mostly of a temporary nature). Immunization rates of residents and staff in long-term care facilities are high, over 90% and 75% respectively in each of the last five influenza seasons. During the 2003/2004 influenza season only one Peel hospital out of three reported that more staff were immunized than not. This is an improvement over the previous two seasons when none of the three hospitals reached this target.

Monitoring of influenza activity in Peel helps to limit spread within the Region and is part of a worldwide system of influenza surveillance that functions as an early warning system for the next pandemic.

Sexually Transmitted Diseases (STD) and Bloodborne Diseases

In Peel, the incidence of Acquired Immunodeficiency Syndrome (AIDS) has remained low and stable since 1997 (1.4 cases per 100,000 or less). Any variability from year to year may be due to increases or decreases in the small number of cases.

The incidence of chlamydia, the most common STD (and most commonly reported communicable disease) in Peel, increased approximately 71% from 1996 to 2003 (100.6 to 171.6 cases per 100,000 population). The incidence of gonorrhoea in Peel has remained stable from 2000 to 2003 (approximately 30-34 cases per 100,000). The incidence of chlamydia and gonorrhoea were highest in those 15 to 24 years of age.

The incidence of syphilis increased in 2003 (0.8 per 100,000), an incidence rate not seen since 1995 (0.9 per 100,000). A similar trend has been observed in the city of Toronto.¹

In Peel, the incidence of hepatitis B has been low since 1997 (approximately one case per 100,000 or less). The incidence of Hepatitis C has steadily decreased since 1995. The incidence of hepatitis B was highest in those aged 25-29 and highest for hepatitis C in those aged 30 and older. The incidence rates for these two diseases were higher among males compared to females in these age groups.

Vaccine Preventable Diseases

The incidence of most vaccine preventable diseases is low and has decreased over the past ten years. This is most likely due to high rates of immunization. Only two cases of measles have occurred since a second dose of measles vaccine was made mandatory in 1996. The incidence of mumps and rubella has also decreased since 1996, probably because vaccines for these diseases are routinely given a second time along with the measles vaccine as “MMR” (Measles/Mumps/Rubella conjugate vaccine).

Diseases Spread by Food and Water

The incidence of most diseases spread by food and water was generally higher for Peel than Ontario and was highest in those under five years of age. There has been a decreasing trend in campylobacteriosis, giardiasis, hepatitis A and yersiniosis in Peel and Ontario over the last 10 years (1994 to 2003). Contamination of food on two separate occasions resulted in provincial wide outbreaks of salmonellosis in 1998 and shigellosis in 2002 that noticeably affected rates of these diseases in Peel residents. These diseases were examined in more detail in the *State of the Region's Health 2003 – Focus on Foodborne Disease* report, published by the Region of Peel Health Department.

Diseases Spread by Close Personal Contact

On average, less than ten cases of invasive meningococcal disease are reported in Peel each year. The incidence is highest in those less than one year of age followed by those 20 to 24 years and then those one to four years. The incidence of reported invasive group A streptococcal (GAS) infection stabilized in 2002 and 2003, after steadily increasing from 1994 to 2001. Part of the increase

¹ Dr. Kim Baker. “Memorandum to all Medical Officers of Health and STD Program Managers Re: Increasing Syphilis cases in Ontario. Public Health Branch, Ontario Ministry of Health and Long-Term Care. April 8, 2004.

from 1994 to 2001 is explained by improved reporting starting in 1996. The incidence of tuberculosis was generally stable in Peel from 1994 to 2003; tuberculosis was found to be more prevalent in those aged 60 years or older.

Diseases Spread by Insects

In Peel, approximately one to six cases per 100,000 population of malaria have been reported each year, with the exception of 1996 and 1997. In these years, there was a dramatic increase in incidence (16.4 and 15.6 cases per 100,000 population, respectively) possibly due to travel to and immigration from the Punjab, India where an outbreak of malaria was occurring. The incidence of malaria has remained stable and low since.

Human cases of locally-acquired West Nile Virus occurred for the first time in 2002, with a total of 37 confirmed, 20 probable and 55 suspect cases in Peel. Case definitions and laboratory testing methods differed in 2002 and 2003, making direct comparisons between the years more difficult. Nevertheless, as of December 2, 2003, there were only 10 residents of Peel who had laboratory evidence of WNV infection stemming from the 2003 mosquito season. Nine of these had confirmed diagnoses of West Nile Fever and one had a diagnosis of West Nile Neurological Manifestations.