

APPROVED AT REGIONAL COUNCIL
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HE-B. INTERDEPARTMENTAL

HE-B1. **Health in Peel: Communicable Disease, 2006-2010**

Presentation by Dr. Eileen de Villa, Associate Medical Officer of Health

Deferred to a future meeting of Regional Council

2012-1022

For Information

DATE: July 19, 2012

REPORT TITLE: **HEALTH IN PEEL: COMMUNICABLE DISEASE, 2006-2010**FROM: Janette Smith, Commissioner of Health Services
David L. Mowat, MBChB, MPH, FRCPC, Medical Officer of Health**OBJECTIVE**

To provide an overview of the report "Health in Peel: Communicable Disease, 2006-2010".

REPORT HIGHLIGHTS

- In 2010, chlamydia, gonorrhoea, campylobacteriosis, salmonellosis, and hepatitis C were the most commonly reported communicable diseases in Peel.
- Rates of tuberculosis, typhoid and paratyphoid fever and malaria in Peel are higher than the provincial averages, largely due to Peel's diverse community and frequent travel to endemic areas. In 2010, there were 247 cases of these four diseases combined.
- The death and disability caused in the past by childhood diseases such as measles, mumps, and polio have been largely eliminated through ongoing efforts to maintain high vaccine coverage rates, including enforcement of immunization requirements.
- Peel Public Health continues to work to reduce the burden of communicable diseases through the promotion of effective measures such as vaccination, hand hygiene and safer sex.

DISCUSSION**1. Background**

Over the last 50 years, the incidence of infectious diseases and associated deaths has fallen a great deal. The success of publicly-funded vaccination programs has greatly decreased the burden of illness associated with childhood diseases such as measles, *Haemophilus influenzae* type b (Hib), and pertussis. In the past 10 years, many new infectious diseases have emerged and others thought to be almost eliminated persist.

In 2010, Peel Public Health received nearly 28,000 reports of communicable diseases. As these are based primarily on laboratory confirmation, we know that this underestimates infectious disease activity in the community because not all diseases may be tested (e.g., influenza). "Health in Peel: Communicable Disease, 2006-2010" is intended to share important infectious disease trends in Peel with the public and health care professionals to reiterate the importance of public health measures to control these diseases. The report also highlights Peel Public Health's efforts to reduce the occurrence of these infections.

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2. Findings

Highlights of "Health in Peel: Communicable Disease, 2006-2010" include:

Vaccine preventable diseases and the success of immunization programs:

- Rates of vaccine preventable diseases in Peel were generally at or below Ontario rates from 2006 to 2010. In 1991, measles was among the top five reportable diseases in Peel with 283 cases reported. Since the introduction of a second dose of measles vaccine in Ontario's immunization schedule in 1996, there were less than five measles cases reported annually between 1997 and 2010.
- In part, this is attributed to the success of Peel Public Health's program to ensure student immunization records are up to date. From 2007 to 2009, documented vaccine coverage against measles, mumps and rubella increased from 69 per cent to 94 per cent. Coverage rates remain high with ongoing enforcement of immunization requirements in school-aged children.
- Influenza has the highest incidence of all vaccine preventable diseases in Peel region, and was found to be one of the ten most burdensome diseases in Ontario in the Ontario Burden of Infectious Disease Study published in 2010.

Increasing rates of sexually transmitted infections:

- Rates of sexually transmitted infections (STIs) have increased in Peel and Ontario. In 2010, there were 3783 cases of chlamydia, gonorrhoea, and infectious syphilis in Peel, representing 62 per cent of all reportable disease cases reported that year.
- The province is investigating reasons for the increase in STIs, however, not using a condom was the risk factor reported by the majority of Peel cases.
- The rate of HIV in Peel has remained stable since 2003. Heterosexual transmission and individuals coming from a country where HIV is endemic have become increasingly important.
- Public Health operates a needle exchange programme, offers free testing at clinics, connects infected clients with community and medical supports, and provides education and counseling in support of controlling the transmission of STIs.

Communicable diseases associated with foreign travel:

- From 2006 to 2010, at least 75 per cent of malaria, typhoid fever, and paratyphoid fever cases were associated with travel. In 2010, there were 120 cases of these three diseases combined. With Canada's largest international airport within its boundaries, Peel is a hub for both newcomers and visitors to Canada. Increased foreign travel puts Peel at higher risk of importation of infectious diseases compared to those regions with less international traffic.
- From 2006 to 2010, 42 per cent (296 cases) of all typhoid and paratyphoid fever cases in Ontario were Peel residents. The impact of Peel's population size, socio-demographic distribution, and cultural diversity also contribute to high numbers of infectious disease cases managed by Peel Public Health.
- These diseases are largely preventable through prophylactic measures (e.g., typhoid vaccine or anti-malarial medications) as well as continued vigilance towards food and water precautions. Peel Public Health is investigating ways to increase awareness of travel health risks.

Tuberculosis:

- While rates of active tuberculosis (TB) in Peel and Ontario have declined over the past two decades, Peel's rate was twice that of Ontario between 2006 and 2010. During this time frame, the number of TB cases ranged from 115 to 127 cases each year.

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- Peel Public Health provides free medication to residents who are diagnosed with TB. In December 2010, Peel Public Health, in partnership with William Osler Health Centre, opened the first TB clinic in Peel at Brampton Civic Hospital.

West Nile Virus and Lyme Disease:

- Vector control programs (e.g., larviciding) and increased public awareness may contribute to the low incidence of vector-borne diseases, such as West Nile virus, in Peel region.
- From 2006 to 2010, rates of Lyme disease in Peel remained at low levels and were comparable to provincial rates. Lyme disease is not endemic to Peel Region; all confirmed cases of Lyme disease reported acquiring the disease while travelling outside of Peel.

Outbreaks in the community and health-care settings:

- In Peel, 22 per cent of enteric (gastrointestinal) disease outbreaks over the past five years occurred in private homes, indicating the need for the public to take measures to prevent illness. This includes taking care to clean, separate, cook (to appropriate temperatures), and chill foods. These outbreaks followed seasonal patterns, with illness peaking in summer months when meals may be eaten outdoors or prepared using a barbeque where cooking temperatures are more difficult to control.
- During this time frame, there were also 170 respiratory outbreaks and 150 enteric outbreaks reported in long-term care homes, retirement homes and hospitals. Influenza was identified as the most common agent in respiratory outbreaks, and norovirus was the most common agent identified in enteric outbreaks in these institutions.
- Peel Public Health nurses and infection control practitioners work closely with hospitals and long-term care homes to implement effective measures to prevent infection and disease transmission, and to manage outbreaks of disease.

Future trends:

- In future years, we expect to see a continued increase in antimicrobial resistance, making many infections more difficult to treat. Antimicrobial stewardship and ensuring treatment compliance are crucial to controlling infections such as methicillin-resistant *Staphylococcus aureus* (MRSA), drug-resistant tuberculosis, *Clostridium difficile* infections, and drug-resistant gonorrhoea.

CONCLUSION

"Health in Peel: Communicable Disease, 2006-2010", provides information on important communicable disease trends for use by internal and external stakeholders in program planning and service delivery. The data presented in this report provides a picture of risk factors for communicable disease specific to Peel, which will help focus our efforts and resources to areas of emerging need.

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Many of the infections that have the highest incidence can be prevented by known interventions such as vaccination, hand hygiene, clean needles and condom use. The prevention and control of infectious diseases remains a priority for Peel Public Health.



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