

# **TORONTO** STAFF REPORT

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May 31, 2004

To: Board of Health

From: Dr. Barbara Yaffe, Acting Medical Officer of Health

Subject: Communicable Diseases in Toronto 2002, and Trends 1992 to 2002

## Purpose:

This report provides baseline incidence rates and trends of reportable communicable diseases in Toronto over an 11-year period (1992 to 2002), with a focus on communicable disease activities and issues during the 2002 calendar year. These data can be used by the public health community to understand how trends have evolved, and how subpopulations are affected by particular communicable diseases. Data comparisons with the rest of Ontario and Canada also highlight the ways in which Toronto is uniquely affected by the burden of communicable diseases. These data are useful to inform Toronto Public Health (TPH) communicable disease control strategies, prevention and response.

## Financial Implications and Impact Statement:

There are no financial implications stemming directly from this report.

## Recommendations:

It is recommended that:

- (1) the Board of Health forward this report to the Ministry of Health and Long-Term Care (MOHLTC) for information and appropriate action;
- (2) the Board of Health forward this report to Health Canada so that areas of concern that may be specifically related to larger urban centres can be identified and addressed;
- (3) the Board of Health forward this report to key stakeholders, including: Ontario Public Health units; Toronto hospitals; Association of Local Public Health Agencies (ALPHA); Association of Public Health Epidemiologists in Ontario (APHEO); Ontario Public Health Association (OPHA); Association of Supervisors of Public Health Inspectors of Ontario (ASPHIO); the Institute for Clinical Evaluative Sciences (ICES); Central East

Health Information Partnership (CEHIP) and Toronto District Health Council (TDHC);  
and

- (4) the appropriate City Officials be authorized and directed to take necessary action to give effect thereto.

Background:

This report summarizes data for diseases designated as “reportable” and “communicable” under the Health Protection and Promotion Act (HPPA) and associated regulations (see Appendix 1). Laboratories, physicians, hospitals, schools, and long-term care facilities are required to report communicable diseases to the local Medical Officer of Health so that appropriate public health action may be taken. Surveillance and case management data are stored and maintained in the MOHLTC mandated Reportable Disease Information System (RDIS).

The attached report (Appendix 2) summarizes these data for the City of Toronto. The data represent both new information and a compilation of RDIS databases from the six former municipalities of Metropolitan Toronto which were merged in 1998, resulting in the first summary of communicable disease trends for Toronto. Toronto Public Health (TPH) will use these data to identify trends to guide further prevention efforts, resource allocation and policy decisions. The information can also serve as a resource for regional, provincial, and national public health agencies to gain insight into the burden of communicable disease in large urban centres. In addition, health sector colleagues and community partners such as hospitals, physicians, community health clinics, long-term care facilities, community based advocacy groups, laboratories and shelters can use the information as a means to improve infection control measures, and ultimately to reduce communicable disease transmission.

Reports of disease are presented over time, and Toronto’s communicable disease rates are compared with the rest of the province and nation. Where data were sufficient, they were further broken down by basic demographic categories (e.g. age and sex). Presenting cases and rates by subgroups enables the identification of pockets of greater vulnerability and provides a focus for education and prevention programs and efforts.

In addition, Toronto’s demographic composition and our position as a hub for global travel, makes us particularly susceptible to the introduction of diseases not endemic to this region. SARS (which is only referenced in this report, given that it emerged in Toronto in 2003) demonstrated that unfamiliar or emerging diseases can be transported and spread to our city virtually overnight.

Comments:

The report presents historical trends starting in 1992, the first complete year of data available following the introduction of the provincial RDIS system to Ontario’s health units. Some highlights include:

(1) Sexually transmitted and bloodborne diseases

- (a) HIV infection reports in Toronto fell by more than half, from 963 cases in 1992 to 407 cases reported in 1998. Case reports have been increasing ever since, and reached 608 reported cases in 2002 (a 49% increase since 1998).
- (b) Chlamydia and gonorrhoea cases have been on the rise since 1997 (3,906 and 1,191 reported cases in 1997 respectively), and increased by 62% and 50% in the subsequent five years (to 6,311 and 1,781 reported cases, respectively).
- (c) Infectious syphilis declined dramatically from 173 cases in 1992 to a low of 19 cases in 1999. The number of reports then increased tenfold to 195 cases in 2002, when an outbreak among gay and bisexual men began. Similar increases were seen in several other large urban centres in North America and Europe.
- (d) Hepatitis B reports declined following the introduction of the provincial Grade 7 vaccination program in 1994, but have been on the rise since 1999 (24 cases in 1999 and 47 cases in 2002).

(2) Enteric, food, and waterborne diseases

- (a) The number of Hepatitis A virus reports decreased fivefold from 267 in 1996 to 56 in 2000. Rates have stayed low ever since.
- (b) Reports of typhoid and paratyphoid have doubled from a 1998 combined total of 19 (15 typhoid and 4 paratyphoid) reported cases, up to a total of 40 (30 typhoid and 10 paratyphoid) cases reported in 2002.
- (c) Campylobacter continues to be the most commonly reported cause of gastroenteritis in Toronto, accounting for 36% of all such reports in 2002.

(3) Diseases preventable by routine vaccination

- (a) Since the introduction of the provincial 2-dose measles vaccination strategy in 1996 for all school-aged students, only 18 cases have been reported in Toronto for the period 1996 to 2002. There were 431 cases reported in the four years prior to 1996. There were no measles cases reported in 2002.
- (b) The proportion of all influenza cases that are outbreak-associated has been declining. This may be related to higher levels of vaccination in staff and residents of institutions or to increased awareness of and testing for influenza in the general community.

(4) Diseases transmitted by direct contact and respiratory routes

- (a) A resurgence of Serogroup C types of invasive meningococcal disease (IMD) has been documented in Toronto, as in other parts of Canada. In 2001, the rise was primarily related to an outbreak of Serogroup C IMD among gay and bisexual men.
- (b) Rates of tuberculosis (TB) reported in Toronto exceeded those reported in the rest of Ontario and Canada for the entire report period. Toronto rates were at least four times greater than the rest of Ontario and double that for Canada in all years. The number of TB cases declined from 492 in 1995 to 380 in 2000 and has remained stable since.

(5) Vector borne and zoonotic diseases

Toronto experienced relatively higher rates of many diseases associated with vectors and animal reservoirs not endemic to Toronto compared to the rest of Ontario and Canada.

- (a) Malaria rates were at least four times higher in Toronto than the rest of Ontario for the entire report period. Toronto accounted for 55% of all malaria reports in Ontario in 2002, with a total of 82 cases in Toronto.
- (b) The 163 reports of West Nile virus cases in Toronto accounted for 40% of the 406 WNV cases reported in Ontario in 2002.

Communicable Disease Highlights for 2002:

The most recent complete and valid data available regarding notifications of disease episodes and events is for the year 2002. The most notable communicable disease highlights for 2002 in Toronto include:

- (1) Sexually transmitted (STD) and bloodborne diseases were those most commonly reported, and comprised four of the top five diseases by number of reports. The rise in STD rates continued in 2002.
- (2) An outbreak of infectious syphilis primarily affecting gay and bisexual men started in early fall.
- (3) In 2002, Toronto accounted for 54% of all Ontario and 24% of all Canadian TB cases. TPH investigated an outbreak of TB in two downtown homeless shelters.
- (4) Hepatitis A virus was detected in a supermarket worker who handled raw fruits and vegetables, requiring vaccination of over 18,000 potentially exposed individuals by TPH.

- (5) West Nile virus was confirmed in the human population a year after it had been detected in the bird and mosquito populations.
- (6) A Shigella outbreak associated with pasta salad purchased from a major grocery chain affected several hundred individuals across Toronto, and beyond.

Vigilance through surveillance of communicable diseases is essential to recognizing changes in disease activity so that effective control measures can be implemented. Sharing communicable diseases information with key community partners promotes early recognition of increases in certain disease activity and appropriate interventions to prevent further spread.

Controlling communicable diseases is best supported by information that is complete, timely, accurate and comparable across health jurisdictions. Information systems that facilitate this are therefore crucial to TPH's function. The current system, RDIS, is a powerful tool that has been used for over a decade but is cumbersome and inflexible. Extracting and summarizing the surveillance data presented here was a lengthy, complex process. This must be improved to allow TPH to create the information needed to respond to the changing epidemiology of communicable diseases in Toronto. This can only occur with the development and implementation of a new communicable disease information system used by all Ontario public health units. TPH is actively participating in a process to develop such a system.

Trends highlighted in this report confirm a unique set of factors associated with health in large urban settings. Health disparities are more pronounced when socioeconomic disparities exist, and communicable disease patterns are shaped by the added risks associated with large urban environments. Some of these include: homelessness and transient housing; a large foreign-born population that may be hard to reach because of language or cultural barriers; a large sub-population with mental health issues; and increased illicit substance use. The data in this report reflect the realities of large urban regions and underscore the need for a comprehensive urban health strategy that includes prevention and control of communicable diseases.

#### Conclusions:

The first report of communicable diseases for the amalgamated City of Toronto provides a summary of reportable communicable disease trends in Toronto with a focus on 2002. Recent trends are documented for Toronto and compared to the rest of Ontario and Canada. These comparisons show that Toronto experiences higher rates of most reportable diseases than its surrounding regions and the rest of Canada. A reinvigoration of efforts to control communicable diseases, particularly sexually transmitted diseases, in Toronto is clearly necessary.

Reports of disease activity in 2002, and the relative burden of communicable disease for subpopulations within the city, are the focus of the first report. This report confirms that several communicable diseases continue to disproportionately affect vulnerable populations in our city. The very young, the elderly, and those dealing with challenging socioeconomic factors such as underlying illness, homelessness, and illicit drug use are particularly at risk. Toronto is also experiencing a resurgence of sexually transmitted and bloodborne diseases which were on the decline in the early and mid 1990s but have increased in recent years. Toronto continues to face

unique challenges related to factors associated with large urban centres as well as travel and immigration patterns.

Basic knowledge of communicable disease trends for the City of Toronto was not available prior to this report. The report provides a context for future planning and policy efforts around strategies to effectively control communicable diseases in Toronto. Future reports will provide an annual summary of communicable disease activity, as well as in-depth examinations of specific diseases or groups of diseases.

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List of Attachments:

Appendix 1: Ontario Reportable Diseases 2002

Appendix 2: Communicable Diseases in Toronto 2002, and Trends 1992 to 2002