

## COMMUNICABLE DISEASE IN TIMISKAMING, 1995 – 2005

Public health has a mandate to reduce the incidence and transmission of communicable disease. To this end, the public health unit plays a key role in disease surveillance and provides community based programs and services designed to prevent and control the spread of infectious disease. This information sheet highlights communicable disease surveillance data from 1995 through 2005 for the district of Timiskaming.

For a full copy of the report, visit [www.timiskaminghu.com](http://www.timiskaminghu.com) or call the Epidemiologist at 1-866-967-9355.

### REPORTABLE DISEASES

Certain communicable diseases are legislated as reportable to health authorities. Public laboratories, health care practitioners, schools, daycares, and institutions are to report suspected and confirmed cases of notifiable infectious disease to public health units. The health unit uses this information to investigate the source of infection and to conduct contact tracing and appropriate patient follow-up. The health unit must also communicate the information to provincial authorities for disease surveillance through a secure, on-line database for real time reporting.

### THE IMPORTANCE OF SURVEILLANCE

Disease surveillance is a crucial component in any population-based program to prevent, control or eliminate communicable disease.

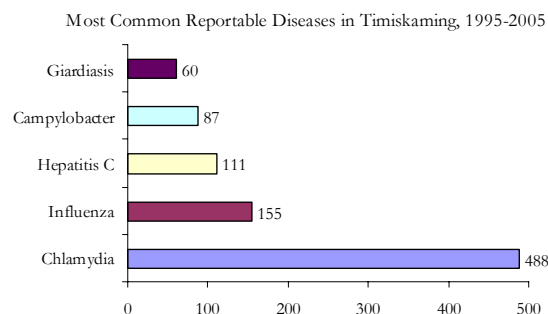
Surveillance of infectious disease is conducted to:

- Understand the burden of illness for a given population;
- Identify new or emerging disease;
- Identify changing disease trends;
- Identify potential outbreaks; and,
- Assess the effectiveness of preventive measures and programs.

A strong partnership between public health, schools, institutions and the medical community is needed to reinforce the local surveillance system to effectively monitor and protect the health of individuals and the community as a whole.

### INCIDENCE OF COMMUNICABLE DISEASE

The incidence (number of new cases occurring in a given population in a given period of time) of reportable communicable disease in Timiskaming is generally low. A total of 1095 cases of disease were reported during the 11 year time period (1995-2005).



Incidence of Reportable Disease, 1995-2005

	N	%
<b>Sexually Transmitted/Bloodborne</b>		
Aids	<5	--
Chlamydia	488	44.6
Gonorrhea	8	0.7
Hepatitis B	9	0.8
Hepatitis C	111	10.1
Syphilis	<5	--
<b>Direct Contact/Respiratory</b>		
Group A Streptococcal	<5	--
Group B Streptococcal	<5	--
Encephalitis/Meningitis	9	0.8
Meningococcal Disease	6	0.5
IPD	<5	--
Tuberculosis	13	1.2
<b>Enteric, Food, Waterborne</b>		
Amebiasis	<5	--
Campylobacter	87	7.9
Cryptosporidiosis	27	2.5
Giardiasis	60	5.5
Hepatitis A	6	0.5
Salmonellosis	45	4.1
Shigellosis	<5	--
Verotoxin-producing E.coli	8	0.7
Yersiniosis	6	0.5
<b>Vaccine Preventable</b>		
Influenza	155	14.2
Measles	5	0.4
Mumps	6	0.5
Pertussis	29	2.6
Rubella	<5	--
<b>Vectorborne/Zoonotic</b>		
Tularemia	<5	--

### SEXUALLY TRANSMITTED AND BLOODBORNE DISEASE

The most predominant category of reportable disease in Timiskaming – sexually transmitted and bloodborne disease – represents 56.8% of reported cases in the 11 year time period under study. This is driven primarily by the high incidence of chlamydia, which accounts for 78.5% of diseases included in this category.

The average incidence rate of lab-confirmed cases of chlamydia in the district of Timiskaming was 119/100,000 for the years 1995 through 2004. The corresponding provincial rate was 126/100,000. In general, district and provincial trends show an increase in the rate of chlamydia over time, due in part to improved detection through the introduction of new, less invasive diagnostic testing.

The Timiskaming Health Unit provides services and programs to prevent and control sexually transmitted infections and bloodborne disease. These services include health promotion and educational resources, sexual health clinics, STI screening, contact tracing and treatment, condom distribution, hepatitis B vaccination, and needle exchange.

### DIRECT CONTACT AND RESPIRATORY

Reportable diseases spread through direct contact or respiratory route are uncommon in Timiskaming, representing 3% of the total number of cases reported from 1995 through

2005. No cases of active pulmonary tuberculosis have been diagnosed in Timiskaming since 2001. Respiratory outbreaks in institutions (hospitals and long-term care facilities) are legislated as reportable, regardless of the aetiological agent. A total of 9 and 11 respiratory outbreaks were reported in institutional settings in 2004 and 2005 respectively.

Public health nurses help prevent and control tuberculosis through mantoux testing, contact tracing and case follow-up. Institutional respiratory outbreaks are monitored by public health nurses who provide consultation on infection control practices.

While chickenpox is a reportable disease included in this category, data is not systematically collected or reported in the district. Improved surveillance of chickenpox would help estimate the effectiveness of the universal immunization program for Varicella, introduced in Ontario in 2005.

#### ENTERIC, FOOD AND WATERBORNE

Enteric, food, and waterborne illnesses are the second most predominant category of reportable disease in Timiskaming, representing 22.1% of the 1095 cases of reportable disease from 1995 through 2005. The most common of the enteric, food, and waterborne illnesses in Timiskaming are, in rank order, campylobacter, giardiasis, salmonellosis, and cryptosporidiosis. The incidence rates of these diseases fluctuate, with no apparent trend over time.

Rates of campylobacter and salmonellosis are lower in Timiskaming than in Ontario as a

whole. Campylobacter, the most common of the enteric, food, and waterborne diseases reported in Timiskaming, had an average incidence rate of 22.2/100,000 from 1995 to 2004. The corresponding provincial rate was almost double that of the district, at 42.2/100,000 during the same time period. A similar difference is seen between district and provincial average incidence rates for salmonellosis (11.9/100,000 Timiskaming vs. 21.8/100,000 Ontario).

The incidence of giardiasis in Timiskaming has fluctuated both above and below provincial rates during the time period under study. The average incidence rates are similar however, at 15.5/100,000 in the district and 18.1/100,000 in the province. Cryptosporidiosis, a waterborne illness, is more common in Timiskaming (7.2/100,000 vs. 2/100,000 for Ontario, average incidence rate, 1995-2004).

Prevention and control of enteric, food, and waterborne illness is primarily handled by public health inspectors, who ensure food safety and safe food handling through routine inspection of food storage and food preparation areas of restaurants, institutions, day cares, and retail outlets. Public health also provides free training for food handlers.

Health inspectors investigate reported cases of enteric illness to determine the source of infection and to conduct contact tracing. Enteric outbreaks in institutions are monitored and public health inspectors provide consultation on infection control measures.

A publicly funded program for bacteriologic well water testing, administered through public

health units, assists in the prevention of waterborne illness through private water supplies. Public beaches are tested weekly during the swimming season to ensure that bacteria levels are within recreational water quality guidelines.

#### VACCINE PREVENTABLE

With the exception of influenza, routine and mandatory immunization of children has all but eradicated vaccine preventable disease from the Timiskaming population. Vaccination rates for childhood diseases in the district are high. Ninety-five percent of children and youth born between 1988 and 2000 have complete immunization as appropriate for their age by school completion. The health unit plays a key role in maintaining high vaccination coverage rates by providing immunizations during Well Baby Clinics and school immunization clinics.

The average incidence rate of influenza for the years 1995 through 2004 was higher in Timiskaming than in the province, at 29/100,000 (vs. 17.9/100,000 Ontario). Annual incidence rates fluctuated both above and below the corresponding provincial rate, with no apparent trend over time.

Universal vaccination for influenza is available in Ontario but is not mandatory. The Timiskaming Health Unit provided influenza immunization to 10 253 people in 2005, representing approximately 30% of the district population, with the majority of vaccinations administered at community clinics. The health unit also offers an annual school influenza immunization program, open to both staff and students.

Influenza immunization is strongly recommended for staff and residents of health care facilities. The Ministry of Health has a target coverage rate of 95% for residents of LTC facilities and 70% for LTC and hospital workers. Coverage rates for these subgroups have improved over time to meet or exceed the provincial targets.

#### VECTORBORNE AND ZONOTIC

Diseases transmitted by insects and animals are extremely rare in the district of Timiskaming. Public health plays a role in the prevention of rabies, through the quarantine of domestic animals following a bite incident and provision of post-exposure prophylaxis when necessary. West Nile virus is monitored in mosquitoes and birds. No human cases of West Nile have ever been reported in Timiskaming.