

## Annual Reportable Disease Surveillance Report

The Communicable Disease Surveillance Unit at the Simcoe Muskoka District Health Unit (SMDHU) performs ongoing surveillance of infectious diseases. We depend on disease reporting from health care practitioners, laboratory results, and our active surveillance to generate a continually monitored database to detect disease clusters and outbreaks. This surveillance report provides health care practitioners with a snapshot of pertinent diseases in Simcoe Muskoka to improve clinical decision making, patient care, and detection of unusual clusters. This year's *In Focus* section provides an epidemiological profile of hepatitis C in Simcoe Muskoka and screening recommendations.

### Incidence of Most Relevant Reportable Diseases in Simcoe Muskoka in 2014

Data Source: Integrated Public Health Information System, Extracted August 2015

Disease	Trend	January-December 2014 <sup>^</sup>		5 Year Mean* Jan-Dec, 2009-2013		Comments
		# of Cases	Rate per 100,000 Population	# of Cases	Rate per 100,000 Population	
<b>Respiratory Diseases</b>						
Influenza	↑↑	647	119.4	330	62.9	Flu A (H3N2) predominated with poor flu A vaccine match. 1/3 of cases were from institutional outbreaks compared to 10% - 15% in flu A(H1N1) or flu B predominant seasons
Pertussis		11	2.0	16	2.9	
Invasive Group A Streptococcal	↑↑	37	6.8	22	4.1	Gradual increase in past 10 years consistent with provincial trend. Cause is unknown
Mumps		0	0.0	3	0.6	
Legionellosis		4	0.7	4	0.8	
Tuberculosis	↓	2	0.4	5	0.9	Local rate is less than 1/4 of Ontario rate. Concentrated in risk populations in urban centres (Toronto, Ottawa)
Meningococcal disease, invasive	↓	0	0.0	2	0.3	
<b>Gastro-Intestinal diseases</b>						
Campylobacter	↑	132	24.4	103	19.5	Gradual increase in past 5 years consistent with provincial trend. Cause is unknown
Salmonellosis		121	22.3	97	18.5	
Giardiasis		42	7.7	48	9.1	
Amebiasis, Cryptosporidiosis, Cyclosporidiosis, Shigellosis, and Yersiniosis	↑	37	6.8	25	4.7	Small local increases in amebiasis and cryptosporidiosis, consistent with provincial trends. Cause is unknown
Verotoxigenic E.coli		3	0.6	5	1.0	
Hepatitis A		1	0.2	3	0.5	
Listeriosis		1	0.2	2	0.5	

Moderate (1-2 Standard Deviation (SD)) increase (↑) or decrease (↓), and significant (>2 SD's) increase (↑↑) or decrease (↓↓) compared to the historical average.

		January-December 2014 <sup>^</sup>		5 Year Mean* Jan-Dec, 2009-2013		Comments
		# of Cases	Rate per 100,000 Population	# of Cases	Rate per 100,000 Population	
<b>Sexually Transmitted Infections and Bloodborne Infections</b>						
Chlamydia	↑	1298	239.5	1047	199.1	Local and provincial increase in past several years has slowed. Local percent positivity (6.5%) remained stable since 2012. Highest rate in 15-24 year old females
Hepatitis C	↑	197	36.3	166	31.7	See "In Focus" section below table
Gonorrhea	↑↑	119	22.0	51	9.7	Significant local and provincial increase since fall 2013. Local percent positivity (0.7%) has tripled since 2012. Mainly affecting 20-39 year olds. 20% of cases are men who have sex with men (MSM)
Syphilis	↑	18	3.3	13	2.5	Locally, infectious syphilis has gradually increased in recent years. 70% of cases are MSM. 10% are HIV+
HIV/AIDS	↑	14	2.6	8	1.5	Mainly affects MSM. Many partners meet online
Hepatitis B (acute)		2	0.4	2	0.4	
<b>Vector-Borne and Zoonotic Diseases</b>						
West Nile virus		1	0.2	1	0.3	
Lyme Disease (confirmed + probable)	↑	5	0.9	2	0.4	Increasing human cases in Ontario. Simcoe Muskoka is a low risk area. None of the 2014 cases were assessed to be acquired locally
<b>Rare Diseases</b>						
Varicella (lab-confirmed cases and those with severe outcomes)		4	0.7	5	0.9	
Group B Streptococcus		1	0.2	1	0.2	
Diphtheria, Polio, Rubella, Tetanus		0	0.0	0	0.1	
Haemophilus influenzae b		1	0.2	0	0.0	
Malaria		1	0.2	3	0.5	Imported cases
Measles		1	0.2	0	0.0	Local case was travel-related to U.S. Ontario had outbreak of travel-related and secondary cases in 2014
Rabies		No non-imported human cases in Ontario in 20+ yrs. Animals with highest incidence in Ontario are: bats, skunks, foxes and livestock. Cats and dogs can also become infected with rabies				

<sup>^</sup> All disease counts are reported by calendar year except influenza, which are reported by flu season (September to August).

\* Outbreak years are excluded from historical average calculations.

For more information on infectious disease statistics in Simcoe Muskoka and Ontario, please visit:  
[www.simcoemuskokahealthstats.org](http://www.simcoemuskokahealthstats.org)

Please continue to report all confirmed or suspected cases of reportable diseases to the SMDHU via phone:  
(705) 721-7520 ext. 8809 (After hours: 1-888-225-7851), or fax: (705) 733-7738.

For more information and resources on infectious diseases, please go to our Primary Care Portal at:  
[www.smdhu.org/pcportal](http://www.smdhu.org/pcportal)

## In Focus: Hepatitis C

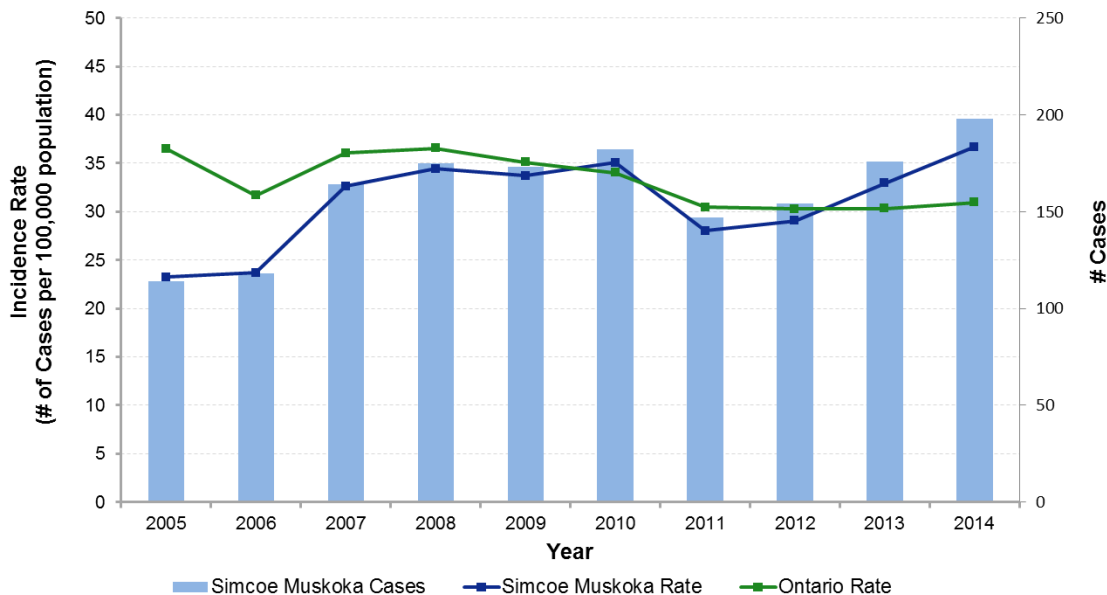
### Local Incidence

In 2010, an [Ontario Burden of Infectious Diseases study](#) deemed hepatitis C virus (HCV) the most burdensome infectious disease in Ontario based on the years of life lost due to premature mortality (YLL) and years of reduced functioning.

Incidence of HCV cases reported to public health includes all individuals who are positive for the HCV antibody. Some of these cases will have cleared their infection either spontaneously or with treatment so many of them are no longer infectious. At the same time, more than 90% of initial infections are asymptomatic and remain undiagnosed for a long period of time so do not get reported until years after infection. Recommendations have been made to change the provincial case definition to differentiate between newly acquired and chronic cases.

The reported HCV incidence in Ontario has decreased since 2005 whereas it has increased in Simcoe Muskoka. It is unclear whether this is due to increased awareness and testing of HCV or if it represents an increase in true incidence.

**Incidence of Reported Hepatitis C\* in Simcoe Muskoka and Ontario, 2005-2014<sup>^</sup>**



Data Sources: Integrated Public Health Information System (IPHIS), extracted July 2015  
IPHIS data posted on PublicHealthOntario.ca e-portal and Query@PHO  
Population Estimates&Projections, Intellihealth, extracted April 2015

\* Confirmed Cases

<sup>^</sup> The 2013 and 2014 rates are based on the projected population rather than the estimated population.

**Table 1: Age Distribution of HCV Cases in Simcoe Muskoka, 2010-2014**

Age Group (years)	Age-specific rate per 100,000
0-19	3.0
20-29	49.3
30-39	53.0
40-49	46.3
50-59	56.8
60-69	26.5
70+	4.7
<b>Overall</b>	<b>32.3</b>

Data Source: Integrated Public Health Information System, extracted July 2015

### Highlights

- In the past five years, the highest age-specific incidence rates are among 20-59 year olds as shown in Table 1.
- Sixty five percent of cases are male.

## Prevalence

- The modeled Hepatitis C prevalence for Simcoe Muskoka is 0.87% or 1 in 115 people (2012, PHO). This varies widely between risk groups. The modeled prevalence for Ontario is 0.84%.

## Risk Factors

- **Injection drug use (IDU)** anytime in the past or present, even if only once. This is due to:
  - shared/contaminated drug preparation/injection materials (e.g., syringe/needle, spoon/cooker, water, drug solution, filter).
- **Incarceration:** exposures due to:
  - shared/contaminated drug preparation/injection materials
  - shared/contaminated tattooing materials (e.g., needles, inks)
  - physical trauma (e.g., fighting where blood is present)
  - unprotected sex where blood may be present (e.g., anal intercourse, fisting).
- **Born, traveled, or resided in a region in which HCV infection is more common:** exposures due to:
  - lack of universal precautions and medical/dental practices using contaminated equipment (e.g., childhood immunizations, injections, multi-dose vials, surgery, transfusion, etc.).
- **Receipt of health care where there is a lack of universal precautions (nosocomial transmission)** due to:
  - use of contaminated equipment in medical/dental practices (e.g., childhood immunizations, injections, multi-dose vials, surgery, transfusion, etc.).
- **Blood transfusion, blood products, or organ transplant before 1992 in Canada. (CFPC)**

## Action Items for Healthcare Practitioners

- Screen persons with risk factors using HCV Immunoglobulin G (IgG).
- Consider one time screening for persons born between 1945 and 1975, even without risk factors as per Canadian Liver Foundation recommendations.
- If HCV IgG is positive, order HCV RNA test.
- Refer to gastroenterologist for potential curative treatment.
- Submit SMDHU HCV form when requested for public health management and contact tracing.

## References

1. Kwong JC, Crowcroft NS, Campitelli MA, Ratnasingham S, Daneman N, Deeks SL, Manuel DG. Ontario Burden of Infectious Disease Study (ONBOIDS): An OAHPP/ICES Report. Toronto: Ontario Agency for Health Protection and Promotion, Institute for Clinical Evaluative Sciences; 2010. Accessed in September 2015 at: <http://www.publichealthontario.ca/en/BrowseByTopic/InfectiousDiseases/Pages/Ontario-Burden-of-Infectious-Disease-Study.aspx>
2. Ontario Agency for Health Protection and Promotion (Public Health Ontario or PHO), Provincial Infectious Diseases Advisory Committee. Recommendations for the public health response to hepatitis C in Ontario. Toronto, ON: Queen's Printer for Ontario; 2014. Accessed in September 2015 at: [http://www.publichealthontario.ca/en/eRepository/Recommendations\\_Public\\_Health\\_Response\\_Hepatitis\\_C.pdf](http://www.publichealthontario.ca/en/eRepository/Recommendations_Public_Health_Response_Hepatitis_C.pdf)
3. College of Family Physicians of Canada (CFPC). Primary Care Management of Chronic Hepatitis C Professional Desk Reference. 2009. Accessed in September 2015 at: [http://www.cfpc.ca/uploadedFiles/Resources/Resource\\_Items/HEP\\_C\\_Guide\\_eng\\_2.pdf](http://www.cfpc.ca/uploadedFiles/Resources/Resource_Items/HEP_C_Guide_eng_2.pdf) .
4. Canadian Liver Foundation Position Statement on Hepatitis C Testing. Accessed in October 2015 at: [http://www.liver.ca/support-liver-foundation/advocate/clf-position-statements/hepatitis\\_C\\_testing.aspx](http://www.liver.ca/support-liver-foundation/advocate/clf-position-statements/hepatitis_C_testing.aspx)