

## 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 gonorrhea in Simcoe Muskoka and summarizes Ontario's updated testing and treatment guidelines for gonorrhea.

### Incidence of Most Relevant Reportable Diseases in Simcoe Muskoka in 2013

Data Source: Integrated Public Health Information System, Extracted May 2014

Moderate (1-2 Standard Deviation (SD)) increase (↑) or decrease (↓), and significant (>2 SD's) increase (↑↑) or decrease (↓↓) compared to the historical average.	January-December 2013^		5 Year Mean* Jan-Dec, 2008-2012		Comments	
	# of Cases	Rate per 100,000 Population	# of Cases	Rate per 100,000 Population		
Respiratory Diseases						
Influenza (2013/14 flu season)		392	73.2	311	59.1	Predominantly H1N1 for flu A with median age of death at 58.8 years which is much lower than the usual 80 years of age. April wave of influenza B
Pertussis	↑	25	4.7	9	1.8	High variability year to year, naturally peaks every 3 to 5 years
Invasive Group A Streptococcal	↓	16	3.0	23	4.4	Gradual increase with no identified cause over last 5 years in Ontario
Mumps	↑↑	7	1.3	1	0.2	Clusters of mumps generally point-source, not travel-related
Legionellosis	↑↑	6	1.1	3	0.7	Increasing incidence across Ontario with no identified cause
Tuberculosis		3	0.6	4	0.7	Lower than urban areas in Ontario
Meningococcal disease, invasive		2	0.4	2	0.3	
Gastro-Intestinal Diseases						
Campylobacter	↑↑	129	24.1	94	18.2	Increased incidence across Ontario with no identified cause
Salmonellosis		86	16.1	90	17.4	Increased provincial incidence. Common sources include undercooked/raw poultry, raw eggs, soft cheese
Giardiasis	↑↑	70	13.1	42	5.7	No identified cause for increase
Amebiasis, Cryptosporidiosis, Cyclosporidiosis, Shigellosis, and Yersiniosis		28	5.2	24	4.6	
Verotoxigenic E.coli		3	0.6	6	1.2	
Hepatitis A		1	0.2	2	0.3	Low level of endemicity in Canada
Listeriosis		1	0.2	2	0.5	

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Sexually Transmitted Infections and Bloodborne Infections					
Chlamydia ↑	1195	223.1	946	181.7	Cases mostly females between 15-24 yrs; Less testing done in 2013 - potentially because of change in pap smear guidelines to every 3 years from age 21 for sexually active healthy women
Hepatitis C ↑	175	32.7	148	28.6	Important to do viral load and refer to GI specialist for treatment options
Gonorrhea ↑	68	12.7	45	8.7	Note: Dual therapy with Ceftriaxone and Azithromycin is 1 <sup>st</sup> line treatment
Syphilis	15	2.8	12	2.3	Mainly affecting men who have sex with men (MSM) population in urban centres
HIV/AIDS	9	1.7	6	1.2	Highest incidence in urban centres. - SMDHU ~ 1/3 of provincial rate. MSM is a very high risk group. Recent local survey shows 71% of MSM do not disclose sexual preference to their health care providers
Hepatitis B (acute and chronic) ↓↓	0	0.0	5	7.2	
Vector-Borne and Zoonotic Diseases					
West Nile virus	2	0.4	1	0.2	
Lyme Disease	1	0.2	3	0.6	Increasing human cases in Ontario
Rare Diseases					
Group B Streptococcus, neonatal	2	0.4	1	0.2	
Diphtheria, Polio, Rubella and Tetanus	2	0.4	0	0	1 case each of Rubella and Tetanus reported in 2013
Haemophilus influenzae b	0	0.0	0	0.1	
Malaria ↓	0	0.0	3	0.5	
Measles	0	0.0	1	0.1	2014: Outbreak in BC; 1 imported case reported in Simcoe Muskoka
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 with the exception of influenza. Influenza counts are reported using the flu season (September to August). The influenza count reported is for the 2013-2014 (September 1, 2013 to present).

\* 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: Gonorrhea

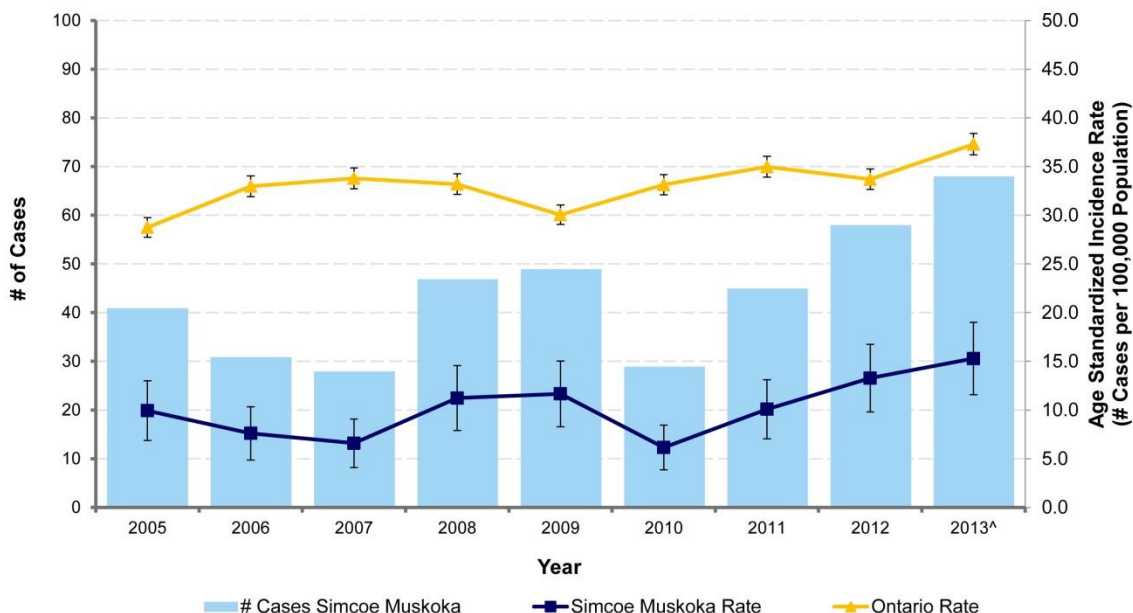
### Gonorrhea in SMDHU

Cases of *Neisseria gonorrhoeae* have been increasing in Simcoe Muskoka over the past four years. In 2013, 68 cases of gonorrhea were reported in Simcoe Muskoka. The corresponding age-adjusted rate for Simcoe Muskoka remains lower than the age-adjusted rate for Ontario in 2013, 15.2 cases per 100,000 and 37.2 cases per 100,000 age-adjusted population, respectively.

### Quick Facts

- The vast majority of the 68 cases (90%) were reported in those aged 15-24 years (32 cases) and 25-34 years (20 cases).
- 12% of cases were identified through contact tracing.
- 11 cases (16%) were identified as men who have sex with men (MSM).
- In non-MSM cases, 58% were male.
- Gonorrhea is spread through sexual contact via oral, vaginal, cervical, urethral or anal routes. Infections may be asymptomatic in up to 50% of females and 10% of males.

**Number of Gonorrhea\* cases in Simcoe Muskoka, 2005-2013**



Data Sources: Integrated Public Health Information System (iPHIS), extracted May 2014  
Reportable Disease Information System (RDIS) and iPHIS data posted on PublicHealthOntario.ca e-portal  
Population Estimates&Projections, Intellihealth, extracted September 2013

\* Confirmed Cases

<sup>^</sup> The 2013 rate is calculated using the 2013 projected population rather than the population estimate.

## Risk Factors:

In Simcoe Muskoka, the most common risk factors reported include no condom use, men who have sex with men and risky sexual behaviors. Risk factors were most commonly reported in younger cases and MSM populations.

High risk groups for gonorrhea include:

- Sexually active youth (less than 25 years) with multiple partners
- Men who have sex with men
- Sex trade workers and their partners
- Street-involved youth
- History of gonorrhea or other STI infection.

## Distribution of Risk Factors in Confirmed Cases in Simcoe Muskoka, 2013

Risk Factor	N (%)
No Condom Use	47 (69%)
New Sex Contact in Last 2 Months	20 (29%)
>1 Sex Contact in Last 6 Months	20 (29%)
Men Who Have Sex with Men	11 (16%)
Anonymous Sex	5 (7%)
Judgment Impaired by Alcohol/Drugs	5 (7%)
Previous STI	3 (4%)

Note: Cases can report more than one risk factor

Source: Integrated Public Health Information System (iPHIS), extracted May 2014

## Action Items:

**Screen** individuals presenting with risk factors, but no associated symptoms with cervical or urine NAAT. For MSM who practice oral or/and anal sex, screen for pharyngeal or/and rectal gonorrhea with oro-pharyngeal or/and rectal cultures. NAAT testing is currently unavailable for the pharyngeal and rectal sites.

**Test** individuals presenting with symptoms and risk factors consistent with gonorrhea with urethral/cervical culture, or if not feasible, with cervical or urine NAAT.

**Report** all cases of gonorrhea to SMDHU.

**Treat** according to Ontario guidelines (dual therapy with Ceftriaxone 250mg IM and Azithromycin 1gm PO stat) and re-screen six months post-treatment.

Sources: Public Health Ontario (2013). *Guidelines for Testing and Treatment of Gonorrhea in Ontario*. pp. 13.  
Public Health Ontario – Public Health Laboratory (2011). *Labstrack: Chlamydia trachomatis and Neisseria gonorrhoeae – Sensitivity and Specificity of the Gen-Probe® Aptima® Assay, LAB-SD-005-004*.

## Validity of Gonorrhea Tests

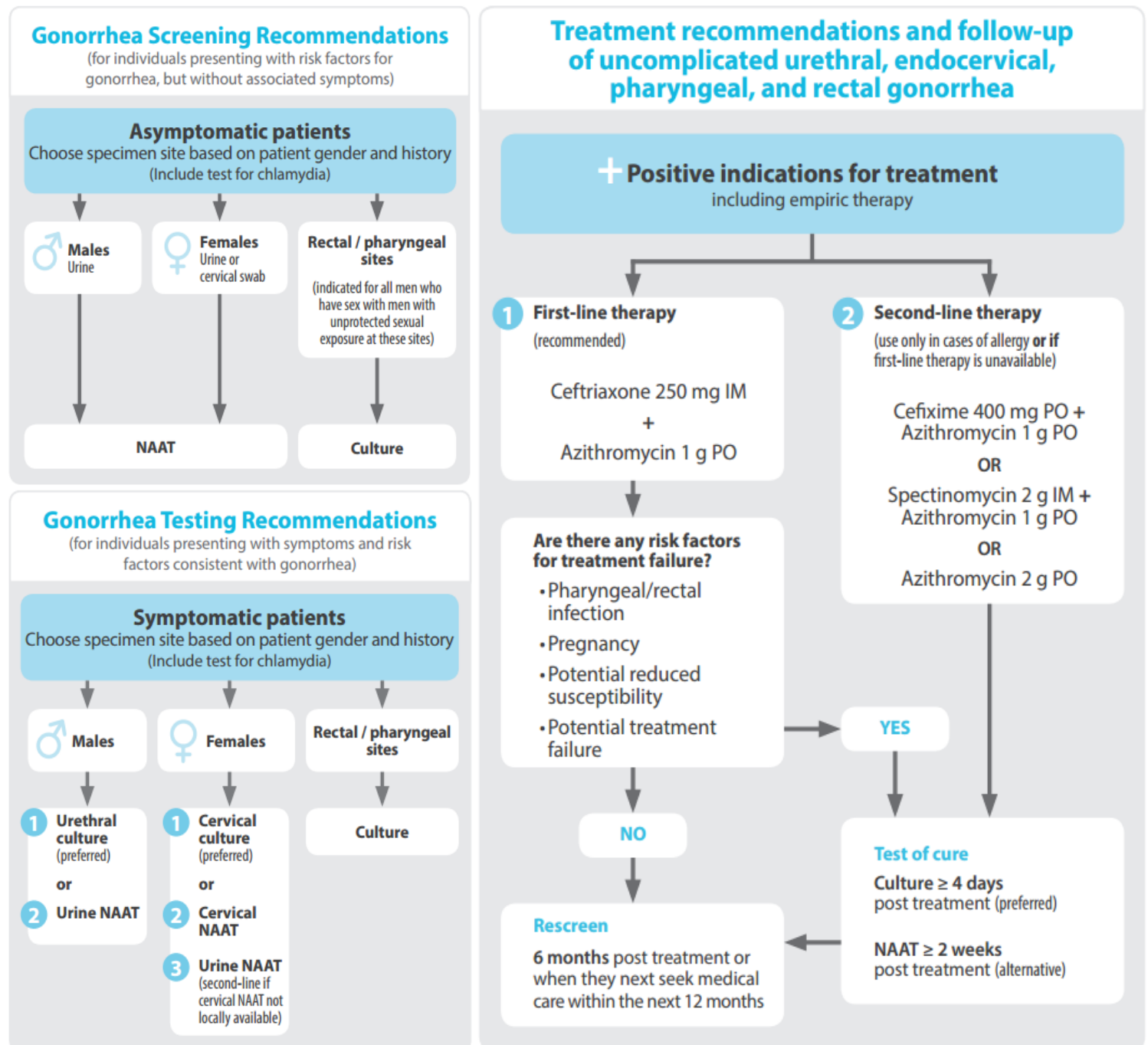
Test	Sensitivity*	Specificity†
<b>Female</b>		
Cervical Culture	50-92%	>99%
Cervical Swab NAAT	97.3%	99.0%
Urine NAAT	92.0%	99.8%
<b>Male</b>		
Urethral Culture	50-92%	>99%
Urethral Swab NAAT	99.4%	97.5%
Urine NAAT	98.9%	99.2%

\***Sensitivity**: ability of test to correctly identify cases with disease (true-positives)

†**Specificity**: ability to test to correctly identify cases without disease (true-negatives)

**Ceftriaxone and azithromycin treatment is available free of charge to physicians from Simcoe Muskoka District Health Unit to provide to patients with gonorrhea and their contacts. Please contact the health unit if you would like to participate in the STI medication program.**

## Ontario's Updated Testing and Treatment Guidelines



Source: Ontario Agency for Health Protection and Promotion (Public Health Ontario). Guidelines for testing and treatment of gonorrhea in Ontario. Toronto, ON: Queen's Printer for Ontario; 2013. Figure 4, Testing algorithm for asymptomatic persons, Figure 5, Testing algorithm for symptomatic persons, Figure 8, Treatment algorithm; p. 15, 16, 24.

For more gonorrhea resources, please go to:

[www.publichealthontario.ca/en/BrowseByTopic/InfectiousDiseases/Pages/Gonorrhea-Guideline.aspx](http://www.publichealthontario.ca/en/BrowseByTopic/InfectiousDiseases/Pages/Gonorrhea-Guideline.aspx)

Online Training Module now available through Public Health Ontario:

[www.publichealthontario.ca/en/LearningAndDevelopment/Pages/Gonorrhea-Online-Training-Module.aspx#](http://www.publichealthontario.ca/en/LearningAndDevelopment/Pages/Gonorrhea-Online-Training-Module.aspx#)