

Reportable Diseases in Renfrew County and District



Renfrew County and District Health Unit

How to report a reportable disease

For diseases which need to be reported immediately (see the list of **Reportable Communicable Diseases** on page 3), call 613-735-8653 during office hours and 613-735-9926 during evenings, weekends and holidays.

For diseases which can be reported the next working day, complete the **Communicable Disease Reporting Form** (sample enclosed) and fax it to 613-735-3067.

For more information, call 613-735-8653 or see our Reportable Diseases web page: <http://www.rcdhu.com/Pages/InfectiousDiseases/id-reportable-diseases.html>.

Note: **Public Health Notes** was formerly titled **Health Notes for Health Care Providers**.

This issue of **Public Health Notes** provides a summary of reportable diseases from 2014 in Renfrew County and District, and practical information related to their prevention and management.

In Ontario, over 70 communicable diseases are reportable to the local Medical Officer of Health under the Health Protection and Promotion Act, Regulation 559/91. Health care practitioners, hospital administrators, superintendents of institutions and school principals who become aware of these diseases are responsible for reporting them to the local public health authority.

Prompt reporting enables the public health unit to complete timely follow-up with the affected individuals and their contacts and implement measures to prevent further transmission.

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Mission: Renfrew County and District Health Unit protects and promotes the health and well-being of all residents through leadership, partnership, accountability and service excellence.

Vision: Optimal health for all in Renfrew County and District.

Changes to the list of reportable diseases

The list of reportable diseases was updated in December 2013. Two diseases were added: **Acute Flaccid Paralysis (AFP)** and **Paralytic Shellfish Poisoning (PSP)**. Six diseases were removed: Neonatal herpes, congenital Cytomegalovirus infection, Hepatitis D, Fatal Familial Insomnia, Gerstmann-Sträussler-Scheinker Syndrome and Transmissible Spongiform Encephalopathies.

Acute Flaccid Paralysis¹

Acute Flaccid Paralysis (AFP) is a broad clinical syndrome and may be the result of infectious or non-infectious agents (e.g. echoviruses, enteroviruses including polio, adenoviruses, acute West Nile virus infection, *Campylobacter spp*, transverse myelitis, peripheral neuropathy, acute non-bacterial meningitis, brain abscess, myasthenia gravis and botulism). The immune-mediated condition Guillain-Barré Syndrome (GBS) is the most common cause of AFP in Canada.

Surveillance is conducted in an attempt to identify cases of AFP, and to investigate these cases in order to rule out poliomyelitis (polio), which is essential for documenting global polio elimination.

Paralytic Shellfish Poisoning¹

Paralytic Shellfish Poisoning (PSP) is caused by potent neurotoxins that are produced by oceanic phytoplankton or dinoflagellates, and can pose a severe and urgent health threat.

Onset of symptoms usually begins between 30 minutes and three

hours after ingestion of the contaminated food. The progression to paralysis may be rapid in severe cases.

The first symptom is often paresthesia around the lips or mouth which spreads to the face and neck. Other early symptoms include tingling or numbness in the fingertips or toes, dizziness, headache, sweating or excess saliva production. Nausea, vomiting and abdominal pain may occur. Later symptoms include generalized

paresthesia of the extremities and ataxia.

A diagnosis of PSP should be based on clinically compatible signs and symptoms in the context of a history of recent shellfish/seafood consumption.

Report immediately to the Health Unit any cases that occur within 12 hours of consumption of a potential source of PSP toxin: shellfish or other seafood such as crabs, lobster, or scallops.

Message from the MOH

Dear Colleagues,

After a long cold winter, I am pleased to provide you with the spring edition of **Public Health Notes**. Information in this issue is focused on infectious disease surveillance and was designed to provide updated and relevant public health information for health care practitioners.

Included in this edition you will find a summary of changes in reporting requirements for communicable diseases, trends in the occurrence of chlamydia (one of the more common infections), information on Lyme disease in Renfrew County and District and a description of influenza from the 2013-14 flu season.

Once the 2014-15 flu season has ended, we will be providing a summary of the 2014-15 season as well.

Please visit our website for more resources and information on a



variety of public health issues that concern you and your patients.

We would also like to hear your feedback and suggestions on the content of **Public Health Notes**. Please feel free to contact me in this regard at mcarew@rcdhu.com.

Sincerely,

Maureen Carew M.D., MSc, FRCPC
Medical Officer of Health and Chief Executive Officer



REPORTABLE COMMUNICABLE DISEASES

Under the Ontario *Health Protection and Promotion Act*, Ontario Regulations 559/91, Health care practitioners, hospital administrators, laboratory operators, superintendents of institutions, school principals and child care facilities must report to the local Medical Officer of Health (MOH) any person who, in his or her opinion, is or may be infected with an agent of one of the communicable diseases listed below. Your co-operation in reporting will help to ensure prompt and complete follow-up of cases. Please report according to the schedule outlined below.

COMMUNICABLE DISEASE CONTACT:

Phone: (613) 735-8653 or 1-800-267-1097 Fax: (613) 735-3067

AFTER HOURS CALL: (613) 735-9926

***Note:** Diseases marked with “*” should be reported immediately to the MOH by phone. Other diseases are to be reported by the next working day.

<p>Acquired Immunodeficiency Syndrome (AIDS) Acute Flaccid Paralysis (AFP) Adverse Events Following Immunizations (AEFIs) Amebiasis *Anthrax *Botulism *Brucellosis Campylobacter Enteritis Chancroid Chickenpox (Varicella) Chlamydia Trachomatis *Cholera *Clostridium Difficile Infection (CDI) outbreaks in public hospitals Creutzfeldt-Jakob Disease, all types *Cryptosporidiosis *Cyclosporiasis *Diphtheria *E.coli (see Verotoxin-producing E.coli) *Encephalitis, including, i. *Primary, viral including West Nile Virus ii. Post-infectious iii. Vaccine-related iv. Subacute sclerosing panencephalitis v. Unspecified *Food Poisoning, all causes *Gastroenteritis, institutional outbreaks *Giardiasis, except asymptomatic cases Gonorrhoea *Group A Streptococcal Disease, invasive (IGAS) Group B Streptococcal Disease, neonatal</p>	<p>*Haemophilus Influenzae B Disease, invasive *Hantavirus Pulmonary Syndrome *Hemorrhagic Fevers, including, i. *Ebola Virus Disease ii. *Marburg Virus Disease iii. *Other viral causes *Hepatitis A Hepatitis B Hepatitis C Influenza *Lassa Fever *Legionellosis Leprosy *Listeriosis Lyme Disease Malaria *Measles *Meningitis, acute, i. *Bacterial ii. *Viral iii. Other *Meningococcal Disease, invasive *Mumps Ophthalmia Neonatorum *Paralytic Shellfish Poisoning (PSP) *Paratyphoid Fever *Pertussis (Whooping Cough) *Plague Pneumococcal Disease, invasive</p>	<p>*Poliomyelitis, acute Psittacosis/Ornithosis *Q Fever *Rabies *Respiratory Infection outbreaks in institutions *Rubella *Rubella, congenital syndrome Salmonellosis *Severe Acute Respiratory Syndrome (SARS) *Shigellosis *Smallpox Syphilis Tetanus Trichinosis Tuberculosis 1. Active Disease 2. Latent Infection (LTBI) *Tularemia *Typhoid Fever *Verotoxin-producing E. coli infection indicator conditions, including Haemolytic Uraemic Syndrome (HUS) *West Nile Virus Illness *Yellow Fever Yersiniosis</p>
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Additional copies of this document can be found at www.rcdhu.com

Chlamydia is still the most common reportable disease

Chlamydia is the most frequently reported of all the reportable diseases, both in Renfrew County and District and in Ontario as a whole.

The incidence of chlamydia in Ontario has been increasing. This can be partially explained by increased testing.² However, chlamydia is still considered to be under-reported, mainly because a large proportion of people who become infected do not experience symptoms (up to 70 percent of females and up to 50 percent of males).²

In 2014 there were 270 confirmed cases of chlamydia in Renfrew County and District. Over the years shown in **Figure 1**, female rates are highest in the 20–24 age group, followed by age 15–19. For males, the highest rates fluctuate between the 20-25 and 25–29 age groups.

Figure 2 shows the most common behavioural/social risk factors associated with confirmed chlamydia cases, as reported by the affected individuals during follow-up by the Health Unit.

Figure 3 shows that about 5% of lab tests for females and 15% of lab tests for males result in a positive diagnosis.

Screening Recommendations

The Public Health Agency of Canada (PHAC) recommends screening for chlamydia and gonorrhea for all at-risk groups. This includes sexually active females under age 25 and all pregnant women at the first prenatal visit.

PHAC states that there is an evidence gap to support routine screening of asymptomatic young

males. While waiting for data on effectiveness, PHAC recommends screening males under age 25 for chlamydia.³

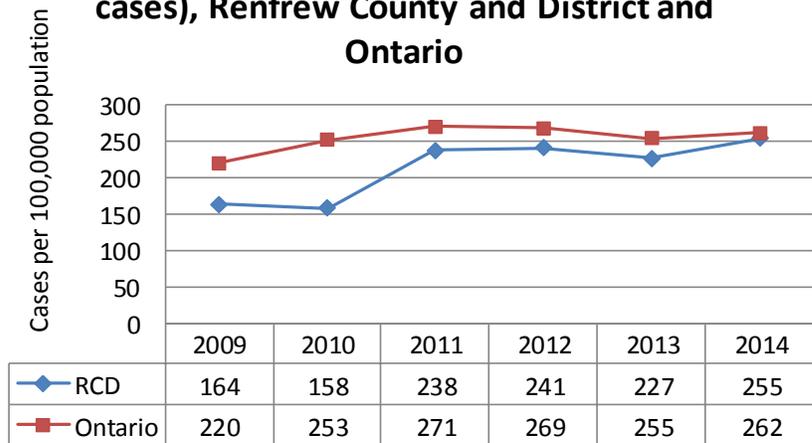
Condoms and Antibiotics from the Health Unit

Condoms are available at no charge from Renfrew County and District Health Unit for distribution to clients. They can be ordered by

calling the number below. Condom orders may be picked up at our Pembroke and Renfrew offices.

Provincially funded drugs for the treatment of STIs can be dispensed by the Health Unit at no charge. Call the Health Info Line at 613-735-8666 or 1-800-267-1097 ext. 666 and ask to speak to the Sexual Health Program Nurse.

Figure 1: Rates of chlamydia (confirmed cases), Renfrew County and District and Ontario



Sources: See page 7.

Figure 2: Behavioural/social risk factors for chlamydia, 2014, Renfrew County and District

Risk factor	Number (%)
No condom used	182 (67%)
More than one sexual contact in last 6 months	26 (10%)
New sexual contact in past 2 months	22 (8%)

Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System. Extracted March 2, 2015

Figure 3: Test results for Chlamydia trachomatis by Public Health Ontario Laboratories, 2014, Renfrew County and District

Gender	Number of tests	Number (%) of tests that were positive
Females	1130	56 (5%)
Males	582	80 (14%)

Source: Public Health Ontario, STI Lab Data Decision Support Tool, extracted February 11, 2015 (Data source last updated December 31, 2014)

Summary of 2013/14 influenza season

Reporting of laboratory confirmed influenza cases to public health units significantly underestimates the burden of influenza in Ontario, since many individuals with influenza-like illness never seek care or have lab testing completed.

The influenza season is from September 1 to August 31, and influenza activity normally peaks during the colder months. The incidence of influenza fluctuates due to a variety of factors, including variations in the circulating strains and how well the vaccine matches circulating strains.

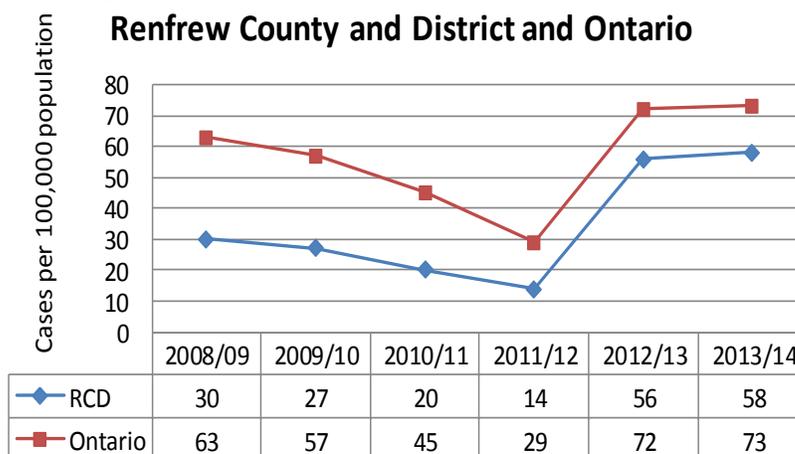
In the 2013/14 influenza season, the strains in the trivalent influenza vaccine matched the isolates from Ontario characterized by the National Microbiology Laboratory.⁴

During the 2013/14 influenza season, there were 61 confirmed cases of influenza in Renfrew County and District. The incidence of influenza in Renfrew County and District has been consistently lower compared with Ontario as a whole (Figure 4).

In the 2013/14 season, the highest number of cases in a one-month period was January 2014 (37), followed by December 2013 (11). As shown in Figure 5, 95% of cases in Renfrew County and District were influenza A compared to 59% in Ontario. Figure 6 shows confirmed influenza cases by age group.

Information about the current influenza season is provided in our **Weekly Outbreak Status Reports**, which are posted on the Renfrew County and District Health Unit web site: <http://www.rcdhu.com/Pages/InfectiousDiseases/id-outbreak-status-reports.html>.

Figure 4: Rates of influenza (confirmed cases), Renfrew County and District and Ontario



Sources: See page 7.

Figure 5: Laboratory confirmed influenza cases by type, Renfrew County and District and Ontario, 2013/14 influenza season

Influenza Type		Number of RCD cases	Percent of RCD cases	Percent of Ontario cases
Influenza A	H1N1	13	21	22
	H3	9	15	4
	No subtype available	36	59	33
Influenza B		3	5	41
Total		61	100	100

Source: Public Health Ontario. Ontario Respiratory Virus Bulletin, 2013/14 Surveillance Season (Seasonal Summary). Available online at: <http://www.publichealthontario.ca/en/ServicesAndTools/SurveillanceServices/Pages/Ontario-Respiratory-Virus-Bulletin.aspx>

Figure 6: Age groups of confirmed influenza cases, Renfrew County and District, 2013/14 influenza season

Age group	Females	Males	Total	Percent of cases
Under 5	3	2	5	8
5 - 19	2	3	5	8
20 - 45	4	7	11	18
45 - 64	8	10	18	30
65+	16	6	22	36
Total	33	28	61	100

Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS).

Lyme disease—A local public health concern

Lyme disease is a spirochete infection transmitted to humans through the bite of an infected tick. In Ontario, the tick, *Ixodes scapularis* or blacklegged tick (sometimes called the deer tick) is the primary vector of Lyme disease. Lyme disease is the most common vector-borne disease in North America. It became a reportable disease in Ontario in 1988.

While the distribution of infected ticks in Ontario is generally limited to defined areas in southern Ontario and along the St. Lawrence Seaway, isolated cases of Lyme disease can occur outside of these tick endemic areas.

In 2014, two ticks from Renfrew County and District tested positive for *Borrelia burgdorferi*, the organism that causes Lyme disease. In the same year there was one confirmed case and two probable cases of Lyme disease in our region. However, in all three cases the exposure occurred outside of Renfrew County and District.

Symptoms

A tick must attach and feed for at least 24 – 36 hours before the agent of Lyme disease is transmitted. Symptoms usually begin three to 30 days after being bitten by an infected tick.

The first sign of infection is usually a “bulls-eye” rash called erythema migrans which occurs in 70 – 80%

of those infected.

Other early symptoms include fatigue, chills, fever, headache, muscle and joint pain and swollen lymph nodes. Later symptoms may include skin rashes, heart palpitations, arthritis, and neurological disorders.

Diagnosis and Treatment

The diagnosis of Lyme disease in the early stage is based on clinical symptoms, a history of exposure to ticks in known endemic areas, the presence or absence of confirmatory lab serology results and to some extent the response to treatment.



Left to right: an *Ixodes scapularis* larva, nymph, adult male tick and adult female tick.

Serological testing plays a supporting role only in the early stage as results are often negative. It is more reliable during the later stages when there has been adequate time for antibodies to develop.

Regarding treatment, Public Health Ontario (PHO) recommends the use of the Infectious Diseases Society of America’s Clinical Practice

Guidelines, which can be accessed at: <http://cid.oxfordjournals.org/content/43/9/1089.full>

Submit Ticks to the Health Unit for Identification

Due to the fact that Lyme disease in ticks is being identified more frequently at the local level, all ticks removed from humans should be submitted for identification and testing through the Renfrew County and District Health Unit. This will ensure that blacklegged ticks receive further testing for the presence of *Borrelia burgdorferi* bacteria. We will forward the results to you when we receive them.

If you decide to submit the tick for analysis yourself to the public health lab, two forms must be completed and sent along with the specimen in order to ensure that the appropriate tests are ordered. These forms are: 1) **OAHP General Test Requisition Form #97-44** (available at http://www.publi-chealthontario.ca/en/eRepository/General_test_fillable_requisition.pdf); and 2) the Public Health Agency of Canada’s **Submission form: Passive Surveillance for Black-legged Ticks** (available at http://www.phac-aspc.gc.ca/id-mi/pdf/tick-sf_e.pdf). Contact the Renfrew County and District Health Unit Environmental Health Department at 613-735-8654 ext. 555 for further information.

Figure 7: Counts and incidence rates of reportable diseases, Renfrew County and District (RCD) and Ontario, 2014

Disease	Renfrew County and District		Ontario	
	Number of confirmed cases	Rate per 100,000 population	Number of confirmed cases	Rate per 100,000 population
Amebiasis*	1	0.94	731	5.28
Campylobacter Enteritis	24	22.64	3738	27.0
Chlamydia	270	254.69	35,749	258.21
Cryptosporidiosis	6	5.66	353	2.55
Encephalitis	1	0.94	17	0.12
Giardiasis	6	5.66	1220	8.81
Gonorrhoea	9	8.49	5822	42.05
Hepatitis A	1	0.94	83	0.6
Hepatitis C	19	17.93	4161	30.05
HIV	2	1.89	713	5.15
Influenza	53	49.99	11,245	81.22
Legionellosis	1	0.94	125	0.9
Lyme disease*	3	2.83	214	1.55
Malaria	1	0.94	188	1.36
Ophthalmia neonatorum	1	0.94	3	0.02
Pertussis*	3	2.83	267	1.93
Salmonellosis	13	12.26	2995	21.63
Streptococcal disease, Group A invasive	7	6.60	723	5.22
Streptococcal disease, Group B neonatal	1	0.94	51	0.37
Streptococcus pneumonia, invasive*	10	9.43	105.8	7.64
Syphilis, infectious	1	0.94	717	5.18
Syphilis, other	2	1.89	515	3.72
Verotoxin-producing E. coli including HUS	1	0.94	126	0.91

* Case counts for amebiasis, Lyme disease, and pertussis are the sum of confirmed and probable cases.

Sources: see page 8.

There were no confirmed cases of the other reportable diseases in the Reportable Communicable Diseases list.

References

- 1 Ontario Ministry of Health and Long-Term Care. *Infectious Diseases Protocol Appendix A: Acute Flaccid Paralysis. and Infectious Diseases Protocol Appendix A: Paralytic Shellfish Poisoning*. December 2013. Available online at: http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/infdispro.aspx
- 2 Ontario Agency for Health Protection and Promotion (Public Health Ontario). *Reportable disease trends in Ontario, 2012*. Toronto, ON: Queen's Printer for Ontario; 2014, page 145. Available online at: <http://www.publichealthontario.ca/en/BrowseByTopic/InfectiousDiseases/Pages/Reportable-Disease-Trends.aspx>
- 3 Public Health Agency of Canada. *Canadian Guidelines on Sexually Transmitted Infections—Management and Treatment of Chlamydia*. Available online at: <http://www.phac-aspc.gc.ca/std-mts/sti-its/cgsti-ldcits/section-5-2-eng.php>
- 4 Public Health Ontario. *Ontario Respiratory Virus Bulletin, 2013/14 Surveillance Season (Seasonal Summary)*. Available online at: <http://www.publichealthontario.ca/en/ServicesAndTools/SurveillanceServices/Pages/Ontario-Respiratory-Virus-Bulletin.aspx>

Sources for Figure 1: Rates of chlamydia (confirmed cases), Renfrew County and District and Ontario

RCD cases: Ontario Ministry of Health and Long-Term Care. Integrated Public Health Information System (iPHIS).
Ontario cases 2009 - 2013: ehealth Ontario portal, Infectious Disease Reports, Preliminary Disease Data.
Ontario cases 2014: Public Health Ontario. Monthly Infectious Diseases Surveillance Report, February 2015.
Population estimates 2009 - 2012: IntelliHealth Ontario, extracted November 14, 2014.
Population estimates 2013: Statistics Canada, Demography Division, Excel file distributed by Ontario Ministry of Health and Long-Term Care, Ontario CSDs 2006 – 2013.
Population estimates 2014: Based on average percent change over the previous 3 years.

Sources for Figure 4: Rates of influenza (confirmed cases), Renfrew County and District and Ontario

RCD cases: Ontario Ministry of Health and Long-Term Care. Integrated Public Health Information System (iPHIS).
Ontario cases: 2012/13—Ontario Respiratory Virus Bulletin 2012/13 surveillance season, page 1. 2011/12 - Ontario Influenza Bulletin 2011/12 surveillance season, page 2. 2010/11—Ontario Influenza Bulletin 2010/11 surveillance season, page 5. 2008/09 and 2009/10—eHealth Ontario portal, Infectious Disease Reports, Influenza 2005/06 - 2010/11.
Population estimates: Same as in Source for Figure 1 above.

Source for Figure 7: Counts and incidence rates of reportable diseases, Renfrew County and District and Ontario

RCD cases: Ontario Ministry of Health and Long-Term Care. Integrated Public Health Information System (iPHIS) database, extracted March 26, 2015.
RCD rates: Calculated using a 2014 population estimate based on the average percent change over the previous 3 years.
Ontario cases and rates: Public Health Ontario. Monthly Infectious Diseases Surveillance Report, February 2015.

Technical Notes

Crude incidence rates are calculated by dividing the total case count in a year by the total number of people at risk of acquiring the disease in that year. The total case count for most diseases is the confirmed cases. As noted on page 5, case counts for amebiasis, Lyme disease, and pertussis are the sum of confirmed and probable cases. Rates are presented per 100,000 population. The formulas for calculating rates used throughout the report is: Number of cases in specified time period and population divided by the total number of people in that population X 100,000.