

Appendix: Factors affecting Case Definition Changes in Ontario

1991-2016



Technical Report: Appendix October 2018

Public Health Ontario

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How to cite this document:

Ontario Agency for Health Protection and Promotion (Public Health Ontario). Appendix: Factors affecting Case Definition Changes in Ontario (1991-2016). Toronto, ON: Queen's Printer for Ontario; 2018.

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Public Health Ontario acknowledges the financial support of the Ontario Government.

Contributing Authors

The production of the Factors affecting Reportable Diseases in Ontario report was made possible by a collaboration of highly skilled and dedicated staff of the Communicable Disease Emergency Preparedness and Response (CDEPR) department and the Public Health Ontario Laboratory (PHOL) at Public Health Ontario (PHO). Production of the report was led by CDEPR, with contributions from the following teams: Communicable Diseases; Enteric, Zoonotic and Vector-borne Diseases; Immunization and Vaccine-Preventable Diseases; and Laboratory Surveillance and Data Management at PHOL.

Acknowledgements

Public Health Ontario wishes to express their sincere appreciation to the Ontario Ministry of Health and Long-Term Care (MOHLTC) for providing archived Appendices of the Infectious Diseases Protocol. We also thank our PHO colleagues from CDEPR, Communications, Library Services, and PHOL for their collaboration in the development, review, and interpretation of the reportable disease timeline and trends presented here.

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A guide to use the Appendix

This document is an Appendix to the <u>Factors affecting Reportable Diseases in Ontario (1991-2016)</u> report. Changes in case definitions were documented for all included reportable diseases from 1991 to 2016 based on the RDIS Guidelines², iPHIS Manual³, and the Infectious Diseases Protocol⁴. These modifications were recorded in a timeline format, showing all the years in which important changes occurred.

The tables in this Appendix show case definition changes in alphabetical order, with the name of the reportable disease and the date when it first became reportable in the titles. While the first reportable date for all the diseases have been based on the HPPA, R.S.O. 1990,¹ many of the diseases have actually been reportable in Ontario and Canada since before 1991. The columns in the tables provide the case definitions, including laboratory testing methods. Each point in the definition is numbered for differentiating each of the criteria of the definition.

If there were partial changes in definitions during subsequent years, the full definition of the disease was not provided. Rather, only the changes compared to the previous definition are fully written out. For example, if a probable definition is added in 2009, but there have been no changes made to the 1996 year confirmed case definition, the probable case definition would be fully written. For the confirmed case definition, "1996 case definition" would be written. If only part of the previous confirmed case definition is kept unchanged, "1996 case definition (#1)" would be written, where the number corresponds to the particular criteria of the previous definition which is kept unchanged.

Acute Flaccid Paralysis

First reportable in 2013 through an amendment to O. Reg 559/91 under HPPA R.S.O. 1990

2013
Confirmed cases:
Acute onset of focal weakness or paralysis characterized as flaccid (reduced tone) without other obvious cause (e.g., trauma) in children < 15 years old.
Cases of Guillain-Barré Syndrome (GBS) should be included as cases of AFP. Although this is categorized as "confirmed" it is actually a clinical case definition. Transient weakness (e.g., post-ictal weakness) should not be reported.

Amebiasis

1996	2009	2015
Confirmed cases only:	Confirmed:	Confirmed:
Clinically compatible signs and	Symptomatic or asymptomatic	Symptomatic or asymptomatic
symptoms	AND	AND
 AND 1. Demonstration of trophozoites or cysts (<i>E. histolytica/dispar</i>) in an appropriate laboratory specimen OR 2. Positive serological test(s) for <i>Entamoeba histolytica</i> 	 Positive serological test(s) for <i>E. histolytica</i>, titre >1:512 OR Positive for <i>E. histolytica</i> by stool antigen ELISA on unpreserved stool samples OR Demonstration of trophozoites in intestinal tissue 	 Demonstration of ingested RBCs in hypertrophized trophozoites of <i>Entamoeba</i> <i>histolytica (E. histolytica)</i> in preserved stool samples OR 2009 case definition (#2) OR
OR 3. An epi link to one or more laboratory confirmed cases	 biopsy or ulcer scraping (e.g., Iron-Haematoxylin [IH] stained smears) OR 4. Demonstration of trophozoited in extra- intestincal tissues (e.g., Haematoxylin and Eosin [HandE] stained sections 	2009 case definition (#3and4), but trophozoites described as hypertrophied
	Probable:	Probable:
	1. 1996 case definition (#3)	1. 1996 case definition (#3)
	OR	OR
	 Asymptomatic/symptomatic AND Presence of <i>E. histolytica/dispar</i> cysts and trophozoites by microscopy 	2. 2009 case definition (#2)

Anthrax

1996	2009	2014
Confirmed cases only:	Confirmed:	Confirmed:
Clinically compatible signs and symptoms	1. 1996 case definition (#1)	1. 2009 case definition, from a clinical
AND	OR	specimen (e.g., blood)
1. Culture of Bacillus anthracis	2. 1996 case definition (#3)	OR
OR		2. 2009 case definition, in a clinical specimen
2. <a>2+fold rise in antibody titre in paired sera		(e.g., blood)
OR	Probable:	Probable:
2 Identification of D anthropic using the	Clinically compatible signs and symptoms	2009 case definition
fluorescent antibody technique	AND	
	Detection of <i>B. anthracis</i> DNA detection	
	AND	
	Epi-link to a confirmed case or suspected	
	source	
	Suspect:	Suspect:
	Clinically compatible signs and symptoms	2009 case definition
	AND	
	Epi-link to a confirmed case or suspected	
	source	
	1996, case definition (#2) eliminated	

Acquired Immunodeficiency Syndrome (AIDS)

1996	2009	2014
Without HIV lab evidence and	Compared to previous case definitions, a	
immunodeficiency that disqualifies	confirmed HIV positive test is required	
AIDS:		
1. High dose or long-term systemic	Confirmed case of HIV Infection:	HIV Infection:
corticosteroid therapy or other	Children <18 months	Children <18 months
therapy > 3 months before onset of	Detection of HIV nucleic acid (by DNA PCR)	2009 case definition
indicator disease	OR	OR
 Any of following diseases diagnosed <u>></u>3 months after diagnosis of indicator disease: Hodgkin's disease, non-Hodgkin's lymphoma, lymphocytic leukemia, multiple 	Detection of p24 antigen in two separate samples collected one month and four months after delivery	Isolation of HIV in culture
myeloma, any other cancer of	Adults, Adolescents, Children >18 months	Adults, Adolescents, Children >18 months
lymphreticular or histiocytic tissue, or angioimmunoblastic	Detection of HIV antibody with confirmation	2009 case definition OR Isolation of HIV in culture
lymphadenopathy	OR	
3. A genetic immunodeficiency syndrome or an acquired	Detection of HIV nucleic acid	
immunodefieciency syndrome	OR	
atypical of HIV infection, such as one involving hypogammaglobulinemia	Detection of p24 antigen	
AIDS indicator diseases diagnosed	Confirmed case of AIDS:	
definitely:	Positive test for HIV infection with	2009 case definition but indicative diseases now
Bacterial infections, multiple or	confirmation	include
recurrent within a 2-year period, affecting a child <13 years	AND	M. tuberculosis (pulmonary)

1996	2009	2014
(septicemia, pneumonia, meningitis	, Definitive diagnosis of one or more AIDS	
bone or joint infection, or abscess of	indicative diseases, including:	
caused by Haemonbilus	Adults and adolescents > 15 years of age	
Streptococcus, or other pyogenic	Bacterial pneumonia (recurrent)	
bacteria*	Candidiasis (bronchia, trachea or lungs)	
• Candidiasis of esophagus, trachea,	Candidiasis (esophageal)	
bronchi, lungs	Cervical cancer (invasive)*	
Coccidioidomycosis, disseminated	Coccidioidomycosis (disseminated or ovtranulmonany)	
(at a site other than or in addition t	Cryptococcosis (extrapulmonary)	
lungs or cervical or hilar lymph	 Cryptococcosis (extrapulational y) Cryptosporidiosis chronic intestinal (>1 	
nodes)*	month duration)	
Cryptococcosis (extrapulmonary)	 Cvtomegaleovirus diseases (other than 	
Cryptospondiosis with diarrhoea porcisting >1 month	liver, spleen, nodes)	
 Cytomegalovirus disease (other that 	Cytomegalovirus retinitis (with loss of	
liver, spleen, or lymph nodes in	vision)	
patient >1month age)	 Encephalopathy, HIV-related (dementia)* 	
Cytomegalovirus retinitis with loss	f Herpes simplex: chronic ulcers (>1 month	
vision	duration) or bronchitis, pneumonitis or	
• Herpes simplex: chronic ulcers (>1	esophagitis	
month duration) or bronchitis,	Histoplasmosis (disseminated or ovtrapulmopapu)	
pneumonitis or esophagitis, in a	 Isosporiasis chronic intestinal (>1 month) 	
patient >1 month age	duration)*	
Histoplasmosis, disseminated (at a site other than on in addition to	Kaposi's sarcoma	
site other than or in addition to	 Lymphoma, Burkitt's (or equivalent term) 	
nodes)*	Lymphoma, immunoblastic (or equivalent	
 HIV encephalopathy* 	term)	
 HIV wasting syndrome* 	Lymphoma (primary in brain)	
 Invasive cervical cancer* 	• Mycobacterium avium complex or M.	
 Isosporiasis with diarrhoea 	kansaii (disseminated or extrapulmonary)	
·	Mycobacterium of other species or	

Appendix: Factors affecting case definition changes (1991-2016)

	1996	2009	2014
	persisting 1 month*	unidentified species	
٠	Kaposi's sarcoma affecting a	M. tuberculosis (disseminated or	
	patient* (HIV positive test not req.	extrapulmonary)	
	for <60 years age)	Pneumocystis carinii pneumonia	
٠	Lymphoma of brain affecting	(renamed: Pneumocystis jirovecii)	
	patient* (HIV positive test not req.	 Progressive multifocal 	
	for <60 years age)	leukoencephalopathy*	
٠	Lymphoid interstitial pneumonia	 Salmonella septicemia (recurrent) 	
	and/or pulmonary lymphoid	 Toxoplasmosis of brain 	
	hyperplasia affecting patient <13 years of age	Wasting syndrome due to HIV	
•	Mycobacterium avium complex or	*=new diseases added, compared to last	
	M. kanasii disease, disseminated (at	case definition	
	a site other than or in addition to		
	lungs, skins, cervical or hilar lymph		
	nodes)	Pediatric cases (<15 years)	
٠	M. tuberculosis disease, pulmonary	Bacterial infections (multiple or	
	and extrapulmonary*	recurrent, excluding recurrent bacterial	
٠	Mycobacterial disease caused by	pneumonia)	
	mycobacteria other than <i>M.</i>	Lymphoid interstitial pneumonia and/or	
	tuberculosis, disseminated *	pulmonary lymphoid hyperplasia	
٠	Non-Hodgkin's lymphoma of B-cell		
	or unknown immunologic phenotype		
	and following histologic types: small		
	non-cleaved lymphoma (Burkitt or		
	sarcoma*		
•	Pneumocystis carinii pneumonia		
•	Progressive multifocal		
	leukoencephalopathy		
•	Recurrent bacterial pneumonia*		
•	Salmonella (non-typhoid)		
	septicemia, recurrent*		

1996	2009	2014
 Toxoplasmosis of brain in a patient >1 month of age 		
*= Requires HIV+ lab evidence		
HIV negative lab evidence and		
diagnosis of AIDS		
 Above criteria AND a T-helper/induce (CD4) lymphocyte count <400/mm³ 		

Botulism

1996	2009	2014
Confirmed cases only:	Confirmed:	Confirmed:
	Requires definitive lab evidence	Requires definitive lab evidence
Foodborne	Foodborne	Foodborne
Clinically compatible signs and	1. 1996 case definition (#1)	Clinically compatible signs and symptoms
symptoms AND exposure to probable		AND
food source	2. 1996 case definition (#2)	
		1. 2009 case definition (#1), "botulinal" revise to
		"botulinum"
Detection of botulinal toxin in serum,		OR
stool or suspect food		2,2000 and $definition (#2) an examinate$
OR	Wound	2. 2009 case definition (#2), or gastric aspirate
1 Isolation of Clastridium botulinum	1996 case definition	
from stools		Wound
		1996 case definition AND no evidence of
OR		consumption of food contaminated with C.
2. An epi link to a lab-confirmed case of		botulinum
foodborne botulism		AND
OR		
2 No laboratory confirmation but		1. 1996 case definition (#1)
overwhelming clinical evidence of		OR
botulism		2 1006 case definition (#2) revised "of betulinum
		2. 1996 case definition (#2), revised of Botuinum
	Intestinal/Colonization Botulism	LUXIII
Wound	Clinically compatible signs and symptoms	
Clinically compatible signs and	, - , - , - , - , - , - , - , - , - , -	Intestinal/Colonization Botulism

1996	2009	2014
symptoms AND no history of exposure to suspect food AND Fresh contaminated wound within 2 weeks of onset of symptoms AND 1. Isolation of <i>C. botulinum</i> from a wound culture OR 2. Detection of toxin in serum	 AND 1. ≥ 1 year with severely compromised GI tract functioning due to various diseases such as colitis, or occurring in assoc. with other conditions or procedures that may create local or widespread disruption in normal intestinal flora OR 2. Detection of botulinum toxin in stool or serum OR 3. Isolation of <i>C. botulinum</i> from patient's stool, or at autopsy 	Clinically compatible signs and symptoms in a patient aged 1+ AND 1. 2009 case definition (#2) OR 2. 2009 case definition (#3), revised "over a prolonged period of time or at autopsy" 2009 case definition (#1) eliminated
Infant Botulism	Infant Botulism	Infant Botulism
Symptoms compatible with infant botulism (incl. sudden infant death syndrome) in a person less than one year of age	1996 case definition Probable:	1996 case definition, but "botilinal" revised to "botulinum"; and (#1), in stool or serum Probable:
AND1. Detection of botulinal toxin	Split from Foodborne Botulism in 1996 definition (#3)	2009 case definition
OR	Suspect:	Suspect:
2. Isolation of <i>C. botulinum</i> from patient's stool or autopsy	Overwhelming clinical evidence of botulism, as determined by MOH, in absence of lab- confirmation or an epidemiologic link	2009 case definition, revised "Clinical evidence strongly suggestive of"; "by MOH or attending physician"

Brucellosis

1996	2009	2014
Confirmed cases only:	Confirmed:	Confirmed:
Clinically compatible signs and symptoms		Clinically compatible signs and symptoms AND
AND	1. 1996 case definition (#1)	1. 2009 case definition (#1), from an
1. A positive culture for a species of Brucella	AND	appropriate clinical specimen (e.g., blood, tissue)
OR	2. 1996 case definition (#3)	AND
2. Detection of <i>Brucella</i> antigen		 A significant (<u>></u>4-fold) rise in <i>Brucella</i> agglutination titre between acute and
OR		convalescent serum specimens obtained
1. A ≥4-fold increase in titre to >1/80 by		2+ weeks apart
standard tube agglutination or equivalent	Probable:	Probable:
more weeks apart and studied in same	Clinically compatible signs and symptoms	Clinically compatible signs and symptoms AND
laboratory	AND	1. 2009 case definition (#1), changes:
OR	1. 1996 case definition (#4)	Supportive serology (i.e. <i>Brucella</i>
2. 4. A single high titre against <i>Brucella</i>	OR	1 or more serum specimens obtained after
>1/160	2 Enidemiologic link to a confirmed case	onset of symptoms)
		OR
	1996, case definition (#2) eliminated	2. 2009 case definition (#2), or suspected source
		OR
		3. Detection of <i>Brucella</i> spp. DNA from an appropriate clinical specimen

Campylobacter Enteritis

1996	2009	2014
Confirmed cases only:	Confirmed:	Confirmed:
Clinically compatible signs and symptoms	1. 1996 case definition (#1), but symptomatic	1. 2009 case definition (#1), but "from the
AND	or asymptomatic	stool or from body fluids" changed to "from an appropriate clinical specimen (e.g. stool, urine, body fluids)"
or from body fluids		OR
OR		2. Detection of <i>Campylobacter</i> spp. by NAAT
An epi link to two or more laboratory confirmed cases		from an appropriate clinical specimen
	Probable:	Probable:
	Clinically compatible signs and symptoms in a	2009 case definition
	person with an epi linked to a lab confirmed	
	case	

Chancroid

1996	2009
Confirmed cases only:	Confirmed:
Clinically compatible signs and symptoms	
AND	1996 case definition (#1)
1. Lab identification of <i>Haemophilus ducreyi</i> in specimen taken from any anatomical site	
OR	Probable:
2. An epi-link to a lab-confirmed case	1996 case definition (#2)

Chickenpox (Varicella)

1996	2009	2014
Confirmed cases only:	Confirmed cases only:	Confirmed:
Clinically compatible signs and symptoms	Laboratory confirmation of infection with	Clinical evidence of illness and laboratory
AND	clinically compatible signs and symptoms in	confirmation of infection:
1. Isolation of virus from vesicular fluid	absence of recent immunization with varicella containing vaccine	
 OR 2. Serological evidence of infection OR 3. Patient with a typical generalized rash evolving from macules to papules, vesicles and crusts 	 AND 1. Isolation or direct antigen detection of varicella-zoster virus (VZV) from an appropriate clinical specimen (e.g., vesicle/lesion fluid or swab submitted in viral transport media) OR 	2009 case definition (#1-4), except: (#2) <i>"by nucleic acid test (NAT)" omitted</i> OR Clinical evidence of illness in a person with an epi-link to lab-confirmed case of chickenpox or VZV infection
	2. Detection of VZV DNA by NAT	
	 OR 3. Seroconversion or significant rise by any standard serologic assay in varicella-zoster IgG titre between acute and convalescent sera OR 4. Positive serologic test for varicella-zoster IgM antibody OR Clinically compatible signs and symptoms 	 Probable*: Clinical evidence of illness in the absence of laboratory confirmation or epi-link to a lab- confirmed case. * Probable case definitions are provided as guidelines to assist with case finding and public health management, and are not for reporting purposes.

Chlamydia trachomatis infections

1996	2009	2014
Confirmed cases only:	Confirmed cases only:	Confirmed:
Genital Chlamydia		2009 case definition, except slight change:
1. Chlamydia trachomatis detected in genital	1996 case definition, Genital Chlamydia (#1)	Chlamydia trachomatis detected in an
tract or rectal specimen		appropriate clinical specimen (e.g.,
OR		urogenital tract, rectal, or pharyngeal
 Clinically compatible signs and symptoms AND epi-link to a lab-confirmed case 	1996 case definition (#2 and 3) eliminated	specimen) Probable:
Pneumonia		Clinically compatible signs and symptoms AND
 Infant <6months of age with clinically compatible signs and symptoms AND detection <i>C. trachomatis</i> in nasopharyngeal specimens and/or tracheal aspirates 		epi-link to a lab-confirmed case

Cholera

1996	2009	2014
Confirmed cases only:	Confirmed:	Confirmed:
Clinically compatible signs and	1996 case definition	2009 case definition, but "serovar which has been
symptoms	OR	shown to be toxin-producing from stool or body
AND Isolation of <i>Vibrio cholera</i> serovar 01 or	Isolation of <i>V. cholera</i> serovar O139 from appropriate specimen	fluids" omitted OR
serovar which has been shown to be		Detection of V. cholerae by NAAT from an
toxin-producing from stool or body		appropriate specimen
fluids		
	Probable:	Probable:
	Clinically compatible signs and symptoms in	2009 case definition
	a person with an epi link to a lab-confirmed	
	case	

Cryptosporidiosis

First reportable in 1996 through an amendment to O. Reg 559/91 under HPPA R.S.O. 1990

1996	2009	2015
Confirmed cases only:	Confirmed:	Confirmed:
Clinically compatible signs and symptoms	Lab confirmation AND symptomatic or	Lab confirmation of infection from
AND	asymptomatic	appropriate clinical specimen (e.g., stool,
 Demonstration of oocysts in stool or of life- cycle stages of the parasite in intestinal 	AND 1. Demonstration of <i>Cryptosporidium</i> oocysts	intestinal fluid, small bowel biopsy) AND symptomatic or asymptomatic:
biopsy sections	OR	1. 2009 case definition
OR	2. Detection of Cryptosporidium DNA	OR
 An epi link to one or more lab confirmed cases 	 OR 3. Demonstration of <i>Cryptosporidium</i> antigen by an approved method (e.g., enzyme immunoassay [EIA], immunochromatographic test [ICT]) 	2009 case definition (#2 and 3)
	Probable: 1996 case definition (#2)	Probable: 2009 case definition

Cyclosporiasis

First reportable in 2001 through an amendment to O. Reg 559/91 under HPPA R.S.O. 1990

2001	2009	2011	2014
Confirmed cases only:	Confirmed:	Confirmed:	Confirmed:
Clinically compatible signs and	Symptomatic or asymptomatic	Lab confirmation of infection,	2011 case definition, "Cyclospora
symptoms	AND	symptomatic or asymptomatic,	oocysts" changed to "Cyclospora
 AND Demonstration of <i>Cyclospora</i> oocysts (by morphologic criteria or by demonstration of sporulation) in stool/jejunal aspirates or small bowel biopsy specimens 	 1. 1996 case definition (#1) OR 2. 1996 case definition (#2) 	from an appropriate clinical specimen (e.g.: stool, duodenal/ jejunal aspirate, small bowel biopsy): 1. Demonstration of Cyclospora cayetanensis oocysts (by morphologic criteria)	<i>cayetanensis</i> oocysts (by morphologic criteria)"
OK		OR	
 Demonstration of Cyclospora DNA (by PCR) in stool/jejunal aspirates or small bowel biopsy specimens 		2. Cylclospora DNA, by polymerase chain reaction (PCR)	
OR	Probable:	Probable:	Probable:
 An epi link to one or more lab confirmed cases 	1996 case definition (#3)	 2009 case definition by: 1. Consumption of the same food or food exposure to food known to be handled by a confirmed case OR 2. History of travel to a 	Back to 2009 case definition
		cyclospora-endemic area	

Cytomegalovirus infection, congenital

1996	2002	2004	2009	2013
Confirmed:	Confirmed cases only:	Confirmed:	Confirmed:	Not reportable as of
Clinically compatible signs	1996 case definition	1996 case definition	Liveborn (within first 3	December 4, 2013
and symptoms in a			weeks of life) with	
liveborn/stillborn			clinically compatible signs	
AND			and symptoms AND lab	
1. Isolation of virus in			appropriate clinical site	
first 3 weeks of life			(urine saliva secretions	
OR			tissue)	
2. Demonstration of			OR	
typical cytomegalic			Stillborn with lab evidence	
in sediments of body			of CMV	
fluids or in organs in				
first 3 weeks of life			Probable:	
OR			Presence of one or more	
2 Corological avidance of			clinically compatible signs	
3. Serological evidence of CMV IgM within first 3			and symptoms, obtained	
weeks of life			in first 3 months of life	
			and exclusion of other	
Suspect		Suspect:	diseases that produces	
Detection of CMV in urine	Suspect case definition	1996 case definition	these abnormalities (lab	
saliva secretions or tissue	eliminated		test not needed)	
obtained after first 2				
weeks to <5 years of life				

1996	2002	2004	2009	2013
with presence of one or				
more of following signs,				
symptoms, and laboratory				
abnormalities in the first 3				
months of life and				
exclusion of other				
diseases that produce				
these abnormalities:				
purpura, splenomegaly,				
hepatomegaly,				
microcephaly,				
chorioretinitis, intra-				
cranial calcifications,				
hearing impairment and				
platelet count of				
<u><</u> 75,000/mm ³				

Diphtheria

1996	2009	2014
Confirmed cases only:	Confirmed:	Confirmed:
Clinically compatible signs and symptoms	Clinically compatible signs and symptoms in a	Clinical illness or systemic manifestations
AND	person with an upper respiratory tract	compatible with diphtheria in a person with
	infection or infection at another site	an upper respiratory tract infection or
diphtheria from nasopharyngeal, nasal or	AND	infection at another site (e.g., wound, cutaneous)
cutaneous sites	1. Isolation of <i>C. diphtheria</i> with confirmation of toxin from an appropriate clinical	AND
	specimen	2009 case definition (#1-3)
	OR	OR
	 Histopathologic diagnosis of diphtheria OR 	4. Isolation of other toxigenic Corynebacterium species (<i>C. ulcerans</i> or <i>C.</i>
	 Epi-link to a lab-confirmed case (contact within 2 weeks prior to onset of symptoms) 	<i>pseudotuberculosis</i>) from an appropriate clinical specimen
	Probable:	Probable:
	Clinically compatible signs and symptoms in the absence of lab confirmation or absence of epi-link to a lab confirmed case	2009 case definition

Food poisoning

1996	2009	2014
Confirmed cases only: Clinically compatible signs and symptoms, known to be linked to food consumption AND 1. Isolation of a microbial toxin, and/or pathogenic organism in vomitus, feces, or a	Confirmed: Clinically compatible signs and symptoms, known to be linked to food consumption AND Identification of a pathogenic organism, toxin or other agent in vomitus, stool, or a	Confirmed: Clinically compatible signs and symptoms, linked to food consumption AND Identification of a pathogenic organism that is not individually reportable, toyin or other
suspected food item	suspected food item	agent in stool, or a suspected food item
 An epi link to 2+ lab-confirmed cases of food poisoning 	Probable: Clinically compatible signs and symptoms, known to be linked to food consumption	Probable: 2009 case definition
	 AND An epi link* to one or more laboratory-confirmed cases of food poisoning * An individual who consumed the same food or food from the same source as the laboratory-confirmed case 	Suspect: An incident in which one of two or more persons, who are neither confirmed nor probable cases, experience similar clinical illness after ingestion of a common food item AND epi analysis implicates the food as the source
	Suspect: An incident in which 2+ persons experience a similar illness after ingestion of a common food AND Epi analysis implicates the food as the source of the illness	of their illness

Gastroenteritis, institutional outbreaks

1996	2009	2015
Confirmed Outbreak:	Confirmed Outbreak:	Confirmed Outbreak:
Clinical signs and symptoms compatible with and epi linked to 2 or more cases with similar signs and symptoms. (Example: Norwalk-like	1. Three or more cases* with signs and symptoms compatible with infectious gastroenteritis in a specific unit or floor within a 4-day period2OR1	2009 case definition
virus outbreaks)		Suspected Outbreak:
		Two suspected cases* of infectious
	 Three or more units/floors having a case of infectious gastroenteritis within 48 hours 	gastroenteritis in a specific area, such as a home, unit, or floor within 48 hours
	* To be defined as a case within a	
	gastroenteritis outbreak, at least one of the following must be met:	* To be defined as a suspected case within a suspected gastroenteritis outbreak, only 1
	 a. Two or more episodes of loose/watery bowel movements (conforms to the shape of the container) within a 24-hour period, or two or more episodes of vomiting within a 24-hour period 	episode of either vomiting or diarrhea and with or without other signs and symptoms associated with gastrointestinal illness. A suspected case becomes a case when 1+ of the criteria under the definition of a case
	OR	within a gastroenteritis outbreak is met.
	 b. One episode of loose/watery bowel movements (conforms to the shape of the container) and one episode of vomiting within a 24-hour period 	
	OR	

1996	2009	2015
	 c. Laboratory confirmation of a known gastrointestinal pathogen and at least one symptom compatible with gastrointestinal infection – nausea, vomiting, diarrhea, abdominal pain or tenderness 	

Giardiasis

1996	2009	2014	2015
Confirmed cases only:	Confirmed:	Confirmed:	Confirmed:
Clinically compatible signs and	Clinically compatible signs and	2009 case definition, except	2014 case definition, except "with
symptoms	symptoms	"Laboratory confirmation of	clinically compatible signs and
 AND 1. Demonstration of trophozoites or cysts in stool or small bowel specimen OR 2. An epi link to two or more lab confirmed cases 	 AND 1. Demonstration of <i>Giardia</i> <i>lamblia</i> cysts or trophozoites OR 2. Demonstration of <i>G. lamblia</i> antigen by an approved method (enzyme immunoassay [EIA], immunochromatographic test [ICT]) 	infection, with or without clinically compatible signs and symptoms, from an appropriate clinical specimen (e.g., stool, duodenal fluid, small bowel biopsy)	symptoms" 1. 2014 case definition (#1 OR 2. 2014 case definition (#2)
	Probable:	Probable:	Probable:
	Symptomatic AND a person with an epi link to a lab confirmed case	2009 case definition	2014 case definition

Gonorrhoea

1996	2009	2014
Confirmed cases only:	Confirmed cases only:	Confirmed:
 Gram negative diplococcic on a smear of urethral discharge (male only) 	Neisseria gonorrhoeae detected in an appropriate clinical specimen (e.g., urogenital, rectal or throat [pharyngeal] swab)	2009 case definition, except "throat [pharyngeal] swab" changed to "pharyngeal swab"
OR		Probable:
2. A positive culture for <i>Neisseria</i> gonorrhoeae from urogenital, rectal or throat swabs or from tissue biopsy or sterile body fluids		Clinically compatible signs and symptoms AND epi- link to a lab-confirmed case
OR		
3. Detection of <i>N. gonorrhoeae</i> by antigen detection methods		
OR		
 Clinical signs and symptoms compatible with a diagnosis of gonorrhoea, and who can be epi- linked to a lab-confirmed case 		

Group A Streptococcal disease, invasive (iGAS)

First reportable in 1995 through an amendment to O. Reg 559/91 under HPPA R.S.O. 1990

1996	2009	2013	2014
Confirmed cases only:	Confirmed:	Confirmed:	Confirmed cases only:
1. Isolation of Group A streptococcus from a normally sterile site with or without	1996 case definition	1996 case definition OR DNA detection by NAAT from a	2013 case definition
 Clinical severity OR 2. Isolation of Group A streptococcus from a non- 		normally sterile site, with or without clinical severity	
sterile site AND clinical severity	Probable: Clinical severity AND an epi-link to a lab-confirmed case of Group A Streptococcal disease	<u>Probable:</u> 2009 case definition	Probable case definition removed

Group B Streptococcal disease, neonatal

First reportable in 1995 through an amendment to O. Reg 559/91 under HPPA R.S.O. 1990

1996	2009	2014
Confirmed:	Confirmed:	Confirmed:
 Clinically compatible signs and symptoms of invasive disease in a neonate aged ≤28 days AND 1. Isolation of Group B streptococcus (Streptococcus agalactiae) from a normally sterile site 	1996 case definition	Clinically compatible signs and symptoms of invasive disease in a neonate aged <28 days AND laboratory confirmation of Group B <i>Streptococcus</i> from a normally sterile site
OR2. Detection of Group B streptococci in CSF by antigen detection		
Suspect:	Probable:	Probable:
Clinical signs and symptoms AND diagnosis of invasive Group B streptococcal disease in a neonate whose mother has lab confirmation of Group B streptococci from a lower vaginal or anorectal specimen <i>Note: Suspect cases included to ensure</i> <i>completeness of reporting in cases</i> where an infant is treated early with antibiotics before all appropriate specimens have been taken.	1996 suspect case definition	2009 case definition

Haemophilus influenza b disease, invasive

1996	2009	2014
Confirmed cases only:	Confirmed:	Confirmed:
Meningitis	Clinically compatible signs and symptoms of	2009 case definition, except (#1 and 2)
Clinically compatible signs and symptoms of	invasive disease with lab confirmation of	"serotype b" changed to "type b*" with
meningitis AND	infection (organism detected) AND	* Note: only H. influenza caused by serotype b
1. Isolation of Haemophilus influenzae type b	1. Isolation of <i>H. influenzae</i> serotype b from a	is reportable; other types of <i>H. influenza</i>
OR	normally sterile site (e.g., CSF)	not reportable)
2. Detection of antigen from CSF	OR	
	2. Isolation of <i>H. influenzae</i> serotype b from	
Epiglottis	epiglottis in a person with epiglottis	
Clinically compatible signs and symptoms of		
epiglottis	Probable:	Probable:
	Invasive disease with lab confirmation of	2009 case definition, except:
AND	infection (antigen detected) AND	
 Isolation of <i>Haemophilus influenzae</i> type b from the epiglottis or a normally sterile site 	 Demonstration of <i>H. influenzae</i> serotype b antigen in CSF 	(#1) " <i>H inflenzae</i> serotype b" changed to " <i>H.</i> <i>influenzae</i> type b (Hib)"
OR	OP.	
2 Detection of antigan in uring	OK .	(#2) "by NAT" omitted
2. Detection of antigen in unne	Detection of <i>H. influenzae</i> DNA by NAT in a normally sterile site	
Other Invasive Disease	OR	
Clinically compatible signs and symptoms of invasive disease AND Isolation of	Buccal cellulitis or epiglottis in a child < 5 years	
Haemophilus influenza type b from a normally sterile site	of age with no other causative organisms isolated	
Hantavirus Pulmonary Syndrome

First reportable in 2001 through an amendment to O. Reg 559/91 under HPPA R.S.O. 1990

2001	2009	2014
Confirmed cases only:	Confirmed cases only:	Confirmed cases only:
Clinically compatible symptoms AND	2001 case definition, slight change:	
 Detection of hantavirus-specific IgM or <u>></u>4- fold increase in hantavirus-specific IgG antibody titres 	 Detection of IgM antibodies or a significant (i.e. <u>></u>4-fold) rise in hantavirus- specific IgG antibody titres 	1. 2009 case definition (#1) OR
OR	OR	2. Detection of hantavirus-specific NAAT in an
 Detection of hantavirus-specific RNA sequence by PCR in an appropriate clinical specimen 	2. 2001 case definition (#2) OR	OR
OR	3. 2001 case definition (#3)	3. 2009 case definition (#3)
 Detection of hantavirus antigen by immunohistochemistry 		

Hemorrhagic fevers (Ebola virus, Marburg virus, other viral causes)

1996	2009	2014
Confirmed cases only:	Confirmed:	Confirmed
Clinically compatible signs and	Clinically compatible signs and symptoms	Clinically compatible signs and symptoms AND 2+ of
symptoms AND	AND Detection of virus-specific nucleic acid	hemorrhagic manifestations AND
1. Positive IgM antibody tests OR	by RT-PCR from an appropriate clinical	
2. Detection on indetion of view OD	specimen (e.g., blood, urine, throat	Lab confirmation:
2. Detection or isolation of virus OR	washings, tissue) AND Confirm with one of	Detection of virus-specific RNA by RT PCR from an
3. A <u>></u> 4-fold in antibody titre from	the following:	appropriate clinical specimen AND
paired sera	1. Demonstration of virus antigen in tissue	Demonstration of virus antigen in appropriate
	(skin, liver, spleen) by	One of the above lab criteria $+$ lab confirmation
		using $1 + of$ the 2009 case definition (#1-4) OB
	2 Demonstration of energific LeM entitled	2009 case definition (#5)
	by ELISA, EIA, immunofluorescent assay, or Western Blot OR	
	 3.Demonstration of ≥4-fold rise in IgG serum antibody by EIA, imunofluorescent assay, or Western Blot OR 	
	 RT-PCR on an independent target gene and/or independent sample or confirmation through another reference laboratory OR 	
	 Isolation of virus from an appropriate clinical specimen (blood, tissue, urine specimens, throat secretions) 	

1996	2009	2014
	Probable:	Probable
	Clinically compatible signs and symptoms	2009 case definition, AND >2 of hemorrhagic
	AND a history within the 3 weeks before	manifestations
	onset of fever of the following:	
	 Travel in a specific areas of a country where an outbreak of viral hemorrhagic fever (VHF) has occurred recently OR 	
	 An epi-link with a confirmed or probable case OR 	
	 Direct contact with blood or other body fluids from a confirmed or probable case OR 	
	 Works in lab that handles VHF virus specimens or in a facility that handles animals with VHF OR 	
	5. A NAAT positive without lab confirmation by another approved or validated test	
	Suspect:	Suspect case definition eliminated
	Clinically compatible signs and symptoms in	
	the absence of an epi-link to a lab-confirmed	
	case or probable case	

Hepatitis A

1996	2009	2014
Confirmed cases only:	Confirmed:	Confirmed:
 Clinically compatible signs and symptoms AND 1. Demonstration of IgM anti-HAV OR An epi link to one or more laboratory confirmed cases of Hepatitis A OR 2. An asymptomatic individual with anti-HAV 	Lab confirmation of infection, in the absence of recent vaccination AND Detection of IgM antibody to anti-HAV AND 1. Acute illness with discrete onset of symptoms and jaundice or elevated serum	Laboratory confirmation of infection, in the absence of recent hepatitis A vaccination, with detection of anti-HAV IgM AND 1. 2009 case definition, (AST, ALT) OR 2. 2009 case definition
IgM	aminotransferase levels OR 2. An epi link to lab-confirmed case <u>Probable:</u> Acute illness in a person with an epi link to a lab-confirmed case	Probable: 2009 case definition

Hepatitis B

1996	2009	2012	2014
Confirmed cases only:	Confirmed:	Confirmed:	Confirmed:
Symptomatic:	Acute case (symptoms)	2009 case definition	2009 case definition
 Detection of positive anti-HBc IgM OR Conversion from anti-HBc 	 AND 1. Detection of HBsAg and IgM antibody to anti-HBc OR 	Probable: 2009 case definition	Probable: 2009 case definition
negative to anti-HBc positive between acute and convalescent serum samples	 Loss of HBsAg over 6 months in the context of a compatible clinical history or probable exposure 	1. Detection of HBsAg with a negative IgM anti-HBc	2012 case definition, except : (#1) Detection of HBsAg with a negative IgM anti-HBc in the
 3. Conversion from HBsAg positive to anti-HBsAg between acute and convalescent serum samples OR 4. Positive HBsAg and negative IgM anti-HAV Asymptomatic: Conversion to anti-HBs within 6 months of HBsAg 	 <u>Probable:</u> Acute case (symptoms) AND 1. An epi-link to a lab-confirmed case OR 2. Detection of HBsAg (and HAV and HCV negative) when the test for IgM antibody to anti-HBc is not available 	 2. Presence of HBsAg for > 6 months OR 3. Presence of HBV DNA for > 6 months 	<pre>context of a compatible clinical history (#2) Persistence of detectable HBsAg for >6 months OR (#3) Persistence of detectable HBV DNA for > 6 months</pre>

Hepatitis C

1996	2009
Confirmed cases only:	Confirmed cases only:
Symptomatic or asymptomatic	
AND	
1. Detection of anti-HCV	1996 case definition (#1, if >18 months age)
OR	OR
Conversion from anti-HCV negative to anti-HCV positive between acute and convalescent serum samples	Detection of Hepatitis C virus RNA

Hepatitis D

1996	2009	2013
Confirmed cases only:	Confirmed cases only:	Not reportable as of December 4, 2013
Clinically compatible signs and symptoms AND	1. 1996 case definition (#1)	
1. Acute or chronic Hepatitis B	AND	
AND	2. Detection of total antibody (IgM and IgG)	
2. Detection of total anti-HDV	to the anti-HDV	

Herpes, neonatal

1996	2009	2013
Confirmed cases only:	Confirmed cases only:	Not reportable as of December 4, 2013
1. Clinically compatible signs and symptoms	1996 case definition, except :	
AND	(#2) Detection of herpes simplex virus (HSV) in	
Isolation of herpes simplex virus from any site in any infant <1 month of age	an infant (most commonly occurs in infants less than or equal to 28 days in age)	

Influenza

1996	2004	2005	2009	2012	2014
Confirmed cases only:	Confirmed cases only:	Confirmed cases only:	Confirmed:	Confirmed cases only:	Confirmed cases only:
Contirmed cases only: Clinically compatible signs and symptoms AND 1. Lab confirmation by detection or isolation of influenza virus in pharyngeal or nasal secretions OR 2. ≥4-fold increase in hemagglutination antibody titres to influenza between acute and convalescent sera	Confirmed cases only: 1996 case definition, except (#1) slight change: Lab confirmation by detection or isolation of influenza in pharyngeal, nasal secretions or lung tissue	Confirmed cases only: 2004 case definition OR 3. An epi-link to a lab-confirmed case	Contirmed: 2005 case definition OR 4. Detection of influenza-specific RNA Suspect: Clinically compatible signs and symptoms without epi-link to a lab-confirmed case	Contirmed cases only: 2005 case definition, except (#3) applies to institutional outbreaks only Suspect case definition removed	Contirmed cases only: 2012 case definition, except (#1) slight change: Lab confirmation by detection or isolation of influenza virus from appropriate clinical specimen(s) (e.g., nasopharyngeal/ throat swabs)

Lassa Fever

2005	2009	2014
Confirmed cases only:	Confirmed:	Confirmed:
Clinically compatible signs and	Clinically compatible signs and symptoms	Clinically compatible signs and symptoms AND
symptoms	AND Detection of virus-specific nucleic acid	Detection of virus-specific RNA by RT-PCR from an
	by RT-PCR from an appropriate clinical	appropriate clinical specimen (e.g., blood, serum,
AND	specimen (e.g., blood, urine, throat	tissue, urine or throat washings) AND
1. Positive IgM antibody tests	washings, tissue)	Demonstration of virus antigen in an appropriate
OR	AND	clinical specimen by enzyme immunoassay (EIA) OR
 Detection or isolation of the virus 	 Demonstration of virus antigen in tissue (skin, liver, or spleen) by 	one of the above plus lab confirmation using 1+ of the following:
OR	immunohistochemical or	1. 2009 case definition (#1)
3. A <u>></u> 4-fold rise in antibody titre from	OR	OR
		2. 2009 case definition (#2)
	2. 2005 case definition (#1), by ELISA, EIA, immunofluorescent assay, or Western	OR
	Blot	3 2009 case definition (#3) slight change
	OR	Demonstration of a >4-fold rise in IgG serum
	3. 1996 case definition (#3), by EIA, immunofluorescent assay, or Western	antibody by EIA, immunofluorescent assay or Western blot
	Blot	OK .
	OR	4. 2009 case definition (#4)
	4. RT-PCR on an independent target gene	OR
	and/or independent sample or confirmation through another reference laboratory	5. 2009 case definition (#5), "Detection or" omitted

2005	2009	2014
	OR	
	 2005 case definition (#2), from an appropriate clinical specimen (e.g., blood, tissue, urine specimens, throat secretions) 	
	Probable:	Probable:
	Clinically compatible signs and symptoms AND 1. History within the 3 weeks before onset of fever of one of the following :	"NAAT"
	a. Travel in a specific area of a country where an outbreak of lassa fever has recently occurred	
	OR	
	 An epi-link with a confirmed or probable case 	
	OR	
	 c. Direct contact with blood or other body fluids from a confirmed or probable case of lassa fever 	
	OR	
	 Works in a lab that handles lassa fever virus specimens or in a facility that handles animals with lassa fever 	
	OR	
	2. A NAT-positive without lab confirmation	

2005	2009	2014
	by another approved or validated test	
	Suspect:	Course of an and a line in the d
	Clinically compatible signs and symptoms in	Suspect cases eliminatea
	the absence of an epi-link to a lab-confirmed	
	case or a probable case	

Legionellosis

1996	2009	2011	2012
Confirmed cases only:	Confirmed:	Confirmed:	Confirmed:
Clinically compatible signs and symptoms AND	1. 1996 case definition (#1) with <i>Legionella</i> spp.—more broad)	2009 case definition	2011 case definition, except (#1) "from appropriate clinical
 Isolation of <i>Legionella</i> pneumophila organism or antigen detection from a site which is normally sterile 	OR2. 1996 case definition (#3) with <i>Legionella</i> spp.—more broad)		(#3) "static" changed to "single
OR	OR		specimen"
 ≥4-fold in antibody titre to 1:128 against <i>L. pneomophila</i> OR 	 A significant ≥4-fold rise in Legionella spp. total antibody titre between acute and convalescent sera 		
3. Static or single antibody titre of 1:256	OR 4. Demonstration of <i>L</i> .		
	pneumophila serogroup 1	Probable:	Probable:
	antigen in unne	2009 case definition	2011 case definition
	<u>Probable:</u> Clinically compatible signs and symptoms AND Demonstration of <i>Legionella</i> spp. DNA by NAT, such as PCR	 Detection of <i>Legionella</i> antigen or staining of the organism in respiratory secretions, lung tissue, or pleural fluid by DFA staining, IHC, or other similar method 	

Listeriosis

1996	2009	2015
Confirmed cases only:	Confirmed:	Confirmed:
Clinically compatible signs and symptoms	1996 case definition, (e.g., blood, CSF, joint,	1996 case definition, but:
AND	pleural or pericardial fluid)	1. 2009 case definition (#1)
 Isolation of <i>Listeria monocytogenes</i> from a normally sterile site, including fetal gastrointestinal contents 		 OR 2. Isolation of <i>L. monocytogenes</i> from miscarried or stillbirth placental or fetal tissue
	Probable:	Probable:
	Clinically compatible signs and symptoms	2009 case definition
	AND	
	1. An epi link to a lab-confirmed case	
	OR	
	 An epi link to a confirmed source (contam. Milk, soft cheese, ready-to-eat meats) 	

Lyme disease

1996	2009	2015
Confirmed:	Confirmed:	Confirmed:
 Endemic: 1. Isolation of <i>Borrelia burgdorferi</i> from a clinical specimen OR 2. Erythema migrans observed by a physician OR 	 (Erythma migrans or objective symptoms of disseminated Lyme disease) AND lab confirmation by PCR or culture OR (Erythma migrans or objective symptoms of disseminated Lyme disease) AND lab support by serological methods AND 	 Clinician-confirmed erythema migrans (EM) >5 cm in diameter with a history of residence in, or visit to, a Lyme disease endemic area or risk area OR Clinical evidence of Lyme disease AND lab confirmation by PCR or culture
 At least one clinically compatible late manifestation (neurologic, cardiac or musculoskeletal) AND laboratory evidence of <i>B. burgdorferi</i> infection Non-endemic: 	history of residence in, or visit to, an endemic area	 OR 3. 2009 case definition (#2), except "(Erythma migrans or objective symptoms of disseminated Lyme disease)" changed to "Clinical evidence of Lyme disease"
 Erythema migrans observed by a physician AND lab evidence of <i>B. burgdorefi</i> infection 		

1996	2009	2015
Probable:	Probable:	Probable:
Endemic:1. Physician recognition of erythema migrans as reported by patient	 (Erythma migrans or objective symptoms of disseminated Lyme disease) AND lab support by serological methods but with no history of residence in, or visit to, an 	 2009 case definition (#1), except "(Erythma migrans or objective symptoms of disseminated Lyme disease)" changed to "Clinical evidence of Lyme disease"
Non-endemic:	endemic area	OR
 At least one clinical compatible late manifestation (neurologic, cardiac, or musculoskeletal) AND lab evidence for <i>B.</i> <i>burgdorferi</i> infecton 	 OR 2. Erythma migrans AND history or residence in, or visit to, an endemic area but no lab confirmation 	 Clinician-confirmed EM >5cm in diameter but no history of residence in, or visit to an endemic area or risk area

Malaria

1996	2009	2014
Confirmed cases only:	Confirmed:	Confirmed:
Clinically compatible signs and symptoms	1996 case definition, but symptomatic or	2009 case definition, but "malaria parasites"
AND Presence of malaria parasites on peripheral blood smears	asymptomatic	changed to " <i>Plasmodium</i> sp." in blood smear/film (thick and thin)
	Probable:	Probable:
	Symptomatic or asymptomatic	2009 case definition
	AND	OR
	Detection of <i>Plasmodium</i> sp. antigen in an appropriate clinical specimen (e.g., blood)	Detection of amplified Plasmodium DNA by NAAT

Measles

1996	2005	2009	2013	2014
Confirmed cases only:	Confirmed cases only:	Confirmed cases only:	Confirmed:	<u>Confirmed</u> :
A. Clinically compatible	A. Clinically compatible	Clinically compatible signs	Clinically compatible signs	Clinical evidence of
signs and symptoms AND	signs and symptoms AND	and symptoms in absence	and symptoms in absence	invasive disease AND
 4-fold rise in blood or saliva antibody titre OR Presence of measles- specific IgM OR An epi-link with a lab- confirmed case OR Detection of measles 	 1996 case definition (#2), present 3-4 days after onset of rash OR Significant rise in antibody concentrations between acute and convalescent sera OR 	of recent immunization with measles-containing vaccine AND 1. 1996 case definition (#4) OR 2. Detection of measles RNA from an appropriate clinical	of immunization with measles-containing vaccine in the last 7-42 days AND 1. 2005 case definition (#3) OR 2. 2009 case definition (#2) OB	 2013 case definition (#1), slight change: Isolation of measles virus from an appropriate clinical specimen (e.g., nasopharyngeal swab/aspirate/wash and urine) OR
 virus from appropriate specimens OR B. Clinically compatible signs and symptoms AND 1. Fever >38.3°C (101°F) AND 2. Cough, coryza or conjunctivitis AND 3. Generalized maculopapular rash for at least 3 days 	 3. 1996 case definition (#4), from blood or NP swab collected before day four of rash onset or from urine specimen taken within 7 days of rash onset OR 4. 1996 case definition (#3) OR 1996 case definition, Part B 	 specimen OR 3. 2005 case definition (#2), for IgG titre OR 4. 1996 case definition (#2), in a person who is either epi-linked to a lab-confirmed case or has recently travelled to an area of known measles activity OR 5. 1996 case definition (#3) 	 2009 case definition (#3) 2009 case definition (#4) OR 2009 case definition (#5), OR Travel during the 21 days prior to onset of rash to a measles endemic area or where an outbreak of measles is occurring or belonging to a defined risk 	 2. 2013 case definition (#2) OR 3. 2013 case definition (#3), slight change: Seroconversion or a significant (i.e. ≥4- fold or greater) rise in measles IgG titre by any standard serologic assay between acute and convalescent sera OR 4. Positive serologic test
		Part B eliminated	group during an outbreak	for measles IgM antibody using a

1996	2005	2009	2013	2014
		Probable: Clinically compatible signs and symptoms AND 1. Absence of appropriate lab tests or epi-link to lab- confirmed case OR 2. Recent travel to an area of known measles activity	Probable: 2009 case definition	recommended assay in a person who is either epi-linked to a lab-confirmed case OR has recently travelled to an area of known measles activity OR Clinically compatible signs and symptoms in a person AND known epi-link to a lab-confirmed case of measles <u>Probable:</u> Clinical evidence of infection in the absence of immunization with measles-containing vaccine in the last 5-42 days AND 1. A positive serologic test for measles IgM antibody using a recommended assay OR 2. 2009 case definition (#2)

Meningococcal disease, invasive

1996	2005	2009	2014
Confirmed cases only:	Confirmed cases only:	Confirmed:	Confirmed:
 Isolation of <i>Neisseria</i> <i>meningitidis</i> from a normally sterile site OR Signs and symptoms of meningococcemia (purpura fulminans) without culture confirmation OR 	 1996 case definition, except: 1. Signs and symptoms of meningitis AND a. antigen detection from CSF or serum, usually by latex agglutination 	1996 case definition (#1) OR 1. Detection of <i>N. meningitidis</i> DNA by a validated NAT from a normally sterile site	 Clinical evidence of invasive disease: 1. 1996 case definition (#1) (e.g. blood, cerebrospinal fluid [CSF], joint, pleural, or pericardial fluid) OR 2. 2009 case definition (#2), but "NAT" changed to "NAAT"
3 Signs and symptoms of	OR		
meningitis	b. Gram negative diplococci in	Probable:	Probable:
AND	CSF, blood, or skin lesions	1996 case definition (#2) AND	Clinical evidence of invasive
 a. Antigen detection from CSF or serum, usually by latex agglutination OR a. Gram negative diplococci in CSF, blood, or skin lesions 	OR c. Detection of <i>N. meningitidis</i> from serogroup-specific PCR (<i>new</i>)	demonstration of <i>N. meningitidis</i> antigen in the CSFF	disease with purpura fulminans or petechiae with no other apparent cause AND with non-confirmatory laboratory evidence AND Detection of <i>N. meningitidis</i> antigen in the CSF

Mumps

First reportable in 1991 under HPPA R.S.O. 1990

1996	2005	2009	2014
Confirmed cases only:	Confirmed cases only:	Confirmed:	Confirmed:
A. Clinically compatible signs and	A. 1996 case definition, except:	Clinically compatible signs and	2009 case definition, in the last
symptoms AND	(#2) Demonstration of <u>></u> 4-fold	symptoms in absence of recent	seven to 42 days AND
1. Isolation of virus from	increase or serconversion in	immunization with mumps-	1. 1996 case definition (#1) (e.g.
appropriate specimens	serum mumps IgG antibody titre	containing vaccine AND	buccal swab, throat swab and urine culture)
OR	OR	1. 1996 case definition (#1)	OR
 Demonstration of ≥4-fold increase in antibody titre 	 Positive mumps-specific IgM antibodies 	OR	2. 2009 case definition (#2) <i>"by a</i>
OR		2. Detection of mumps virus RNA	validated NAT" omitted
An epi-link with another confirmed case		appropriate clinical specimen (e.g., buccal swab and urine	OR 3. 2005 case definition (#2), by
OR	OR	sample; buccal swab preferred)	any standard serologic assay between acute and convalescent sera
B. Clinically compatible signs and symptoms AND	B. 1996 case definition	3. 2005 case definition (#2)	OR
1. Fever		OR	4. 2009 case definition (#4)
AND		4. 2005 case definition (#4) in a person who is either epi-linked	OR
2. Tender self-limited swelling of the salivary glands lasting two		to a lab-confirmed case or has recently travelled to an area	5. 1996 case definition (#3)
or more days		OR	
		5. 1996 case definition (#3)	

Appendix: Factors affecting case definition changes (1991-2016)

1996	2005	2009	2014
3. No other apparent cause		Probable:	Probable:
		 Clinically compatible signs and symptoms in the absence of an epi-link to a lab-confirmed 	2009 case definition (#1), and in the absence of appropriate lab tests
		case	
		OR	
		2. Clinically compatible signs and symptoms in a person with recent travel to an area of known mumps	

Opthalmia neonatorum

1996	2009
Confirmed cases only:	Confirmed:
An infant <1 month of age AND signs of conjunctivitis AND	1996 case definition, but signs of conjunctivitis not necessary
1. Detection by culture or direct antigen of <i>N. gonorrhoeae</i> from	Probable:
conjuctival exudate or pseudomembrane or by stained smear of conjuctival exudate showing typical gram negative intracellular diplococcic	Lab confirmation of <i>Neisseria gonorrhoeae</i> or <i>Chlamydia trachomatis</i> in maternal specimen
OR	AND/OR
 Detection of <i>C. trachomatis</i> from conjuctival exudate or pseudomembrane 	Clinically compatible signs and symptoms in an infant <1 month of age

Paralytic shellfish poisoning

First reportable in 2013 through an amendment to O. Reg 559/91 under HPPA R.S.O. 1990

2013
Confirmed:
Clinically compatible signs and symptoms AND
1. Detection of Paralytic Shellfish Poison in ingested shellfish or other seafood (e.g. whole scallops, crabs and lobsters)
OR
2. Detection of high levels of dinoflagellates associated with shellfish poisoning in water from which epidemiologically related shellfish were gathered
OR
3. Detection of PSP toxins in urine sample
Probable:
Clinically compatible signs and symptoms with onset within 12 hours following consumption of a potential source of Paralytic Shellfish Toxins (e.g., shellfish or other seafood, such as whole scallops, crabs and lobster)

Paratyphoid fever

1996	2009	2013	2014
Confirmed cases only:	Confirmed:	No change	Confirmed:
Clinically compatible signs and	1996 case definition		Symptomatic or asymptomatic
symptoms AND 1. Isolation of <i>Salmonella</i> <i>paratyphi A, B, C</i> from any appropriate specimen OR		* Note: Salmonella Paratyphi B variant java now entered as Salmonellosis, not Paratyphoid Fever	 AND 1. 1996 case definition, excluding S. Paratyphi B variant Java); specimens specified (e.g., sterile site, blood, stool, urine)
 Isolation of S. paratyphi from an asymptomatic individual 	Probable: Clinically compatible signs and symptoms AND An epi link to a lab-confirmed case		Probable: 2009 case definition OR Positive NAAT for <i>Salmonella</i> Paratyphi without culture confirmation

Pertussis

1996	2005	2009	2014
Confirmed cases only:	Confirmed cases only:	Confirmed:	Confirmed:
1. Lab-confirmation of <i>Bordetella pertussis</i> in nasopharyngeal	 1996 case definition (#1), by culture and/or PCR testing 	Clinically compatible signs and symptoms AND	1. 1996 case definition (#1), from an appropriate specimen
swabs	OR	1. 1996 case definition (#1)	OR
 OR 2. A clinical case with an epi-link to a lab-confirmed case OR 3. Cough lasting two or more weeks, for which there is no other known cause, and one of the following: paroxysmal cough, cough ending in apnea or vomiting or inspiratory 'whoop' 	 OR 2. 1996 case definition (#2) OR 3. 1996 case definition (#3) OR 4. Detection of specific antigens from acute and convalescent sera 	 1996 case definition (#1) OR Detection of DNA by NAT from an appropriate clinical specimen (e.g., nasopharyngeal swabs) OR 1996 case definition (#2) 	 2. 2009 case definition (#2), "NAT" changed to "NAAT" AND 1+ of the following: a. cough lasting 2 weeks b. paroxysmal cough of any duration c. cough with inspiratory "whoop" d. cough ending in vomiting or gagging, or associated with apnea OR 3. Epi-link to lab-confirmed case AND 1+ of the following for which there is no other known cause: a. paroxysmal cough of any
			b. cough with inspiratory

1996	2005	2009	2014
		Probable: 1996 case definition (#3), in the absence of appropriate lab tests and epi-links	 "whoop" c. cough ending in vomiting or gagging, or associated with apnea Probable: 2009 case definition

Plague

1996	2009	2014
Confirmed cases only:	Confirmed:	Confirmed:
Clinically compatible signs and symptoms AND	1. 1996 case definition (#1) OR	1. 2009 case definition (#1)
 Isolation or detection of <i>Yersinia pestis</i> from an appropriate clinical specimen OR 	 1996 case definition (#2) by EIA or passive haemagglutination/inhibition titre 	 2009 case definition (#2), slight change: A ≥4-fold rise in serum antibody titre to
 A ≥4-fold rise in serum antibody to Y. pestis OR 		Y.pestis fraction 1 (F1) antigen by EIA or passive haemagglutination/inhibition titre
3. A single high antibody titre $\geq 1/256$ to Y.		
<i>pestis</i> in the absence of immunization OR	Probable:	Probable:
4. Demonstration of Y. pestis antigen in	Clinically compatible signs and symptoms AND	2009 case definition
appropriate clinical specimens	 Demonstration of elevated serum antibody titres to Y. pestis F1 antigen (without ≥4- fold rise) in a patient with no history of plague immunization OR 	
	 1996 case definition (#4) by immunofluorescence OR 	
	3. Detection of Y. pestis nucleic acid OR	
	 >1:10 passive haemagglutination/inhibition titre in a single serum sample in a patient with no history of vaccination or previous infection OR 	
	5. Detection of <i>Y. pestis</i> antibody by EIA	
	1996 case definition (#3) eliminated	

Pneumococcal disease, invasive

First reportable in 2001 through an amendment to O. Reg 559/91 under HPPA R.S.O. 1990

2005	2009	2014
Confirmed cases only:	Confirmed:	Confirmed:
 Clinically compatible signs and symptoms AND 1. Isolation of <i>Streptococcus pneumoniae</i> from blood or CSF 	Laboratory confirmation of infection (organism detected) with invasive disease	Clinical evidence of invasive disease with laboratory confirmation of infection:
OR2. Demonstration of <i>S. pneumoniae</i> antigen in	AND 1. 2005 case definition (#1) OR	1. 2005 case definition (#1) OR
CSF OR 3. An epi-link to a lab-confirmed case	 Detection of <i>S. pneumoniae</i> DNA by NAT from a normally sterile site (blood, CSF) 	2. 2009 case definition (#2)
	Probable: Invasive disease and no other apparent cause AND	Probable:* Clinical evidence of invasive disease and no other apparent cause with non-confirmatory laboratory evidence: demonstration of S.
	1. 2005 case definition (#2)	pneumoniae antigen from a normally sterile site (e.g., blood, CSF), excluding the middle ear. *Probable case definitions are provided as
		guidelines to assist with case finding and health management, and are not for provincial notification purposes

Poliomyelitis, acute

1996	2009	2014
<u>Confirmed cases only:</u> Clinically compatible signs and symptoms including flaccid paralysis of one or more limbs, decreased or absent deep tendon reflexes on the affected limb(s), no sensory or	Confirmed: Clinically compatible signs and symptoms of paralytic polio AND with travel to a polio endemic region AND	Confirmed: Paralytic Clinical illness with lab confirmation: 1. 1996 case definition (#1)
cognitive loss, neurologic deficit present 60 days after onset of initial symptoms unless patient has died, no other apparent cause	 1. 1996 case definition (#1) OR 2. Detection of polio virus RNA by NAT 	 OR 2. 2009 case definition (#2), "NAT" changed to "NAAT" OR
AND1. Isolation of vaccine or wild poliovirus from a clinical specimen (e.g., stool, CSF)	 OR 3. Clinically compatible signs and symptoms in a person with an epi-link to a lab- 	3. 2009 case definition (#3)
OR2. A 4-fold rise in antibody titre to poliovirus	confirmed case	Non-paralytic Any person without symptoms of paralytic poliomyelitis, with lab confirmation:
	Clinically compatible signs and symptoms without detection of polio virus from an appropriate specimen (e.g., stool, pharyngeal swabs, CSF) and without evidence of infection with other neurotropic viruses AND with travel to a polio endemic region	 1.1996 case definition (#1), vaccine* OR 2. 2009 case definition (#2), "NAT" changed to "NAAT" *except where there has been vaccination with oral polio virus (OPV) in the 30 days prior to the date of specimen collection
		Probable case definition eliminated

Psittacosis/Ornithosis

1996	2009	2014
Confirmed cases only:	Confirmed:	Confirmed:
Clinically compatible signs and symptoms	Same as 1996 case definition:	Clinically compatible signs and symptoms AND
 AND 1. A ≥4-fold antibody rise against <i>Chlamydia</i> psittaci OR 2. Isolation of infectious agent from a clinical specimen OR 	 1. 1996 case definition (#1) 2. 1996 case definition (#2) 	 AND 1. 2009 case definition (#1), but "Chlamydia psittaci" changed to "Chlamydophila psittaci" OR 2. 2009 case definition (#2) OR
 A single CF titre ≥ 1/32 	Probable:Clinically compatible signs and symptomsAND1. Epi-link to a known source (human, animal, environment)OR2. 1996 case definition (#2)OR3. Positive for NAT for <i>C. psittaci</i> specific targets	 3. 2009 case definition (#3) from Probable cases, but "NAT" changed to "NAAT" Probable: Clinically compatible signs and symptoms AND 1. 2009 case definition (#1) OR 2. Supportive serology (e.g., <i>C. psittaci</i> titre of ≥ 32) with one or more serum specimens obtained after onset of symptoms

Q-fever

1996	2009	2014
Confirmed cases only:	Confirmed:	Confirmed:
Clinically compatible signs and symptoms AND	Same as 1996 case definition (#1 and 2)	Clinically compatible signs and symptoms AND
 A <u>></u>4-fold rise in specific antibodies to Coxiella burnetii 		 A significant (<u>></u>4-fold) rise in specific IgG antibody titer to <i>C. burnetii</i> phase II antigen
OR		antigen
2. Isolation of <i>C. burnetti</i> from blood		OR
OR		2. Isolation of C. burnetii from a clinical
		specimen
3. 3. A single CF titre $\geq 1/128$		OR
		3. Detection of <i>C. burnetii</i> DNA from a clinical specimen by NAAT testing
	Probable:	Probable:
	Clinically compatible signs and symptoms AND	Clinically compatible signs and symptoms AND
	1. An epi-link to a lab-confirmed case	1. Epi-link to a lab-confirmed case
	OR	OR
	2. A single CF titre >1:32	2. 2009 case definition (#1), slight change:
	OR	Only asymptomatic, <i>symptomatic omitted</i>
	 Asymptomatic individual with positive lab evidence AND epi-link to confirmed source (human, animal, environment) 	 Single convalescent serum sample (IgG phase II <u>></u>1:256) from a patient who has been ill > 1 week.

Rabies

1996	2009
Confirmed cases only:	Confirmed:
Clinically compatible signs and symptoms	Clinically compatible signs and symptoms
AND	AND
Lab confirmation by antigen detection, virus isolation, or appropriate serologic evidence	 Detection of viral antigen in an appropriate clinical specimen, preferably the brain or the nerves surrounding hair follicles in the nape of the neck, by immunofluorescence
	OR
	2. Isolation of rabies virus from saliva, CSF, or CNS tissue using cell culture or laboratory animal
	OR
	 Detection of rabies virus RNA in an appropriate clinical specimen (e.g., saliva)
	Probable
	Clinically compatible signs and symptoms
	AND
	Demonstration of rabies-neutralizing antibody titre > 5 (i.e., complete
	neutralization) in the serum or CSF of an unvaccinated person

Respiratory infection outbreaks in institutions

First reportable in 2001 through an amendment to O. Reg 559/91 under HPPA R.S.O. 1990

2002	2009	2015
Confirmed respiratory infection	Confirmed respiratory infection outbreak in	Confirmed respiratory infection outbreak in a Long-
outbreak in a Long-Term Care Home:	a Long-Term Care Home:	Term Care Home:
 Two cases of acute respiratory tract illness within 48 hours, at least one of which must be lab-confirmed 	2002 case definition	 Two cases of acute respiratory infections (ARI) within 48 hours, at least one of which must be laboratory-confirmed;
OR		OR
 Three cases of acute respiratory illness (lab confirmation not necessary) occurring within 48 hours in a geographic area (e.g., unit, floor) 		 Three cases of ARI (laboratory confirmation not necessary) occurring within 48 hours in a geographic area (e.g., unit, floor);
OR		UR
 More than two units having a case of acute respiratory tract illness within 48 Hours 		 More than two units having a case of ARI within 48 hours.
	Confirmed influenza outbreak in a hospital:	Confirmed influenza outbreak in a hospital:
	Two or more cases of nosocomially acquired influenza-like illness occurring within 48 hours on a specific hospital unit, with at least one case laboratory-confirmed as influenza	Two or more cases of nosocomially acquired ARI (e.g., influenza) occurring within 48 hours on a specific hospital unit, with at least one case laboratory-confirmed as influenza.

2002	2009	2015
Suspect outbreak:	Suspect respiratory infection outbreak:	Suspect respiratory infection outbreak:
 One laboratory confirmed case of a respiratory pathogen (e.g. influenza, para influenza virus, human Metapneumovirus, etc.) OR Two cases of acute respiratory tract illness occurring within 48 hours in a geographic area (e.g., unit, floor) 	 Two cases of acute respiratory tract illness occurring within 48 hours in a geographic area (e.g., unit, floor) OR More than one unit having a case of acute respiratory illness within 48 hours Suspect influenza outbreak: 	 Two cases of ARI occurring within 48 hours in a geographic area (e.g., unit, floor); OR More than one unit having a case of ARI within 48 hours.
OR		Suspect Influenza outbreak:
3. 3. More than one unit having a case of acute respiratory illness within 48 hours	 One laboratory-confirmed case of influenza OR Two cases of acute respiratory tract illness occurring within 48 hours in a geographic area (e.g., unit, floor) OR More than one unit having a case of acute respiratory illness within 48 hours 	 One laboratory-confirmed case of influenza; OR Two cases of ARI occurring within 48 hours in a geographic area (e.g., unit, floor); OR More than one unit having a case of ARI within 48 hours.

Rubella

1996	2005	2009	2013
Confirmed cases only:	Confirmed cases only:	Confirmed:	Confirmed:
 Virus isolation from appropriate clinical specimens 	1. 1996 case definition (#1)	In the absence of recent immunization with rubella-	Absence of immunization with rubella-containing vaccine in the
OR2. A 4-fold increase in specific	 2. 1996 case definition (#3) obtained within 28 days after 	containing vaccine AND 1. 1996 case definition (#1)	last 7-42 days AND
OR	OR	OR	2009 case definition
3. Demonstration of rubella- specific IgM	 Paired sera that demonstrate seroconversion or at least a 4- 	 Detection of rubella virus RNA by NAT 	
OR	fold increase in rubella-specific IgG antibody titre	OR	
 Clinically compatible signs and symptoms AND Epi-link to a lab-confirmed case 	OR 4. A positive rubella PCR test	3. 1996 case definition (#3) using a recommended assay in a person with an epi-link to a lab-confirmed case or has	
OR	OR	recently travelled to an area	
 Clinically compatible signs and symptoms, including fever, rash, and one of the following: 	5. 1996 case definition (#4) OR	of known rubella activity OR	
a. Arthritis/arthralgia	6. 1996 case definition (#5)	4. 2005 case definition (#3)	
b. Lymphadenopathy		5. 1996 case definition (#4)	
B. with evidence of rubella activity in the community			
1996	2005	2009	2013
------	------	------------------------------------	----------------------
		Probable:	Probable:
		Clinically compatible signs and	2009 case definition
		symptoms in a person with recent	
		travel to an area of known rubella	
		activity	

Rubella, congenital

1996	2005	2009	2013
Confirmed cases only:	Confirmed cases only:	Confirmed:	Confirmed:
Clinically compatible signs,	Clinically compatible signs,	Live birth:	Live birth:
symptoms or defects in a liveborn	symptoms or defects in a	Two clinically compatible	2009 case definition, except:
infant or a stillbirth AND	liveborn infant or a stillbirth AND	manifestations (any combination	"documented maternal rubella in
 Isolation of rubella virus OR Detection of rubella specific IgM OR With persistence of rubella specific IgG above and beyond that expected from passive transfer or maternal antibody 	 1. 1996 case definition (#1), from throat swab or urine OR 2. 1996 case definition (#2) OR 3. 1996 case definition (#3), rubella specific IgG in blood OR 4. 1996 case definition (#4) 	 from list A or B below) with lab confirmation of infection and documented maternal rubella in pregnancy: a) Cataracts or congenital glaucoma; Congenital heart defect; Sensorineural hearing 	pregnancy" omitted
OR 4. Without lab confirmation		 b) Purpura; Hepatosplenomegaly; Microcephaly; Micro ophthalmia; Intellectual disability; Meningoencephalitis; Radiolucent bone disease; Developmental or late onset conditions 	
		AND	
		 2005 case definition (#1), from an appropriate clinical specimen (e.g., throat swab, urine, nasopharyngeal aspirate/wash/swab) OR 	

1996	2005	2009	2013
		 Detection of rubella virus RNA by NAT from an appropriate clinical specimen OR 	
		 2005 case definition (#2), in the absence of recent immunization with rubella- containing vaccine OR 	
		 2005 case definition (#3), 6 months following birth, or in the absence of recent immunization 	
		Still birth:	Still birth:
		Two clinically compatible manifestations with isolation and/or detection of rubella virus RNA from an appropriate clinical specimen (e.g., placenta and autopsy material) and/or documented maternal rubella infection in pregnancy	2009 case definition, except: <i>"documented maternal rubella</i> <i>infection in pregnancy" omitted</i>
		Probable:	Probable:
		 Two clinically compatible manifestations from list A above OR 	2009 case definition, and lacks evidence of any other etiology
		 One of the above AND one of the manifestations from list B above 	

Salmonellosis

1996	2009	2013	2014	
Confirmed cases only:	Confirmed:	No change	Confirmed:	
Clinically compatible signs and	Symptomatic or asymptomatic		2009 case definition, but "S. typhi	
symptoms	AND	* Note: Salmonella Paratyphi B	or <i>S. paratyphi"</i> revised to	
 AND 1. Isolation of a species of Salmonella other than S. typhi or S. paratyphi from stool or from any body site 	1996 case definition (#1)	variant java now entered as Salmonellosis, not Paratyphoid Fever ⁷	variant java now entered as Salmonellosis, not Paratyphoid Fever ⁷ Salmonella Typhi d revised "from an ap clinical specimen (e site, blood, stool, u	"Salmonella Typhi or Paratyphi"; revised "from an appropriate clinical specimen (e.g., sterile site, blood, stool, urine)"
OR2. An epi link to one or more laboratory confirmed cases	Probable: 1996 case definition (#2)		Probable: 2009 case definition OR Positive NAAT for <i>Salmonella</i> spp. without culture confirmation	

Severe Acute Respiratory Syndrome (SARS)

First reportable in 2003 through an amendment to O. Reg 559/91 under HPPA R.S.O. 1990

2003	2005	2009	2014
Temporary case definitions during	Confirmed:	Confirmed:	Confirmed:
the outbreak	Living person	Living person	Living person
 Probable: 1. Fever >38°C AND 2. Cough or shortness of breath AND 3. Epi-link during 10 days prior to onset of symptoms to: Close contact with person who is suspect/ probable case OR Recent travel to an area with recent local transmission of SARS outside of Canada OR Recent travel or visit to an identified setting in Canada where exposure to SARS may have occurred AND 	 Early presentation of SARS (Fever >38°C AND cough or breathing difficulty) AND Radiographic evidence consistent with SARS, Radiographic evidence of infiltrates consistent with pneumonia or respiratory distress syndrome (RDS)* AND Lab evidence of SARS- associated coronavirus (SARS- CoV) infection (NAT-PCR or serconversion or virus isolation) 	2005 case definition, except: (#1) Early presentation of clinically compatible signs and symptoms of SARS AND (#2) Radiographic evidence consistent with SARS AND (#3) Lab evidence of SARS-CoV infection	2009 case definition (#3) AND Early presentation of clinically compatible signs and symptoms of SARS with/without radiographic evidence consistent with SARS
 Radiological evidence of pneumonia or infiltrates indicative of respiratory distress disorder (RDS) <u>Suspect:</u> Probable case definition #1,2,3 	*During the outbreak, persons without x-ray changes may have lab evidence of SARS-CoV infection if tested as part of an outbreak; considered as confirmed SARS-CoV infections		
(without #4)			

2003	2005	2009	2014
	Deceased person	Deceased person	Deceased person
	 Early clinical presentation of SARS AND Autopsy findings consistent with SARS (evidence of pneumonia or RDS without an alternate identifiable cause) AND 	2005 case definition, except: (#1) (i.e., fever AND cough OR difficulty breathing resulting in death)	2005 case definition, but (#1) includes: (i.e. fever AND cough OR difficulty breathing resulting in death)
	3. Lab evidence of SARS coronavirus infection (NAT- PCR or seroconversion, if appropriate specimens available, or virus isolation)		
	Probable:	Probable:	Probable:
	Living person	Living person	Living person
	 Early clinical presentation of SARS AND Evidence consistent with SARS (Radiographic evidence of infiltrates consistent with pneumonia or respiratory distress syndrome (RDS) AND Epi-link to: a person or place linked to SARS within 10 days of onset of symptoms OR Close contact with a symptomatic person who has lab evidence of SARS-CoV 	2005 case definition, except (#3): 3. Epi link to: 2005 case definition OR lab exposure to SARS-CoV	2009 case definition, except (#2): Early clinical presentation of SARS with or without radiographic evidence consistent with SARS (#3): An epi-link to a person or place linked to SARS, including: Close contact with a confirmed SARS case, within 10 days of onset of symptoms OR Close contact with a symptomatic person who has lab evidence of SARS-CoV infection, within 10

2003	2005	2009	2014
	infection, within 10 days of onset of symptoms OR Residence/ recent travel to an area with recent local transmission of SARS within 10 days prior to onset of symptoms		days of onset of symptoms OR Residence/recent travel or visit to to an "area with recent local transmission" of SARS within 10 days prior to onset of symptoms OR Close contact with a probable
	Deceased person (part 1)	Deceased person	case who has been to an "area
	 History of early clinical presentation of SARS AND 	2005 case definition, part 1, except: (#3) An epi link to a person or	with recent local transmission of SARS" within the 10 days prior to onset of symptoms; this includes
	2. Autopsy findings consistent with SARS (Consistent with pathology of RDS without identifiable cause) AND	place linked to SARS	health care workers who were not wearing personal protective equipment OR Lab exposure to SARS-CoV where
	3. Epi-link to a person or place linked to SARS within 10 days of onset of symptoms OR close contact with a symptomatic person who has		appropriate barriers and personal protective equipment were not in place
	lab evidence of SARS-CoV infection within 10 days of onset of symptoms OR Residence/ recent travel to an area with recent local transmission of SARS within 10 days prior to onset of symptoms OR close contact with a probable case who has been to an area with recent local transmission of SARS		Deceased person 2009 case definition, except (#2) brackets omitted AND (#3) simplified: An epi- link to a person or place linked to SARS

2003	2005	2009	2014
	within 10 days prior to onset of symptoms OR Symptomatic lab workers dealing with SARS-CoV		
	Deceased person (part 2)	Deceased person—part 2	
	 History of early clinical presentation of SARS AND 	eliminated	
	2. Lab evidence of SARS coronavirus infection (NAT- PCR or serconversion, if appropriate specimens available, or virus isolation)		

Shigellosis

1996	2009	2014
Confirmed cases only:	Confirmed:	Confirmed:
Clinically compatible signs and symptoms	Laboratory confirmation, symptomatic or	Laboratory confirmation, symptomatic or
AND	asymptomatic AND	asymptomatic
 Isolation of <i>Shigella</i> from stool or any body site 	 Isolation of Shigella spp. from an appropriate clinical specimen (e.g., stool. 	AND 1. 2009 case definition (#1), except examples
OR	urine)	are "stool, rectal swab"
2. An epi link to one or more laboratory		
confirmed cases	Probable:	Probable:
	1996 case definition (#2)	Clinically compatible signs and symptoms in a
		person with an epi link to a lab-confirmed
		case
		OR
		Positive NAAT result for <i>Shigella</i> spp.

Smallpox

First reportable in 2001 through an amendment to O. Reg 559/91 under HPPA R.S.O. 1990

2005	2009
Confirmed cases only:	Confirmed:
Clinically compatible signs and symptoms of disease	Laboratory confirmation of infection with clinically compatible signs and symptoms:
with laboratory confirmation:	1. Detection of variola virus nucleic acid
 Isolation of variola virus from appropriate clinical specimen 	OR
OR 2. Critical illness in a person who is epi-linked to a	2. Isolation of variola virus from an appropriate clinical specimen (e.g., blood, vesicular flouid, scabs), followed by confirmation through detection of variola virus nucleic acid
confirmed case	OR
	3. Detection of poxvirus particles in a clinical specimen by electron microscopy followed by confirmation through detection of variola virus nucleic acid
	Probable:
	Clinically compatible signs and symptoms in a person with an epidemiologic link to a lab-confirmed case
	Suspect:
	Clinically compatible signs and symptoms in a person without an epi-link OR
	Atypical lesion (illness) known to be associated with variola virus on a person with an epi-link

Syphilis

First reportable in 1991 under HPPA R.S.O. 1990

1996	2004	2009	2010	2011	2014
Confirmed cases	Confirmed:	Confirmed cases	Confirmed cases	Confirmed cases	Confirmed cases
<u>only:</u>	1996 case definition	<u>only:</u>	<u>only:</u>	<u>only:</u>	only:
Primary Other Sites:			2009 case definition,	2009 case definition,	2009 case definition,
Symptomatic AND	Suspect:	Primary Syphilis:	except:	except:	except:
1. Detection of <i>T.</i>	Any infant whose mother had	1. 1996 case definition. but	Neurosyphilis,	Neurosyphilis,	Primary Syphilis:
pallidum by	untreated or	can also use NAT	infectious:	Infectious (back to	(#1), but "NAT"
darkfield	inadequately treated	or equivalent	Reactive treponemal	2009 case	changed to "NAAT"
microscopy or by	syphilis at delivery,	examination OR	serology (regardless	definition):	OR
arrect nuorescent	regardless of findings	2. 1996 case	of non-treponemal	Either Primary,	
technique in	in infant OR	definition	serology reactivity)	Secondary, or Early	Presence of 1+
material from a			AND	Latent Syphilis AND	typical lesions
chancre or in	Any infant or child	Secondary Syphilis:			(chancres), and
aspirated material	who has a reactive	1. 1996 case	2009 case definition	1 Reactive CSE-VDRI	reactive treponemal
from a regional	treponemal test for	definition, but	(#1 and 2)	in non-bloody CSF	serology, regardless
lymph hode OR	syphilis and any one	can also use NAT		OP	of NTT reactivity, in
2 The presence of	of the following:	or equivalent	Neurosyphilis, non-	UK	individuals with no
1+ typical lesions	1 Any evidence of	examination of	infectious:	2. Either elevated	previous history of
and one or more	congenital	mucocutaneous	Reactive treponemal	CSF leukocytes or	syphilis OR
of the following	syphilis on	condvlomata lata	serology (regardless	protein in the	Presence of 1+
conditions:	physical	and reactive	of non-treponemal	absence of other	typical lesions
Reactive	examination OR	serology (non-	serology reactivity)	known causes	(chancres) and a
nontreponemal	2. Any evidence of	treponemal and	AND		significant <u>></u> 4-fold
tests hut no	congenital	treponemal) OR	2009 case definition		rise in the titre over
previous history	syphilis on a long		(#1 and 2)		the last known NTT in
		2. 1996 case			1

Appendix: Factors affecting case definition changes (1991-2016)

1996		2004	2009	2010	2011	2014
 of syphilis Reactive treponemal tests alone A ≥4-fold increase in titre over the last known NTT in individuals with a past history of syphilis treatment 	3. Rea VDI 4. Elev cou (wit cau 5. Qua nor	ne x-ray OR active CSF PRL OR evated CSF cell unt or protein ithout other use) OR mantitative ntreponemal	definition; Secondary syphilis symptoms include: mucocutaneous lesions, alopecia, loss of eyelashes and lateral third of eyebrows,			individuals with a past history of appropriate syphilis treatment Secondary Syphilis 2009 case definition (#1), but "NAT" changed to "NAAT"
Secondary, other: Symptomatic AND 1. Detection of <i>T.</i> <i>pallidum</i> by darkfield microscopy or direct fluorescent antibody technique in material from skin	sera whi higl mo dra OR 6. Rea FTA ant	rologic titres nich are 4-fold gher than other's (both awn at birth) active test for A-ABS-19S-IgM tibody	Firitis, generalized lymphadenopath y, fever, malaise or splenomegaly Early Latent Syphilis: 1996 case definition, but the conditions would be within 12 months			OR (#2), symptoms AND either a reactive serology (non- treponemal and treponelmal) OR a significant ≥4-fold rise in titre of NTT
or mucosal lesions and reactive nontreponemal and treponemal serology OR 2. Signs of secondary syphilis AND reactive syphilis serology			1996 case definition, but only reactive treponemal activity is required (regardless of nontreponemal activity) Neurosyphilis,			Neurosyphilis, Infectious: 2011 case definition, but (#2) includes clinical evidence of neurosyphilis

1996	2004	2009	2010	2011	2014
(nontreponemal and treponemal tests) OR ≥4-fold or greater increase in titre over the last known nontreponemal tests		Infectious: Either Primary, Secondary, or Early Latent Syphilis AND 1. Reactive CSF- VDRL in non- bloody CSF OR			
Early Latent (<1 year after infection): Asymptomatic AND Reactive nontreponemal and treponemal tests,		2. Either elevated CSF leukocytes or elevated CSF protein in the absence of other known causes			
known to have had		Neurosyphilis, non-			Neurosyphilis, non-
within the previous		infectious:			infectious:
24 months or more		Late Latent Syphilis			2010 case definition,
of the following		AND			but (#2) includes
 Nonreactive serologic test Previous symptoms highly 		 Reactive CSF- VDRL in non- bloody CSF OR 			neurosyphilis
 suggestive of primary or secondary syphilis Exposure to a sexual partner with confirmed 		2. Either elevated CSF leukocytes or elevated CSF protein in the absence of other known causes			

1996	2004	2009	2010	2011	2014
primary, secondary, or early latent syphilis		Early Congenital Syphilis (within 2 years of birth): 1. 1996 case definition (for up			
Late Latent:		to 4 weeks of			
Asymptomatic AND		age) OR			
Stable, reactive nontreponemal and treponemal tests AND Does not meet criteria for early latent syphilis AND Has not been previously treated adequately for syphilis		 Reactive serology (non-treponemal and treponemal) from venous blood (not cord blood) in an infant/child with clinical, lab, or radiographic evidence of congenital syphilis OR Detection of <i>Treponema</i> nallidum DNA in 			Early congenital syphilis: 1. 2009 case definition, but includes NAAT or equivalent examination of material from nasal discharges, skin lesions, placenta, umbilical cord or autopsy material OR
Neurosyphilis,		an appropriate			(#2 and 3)
Unspecified:		clinical specimen			·
 The findings of pleocytosis (particularly lymphozytes), elevated protein and reactive 		Tertiary Syphilis (other than Neurosyphilis): No clinical or lab			

1996	2004	2009	2010	2011	2014
nontreponemal tests in a non- bloody CSF AND		evidence of neurosyphilis AND			
2. Reactive (treponemal, +/- nontreponemal) syphilis tests in the peripheral blood		Reactive treponemal serology (regardless of NTT reactivity) together with characteristic late abnormalities of the cardiovascular			
Early Congenital Syphilis, Unspecified: Newborn or infant AND		system, bone, skin or other structures, in the absence of other known causes of			
1. <i>T. pallidum</i> demonstrated by darkfield microscopy or by direct fluorescent antibody technique in material from nasal discharges, skin lesions or tissues OR		these abnormalities (<i>T. pallidum</i> is rarely seen in these lesions, although when present, is considered diagnostic)			
 Signs of congenital syphilis and positive nontreponemal 					

1996	2004	2009	2010	2011	2014
and treponemal serology OR					
3. Positive nontreponemal and treponemal serology who remains positive at 3 and 6 months follow-up					

Tetanus

1996	2009	2014
Confirmed cases only:	Confirmed cases only:	Confirmed cases only:
Clinically compatible signs and symptoms with	1996 case definition, but removal of toxin	Clinical evidence of illness without other
or without evidence of injury AND	detection	apparent medical cause AND w ith or without
1. Demonstration of <i>Clostridium tetani</i> or its toxin from clinical specimens		isolation of <i>C. tetani</i> AND with or without history of injury
OR		
 Without lab evidence and in absence of other apparent medical cause 		

Trichinosis

1996	2009	2014
Confirmed cases only:	Confirmed:	Confirmed:
Clinically compatible signs and symptoms	Same as 1996 case definition (#1 and 2)	With or without clinically compatible signs
AND		OR
1. Demonstration of <i>Trichinella spiralis</i> in a muscle biopsy		2009 case definition (#1 and 2)
OR		
2. Positive serology	Probable:	Probable:
OR	1996 case definition (#3)	Clinically compatible signs and symptoms
3. 3. An epi-link to a confirmed case of		AND
trichinosis or to meat known to contain		1996 case definition, slight change:
Trichinella larvae		An epi-link to a lab-confirmed case or to a
		confirmed food source (e.g. meat known to
		contain <i>Trichinella larvae)</i>

Tularemia

1996	2009	2014
Confirmed cases only:	Confirmed:	Confirmed:
Clinically compatible signs and symptoms		
AND	1. 1996 case definition (#1)	2009 case definition (#1-2), but slight change:
1. Isolation of <i>Francisella tularensis</i> from an appropriate clinical specimen	 2. 1996 case definition (#2) 	#2 A ≥4-fold rise in serum antibody titre to F. <i>tularensis</i> antigen
OR	1996, case definition (3and4) eliminated	
 A <u>></u>4-fold increase in specific antibody 		
OR	Probable:	Probable:
 A specific antibody titre of <a>1/160 in one or more specimens 	Clinically compatible signs and symptoms AND	Clinically compatible signs and symptoms
OR	 Detection of <i>F.tularensis</i> in a clinical specimen (eg, lymph node aspirates, ulcer 	AND
4. Positive fluorescent antibody tests on a	exudate) by fluorescent assay	1. 2009 case definition (#1)
clinical specimen	OR	OR
	2. Detection of <i>F. tularensis</i> nucleic acid	2. Detection of <i>F. tularensis</i> by NAAT
	OR	OR
	 3. ≥1:128 microagglutination titre OR ≥ 1:160 tube agglutination in a single serum specimen 	3. 2009 case definition (#3)

Tuberculosis

2006	2009	2015
Confirmed cases only:	Confirmed:	Confirmed:
 With Mycobacterium tuberculosis complex (e.g., M. tuberculosis, M. bovis (excluding BCG strain), or M. africanum) demonstrated on culture from sputum, body fluids, or tissues OR Without bacteriological proof but with clinical symptoms or signs, radiological or pathological evidence of active pulmonary or nonpulmonary disease, with Positive tuberculin skin test Demonstration of acid-fast bacilli in smears from sputum or other body fluids or tissues OR Response to antituberculous treatment 	 1996 case definition (#1) OR In absence of bacteriological proof, cases clinically compatible with active tuberculosis that have: a. Radiological changes compatible with active tuberculosis AND b. Histopathologic or post-mortem evidence of active tuberculosis OR c. 1996 case definition (#2c) 	 2009 case definition, but: With Mycobacterium tuberculosis complex (MTB complex) demonstrated on culture from an appropriate specimen (e.g. sputum, body fluid or tissue) specifically M. Tuberculosis, M. africanum, M. canetti, M. caprae, M. microti, M. pinnipedii or M. bovis (excluding M. bovis BCG strain) OR 2009 case definition (#2a) OR (#2b) OR (#2c) OR Detection of MTB complex by NAAT with compatible clinical and epidemiological associated information OR Active nonrespiratory tuberculosis (meningeal, bone, kidney, peripheral lymph nodes, etc.) Note: A case should not be counted twice within any consecutive 12-month period, unless a second genotype is detected.

2006	2009	2015
	Suspect:	Suspect:
	Signs and symptoms compatible with active	
	disease	2009 case definition (#1 and 2)
	AND	2009 case definition (#3 and 4) eliminated
	1. Radiological findings suggestive of active	Latent:
	disease	The presence of latent infection with
	OR	Mycobacterium tuberculosis as determined by a TST
	2 1996 case definition (#2h)	or an IGRA
	2. 1996 case definition (#20)	AND
	OR	a. No evidence of clinically active disease
	3. Detection of MTB complex by NAT	AND
	OR	b. No evidence of radiographic changes that
	4. Histopathology suggestive of MTB disease	suggest active disease
		AND
		c. Negative microbiologic tests, if performed

Typhoid Fever

1996	2009	2014
Confirmed cases only:	Confirmed:	Confirmed:
Clinically compatible signs and symptoms	1996 case definition	Symptomatic or asymptomatic
AND		AND
Isolation of <i>Salmonella typhi</i> from an asymptomatic individual		Isolation of Salmonella Typhi from an appropriate clinical specimen (e .g., sterile site, stool, urine, bone marrow)
	Probable:	
	Clinically compatible signs and symptoms AND 1. An epi link to a lab-confirmed case	Probable:
		Clinically compatible signs and symptoms
		AND
		1. 2009 case definition (#1)
		OR
		2. Positive NAAT for Salmonella Typhi without culture confirmation

Verotoxin producing *E. Coli* (VTEC) and Haemolytic uraemic syndrome (HUS)

1996	2009	2014
Confirmed cases only:	Confirmed:	Confirmed:
Clinically compatible signs and symptoms	Symptomatic or asymptomatic	
AND1. Identification of verocytotoxin in stool	AND 1. Isolation of VTEC from appropriate clinical	2009 case definition (#1), (e.g. stool, urine, blood)
or or or other specimen	or or or other specimen	
2. Isolation of one or more strains of verocytotoxigenic <i>E.coli</i> from stool or blood	2. Detection of verotoxin antigen or nucleic acid from appropriate clinical specimen	
OR		Drobable:
3. An epi link to 2 or more lab-confirmed cases	Probable: 1. 1996 case definition (#3), but only one epi	Clinically compatible signs and symptoms
 Haemolytic uraemic syndrome (HUS), not caused by defects in serum complement, chemotherapy, immunosuppressants in organ transplants, pregnancy or oral contraceptives, or known infections other than <i>E. coli</i> Clinical evidence of HUS: uraemia, thrombocytopenia, acute renal failure, CNS signs and symptoms Diarrheal prodrome in 86-95% patients and 60-75% of diarrhea is bloody 	link minimum required OR 2. HUS, details from 1996 case definition	 2009 case definition (#1) OR HUS, details from 1996 case definition OR Detection of verotoxin antigen or nucleic acid from an appropriate clinical specimen (e.g., stool, urine, blood)

West Nile Virus Illness

First reportable in 2003 through an amendment to O. Reg 559/91 under HPPA R.S.O. 1990

2004	2009	2014
West Nile virus Neurological Syndromes (WNNS) / West Nile virus Fever (WNF)	West Nile virus Neurological Syndromes (WNNS) / West Nile virus Non-Neurological Syndrome (WN Non-NS)	West Nile virus Neurological Syndromes (WNNS) / West Nile virus Non-Neurological Syndrome (WN Non-NS)
<u>Confirmed:</u>	Confirmed:	<u>Confirmed</u> :
Clinical criteria	Clinical criteria	2009 case definition
AND	AND	
 A ≥4-fold change in WN virus neutralizing antibody titres (using Plaque Reduction Neutralization Test-PRNT) in paired acute and convalescent sera OR a PRNT titre of ≥1:40 on a single serum sample AND Demonstration of flavivirus antibodies in a single serum or CSF sample using two WN virus IgM ELISAs 	 2004 case definition (#1), but CSF can also be used OR Demonstration of flavivirus antibodies in a single serum or CSF sample using a WN virus IgM ELISA, confirmed by the detection of WN virus specific antibodies using PRNT (acute or convalescent serum sample) OR Isolation of WN virus from, or demonstration of WN virus antigen or 	
	tissue, blood, CSF or other body fluids	
	 A ≥4-fold rise in flavivirus 	

2004	2009	2014
	haemagglutination inhibition (HI) titres in paired acute and convalescent sera or demonstration of a seroconversion using a WN virus IgG ELISA AND the detection of WN specific antibodies using PRNT (acute or convalescent serum sample)	
Probable:	Probable:	Probable:
 Clinical criteria AND 1. Detection of flavivirus antibodies in a single serum or CSF sample using two WN virus IgM ELISAs without confirmatory neutralization serology (E.g., PRNT) OR 2. Demonstration of Japanese encephalitis (JE) serocomplex- specific genomic sequences in blood by NAT screening on donor blood, by Blood Operators in Canada 	Clinical criteria AND	 Detection of flavivirus antibodies in a single serum or CSF sample using a WN virus IgM ELISA2 without confirmatory neutralization serology (e.g. PRNT)
	 2004 case demittion (#1 and 2) (but only 1 WN IgM ELISA needed for #1) OR A ≥4-fold rise in flavivirus HI titres in paired acute and convalescent sera or demonstration of a seroconversion using a WN virus IgG ELISA OR A titre of ≥1:320 in a single WN virus HI test, or an elevated titre in a WN virus IgG ELISA, with confirmatory PRNT result 	 OR 2. A significant (i.e., fourfold or greater) rise in flavivirus HI titres in paired acute and convalescent sera or demonstration of a seroconversion using a WN virus IgG ELISA2 OR
		 A titre of > 1:320 in a single WN virus HI test, or an elevated titre in a WN virus IgG ELISA, with a confirmatory PRNT result OR
		 Demonstration of Japanese encephalitis (JE) serocomplex-specific genomic sequences in blood by nucleic acid amplification test (NAAT) screening on donor blood, by Blood Operators in Canada.

2004	2009	2014
Suspect:	Suspect:	Suspect case definition eliminated
Clinical criteria but in absence of any	Same as 2004 case definition	
lab test		
West Nile virus Asymptomatic	West Nile virus Asymptomatic Infection	West Nile virus Asymptomatic Infection (WNAI)
Infection (WNAI)	(WNAI)	
		Confirmed:
Confirmed:	Confirmed:	Above lab criteria but no clinical criteria
Above lab criteria but no clinical criteria	Above lab criteria but no clinical criteria	
Probable:		Probable:
Above lab criteria but no clinical criteria	Probable:	Above lab criteria but no clinical criteria
	Above lab criteria but no clinical criteria	

Yellow Fever

1996	2009	2014
Confirmed cases only:	Confirmed:	Confirmed:
Clinically compatible signs and symptoms	1996 case definition but:	2009 case definition (#1-3), but:
 Clinically compatible signs and symptoms AND 1. Isolation or detection of yellow fever virus OR 2. Detection of yellow fever viral antigen in serum or tissue OR 3. A ≥4-fold rise in antibody titre in the absence of yellow fever vaccination within the previous two months OR 4. A single yellow fever specific IgM titre in the absence of yellow fever vaccination within the previous two months 	 1996 case definition but: (#3 and 4), cross-reactive serological reactions to other falviviruses must be excluded OR 5. Detection of yellow fever nucleic acid in body fluids or tissue <u>Probable:</u> Clinically compatible signs and symptoms AND Stable elevated antibody titre to yellow fever virus with no other cause (cross-reactive serologic reactions to other flaviviruses must be a bistery of wellow fever 	 2009 case definition (#1-3), but: 1. 2009 case definition (#1), "or detection" omitted OR 2. 2009 case definition (#2), includes detection of nucleic acid; "serum" changed to "body fluids" (#2and5 combined) OR 3. 2009 case definition (#3), to the yellow fever virus or a single elevated yellow fever lgM antibody titre 2009 case definition (#4) eliminated
	vaccination)	2009 case definition

Yersiniosis

1996	2009	2014
Confirmed cases only:	Confirmed:	Confirmed:
Clinically compatible signs and symptoms	Symptomatic or asymptomatic	2010 case definition, but:
 AND 1. Isolation of <i>Yersinia enterocolotica</i> from stool or body fluids OR 2. An epi link to two or more laboratory confirmed cases 	 AND 1. 1996 case definition (#1) OR 2. A positive serological test for <i>Yersinia</i> spp. 	 2009 case definition (#1) , revised "from an appropriate clinical specimen (e.g., stool, blood, urine) OR Detection of <i>Yersinia enterocolitica</i> by NAAT from an appropriate clinical specimen
	Probable:	Probable:
	1996 case definition (#2), but only one epi link minimum required	2009 case definition

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4. *Health Protection and Promotion Act*, RSO 1990, c H7 Available from: http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90h07_e.htm