Appendix B: Provincial Case Definitions for Reportable Diseases

Disease: Poliomyelitis, acute

Ontario

Poliomyelitis, acute

1.0 Provincial Reporting
Confirmed and probable cases of disease

2.0 Type of Surveillance
Case-by-case

3.0 Case Classification

3.1 Confirmed Case
Clinically compatible signs and symptoms of paralytic polio with no other apparent cause and with travel to a polio endemic region
AND:
- Isolation of vaccine or wild type poliovirus from an appropriate clinical specimen (e.g., stool, pharyngeal swab, cerebrospinal fluid [CSF])
  OR
- Detection of polio virus ribonucleic acid (RNA)) by nucleic acid amplification test (NAT)

OR
Clinically compatible signs and symptoms in a person with an epidemiologic link to a laboratory-confirmed case

3.2 Probable Case
- Clinically compatible signs and symptoms without detection of polio virus from an appropriate clinical specimen (e.g., stool, pharyngeal swabs, CSF) and without evidence of infection with other neurotropic viruses and with travel to a polio endemic region

4.0 Laboratory Evidence

4.1 Laboratory Confirmation
Any of the following will constitute a confirmed case of Poliomyelitis:
- Isolation of polio virus (vaccine or wild type) from an appropriate clinical specimen
- Positive for polio virus-specific RNA by NAT

4.2 Approved/Validated Tests
- Standard culture for poliovirus
- NAT for poliovirus/enterovirus RNA
- Consult with laboratory about testing issues and appropriate specimens

4.3 Indications and Limitations
- The commercially available NAT does not differentiate polioviruses from other enteroviruses
- Further isolate characterization is indicated for epidemiological public health and control purposes

5.0 Clinical Evidence

Clinically compatible signs and symptoms are characterized by all of the following:

- Acute flaccid paralysis of one or more limbs
- Decreased or absent deep tendon reflexes on the affected limb(s)
- No sensory or cognitive loss,
- Neurologic deficit present 60 days after onset of initial symptoms unless patient has died

6.0 ICD Code(s)

6.1 ICD-10 Code(s)

G05.2, G04.0, T50.9, Y59.0, A80.3 Poliomyelitis

6.2 ICD-9/ICD-9CM Code(s)

323.2, 323.5, 979.5, E949.5 (polio vaccine poisoning), 045.1 (acute polio with other paralysis) Poliomyelitis

7.0 Comments

- Polio virus strain typing is done using sequencing methodologies at the National Microbiology Laboratory
- Stool specimens and pharyngeal swabs are preferred specimens. Other specimens include autopsy material and CSF
- Cultures of stool from a single specimen collected within the first 15 days after onset of symptoms represents the diagnostic test for confirming polio.

Confirmed cases of poliomyelitis can be further subdivided into the following two categories:

a) Wild virus

Laboratory investigation implicates wild type virus. This group is further subdivided as follows:

- imported: travel in or residence in a polio-endemic area 30 days or less before onset of symptoms
- import-related: epidemiologic link to someone who has travelled in or resided in a polio-endemic area within 30 days of onset of symptoms
- indigenous: no travel or contact as described above

b) Vaccine-associated virus

Laboratory investigation implicates vaccine-type virus. This group is further subdivided as follows:

- recipient: the illness began 7-30 days after the patient received oral polio vaccine (OPV)
- contact: the patient was shown to have been in contact with an OPV-recipient and became ill 7-60 days after the contact was vaccinated
- possible contact: the patient had no known direct contact with an OPV-recipient and no history of receiving OPV, but the paralysis occurred in an area in which a mass vaccination campaign using OPV had been in progress 7-60 days before the onset of paralysis
- no known contact: the patient had no known contact with an OPV-recipient and no history of receiving OPV, and the paralysis occurred in an area where no routine or intensive OPV vaccination had been in progress. In Canada, this would include all provinces and territories.

Disease Specific Guidelines and Procedures

i. Non-Paralytic Poliomyelitis

Non-paralytic poliomyelitis should be reported under encephalitis/meningitis (viral meningitis).

ii. Stool viral culture results

Shedding of the poliovirus in the stool may occur for several weeks after administration of oral polio vaccine.

iii. Cases of acute flaccid paralysis (AFP) not due to the polio virus should be reported to the Senior Coordinator for the Canadian Paediatric Surveillance Program at 613-526-9397 ext. 239. Cases should also be immediately reported to the PHD of the MOHLTC using the 24 hour emergency line, (416) 212-6361 or (416) 212-6362

8.0 References

- Ministry of Health and Long-Term Care, Public Health Division. iPHIS manual. Toronto, ON: Queen's Printer for Ontario; 2005.
- Nationally Notifiable Diseases Case Definitions with Canadian Public Health Laboratory Network (CPHLN) and Epidemiologic Group Draft Edits. March 2007. Based on case definitions as written in the: Health Canada. Case definitions for diseases under national surveillance. Can Commun Dis Rep. 2000; 26 Suppl 3:i-iv 1-122. Available from http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/00pdf/cdr26s3e.pdf.

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