

Appendix A: Disease-Specific Chapters

Chapter: Yellow Fever

Yellow Fever

- Communicable
 Virulent

**Health Protection and Promotion Act:
Ontario Regulation 558/91 – Specification of Communicable Diseases**

**Health Protection and Promotion Act:
Ontario Regulation 559/91 – Specification of Reportable Diseases**

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| 1) Aetiologic Agent: | Yellow fever is caused by the Yellow Fever virus: genus <i>Flavivirus</i> and family <i>Flaviviridae</i> (1). |
| 2) Case Definition: | |
| Surveillance Case Definition | See Appendix B |
| Outbreak Case definition | not applicable |
| 3) Identification: | |
| Clinical Presentation: | <p>Yellow fever is an acute viral disease of short duration and varying severity. The mildest cases may be clinically indeterminate (1).</p> <p>Typically, the clinical presentation is characterized by sudden onset of fever, chills, headache, backache, generalized muscle pain, prostration, nausea and vomiting. The pulse may be slow and weak out of proportion to the elevated temperature (Faget sign). Jaundice is moderate early in the disease and intensifies later (1).</p> <p>Most infections resolve after the 5th day, however some cases progress after a brief remission of hours to a day into the ominous stage of intoxication manifested by hemorrhagic symptoms including epistaxis, gingival bleeding, hematemesis (coffee ground or black), melaena and liver and renal failure. 20-50% of jaundiced cases are fatal (1).</p> |
| Diagnosis | <p>See Appendix B</p> <p>Note: Diagnosis is made by isolation of the yellow fever virus from blood samples; this is supported by clinical and epidemiological evidence (1).</p> |
| 4) Epidemiology: | |
| Occurrence | Yellow fever exists in nature in two transmission cycles, a sylvatic or jungle cycle that involves mosquitoes and nonhuman primates, and an urban cycle involving <i>Aedes aegypti</i> mosquitoes and humans (1). |

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| | Yellow fever is not endemic to Ontario and reported cases in Ontario are attributed to recent immigration or travel to yellow fever endemic countries. It is endemic in tropical areas of Africa and Latin America (1). |
| Reservoir | Humans in urban areas; in forest areas, vertebrates other than humans, mainly monkeys and possibly marsupials (1). |
| Modes of Transmission | Yellow fever is transmitted via the bite of infected mosquitoes, primarily those of the genus <i>Aedes</i> (1). There is no human to human transmission. |
| Incubation Period | 3-6 days (1) |
| Period of Communicability | Mosquitoes can acquire the virus from an infected person shortly before onset of fever and for the first 3 – 5 days of illness (1). The disease is highly communicable where many susceptible people and abundant vector mosquitoes coexist; it is not communicable through contact or common vehicles (1). <i>Aedes aegypti</i> mosquitoes require 9 to 12 days after a blood meal to become infectious and remain so for life (1). |
| Susceptibility and Resistance | Vaccine preventable; recovery from yellow fever is followed by lasting immunity; mild unapparent infections are common in endemic areas; previous infections with dengue give some degree of immunity (1). |

5) Reporting Requirements:

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| To Local Board of Health | Confirmed and suspected cases shall be reported to the medical officer of health by persons required to do so under the <i>Health Protection and Promotion Act</i> , R.S.O. 1990. |
| To Public Health Division (PHD) | <p>Report only case classifications specified in the case definition to PHD.</p> <p>Cases shall be reported using the integrated Public Health Information System (iPHIS), or any other method specified by the Ministry within five (5) business days of receipt of initial notification as per <i>iPHIS Bulletin</i> Number 17: Timely Entry of Cases (2).</p> <p>The minimum data elements to be reported for each case is specified in the following:</p> <ul style="list-style-type: none"> • <i>Ontario Regulation 569</i> (Reports) under the Health Protection and Promotion Act (HPPA); • The disease-specific User Guides published by the Ministry, and • Bulletins and directives issued by the Ministry. |

6) Prevention and Control Measures:

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| Personal Prevention Measures | <p>Preventive measures: (1)</p> <ul style="list-style-type: none"> • Immunization of travellers with yellow fever vaccine when appropriate and travelling to endemic areas. |
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| | <ul style="list-style-type: none"> • Use of protective clothing, bed nets and repellents with DEET in high risk areas. |
| Infection Prevention and control Strategies | Defer blood donations from persons with a history of yellow fever or recent immigration from, or travel to, endemic countries. |
| Management of Cases | <p>Refer to <i>Ontario Regulation 569</i> for relevant data to collect. Investigate the case to determine source of infection as well as the following:</p> <ul style="list-style-type: none"> • Apply case definition • Investigate risk factors for acquisition including but not limited to 3-6 days prior to onset: <ul style="list-style-type: none"> – history of travel, specific geographic location, season, and duration of exposure – immunization status – history of mosquito bites <p>Provide education about transmission of infection and use of personal protective measures against mosquito bites.</p> <p>There is no specific treatment for yellow fever except for supportive treatment (1).</p> |
| Management of Contacts | Not applicable |
| Management of Outbreaks | Not applicable |

7) References

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| | <p>(1) Heymann D, editor. Control of communicable diseases manual. 18th ed. Washington: American Public Health Association; 2004.</p> <p>(2) Ministry of Health and Long-Term Care. Timely entry of cases. <i>iPHIS Bulletin</i>. 2007 May 11;17.</p> |
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8) Additional Resources

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| | <p>Public Health Agency of Canada.[Internet] Disease fact sheet: Yellow Fever; 2008 Jan 28. [cited 2008 Jul 22]: Available from: http://www.phac-aspc.gc.ca/tmp-pmv/info/yf-fj-eng.php</p> <p><i>Health Protection and Promotion Act</i>, R.S.O. 1990, c. H.7. Available from http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90h07_e.htm.</p> <p>National Advisory Committee on Immunization. Canadian immunization guide. 7th ed. Ottawa: Public Health Agency of Canada; 2006. Available from: http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php.</p> <p>World Health Organization. International travel and health: vaccination requirements and health advice. Geneva: World Health Organization; 2005. Available online from http://www.who.int/ith/chapters/en/index.html</p> |
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| Monath TP. Yellow fever. In: Plotkin SA, Orenstein WA, Offit P, editors. Vaccines. 4 th ed. Philadelphia: Saunders; 2004. p. 1095-1176. |
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