Appendix A: Disease-Specific Chapters

Chapter: Psittacosis/Ornithosis

Revised December 2014
Psittacosis/Ornithosis

☒ 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

1.0 Aetiologic Agent

Psittacosis/Ornithosis is caused by *Chlamydophila psittaci* (formerly *Chlamydia psittaci*), an obligate intracellular bacterial pathogen.1

2.0 Case Definition

2.1 Surveillance Case Definition

See Appendix B

2.2 Outbreak Case Definition

The outbreak case definition varies with the outbreak under investigation. Consideration should be given to the provincial surveillance case definition and the following criteria when establishing an outbreak case definition:

1. Clinical, laboratory and/or epidemiological criteria;
2. The time frame for occurrence;
3. The geographic location(s) or place(s) where cases live or became ill/exposed; and
4. Special attributes of cases (e.g. age, underlying conditions).

Outbreak cases may be classified by levels of probability (*i.e.* confirmed, probable and/or suspect).

An outbreak is defined as two or more cases linked in place and time.

3.0 Identification

3.1 Clinical Presentation

Onset of psittacosis is usually abrupt with fever, headache, photophobia, myalgia, upper or lower respiratory tract symptoms, and non-productive cough. Complications can occur occasionally and include encephalitis, myocarditis and thrombophlebitis.2,1 Mild forms of the illness may be mistaken for common respiratory infection and may go unnoticed or undiagnosed.3
3.2 Diagnosis
Laboratory demonstration of *C. psittaci* in blood or appropriate clinical specimen. For further information about human diagnostic testing, contact the Public Health Ontario Laboratories or refer to the Public Health Ontario Laboratory Services webpage: http://www.publichealthontario.ca/en/ServicesAndTools/LaboratoryServices/Pages/default.aspx
See Appendix B for diagnostic criteria relevant to Case Definitions.

4.0 Epidemiology

4.1 Occurrence
Worldwide; most human cases are sporadic and many infections likely go undiagnosed.\(^2\) One human case of psittacosis was reported in Ontario in 2011. This was the first case reported in the province since 2004.

*C. psittaci* is found in both domestic and wild birds in Ontario. A significant outbreak of severe avian chlamydiosis (disease occurring in birds due to *C. psittaci* infection) occurred within a large private aviary in Ontario in 2009, affecting multiple species of pet birds – the outbreak was caused by the introduction of two infected parrots from British Columbia into the aviary.

Please refer to the Public Health Ontario Monthly Infectious Diseases Surveillance Reports and other infectious diseases reports for more information on disease trends in Ontario.\(^4\),\(^5\)

http://www.publichealthontario.ca/en/DataAndAnalytics/Pages/DataReports.aspx

4.2 Reservoir
This agent can be carried by many species of wild and domestic birds. Most human cases have been caused by transmission of disease from psittacine birds such as parakeets, parrots and lovebirds and less often from poultry, pigeons, canaries and sea birds.\(^2\) Healthy birds can be carriers and shed the infectious agent, particularly when subjected to stress through crowding and shipping.\(^2\)

4.3 Modes of Transmission
Infection is generally acquired by inhaling dust from dried feces or dried ocular and nasal secretions from infected birds. Direct contact with birds is not required; rare person-to-person spread has occurred.\(^2\)

4.4 Incubation Period
From 1- 4 weeks.\(^2\)

4.5 Period of Communicability
Birds may shed the agent intermittently and sometimes continuously for weeks or months.\(^2\)
4.6 Host Susceptibility and Resistance
Susceptibility is general; persons in contact with infected birds are at highest risk and older adults may be more severely affected; there is no evidence that persons with antibodies are protected, post infective immunity is incomplete or transitory.²

5.0 Reporting Requirements

5.1 To local Board of Health
Individuals who have or may have psittacosis shall be reported as soon as possible to the medical officer of health by persons required to do so under the Health Protection and Promotion Act, R.S.O. 1990 (HPPA).⁶

5.2 To the Ministry of Health and Long-Term Care (the ministry) or Public Health Ontario (PHO), as specified by the ministry
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 iPHIS Bulletin Number 17: Timely Entry of Cases and Outbreaks.⁷

The minimum data elements to be reported for each case are specified in the following:

- Ontario Regulation 569 (Reports) under the HPPA,⁸ ⁶
- The iPHIS User Guides published by PHO; and,
- Bulletins and directives issued by PHO.

6.0 Prevention and Control Measures

6.1 Personal Prevention Measures
Preventive measures:

- Educate the public about the risk of household or occupational exposure to infected pet birds;
- Use of cage cleaning and feeding methods that minimize air circulation of feathers, dust and droppings;
- Wear gloves and dust masks when cleaning cages and birdfeeders; and
- Treat and eliminate infections of pet birds and disinfecting premises.

6.2 Infection Prevention and Control Strategies
Routine practices are recommended for hospitalized cases.

Refer to PIDAC Routine Practices and Additional Practices in All Health Care Settings, 2012 (or as current).

Refer to Public Health Ontario’s website at www.publichealthontario.ca to search for the most up-to-date Provincial Infectious Diseases Advisory Committee (PIDAC) best practices on Infection Prevention and Control (IPAC). PIDAC best practice documents can be found
6.3 Management of Cases

Information that must be reported to the medical officer of health is included in Ontario Regulation 569 under the HPPA.8,6

Investigate the case to determine source of infection and type of exposure. Ensure to inquire about the following:

- History of occupational exposure, and
- History of exposure to birds belonging to the parrot family, other caged birds, or on poultry farms and contact with bird droppings.

Isolation of case is not required. The case should be instructed on using proper hand hygiene and proper cough etiquette.2 Treatment with antibiotics is under the direction of the attending health care provider.

Identify others that may have had the same exposure. If an avian source of infection has been identified, notify the ministry’s public health veterinarian, and trace the origin of the suspected birds in collaboration with the Public Health Division, and the Canadian Food Inspection Agency (CFIA), or Ontario Ministry of Agriculture and Food (OMAF), as appropriate. Infected birds should be placed under the care of a veterinarian.

6.4 Management of Contacts

No public health follow-up required of contacts of human cases; however, individuals exposed to common sources of infection should be educated about symptoms of concern (e.g., fever, respiratory tract symptoms, and coughing) and the actions they should take should symptoms develop, stressing the need for immediate clinical assessment noting the linkage to a psittacosis case. Early diagnostic tests should be performed and therapy should be initiated if symptoms appear.

6.5 Management of Outbreaks

An outbreak is defined as two or more cases linked in place and time.

As per the Infectious Diseases Protocol, 2008 (or as current), outbreak management shall be comprised of, but not limited to, the following general steps:

- Confirm diagnosis and verify the outbreak;
- Establish an outbreak team;
- Develop an outbreak case definition;
- Implement prevention and control measures;
- Implement and tailor communication and notification plans depending on the scope of the outbreak;
- Conduct epidemiological analysis on data collected;
• Conduct environmental inspections of implicated premise where applicable;
• Coordinate and collect appropriate clinical specimens where applicable;
• Prepare a written report; and
• Declare the outbreak over in collaboration with the outbreak team.

Refer to the document “Management of Chlamydiosis in Birds” (MOHLTC 2008) for the management of outbreaks in birds.)

7.0 References


8.0 Additional Resources

Canadian Food Inspection Agency [Internet]. Ottawa, ON: CFIA; 2013. Importing or travelling with pet birds from countries other than the United States; [updated 2013 Sep 23; cited 2014 Jun 26]. Available from: [link]

Ontario Agency for Health Protection and Promotion (Public Health Ontario), Provincial Infectious Diseases Advisory Committee. Routine practices and additional precautions in all


9.0 Document History

Table 1: History of Revisions

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<th>Revision Date</th>
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<td>December 2014</td>
<td>General</td>
<td>New template.</td>
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<tr>
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<td>Title of Section 4.6 changed from “Susceptibility and Resistance” to “Host Susceptibility and Resistance”.</td>
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<td>Title of Section 5.2 changed from “To Public Health Division (PHD)” to “To the Ministry of Health and Long-Term Care (the ministry) or Public Health Ontario (PHO), as specified by the ministry”.</td>
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<td>Section 9.0 Document History added.</td>
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<td>2.2 Outbreak Case Definition</td>
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<td>3.1 Clinical Presentation</td>
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