

09-ID-13

Committee: Infectious

Title: Public Health Reporting and National Notification for Psittacosis

I. Statement of the Problem

CSTE position statement 07-EC-02 recognized the need to develop an official list of nationally notifiable conditions and a standardized reporting definition for each condition on the official list. The position statement also specified that each definition had to comply with American Health Information Community recommended standards to support “automated case reporting from electronic health records or other clinical care information systems.” In July 2008, CSTE identified sixty-eight conditions warranting inclusion on the official list, each of which now requires a standardized reporting definition.

II. Background and Justification

Background¹

Psittacosis is a systemic disease characterized by fever, chills, headache, myalgia, and a dry cough with pneumonia often evident on chest x-ray. Severe pneumonia requiring intensive-care support, endocarditis, hepatitis, and neurologic complications occasionally occur. The disease is caused by the bacterium, *Chlamydophila psittaci*, which is transmitted to humans when they inhale dried secretions or excreta from infected birds. The incubation period is 5 to 19 days. Although all birds are susceptible, pet birds (parrots, parakeets, macaws, and cockatiels) and poultry (turkeys and ducks) are most frequently involved in transmission to humans. Those at increased risk for infection include bird owners, pet shop employees, and veterinarians. Outbreaks of psittacosis in poultry processing plants have also occurred.

Diagnosis of psittacosis can be difficult. Antibiotic treatment may prevent an antibody response, thus limiting diagnosis by serologic methods. Infected birds are often asymptomatic. Tracebacks of infected birds to distributors and breeders often is not possible because of limited regulation of the pet bird industry.

Justification

Psittacosis meets the following criteria for a nationally and **standard** notifiable condition, as specified in CSTE position statement 08-EC-02:

- A majority of state and territorial jurisdictions—or jurisdictions comprising a majority of the US population—have laws or regulations requiring **standard** reporting of psittacosis to public health authorities
- CDC requests **standard** notification of psittacosis to federal authorities

¹ Much of the material in the background is directly quoted from the CDC’s Psittacosis Website. See the References for further information on this source.

- CDC has condition-specific policies and practices concerning the agency’s response to, and use of, notifications.

III. Statement of the desired action(s) to be taken

CSTE requests that CDC adopts changes to the case classification and standardized reporting for psittacosis to facilitate more timely, complete, and standardized local and national reporting of this condition.

IV. Goals of Surveillance

To provide information on the temporal, geographic, and demographic occurrence of psittacosis to facilitate its prevention and control.

V. Methods for Surveillance

Surveillance for psittacosis should use the sources of data and the extent of coverage listed in Table V below.

Table V. Recommended sources of data and extent of coverage for ascertaining cases of psittacosis.

Source of data for case ascertainment	Coverage	
	Population-wide	Sentinel sites
clinician reporting	x	
laboratory reporting (human and veterinary)	x	
reporting by other entities (e.g., hospitals, veterinarians, pharmacies)	x	
death certificates	x	
hospital discharge or outpatient records	x	
extracts from electronic medical records	x	
telephone survey		
school-based survey		
other _____		

VI. Criteria for Reporting

Reporting refers to the process of healthcare providers or institutions (e.g., clinicians, clinical laboratories, hospitals) submitting basic information to governmental public health agencies about cases of illness that meet certain reporting requirements or criteria. Cases of illness may also be ascertained by the secondary analysis of administrative health data or clinical data. The purpose of this section is to provide those criteria that should be used to determine whether a specific illness should be reported.

A. Narrative description of criteria to determine whether a case should be reported to public health authorities

Report any illness to public health authorities that meets any of the following criteria:

A person with an illness characterized by fever, chills, headache, cough, and myalgia *and* any of the following laboratory criteria:

- Isolation of *Chlamydophila psittaci* from respiratory specimens (e.g., sputum, pleural fluid or tissue) or blood,
- A fourfold or greater increase in antibody (IgG) against *C. psittaci* by complement fixation (CF) or microimmunofluorescence (MIF) between paired acute- and convalescent-phase serum specimens obtained at least 2-4 weeks apart,
- A *C. psittaci* antibody titer (IgM) by CF or MIF of greater than or equal to 1:32 in at least one serum specimen obtained after onset of symptoms
- Detection of *C. psittaci* DNA in a respiratory specimen (e.g. sputum, pleural fluid or tissue) via amplification of a specific target by PCR assay.

A person whose healthcare record contains a diagnosis of psittacosis.

A person whose death certificate lists psittacosis as a cause of death or a significant condition contributing to death.

Other recommended reporting procedures

- All cases of psittacosis should be reported.
- Reporting should be on-going and routine.
- Frequency of reporting should follow the state health department’s routine schedule.

B. Table of criteria to determine whether a case should be reported to public health authorities

Table VI-B. Table of criteria to determine whether a case should be reported to public health authorities. Requirements for reporting are established under State and Territorial laws and/or regulations and may differ from jurisdiction to jurisdiction. These criteria are suggested as a standard approach to identifying cases of this condition for purposes of reporting, but reporting should follow State and Territorial law/regulation if any conflicts occur between these criteria and those laws/regulations.

Criterion	Reporting
<i>Clinical Evidence</i>	
Fever	C
Chills	C
Headache	C

Criterion	Reporting
Cough	C
Myalgia	C
Healthcare record contains a diagnosis of psittacosis	S
Death certificate lists psittacosis as a cause of death or a significant condition contributing to death	S
<i>Laboratory Evidence</i>	
Isolation of <i>Chlamydophila psittaci</i> from respiratory specimens (e.g., sputum, pleural fluid or tissue), or blood	S
Fourfold or greater increase in IgG antibody against <i>C. psittaci</i> by complement fixation (CF) to a titer of at least 1:32 between paired acute- and convalescent-phase serum specimens	S
Fourfold or greater increase in IgG antibody against <i>C. psittaci</i> by microimmunofluorescence (MIF) to a titer of at least 1:32 between paired acute- and convalescent-phase serum specimens	S
A <i>C. psittaci</i> antibody titer (IgM) by CF or MIF of greater than or equal to 1:32 in at least one serum specimen obtained after onset of symptoms	S
A <i>C. psittaci</i> antibody titer (IgM) by CF or MIF of greater than or equal to 1:32 in at least one serum specimen obtained after onset of symptoms	S
Detection of <i>C. psittaci</i> DNA in a respiratory specimen (e.g., sputum, pleural fluid or tissue) via amplification of a specific target by PCR assay	S

Notes:

S = This criterion alone is Sufficient to identify a case for reporting.

C. Disease Specific Data Elements:

Disease-specific data elements to be included in the initial report are listed below.

Clinical Information:

Date of onset of symptoms consistent with psittacosis

Epidemiologic Risk Factors:

Recent exposure to birds or bird feces

Vocation or avocation

VII. Case Definition for Case Classification

A. Narrative description of criteria to determine whether a case should be classified as confirmed or probable (presumptive) is provided:

Case Classification

This document contains minor technical corrections approved by the CSTE membership on June 10, 2010.

Confirmed: An illness characterized by fever, chills, headache, cough and myalgia, and laboratory confirmed by either:

- Isolation of *Chlamydophila psittaci* from respiratory specimens (e.g., sputum, pleural fluid or tissue), or blood.
- Fourfold or greater increase in antibody (IgG) against *C. psittaci* by complement fixation (CF) or microimmunofluorescence (MIF) between paired acute- and convalescent-phase serum specimens obtained at least 2 weeks apart.

Probable: An illness characterized by fever, chills, headache, cough and myalgia that has either:

- Antibody titer (IgM) against *C. psittaci* of at least 1:32 by CF or MIF in one or more serum specimens obtained after onset of symptoms.
- Detection of *C. psittaci* DNA in a respiratory specimen (e.g. sputum, pleural fluid or tissue) via amplification of a specific target by PCR assay.

Comment

Although MIF has shown greater specificity to *C. psittaci* than CF, positive serologic findings by both techniques may occur as a result of infection with other Chlamydia species and should be interpreted with caution. To increase the reliability of test results, acute- and convalescent-phase serum specimens should be analyzed at the same time in the same laboratory. A realtime polymerase chain reaction (rtPCR) has been developed and validated in avian specimens but has not yet been validated for use in humans.²

B. Classification Tables

Table VII-B lists the criteria that must be met for a case to be classified as confirmed or probable (presumptive).

Table VII-B. Table of criteria to determine whether a case is classified.

Criterion	Case Definition	
	Confirmed	Probable
<i>Clinical Evidence</i>		
Fever	O	O
Chills	O	O
Headache	O	O

² Mitchell SL, BJ Wolff, WL Thacker, PG Ciembor, CR Gregory, KDE Everett, BW Ritchie, JM Winchell 2008 Genotyping of *Chlamydophila psittaci* by real-time PCR and high resolution melt analysis. J. Clin. Microbiol. 47:175-181

Cough	O	O
Myalgia	O	O
<i>Laboratory Evidence</i>		
Isolation of <i>Chlamydophila psittaci</i> from respiratory specimens (e.g., sputum, pleural fluid or tissue) or blood	O	
Fourfold or greater increase in antibody (IgG) against <i>C. psittaci</i> by complement fixation (CF) between paired acute- and convalescent-phase serum specimens obtained a minimum of 2 weeks apart	O	
Fourfold or greater increase in antibody (IgG) against <i>C. psittaci</i> by microimmunofluorescence (MIF) between paired acute- and convalescent-phase serum specimens obtained a minimum of 2 weeks apart	O	
Titer of antibody against <i>C. psittaci</i> (IgM) of at least 1:32 by CF in one or more serum specimens obtained after onset of symptoms		O
Titer of antibody against <i>C. psittaci</i> (IgM) of at least 1:32 by MIF in one or more serum specimens obtained after onset of symptoms		O
Detection of <i>C. psittaci</i> DNA in a respiratory specimen (e.g. sputum, pleural fluid or tissue) via amplification of a specific target by PCR assay		O

Notes:

O = At least one of these “O” (Optional) criteria in each category (i.e., clinical evidence and laboratory evidence) in the same column—in conjunction with all “N” criteria in the same column—is required to classify a case.

VIII. Period of Surveillance

Surveillance should be on-going.

IX. Data sharing/release and print criteria

- Notification to CDC of confirmed and probable cases for psittacosis is recommended.
- Electronic reports of psittacosis in NNDSS are summarized annually and reported in MMWR’s Summary of Nationally Notifiable Conditions.

X. References

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XI. Coordination:

Agencies for Response:

- (1) Thomas R. Frieden, MD, MPH
Director
Centers for Disease Control and Prevention
1600 Clifton Road, NE
Atlanta GA 30333
(404) 639-7000
txf2@cdc.gov
- (2) Laura Conklin MD
Medical epidemiologist
Centers for Disease Control and Prevention
Respiratory Diseases Branch
1600 Clifton Rd., MS C-23
Atlanta, GA 30333
404-639-7000
Dvj3@cdc.gov

XII. Submitting Author:

- (1) Kathleen A Smith DVM MPH
State Public Health Veterinarian
Ohio Department of Health
PO Box 1430
Reynoldsburg, OH 43068-6430
Phone (614) 466-0283
Fax (614) 466-1057
Email kathy.smith@odh.ohio.gov

Co-Authors:

- (1) Leslie Tengelsen, PhD, DVM
Deputy State Epidemiologist
Idaho Department of Health and Welfare
450 W. State St, 4th Floor
Boise, ID 83702
(208) 334-5941

tengelse@dhw.idaho.gov

- (2) Harry F. Hull, Medical Epidemiologist
HF Hull & Associates, LLC
1140 St. Dennis Court
Saint Paul, MN 55116
(651) 695-8114
hullhf@msn.com

- (3) Cecil Lynch, Medical Informaticist
OntoReason
7292 Shady Woods Circle
Midvale, UT 84047
(916) 412.5504
clynch@ontoreason.com

- (4) R. Gibson Parrish, Medical Epidemiologist
P.O. Box 197
480 Bayley Hazen Road
Peacham, VT 05862
(802) 592-3357
gib.parrish@gmail.com