Chlamydiosis (Psittacosis, Ornithosis)

**DISEASE IN ANIMALS**

Avian Chlamydiosis is an intracellular bacterial infection of birds, most commonly found in psittacine birds, pigeons and doves, sometimes in ducks and turkeys but rarely in chickens.

**Reporting:** Suspect cases in any poultry are to be immediately reported to the Ohio Department of Agriculture (ODA), Division of Animal Industry at (614) 728-6220 or (800) 300-9755. Reporting of psittacosis in pet birds to ODA is voluntary. Because psittacosis is a zoonotic disease, it is recommended that the local health department (LHD) also be notified if a recently acquired pet bird from a commercial source has a laboratory confirmed infection.

**Transmission:** Transmission is via inhalation of the organism that has been aerosolized from dried feces or respiratory tract secretions of infected birds. Some infected birds only shed intermittently, particularly when under stress. The organism can remain infectious for over a month if protected by organic debris.

**Clinical signs:** The clinical signs in birds are variable and include depression, ruffled feathers, weakness, anorexia, weight loss, nasal discharge, respiratory distress, yellowish–green or green diarrhea, and conjunctivitis. Asymptomatic infections and periodic shedding of organisms by these birds make it difficult to control in an aviary situation.

**Diagnostics:**
- Culture: combined conjunctival, choanal and cloacals swab; spleen and liver tissue from necropsy specimens
- Cytology: Gimenez or Macchiavello’s will stain organisms in the macrophages
- Serology: acute and convalescent titers if possible using IFA or CF. A single titer may indicate past exposure, not current infection
- ELISA, IFA, PCR: Results need to be interpreted carefully due to possible false negatives due to intermittent shedding of the organism or false positives from cross reactivity with other antigens
- In individual animals, a combination of antibody and antigen test may be most useful for diagnoses

**Case classification:** (see NASPHV Psittacosis Compendium for more detail)
- Suspected: A compatible illness that is epidemiologically linked to another case in a human or bird but is not laboratory confirmed or a compatible illness that is responsive to appropriate therapy
- Probable: A single high serologic titer in a bird with clinical illness; or detection of chlamydial antigen identified by ELISA, PCR, or FA from a clinical specimen
- Confirmed: Detection of the organism (culture, cytology) or chlamydial antigen (immunofluorescence) in a clinical specimen or a greater than fourfold change in serologic titer

**DISEASE IN HUMANS**

**Reporting:** Report by the end of the business day any suspected human illness or positive laboratory result to the LHD where the patient resides. If unknown, report to the LHD of the health provider or laboratory.

**Human illness:** Psittacosis is an illness 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 incubation period is usually one to four weeks. The severity of the disease ranges from a mild, non-specific illness to a systemic illness with severe pneumonia. Humans with symptomatic infections typically have an abrupt onset of fever, chills, headache, malaise, and myalgia. A nonproductive cough is usually present and can be accompanied by breathing difficulty and/or chest tightness. A pulse-temperature dissociation (fever without
increased pulse rate), enlarged spleen, and nonspecific rash are sometimes observed. Mortality has been extremely rare since the advent of antibiotics.

**Personal protection:** Caretakers of sick birds should wear gloves, eyewear, disposable cap and an appropriately fitted respirator with N95 or higher rating. Surgical masks may not be effective. Litter should be wetted before cleaning to decrease aerosolization. Necropsies should be done in a biological safety cabinet and wet the carcass with detergent and water to prevent aerosolization.

**FOR MORE INFORMATION**

Reportable Animal Diseases in Ohio
ODA Division of Animal Industry
OAC Chapter 901:1-21 Dangerously Contagious or Infectious and Reportable Diseases
USDA Animal and Plant Health Inspection Service

Disease in Animals
NASPHV Compendium of Measures to Control Chlamydophila psittaci Infection among Humans and Pet Birds
AVMA Zoonoses Update: Psittacosis
Iowa State University Center for Food Security and Public Health Animal Disease Factsheets

Disease in Humans
ODH Infection Control Manual (Psittacosis)
CDC Psittacosis