



AVIAN INFLUENZA

Agent Information:	The “avian influenza virus” refers to influenza A viruses found mainly in birds, but infections with certain strains can occur in humans. Many different subtypes of type A influenza viruses exist. These subtypes are identified by specific proteins on the surface of the influenza A virus (hemagglutinin [HA] and neuraminidase [NA] proteins). There are 16 known HA subtypes and nine known NA subtypes of influenza A viruses, with many different combinations of HA and NA proteins possible. Each combination represents a different subtype of the virus. Human illness has been documented from types H5, H7, and H9. The most recent outbreak documented in humans was caused by influenza A H7N9 virus.
Transmission:	Direct contact with infected poultry or contaminated surfaces. Avian strains which infect humans may acquire the ability to be spread from person to person. Limited, non-sustained, person-to-person transmission of H5N1 and H7N9 has been reported in Asia. Person-to-person transmission occurs by droplet, aerosol, and fomite transmission.
Signs and Symptoms:	The reported symptoms for avian influenza in humans have ranged from typical influenza-like symptoms (fever, cough, sore throat, and muscle aches) to eye infections (conjunctivitis), pneumonia, acute respiratory distress, viral pneumonia, and other severe life-threatening complications. The severity of the disease depends on the strain or subtype of the virus. Asian lineage H7N9 and H5N1 have been responsible for the majority of cases in humans as well as highest morbidity and mortality.
Protective Measures:	<p><u>Standard Precautions:</u> Hand hygiene before and after all contact with patients or with items potentially contaminated with respiratory secretions.</p> <p><u>Contact Precautions:</u> Use gloves, gown, eye protection, and dedicated equipment (e.g. stethoscopes, disposable blood pressure cuffs, disposable thermometers) for all patient contact.</p> <p><u>Airborne Precautions:</u> Place the patient in an airborne isolation room. It should have monitored negative air pressure in relation to corridor, with 6 to 12 air changes per hour (ACH), and exhaust air directly outside or have recirculated air filtered by a high efficiency particulate air (HEPA) filter. Portable HEPA filters may be used instead to increase the number of ACH. Use a fit-tested respirator, preferably a NIOSH-approved N-95 filtering respirator, when entering the room.</p>
Lab Samples for Evaluation:	Call the Delaware Public Health Laboratory (302-223-1520) for information about laboratory testing and to coordinate the submission of specimens for analysis. For viral cultures, acceptable specimens include nasal washes, nasopharyngeal (NP) aspirates, NP and throat swabs, tracheal aspirates, and bronchoalveolar lavage.



- Prophylaxis:** There is no vaccine currently available. The Centers for Disease Control and Prevention (CDC) recommend that oral oseltamivir or inhaled zanamivir chemoprophylaxis be provided to close contacts of a confirmed or probable case according to risk of exposure, which is based on clinical judgement.
- Treatment:** Most Influenza A (H7N9) and A (H5N1) viruses are susceptible to neuraminidase inhibitors oseltamivir, peramivir, and zanamivir, and resistant to adamantanes. Therefore, amantadine and rimantidine are not recommended for treatment of novel influenza A virus infections.
- Reporting:** Report any suspect cases immediately to the Division of Public Health, Epidemiology Branch: 1-888-295-5156 (24/7 coverage). For additional information, visit the CDC website:
www.cdc.gov/flu/avian/.