**Avian Influenza**  
**Summary Guidance for Veterinarians**  

**Agent**  
- Type A influenza virus: RNA virus in family Orthomyxoviridae  
  - Hemagglutinating antigen (HA) and neuraminidase antigen (NA), are the basis for the serologic identity of the influenza viruses  
  - To date, 16 hemagglutinins (H1 to H16), and 9 neuraminidases (N1 to N9) have been found in viruses from birds  
  - Classified as low pathogenic avian influenza (LPAI) and highly pathogenic avian influenza (HPAI) based upon specific diagnostic and/or sequence criteria.  
  - Since 1955, all HPAI outbreaks have been attributed to subtypes H5 and H7

**Susceptible species**  
- Domestic and wild birds. Wild aquatic birds are the reservoir for avian influenza viruses  
- Sporadically the virus can spill over to mammals such as humans, pigs, mink, marine mammals, foxes, skunks, cats, dogs

**Occurrence in BC and the world**  
- Occurs worldwide; different strains are more prevalent in certain areas  
- Beginning in 2020 there is a widespread global outbreak of H5N1 avian influenza in poultry, wild birds, and occasional mammalian cases  
- 11 human cases globally have been detected in the current H5N1 outbreak (2020 to present)

**Transmission**  
- Within farm: transmission occurs via direct and indirect routes:  
  - **Direct**: via secretions/excretions from infected birds, such as feces  
  - **Indirect**: via contaminated items such as feed, water, equipment, clothing  
- Between farms: movement of live birds (domestic & wild), people, equipment and vehicular traffic

**Diagnosis**  
**Clinical**  
- Incubation period in birds: 2-7 days  
  - **LPAI**: Subclinical or mild infection. Decreased egg production and quality, respiratory signs, lethargy, decreased feed and water consumption, or somewhat increased flock mortality rates may be seen in chickens and turkeys  
  - **HPAI**: High mortality with non specific systemic, respiratory and/or neurological signs, sudden death in chickens and turkeys. Variable severity in other birds  
  - **Differential diagnoses** for HPAI: Newcastle disease, infectious laryngotracheitis, duck plague, acute poisonings, sudden death associated with husbandry issues (eg ventilation, temperature etc)

**Laboratory**  
- Virus isolation from oropharyngeal, tracheal and/or cloacal swabs or organ samples. Detection from real-time RT-PCR.

**Prevention in poultry**  
- Enforcing strict biosecurity measures on poultry farms, preventing contact with wild birds  
- CFIA surveillance program for H5 and H7 strains of avian influenza

**Zoonotic implications**  
- Human infection is rare and should be avoided to minimize the risk of viral reassortment leading to emergence of a new pandemic strain  
- Most cases have direct contact with infected poultry

**Reporting**  
- H5 and H7 avian influenza are reportable diseases to BC’s Chief Veterinarian  
  - **All suspect or confirmed cases should be reported within 24 hours to** Chief.Veterinarian@gov.bc.ca  
  - Veterinarians may be contacted by public health authorities for follow-up  
  - H5 and H7 avian influenza is a reportable disease to the CFIA:  
  - **Veterinarians must immediately report suspect and confirmed cases to** a CFIA district veterinarian