### Influenza A in Swine 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, 16 hemagglutinin (H) and nine neuraminidase (N) subtype antigens described for Type A influenza viruses
- Most common subtypes in swine are H1N1, H1N2, H3N2

#### Susceptible species
- Pigs are reservoir and principal host of swine influenza viruses
  - Because pigs are susceptible to both avian and human influenza strains, they can be important in influenza virus reassortment events and interspecies transmission.
- Swine influenza viruses have been detected in other species including humans, turkeys and ducks

#### Occurrence in BC and the world
- Enzootic in pigs in Canada, the United States, Mexico, South America, Europe, and parts of Africa and Asia
  - H1N1 is the most common cause of swine influenza in North America; up to 40% of herds may contain antibody positive pigs
  - Outbreaks usually in late fall or winter months
- 1-3 cases of swine influenza diagnosed in BC herds annually
- No cases of human transmission of swine influenza documented in BC

#### Transmission
- Respiratory and indirect transmission

#### Diagnosis

##### Clinical
- 1-3 day incubation period
- High morbidity, low mortality; young growing pigs most susceptible.
- Acute upper respiratory disease: fever, lethargy, anorexia, weight loss, laboured breathing, coughing, sneezing, nasal discharge

**Differential diagnoses:** *enzootic pneumonia, hog cholera, inclusion body rhinitis, atrophic rhinitis*

##### Laboratory
- PCR to detect virus, virus isolation, hemagglutination inhibition test, ELISA

#### Prevention and control
- Vaccination, strict import controls and good biosecurity to prevent infection entering a herd
  - Inactivated H1N1 and H3N2 influenza vaccines are available
- Treatment to relieve symptoms, antimicrobials may reduce secondary bacterial infections

#### Zoonotic implications
- Zoonotic transmission of swine influenza to humans has occurred worldwide
- Swine influenza illness is rare in humans, and is usually mild if it occurs

#### Reporting
- Influenza A in swine is a notifiable disease to the Chief Veterinary Officer (CVO) in BC
  - All laboratory-confirmed cases should be reported within 24 hours (604-556-3013)
  - Veterinarians may be contacted by public health authorities for follow-up