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What is Canine Influenza?

- **H3N8¹** – Detected in dogs in 2004 in the US– Jumped from horses to dogs in the US

- **H3N2^{2,3}**
 - Detected in 2015 in the US – Originally from South Korea– Jumped from birds to dogs in South Korea
 - H & N refer to outer surface proteins

3,4 H3N2 Identified in the USA

- First detected in the US in Chicago, IL in March 2015
- Second major outbreak in Atlanta, GA in May 2015

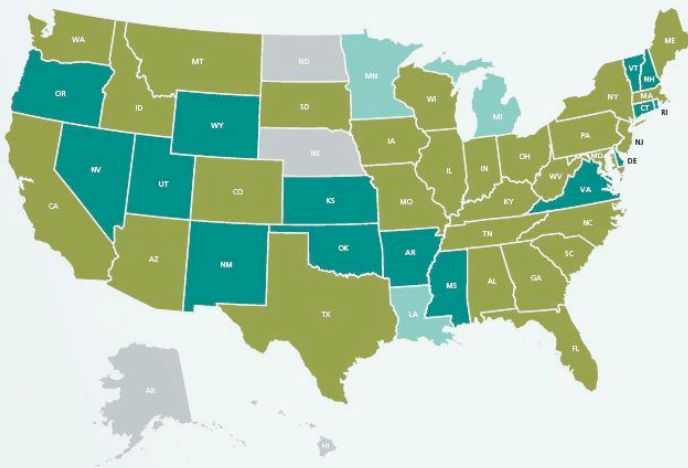
- Circulating throughout the US since
- Dog show – Perry, Georgia May 19th
- Dog show- Deland, Florida May 25th

States with recently confirmed H3N2 are currently California, Florida, Georgia, Kentucky, Louisiana, Missouri, North Carolina, South Carolina, Louisiana, Tennessee, Illinois, and Texas.

CIV H3N2 Outbreak: May/June 2017



The growing prevalence of dog flu H3N2 and H3N8*



- H3N2 strain only
- H3N8 strain only
- Both strains

*Syndromic surveillance data of Cynda Crawford, DVM, PhD, University of Florida; Edward Dubovi, PhD, Cornell University; Sanjay Kapil, DVM, PhD, ACVIM, Oklahoma State University; Rhode Island State Veterinarian's office; and IDEXX Laboratories. May 2017.

Which dogs are at risk?

- Dogs that are taken to venues where dogs interact/socialize •
- Boarding facilities • Doggie daycares • Shelters/rescues • Pet stores •
- Adoption groups
- Breeding facilities • Groomers • Travel/shows/competition
- Walking in the neighborhood/pet store

Transmission • Aerosolization • Coughing, sneezing • Direct contact •

Bowls/toys/bedding/cages • CIV- up to 48 hours • Care-givers • CIV- 12-24

hours

Transmission/Disease^{3,5} H3N8

- Shed for ~5 days after the onset of clinical signs • Fewer viral particles shed •

Slower onset of disease

H3N2 • Shed for up to 24 days after the onset of clinical signs

- More viral particles shed • Faster onset of disease

Clinical Signs⁶

- Non-specific – Coughing
 - Sneezing
 - Discharge from the nose and eyes – Fever
 - Lethargy
 - Loss of appetite
 - Pneumonia
 - Death
- Bring the dog to the vet!!

Tools for Prevention of CIRDC complex: Vaccines

The only prevention is vaccination!
• Vaccination is not a treatment option, it is preventative

- Vaccination must be performed **BEFORE** you see disease – 2 doses, 2-4 weeks apart
- Immunity is achieved 2 weeks after the second dose



Nobivac® Canine Flu Bivalent

- 2 canine flu strains in 1.0 mL dose – H3N2

– H3N8

- Inactivated virus vaccine
- For dogs 7 weeks of age or older
- 2 initial doses 2-4 weeks apart
- Annual booster with 1 dose recommended

Summary

- Two strains of influenza infect dogs (H3N2 and H3N8) • H3N2 and/or H3N8 have been detected in 46 states
- All dogs who are exposed to other dogs are at risk
- Transmission is by direct or indirect contact
- Influenza can survive in the environment for up to 48 hours • Clinical signs are non-specific for respiratory disease
- Practice good disinfection protocols
- Appropriate cleaning, disinfectant contact time
- Clean all areas where dog went • Proper isolation and quarantine • Vaccination is key for prevention