

Chronic Wasting Disease (CWD)

Stephen M. Schmitt, D.V.M.

Michigan Department of Natural Resources Wildlife Disease Laboratory



Wyoming deer



Colorado elk



History of Index Case

- On May 20, 2015, the DNR Wildlife Disease Lab received confirmation a skinny six year old whitetail doe was infected with Chronic Wasting Disease (CWD).
- The doe had been wandering unafraid of humans in a neighborhood in Meridian Township, Ingham County.
- This was the first confirmed CWD-positive wild deer in Michigan. A captive whitetail doe from Kent County was positive in 2008.



History of Index Case

- DNR had tested >34,000 deer, 1,600 elk and 70 moose prior to the positive deer, and they were all negative.
- Genetic tests at MSU suggest the positive wild doe was local.
- How the doe was infected is unknown, it's possible the disease was either brought in with an infected live deer, or in a contaminated carcass from out of state.
- Given CWD's long incubation, the deer was likely infected sometime in or before 2013.



CWD as a Disease

- CWD is a slowly progressive neurological disease occurring only in the deer family.
- It is related to, but distinct from, other transmissible spongiform encephalopathies like Mad Cow Disease in cattle, scrapie in sheep, and Creutzfeldt-Jacob disease in humans.
- Research to date has not shown it to be naturally transmissible to humans or other animals besides cervids.
- Like other TSEs, CWD is caused by prions, infectious proteins.



CWD as a Disease

- Prions can be transmitted directly by contact with an infected animal or its carcass, or indirectly from contact with items or areas contaminated by an infected animal.
- Once contaminated, prions stay infectious in the soil for years.
- Infected animals take 18 months or longer to show signs of sickness, but are infectious all that time.
- They always die, and currently there is no effective treatment or vaccine.



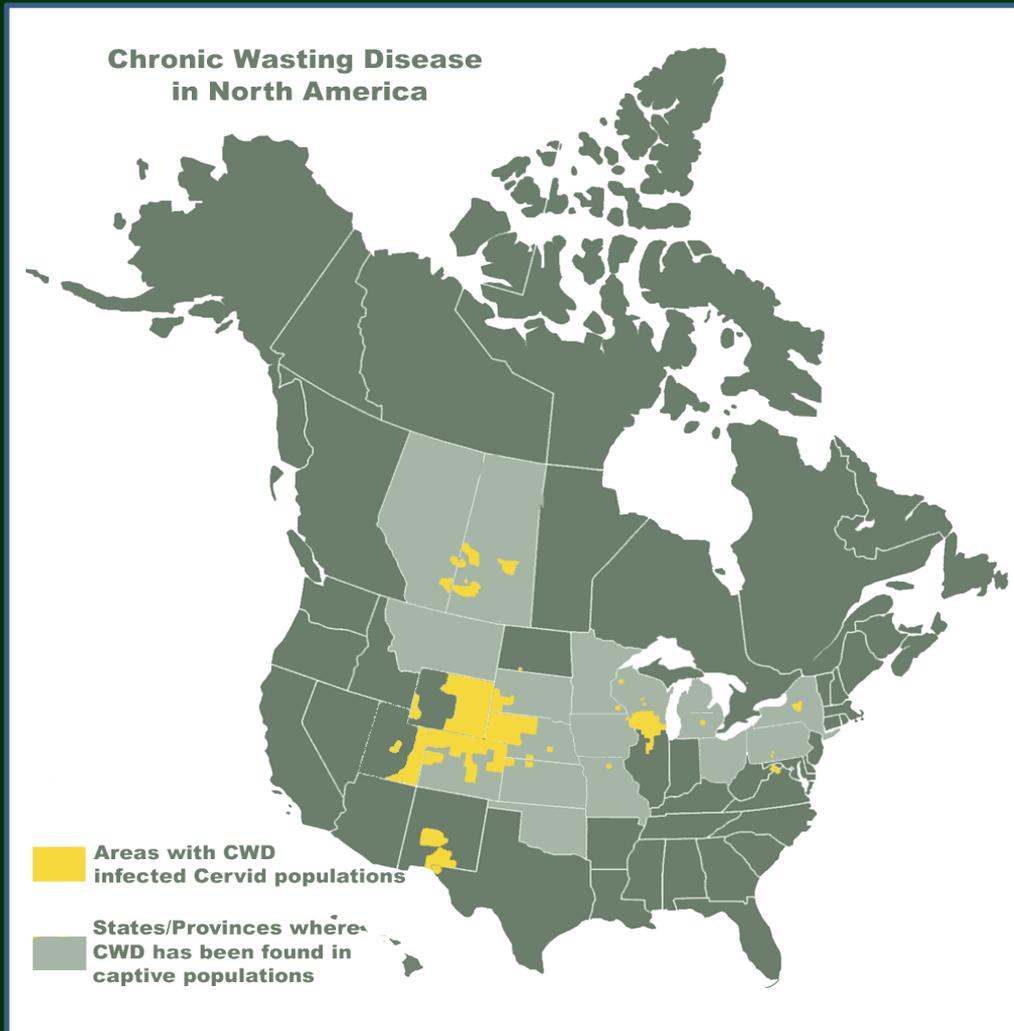
Management Prognosis

- Recent (March 2014) research from Wisconsin's established core outbreak area suggests that under current harvest management there, about half of adult bucks and 25% of adult does will likely be infected within 10 years.
- In Wisconsin, geographic spread is relatively slow (a little less than a mile per year).



Occurrences of CWD in North America

CWD has been found in:



Free-ranging wild cervids

20 States

2 Canadian Provinces

Privately owned captive
cervid facilities(POCs)

14 States

2 Canadian Provinces



Michigan's CWD Surveillance and Response Plan was created in 2002 and updated in 2012.

Fundamental Goals of the Plan:

1. Early identification of the disease.
2. Once found, limit further transmission.
3. We will immediately begin testing deer in Meridian Township to determine prevalence and distribution of the disease.
4. Then eradication of CWD if results of surveillance suggest that it is likely to be achievable.



Michigan's CWD Surveillance and Response Plan

Implementation of the Plan:

1. Complete a population survey
2. Establish a CWD Management Zone
3. Implement a deer feeding and baiting ban
4. Prohibit the movement of deer or deer parts from the CWD Management Zone
5. Intensify surveillance efforts on free-ranging deer within the zone, with mandatory check and CWD testing of all deer



Importance of Hunters

- Cooperation and participation from hunters will be critical in combating this disease
- Continue supporting Meridian Township's urban deer management program
- Hunters will know disease status of their deer



Highly Pathogenic Avian Influenza

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History of Index Case

- Three Canada goslings in Sterling Heights, Macomb County were seen having seizures and head tremors. The birds were collected by DNR field staff and brought to the DNR Wildlife Disease Lab (WDL)
- The goslings were positive for avian influenza (AI) subtype H5 on initial testing.
- Last Saturday, June 6, we received confirmation from USDA's National Veterinary Services Laboratory that the goslings were infected with Highly Pathogenic AI (HPAI), H5N2.



- This is the first time HPAI has been detected in wild birds in Michigan.
- Twenty other states have reported cases of High Path H5N2 in domestic or wild birds.
- Michigan is one of six to have a case only in wild birds.



- Avian influenza virus has been found worldwide in many wild bird species, but most often the virus infects ducks, geese, swans and shorebirds and typically causes few, if any symptoms.
- Infected wild birds usually do not get sick themselves but can still spread AI to other birds.
- Susceptible birds become infected by contacting nasal or respiratory secretions, or feces from infected birds.



- Avian influenza viruses can also infect certain mammals such as pigs, horses, dogs, and humans.
- However, at this time, no humans have become sick with the H5N2 subtype of AI.
- Certain HPAI viruses (some H5 and H7 strains) cause widespread disease and death in domestic poultry, which become infected by direct contact with infected wild birds or infected domestic poultry, or by indirect contact with soil, cages, water, or feed contaminated with the virus.



- People, vehicles, and other objects can unknowingly spread influenza virus from one farm to another.
- Avian influenza outbreaks among poultry occur sporadically world-wide.
- The Michigan DNR has an Avian Influenza Plan that was created in 2006. The DNR response efforts are designed to limit the spread in wildlife and prevent transmission from wild birds to domestic poultry.



Guided by the plan, the DNR will:

1. Create an AI Core Area, which is a 10-mile radius around the positive cases.
2. Create an AI Management Zone. Any counties that touch the AI Core Area are considered within the AI Management Zone. The zone is Macomb and Oakland counties.
3. Suspend goose round-up and relocation statewide, except in approved situations where there are elevated health and safety concerns.



Guided by the plan, the DNR will:

4. Heighten AI surveillance throughout southeastern Michigan.
5. Increase biosecurity measures for anybody handling geese.
6. Continue statewide AI surveillance, which includes responding to suspicious sick and dead animals, testing ducks and geese that are being banded, and testing hunter-harvested waterfowl.



Thank You

www.michigan.gov/CWD

www.michigan.gov/avianinfluenza

