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Chronic Wasting Disease (CWD) and Government Response

Chronic wasting disease (CWD) is a degenerative neurological disorder that affects cervids, including multiple species of deer, elk, and moose. Infected cervids may exhibit many symptoms including weight loss or wasting, poor balance, excessive salivation, difficulty swallowing, and others. CWD has a 100% mortality rate. The spread of CWD has impacted both wild and captive animals, including farm-raised cervids (e.g., for venison production), across the United States. CWD has caused economic losses for U.S. farm-raised cervid operations and may affect wild cervids. As a result, Congress is taking an active interest in the incidence and management of CWD.

CWD was first discovered in 1967 in Colorado, and since that time, it has spread across the United States. It may be transmitted by direct animal-to-animal contact or indirectly when animals come in contact with infected substances, such as soil, dust, or forage. According to the U.S. Geological Survey (USGS), CWD has spread to 26 U.S. states (as of May 2019; **Figure 1**) and to Canada, Finland, Norway, Sweden, and South Korea.

CWD is a type of transmissible spongiform encephalopathy (TSE) that affects cervids. TSEs, also known as prion diseases, are a group of degenerative neurological disorders that result in a spongy appearance of the infected brain. TSEs are believed to be caused by abnormally folded prion proteins. Prion proteins are naturally occurring but, when folded incorrectly, can become both infectious and deadly. Other TSEs include scrapie, which afflicts sheep and goats, and bovine spongiform encephalopathy (BSE, also known as mad cow disease), which affects cattle. TSEs in humans include Creutzfeldt-Jakob disease.

After infection by CWD, cervids may not exhibit symptoms for an extended period following exposure. This incubation

period can last for a year or longer. No vaccine or treatment exists for CWD. Two diagnostic post-mortem testing techniques exist for identifying CWD in cervids.

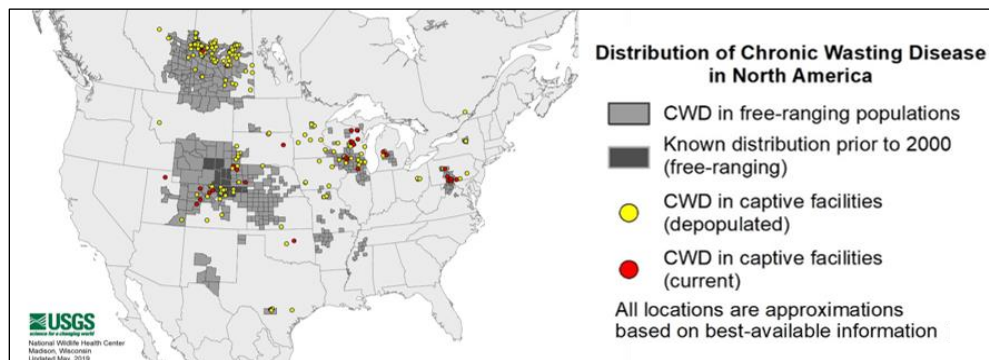
In some experimental studies, CWD has been shown to infect mice, squirrels, monkeys, and potentially macaques. According to the Centers for Disease Control and Prevention (CDC) in the Department of Health and Human Services (HHS), there is no “strong evidence,” to date, of CWD infecting humans. It is unknown if humans may become infected by CWD prions, but some research suggests that CWD may possibly pose a risk to humans. As a precaution, the CDC and other public health officials advise caution in handling/processing animals that may be infected and warn against eating meat from an infected cervid. The CDC monitors current research on the potential for CWD transmission to humans and provides recommendations for hunters to reduce their risk of exposure.

CWD Management Activities

CWD management activities are shared by several federal and state departments and agencies. The primary federal agencies include the Animal and Plant Health Inspection Service (APHIS) within the U.S. Department of Agriculture (USDA) and USGS, the U.S. Fish and Wildlife Service (FWS), and the National Park Service (NPS) within the Department of the Interior (DOI). Various state agencies—such as those overseeing agriculture, fish, or wildlife—often collaborate with federal agencies. Over 25 states have control programs for both wild and captive cervids.

An early example of state and federal government cooperation was the “CWD Task Force” (no longer in operation). Initiated in 2002 by USDA, DOI, several state wildlife and agriculture agencies, land grant universities,

Figure 1. Distribution of CWD in North America



Source: CRS, adapted from USGS, National Wildlife Health Center, https://www.usgs.gov/centers/nwhc/science/expanding-distribution-chronic-wasting-disease?qt-science_center_objects=0#qt-science_center_objects.

Notes: Map depicts the distribution area of CWD in North America as of May 2019. This map is regularly updated by the USGS. Both Hawaii and Alaska (not depicted in the figure) do not have cases of CWD.

and other organizations, the purpose of the task force was to establish a network to conduct CWD surveillance, research, and depopulation/culling efforts. Some notable outcomes of the task force include the publication of a management plan—titled “Plan for Assisting States, Federal Agencies, and Tribes in Managing Chronic Wasting Disease in Wild and Captive Cervids”—and a USGS-led CWD data clearinghouse. Today, cooperation continues among state and federal agriculture and wildlife agencies, producers, and hunters.

Federal Management Activities

At the federal level, many CWD activities are within the purview of USDA’s APHIS. One of APHIS’s goals is to eradicate animal diseases, such as CWD from farmed deer and elk herds, and to assist states and tribes in managing diseases in wild animals. APHIS’s legislative authority for this work derives mainly from the Animal Health Protection Act (AHPA, 7 U.S.C. §§8301 *et seq.*).

One APHIS management tool is the CWD Voluntary Herd Certification Program (HCP), which provides a national approach to the control of CWD in farm-raised cervids. The program is a voluntary, cooperative effort among APHIS, state animal health and wildlife agencies, and farming operations. As of September 2018, 28 states are participating in this voluntary program. APHIS coordinates with state agencies to encourage cervid owners to certify their herds and comply with the CWD HCP standards to prevent the introduction and spread of CWD (9 C.F.R. Parts 55 and 81). To be enrolled in CWD HCP, herd owners are required to install fencing, provide individual animal identification, and conduct post-mortem testing for all animals over 12 months that die for any reason.

Several DOI agencies have also been involved in CWD activities, including USGS, FWS, and NPS. USGS, primarily through its National Wildlife Health Center, collaborates with other federal and state agency partners to address such challenges as the need for new diagnostic capacities as well as data collection. FWS has addressed CWD through a number of mechanisms, including through law enforcement, requiring mandatory testing in certain areas, and developing CWD plans for individual units in the National Wildlife Refuge System. NPS has similarly addressed CWD, including through the NPS Wildlife Health Branch, research activities, and management and surveillance efforts.

Animal feed, as well as rendered or animal byproducts, and wild game meat—including venison—intended for retail sale fall under the purview of HHS’s Food and Drug Administration (FDA). The Food Safety and Modernization Act (P.L. 111-353) provides FDA authority to establish preventative controls (e.g., food safety plans) for animal feed intended to be consumed by livestock and other animals, including farm-raised cervids. In 2016, FDA issued guidance to the industry prohibiting the use of materials from deer and elk in any animal feed or feed ingredients. In addition, FDA inspects and regulates all non-USDA-regulated meats and meat products, including wild or captive cervid meat, intended for commercial sale.

State Management Activities

State government management activities include enforcing APHIS’s CWD regulations for wild/captive cervids, establishing state-specific CWD regulations, and conducting CWD testing in wild/captive cervids. In some states, the department of agriculture has jurisdiction over captive and wild cervids. In other states, the fish and game department has this responsibility. In several states, these two departments share this responsibility. The Environmental Protection Agency coordinates with states to develop protocols for the safe disposal of potentially infected animal carcasses.

In October 2018, the Michigan Department of Natural Resources released an analysis of CWD regulations in the United States and Canada. The analysis reports on state-specific responses to managing CWD. For example, many states prohibit cervid imports from any country, region, or state in which CWD is found and/or require that the country, region, or state exporting the cervid be enrolled in an official CWD monitoring or certification program. Many states have banned all cervid and cervid product imports.

Recent Congressional Interest

In the 115th Congress, the Agriculture Improvement Act of 2018 (P.L. 115-334, commonly referred to as the 2018 farm bill) included a provision (Section 7209) to make CWD research and extension grants a high priority. The 116th Congress appropriated funds to address CWD in wild and captive cervids through the Consolidated Appropriations Act, 2019 (P.L. 116-6). In particular, both APHIS and the Agricultural Research Service, also in USDA, were specifically directed to address CWD (H.Rept. 116-9).

Some Members of Congress have also introduced legislation to continue CWD research, surveillance, and management. For example, bills introduced in the 116th Congress related to CWD include the following.

- The **CWD Transmission in Cervidae Study Act** (H.R. 837 and S. 382) would authorize a special study on the spread of CWD in cervids. The bill directs APHIS to study CWD in wild, captive, and farm-raised cervid populations no later than six months after the date on which funds are made available.
- The **CWD Disease Management Act** (H.R. 1550 and S. 689) would authorize \$35 million of appropriations for state and tribal efforts to manage and control CWD.
- The **ACCESS Act** (H.R. 1326) includes two titles (Titles X and XI) that incorporate CWD oversight that are similar to the CWD Transmission in Cervidae Study Act and CWD Disease Management Act.
- The **DEER Act** (S. 613 and H.R. 1919) would amend the AHPA to provide support for states and coordinate response efforts to address CWD through a multiagency task force. The bill would also award a grant for research focused on CWD in whitetail deer.

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