CWD show and tell: gauging hunters' willingness to adopt management practices

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Chronic wasting disease (CWD) continues to be a critical challenge for wildlife health and management. It has been detected in captive or wild cervids in 26 states, four Canadian provinces and in Finland, Norway, South Korea and Sweden. Although the potential management implications of the disease have been clear for decades, much remains unknown concerning methods of transmission and spread, differences in risk of infection among sex or age classes, the impacts of different regulatory and harvest regimes, effective dose for infection, and potential differences in transmissibility among CWD strains. Because the spread of this neurodegenerative disease among regions is accelerating, many believe that CWD represents an existential challenge to deer populations, deer hunting, and natural resource economics.

State and federal natural resource agencies, hunter organizations, and academics are interested in more effective and efficient CWD surveillance, management, and control to stop or slow this disease. Progress towards achieving these goals has been complicated by the fact that what we do know is controversial. Hunters argue passionately over sharp shooting, bans on baiting and feeding, regulations for and against antler point restrictions, liberalized hunting seasons and bag limits, and movement restrictions on carcasses and animal parts. Recent best management practices (BMPs) developed and published by the Association of Fish and Wildlife Agencies represent the most comprehensive and focused recommendations concerning CWD management to date, but it's too soon to know how impactful the BMP's are for disease prevention and control across many states.

Thanks to funding provided by the Michigan state legislature through PA207 of 2018, the Department of Natural Resources, the Fisheries and Wildlife Department at Michigan State University, and the University of Wisconsin at Madison have initiated a new approach to address these and other deficiencies. MSU faculty member Dr. Sonja Christensen has assembled a consortium of 14 universities, seven state and three federal agencies, one Canadian province.

The consortium has the goal of addressing four critical disease management needs:

1. Identify the most pressing research themes for coordinated action across interdisciplinary teams.
2. Improved communication between research and management personnel within and among states.
3. Identify and secure adequate funding for more diverse and measurably effective research and management efforts.

4. Develop coordinated outreach for disseminating research findings for use across states and agencies and improved understanding by the affected public.

Specifically, the consortium has agreed to prioritize the following collaborative research:

1. Create a national CWD tissue database and repository with improved access for transmission and pathology research and validation of new CWD prion detection assays.
2. Establish large-scale facilities for controlled CWD management research, potentially using depopulated cervid facilities where CWD has been detected.
3. Advance new diagnostic methods with a focus on adoption of significantly more sensitive assays than now currently in use.
4. Develop a multistate/regional approach for the adaptive management of CWD to evaluate surveillance and control strategies and to empirically evaluate how deer harvest regulations packages impact deer disease dynamics;
5. Enhance understanding of social values, motivations, and attitudes to inform decision-making and improve engagement and acceptance of disease management actions at local, state, and regional levels.

One example of new research from this effort has been a collaboration with Michigan State University, Cornell University, United States Geological Service (USGS), and the National Deer Association to assess hunter's intentions and willingness to adopt CWD management practices after watching an informative video about a management action. This study was able to evaluate changes in hunter behavior in a meaningful way that will help agencies target the CWD mitigation strategies that are most likely to succeed.

Over the coming years, this new consortium will use its collaborative platform to address CWD challenges, and perhaps, the challenges posed by other emerging diseases and threats as well. The approach is both exciting and essential. No state or jurisdiction has the resources or sufficient background data to go it alone and all recognize that regional consistencies will be needed to transcend the priorities of changing state and federal administrations.