Chronic Wasting Disease in West Virginia: A Brief Assessment of Disease Management and Monitoring, “Now and Down the Road”

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West Virginia began formal surveillance for Chronic Wasting Disease (CWD) in 2002. In 2005, after two and one-half years of surveillance, West Virginia became the 10th state to detect CWD within its borders. The first free-ranging white-tailed deer (Odocoileus virginianus) found to harbor the abnormal protein associated with CWD was a 2.5 years of age male that had been sampled as part of the statewide surveillance of road kill deer. Since that time, a total of 338 CWD positive deer have been detected through sample monitoring of predominately hunter harvested deer in the area of the first detection. Both, the known geographic distribution of the disease and disease agent prevalence, have increased in the area through the period from 2005 to present. The outbreak has expanded geographically approximately 33 sq.km. ($R^2 = 0.9344$) per year in Hampshire County and increased in periodic prevalence from 2.5% (±2.4%) to 36.5% (±13.1%) from 2005 to present in a designated monitoring area of 102 sq.km.

Generally accepted disease management actions to limit the spread of CWD focus on deer population manipulation, carcass disposal and transport, and curtailing supplemental feeding and baiting of deer. Disease management actions implemented to address CWD in West Virginia include, increase oversight of captive cervids, designation of an area to focus disease management actions, liberalize deer hunter opportunity for antlerless deer, impose a ban on supplemental feeding and baiting of deer, discourage the use of deer derived lures, impose restrictions on the disposal and transport of deer carcasses from within areas in West Virginia and surrounding states, and provide carcass disposal receptacles during deer hunting seasons to encourage proper deer carcass disposal. Evaluation and insight of the public involvement and compliance of these key elements to disease management will reduce risk to the remaining unaffected free-ranging deer populations. The “hunter friendliness” of management actions as evaluated with a hunter’s attitude survey will be shared [1].

The impact to the agency is significant. The agency’s challenges relating to operational changes for game harvest registration, expenditures, staffing, and agency stamina for sustained disease management actions will be discussed. Potential future challenges will be elucidated, such as the demand for food safety testing of harvested deer, outbreak geographical expansion impacts, landowner concerns regarding disease presence, and the agency’s ability to make adjustments to a declining deer population and/or declining hunter participation. Efforts to increase public awareness and compliance to maximize disease management actions that target deer hunters and landowners also need political support to be effective.
A well-documented method of spreading CWD across long distances is the movement of live species of deer for commercial purposes. Organizations such as the Quality Deer Management Association, Rocky Mountain Elk Foundation, and The Wildlife Society have recognized the threat that pen propagation and translocation of deer species represent to the wild deer and elk resources which are enjoyed by all citizens. This threat is not only CWD but also the introduction of other pathogens and genetic consequences, which have the potential to devastate our revered deer resources. A unified effort across state, federal, and public health agencies is needed to make the risks for continued spread of CWD relevant not only to deer hunters, but to the agricultural community and the general public.

References