

## TESTIMONY

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### Overview

West Nile Virus infection is spreading rapidly; and, in Arkansas, it has reached epidemic levels in horses and birds. This is not unlike the experience in other states in the nation. In 1999, one state had evidence of the virus, while 12 states reported it in 2000, with 27 states in 2001 and now we are up to 42 states in 2002. Last year 48 human cases were reported in the U.S.; and, this year as of September 19, 1745 cases have been reported with 84 deaths.

Our neighboring state, Louisiana, had only one human case in 2001. This year, they have more than 260 human cases. Additionally, with 473 cases in Illinois as of September 20, we are concerned that migrating birds flying south will increase the disease burden on their way through Arkansas. It is likely that many of those birds will over winter in Southern Louisiana where the mosquito population may not die off due to cold weather.

This leads me to believe there is a real possibility that Arkansas will have a dramatic increase in human cases in 2003. We currently have 9 confirmed cases, with 18 more pending CDC confirmation.

We want to be ready to have an adequate surveillance and control program in place. Larviciding to reduce the mosquito population early in 2003 is a primary control activity that we want to emphasize in Arkansas. This mosquito abatement would be carried out at the county level. We are heartened by the financial assistance contained in the two bills before Congress, which will allow counties to implement these vital mosquito control programs.

At the state level, our primary needs are to expand laboratory capacity, and to augment and continue disease surveillance programs through testing. The coordination and evaluation called for in the two Congressional bills is necessary to ensure effective use of the mosquito abatement funding; however, we are concerned that more resources will be required than the proposed \$10,000 in funding provided for the state.

### **CURRENT STATUS OF WEST NILE VIRUS ACTIVITY IN ARKANSAS**

#### Human Cases

In Arkansas we currently have 9 CDC confirmed positive cases of West Nile Virus infection out of 408 blood and cerebrospinal fluid samples received as of September 19.

Included in the 408 patient samples are 18 suspect cases that have tested positive by IGM antibody capture ELISA testing at the ADH lab, but are awaiting a confirmation neutralization test at CDC.

There are currently 54 samples awaiting testing in the ADH laboratory.

The remainder of the samples from physicians tested negative, representing 328 patients.

The confirmed and suspect WNV human cases are from Pulaski, Union, Jefferson, Bradley, Arkansas, Desha, Crittenden, Monroe and Ouachita counties.

The Communicable Disease Nurse Specialists of the Arkansas Department of Health coordinate with physicians and hospitals testing for West Nile Virus and evaluate blood serum and cerebrospinal fluid samples. They determine demographic information on each patient, which includes age, sex, symptoms, onset date, the date blood was drawn, patient address, and any travel outside of the state where they may have been exposed.

Repeat samples are requested if the sample was drawn before antibodies were formed. It is necessary to evaluate the patients' symptoms and blood or CSF results before making a diagnosis.

### **Bird Testing**

During 2002, as of September 20, the Livestock and Poultry Commission laboratory has reported 336 positive birds. Decomposed birds were not tested and 1245 birds were rejected because they were not suitable for analysis. Positive birds have been found in 48 of the 75 counties in Arkansas. Crows represented 22 percent of the positives, and 78 percent were blue jays. One owl, one hawk, one dove and one unidentified bird also tested positive for WNV infection.

### **Mosquito Testing**

During 2002, mosquitoes were trapped at 34 different sites. Positive mosquitoes were found at five different locations around the state.

During 2002, as of September 19, there were five positive mosquito pools found in the counties of Pulaski, Jefferson and Desha. These positives were of the Culex species and were trapped with both Gravid and Light traps.

### **Surveillance in Horses**

During 2002, as of September 20, there have been at least 130 horses tested for WNV and 56 have tested positive in 23 counties. The fatality rate is 39 percent, with 22 horses having died. The Arkansas Livestock and Poultry Commission conducts equine testing under a contract with the Department of Health.

During 2002, as of September 19, surveillance of horses for Eastern Equine Encephalitis has shown 20 cases in seven counties, with 19 of the 20 cases being fatal, a 95% fatality rate. This is the highest number of cases of EEE ever recorded in Arkansas and the onset was earlier in the

year than has previously been seen. EEE is more of a threat to humans than WNV since the death rate in infected humans ranges from 30 - 70%.

### **Emergency Funding by the Governor**

The Governor has released \$1 million from his emergency funds to the 75 county judges for mosquito abatement. Health Department personnel developed a formula to equitably determine the amount of money each county would receive based on evidence of WNV in the county, its population and square miles.

The funding was distributed through the Arkansas Department of Emergency Management; however, the ADH facilitated a multi-agency review process of the applications for assistance. The University of Arkansas Cooperative Extension Service, and the Arkansas Plant Board were also involved in the application process.

The Governor also declared Arkansas a disaster area because of the WNV epidemic. This would make the state eligible for funding from the Federal Emergency Management Agency (FEMA) for mosquito control. The Arkansas Congressional delegation has written a letter of support for a Federal declaration from Health and Human Services Secretary Tommy Thompson.

County judges, city managers, city mayors and public works officials are involved in larvacidal treatment of mosquito breeding areas. They also direct adulticiding if human cases of WNV occur in their county. Local level Department Environmental Health Specialists also assisted in setting priorities for mosquito abatement by identifying mosquito breeding sites. Cooperative Extension Service Entomologists and county agents also assisted by advising county officials on mosquito control.

The majority of the 75 counties in Arkansas have little or no mosquito abatement capabilities. They need money for equipment, personnel training and chemicals. The estimated cost is \$5 million for the state. The bills pending before Congress now could help address this need.

### **Centers for Disease Control Support**

CDC assisted Arkansas by sending a team of Epidemiological Intelligence Service Professionals to Arkansas to assist in our disease surveillance program. They provided technical support in the area of electronically recording and tabulating data. We now have a database for human, bird and equine cases. We are also working on a GIS to pinpoint the location of positive cases.

CDC EIS officers also assisted the Department in

identifying appropriate CDC contacts as questions and issues arose.

Laboratory samples are sent to CDC for confirmation. At CDC these samples are also tested for EEE, St. Louis Encephalitis and La Cross Encephalitis.

CDC has supported Arkansas by awarding a Cooperative Agreement to the state for \$300,000 to cover the period from April 1, 2002 to April 1, 2003. Because of the dramatic spread of the disease during August of 2002 we were awarded supplemental funds of \$398,000 for surveillance and to assist in controlling the disease.

CDC also provided television and radio public service announcements that could be customized for Arkansas.

### **Educational Activities**

The medical community was sent special letters and faxes reminding them of the necessity to submit blood samples on all patients showing encephalitis or meningitis, proper preparation of the samples, and required patient information.

The Environmental Health Specialists were trained in mosquito abatement by the entomologist at the University of Arkansas Cooperative Extension Service. They were also trained in surveillance, mosquito speciation and mosquito trapping by the WNV Project Officer and by CDC personnel through special mosquito schools.

### **Outreach Activities**

Local elected officials have been informed as human cases have been detected in their area. This contact with elected officials has been primarily by personnel at the local level.

ADH speakers frequently presented at clubs, civic organizations and other interested groups. The CDC power point presentation augmented with Arkansas data is routinely presented and is informative and gives a complete description of the disease and control measures.

We have printed and distributed 23,000 posters and brochures to the general public. We also printed coloring books for county fairs and schools.

Media relations have been excellent. The Health Director took the lead in appearing on television and radio. The State Epidemiologist appeared on talk shows and was interviewed by the television stations.

ADH has conducted three press conferences to release information on West Nile Virus.

Since August 5, 2002 the Arkansas Department of Health has issued over 20 press releases. Press releases and

educational materials have been posted on our website and are available for the media and community to access the latest and most comprehensive information regarding West Nile in Arkansas. Updates are made as necessary. Media alerts are sent to statewide media outlets to inform them that the website has been updated.

The Public Information Office has emphasized the prevention message and precautions to avoid mosquito bites and to eliminate stagnant water in their area where mosquitoes can breed.

In order to answer our citizens' questions related to this disease, a telephone response center was established. The call center operated on a 24/7 basis with calls being answered by dedicated colleagues and the Department's Emergency Communication Center.

Because of the large number of phone calls from physicians, para-medical personnel and the general public it was necessary to have a Epidemiologist and M.D. on call 24/7. The on-call roster developed for a Bioterrorism response was effectively used and ensured that a professional was available.

Through September 11, 2002 the West Nile Hotline has answered 3,417 calls from the general public and health care providers.

Internal Communication was emphasized to ensure that effective and timely information was provided from the WNV Project Team, to Business Unit Leaders, and others at the local level, including Hometown Health Leaders, Health Unit Administrators, Regional Leaders, Group Leaders, and Team Leaders.

Internal and external communication leaders worked as a team to ensure timely submission of press releases and communication between all entities before reports were made public.

### **Additional Needs**

Funding is necessary to upgrade and improve our public health laboratory. The Department's laboratory needs to be upgraded to a Bio Safety Level 3 so live viruses can be analyzed. Also, our laboratory needs the capability to test for all types of arboviral encephalitis.

Abatement funding for the counties is estimated to require an additional \$5 million.

The Livestock and Poultry Commission Laboratory test the birds, mosquitoes and horses on behalf of the Department of Health. Bird submission by the public exceeded expectations with more birds being received than the L&PC laboratory has capability to test. To expedite testing, a real time PCR testing device is needed.