

## TESTIMONY

**Testimony of John R. Lumpkin, M.D.,  
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**Joint Hearing on West Nile Virus**

**September 24, 2002**

**to the Senate Health, Education, Labor, and Pensions Committee  
and the  
Governmental Affairs Subcommittee on Oversight of Governmental Management,  
Restructuring, and the District of Columbia**

First of all, let me thank the Committees for this opportunity to provide testimony on West Nile Virus and it's very real and devastating effect in Illinois . As one of the States hardest hit, Illinois has been working hard, using every available resource, to make an impact on stopping the spread of West Nile . I am hopeful that my testimony can shed some light on our activities and the needs of our State, and probably other states that are impacted by this disease.

I know that there are specific questions of interest to committee members but, I would like to begin with some background on our experience in Illinois . As you probably know, Illinois , Louisiana , Ohio , Michigan , and Mississippi have reported the most cases of WNV during 2002.

In Illinois cases have been reported in 38 of the 102 counties (approximately 1/3 of the State). Through 9-20-02 Illinois has reported 473 cases including 25 deaths (this is a moving target) Although we have no hard data, numerous survivors have not been discharged to their homes, but to long-term care facilities or rehab facilities. We understand a major (at least short term) sequella is inability to ambulate

The majority of cases have been in the Chicago metropolitan area. In the Chicago metropolitan area, two areas of suburban Cook County bordering the City of Chicago ( Oak Lawn vicinity and Skokie vicinity) have been over-represented in the case count.

IDPH has actually planned for WNV since summer 2001. Included in the Department's FY02 budget was an initiative related to West Nile . IDPH provided funding to allow a number of local health departments to develop their own plans to ensure coordination of efforts with municipalities, mosquito abatement districts, street departments or other entities that would be involved in such an endeavor.

Infections in Illinois were unlikely prior to 2002. The virus was first documented to be present in Illinois in September 2001 when there was evidence in dead crows. Not much time remained in the mosquito feeding season after discovery of WNV in Illinois in 2001 but the evidence of it's presence started our preparations in earnest.

Realizing the potential impact, Governor George H. Ryan created a Cabinet level work group, headed by IDPH, to coordinate the state's response among the various agencies involved which included the Department of Agriculture, Natural Resources, Environmental Protection and Public Health.

The Work Group has been meeting consistently since the early Fall of 2001, and more recently, talking on a daily basis to coordinate our efforts and information.

In more general terms, a plan for surveillance of human mosquito borne infections was established in 1976 and has been implemented annually since that time.

### **Current Efforts to Control the Spread of West Nile Virus in Illinois**

After WNV was first detected in wild birds in Illinois in May 2002, IDPH put out press releases concerning personal protection and the removal of standing water and produced 30,000 color posters and fliers, over half of which have been distributed to local health departments and others that request them. Bulletins were issued to all local health departments and municipalities recommending that at minimum, larvicide be applied to street catch basins twice during the summer to prevent an outbreak of WNV.

Prior to the first human case of WNV, Public Health awarded \$264,059 to 20 local health departments to prepare for the expected WNV outbreak in Illinois. The grants allowed many LHDs to train their personnel, provide information about WNV to municipalities, and make contacts with mosquito control agencies.

An additional 18 grants totaling \$462,490 have been made to LHDs to create vector control programs and cleanup mosquito-producing tire sites.

Within a week of learning of the first Illinois resident to contract WNV on 8/8/2002, the Governor instituted daily meetings of the four-state agency WNV Task Force, created in 2001, to make funds available to local agencies to combat the advance of WNV in Illinois. Within 3 weeks, the first emergency grants were executed.

Since then, emergency WNV mosquito control grants have been offered to 37 local health departments where human WNV cases have occurred of which 24 departments have requested and received grants totaling about \$2.6 million providing protection for about 8.1 million people.

Due to the shortage of licensed mosquito control personnel in Illinois, the Department of Agriculture, in cooperation with Public Health, issued an emergency rule to allow health department and municipal officials to apply certain mosquito larvicides, without a license, after attending a one-hour seminar. Public Health staff have offered over 20 emergency-rule larviciding seminars to over 500 local officials.

Public Health has provided extensive technical assistance and advice to local health departments on mosquito control and is working closely with CDC and DNR and the UI Vet School to determine the etiology of WNV, especially concerning the two clusters of cases that have occurred near Chicago, and possible reservoirs and hosts.

Public Health has responded to thousands of phone calls, e-mails and news media contacts to answer questions from the media and the general public.

### **What more can federal and state governments do to prepare for next summer?**

However, we believe that increased attention in the form of federal funds are needed at both the state and federal level for more full-time Public Health staff to:

Administer a grant program to assist local health departments in assuring that arbovirus surveillance and control programs are provided where these services are not

offered by mosquito abatement districts or other agencies.

Work with mosquito abatement districts and other municipal mosquito control programs to assure the implementation of comprehensive and effective mosquito control programs next spring that emphasize source reduction and larviciding.

Provide mosquito control training for local health departments and municipalities that leads to licensing by the Department of Agriculture; and training in mosquito and bird collection techniques to assist Public Health in arbovirus surveillance work.

Provide resources to state public health, animal disease, and research laboratories to provide the analytical, entomological, and epidemiological tools needed to fight WNV, as well as funding for materials and personnel to rapidly perform confirmatory testing

Additional surveillance staff are also needed that can be mobilized to facilitate rapid processing of human surveillance data, rapid analysis of data and rapid dissemination of data.

Begin early public information campaigns.

We also believe that USEPA should consider the creation of a special Pesticide Applicator license for municipal officials. Current licensing focuses on agricultural pesticide applications. The license should only require enough training so that municipal officials could apply low-risk mosquito larvicides.

**Have State resources to fight West Nile virus come at the expense of other programs?**

Local Health Protection Grants, intended to support local health department programs in water supply, sewage disposal, food sanitation and infectious diseases were used to support the emergency WNV mosquito control grants provided by the WNV Task Force to LHDs.

Public Health staff that operate other programs dealing with general administration, lead, mold and moisture, environmental toxicology, and structural pest control have been diverted to WNV response.

Federal money to support bioterrorism preparedness, epidemiology and laboratory capacity, has made us better prepared to deal with this outbreak. Specifically, we believe this has been demonstrated with enhanced rapid communication to LHDs, hospital ICPs, hospital laboratories and infectious disease physicians and the funding used in disseminating information about responsibility to report human infectious disease cases responsibilities and methods of reporting

**Where have West Nile Virus infections been most prevalent in 2002, and why have infections become significantly more common this year, as compared to years past? Can we expect the number and severity of human cases to worsen in years to come?**

The virus has expanded its range across the Midwest into areas that include large population centers, such as Chicago, suburban Cook County and the nearby suburban counties. Although the virus first appeared in Illinois during August 2001, it was near the end of the mosquito transmission season. Apparently, in 2001 virus amplification in wild birds did not reach a level where humans were at significant risk.

In contrast, WNV-positive dead birds appeared in May 2002, at the beginning of the summer, which permitted summer-long virus amplification in the wild bird population. Furthermore, the hot summer of 2002 was conducive to breeding and flight activity of the house mosquito, the primary vector of WNV. As a result, there was a high level of virus amplification in birds and mosquitoes. Consequently, more people were exposed to the virus in 2002.

**Is West Nile Virus similar to any other mosquito-borne illnesses found in the United States ? If so, what lessons has the Department learned from responding to previous outbreaks?**

WNV has many similarities to St. Louis encephalitis, which caused an outbreak in Illinois during 1975. Since then, cases of SLE have been rare in Illinois , although they have been more common in southern states.

However, WNV appears to be better adapted to the temperatures in northern states; it has even been detected in southern Canada .

Because there have been few cases of mosquito-borne disease in recent years, many local mosquito abatement programs have been reduced or eliminated, which results in less effective emergency control programs. Similarly, there are few environmental staff with experience in mosquito surveillance and abatement at the state level to assist local officials during emergencies.

State and local mosquito abatement resources need to be rebuilt.

A lesson learned from the SLE outbreak of 1975 was to establish a system for surveillance of human illnesses before cases occur. In Illinois we have such a system in place.

Another lesson learned was to establish an “early warning system” that became functional in 1976 to detect evidence of arbovirus infections in wild birds. IDPH also has this type of system in place. The Department has traditionally collected some 5000 live birds annually for testing. The bird blood is tested for SLE, EEE and now, WNV. Additionally, we test mosquito pools as a supplement to live bird testing.

Provide scientifically sound information to organizations that provide mosquito control services on appropriate mosquito abatement practices.

Our ability to identify and track disease is key to being able to take appropriate measures. In addition to that very real part of the equation - both government and individuals can do a lot to curb the spread of the disease by specific activities. Comprehensive mosquito abatement programs are important to addressing the problem. But what remains the single most effective precautions are those that can and should be taken by individuals:

- Stay indoors at times when mosquitoes are most active
- when outdoors - wear protective clothing
- use mosquito repellent containing 25-35% DEET
- Check residential screens to ensure insects are kept out of living

areas and, eliminate stagnant water where mosquitoes might breed.

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