West Nile Virus
Michigan - 2002

Mary Grace Stobierski, DVM, MPH, DACVP
Michigan Dept. Community Health
West Nile Virus 2002, A Season of Surprises

- Largest arbovirus meningoencephalitis outbreak epidemic ever documented in western hemisphere
- Largest WNME epidemic ever documented
- Geographic spread to the Pacific Coast
- Clinical syndromes (Acute Flaccid Paralysis, was not Guillian-Barre syndrome)
- New modes of transmission
Novel Modes of West Nile Virus Transmission, 2002

- Transplanted organs
- Transfused blood
- Breast milk
- Percutaneous, occupational exposure
- Prenatal transmission
Any WNV Activity Reported - 2002

West Nile Virus in the United States, 2002

- **Verified avian, animal, and mosquito infections during 2002, as of October 8, 2002**
- **Pattern indicates human case(s)**
Human Cases

West Nile Virus in the United States, 1999 - 2002
WNV Hotline Calls* 2002
(operated by MDCH staff)

* >35,000 calls in Aug & Sept

1/888/668-0869
Michigan Department of Community Health Announces Probable Human Cases of West Nile Virus

August 16, 2002

Michigan Department of Community Health Chief Medical Executive, David R. Johnson M.D., today announced two probable human cases of West Nile virus. Laboratory samples have been sent to the Centers for Disease Control and Prevention for confirmatory testing.

The first case involves an 82 year-old male from Southeast Michigan who was hospitalized and has been released in good condition. The second involves a 63 year-old male from Southeast Michigan who is currently hospitalized and appears to be improving.

“We are encouraged that both of these gentlemen appear to be recovering and we will continue to work with health care providers throughout Michigan to quickly identify any other potential human cases,” said Dr. Johnson. “The most important thing a person can do to protect themselves from West Nile virus is to follow the common-sense precautions to minimize exposure to mosquitoes.”
Phone Reports of Dead Birds versus Human Cases in Michigan for 2002

Data from 614 out of 644 human cases
Onset Date of Symptoms Among Human West Nile Virus Cases in Michigan for 2002

Data from 614 of the 644 Total Cases
WNV
Human cases
Michigan 2002*

(Includes probable and confirmed cases, all clinical syndromes)

644 cases
51 deaths
*(Total Cases/Deaths)
### Michigan WNV Case Statistics:

<table>
<thead>
<tr>
<th>All Cases</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age range: 9mo-95yrs</td>
<td>Age range: 24-95 yrs</td>
</tr>
<tr>
<td>Ave Age: 57.6</td>
<td>Ave Age: 74.5</td>
</tr>
<tr>
<td>% Female: 45</td>
<td>% Female: 41</td>
</tr>
<tr>
<td>% Male: 55</td>
<td>% Male: 59</td>
</tr>
</tbody>
</table>
West Nile Virus Case Summary

Total Laboratory Positive Cases: 644

West Nile Meningo-encephalitis cases: 559 (87%)
   Age range: .75-95 yrs
   Average age: 57.8 yrs

West Nile Fever cases: 57 (9%)
   Age range: 3-80 yrs
   Average Age: 47.7 yrs

Unknown cases: 28 (4%)

Deaths: 51 (9%)
   Age range: 24-95 yrs
   Average age: 74.5 yrs
2002 Cases by Agegroup - 2002

N=639 cases
Additional Arboviruses in 2002

- St. Louis Encephalitis: 3 cases
- Eastern Equine Encephalitis: 6 cases
- LaCrosse Encephalitis: 11 cases
- Powassan virus: 1 case (Emmet Co.)
  (tick borne encephalitis)
  First time ever documented case in Michigan!
Additional Arbovirus Cases
Michigan, 2002

<table>
<thead>
<tr>
<th>County</th>
<th>SLE</th>
<th>EEE</th>
<th>LAC</th>
<th>POW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clare</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Eaton</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Emmet</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Genesee</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Huron</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kent</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Macomb</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manistee</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Oakland</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ottawa</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presque Isle</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Wayne</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Comprehensive Website

www.michigan.gov/westnilevirus