Cook County
West Nile Virus
Prevention and Response Plan

Cook County Government

Honorable John H. Stroger, Jr.,
President
Cook County Board of Commissioners

Daniel H. Winship, M.D.
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Cook County Department of Public Health
1010 Lake Street Oak Park, IL 60301

June 20, 2005

Dear Residents:

In 2002, the central United States, especially the Great Lakes region, experienced the most intense West Nile virus (WNV) activity that had ever occurred up to that point. Illinois had the most cases in the nation that year--877--leading to 62 deaths. Among the 877 cases, approximately 46.4%, (407 cases) were documented in suburban Cook County. Of the 407 suburban Cook County cases, 20 cases resulted in death.

As a result of the 2002 epidemic, the Cook County Department of Public Health (CCDPH) has dedicated itself to investigating the emerging threat of WNV with a number of partners from the public and private sector. This is a major challenge, but it is also an excellent illustration of the intense spirit of collaboration among the public health community. With their help, CCDPH has prepared a working response plan for the control of WNV in suburban Cook County.

This document is a framework for CCDPH to respond to WNV and will be updated accordingly, if necessary. Should the need arise to implement the plan, CCDPH will continue to collaborate with our many associates in government, the private sector, labor, academia, and non-governmental organizations.

I would like to thank our partners for their tremendous cooperation in developing this working plan.

Sincerely,

Stephen A. Martin, Jr., Ph.D., M.P.H.
Director

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1. West Nile Virus Task Force

Communicable Disease Control Unit
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Environmental Health Services Unit

2. Acknowledgements

The following documents were used in preparation of this plan. Sections of the plan were modeled after those from the Centers for Disease Control and Prevention (CDC), the Illinois Department of Public Health (IDPH), the Chicago Department of Public Health (CDPH), and the New York City Department of Health and Mental Hygiene (NYCDOHMH).

CDC:

Epidemic/Epizootic West Nile virus in the United States: Revised guidelines for surveillance, prevention and control
http://www.cdc.gov/ncidod/dvbid/westnile/resources/wnv-guidelines-aug-2003.pdf

IDPH:

Surveillance and Response Procedures for Mosquito-borne Arbovirus Emergencies
http://www.idph.state.il.us/envhealth/pdf/mosquito-borne01.pdf

CDPH:

West Nile Virus: 2004 Interim Report and Comprehensive Prevention Plan for 2005
http://egov.cityofchicago.org/webportal/COCWebPortal/COC_EDITORIAL/WestNilePlan.pdf

NYCDOHMH:

Comprehensive mosquito surveillance and control plan, 2005
http://www.nyc.gov/html/doh/pdf/wnv/wnvplan2005.pdf

The Cook County Department of Public Health wishes to thank its many partners who have collaborated on the management of this important public health issue in Cook County.

Mosquito Surveillance and Control

According to the CDC, mosquito control is the most reliable means currently available to reduce the risk of mosquito borne disease in humans. CCDPH will monitor mosquito surveillance activities in Cook County and surrounding areas in order to determine the density and geographic distribution of mosquito vectors that are likely to transmit WNV infection. The priority will be to identify and monitor important *Culex* mosquito breeding sites to target control measures. Information will be gathered from **CCDPH EHSU,** the four mosquito abatement districts (MADs), and private contractors. CCDPH will carry out onitor im

4. Introduction and Background

History of West Nile Virus

WNV was first detected in 1937, in a Ugandan woman, living in the West Nile Province, who experienced a mild illness with fever. Since that time, extensive studies of WNV have led to a better understanding of its ecology and clinical characteristics. WNV is a

Within the temperate climate of North America, WNV has demonstrated an ability to persist in a seasonal pattern from year to year, both in nature and in the form of human illness. WNV was first detected in the United States when it appeared in New York City (NYC) during the late summer of Tm( )TjE

5. Purpose and Scope of Plan

The purpose of the *CCDPH WNV Prevention and Control Plan* is to provide standardized protocols and terminology, chain of command, and established authority for the detection of and response to a WNV

6. Plan Definitions

Case: is a person with an illness that is clinically compatible with the characteristics of WNV described previously and with laboratory evidence of WNV infection (Appendix 2).

Healthcare worker: refers to any employee who has close contact with 1) patients, 2) patient-care areas (i.e., patient rooms, procedure areas), or 3) patient-care items (i.e., linens and other waste).

Incubation period: is the time from exposure to an infectious disease to symptom onset.

Personal protective equipment (PPE): is barrier protection to be used by an individual to prevent disease transmission. PPE may include gowns, gloves, masks, goggles or face shields.

Authority-Federal

- United States Public Law 93-288, the Robert T. Stafford Disaster Relief and Emergency Assistance Act, provides the federal government authority to respond to emergencies and provide assistance to protect public health. This function is implemented by the Federal Emergency Management Agency (FEMA).
- Health and medical services will be provided through the Emergency Support Function (ESF) #8 of the Federal Response Plan (FRP). The purpose of this function is to coordinate assistance to supplement state and local resources needed in response to an event.
- The Centers for Disease Control and Prevention (CDC), through its Division of Global Migration and Quarantine, is empowered to detain, medically examine, or conditionally release persons suspected of carrying certain communicable diseases. This authority derives from section 361 of the Public Health Service Act (42 U.S.C. 264), as amended.

8. Partner Agencies Within Suburban Cook County

Primary Agency
Cook County Department of Public Health (CCDPH): is the lead agency for operations under this plan. The Executive Director of the health department, or designated alternate, will be in overall command for the implementation of this plan. CCDPH has been designated by the President of the Cook County Board as the primary agency to coordinate Cook County's plan for instituting orders of isolation, monitoring and quarantine.

Partner Agencies
Catholic Cemeteries: will distribute WNV prevention materials to the public visiting their cemeteries.

Community Colleges in SCC: will allow CCDPH to use their auditoriums for community presentations.

Cook County Bureau of Health Service (CCBHS): is the Cook County agency responsible for overall hospital and health care management. CCDPH will communicate all activities to CCBHS during the activation of this plan to coordinate a county-wide response.

Cook County's Emergency Public Information Officer: will be responsible for collaborating with the CCDPH Media Services personnel and other municipal governments in the release of information to the general public and media.

Cook County Office of the Comptroller: will distribute a joint letter with CCDPH to advise cemetery admTJ11 Tc - burautNV prevention mahe imonne to thevisprot of.00040.0016 Tw 12 0 28.64( )TjEomptal public a

Illinois Department of Public Health (IDPH): will assist in disease control and hospital management related to WNV. During a WNV emergency, IDPH will step-up the Illinois Operational Headquarters Notification Office (IOHNO) and implement the Illinois Emergency Medical Disaster Plan.

Illinois Emergency Management Agency (IEMA): is the lead agency within the State of Illinois that is responsible for the management and coordination of the state's disaster response and recovery operations. During an emergency, IEMA will set-up a state emergency operations center (SEOC) through which CCSEMA will request additional assets.

Municipalities and Governments: have the primary responsibility to provide emergency health and medical services within their jurisdiction in response to an emergency or disaster of natural or manmade origin. They may assist CCDPH to provide key information to citizens during a large WNV outbreak.

Municipal Fire Department/Fire Districts/Emergency Medical System: will work in cooperation with and assist the CCDPH to implement infection disease control mechanism.

Municipal Law Enforcement: will be responsible implementing and enforcing orders of isolation or quarantine in their respective municipalities and hospitals within said municipality located within SCC.

SCC Hospitals: will work in cooperation with CCDPH and paramedics to transport sick patients.

SCC POD Hospitals: are the designated hospitals in SCC to be activated by the State of Illinois Emergency Medical Disaster Plan. During an emergency, POD hospitals will collect information regarding hospital bed capability, supply needs, morgue status, and pharmaceutical needs of all associate and resource hospitals in the POD region (organized by IDPH).

State's Attorney's Office: will forcemen2W 12957nselh and dv(ice cocverring illnform)8ds,docuemensH and irds during apoten tral outbreas of WNn. Th Cook Co

South Cook County Mosquito Abatement District: will monitor and control mosquito activity in their jurisdiction

Clarke Mosquito Control: a contractor hired to assist in mosquito control

9. CCDPH: Incident Management System

Command and Control
The Incident Management System (IMS) provides a mechanism to provide command, control and coordination for management of emergency situations (www.fema.gov). The Federal Emergency Management Agency states that this system is used "to coordinate the efforts of individual agencies as they work toward the common goal of stabilizing the incident or situation and protecting life, property and the environment." The IMS, formally known as Incident Command System, has been used in the field by first responders for many years. Public health department and personnel are new to this and as a result, they continue to develop this application for their purposes.

CCDPH Incident Management System(IMS)

Supplement A: Public Education and Media Communication

Objectives

- To increase risk awareness about WNV;
- To implement effective communication and education strategies for media and community officials;
- To increase personal protection, and other health promoting behaviors;
- To decrease mosquito breeding, including messages describing the benefits of necessary mosquito control efforts (e.g. adulticiding) and source reduction;
- To increase public reports of dead birds; and
- To promote the use of medical care, if symptomatic.

Preparedness Plan

The pre-event phase of a WNV outbreak, like any emergency situation, is the most important. Each step of preparedness before an emergency strikes brings us closer to managing the event successfully. Pre-event planning entails the following:

1. Message creation

English and Spanish. Osco Drug pharmacies in Cook County displayed WNV safety information on their counters.

Response Plan

Based on past activity, the 2005 campaign will begin on Memorial Day, with the height of outreach

Response Plan

- EHU in cooperation with selected laboratories, villages, other agencies, and the public, will collect and assess reports of sentinel bird mortality as an indicator of potential WNV activity;
- Dead crows and blue jays will be collected and submitted for testing by EHU according to IDPH

Supplement C: Mosquito Surveillance and Control

I. Mosquito Surveillance

Objective

- To estimate the density and distribution of mosquito populations, and the associated risk of human disease, by monitoring reports of mosquito surveillance activities conducted by the Mosquito Abatement Districts of Cook County, and other sources as available.

Background

Studies have demonstrated that the most effective means of prevention and control of outbreaks of mosquito-borne disease is the implementation of an integrated mosquito management program. It is recommended that such a program include both mosquito surveillance and mosquito control activities.

Mosquito surveillance can be useful in a number of ways, including:

- Document the species composition of mosquito populations in an area;
- Monitor for vector species capable of transmitting WNV;
- Identify larval habitats of vector species for targeted control;
- Evaluate data in conjunction with other indicators to assess human risk;
- Determine need for and timing of additional interventions; and
- Assess effectiveness of control operations.

Typical activities include surveillance to determine the density and distribution of larvae and adult mosquitoes, and to detect disease causing viral infections (WNV, or other arboviruses). Larval surveillance detects vector and pest species in both known and new aquatic habitats. Adult mosquito surveillance documents which species of mosquitoes have emerged from their aquatic habits. Determination of the proportion of WNV-infected mosquitoes can enable the detection of virus amplification, geographic spread and increase in risk to humans.

In SCC, mosquito surveillance and control responsibilities are assigned to four agencies generally referred to as mosquito abatement districts (MADs). These agencies include Northwest MAD, North Shore MAD, Des Plaines Valley MAD, and South Cook County MAD.

In early 2002, CCDPH formed an interagency task force to address the possibility of a WNV outbreak in Cook County. Participants included representatives from CCDPH, each Cook County MAD, the Illinois Department of Public Health, other certified local health departments (Chicago, Evanston, Skokie, Oak Park, and Stickney Township), Cook County Forest Preserve, Metropolitan Water Reclamation District of Greater Chicago, and Clarke Mosquito Control Company (hereafter referred to as Clarke). An entomologist from the CDC provided consultation on mosquito control measures for the task force; EHU served as the lead support and facilitating group for the task force. Throughout the outbreak, the task force worked cooperatively to assess surveillance data, to determine the need for additional surveillance and control activities, and to coordinate the implementation of those supplemental activities. In 2004, CCDPH expanded its environmental surveillance to include mosquito surveillance, primarily in the areas of SCC that are not under the jurisdiction of a MAD.

Response Plan

- Request weekly reports of mosquito surveillance activities from Cook County MADs and provide weekly reports of CCDPH mosquito surveillance activities to Cook County MADs and IDPH;
- Monitor the prevalence and geographic distribution of vector mosquito populations;
- Monitor the infection rate of vector mosquitoes, by geographic area, throughout the arboviral season;
- Use GIS to map infected mosquito pools, and to track increasing risk;
- Combine mosquito surveillance data with other surveillance and risk indicator data to obtain an overall estimate of human risk and the need for enhanced control measures; and
- Encourage the use of the VecTest assay for rapid field testing, especially when risk of human disease is high.

II. Larval Mosquito Control

Objectives

- To monitor the utilization of chemical larvicides to control vector mosquito populations;
- To assess the adequacy of geographic coverage of larviciding activities; and
- To facilitate the implementation of supplemental measures as needed.

Background

The two main approaches to control of vector mosquitoes at the larval stage are source reduction and chemical larvicide applications (larviciding). Source reduction is believed to be the most effective and economical method of providing long term mosquito control.

It involves the elimination or alteration of aquatic larval habitats to prevent breeding. Source reduction can be as simple as removing water-collecting containers and instituting once-a-week water changes in bird baths and wading pools around the home, to proper management of discarded tires, to large water management projects.

Larviciding, the application of bacterial or synthetic chemical products to kill mosquito larvae, is an important part of integrated mosquito management. It is an essential tool used for addressing standing water that is not accessible to source reduction techniques. Commonly used larvicides include *Bacillus thuringiensis israelensis* (*Bti*, a bacterial larvicide), *Bacillus sphaericus* (VectoLex®, a bacterial larvicide), methoprene (Altosid®, an insect growth regulator), and temephos (Abate®, an organophosphate). Larvicide applicators must be licensed or certified by an appropriate state agency.

In SCC, larviciding activities are principally carried out by the four MADs. In addition some villages conduct independent larviciding activities or contract with a private agency for this service.

risk to human health and the environment when ULV insecticides are used according to label directions. Products commonly used for mosquito adulticiding include organophosphates (e.g., malathion), pyrethrins, and synthetic pyrethroids (e.g., permethrin). The decision to use adulticides is based on

Supplement D: Human Disease Surveillance and Health Care Provider Communication

Objectives

- To detect cases of WNV infection in humans within the CCDPH jurisdiction and surrounding area;
- To determine the geographic distribution of human WNV infections over time;
- To guide the initiation, intensity, duration, and location of outbreak control measures; and
- To document the clinical and epidemiological characteristics of WNV infection.

Background

Surveillance for human illness is critical for defining the scope of an outbreak, ensuring that public health decisions are based on the best available assessment of the problem, and for identifying patterns and trends that can help inform prevention activities. Public information efforts in response to initial human cases can increase public attention to the importance of preventive methods such as reduction of standing water, larviciding, and avoidance of mosquito bites. Given that the goal of WNV surveillance activities is to prevent or minimize infection among people, human case surveillance is typically not used alone for the detection of arbovirus activity, but is usually supplemented by ecological surveillance activities in other animal species (e.g., avian, equine, mosquitoes, etc.).

Laboratory-based surveillance is employed for the detection of human arboviral infection. Surveillance is conducted for non-bacterial central nervous system infections (NBCNSI) caused by WNV, St. Louis Encephalitis Virus (SLE), California (LaCrosse) En

incidence of reported cases peaked during the third week of August, and that nearly three-quarters of all cases occurred between August 15 and September 15.

In order to document incident cases in a more timely fashion, CCDPH requested that providers report hospitalized cases within 24 hours of a presumptive or confirmed diagnosis. The more timely reports were used to create GIS maps of cases over the course of the oun.wvk. The maps were then used to guide supplemental mosquito control and public information interventions.

The staff of the CCDPH obtained assistance from the IDPH and the CDC in conducting the 2002 oun.wvk investigation and with implementation of the necessary intervention measures. Medical record reviews were conducted on all hospitalized patients on whom partially completed case report forms were submitted within 24 hours of specimen submission. A database of clinical information was established. In addition, CDC staff assisted with the development of a behavioral/environmental exposure questionnaire that was used to conduct interviews with 125 case patients.

Response Plan

- Á Incorporate recommendations from the IDPH for enhanced surveillance in 2005 for arboviral diseases (WNV, SLE, LAC, and EEE) into the CCDPH WNV Prevention and Control plan;
- Á Notify ICPs of all changes and/or revisions to the 2004 WNV surveillance protocol;
- Á Issue a written request to hospital ICPs for WNV/arboviral case report submission within 24 hours of diagnosis, for all patients that are hospitalized or seen in an emergency department. (This request will be made as an oun.wvk response measure once human cases are detected in the Cook County area.);
- Á Provide periodic updates on 2005 local WNV infection trends, throughout the arboviral surveillance season, to health care providers serving SCC;
- Á Provide notification of human WNV cases to CCDPH personnel and staff from other agencies (e.g., the Cook County MADs) working on WNV prevention and control activities;
- Á Assist in coordinating the submission of WNV positive specimens from private labs to the IDPH laboratory for confirmation;
- Á Monitor the distribution of WNV cases utilizing GIS mapping (to be conducted by the CCDPH Epidemiology Unit);
- Á Monitor local and state surveillance and control trends through the IDPH intranet, and via verbal and written communications with the state;
- Á Monitor local NBCNSI cases during the arboviral surveillance season and the number of serum samples obtained for assessment of convalescent titers; and
- Á Monitor national surveillance and control trends through CDC conference calls, summaries in the Morbidity and Mortality Weekly Reports (MMWR), and attendance at the national WNV conference.

Supplement E: West Nile Virus Risk-Response Levels

Objectives

- To compile and analyze climactic and surveillance data throughout the arboviral season; and
- To establish a system of assessing risk of human disease as a guide to the implementation of progressively intense prevention and control measures.

Background

A number of environmental factors contribute to the overall risk of human WNV infection in a community. Those factors include rainfall and temperature variations throughout the spring and summer months; the presence of adequate, competent hosts (i.e., susceptible wild birds) to support viral amplification; and the emergence of ample mosquito vectors including bridge vectors likely to transmit infection from bird to human populations.

Ongoing assessment of human disease risk should occur throughout the arboviral season (early-spring to mid-fall). Risk assessment can be used to guide a progressively intense, phased response, as recommended by the CDC. A flexible approach to implementation of the response plan should be adopted, which takes into account such feasibility factors as availability and quality of surveillance data; existing budgets and infrastructure; public acceptance; and ongoing mosquito control activities.

The recommended six stage phased response adopted from CDC guidelines is as follows:

WNV Risk-Response Level 0 (Likelihood of human outbreak: none)

Definition: Off-season; weather unsuitable for mosquito activity and virus amplification and transmission; surveillance suspended.

Response

mosquito trapping and testing); consider encouraging and facilitating focal or targeted adult mosquito control if surveillance demonstrates likelihood of increasing risk for humans.

WNV Risk-Response Level 3 (likelihood of human outbreak: moderate)
Definition: Occurs during arboviral surveillance season (spring, summer, fall); applies when WNV activity in birds/mosquitoes is moderate or there is initial confirmation in a human and/or horse.
Response: Continue category 2 activities; continue enhanced animal and human surveillance; strongly encourage/facilitate consideration of adult mosquito control if surveillance indicates likely potential for human risk to persist or increase; consider enhanced risk communication message to include explanation of adulticiding need, and risk/benefit.

WNV Risk-Response Level 4 (likelihood of human outbreak: high)
Definition: May occur spring, summer, or fall; applies when quantification of surveillance data indicates a high level of WNV epizootic transmission (e.g., multiple mosquito species infected, high mosquito infection rate, high dead bird density/ infection rate, escalating transmission in horses or other mammals; or a human case and high epizootic activity.
Response: Continue category 3 activities; public information program to include TV, radio, and newspapers (Re., public compliance with source reduction, use of repellants, other personal protection, risk communication about adult mosquito control); consider active surveillance for human cases; ensure implementation of adult mosquito control targeted at areas of potential human risk.

WNV Risk-Response Level 5 (human outbreak in progress)
Definition: Multiple human cases confirmed; sustained transmission to humans anticipated and supported by surveillance data.
Response: Continue category 4 activities; ongoing enhanced risk communication about adult mosquito control; monitor efficacy of spraying on target mosquito populations through continued surveillance and data analysis; if the outbreak is widespread ensure implementation of widespread adulticiding measures.

Public Education and Media Communication
WNV Risk-Response Activities

Risk-Response Level 0
Likelihood of Human Outbreak: None

- Á Assess readiness of SCC to meet communication needs during a WNV outbreak, and update the plan as necessary;
- Á Assess the information needs of the general public and healthcare providers;
- Á Assess logistical capacity for effective health and risk reduction communication;
- Á Assess the range of educational materials that are available in appropriate languages as determined by the needs of SCC residents;
- Á Assess adequacy of printing/graphic design contracts, website and resources to meet emergency needs;
- Á Assess capacity of hotlines and web servers to accommodate increased usage;
- Á Assess availability of CCDPH personnel to staff hotlines for extended hours;
- Á Establish a mechanism in advance for reviewing and clearing WNV-related messages and materials;
- Á Develop 27-9-3 message for press interest in WNV;
- Á Identify and train (in risk communication) spokespersons and subject matter experts who will be available during an outbreak;
- Á Carry out media and risk communication training as needed;
- Á Make sure information is available to fax to media;
- Á Maintain partnerships with county partners for the dissemination of WNV information;
- Á Develop phone bank and hotline message template;
- Á Investigate if larvacide training will be offered by CCDPH, and revise larvicide training letter;
- Á Revise letters to Cook County Office of Comptroller, Archdiocese of Chicago, Jewish Cemeteries, Suburban Area on Aging, municipalities, and partner businesses;
- Á Identify key locations for disseminating information throughout community; and
- Á Update 2004 community contacts.

Risk-Response Level 1
Likelihood of Human Outbreak: Remote

- Á Post and/or update WNV information on website;
- Á Write a mock press release announcing first WNV case in SCC;
- Á Have information available for press;
- Á Pitch stories to local press regarding the upcoming WNV season;
- Á Designate medical spokesperson(s) to talk about WNV and create specific messages for spokesperson(s) to practice their message delivery;
- Á Create 2005 PowerPoint community presentation based on 2004 statistics;
- Á Create hotline message for bird collecting and disease prevention/health promotion;
- Á Send letters to Cook County Office of Comptroller, Archdiocese of Chicago,

- Increase emergency adulticiding as necessary.
- Monitor efficacy of spraying programs on target areas.

Human Disease Surveillance

Appendix 1: Initializations Used in the Plan

CCDPH	Cook County Department of Public Health
CDPH	Chicago Department of Public Health
CD	(CCDPH) Communicable Disease (Unit)
CDC	Centers for Disease Control
COO	(CCDPH) Chief Operating Officer
DVBID	(CDC) Division of Vector Borne Infectious Disease
EEE	Eastern Equine Encephalitis Virus
EHU	(CCDPH) Environmental Health Unit
GIS	Geographic Information System
HCWs	Health Care Workers
ICP	Infection Control Practitioner
IDA	Illinois Department of Agriculture
IDPH	Illinois Department of Public Health
IL	State of Illinois
IMS	Incident Management System
LAC	California (LaCrosse) Encephalitis Virus
LHD	Local Health Department
MAD	Mosquito Abatement District
MMWR	Morbidity and Mortality Weekly Report/AMCID 20 >>BDC BT/TT1 1Tyi55((LaCross

Appendix 2: West Nile Virus Case Definition

(Source: http://www.cdc.gov/ncidod/dvbid/westnile/clinical_guidance.htm)

Clinical Features

Mild Infection

Most WNV infections are mild and often clinically unapparent.

- Approximately 20% of those infected develop a mild illness (West Nile fever).
- The incubation period is thought to range from 3 to 14 days.
- Symptoms generally last 3 to 6 days.

Reports from earlier outbreaks describe the mild form of WNV infection as a febrile illness of sudden onset often accompanied by

- malaise
- anorexia
- nausea
- vomiting
- eye pain
- headache
- myalgia
- rash
- lymphadenopathy

The full clinical spectrum of West Nile fever has not been determined in the United States.

Severe Infection

Approximately 1 in 150 infections will result in severe neurological disease.

- The most significant risk factor for developing severe neurological disease is advanced age.
- Encephalitis is more commonly reported than meningitis.

In recent outbreaks, symptoms occurring among patients hospitalized with severe disease include

- fever
- weakness
- gastrointestinal symptoms
- change in mental status

- A minority of patients with severe disease developed a maculopapular or morbilliform rash involving the neck, trunk, arms, or legs.
- Several patients experienced severe muscle weakness and flaccid paralysis.
- Neurological presentations included
  - ataxia and extrapyramidal signs
  - cranial nerve abnormalities
  - myelitis
  - optic neuritis
  - polyradiculitis
  - seizures

Although not observed in recent outbreaks, myocarditis, pancreatitis, and fulminant hepatitis have been described.

Clinical Suspicion

Diagnosis of WNV infection is based on a high index of clinical suspicion and obtaining specific laboratory tests.

- WNV, or other arboviral diseases such as St. Louis encephalitis, should be strongly considered in adults ≥50 years who develop unexplained encephalitis or meningitis in summer or early fall.
- The local presence of WNV enzootic activity or other human cases should further raise suspicion.
- Obtaining a recent travel history is also important.

Note: Severe neurological disease due to WNV infection has occurred in patients of all ages. Year-

- Ribavirin in high doses and interferon alpha-2b were found to have some activity against WNV in vitro, but no controlled studies have been completed on the use of these or other medications, including steroids, antiseizure drugs, or osmotic agents, in the management of WNV encephalitis.

Appendix 4: CCDPH Letter to Village Managers

June 16, 2005

Dear Mayor or Village Manager,

The Cook County Department of Public Health is committed to the prevention of illness, disability and premature death among all of the residents of suburban Cook County. Educating the public about West Nile virus is an important part of the strategy to reduce the risk of human illness. The goal of the CCDPH education campaign is to increase public awareness of WNV as a public health threat, and to stimulate health promoting behaviors that reduce the risk of WNV infection. CCDPH activities include:

- Working with hospitals and medical providers to alert them to the signs and symptoms of severe WNV disease
- Establishing a phone line for residents to report dead birds: 708-492-2650
- Encourage residents to call our health alert phone line: 708-492-2185
- Making prevention presentations to community groups
- Distributing personal protection messages on post cards, brochures, posters, and door hangers

Please encourage your residents to visit our web site at:
http://www.cookcountypublichealth.org/publications/print.shtml to download a West Nile virus brochure in English and Spanish. If you would like more information on WNV and/or a tailored presentation for your community, please contact Kimberly Fairman at 708-492-2268 or you can also contact me at 708-492-2010 if you should have additional questions or concerns.

Thank you for working with us to make suburban Cook County a healthy place to reside.

Sincerely,

Stephen A. Martin, Jr., Ph.D., M.P.H.
Chief Operating Officer