Community Health and Safety Bulletin
San Francisco Department of Public Health

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In this issue

West Nile virus advisory

The California Department of Health Services (DHS) issued a press release on September 6, 2002, regarding the first human case of West Nile virus (WNV) diagnosed in a resident from Los Angeles County, California. Although, the patient reported no mosquito bites, blood transfusions, organ transplants, or travel to areas where West Nile virus has been confirmed, laboratory tests indicated that this patient was exposed to West Nile virus. However, tests of mosquitoes, chickens and dead birds have shown no evidence of the virus in California. The CDC issued an updated advisory on October 4, 2002, confirming the transmission of WNV to organ transplant and blood transfusion recipients. They are also investigating the possible transmission of WNV to a breastfeeding newborn infant.

As of October 4, 2002, CDC has reported 2631 human cases of WNV and 136 deaths in 43 states and the District of Columbia. California, Oregon and Washington State have recently reported imported human cases in some patients who had spent time in endemic states.

Surveillance is the key to control and prevention of all communicable diseases and physicians are an integral part of the surveillance effort. Both aseptic meningitis and encephalitis are reportable conditions by clinicians under California Code of Regulations, Title 17, Section 2500.

The San Francisco Department of Public Health, Community Health Epidemiology and Disease Control Section would like to provide some information for clinicians on West Nile Virus.

Clinical features

Mild illness

Most WNV infections are mild and often clinically inapparent. Approximately 20% of those infected develop a mild illness (West Nile fever). The incubation period ranges 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, and lymphadenopathy. The full clinical spectrum of West Nile fever has not yet been determined in the United States.

Severe illness

Approximately 1 in 150 infections will result in severe neurological disease, the most significant risk is age over 50. Encephalitis is more commonly reported than meningitis. In recent outbreaks, symptoms occurring among patients hospitalized with severe disease included fever, weakness, gastrointestinal symptoms, and altered mental status. A minority of patients with severe disease developed a maculopapular or morbilliform rash involving the neck, trunk, arms, or legs.

Several patients have experienced severe muscle weakness and flaccid paralysis. Neurological presentations included ataxia and extrapyramidal signs, cranial nerve abnormalities, myelitis, optic neuritis, polyradiculitis and seizures.

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. History of travel to an endemic area or organ transplant in the preceding weeks may

also be important.

Note: Severe neurological disease due to WNV infection has occurred in patients of all ages. Year-round transmission is possible in some areas. Therefore, WNV should be considered in all persons with unexplained encephalitis and meningitis.

Laboratory findings

Among patients in recent outbreaks:

- Total leukocyte counts in peripheral blood were mostly normal or elevated, with lymphocytopenia and anemia also occurring.
- Hyponatremia was sometimes present, particularly among patients with encephalitis.
- Cerebrospinal fluid (CSF) showed pleocytosis, usually with a predominance of lymphocytes. Protein was universally elevated. Glucose was normal.
- Computed tomographic (CT) scans of the brain have rarely shown evidence of acute disease. In about one-third of patients, magnetic resonance imaging (MRI) showed enhancement of the leptomeninges, the periventricular areas, or both.

Diagnosing and reporting

West Nile Virus testing is available free of charge at the California Department of Health Services Viral and Rickettsial Disease Laboratory.

- The most efficient diagnostic method is detection of IgM antibody to WNV in serum or cerebral spinal fluid (CSF) collected **within 8 days of illness onset** using the IgM antibody capture enzyme-linked immunosorbent assay (MAC-ELISA).
- Since IgM antibody does not cross the blood-brain barrier, IgM antibody in CSF strongly suggests central nervous system infection.
- Patients who have been recently vaccinated against or recently infected with related flaviviruses (e.g., yellow fever, Japanese encephalitis, dengue) may have positive WNV MAC-ELISA results.

Who to refer for state testing

Any hospitalized or emergency department (ED) patient with any of the following symptoms:

- Viral Encephalitis (patients >= 6 months of age) characterized by encephalopathy (depressed or altered level of consciousness, lethargy, or personality change), and one or more of the following: fever (T>=38°C), seizure(s), focal neurologic findings, CSF pleocytosis, abnormal EEG, abnormal neuroimaging;
- aseptic meningitis (patients >= 17 years of age) characterized by fever (T>=38°C), headache, stiff neck and/or other meningeal signs, and CSF pleocytosis;
- atypical Guillain-Barré Syndrome characterized by fever (T>=38°C), altered mental status, and/or CSF pleocytosis.

How to arrange for testing

- Clinicians must first notify the SFDPH, Communicable Disease Control Unit, **specimens will not be tested if the case has not been reported.**
- For critically ill patients, specimens can be sent directly to California Department of Health Services (DHS). Because of limited laboratory capacity, testing for WNV at the State is being prioritized for hospitalized or Emergency Department patients with the above syndromes. Please call to discuss the case and the need for testing before directing your laboratory to submit specimens.
- For patients with a high suspicion of West Nile virus who do not meet the above criteria also contact DHS for clinical consultation.
- The DHS, Viral and Rickettsial Disease Laboratory will help to arrange shipment.

What specimen to send and where

For optimal testing both CSF and serum specimens should be submitted.

- ***CSF***: ~2 cc. Store and ship specimen with cold pack or dry ice (preferred). Do NOT ship at room temperature.
- ***Serum*** : 3-5 cc's, after separating from packed cells; ship with cold pack or dry ice (preferred) in a red top tube. Do NOT ship at room temperature.
- Label specimens with: patient's name, date of birth, date of specimen collection, and specimen type.
- All specimens must be accompanied by "**West Nile Surveillance Case History Form**." Use this same form to report to your local health department.
- All forms will be available from the SFDPH by fax and also available at http://www.medepi.org/chedc.

For specimen referral contact:

Evelyn Tu, West Nile Virus Surveillance
California Department of Health Services
Tel: (510) 307-8606, Pager: (510) 639-8667,
Fax: (510) 307-8599

For clinical consultation contact:

Carol Glaser, MD, DVM
California Department of Health Services
Tel: (510) 307-8613

For reporting to your local health department contact:

San Francisco Department of Public Health
Communicable Disease Control Unit
Tel: (415) 554-2830, Fax: (415) 554-2848
On-call CD Physician pager: (415) 809-7839,
Back-up pager: (415) 809-7837

Additional resources

Annals of Internal Medicine clinical review

Petersen LR and Marfin AA, "West Nile Virus: A Primer for the Clinician [Review]," Annals of Internal Medicine (August 6) 2002: 137:173-9. http://www.annals.org/issues/v137n3/full/200208060-00009.html.

Centers for Disease Control and Prevention (CDC)

Questions and Answers:
http://www.cdc.gov/ncidod/dvbid/westnile/q&a.htm
Prevention Tips for patients: http://www.cdc.gov/ncidod/dvbid/westnile/brochure.htm.
Public Inquiries (Mon-Fri 11am-8pm PST, Sat-Sun 1pm-5pm PST):
English: 1-888-246-2675,
Español (Spanish): 1-888-246-2857
TTY: 1-866-874-2646

California Department of Health Services

West Nile Virus information is available at: http://www.westnile.ca.gov, including updated surveillance data, patient education materials and prevention information. You can also call 1-877-WNV-BIRD (1-877-968-2473).

US Food and Drug Administration

Information about West Nile virus and blood safety can be found at: http://www.fda.gov/cber/safety/westnile.htm.

San Francisco Department of Public Health

http://www.sfdph.org.

West Nile virus – personal and environmental prevention

Sentinel events monitoring in the California's Surveillance Program

The California Department of Health Services (DHS) has overseen a statewide mosquito-borne encephalitis surveillance program since 1969 for Western Equine Encephalitis (WEE), St. Louis Encephalitis (SLE) and other viruses. In 2000 the program was expanded to enhance the ability to detect West Nile Virus (WNV). Mosquitoes are sampled for the presence of WNV, WEE and SLE throughout the state. Birds are the reservoir hosts of WNV. Approximately 300 chicken flocks are strategically placed and are routinely tested for evidence of viral infection.

California began to test dead crows and related birds for WNV in 2000. None have tested positive to date. Private individuals can participate in the surveillance program by reporting recently dead birds to DHS via a toll-free number (877-WNV-BIRD). DHS will arrange for pickup and testing when appropriate.

Resources that SFDPH EHS can provide

The San Francisco Department of Public Health Environmental Health Services (EHS) public complaint program handles calls for assistance regarding mosquito activity in San Francisco and offers assistance to tenants and property owners in identifying and controlling potential and actual breeding sites. EHS staff include state certified vector control specialists, trained to apply and give advice on the control of pests and the use of pesticides.

Where mosquito activity is due to conditions on privately owned properties, the owners are required by the Health Code to maintain their properties in a way that does not contribute to mosquito breeding. There are limited public areas that are conducive to mosquito breeding in San Francisco; however, mosquitoes are known to breed in the city's catch basins and holding tanks of the waste treatment system. The complaint program will be conducting trainings on mosquito control for other city departments who maintain property where mosquito breeding may occur.

Information is made available several ways - by telephone, through printed materials, through our website, through referrals, through our Fax-back system, and by making courtesy home visits. Requests for assistance can be registered through our web-page, or by

phone at (415) 252-3805.

Personal steps to prevent Mosquito Bites

You cannot prevent every mosquito bite but here are some simple things that can reduce the number of bites:

- Avoid outdoor activity at dawn and dusk. In most areas the mosquito "season" is from May to October, but in the Bay Area the season extends almost year round, with activity ceasing only in the coldest weeks.
- Wear protective clothing (long pants and long sleeves) and apply repellant to the clothing and to exposed skin. DEET and permethrin products are most effective but must be used with caution, especially around children.
- Make sure that doors and windows have tight fitting screens. Repair or replace screens with tears or holes.

Environmental Mosquito Control

The environmental approach to mosquito control means eliminating the conditions that favor breeding and harborage, and minimizing the need for chemical controls. In general, seven days are required for an egg to become a mature mosquito in warm weather. The female mosquito may live as long as 3 weeks in the summer and survive the winter to lay eggs in the spring. The following steps can control mosquitoes around your home:

- Drain all standing water from the property, such as saucers below flower pots, hot tub covers, wading pools, hollow stumps and trash containers.
- Stock permanent ponds with fish that eat mosquito larvae.
- Clean out clogged roof gutters in the spring and fall, and maintain drains clear of leaf litter.
- Cut back overgrown vegetation, especially if it is growing in the shade, and do not over water your yard. Keep grass cut short and let the ground and the soil in potted plants dry on the surface before watering.
- Place 2 tablespoons full of bleach in your basement sump-pump pit.
- Non-chemical, microbial insecticides such as *Bacillus thuringiensis israeliensis* (Bti) can be purchased at garden supply stores and used in pools of standing water that cannot be drained.

Influenza vaccine update

There is sufficient supply of influenza vaccine for the 2002-2003 season, however it is recommended that highest priority groups be vaccinated first. October and early November are the optimal times to immunize the following groups:

- persons > age 65,
- chronically ill regardless of age (e.g., asthma, heart disease or diabetes mellitus),
- pregnant women,
- health care workers with direct patient care, and
- immunocompromised persons

Healthy individuals less than age 65 should wait until mid to late November to be vaccinated. Immunizations received later in November and December will still offer ample protection since flu season typically lasts through March. Comprehensive information regarding vaccine use and San Francisco influenza clinics is listed on the SFDPH website: http://www.sfdph.org/Services/Flu.htm.

Information can also be obtained via telephone by calling the Flu information line at (415) 554-2681 or by emailing fluinfo@sfdph.org.

Health Advisory Notification Database (HAND)

Since September 11, 2001 we are much more aware that SFDPH needs better communication, collaboration, and coordination with other health and medical providers in the community. This Bulletin helps to bridge this gap.

In order to be better prepared for any disaster, whether it be natural or intentional, we encourage providers, if they have not done so already or are unsure, to join the SFDPH HAND. To join HAND send an email to cdcontrol@sfdph.org with the following information:

- Full name
- Specialty/ies
- Primary affiliation(s)
- Mailing address
- Fax number(s)
- Email address(s)
- Telephone number(s)

SFDPH launches new bulletin

The SFDPH launches the Community Health and Safety Bulletin (CHSB). CHSB will be web-based and available online for reading as a HTML web page or downloading as portable document format (PDF) file.

The CHSB's audience is medical and public health providers. The primary contributors to this Bulletin will come from the SFDPH Community Health and Safety Branch which include the following sections:

- AIDS/HIV Surveillance and Epidemiology
- Community Health Epidemiology & Disease Control
- Emergency Medical Services
- Environmental Health Services
- STD Prevention and Control
- Tuberculosis Control

We will notify you of new Bulletins by Fax and email using our Health Advisory Notification Database (HAND). Send comments, feedback, or suggestions about CHSB to cdcontrol@sfdph.org.

Important web resources

Public health

San Francisco Department of Public Health
http://www.sfdph.org
California Department of Health Services
http://www.dhs.ca.gov
Center for Disease Control and Prevention
http://www.cdc.gov
National Library of Medicine
http://www.nlm.nih.gov

Free biomedical journals

BioMed Central
http://www.biomedcentral.com
PubMed Central
http://pubmedcentral.nih.gov
University of Iowa listing (most comprehensive)
http://www.lib.uiowa.edu/hardin/md/ej.html

The Community Health and Safety Bulletin is available online at http://www.medepi.org/chsb. To receive email notifications or to receive the CHSB by U.S. mail contact the Communicable Disease Control Unit at (415) 554-2830 or email your request to cdcontrol@sfdph.org.

Reportable diseases summary

AIDS Cases

	This Year Through June 2002	2001	2000
No. of cases diagnosed*	134	478	560
Transmission category (% of cases)			
Gay/bisexual male	66%	64%	60%
Injection drug user (IDU)	15%	15%	17%
Gay/bisexual male IDU	12%	14%	15%
Heterosexual	6%	3%	5%
Other	2%	8%	4%

* Data in recent years is incomplete due to delays in reporting.
Source: SFDPH, Quarterly AIDS Surveillance Report, AIDS Cases Reported Through June 2002.
http://www.sfdph.org/PHP/RptsHIVAIDS/qtrrpt0602.pdf

STD Cases

STD	2002 Through July	2001 Through July	2000 Through July
Chlamydia	1968	1780	1816
Gonorrhea	1316	1197	1182
Early syphilis*	280	85	43

* Infection less than one year duration (includes primary, secondary and early latent cases).
Source: SFDPH, San Francisco Monthly STD Report, monthly reports for July 2002 and July 2001.
http://www.sfdph.org/Reports/STD/STD0207.pdf

Tuberculosis

Measure	2002	2001	2000
No. of S.F. cases through Disease Week 35	85	117	116
San Francisco rate	16.6*	23.4	21.9

* Projected for 2002 based on data through Disease Week 35 (end of August).
Rates are annual rates per 100,000 population.
2001 rate for California: 9.5; for U.S.: 5.6.
Source: SFDPH, Tuberculosis Control Section

Year-to-Date (January through August) Cases of Selected Other Reportable Diseases

Disease	2002	2001	2000
Campylobactor	266	294	223
Cryptosporidiosis	31	24	16
E. coli 0157-H7	0	1	0
Giardiasis	248	225	204
Vaccine preventable diseases			
Acute hepatitis A	39	40	33
Acute hepatitis B	34	43	28
Meningococcal disease	9	4	8
Measles/mumps/rubella	3	1	2
Pertussis	28	8	5

Cases reported to SFDPH from January through August of each year listed.
Source: SFDPH, Community Health Epidemiology & Disease Control

Public health resources (Main telephone: 554-2500)

Community Health and Safety Services	Address	Telephone	Fax
AIDS Office (including AIDS/HIV reporting)	25 Van Ness Avenue, Suite 500, SF 94102	554-9000	431-0353
Bioterrorism Preparedness and Response	101 Grove Street, Room 408, SF 94102	554-2724	554-2854
-- Received suspicious package or envelope	.....	9-1-1 (861-8020)	
-- Suspect disease caused by BT agent	.....	809-7839, -7837	
Communicable Disease Control Unit	101 Grove Street, Room 408, SF 94102	554-2830	554-2848
-- Disease reporting (except AIDS/HIV, STDs, TB)			
-- Acute and chronic hepatitis reporting			
-- Food-borne illness or food poisoning			
-- Animal bite reporting			
Emergency Medical Services			
-- Medical Emergency	.....	9-1-1 (861-8020)	
-- Other EMS services (administrative offices)	68 12th Street, Suite 220, SF 94103	355-2600	552-0194
Environmental Health Services	1390 Market Street, Suite 210, SF 94102	252-3800	252-3875
Immunization Services	101 Grove Street, Room 408, SF 94102	554-2830	554-2579
-- Influenza vaccine information line	.....	554-2681	
-- Hepatitis information line	.....	554-2844	
Public Health Laboratory	101 Grove Street, Room 419, SF 94102	554-2800	431-0651
STD Prevention and Control			
-- Provider reporting hotline	.....	487-5555	431-4628
-- City Clinic (diagnosis and treatment)	356 7th Street, SF 94103	487-5500	437-9231
Tuberculosis (TB) Control (and reporting)	1001 Potrero Avenue, Ward 94, SF 94110	206-8524	648-8369
Community Programs and Clinical Services	**Address**	**Telephone**	**Fax**
Adult Immunization Clinic (for travel, work, school)	101 Grove Street, Room 405, SF 94102	554-2625	554-2619
Behavioral Health Services			
-- Community Substance Abuse Services	1380 Howard Street, 4th Floor, SF 94103	255-3500	255-3529
-- Community Mental Health Services	1380 Howard Street, 5th Floor, SF 94103	255-3400	252-3015
Children and Adolescent Abuse			
-- Child abuse hotline (Health & Human Services)	call first.....	558-2650	call first
-- Child & Adolescent Sexual Abuse Resources	995 Potrero Avenue, Ward 82, SF 94110	206-8386	206-6273
Community Health Centers (HCs)			
-- Castro-Mission HC	3850 17th Street (at Noe St), 94114	487-7500	558-8221
-- Chinatown Public HC	1490 Mason Street (at Broadway), 94133	705-8500	705-8505
-- Maxine Hall HC	1301 Pierce Street (at Ellis St), 94115	292-1300	928-6487
-- North of Market Senior Services	333 Turk Street (at Leavenworth St), 94102	885-2274	885-2344
-- Ocean Park HC	1351 24th Avenue, (at Judah St), 94122	682-1900	753-8134
-- Potrero Hill HC	1050 Wisconsin St (at Connecticut St), 94107	648-3022	550-1639
-- Silver Avenue Family HC	1525 Silver Avenue, (at San Bruno Ave), 94134	715-0300	467-3320
-- Southeast HC	2401 Keith Street (at Armstrong St), 94124	715-4000	822-3620
-- The Excelsior Group	4434 Mission Street (at Francis St), 94112	406-1353	452-9307
-- Tom Waddell HC	50 Ivy (Lech Walesa) St (at Polk St), 94102	554-2950	554-2919
Urgent Care	.....	554-2952	554-2919
-- Women's Health Center at SFGH	1001 Potrero Ave. Room 5M-5, SF 94110	206-3400	206-4562
Community Health Promotion and Prevention	30 Van Ness Ave., Suite 2300, SF 94102	581-2400	581-2490
Domestic violence (Police Department)	call first.....	553-9225	call first
Housing and Urban Health	101 Grove St., Rm 323, SF 94102	554-2679	554-2658
Maternal and Child Health Services	30 Van Ness Avenue, Suite 260, SF 94102	575-5670	575-5799
Needlestick Hotline for Clinicians	n/a.....	1-888-448-4911	
Patient Referral (for all SFDPH clinical services)	1001 Potrero Avenue, Room 1Q-1, SF 94110	206-5166	206-4883
Poison Control (at SFGH)	1001 Potrero Avenue, SF 94110	1-800-411-8080	502-6060
	.....patients:	1-800-876-4766	
San Francisco General Hospital (SFGH)	1001 Potrero Avenue, SF 94110	206-8000	
-- Emergency Department	Entrance on 23rd Street	206-8111	206-4719
-- Integrated Soft tissue Infection Services (ISIS)	Ward 4C	206-8287	206-3615
-- Urgent Care	Ward 6M	206-8052	206-8054

Updated Oct 18, 2002, For corrections or suggestions send email to tomas.aragon@sfdph.org.