医薬品　研究報告 調査報告書

識別番号・報告回数			報告日	第一報入手日	新医薬品等の区分	総合機構処理欄
一般的名称	－		研究報告の公表状況	CDC／MMWR 56 (04) 76-79／ (2007. 2. 2)	公表国 米国	
販売名(企業名)	－					

研究報告の概要

輸血によるウエスト・ナイル・ウイルス(WNV)感染が初めて報告されたのは2002年であり、2003年までに供血の全国的なWNV検査が迅速に導入された。スクリーニングは6又は16人のミニプール核酸増幅検査(MP-NAT)が用いられ、後に個別の供血NAT(ID-NAT)による強化スクリーニングが、WNV流行時期にMP-NAT陽性数が既知のトリガー閾値に達した場合(連続7日間で500件に1件以上の陽性が検出された場合)に実施された。
WNV輸血感染患者は、スクリーニング実施前の2002年は23名、2003年は6名、2004年は1名、2005年は0名であった。
本報告はID-NATを使用した強化スクリーニングが開始されて以降、初めて2006年に2名の免疫抑制状態の患者がウエスト・ナイル神経侵襲性疾患(WNND)を発症したとの報告である。
一例は腎移植を受けた末期腎疾患の82歳の男性で、発症の8週間前に6名の供血者由来の血液成分を投与されており、その内1本の濃厚赤血球の供血者がIgM抗体陽性であった。
供血者の識別後、その血液からの血小板および新鮮凍結血漿(FFP)が遡って追跡調査された結果、さらに腎移植を5年前に受けていた60歳の男性にFFPが投与されており、この男性もWNV関連脊髄炎を発症し、脳脊髄液(CSF)中にIgM型の抗WNV抗体が検出された。
WNNDの発症率はWNV感染症全体(大半は蚊由来)の1%未満であるが、移植患者のWNND発症リスクは一般集団の4倍以上と推定される。
今回の供血から遡って1ヵ月の間に実施された血液採取期間の検査では、MP-NAT陽性結果が2件検出されていたが、この2件の陽性結果の間には7日間以上の開きがあったため、MP-NATは実施されたがトリガーID-NAT検査は実施されなかった。今回の調査結果は、偽陰性MP-NAT結果が生じる可能性のほか、トリガーID-NATに関する戦略を検討する必要性を示唆している。

報告企業の意見	今後の対応
輸血用血液成分製剤によるWNV感染例の報告であるが、血漿分画製剤でのWNV感染伝播の報告はなく、製造工程中にWNVと同じフラビウイルスであるウシ下痢症ウイルス(BVDV)の不活化除去が確認された工程を設けているが、今後とも関連情報に注意していく。	今後ともWNVに関連する情報の収集に努めていく。

使用上の注意記載状況・その他参考事項等

添付文書の冒頭部分
原料となった血液を採取する際には、問診、感染症関連の検査を実施するとともに、製造工程において一定の不活化・除去処理などを実施し、感染症に対する安全対策を講じているが、ヒト血液を原料としていることによる感染症伝播のリスクを完全に排除することはできないため、疾病の治療上の必要性を十分に検討の上、必要最小限の使用にとどめること。

NIHONSEIYAKU
2005-038

Since mid-January, RVF in livestock has been detected in districts surrounding Nairobi, signaling occurrence of the outbreak in new areas. Reports also have been received of livestock and humans with illness consistent with RVF across the border in Somalia, where disease assessment has been hampered by ongoing security concerns. Several international organizations are collaborating to control the spread of the outbreak within Kenya and to other countries. Travelers should take precautions when visiting RVF-affected areas. Generally, the risk for RVF infection among travelers to Kenya is low, unless they visit areas where an outbreak is occurring and are bitten by infected mosquitoes or come in contact with body fluids, uncooked tissue, or aerosols from infected livestock. No preventive RVF medications or licensed vaccines for humans exist. Travelers to affected areas should reduce their risk for infection by protecting themselves from mosquito bites and by avoiding direct contact with livestock. Specific recommendations for U.S. travelers are available at http://www.cdc.gov/travel/other/2006/rift_valley_fever_kenya.htm.

To control the outbreak, KMOH launched several interventions, some of which might have limited the public health impact of the outbreak. A ban on the slaughter of animals (including during Eid-ul-azha, a religious holiday) was imposed in NEP and strictly enforced. The Ministry of Livestock and Fisheries Development initiated a policy of vaccinating apparently unaffected herds of livestock in districts in which human or livestock RVF disease had been confirmed and also in adjacent districts; however, as of January 25, only a small proportion of livestock had been immunized. Other interventions included heightened disease surveillance among humans and animals, community mobilization, animal quarantines and restricted transport of livestock, and an integrated vector-control strategy, including indoor residual spraying and larviciding. RVF wards were established in which appropriate infection-control measures were encouraged.

Timely detection of this outbreak was aided by implementation of Integrated Disease Surveillance and Response* within most of the affected districts. A second factor contributing to timely detection was initiation of RVF laboratory-supported field surveillance of febrile patients at outpatient clinics in Garissa. Ongoing epidemiologic, entomologic, and veterinary studies related to this outbreak continue to 1) identify factors associated with severe forms of RVF illness and poor outcomes; 2) characterize the role of specific species of mosquitoes in transmitting, maintaining, and spreading RVF virus; 3) assess the economic impact of the outbreak; and 4) define the impact of livestock immunization with live, attenuated RVF veterinary vaccine on minimizing the spread of animal and human disease. Taking measures to decrease contact with mosquitoes through use of repellents and bednets and avoiding exposure to blood or tissues of animals that might be infected are important protective measures for preventing RVF. Livestock vaccination also can be an effective means of preventing cases of human RVF if adequate vaccination coverage and herd immunity are achieved.

*A strategy of the African Regional Office of WHO that aims to improve availability and use of surveillance and laboratory data to control infectious diseases that are the leading causes of death, disability, and illness in the region.

Acknowledgments

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References

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West Nile Virus Transmission Through Blood Transfusion — South Dakota, 2006

West Nile virus (WNV) transmission through blood transfusion was first reported in 2002 (*1,2*), prompting rapid implementation of nationwide screening of blood donations for WNV by 2003 (*3,4*). Screening strategies were developed using minipool nucleic acid-amplification testing (MP-NAT) based on six or 16 pooled donor samples. To improve sensitivity of WNV detection, blood-collection agencies (BCAs) later implemented enhanced screening by individual donation NAT (ID-NAT), most often used when a given trigger threshold of positive MP-NAT results is reached during the WNV transmission season (*5,6*). This approach has been effective, resulting in the detection and interdiction of

approximately 1,400 potentially infectious blood donations during 2003–2005 and a reduction in recognized transfusion-transmission events (*7*). A total of 23 confirmed WNV transfusion-transmitted cases were reported in 2002, before screening was implemented; six probable or confirmed cases were detected in 2003 after MP-NAT screening was initiated, one was detected in 2004, and none were detected in 2005 (*7*). This report describes the first WNV transfusion-transmission cases detected since the initiation of enhanced screening strategies using ID-NAT triggering. In 2006, two immunosuppressed patients had onset of West Nile neuroinvasive disease (WNND) after receiving blood products from a single infected donor despite a negative MP-NAT result at the time of donation. Although risk for transmission has been substantially reduced as a result of routine MP-NAT and triggered ID-NAT screening, clinicians should be reminded that transfusion-transmitted WNV infections can still occur, and that immunosuppressed patients are more likely to have onset of WNND.

In September 2006, the South Dakota Department of Health (SDDH) was notified of WNND in a man aged 82 years with end-stage renal disease who had received a kidney transplant on August 25, 2006. Four days after the transplant surgery, the patient received a transfusion of 2 units of packed red blood cells (PRBC) for anemia. Ten days after surgery, the patient was discharged to a long-term–care facility and continued to receive immunosuppressive therapy, including 750 mg of mycophenolate mofetil twice daily, 125 mg of cyclosporin twice daily, and 20 mg of prednisone daily. Twenty-one days after surgery, he had onset of fever, lethargy, and a peri-incisional hematoma, prompting his readmission to the hospital. The patient was treated empirically with broad-spectrum antimicrobial and antifungal agents. Two days after readmission (i.e., 23 days after transplant and 19 days after PRBC transfusion), his mental status deteriorated rapidly. The next day, his cerebrospinal fluid (CSF) had four white blood cells (WBC)/mm^3, 46 red blood cells (RBC)/mm^3; a protein level of 58 mg/dL, and a glucose level of 67 mg/dL. Anti-WNV immunoglobulin M (IgM) antibody was detected in both serum and CSF by IgM antibody-capture enzyme-linked immunosorbent assay (MAC-ELISA) performed at SDDH. When the patient was discharged to a long-term–care facility (36 days after his transplant surgery), his fever had resolved, and his mental status had improved.

Because the patient had been hospitalized during the 2 weeks before onset of his WNV-related illness, WNV transmission by organ transplantation or blood transfusion was considered more likely than transmission by mosquito bite. The kidney donor's premortem serum was negative for both anti-WNV IgM and WNV RNA by MAC-ELISA and reverse transcription polymerase chain reaction (RT-PCR). One other kidney transplant recipient from the same organ donor had no symptoms of WNV disease, and serum from this recipient was negative for both anti-WNV IgM and WNV RNA. Traceback investigation revealed that the patient with WNND had received blood products from six different donors during the 8 weeks before symptom onset. No donor samples from the time of donation were available for testing. However, all donors consented to have serum collected and tested for anti-WNV IgM. One donor, the source of 1 PRBC unit transfused into the patient with WNND 4 days after transplant, was IgM positive.

The implicated blood donor was a man from a rural area of South Dakota where substantial WNV activity in birds, mosquitoes, and humans occurred during the 2006 transmission season. He had not traveled outside of South Dakota during the month before his last donation on August 4, 2006. He did not report any symptoms consistent with WNV disease during the 2 weeks before this donation or during the 3 subsequent months. Because the BCA that collected the donation did not conduct routine screening for WNV, a sample of the donor's blood was sent for screening at an out-of-state BCA, where the MP-NAT test result for six pooled samples, including his donation, was negative. The out-of-state BCA had a policy of triggering ID-NAT after two WNV-positive MP-NAT results and more than one positive in 500 results during a rolling 7-day period. Two positive MP-NAT results had been detected by the testing BCA during the month before this donation; however, the positive results occurred more than 7 days apart and therefore did not trigger ID-NAT testing.

After identification of the IgM-positive donor, the platelet and fresh frozen plasma (FFP) co-components from his whole blood donation were traced. The platelet unit had been discarded without being transfused. The FFP unit had been transfused on August 10, 2006, into a man aged 60 years who had received a kidney transplant in 2001 for end-stage renal disease attributed to insulin-dependent diabetes mellitus. On the same day as the transfusion, he had undergone surgical repair of a spinal fracture caused by a fall. He received a transfusion of 15 blood products, including 6 units of FFP, one of which was from the blood donor described in this report. One week after surgery, he was discharged to a rehabilitation facility, where he continued to receive immunosuppressive therapy, including 4 mg tacrolimus twice daily and 500 mg mycophenolate mofetil three times daily. Eleven days after the surgery, he had onset of fever and was treated empirically with antimicrobial and antifungal agents. Fifteen days after surgery, he had onset of tremors, encephalopathy, and acute left arm paralysis unexplained by his previous injury but

consistent with WNV-associated myelitis. The patient's CSF had four WBC/mm^3, zero RBC/mm^3, a protein level of 171 mg/dL, and a glucose level of 52 mg/dL. Anti-WNV IgM was detected in the CSF by MAC-ELISA at SDDH. The patient's fever, tremors, and encephalopathy resolved, but his left arm paralysis persisted at the time of transfer to an out-of-state hospital 5 days after symptom onset (20 days after surgery). Three months later, the patient remained in a long-term–care facility.

Reported by: *L Kightlinger, PhD, South Dakota Dept of Health. SM Brend, MPH, Iowa Dept of Health. J Gorlin, MD, Memorial Blood Centers, St. Paul; MM Kemperman, Minnesota Dept of Health. MJ Kuehnert, MD, National Center for Preparedness, Detection, and Control of Infectious Diseases (proposed); JJ Sejvar, MD, GL Campbell, MD, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (proposed); EC Farnon, MD, KD Ellingson, PhD, EIS officers, CDC.*

Editorial Note: This report describes two cases of probable transfusion-transmitted WNV from a common blood donor despite a negative MP-NAT result at the time of donation. The source of infection cannot be proven because blood samples or co-components from the implicated donation were unavailable for testing; however, evidence of WNND in two recipients of blood products from a common donor with serologic evidence of recent infection makes WNV transfusion-transmission probable. Because these two transfusion recipients were hospitalized for at least 2 weeks each before onset of WNND, neither patient was likely to have acquired infection from a mosquito bite. Furthermore, for the patient who underwent transplant surgery on August 25, transmission through the transplanted kidney is unlikely, given that neither the organ donor nor the other organ recipient had evidence of WNV infection.

Nationwide blood screening for WNV has been successful in preventing transfusion-transmitted WNV (*3*). However, as with all blood donation screening, infections can be transmitted to transfusion recipients on rare occasions despite negative donor test results. Although WNV transmission by blood transfusion is rare, the cases described in this report underscore the importance of clinical recognition, effective WNV blood screening strategies, and investigation coordination.

Transfusion-transmitted WNND might be difficult to recognize, but physicians should consider the disease as a possible diagnosis, particularly when unexplained neurologic complications occur in immunosuppressed patients after transfusion. Both patients described in this report were kidney transplant recipients who were immunosuppressed when they had onset of WNND after receiving blood product transfusions. Although WNND occurs in less than 1% of WNV infections overall (the majority of which are mosquito-borne), transplant patients who acquire WNV infections have an estimated forty-fold greater risk for developing WNND compared with the general population (*8*).

The results of this investigation highlight the potential for false-negative MP-NAT results and the need to evaluate strategies for triggering ID-NAT donor screening; however, they also underscore the rarity of WNV transfusion-transmission events. Since ID-NAT triggering was fully implemented after the start of the 2004 transmission season, no transfusion-transmitted cases had been detected until the cases described in this report. Most false-negative MP-NAT results are caused by low-level viremic donor samples in which WNV is undetected by MP-NAT but is potentially identifiable by the more sensitive ID-NAT. Criteria for triggering ID-NAT differ among BCAs, but most are based on the number of positive MP-NAT results or a threshold rate for all positive results reached during a rolling 7-day period (*5*). Certain BCAs collect blood and perform NAT screening on-site; however, BCAs without the ability to screen for WNV send donor samples to remote (sometimes out-of-state) BCAs for testing. BCAs performing the testing determine when to trigger ID-NAT upon reviewing their own results.

To enhance the sensitivity of ID-NAT triggering, BCAs are considering the feasibility and utility of more standardized criteria for ID-NAT triggering and methods for enhanced communication among BCAs so that knowledge of positive screening results can be shared. BCAs face many challenges in WNV screening, including seasonal epidemics that are geographically unpredictable, limited resources for ID-NAT, and coordination of blood collection and testing that might be performed by multiple BCAs in a given geographic area. An additional tool for sharing of donor screening results might be useful to enhance ID-NAT triggering. The WNV Biovigilance Network,* currently being piloted by AABB (formerly known as the American Association of Blood Banks) to aggregate WNV blood donor screening results, is a model for successful collaboration. However, timeliness of reporting must be addressed to adapt the network for use in decisions regarding ID-NAT triggering.

Public health investigations involving patients with recent transplantation or blood transfusion are complex and often involve multiple states and local jurisdictions. Coordination among state and local health departments, clinicians, BCAs, hospital blood banks, transplant centers, and CDC often is required. Prompt reporting of suspected cases to local and state health departments, with assistance from CDC, will promote timely traceback investigations that can identify additional cases and prevent further transmission.

* Information available at http://www.aabb.org/content/programs_and_services/west_nile_virus_study/wnvstudy.htm.

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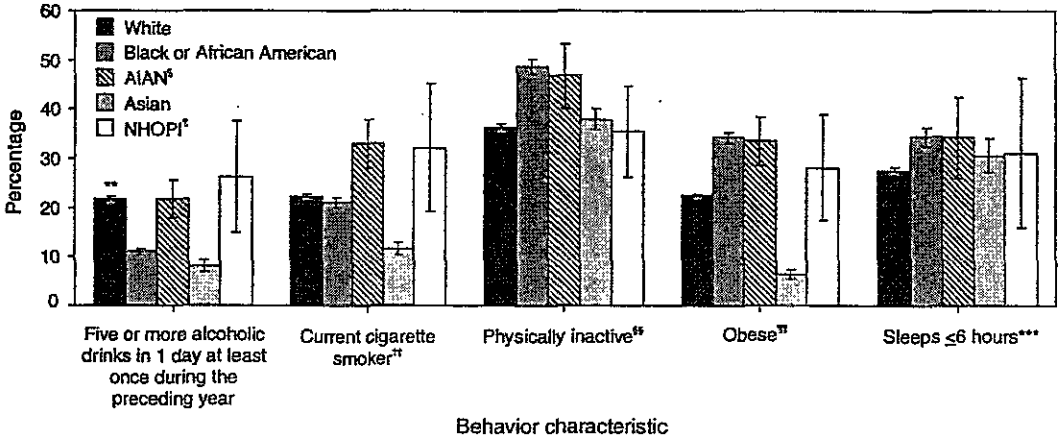
QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Prevalence of Selected Unhealthy Behavior Characteristics Among Adults Aged ≥18 Years, by Race* — National Health Interview Survey, United States, 2002–2004†



* Racial categories include persons who indicated a single race only and are consistent with the 1997 Office of Management and Budget federal guidelines for race reporting.
† Estimates are age adjusted using the 2000 projected U.S. population as the standard population and using three age groups: 18–44 years, 45–64 years, and ≥65 years. Estimates are based on household interviews of a sample of the civilian, noninstitutionalized U.S. adult population. Denominators for each percentage exclude persons with unknown health-behavior characteristics.
§ American Indian or Alaska Native.
¶ Native Hawaiian or other Pacific Islander.
** 95% confidence interval.
†† Smoked at least 100 cigarettes in lifetime and currently smoked.
§§ Never engaged in any light, moderate, or vigorous leisure-time physical activity.
¶¶ Defined as a body mass index (weight [kg]/height [m^2]) of ≥30.
*** Usual number of hours of sleep during a 24-hour period. Based on data from 2004 only.

The percentage of adults with selected unhealthy behavior characteristics varied by race during 2002–2004. Blacks and Asians had the lowest prevalence of consuming five or more alcoholic drinks in a single day; Asians also had the lowest prevalence of current cigarette smoking and obesity. AIAN had among the highest prevalences of consuming five or more drinks, current smoking, and obesity. Generally, physical inactivity was the most prevalent unhealthy behavior.

SOURCE: Adams PF, Schoenborn CA. Health behaviors of adults: United States 2002–2004. Vital Health Stat 2006;10(230). Available at http://www.cdc.gov/nchs/data/series/sr_10/sr10_230.pdf.

医薬品 研究報告 調査報告書

識別番号・報告回数			報告日	第一報入手日	新医薬品等の区分	機構処理欄
				2007. 1. 10	該当なし	

一般的名称	(製造承認書に記載なし)	研究報告の公表状況	ProMED 20061214-3510, 2006 Dec 14. 情報源:[1]Public Health Agency of Canada , 2006 Oct 28. [2]Canadian Cooperative Wildlife Health Centre, 2006 Oct 18. [3]USA CDC, 2006 Dec 11. [4]USA CDC, 2006 Dec 11.	公表国
販売名(企業名)	合成血「日赤」(日本赤十字社) 照射合成血「日赤」(日本赤十字社) 合成血-LR「日赤」(日本赤十字社) 照射合成血-LR「日赤」(日本赤十字社)			米国・カナダ

研究報告の概要

○ウエストナイルウイルス最新情報2006年—西半球(第21回)
[1]カナダ—ヒト症例サーベイランス
11月以降新たな感染例は報告されていない。
[2]カナダ—鳥類サーベイランス
11月以降新たな感染例は報告されていない。
[3] 米国—CDC/Arbonet
2006年、米国におけるウエストナイルウイルス感染のヒト症例は43州から4052例が報告され、うち1396例で脳炎や髄膜炎を発症、死亡例は146例だった。
[4] 米国—USGS/CDC作成の地図
また、動物からのウイルス検出は、ウマ:35州、トリ:43州、蚊:39州から報告されている。

使用上の注意記載状況・その他参考事項等

合成血「日赤」
照射合成血「日赤」
合成血-LR「日赤」
照射合成血-LR「日赤」

血液を介するウイルス、細菌、原虫等の感染
vCJD等の伝播のリスク

報告企業の意見	今後の対応
2006年、米国におけるウエストナイルウイルス感染のヒト症例は42州から4052例が報告され、うち1396例で脳炎や髄膜炎を発症、死亡例は146例だったとの報告である。	輸血によるWNV感染リスクを防止するため、国の指示(平成16年7月13日付薬食発第0713008号「ウエストナイルウイルス等の輸入感染症対策に係る採血禁止期間の変更について」)により帰国(入国)後4週間の供血を禁止している。また、WNV感染の発生に備え、平成17年10月25日付血液対策課発事務連絡に基づき、緊急対応の準備を進めている。

Archive Number 20061214.3510
Published Date 14-DEC-2006
Subject PRO/AH/EDR> West Nile virus update 2006 - Western Hemisphere (21)

WEST NILE VIRUS UPDATE 2006 - WESTERN HEMISPHERE (21)
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A ProMED-mail post
<http://www.promedmail.org>
ProMED-mail is a program of the
International Society for Infectious Diseases
<http://www.isid.org>

In this update:
[1] Canada - human surveillance
[2] Canada - bird surveillance
[3] USA - CDC/Arbonet
[4] USA - USGS/CDC maps

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[1] Canada - human surveillance
Date: 28 Oct 2006
From: ProMED-mail <promed@promedmail.org>
Source: West Nile Virus Monitor, Public Health Agency of Canada [edited]
<http://www.phac-aspc.gc.ca/wnv-vwn/mon-hmnsurv_e.html>

[There have been no changes since the previous update (West Nile virus update 2006 - Western Hemisphere (17) Archive No. 20061109.3221). - Mod.TY]

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[2] Canada - bird surveillance
Date: 18 Oct 2006
From: ProMED-mail <promed@promedmail.org>
Source: Canadian Cooperative Wildlife Health Centre [edited]
<http://wildlife1.usask.ca/en/west_nile_virus/current_maps/canada06en.jpg>

[There have been no changes from the previous update (Archive No. 20061109.3221). Apparently, West Nile virus transmission has declined to undetectability for the year 2006 in Canada. - Mod.TY]

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[3] USA - CDC/Arbonet
Date: 11 Dec 2006
From: ProMED-mail <promed@promedmail.org>
Source: USA CDC, Division of Vector-Borne Infectious Diseases, West Nile Virus [edited]
<http://www.cdc.gov/ncidod/dvbid/westnile/surv&controlCaseCount06_detailed.htm

Human Cases have been reported from:
State / Neuroinvasion* / *West Nile* fever** / Other*** / Total **** / Fatalities
Alabama / 7 / 0 / 0 / 7 / 0
Arizona / 48 / 58 / 42 / 148 / 6
Arkansas / 23 / 5 / 0 / 28 / 3
California / 79 / 182 / 11 / 272 / 6
Colorado / 63 / 269 / 0 / 332 / 7
Connecticut / 7 / 2 / 0 / 9 / 1
District of Columbia / 0 / 1 / 0 / 1 / 0
Florida / 3 / 0 / 0 / 3 / 0
Georgia / 2 / 5 / 1 / 8 / 1
Idaho / 111 / 752 / 26 / 889 / 14
Illinois / 116 / 70 / 24 2/26 10 / 9

Indiana / 26 / 7 / 42 / 75 / 3
Iowa / 21 / 13 / 2 / 36 / 0
Kansas / 17 / 13 / 0 / 30 / 4
Kentucky / 5 / 1 / 0 / 6 / 1
Louisiana / 89 / 83 / 0 / 172 / 8
Maryland / 7 / 1 / 2 / 10 / 0
Massachusetts / 2 / 1 / 0 / 3 / 0
Michigan / 47 / 2 / 2 / 51 / 6
Minnesota / 30 / 35 / 0 / 65 / 3
Mississippi / 87 / 93 / 0 / 180 / 13
Missouri / 47 / 12 / 1 / 60 / 3
Montana / 12 / 21 / 1 / 34 / 0
Nebraska / 43 / 212 / 0 / 255 / 1
Nevada / 34 / 75 / 14 / 123 / 1
New Jersey / 2 / 2 / 1 / 5 / 0
New Mexico / 3 / 5 / 0 / 8 / 0
New York / 16 / 7 / 0 / 23 / 4
North Dakota / 20 / 117 / 0 / 137 / 1
Ohio / 36 / 11 / 0 / 47 / 4
Oklahoma / 27 / 18 / 2 / 47 / 5
Oregon / 7 / 50 / 12 / 69 / 0
Pennsylvania / 8 / 1 / 0 / 9 / 2
South Carolina / 1 / 0 / 0 / 1 / 0
South Dakota / 38 / 75 / 0 / 113 / 3
Tennessee / 15 / 2 / 0 / 17 / 1
Texas / 214 / 105 / 0 / 319 / 28
Utah / 56 / 101 / 0 / 157 / 5
Virginia / 0 / 0 / 4 / 4 / 0
Washington / 0 / 3 / 0 / 3 / 0
West Virginia / 1 / 0 / 0 / 1 / 0
Wisconsin / 11 / 9 / 0 / 20 / 1
Wyoming / 15 / 40 / 10 / 65 / 2
TOTALS / 1396 / 2459 / 197 / 4052 / 146

* Cases with neurologic manifestations (such as WN encephalitis, meningitis, and myelitis).
** Cases with no evidence of neuroinvasion.
*** Cases for which insufficient clinical information was provided.
**** Total number of human cases of WNV illness reported to ArboNET by state and local health departments.

Neuroinvasive disease refers to severe disease cases, particularly West Nile meningitis and West Nile encephalitis.

West Nile fever refers to typically less severe cases that show no evidence of neuroinvasion.

West Nile fever is not currently on the list of nationally notifiable diseases, and therefore, it is optional whether or not state health departments report these cases to CDC. Click the above CDC site [URL above] for further explanations of neuroinvasive West Nile virus disease and West Nile fever.

Other Clinical includes persons with clinical manifestations other than WN fever, WN encephalitis or WN meningitis, such as acute flaccid paralysis. Unspecified cases are those for which sufficient clinical information was not provided.

Total Human Cases Reported to CDC: These numbers reflect both mild and severe human disease cases occurring since 1 Jan 2006 reported to ArboNet by state and local health departments. ArboNet is the national, electronic surveillance system established by CDC to assist states in tracking West Nile virus and other mosquito-borne viruses. Information regarding 2006 virus/disease activity is posted when such cases are reported to CDC.

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[4] USA - USGS/CDC maps
Date: 11 Dec 2006
From: ProMED-mail <promed@promedmail.org>
Source: USA CDC, Division of Vector-Borne Infectious Diseases, West Nile Virus [edited]
<http://diseasemaps.usgs.gov/wnv/wnv_us_human.html>

2006 West Nile virus activity in the United States (through 11 Dec 2006)

Data are being collected from state and local health departments on a weekly basis and are reported to the CDC ArboNET for the following 5 categories: wild birds, sentinel chicken flocks, human cases, veterinary cases, and mosquito surveillance. Maps detailing county-level wild birds, sentinel chicken flocks, human cases, veterinary cases, and mosquito surveillance data are published each week on the collaborative USGS/CDC West Nile virus website.

As of 11 Dec 2006, human, avian, animal or mosquito WNV infections have been reported to CDC ArboNET from the following states: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

WN virus antibody-positive sentinel animals (birds and/or horses) have been found in Arizona, Arkansas, California, Delaware, Florida, Iowa, Montana, Nevada, North Carolina, North Dakota, Pennsylvania, Utah and Virginia. [Not every state has a sentinel program. - Mod.JW]

WN equine infections have been reported from Alabama, Arizona, Arkansas, California, Colorado, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Tennessee, Texas, Utah, Virginia, Washington, Wisconsin and Wyoming.

WN virus has been detected in dead wild birds in Alabama, Arizona, Arkansas, California, Colorado, Delaware, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, West Virginia, Washington, Wisconsin, and Wyoming.

WN virus has been detected in mosquito pools collected in Arizona, Arkansas, California, Colorado, Connecticut, District of Columbia, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Jersey, New Mexico, New York, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin, and Wyoming.

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ProMED-mail
<promed@promedmail.org>

[ProMED-mail readers should note the change in URL for the USGS/CDC weekly maps. Maps for other arthropodborne viruses in the USA are covered at this site also, including St Louis encephalitis, eastern equine encephalitis, western equine encephalitis, La Crosse encephalitis, and Powassan. The URL for all of these maps is <http://diseasemaps.usgs.gov/>. - Mod.TY]

[see also:
West Nile virus update 2006 - Western Hemisphere (20) 20061207.3452
West Nile virus update 2006 - Western Hemisphere (19) 20061116.3282
West Nile virus update 2006 - Western Hemisphere (18) 20061109.3221
West Nile virus update 2006 - Western Hemisphere (17) 20061101.3129
West Nile virus update 2006 - Western Hemisphere (16) 20061027.3075
West Nile virus update 2006 - Western Hemisphere (15) 20061019.3006
West Nile virus update 2006 - Western Hemisphere (10) 20060915.2606
West Nile virus update 2006 - Western Hemisphere (05) 20060803.2147
West Nile virus update 2006 - Western Hemisphere (01) 20060624.1755
2005

West Nile virus update 2005 - Western Hemisphere (22) 20051226.3686]

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