USACHPPM
HEALTH INFORMATION OPERATIONS (HIO) UPDATE

20 June 2002

The HIO Weekly Update provides information regarding global medical and veterinary issues of interest to the United States (US) Army. The weekly update does not attempt to analyze the information regarding potential strategic or tactical impact to the US Army and as such, should not be regarded as a medical intelligence product. Medical intelligence products are available at http://mic.afmic.detrick.army.mil/. The information in the HIO Weekly Update should provide an increased awareness of current and emerging health-related issues.

HOT ISSUES

Bioterror Defense Bill Signed – White House

On 13 June, the Washington Post reported that President Bush signed legislation on 12 June that will provide $4.3 billion for drugs, vaccines, training and other initiatives to

counter biological weapons, which he described as the most dangerous weapons in the world. The legislation also calls for tightening security at water plants, improving food inspections, and increasing stockpiles of vaccines against smallpox and other diseases. It also provides $1.6 billion for states to aid with emergency preparedness. The report is at http://www.washingtonpost.com/wp-dyn/articles/A41323-2002Jun12.html.

Bioweapons Research Facilities and Security Concerns – Russia

On 17 June, the Washington Post reported that a spokesperson from Pokrov Biologics Plant in Russia acknowledged security concerns with the plant's 30-year old alarm system, which no longer works in parts of the campus that are overrun with weeds and littered with debris. According to the report, the facility is believed to have more than a dozen viruses, including Newcastle, a highly contagious disease that infects poultry and other birds. The report is at http://www.washingtonpost.com/wp-dyn/articles/A61628-2002Jun16.html.

Blood Pressure Gauges – Safety Concerns

On 16 June, the New York Times reported that the American Heart Association and the National Heart, Lung, and Blood Institute (one of the National Institutes of Health) had raised concerns that mercury sphygmomanometers were being replaced with newer devices that could be unreliable leading to false diagnoses and inappropriate treatments. According to the report, hospital and clinics nationwide have been converting from the mercury gauges to aneroid or other devices as part of a federal environmental initiative to decrease the use of mercury, a toxic metal that can pollute air and water when disposed of improperly. Anecdotal reports from physicians suggest that erroneous blood pressure reading have caused illness and death, but some medical centers, including the Mayo Clinic, say other devices have been reliable. The Mayo Clinic switched to aneroid devices and checks them annually. According to a study by the clinic that looked at 248 aneroid devices (17% of the 1,500 in use) at two Mayo Clinic hospitals, only one needed to be replaced. The report is at (requires free registration) http://www.nytimes.com/2002/06/16/health/16BLOO.html.

Expanded Pharmacy Services – US

On 16 June, the New York Times reported that a growing number of pharmacies across the US are expanding their services to include a range of health management services. According to the report, about 500 of the 35,000 pharmacies in the National Association of Chain Drug Stores offer counseling services on topics like diabetes, asthma, cholesterol management or blood clotting conditions; 32 states allow pharmacists to give influenza and pneumococcal vaccinations; and Florida allows pharmacists to prescribe limited drugs independently, e.g., allergy drugs. The biggest impediment to further growth is reportedly the lack of pharmacists and insurance reimbursement, e.g., a 45-minute consultation on diabetes runs $75-100. The report is at (requires free registration) http://www.nytimes.com/2002/06/16/business/yourmoney/16HEAL.html.

Fibromyalgia – Brain Scan Results

On 17 June, Reuters reported that researchers at the University of Michigan Medical Center had documented pain and a reduced threshold for tolerating pain in patients diagnosed with fibromyalgia by a type of brain scan known as functional MRI. The report is Arthritis & Rheumatism 2002;46:1333-43, and the Reuters report is at http://www.reutershealth.com/archive/2002/06/17/eline/links/20020617elin006.html.

Millennium Cohort Study – DoD

On 17 June, the AFPS reported that the joint-service Millennium Cohort Study would evaluate the health risks of military deployments, occupations, and general military service. The study is designed to examine the health effects of military service on men and women, both during service and after they leave. The study has enrolled more than 60,000 service members since it began in August 2001 and will ultimately examine health surveys submitted by 140,000 service members across two decades. More information on the study is at http://www.millenniumcohort.org/ and the report is at http://www.defenselink.mil/news/Jun2002/n06172002_200206171.html.

MRI in Postmortem Examinations – BMJ

On 15 June, the BMJ reported the first fully operational service of its kind to use MRI as an alternative to invasive autopsy. In a four-year review of this working service, the researchers found that in cases of non-suspicious death, MRI was a credible alternative to invasive autopsy. An advantage of using MRI is the hard copy images, which are suited to audit and quality control. Limitations of using MRI include expense and availability of scanners and radiologists' time. The report is at http://bmj.com/cgi/reprint/324/7351/1423.pdf.

Smallpox Accident, 1971 – Russia

On 16 June, the Washington Post reported that in the summer of 1971, the Soviet Union apparently conducted an open-air test of a biological weapon containing smallpox virus that caused an outbreak, which sickened 10 people, killed three people, and required a massive vaccination campaign to confine it to a port on the Aral Sea in Kazakhstan. The information was presented for the first time publicly at a gathering of smallpox experts and public health officials at the National Academy of Sciences in Washington DC. Calculations of the rate of disease transmission to vaccinated people in the outbreak suggests – but does not prove – the strain of virus might have been more transmissible or resistant to the protective effects of vaccination than other smallpox strains. Accidents in the Soviet biological warfare program caused deaths elsewhere from plague, anthrax, and the Marburg virus. The last case of naturally acquired smallpox occurred in Somalia in 1977, and the last case ever in England in 1978 after a laboratory accident. The report is at http://www.washingtonpost.com/wp-dyn/articles/A57777-2002Jun15.html.

Typhoid Fever, Imported from India – Germany

On 13 June, the Eurosurveillance Weekly reported that people who have been immunized against typhoid fever might still be at risk of becoming infected while traveling to endemic countries as this case demonstrates. A German man worked in India from March to December 2001. He had been vaccinated with a parenteral typhoid vaccine (typhoid Vi polysaccharide antigen) in December 2000. Eight days before he was due to return to Germany he developed a fever of up to 104 F, headache and general aches and pains, and watery diarrhea. He did not see a doctor but treated himself with an antibiotic (type not known) and tinidazole. On his return to England, the diagnosis was delayed by the patient's concomitant infections with dengue fever and adenovirus infection as well as by the absence of some typical typhoid symptoms (no leukopenia and aneosinophilia, no bradycardia, no roseolae, no splenomegaly). *S. typhi* was found in a blood, rather than stool, specimen. The subclinical manifestation of typhoid may have been a result of the vaccination and the patient's initial self-treatment with antibiotics. Two typhoid vaccines are available, the one previously mentioned and an oral typhoid vaccine that contains a live attenuated strain (Ty 21a) of *S. typhi* in an enteric-coated capsule that must be kept refrigerated. Neither of the vaccines claims efficacy over about 80%. The lesson learned is that typhoid must always be excluded in any fever of unknown origin, regardless of the patient's immunization history and that there may be more than one infection accounting for a fever. The report is at http://www.eurosurv.org/2002/pfp/020613_pfp.htm.

USCENTCOM

HIV/AIDS – Afghanistan

On 9 June, the WHO reported that a technical working group (TWG) has been established to design a strategy to control the potential spread of HIV/AIDS in Afghanistan. Currently the major risks are considered to be intravenous drug use and unsafe blood transfusions. An estimated half of the country's 44 hospitals that perform surgery do not systematically test the blood for HIV before transfusions. Afghanistan is one of the world's largest producers of opium. In Pakistan alone there are an estimated 500,000 heroin dependent persons, of whom 60,000 are injecting drug users. A prevalence of 80% of hepatitis C among intravenous drug users has been reported in Pakistan, clearly pointing to HIV vulnerability among this group. Following the initial assessment by the TWG, an action plan for immediate, short-term, and long-term prevention will be recommended to the task force. The plan is likely to focus on implementing prevention measures in health facilities, increased community awareness, and nation-wide surveillance. The report is at http://www.who.int/inf/en/note2002-02.html.

Mystery Illness – Iran

On 15 June, ProMED-mail reported that an unidentified virus was threatening some 70 villages in western Iran as reported by Iran National Broadcasting on 9 June. The

symptoms included exhaustion, partial paralysis, severe headache, and nausea; however, no deaths were reported. The report is at http://www.promedmail.org/pls/askus/f?p=2400:1001:259102::NO::F2400_P1001_BACK_PAGE,F2400_P1001_PUB_MAIL_ID:1010,18503.

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Anti-smoking Vaccine – UK

On 14 June, Reuters Health reported that a British biotech firm had conducted early tests on an anti-smoking vaccine that showed it was safe and successful in producing antibodies to bind to nicotine, the highly addictive ingredient in tobacco. The rationale is that if nicotine does not reach the brain, then the smoker can more easily eliminate the addiction. The firm is also developing a vaccine against cocaine addiction. The report is at http://www.reutershealth.com/archive/2002/06/14/eline/links/20020614elin020.html.

BSE Ban Update – UK

On 14 June, the Food Standards Agency proposed a Europe-wide ban on the use of sheep's intestines as sausage skins, pending further investigation into whether processing methods remove potential sources of BSE infectivity. A ban on sheep's intestines is one of a number of risk-reducing measures recommended in May by the BSE Stakeholders' Group. The reports are at http://www.food.gov.uk/news/newsarchive/66452 and http://www.defra.gov.uk/news/latest/2002/sausage.htm.

Campylobacteriosis – Norway

On 13 June, the Eurosurveillance Weekly reported *Campylobacter* infections in Norway increased by 24% from 2000 to 2001, from 2,331 cases in 2000 to 2,890 cases in 2001. This was a continuation of the increasing trend that has been evident since the mid-90s (see figure 1 below). The largest increase was observed among domestic cases, which rose by 38% compared with the previous year, where infections acquired abroad increased by 12%. In accordance with previously observed seasonal trends, the highest number of *Campylobacter* infections occurred in June-August with a clear peak in July. The peak was more distinct in domestic than imported cases. Since 1998, *Campylobacter* has been the most frequently reported cause of bacterial gastroenteritis in Norway. The reason for the observed increase in sporadic cases is unknown. A parallel increase has been reported from several other European countries including Austria, Denmark, Finland, Ireland, Spain, and Sweden. In 1999, for the first time, the incidence of Campylobacteriosis cases exceeded that of salmonellosis in the European Union. The report is at http://www.eurosurv.org/2002/pfp/020613_pfp.htm.

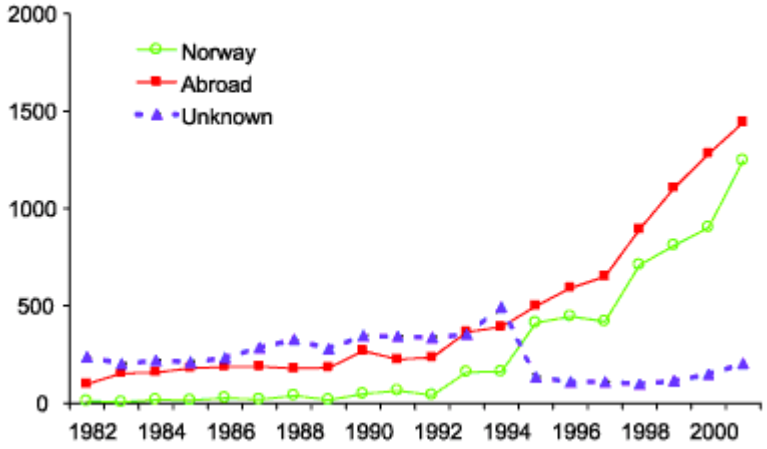

Figure 1. Trends in reported campylobacteriosis cases by place of infection (imported, domestic and unknown), Norway 1982-2001. Courtesy of http://www.eurosurv.org/2002/pfp/020613_pfp.htm - 1

Pertussis Outbreak – UK

On 13 June, the CDR Weekly reported an outbreak of pertussis at a primary school in the Vale of Belvoir in north Leicestershire. The outbreak was recognized on 23 May with the first case having developed symptoms on 25 March. Early reports of whooping cough by the school were ignored because local general practitioners reported they were not seeing children with pertussis. On 22 May, the school reported that nearly half of the pupils were coughing, which prompted a public health visit. The children were found to have a paroxysmal cough typical of pertussis and a seven-day course of erythromycin was initially offered to all children and staff at the school because so many appeared to have early coryzal symptoms. Chemoprophylaxis was also offered to vulnerable household contacts of cases. Later, the treatment of choice was determined to be azithromycin for six days because of the intolerance to erythromycin. Pupils and staff throughout the school were affected, but most cases were aged 5 to 7 years. Childhood vaccine uptake in the area was very high, and only one child was identified who had not received a primary course of pertussis vaccine. The strain of *B. pertussis* was identified as serotype 1,3 and appears similar to other strains circulating in England and Wales. Specific measures used to control the outbreak are included in the report at http://www.phls.org.uk/publications/CDR Weekly/PDF files/2002/cdr2402.pdf.

Tuberculosis (TB) Increasing – Europe

On 6 June, the WHO announced that European countries have registered rising TB statistics over the last decade, and the situation in the countries of central and eastern Europe and the newly independent states (NIS) of the former USSR is particularly alarming. The number of reported TB patients in Europe rose from 280,000 in 1995 to almost 370,000 in 2000. In 2000, almost 70% of all reported cases occurred in the NIS, mainly affecting young men, current and former prison inmates, people with alcohol problems, and other socially disadvantaged people. The breakdown in the health care

infrastructure and the deterioration of living conditions in these countries are to blame. In western European countries, TB primarily involves drug users, elderly people, and migrants. Throughout the region, HIV-infected people are at special risk of the disease. The multidrug-resistant (MDR) form of TB also is a concern particularly in the NIS where it affects 20-50% of all TB patients. Erratic treatment and lack of medical supplies are the main causes of this type of the disease. Chronic patients who develop MDR TB remain infectious and represent a risk to public health. The expansion of an effective TB control program is essential for the European Region. The report is at http://www.euro.who.int/eprise/main/who/mediacentre/pr/20020606_1.

Vancomycin Resistance – Italy

On 13 June, the Eurosurveillance Weekly reported that a total of 5.9% of isolates from blood cultures of enterococci in Italy during the last half of 2001 were resistant to three or more antibiotics (of different classes). Of the reported strains, 80% of vancomycin resistant *Enterococcus faecalis* and *E. faecium* were also multiresistant. The Italian national surveillance project, AR-ISS, began in June 2001, and collects data on antibiotic resistance for several pathogens of clinical and epidemiological interest. These preliminary data from the first six months of the AR-ISS system show that vancomycin resistance is already an important problem in Italy and that levels are higher than in other countries of Europe where means frequency ranges are 0.06% for *E. faecalis* and 3.8% for *E. faecium*. According to the report Italy, along with Greece (where the level of vancomycin resistance for E. faecium is 23.8%), has the highest vancomycin resistance levels in Europe. The report is at http://www.eurosurv.org/2002/pfp/020613_pfp.htm - 2.

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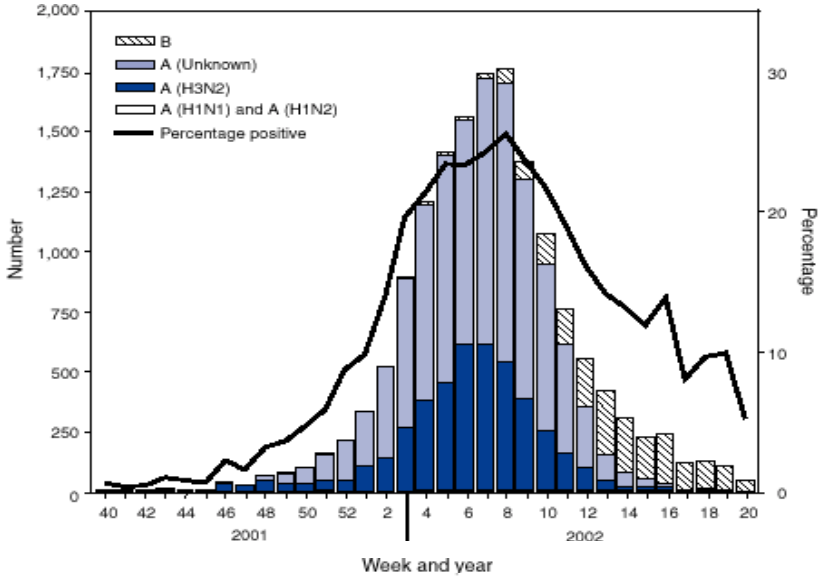
Influenza Activity 2001-02 Season – US

On 14 June, the CDC released the 2001-02 influenza summary report for the US, which indicated the season was mild to moderate. Influenza A (H3N2) viruses predominated, but influenza B viruses were identified more frequently than influenza A viruses toward the end of the season (see figure below). Influenza activity increased in mid-January and peaked during mid-to-late February with influenza A (H3N2) viruses predominating. Influenza B viruses were the most frequently identified influenza viruses from the week ending 30 March (week 13) through the week ending 18 May (week 20). Of the 423 influenza A viruses antigenically characterized by the CDC, all 393 influenza A (H3N2) and 30 influenza A (H1) viruses were similar to the H3N2 and H1N1 component of the 2001-02 influenza vaccine respectively. Of the 30 influenza A (H1) viruses, 16 were identified as influenza A (H1N2) viruses. Of the 267 influenza B viruses antigenically characterized, 61 were of the B/Yamagata lineage and 206 of the B/Victoria lineage. Of the 61 B/Yamagata lineage, 13 were similar to the vaccine strain and 48 demonstrated reduced titers to antisera. The FDA recommended that the composition of the US 2002-03 trivalent influenza vaccine be A/New Caledonia/20/99-like (H1N1), A/Moscow/10/99-like (H3N2), and B/Hong Kong/330/01-like viruses. US vaccine

manufacturers will use the antigenically equivalent virus A/Panama/2007/99 (H3N2) and either B/Hong Kong/330/01 or B/Hong Kong/1434/02 because of growth properties.

FIGURE. Number* and percentage of respiratory specimens testing positive for influenza reported by World Health Organization and National Enteric and Respiratory Virus Surveillance System collaborating laboratories, by week and year — United States, 2001–02 season†



* n=15,671.
† Data reported as of June 10, 2002.

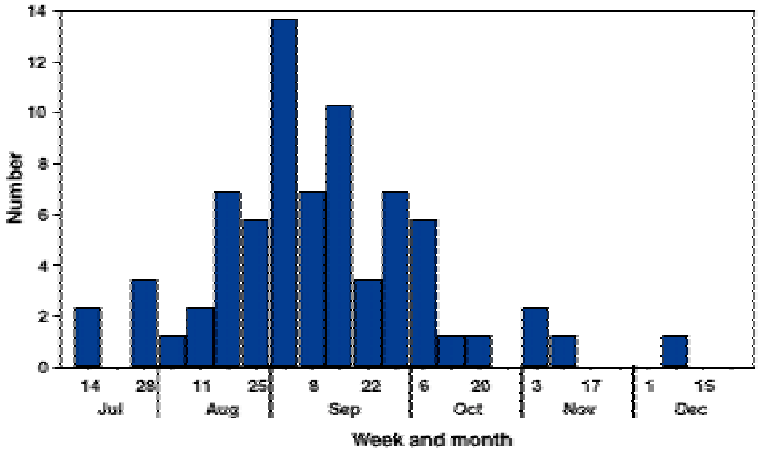
Courtesy of http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5123a3.htm - fig

West Nile Virus (WNV) Activity, 2001 – US

Human: On 14 June, the CDC released a 2001 WNV summary report for the US. WNV was reported in 359 counties in 27 states and the District of Columbia (DC) during 2001 (see figure 1), which was a marked increased from 2000 when 138 counties in 12 states and the DC reported WNV. Surveillance data for 2001 indicated 66 human cases were reported from 10 states and widespread WNV activity in birds, horses, and mosquitoes extended into the Midwestern US and several southern states previously unaffected. Of the 66 human cases, 64 persons had WNV meningoencephalitis and two persons had uncomplicated WNV fever. Among the 64 cases of WNV meningoencephalitis, the median age was 68 years (range: 9-90 years) and the dates of human illness onset ranged from 13 July to 7 December (see figure 2). In 36 (92%) counties reporting human cases, the first case was preceded by at least one reported of a WNV-infected bird, sentinel animal, horses, or mosquito pool. In 2001, WNV encephalitis was diagnosed in a resident of the Cayman Islands who had no recent travel history suggesting that WNV has entered the Caribbean region. The CDC is

recommending that state and local health departments in the contiguous 48 states should, at a minimum, establish enhanced passive hospital-based surveillance for human cases of encephalitis of unknown etiology, and this surveillance should extend beyond mid-October. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5123a1.htm.

FIGURE 2. Number* of human West Nile virus disease cases, by week and month of illness onset — United States, July–December 2001

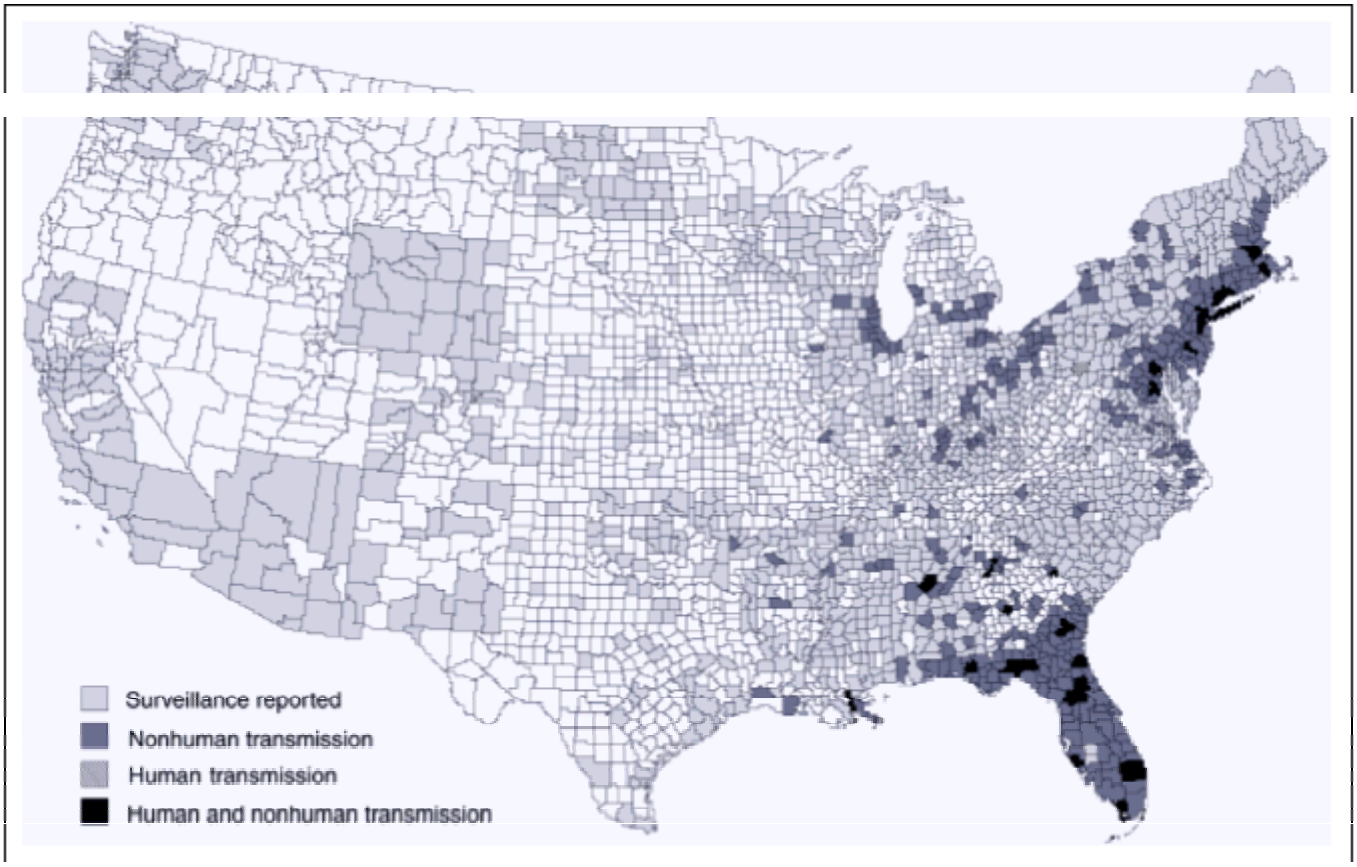


* n=66.

Courtesy of http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5123a1.htm - fig2

Veterinary. Horses were the only WNV-infected non-human mammals reported in 2001. A total of 733 equine cases were reported from 127 counties in 19 states (see figure one), which was a 12-fold increase compared with 2000. Florida reported 483 equine cases (66%) from 40 counties. The first equine illness preceded the first human illness; equine illness onset dates ranged from 27 June to 18 December. Surveillance of dead birds is essential in monitoring WNV activity. Infection in *Corvidae* species (crows and jays) is a particularly important indicator of WNV activity. However, because non-corvid birds were first indicators of WNV activity in 57 (16%) of 359 counties where the virus was detected, surveillance programs should include these other species wherever possible. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5123a1.htm

FIGURE 1. Reported West Nile virus (WNV) activity, by county — United States, 2001



Courtesy of http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5123a1.htm - fig1

USPACOM

Malaria – India

On 13 June, ProMED-mail reported that at least 400,000 people have tested positive for malaria in India's northeastern Assam state. According to local health officials, 73 people have died of the disease in the past six weeks. Officials reported the disease reached epidemic proportions after prolonged heavy rains that created vast pools of stagnant water and provided a breeding ground for mosquitoes. Control efforts reportedly include use of insecticides and chloroquine tablets. ProMED reported that the Assam province has reported a high rate of chloroquine resistance. The report is at http://www.promedmail.org/pls/askus/f?p=2400:1001:259102::NO::F2400_P1001_BACK_PAGE,F2400_P1001_PUB_MAIL_ID:1010,18485.

Simiae-Avium (SAV) Group Mycobacteria – Thailand and Malawi

On 14 June, the CDC reported that SAV group mycobacteria were found to cause disseminated infection in four HIV-1-infected persons with AIDS in Thailand and Malawi in 1997. All four isolates were resistant to all first-line drugs (isoniazid, rifampin,

streptomycin, ethambutol, and pyrazinamide) used for treating *Mycobacterium tuberculosis* infection and to alternative drugs (kanamycin and ciprofloxacin) used for treating atypical mycobacteria and multidrug-resistant tuberculosis. The clinical manifestations of disseminated mycobacterial infection are nonspecific and are not indicative of the infecting species. Therefore, as with other mycobacterial infections, diagnosis and specific therapy should be guided by laboratory testing, including species identification and susceptibility testing whenever possible, rather than clinical findings alone. Because of the lack of data and of clinical experience with *M. simiae* and other SAV group mycobacteria, the best treatment is unknown. The report is at http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5123a2.htm

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Avian Influenza – Chile

On 14 June, the OIE confirmed that avian influenza virus, subtype H7N3 was identified in a breeding farm where it was suspected. The laboratory analysis indicated that the virus isolated was compatible a low pathogenicity strain. Surveillance and monitoring measures are being maintained both in the restricted area and nationwide. The report is at http://www.oie.int/eng/info/hebdo/AIS_67.htm.

FMD, Not – Argentina

On 14 June, the OIE reported that the suspected cases of FMD in Argentina have proved negative. The Patagonia Region south of parallel 42 South has been declared free from FMD without vaccination by the OIE. The report is at http://www.oie.int/eng/info/hebdo/AIS_67.htm.

Please contact the below-listed POC for suggested improvements and/or comments regarding this report. This report is also available on the USACHPPM website at http://chppm-www.apgea.army.mil/Hioupdate/.

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ACRONYMNS

ACIP - Advisory Committee on Immunization Practices
AFMIC - Armed Forces Medical Intelligence Center
AFPS – American Forces Press Service
AGID - Agar Gel Immunodiffusion
AVIP - Anthrax Vaccine Immunization Program
AVMA - American Veterinary Medical Association
BMJ - British Medical Journal
BSE – Bovine Spongiform Encephalopathy
CDC – Centers for Disease Control and Prevention
CDR – Communicable Disease Report (England)
DARPA – Defense Advanced Research Projects Agency, the central research/development organization for the DoD
DHHS – Department of Health and Human Services
DoD - Department of Defense
DOE – Department of Energy
DOS – Department of State
DOT – Department of Transportation
EISS – European Influenza Surveillance Scheme
ELISA - Enzyme-Linked Immunosorbent Assay
EPA – Environmental Protection Agency
ESSENCE – Electronic Surveillance System for the Early Notification of Community-Based Epidemics
FDA – Food and Drug Administration
FEMA – Federal Emergency Management Agency
FMD – Foot and Mouth Disease
FSIS – Food Safety Inspection Service
GAO – US General Accounting Office
HIV/AIDS – Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
IAEA - International Atomic Energy Agency
IDP – Internally Displaced Persons
ICRC – International Committee of the Red Cross
IRCS – International Red Cross Society'
MOU - Memorandum of Understanding
MRI – Magnetic Resonance Imaging
MSDS - Material Safety Data Sheet
NAS – National Academy of Sciences
NGO - Non-Governmental Organization
NIH – National Institutes of Health
NIOSH – National Institute for Occupational Safety and Health
NRC – Nuclear Regulatory Commission
OCHA - Office for the Coordination of Humanitarian Affairs
OIE – World Organisation [sic] for Animal Health
OSHA - Occupational Safety and Health Administration
PAHO - Pan American Health Organization
PCR – Polymerase Chain Reaction
PPE - Personal Protective Equipment
TB – Tuberculosis
UK – United Kingdom – England, Northern Ireland, Scotland, and Wales
UN – United Nations
UNHCR – United Nations High Commissioner for Refugees
USAID - United States Agency for International Development
USAMRIID - United States Army Medical Research Institute of Infectious Diseases
USDA – United States Department of Agriculture
USPS - United States Postal Service
vCJD - variant Creutzfeldt-Jakob Disease
VOA – Voice of America, an international multimedia broadcasting service funded by the US Government
WHO – World Health Organization
WMD - Weapons of Mass Destruction