Nile viremic blood donors have been reported to ArboNET. Of these, 477 (81%) were reported from the following eight western and midwestern states: Colorado, Kansas, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, and Wyoming. Of the 446 donors for whom complete data are reported, two subsequently developed encephalitis, and 38 subsequently had WNV fever. In addition, 8,406 dead birds with WNV infection were reported from 42 states and New York City; 2,143 WNV infections in horses have been reported from 36 states, 12 WNV infections were reported in dogs, five infections in squirrels, and 17 infections in unidentified animal species. During 2003, WNV seroconversions have been reported in 603 sentinel chicken flocks from 13 states. Of the 11 seropositive sentinel horses reported, Minnesota repored four, Illinois and South Dakota each reported three, and West Virginia reported one. A total of 4,941 WNV-positive mosquito pools have been reported from 38 states and New York City.

Additional information about WNV activity is available from CDC at http://www.cdc.gov/ncidod/dvbid/westnile/index.htm and http://www.westnilemaps.usgs.gov.

Notice to Readers

Occupational Safety and Health in the Care and Use of Nonhuman Primates

In 1997, the National Research Council Institute for Laboratory Animal Research (NRCILAR) published the first guide for the management of an Occupational Health and Safety Program (OHSP) for the care and use of laboratory animals (*1*). This report provided a broad reference foundation for the development of an institutional OHSP. The care and use of nonhuman primates in the research setting presents challenges to facility management, including the need for guidance in risk assessment and management of specific hazards. The same year this report was published, a splash to the eye unassociated with injury resulted in the Cercopithecine herpesvirus 1 infection and subsequent death of a research assistant at a primate research center (*2,3*). Limited reviews of policies and procedures related to working with nonhuman primates conducted by CDC's National Institute for Occupational Safety and Health (NIOSH) at various National Primate Research Centers in response to this incident identified an absence of accepted industry-wide standards for management of such occupational hazards.

The Committee on Occupational Health and Safety in the Care and Use of Nonhuman Primates was appointed by NRCILAR in response to a request from the National Institutes of Health, CDC, and the Food and Drug Administration to address the risks associated with occupational exposure to nonhuman primates and to suggest ways of minimizing these risks. In June 2003, the committee published "Occupational Safety and Health in the Care and Use of Non-Human Primates." This report complements the previous publication and expands on topics particularly relevant to facilities in which nonhuman primates are housed or where nonhuman primate blood or tissues are used. The report is available at http://www.nap.edu/catalog/10713.html.

The report describes the hazards associated with work involving nonhuman primates and discusses the components of a successful OHSP, including hazard identification, risk assessment, applicable safety regulations, risk management, and personnel training. It emphasizes the importance of a strong institutional commitment to an OHSP (*4*). Topics include techniques for assessing the degree of risk for those hazards, options for managing those risks, worker training, and personal protective equipment; institutional management of workers after suspected exposures; and examples of safety and health programs in both large and small nonhuman primate facilities. The book is intended as a reference for vivarium managers, veterinarians, researchers, safety professionals, and any other persons involved in developing or implementing an OHSP in settings with nonhuman primates (*4*). It should be informative for a wide audience, including animal handlers, infectious disease physicians, public health and other researchers, and persons occupationally exposed to nonhuman primates or their biologic materials. Combined with the previous NRC publication and other guidance (*1,4,5*), these reports provide the basis for industry-wide standards for occupational health and safety in the nonhuman primate field.

References

1. National Research Council. Occupational Health and Safety in the Care and Use of Research Animals. Washington, DC: National Academy Press, 1997.
2. CDC. Fatal Cercopithecine herpesvirus 1 (B Virus) infection following a mucocutaneous exposure and interim recommendations for worker protection. MMWR 1998;47:1073–6,1083.
3. CDC. HID-5—Cercopithecine herpesvirus 1 (B Virus) Infection Resulting from Ocular Exposure. Atlanta, Georgia: U.S. Department of Health and Human Services, CDC, 1999. Available at http://www.cdc.gov/niosh/hid5.html.
4. National Research Council. Occupational Health and Safety in the Care and Use of Nonhuman Primates. Washington, DC: National Academy Press, 2003.
5. Cohen JI, Davenport DS, Stewart JA, et al. Recommendations for prevention of and therapy for exposure to B virus (Cercopithecine herpesvirus 1). Clin Infect Dis 2002;35:1191–203.

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Transmission of Hepatitis B and C Viruses in Outpatient Settings — New York, Oklahoma, and Nebraska, 2000–2002

Transmission of hepatitis B virus (HBV) and hepatitis C virus (HCV) can occur in health-care settings from percutaneous or mucosal exposures to blood or other body fluids from an infected patient or health-care worker. This report summarizes the investigation of four outbreaks of HBV and HCV infections that occurred in outpatient health-care settings. The investigation of each outbreak suggested that unsafe injection practices, primarily reuse of syringes and needles or contamination of multiple-dose medication vials, led to patient-to-patient transmission. To prevent transmission of bloodborne pathogens, all health-care workers should adhere to recommended standard precautions and fundamental infection-control principles, including safe injection practices and appropriate aseptic techniques.

In the four investigations, a case of acute HBV infection was defined on the basis of a positive test for IgM antibody to hepatitis B core antigen. A case of past or current HCV infection was defined on the basis of a confirmed positive test for HCV RNA or for antibody to HCV; patients known to have been infected before visiting the health-care facility were excluded. Patients with chronic or acute infection were considered to be potential sources for transmission to susceptible patients. Patients were categorized as having clinic-acquired infection on the basis of evidence that included epidemiologic findings, temporal associations between patients and procedures, documented seroconversion, signs and symptoms of acute viral hepatitis, traditional risk factors for HBV or HCV infection, or genetic relatedness among viral isolates.

HCV Transmission in a Private Physician's Office — New York City

In May 2001, a physician notified the New York City Department of Health (NYCDOH) of seven patients who had acute HCV infections after undergoing endoscopic procedures at the same office in March 2001. The office voluntarily ceased performing such procedures in late April 2001.

During the 9-day period encompassing the procedure dates of these seven patients, 68 patients underwent procedures in this practice. Among 61 (90%) patients who were tested, five additional acute HCV infections were identified, and a chronic infection in a patient whose procedure preceded the 12 acute HCV cases was identified. All 12 patients had a procedure performed within 3 days after the chronically infected patient. This chronically infected patient and six of the acutely infected patients had HCV genotype information available; all were genotype 2c, which is rare in the United States (*1*). On the basis of these results, patients who underwent endoscopic procedures since the office opened in January 2000 were notified and offered testing for HCV, HBV, and human immunodeficiency virus (HIV). Results were available for 1,315 (60%) of 2,192 eligible patients; seven additional patients were identified as having HCV infections that prob-

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