

capture enzyme-linked immunosorbent assay) and reverse transcriptase-polymerase chain reaction (RT-PCR) tests for flaviviruses, alphaviruses, and Bunyamwera serogroup bunyaviruses were also negative. RT-PCR for *Crimean-Congo hemorrhagic fever virus* (C-CHFV) was positive. Tests for anti-C-CHFV-specific IgM antibody by indirect immunofluorescence were negative. Virus isolation attempts were then terminated because the cultivation of C-CHFV (the presumptive cause) requires biosafety level 4 facilities. The specimen was submitted to the Special Pathogens Unit in Johannesburg for confirmation of the result. The sample was positive by RT-PCR for C-CHFV and was IgM and IgG antibody negative. No isolation of the virus could be made from the serum sample, possibly because it was received by the Johannesburg laboratory 8 days after initial collection and following freeze-thaw conditions. The specimen was insufficient to attempt C-CHFV antigen detection assays. Sequencing of the RT-PCR amplicon confirmed C-CHFV.

C-CHFV is a tick-borne virus of the genus *Nairovirus*, family *Bunyaviridae*, and is widely distributed throughout eastern Europe and the Crimea, to the Middle East and western China, Pakistan, and Africa. Natural hosts for this virus are varied (including wild and domestic animals and birds) and may reflect the feeding preferences of the host tick (1). While C-CHFV infections are rare in humans, the virus is notorious for nosocomial outbreaks of VHF, typically following admission of an index case to a health-care facility where VHF was not suspected, with mortality rates up to 40%.

Previous evidence for C-CHFV in Kenya is limited and based on serology (human and bovine) and two isolations of C-CHFV from non-human sources (1,2). This report represents the first documented case of acute human C-CHFV infection in Kenya. The hospital concerned belongs to a VHF surveillance network serving to

increase awareness and preparedness within Kenyan health-care facilities. In this case suspicion of VHF was raised, and the patient was immediately isolated, noninvasive procedures were instigated, and barrier nursing was implemented to prevent nosocomial transmission. No family or hospital staff member who had close contact with the patient became ill. Although VHFs are rare, this report stresses the need for health facilities in Kenya and East/Central Africa to include VHFs in their differential diagnosis of unexplained fever with hemorrhagic tendencies, as well as the utility of the surveillance network. The causative agents of Ebola hemorrhagic fever, Marburg hemorrhagic fever, C-CHFV, Rift Valley fever, and yellow fever are all endemic in East and Central Africa, and sporadic cases, as well as outbreaks, are likely to continue to occur in this region (3–5).

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References

1. Hoogstraal H. The epidemiology of tick-borne Crimean-Congo hemorrhagic fever in Asia, Europe, and Africa. *J Med Entomol* 1979;15:307–417.
2. Johnson BK, Ocheng D, Gichogo A, Okiro M, Libondo D, Tukey PM, et al. Antibodies against haemorrhagic fever viruses in Kenya populations. *Trans R Soc Trop Med Hyg* 1983;77:731–3.
3. Rift Valley fever- East Africa 1997-1998. *MMWR Morb Mortal Wkly Rep* 1998;47:261–4.

¹Dr. Kazooba-Voskamp, the attending physician in this case, has requested that the hospital's identity remain anonymous.

4. Viral haemorrhagic fever/Marburg, Democratic Republic of the Congo. *Wkly Epidemiol Rec* 1999;74:157–8.
5. Outbreak of Ebola haemorrhagic fever, Uganda, August 2000-January 2001. *Wkly Epidemiol Rec* 2001;76:41–6.

Preparing at the Local Level for Events Involving Weapons of Mass Destruction

To the Editor: The use of hijacked airplanes in the attacks on the World Trade Center and the Pentagon on September 11, 2001, clearly illustrated the immediate and massive destruction that can result from a well-orchestrated, long-planned, and purposeful terrorist act. Weapons of mass destruction (WMD) events (i.e., biological, nuclear, or chemical attacks) present different challenges than other incidents involving mass casualties (e.g., chemical spills, transportation mishaps, or natural disasters). Persons involved in a biological weapons attack, for example, may take days to develop symptoms and seek medical care (1); a large geographic area may be affected, or persons may travel long distances and unwittingly infect others, including hospital personnel (2). Furthermore, traditional hazardous materials and emergency medical procedures may be inadequate to respond to a WMD event (3–5). As events of September 11 and its aftermath make clear, medical public health systems were not optimally prepared. An effective response to a WMD event focuses on two key areas: joint efforts between the medical community and public health agencies and better trained and coordinated first responders (i.e., law enforcement, public safety, hospital personnel, and public health officials) (1–3).

In early 2001, telephone interviews with West Virginia county health directors (CHDs) or their equivalent were conducted to ascer-

tain the level of collaboration between their departments and local hospitals in regard to WMD preparedness and a coordinated medical and public health response. Forty-four (90%) of 49 CHDs completed the interview. One of the 49 responding CHDs is responsible for a six-county area, thus accounting for the state's 55 counties.

Fewer than half (20 of 44) of the respondents have provided contact information to local hospitals, and barely 20% have reciprocal information. Twenty-one percent were either unaware of a policy for WMD preparedness or reported that it was being handled by another agency. Although 72% of CHDs had attended WMD training, only 14% of the training was in conjunction with hospitals. While nearly two thirds rated their communication with hospitals as moderate to strong, a similar proportion stated they had no protocol for communicating with hospitals about a WMD event. Eighty-six percent of CHDs reported that no new collaborative efforts were directed towards the early identification of new or emerging infectious diseases possibly related to bioterrorism. However, approximately one third of the CHDs thought they should take initiative in this matter. Over 60% indicated that primary responsibility for identifying biological agents rested in another agency or was not the sole responsibility of the CHD. Further, 20% indicated they were weak or untrained in this area and thought that development and implementation of policies, procedures, and training were needed. While 93% of CHDs felt joint

training with hospitals would be beneficial, particularly in defining their respective roles in a WMD scenario, many cited manpower and scheduling constraints for such joint training sessions. Overall, CHDs reported weak relationships with area hospitals, but thought that development or improvement of policies and procedures through regular meetings and training would help prepare and plan for a WMD event.

The results of this survey suggest that before September 11, West Virginia CHDs and local hospitals had little collaboration in preparing to respond to a WMD event. Despite the recent terrorist activities, local health departments and hospitals may still be reluctant to spend resources in preparation for events with a low probability of occurring, such as WMD incidents. The local health departments and hospitals think that other pressing programs will be jeopardized (6–8). Many federal and state initiatives are under way to enhance the public health infrastructure and its preparation and response to bioterrorism. Improving on programs to meet daily operational challenges, as well as those presented by a WMD event, must include the expertise of local health departments and hospitals and encourage the creation of innovative, cost-effective preparedness programs at the local level (9,10). Future research should be conducted in areas of resource education and training, allocation and sharing, personnel, and policy. This research will indicate if existing programs should be improved

and if new programs should be instituted.

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References

1. Henderson DA. Bioterrorism as a public health threat. *Emerg Infect Dis* 1998;4:488–92.
2. McDade JE, Franz D. Bioterrorism as a public health threat. *Emerg Infect Dis* 1998;4:493–4.
3. Macintyre AG, Christopher GW, Eitzen E Jr, Gum R, Weir S, DeAtley C, et al. Weapons of mass destruction events with contaminated casualties: effective planning for health care facilities. *JAMA* 2000;283:242–9.
4. Waeckerle JF. Domestic preparedness for events involving weapons of mass destruction. *JAMA* 2000;283:252–4.
5. Treat KN, Williams JM, Furbee PM, Manley WG, Russell FK, Stamper CD Jr. Hospital preparedness for weapons of mass destruction incidents: an initial assessment. *Ann Emerg Med* 2001;38:562–5.
6. Geiger HJ. Biological weapons, and bonanzas: assess the real threat to public health. *Am J Public Health* 2001;91:708–9.
7. Seidel VW, Cohen HW, Gould RM. Good intentions and the road to bioterrorism preparedness. *Am J Public Health* 2001;91:716–8.
8. Khan A, Ashford D. Ready or not—preparedness for bioterrorism. *N Engl J Med* 2001;345:287–9.
9. Guidotti TL. Bioterrorism and the public health response. *Am J Prev Med* 2000;18:178–80.
10. Fraser MR, Brown DL. Bioterrorism preparedness and local public health agencies: building a response capacity. *Public Health Rep* 2000;115:326–30.

Correction, Vol. 8, No. 5

In “Phylogenetic Analysis of a Human Isolate from the 2000 Israel *West Nile virus* Epidemic” by Thomas Briese et al., errors occurred in the text and figure legend. On page 529, right column, line 25, and in the figure legend on page 530, the host species for ISR-00PigC is pigeon. Additionally, in the figure legend, the GenBank accession no. for ISR-00PigC is AF380671, and the GenBank accession no. for WNV-ROM96(0334)-1996 is AF205879.

The online article at <http://www.cdc.gov/ncidod/EID/vol8no5/01-0324.htm> has been corrected.

We regret any confusion these errors may have caused.

Guidelines for Letters. Letters discussing a recent *Emerging Infectious Diseases* article (400–500 words, 5–10 references) should be received within 4 weeks of the article's publication. Letters reporting preliminary data (500–1,000 words, 10 references) should not duplicate other material published or submitted for publication, should not be divided into sections, and should avoid figures or tables. All letters have the same authorship, financial disclosure, and acknowledgment requirements as full articles and should include a word count. For more guidance on manuscript preparation, see *Emerging Infectious Diseases Instructions to Authors*. Send letters to the Editor, *Emerging Infectious Diseases*, Centers for Disease Control and Prevention, 1600 Clifton Rd., MS D 61, Atlanta, GA 30333, USA, or e-mail: eideditor@cdc.gov.
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