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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 VHFIs are rare, this report stresses the need for health facilities in Kenya and East/Central Africa to include VHFIs 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


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. Over 60% of CHDs had attended WMD 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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