

### Food-Borne Disaster: A Case Report

J. Woody, W. Rivera, L. Velez, F. Benitez

University of Texas Southwestern Medical Center and the North Texas Poison Center, Dallas, Texas USA

**Background:** Botulism is a neuro-toxic disease caused by the toxin produced by *Clostridium botulinum*. This is a report of an outbreak of food-borne botulism involving eight individuals and the experience during the initial management of these cases.

**Case Report:** Six family members presented to different healthcare facilities with a one-day history of vomiting and general fatigue. They initially were thought to have a viral syndrome. Significant physical examination findings included bilateral ptosis, diplopia, tongue weakness, and respiratory muscle weakness. All involved family members had ingested canned meat three days prior. The regional poison center, local health department, and the Center for Disease Control and Prevention (CDC) were contacted immediately. It took eight hours for a supply of botulinum antitoxin to be flown to the site and administered to the patients. Over the next five days, two additional patients were diagnosed with botulism toxicity linked to the same source. Six patients required intubation for respiratory failure. The length of intubation ranged from 19 to 54 days, and the length of hospital stay ranged from five to 72 days. No deaths were reported.

**Conclusions:** The process of identifying uncommon diseases can be a challenge and requires education and training for the rapid recognition of these diseases. This case exemplifies how even a small outbreak of a known disease can overwhelm resources and cause a significant public health emergency. Emergency plans must be in place and functional in all healthcare facilities. Contact numbers for pertinent agencies must be available and tested for accuracy before such an event occurs. Knowing the procedures for procuring rare antitoxins is essential to decrease delays in treatment and the morbidity associated with those delays.

**Keywords:** antitoxin; botulism; diagnosis; food poisoning; treatment

Woody J, Rivera W, Velez L, et al: Food-borne disaster: A case report. *Prehosp Disast Med* 2004;19(S1):s8.

### Psychological Impact of Terrorism

Jim Woody, Gregory Larkin

University of Texas Southwestern Medical Center, Dallas, Texas USA

**Introduction:** While conventional, chemical, biological, and nuclear terrorism can kill or maim, the most profound burden of all such disasters is psychological. Terrorism and its psychological impact represent a major public health threat.

**Methods:** A literature review was done focusing on the psychological impacts of the 11 September 2001 terrorist attacks on the World Trade Center towers.

**Results:** Development of post-traumatic stress is directly proportional to both the geographic and emotional proximity of the traumatic event. Secondly, the larger degree of exposure and the higher frequency of viewing images of a terrorist attack, either real or via the media, both increased the chances for developing the post-traumatic stress disorder and other co-morbid psychopathology. Young children may be particularly susceptible to the effects of violence in the media, and terrorism is no exception. Several specific protective factors are suggested in the literature, but never have been adequately

ly proven in well-designed studies. A systematic review of the literature and the Cochrane database suggests that few modalities have been tested or proven effective to prevent the development of post-traumatic stress or depression.

**Conclusion:** Terrorism is a public health threat and methods of treating its impact on psychological well-being must be elucidated further with new research. The current literature suggests that limiting exposure to the trauma is helpful for both immediate and vicarious victims. In the wake of a terrorist attack, it not always is possible to normalize daily routine and generalize emotional responses. Thus, the physician treating these victims must be versatile and ready to respond with situation-specific and person-specific interventions that are compassionate and appropriate to the circumstance.

**Keywords:** exposure; media; post-traumatic stress disorder; psychological effects; terrorism; trauma; violence

Woody J, Larkin G: Psychological impact of terrorism. *Prehosp Disast Med* 2004;19(S1):s8.

### Technology for Information Gathering and Sharing in Large-Scale Emergencies

Ingrid Svagård, Joe Gorman

SINTEF IKT, Trondheim, Norway

**Introduction:** Information gathering and sharing in crisis situations are the focus of several SINTEF IKT projects. Emergency teams dealing with major crises today rely almost entirely on voice communications to exchange information and direct resources. Our vision for the future is that emergency teams, both military and civilian, will augment voice communications with data communication using small, mobile computers linked together in wireless networks. These networks would be set up rapidly in response to incidents.

**Method:** Discussions with potential users have been used to identify the types of technological support that would be useful in crisis situations. Prototypes have been developed and field trials conducted in order to provide a solid basis for gathering more detailed requirements, verifying technical concepts, identifying important usability factors, and identifying areas for further research.

**Results:** A prototype called FieldCare has been developed to demonstrate data gathering and information sharing at the site of an accident using an *ad hoc* WLAN network, handheld computers, and medical information tags attached to the casualties. In a joint US-NORWAY military project, field trials of a similar prototype, tailored to military standards, have been carried out satisfactorily in a medical evacuation exercise at Setermoen in December 2003.

Some important issues identified through this work are: (1) hands-free operation of mobile terminals in rough and noisy field conditions; (2) the need for robust replication of data without the need of a central server; and (3) the use of tags attached to patients for storage of key information and tracking of patient location.

**Conclusion:** The research and field trials carried out so far show that handheld computers and wireless networks offer significant potential for improving information quality and operational efficiency in crises situations.

**Keywords:** communication; computers; crisis; data; efficiency; information; medical information tags; technology

Svagård I, Gorman J: Technology for information gathering and sharing in large-scale emergencies. *Prehosp Disast Med* 2004;19(S1):s8.