

unpredictable. Over the years, preparedness has gained recognition as a critical component of overall public health management for public health emergencies triggered by infectious disease outbreaks, natural hazards, terrorism, and other causes. *Front-line preparedness* means that public health leaders and administrators must be able to communicate information, roles, capacities, and legal authority to all emergency response partners during planning, drills, and actual emergencies. The recent increased threat of terrorism, coupled with the ever-present dangers posed by disasters caused by natural hazards and public health emergencies, clearly support the need to incorporate preparedness and emergency response into the Indian system. Various programs focusing on different aspects of health emergency preparedness and response have been conducted in India, but there are clear gaps during the response phase of public health emergencies. Public health becomes an indispensable pillar of the national security framework, and to respond to the challenges, planners must think in the broader context of causes as well as symptoms. An attempt is made to identify the gaps and challenges in developing a comprehensive approach to improving public health emergency management in India.

**Keywords:** emergency response; India; planning; preparedness; public health

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### (220) Hospital Template Tool Kit for the Effective Evaluation and Management of Victims of a Botulism Mass-Casualty Incident

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Botulinum is known as the most poisonous toxin. A recent mathematical model has indicated that 1 gram of botulinum toxin in commercially distributed milk consumed by 568,000 people would generate 100,000 casualties. Whether the exposure is caused intentionally or naturally, multiple botulinum patients will present with a unique set of recognition and management imperatives. These imperatives will stress a medical infrastructure that currently is understaffed, inexperienced, and lacking in immediate resources needed to deal with such a threat. While strategic discussions involving anti-toxin caches, ventilator supply deficits, and surge capacity continue, there has been a noticeable lack in the literature regarding the tactical aspects associated with the management of large numbers of botulism victims. This is compounded by the fact that, often times, initial manifestations may be subtle, overlooked, or dismissed easily, and can lead to sudden deterioration of the patient. Therefore, a tool-kit of templates has been created to assist healthcare providers in the recognition, evaluation, and management of botulism victims. This tool-kit contains botulism-specific physician orders, nursing documentation, evaluation templates, patient monitoring forms, anti-toxin administration forms, and discharge instructions. These templates are meant to supplement or be incorporated into the existing management protocols of a hospital. The templates are internet-based so they can be

downloaded as needed should an incident arise. There is no cost to end-users. They also may be utilized for training purposes. With this tool-kit, the initial and ongoing management of multiple botulism victims will be enhanced regardless of the level of experience or training of the healthcare provider.

**Keywords:** botulism toxin; hospitals; management; mass-casualty incident; patients

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### (222) Characterization of Acute Watery Diarrhea Outbreak in Ethiopia's Oromia Region

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**Introduction:** In late June 2006, Ethiopia's Oromia Region was affected by an outbreak of acute watery diarrhea (AWD), subsequently confirmed to be *Vibrio cholerae* 01. Despite control efforts, the outbreak quickly spread from the original zone of West Arsi to four neighboring zones within the Oromia Region.

**Methods:** The current assessment, conducted during the last two weeks of September, addressed the zones of Guji, Bale, and East Shoa. Surveys were administered to health bureau staff, case treatment center (CTC) staff, and community members. A convenience sample was used to assess both CTCs and community members.

**Results:** Geographically, the AWD cases occurred along the Ganale River. There was a trend observed of adult males being disproportionately affected. Overall, the infection rates were low (0.03% to 4.12%), although the CTC data likely underestimate the true values. The CTC case fatality rates ranged from zero to 6.4%, but again these data likely underestimate the true case fatality rates since community deaths were not included. The community response depended on the village chairmen and the strength of community mobilization varied according to the zone. Medical management generally was appropriate and was based largely on Médecins Sans Frontières (MSF) cholera treatment guidelines.

**Conclusions:** This outbreak primarily resulted from insufficient access to clean water and from poor sanitation. Future epidemics undoubtedly will occur unless these basic deficiencies are addressed properly. In this particular instance, the outbreak was brought under control by a prompt and effective response at the community level.

**Keywords:** Cholera; community-level response; Ethiopia; mortality; outbreak

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### (223) Health Disaster Management: Balkan and Mediterranean Network

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In the past decades, the hazards and risks associated with disasters threatening civilian populations in the Balkans and Eastern Mediterranean have worsened. This presentation reports on the collaboration between Greece, Egypt, and Turkey. This collaboration features activities in public health