

DISASTER EPIDEMIOLOGY AND INJURY MITIGATION

Safe States Alliance supports efforts to improve expertise in disaster epidemiology and disaster injury prevention and mitigation among professionals in state and territorial injury programs.

Safe States Alliance recommends that each state and territory establish and maintain expertise in disaster epidemiology and disaster injury prevention and mitigation. This allows states and territories to have a working knowledge of potential injury epidemiological responses to disasters and to facilitate discussions with public health preparedness colleagues and other internal and external partners on injury epidemiologic tools and approaches in disaster settings to improve public health action.

Safe States recommends that federal agencies such as the Centers for Disease Control and Prevention (CDC) and professional organizations such as the Council for State and Territorial Epidemiologists (CSTE) seek additional funds to support staff training and increased expertise in disaster epidemiology in each state and territory. Specific actions for states and territories that are needed to promote disaster epidemiology include:

- a) Examining and overcoming policy barriers for implementing disaster epidemiology;
- b) Linking with emergency management to identify mutually useful information during response and recovery;
- c) Rapidly disseminating and translating findings and recommendations from assessments, surveillance, and investigations for local emergency management authorities;
- d) Partnering with academic institutions to conduct studies in post-disaster settings;
- e) Establishing protocols for data collection and sharing within the jurisdiction; and
- f) Obtaining and maintaining staff capacity and capability in disaster epidemiology.¹

Background

In recent decades, numerous natural disasters, terrorist incidents and other public health emergencies have resulted in mass deaths and casualties in the United States.²⁻⁹ Every state and territory in the United States has communities that are at risk from one or more natural hazards such as hurricanes, floods, tornadoes, earthquakes, extreme heat, drought, ice storms, and wildfires.

Public health has crucial roles in determining the causes, consequences, and risk factors for different types of injuries resulting from terrorism, disasters, and public health emergencies.¹⁰⁻¹⁴ Public health information can be used to prevent or mitigate injuries in future disaster emergencies. Disaster epidemiology presents a source of reliable and actionable information for decision-makers and stakeholders in the disaster management cycle.¹

Various resources on disaster epidemiology in the United States are available. The CDC's Disaster Epidemiology Community of Practice is a collaborative group of CDC, along with other federal and state partners, established to provide technical resources to partners; expand use of disaster surveillance tools; and evaluate tools and guidelines to improve situational awareness and response activities.¹⁵ A community of practice SharePoint site on disaster epidemiology has been launched.

CSTE has established a disaster epidemiology subcommittee to strengthen the capacity in states and territories to conduct applied epidemiology in disaster settings.¹⁵ Since 2010, CSTE, with CDC support, has hosted a national workshop on disaster epidemiology; workshops in 2013 and 2014 were co-sponsored by Safe States Alliance. In early 2012, CSTE assessed the disaster epidemiology and surveillance practices of state and territorial health departments; the results indicated more work needs to be done to strengthen knowledge and capacity. Key recommendations included maintaining formal disaster surveillance plans, establishing partnerships and data-sharing agreements prior to a disaster, and using data collection protocols that are as simple and adaptable as possible.

CSTE is also collaborating with CDC and other partners to provide training, regionally across the nation, to local and state health officials on disaster epidemiology.¹⁵ The training brings together three existing federal tools for use in disaster situations:

- Community Assessment for Public Health Emergency Response,
- Emergency Responder Health Monitoring and Surveillance, and
- Assessment of Chemical Exposures.

The inaugural training took place in 2012 and more are planned. Injury surveillance and prevention programs are situated to contribute towards a greater understanding of the role of injuries in disasters settings.^{2, 16-22}

Safe States Alliance's Disaster Epidemiology Special Interest Group has created a series of documents that provide a [guide](#) of potential injury epidemiological responses to a variety of disasters.²³ These documents identify potential injury activities that might be conducted before, during, and after disasters, and provide an injury epidemiology context within the disaster management cycle.¹ These activities include identifying or enhancing current surveillance systems to monitor injuries among populations (e.g., displaced persons, responders) during the disaster, using standardize injury data collection forms, mobilizing and training staff and volunteers to assist in data collection efforts, preparing media announcements and public health messages aimed at reducing injury morbidity and mortality, and preparing and disseminating injury-specific reports. It is important to ensure that injuries can be incorporated into the overall surveillance activities (e.g., infectious disease, chronic disease) that may be initiated in disaster response.

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