Natural Disaster Epidemiology and Human Health: A Framework for Responding to Disaster Events

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Natural disasters are ubiquitous across the globe, forming a particularly challenging and unpredictable problem for societies. In order to properly aid in the recovery process, the healthcare community needs to have a better understanding of exactly what types of health consequences to anticipate and prepare for in the aftermath of natural disasters. Globally, patterns have shown that extremes are becoming more common, meaning that areas that are prone to one type of disaster (i.e. flooding or drought) are seeing more severe forms of these disasters. In addition, flooding, which accounts for the majority of natural disasters, lacks sufficient research to predict and prevent future complications. In general, the major concerns following disaster events are safety related. These include immediate concerns (i.e. drowning, physical injuries, and burns), intermediate concerns (i.e. infection and starvation), and long term concerns (i.e. chronic disease, mental health, and disabilities). One major limiting factor to disaster epidemiology is the lack of a concerted effort between emergency response and research. Because of this, disaster research often takes much longer than anticipated, with researchers relying on public databases available long after a disaster. In order to adequately understand the health effects of natural disasters, the challenges that have to be addressed include a lack of coordination of multiple stakeholders in identifying prioritizing data gaps and post-disaster research questions, research process challenges like IRB approval and funding, research infrastructure such as logistics and data collection, and effective engagement with stakeholders in implementing research results.

Biography

Sean Liu is a second year medical student from Houston completing his medical degree at Baylor College of Medicine. He is pursuing a career in anesthesiology and environmental health policy.

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