

Pharmaceuticals and Chronic Diseases in Disaster Preparedness

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The authors of this paper underscore a problem that often escapes planning for the public health impacts of disasters: providing needed medications to ensure ongoing intra- and post-event treatment of chronic diseases. Before pharmaceuticals become available from unaffected areas outside of the disaster zone, local resources must meet initial needs. The authors attempted to identify the kinds of medications that might be needed intra- and post-event by analyzing national ambulatory hospital data on the prescription medication needs of patients who visited emergency departments in non-disaster circumstances. They estimated the “numbers of prescribed drugs for chronic conditions that represent the five leading causes of death, the five leading primary diagnoses for physician office visits, and the five leading causes of disease burden assessed by disability-adjusted life years”.

In addition to analgesics and common antibiotics, the authors found that drugs for cardiac and cerebrovascular conditions, cancer, chronic pulmonary disorders, and diabetes were identified frequently. The pharmaceutical recommendations were based on a data set derived from emergency department patients in *non-disaster* settings. But those who visit emergency departments following disasters may not reflect the disease patterns of emergency department patients in normal circumstances. There is as the authors point out, an epidemiological differential across types of disasters, such that patients with certain underlying conditions may be more adversely impacted by a specific hazard. In wildland-urban interface fires, volcanic eruptions, or earthquake-induced structural collapses, patients with underlying pulmonary conditions especially may be “targeted” for exacerbation of their chronic conditions due to the increased concentration of particulate matter in the air. Heat waves place an exceptional load on patients with underlying cardiac conditions who may have difficulty with the increased demands on cardiac output triggered by simultaneous vasodilation and fluid losses. Hurricanes and flooding may predispose to gastrointestinal illnesses and dermatological conditions. Thus, although it is important to be able to address the needs of patients taking medications for the most common chronic diseases, it also is important to know the likely adverse health consequences of specific hazards. This knowledge can help to predict exacerbations in patients who have specific pre-existing conditions. Understanding disaster epidemiology can help guide public health planners as they prepare medications for their disaster caches.

This approach can assist public health departments in planning for broad-based community pharmaceutical needs, but there is another important variable that falls within the realm of individual disaster preparedness. The [US] Federal Emergency Management Agency and the American Red Cross recommend that people prepare for likely emergencies by storing food, water, flashlights, radios, etc. They also recommend that individuals with chronic medical conditions maintain an extra supply of their daily drugs. This need was demonstrated following Hurricane Katrina, when people either lost their medications or were unable travel to an intact pharmacy to resupply them. At its 19 June 2008 annual meeting, the American Medical Association voted to support a policy “allowing all patients with chronic medical conditions to maintain an emergency reserve of prescription medications”.¹ This seems

entirely sensible, until you look at how patients on chronic medications obtain their drugs. In a 2007 poll by the American Public Health Association, only 19% of patients taking ongoing medications have a one-month supply, and 38% reported that they would run out of their medications in seven days or less.² Many patients go to their local pharmacies and purchase a 30 day supply, as limited by their healthcare plans. Insurers often will not authorize patients to “stockpile” more than this amount with a single co-pay-

ment, making self-sustaining disaster efforts even more challenging. In order to be an effective component of individual and family disaster preparedness, patients on chronic medications not only must be encouraged to maintain a sufficient supply of their drugs, they must be provided with a mechanism by which to do so. This is a two-dimensional issue: (1) patients with chronic illnesses must be encouraged to think about maintaining an emergency supply of their daily medications; and (2) health planners must put policies in place so patients actually can get them.

References

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