Medical Xpress

United States death map revealed

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A map of natural hazard mortality in the United States has been produced. The map, featured in BioMed Central's open access *International Journal of Health Geographics*, gives a county-level representation of the likelihood of dying as the result of natural events such as floods, earthquakes or extreme weather.

Susan Cutter and Kevin Borden, from the University of South Carolina, Columbia, used nationwide data going back to 1970 to create their map. According to Cutter, "This work will enable research and emergency management practitioners to examine hazard deaths through a geographic lens. Using this as a tool to identify areas with higher than average hazard deaths can justify allocation of resources to these areas with the goal of reducing loss of life".

Hazard mortality is most prominent in the South, where most people were killed by various severe weather hazards and tornadoes. Other areas of elevated risk are the northern Great Plains Region where heat and drought were the biggest killers and in the mountain west with winter weather and flooding deaths. The south central US is also a dangerous area, with floods and tornadoes posing the greatest threat.

Heat/drought ranked highest among the hazard categories, causing 19.6% of total deaths, closely followed by severe summer weather (18.8%) and winter weather (18.1%). Geophysical events (such as earthquakes), wildfires, and hurricanes were responsible for less than 5% of total hazard deaths combined. Cutter said, "What is noteworthy here is that over time, highly destructive, highly publicized, often catastrophic

singular events such as hurricanes and earthquakes are responsible for relatively few deaths when compared to the more frequent, less catastrophic events such as heat waves and severe weather (summer or winter)".

The authors conclude, "The spatial patterns revealed in our results may be unsurprising – greater risk of death along the hurricane coasts, in the interior west, and in the South – all areas prone to natural hazards as well as significant population growth and expansion throughout the study period. However, using this analysis as a blueprint for hazard mortality 'hot spots' supports justification for a more in-depth study of hazard-induced deaths in specific regions or communities. It is at this local scale where defining the deadliest hazard becomes important and emergency management officials can take action to try to reduce the number of future deaths".

Article: Spatial patterns of natural hazards mortality in the United States, Kevin A Borden and Susan L Cutter, *International Journal of Health Geographics* (in press) www.ij-healthgeographics.com/

Source: BioMed Central