

Emergency planning for storms requires a closer understanding of local communities

February 12 2014, by Robert Brickhouse

Our ability to predict and track hurricanes and major storms has grown in recent years. But our understanding of how people in our communities will react to warnings and what their needs might be has great room for improvement, according to an analysis in the current issue of the *Virginia News Letter*, published by the Weldon Cooper Center for Public Service at the University of Virginia.

Through news media images, Americans have a deep awareness of the fragile nature of our built environment and infrastructure, authors Joshua G. Behr and Rafael Diaz point out. But a realistic understanding of vulnerability must also consider the resources, social ties and special needs of households and neighborhoods, said the authors, research professors at the Virginia Modeling, Analysis and Simulation Center at Old Dominion University. They urge "a radical shift in emergency planning thinking" to take into account post-storm community vulnerabilities such as disrupted medical care and loss of pay.

Americans have a false perception that people who are most vulnerable to a severe storm, such as the elderly and medically needy, will be likely to evacuate to safety, Behr and Diaz write. Decisions are usually made within a family and social network and often result in sheltering-in-place, they add. Households of elderly or disabled people with weak social networks also are less able to evacuate.

"We also know that frequent encounters with 'close call' storms may engender household complacency and a false sense of security in dealing

with the next storm event," the authors write. "Close calls feed skepticism about the messaging surrounding the severity of the next storm.

"If households have modestly prepared for past severe weather events and have recovered from them satisfactorily, then there is a sense that they will be able to manage more serious future storm events. Essentially, these past experiences form a type of benchmark, and individuals may tend to underestimate the seriousness or risk of future severe weather events," they write.

Furthermore, some households, such as those including people with medical conditions or disability, coupled with limited financial resources, are "hyper-vulnerable," Behr and Diaz point out.

Using a hypothetical major storm scenario they dub "Sandtrina," the authors conclude that even after proper warning, the eastern areas of Virginia and North Carolina would be highly vulnerable in many ways besides loss of buildings and infrastructure.

"We posit that systems of social networks, literacy, risk perceptions and public health may be equally, if not more, important to the long-term recovery and well-being of communities than the resilience of buildings and infrastructure," Behr and Diaz write. A household's capacity to absorb the financial impact of a disruption is a key factor sometimes overlooked, they add.

Emergency planners and agencies need to begin to visualize and forecast not only the immediate needs for shelters, housing and health care, but the long-term transition times toward stability and wellness of the impacted communities, the authors conclude. "In addition to tracking and warning about major storms, we need to know well all the people in our communities, how they are likely to react, and what their needs

could be."

More information: The analysis is available here:
www.coopercenter.org/publications/VANsltr0214

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