

# Elderly long-term care residents suffer cognitively during disasters

October 21 2011

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In a summer with unprecedented weather events, from tornados, floods, fires and hurricanes, researchers at the University of Pennsylvania School of Nursing found that physiological changes associated with aging and the presence of chronic illness make older adults more susceptible to illness or injury, even death, during a disaster.

Investigators followed 17 long-term care residents, with a mean age of 86, who were evacuated for five days due to a severe summer storm and were relocated to different facilities with different care providers and physical surroundings. The displaced participants experienced delirium, [cognitive changes](#), hospitalizations, and death, according to research published in the *Journal of Gerontological Nursing*.

"[Older adults](#) often have visual and hearing deficits, making it more difficult to interpret their environments and precipitating increased stress," said lead author Pamela Cacchione, PhD, APRN, GNP, BC. "This stress can also exacerbate [chronic illnesses](#), further precipitating delirium."

The 17 participants were part of a broader [intervention study](#) testing the effectiveness of a nursing intervention to improve vision and [hearing impairment](#) and decrease incident delirium and other outcomes.

As part of the parent study residents were measured with four different tests. The MMSE is a 30-item mental status test that includes questions on orientation, language, attention and recall. The GDS is a 30-item

interview based depression rating scale requiring yes or no responses, the NEECHAM is a 9-item nurse rated scale that includes the participant's vital signs and pulse, which is designed to assess for acute confusion/delirium and the mCAM, another delirium assessment tool which includes tasks to assess attention.

The participants were all screened with the NEECHAM and the mCAM on the day of the severe storm and three times a week for two weeks upon their return to their home facility. The scores were compared with their Week 1 scores.

"This study provided documentation of what clinicians have known for some time, but such anecdotal accounts are seldom described with the clinical instrumentation described here," said Dr. Cacchione.

"Unexpected relocation often leads to poor outcomes for nursing home residents."

The study, published in September 2011 issue, found that more than half the residents were negatively affected by evacuation and showed signs of delirium within the two weeks immediately following – two participants were hospitalized and one died.

"Nurses in all care settings, not just LTC sites, should be aware of the potential difficulties older adults may experience as a result of a natural disaster, especially when evacuations and relocations occur," said Dr. Cacchione. "Basic physical care, ongoing assessment of chronic conditions, medication management, the return to familiar surroundings, and the return of valued objects should be facilitated as soon as possible."

Provided by University of Pennsylvania School of Nursing

Citation: Elderly long-term care residents suffer cognitively during disasters (2011, October 21)  
retrieved 25 April 2024 from

<https://medicalxpress.com/news/2011-10-elderly-long-term-residents-cognitively-disasters.html>

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