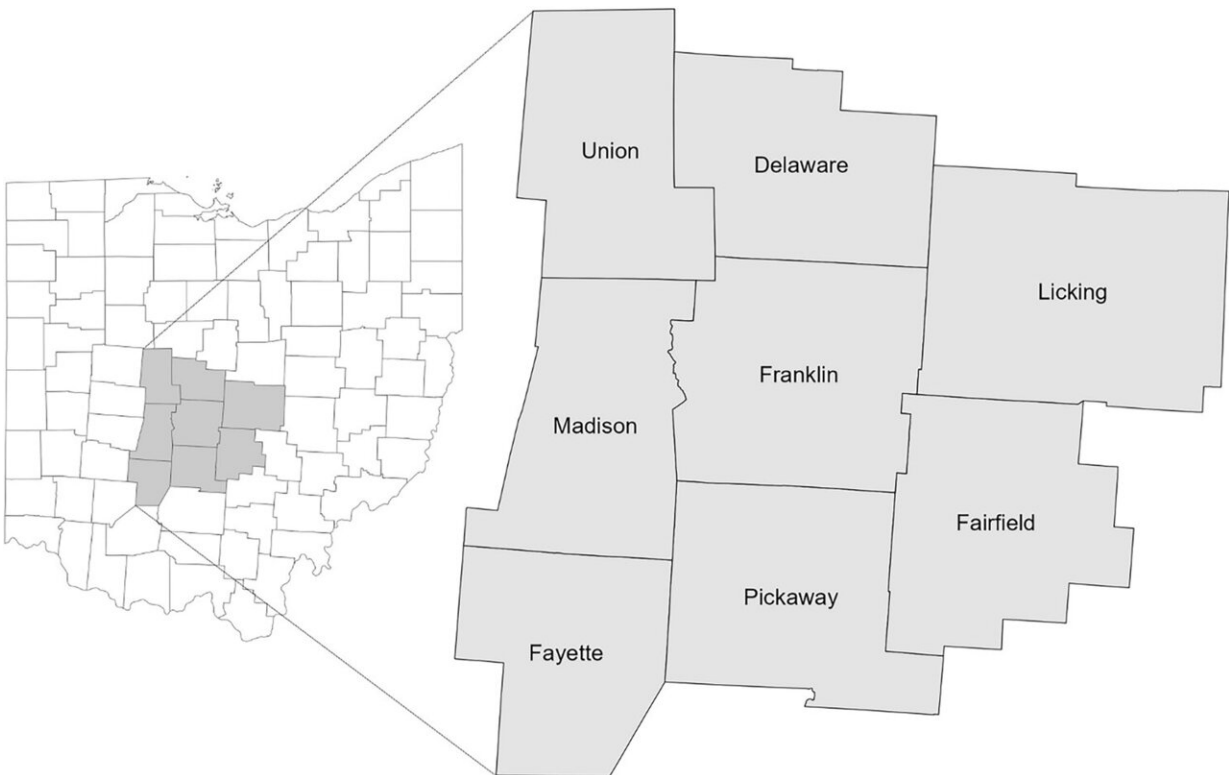# Older adults in Ohio are among the most vulnerable to extreme weather

April 19 2024, by Jeff Grabmeier

Visual representation of eight Central Ohio counties included in the study. Note: This image is not to scale and is for illustrative purposes. The state capital, Columbus, is located in Franklin County. Credit: *International Journal of Disaster Risk Science* (2024). DOI: 10.1007/s13753-024-00548-8

Nearly 1 in 5 older adults in central Ohio report not being prepared for

emergencies, such as extreme weather events, or not knowing if they are ready.

That is concerning because research shows older adults are at greater risk of harm during disasters such as extreme weather events, said Smitha Rao, lead author of the study and assistant professor of social work at The Ohio State University.

And Ohio is not immune from weather catastrophes.

"Ohio and the Midwest are often considered a safe haven from extreme weather, but that is not true anymore with climate change," Rao said.

"Climate projections suggest that Ohio will experience intensifying weather patterns with a higher risk of heavy rainfalls, extreme heat and air pollution days. We need to protect our most vulnerable citizens, which include older adults."

The study was published recently in the *International Journal of Disaster Risk Science*.

Researchers used data from the 2021 Central Ohio Regional Assessment on Aging (CORAA) Survey. It involved 1,417 adults over age 65 in eight central Ohio counties, including Franklin County, which contains Columbus, the state capital. They also included information on county-level data from administrative sources.

Overall, 78% of respondents were prepared for emergencies, 13% were not and 9% didn't know. Those who were prepared indicated they had at least a three-day supply of necessities to sustain life during emergencies, including food, water, clothing, flashlights and medicine.

In counties where greater proportions of older adults faced cumulative

disadvantages such as [lower income](link), living in subsidized housing, and having a disability, higher percentages of respondents also reported not being prepared.

There was a wide range of preparedness by county, from only 68% being ready for emergencies in Fayette County to 94% being prepared in Union County, Rao said.

"Fayette County scored high on vulnerability in terms of socioeconomic status and household characteristics," Rao said.

For example, the median income in Fayette County was under $40,000—the lowest of the eight counties in the study. In addition, 37% of county residents in subsidized housing were over 62 years old and 41% of older adults in the county lived with some form of disability.

Especially for the most vulnerable older adults, the effects of extreme weather aren't just something to worry about in the future—they have already arrived.

That was evident in Fayette County, where, compared to other counties, older residents were more likely to report weather-related disruptions to their lives.

Nearly one-fifth of its older residents reported missing health appointments or not being able to get medicine, reach their work or place of volunteering, or get to family and friends because of severe weather conditions.

The survey didn't ask about the specific extreme weather events that caused these issues, but it could have been events like flooding that blocked off local roads, or power outages, Rao said.

"We tend to think of the worst outcomes that can occur from extreme weather, but there are much more common disruptions that are affecting older residents on a more regular basis," she said.

"Many of the most vulnerable residents in places like Fayette County don't have the social and economic resources or service landscapes to fall back on when those disruptions occur," said study co-investigator Holly Dabelko-Schoeny, professor of social work and the director of the Age-Friendly Innovation Center at Ohio State.

"The results provide key information for policymakers, service professionals and other officials who need to know which older adults will need help in case of extreme weather events," Rao said.

"We do this work to identify communities who are not prepared so that important resources can be directed towards them," she said.

Some of the interventions are easy to identify. Rao noted that Fayette, unlike other counties, did not have an existing tax levy for senior services.

"Levies help get resources to older adults that need them, so that could help more older adults be prepared for emergencies," she said.

Another issue is that many older adults, especially in places like Ohio that are far from rising oceans and tropical heat waves, don't understand the risks they face from a changing climate.

"We've found in other studies that emergency preparedness is not a top priority, especially for vulnerable adults who already have plenty to worry about in their everyday lives," Rao said.

That's one reason why the researchers plan to share their results with

community partners and county leaders so they can take the appropriate actions to identify and help older adults who most need it, she said.

In addition, the researchers have started a project to talk directly to older adults with the goal of learning from their experiences to develop tools that can help them become better prepared for emergencies.

More information: Smitha Rao et al, Extreme Weather Disruptions and Emergency Preparedness Among Older Adults in Ohio: An Eight-County Assessment, *International Journal of Disaster Risk Science* (2024). DOI: 10.1007/s13753-024-00548-8

Provided by The Ohio State University