

Personal profile, not neighborhood factors, determines who calls EMS for stroke

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Neighborhood factors do not influence the use of emergency medical services (EMS) for stroke as strongly as individual factors do, despite earlier indications that socio-demographic characteristics of the neighborhood explain low rates of EMS activation for this life-threatening emergency. A study published online yesterday in *Annals of Emergency Medicine* found that neighborhood characteristics like poverty, the number of older adults living in the area and violent crime matter much less than stroke severity when it comes to seeking prompt treatment for stroke.

"Using an ambulance to get to the hospital really greases the wheels of the process and can lead to better outcomes but many patients still do not understand the importance of early intervention with [stroke](#)," said lead study author William Meurer, MD, MS of the Departments of Emergency Medicine and Neurology at the University of Michigan, Ann Arbor, Mich. "The proportion of neighborhood stroke cases arriving by EMS varied widely: from 17 percent in one neighborhood to 81 percent in another, but no single factor accounted for that disparity. The worrisome finding is that fewer than one-third (31.7 percent) of patients overall arrived at the ER within 3 hours of the onset of stroke."

Patients treated within 3 hours of the onset of [stroke symptoms](#) have the best chance of making the fullest recovery.

Overall, fewer than half of all [stroke patients](#) studied arrived by EMS (47.6 percent). Individual factors associated with decreased odds of

EMS use for stroke were lower stroke severity, younger age, Mexican-American ethnicity, [ischemic stroke](#) (versus intracerebral hemorrhage) and female gender. Neighborhood factors associated with lower use of EMS for stroke were higher family income and a larger percentage of older adults.

"One positive finding was that more disadvantaged populations, despite potentially having lower levels of education and stroke awareness, more frequently use EMS to access acute treatment for stroke," said Dr. Meurer. "Individual factors, especially how severe the stroke is, still outweigh demographic ones. This tells us that interventions to improve EMS use for stroke should focus on individuals learning to recognize less severe strokes, not on [neighborhoods](#) that may appear to be hot spots of low use. In addition, younger adults may need additional education in the importance of using EMS to have their stroke evaluated quickly."

More information: "Neighborhood Influences on Emergency Medicine Services Use for Acute Stroke - A Population-Based Cross Sectional Study" [www.annemergmed.com/article/S0... \(15\)01114-2/fulltext](http://www.annemergmed.com/article/S01501114-2/fulltext)

Provided by American College of Emergency Physicians

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