Study Examines Decision to Use Emergency Medical Services Among Ischemic Stroke Patients

Sudha Xirasagar, a professor of health services policy and management at the University of South Carolina’s Arnold School of Public Health, has collaborated with a team of researchers to study the use of emergency medical services by stroke patients in the United States. Their paper was published in BMC Health Services Research.

“Patients with acute ischemic stroke who use emergency medical services receive quicker reperfusion treatment which, in turn, mitigates post-stroke disability,” says Dr. Xirasagar. “However, nationally only 59% use EMS.”

With this study, the researchers examined why stroke patients use or do not use EMS. They conducted a survey of more than 100 acute stroke inpatients during 2016-2018 admitted at a medical-school affiliated hospital in Columbia, SC. Patients had to be medically fit for survey, available when contacted, and consent to participate.

Among survey participants, 69% has used EMS (some had been taken to another hospital before being transferred to the study hospital), 33% were unaware about any stroke symptoms prior to stroke, and 75% were unaware of the importance of EMS use for good outcomes. The authors found that prior familiarity with stroke, perceiving symptoms as relevant for self and indicating possible stroke, and bystander discouragement to call 911 were significant factors that influenced patients’ decisions to use or not use EMS. All 27 patients who knew the importance of EMS used EMS while all patients whose physician office advised actions other than calling EMS at symptom onset did not use EMS. Importantly, almost all findings are unchanged from 1997, 2005 and 2010. A major change in stroke education strategies is needed if we are to change the outcomes of acute ischemic stroke.

“Systematic stroke education of patients with stroke-relevant comorbidities and life-style risk factors, and public health educational programs may increase EMS use and mitigate post-stroke disability,” concludes Dr. Xirasagar.