Purpose
The purpose of this study was to compare referral patterns and outcomes of older adults injured in rural and urban locations and to determine the role geography plays in the referral of older adults to specialized trauma care.

Background
Adults age 55 or older comprise 12.9% of the US population but account for 25% of all trauma admissions. Older adults (OAs) make up a higher proportion of rural county residents.

Methods
A retrospective review of 1433 OAs (55+ years) treated at a Level 1 trauma center (TC) during 2013-14 was conducted. Differences between injuries occurring in rural and urban counties were identified using descriptive statistical analyses (*p < 0.05).

Results
Falls and motor vehicle accidents accounted for 84.9% of injuries. Less than 1/3 (28.1%) of injuries occurred in rural counties. OAs injured in rural areas were significantly younger, less likely to be injured at home and more likely to be injured on a street/highway compared to those injured in urban areas. Rural OAs were twice as likely to be referred from another hospital and half as likely to reach the TC within 1 hour. However, a higher proportion of OAs injured in rural areas had injury severity scores greater than 15, indicating a serious injury.

Implications
OAs injured in rural counties have more serious injuries yet are less likely to be referred directly and quickly to a TC, which may result in poorer outcomes. Findings will guide further research in developing trauma referral guidelines that take into account the vulnerabilities of age and rurality in order to improve the timeliness and appropriateness of referral to a TC best equipped to manage injuries and complicated chronic conditions.