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Title

Rural-urban differences in continuity of primary care among persons with prediabetes

Priority 1 (Research Category)

Health Care Disparities

Presenters

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Abstract

Context. Continuity of primary care is associated with better health outcomes, however, there are known disparities related to access to primary care among rural populations potentially fracturing continuity of care. Continuity of care may prevent or delay the onset of lifestyle-related diseases, like type 2 diabetes, through preventative care and early detection. Objective. To evaluate rural-urban differences in continuity of care in the 3-years prior to and 3-years after onset of prediabetes. Study Design and Analysis. This study is a retrospective cohort analysis of electronic health records of patients from Geisinger Health System. We used fractional logistic regression models controlling for age, sex, race/ethnicity, baseline HbA1c, hypertension, hyperlipidemia, and BMI. Bootstrapping was then used to estimate standard errors. A binary indicator for rural was the main independent variable and was defined using the 2010 Census Bureau's Urban and Rural classification. Setting. A healthcare system located throughout central and northeast Pennsylvania serving a large rural population. Population Studied. Persons diagnosed with prediabetes and/or an HbA1c between 5.7-6.4% (N=6,580). Outcome Measures. The modified modified continuity index (MMCI), which ranges from 0 to 1, was used to assess continuity of primary care. Results. Approximately 40% of patients included in the analysis are classified as rural. The mean age among rural and urban patients was 55 and 54 years, respectively (p=0.001). The majority of patients are female (54.5% rural; 57% urban). In the 3-year period prior to onset of prediabetes, living in an urban area, compared to a rural area, was associated with a 0.09 increase in the log-odds of the MMCI (aOR=1.09, 95% CI 1.02, 1.18, p=0.014). There were no significant differences in the MMCI among rural and urban patients with prediabetes after onset (aOR=1.03, 95% CI 0.98, 1.08, p=0.323). Conclusions. In the period leading up to the onset of prediabetes, rural patients have slightly less continuity of primary care compared to urban patients. However, geographic differences in continuity of care diminished after prediabetes was diagnosed and suggests that other factors may

explain rural-urban disparities related to type 2 diabetes. Future research may examine strategies to strengthen continuity of care to prevent type 2 diabetes among rural populations.

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