

Research Symposium

Deprivation and Health Care Access and Utilization of Participants with Glaucoma in the NIH All of Us Research Program

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PURPOSE

To assess if community deprivation is associated with health care access and utilization in participants in the NIH All of Us Research Program with glaucoma.

METHODS

We analyzed associations between three-digit ZIP Code (ZIP3) area-level deprivation and 15 person-level binary outcomes capturing the accessibility and use of health care resources (e.g., delaying care due to the copay) in US glaucoma patients diagnosed at ≥ 40 years of age. We used logistic generalized estimating equations with a logit link function to account for clustering of binary outcomes within ZIP3. We fit adjusted models that included age, sex, race/ethnicity, and education, and models that further controlled for individual-level household income bracket, employment status, and housing arrangement.

RESULTS

Data for 5881 people across 379 ZIP3s were usable in ≥ 1 model (median age: 71; 55% female; 69% white; 58% at least college educated). When adjusting for age, sex, race/

ethnicity, and education level, deprivation index (rescaled [0, 10]) was associated with being unable to afford eye-glasses (OR [95% CI]: 1.21 [1.04, 1.40]; $p = .02$), lacking follow-up (OR [95% CI]: 1.32 [1.08, 1.61]; $p = .01$) or emergency (OR [95% CI]: 1.35 [1.03, 1.77]; $p = .03$) care, and receiving delayed care due to the copay (OR [95% CI]: 1.36 [1.02, 1.83]; $p = .04$). Further adjustment for household income, employment status, and housing arrangement, deprivation index was not significantly associated with any outcomes.

CONCLUSION

In US glaucoma patients diagnosed at ≥ 40 years of age, ZIP3-level deprivation was linked to greater odds of cost-related care barriers after adjusting for age, sex, race/ethnicity, and education, but these associations appear to be explained by individual-level income, employment, and housing. Future research should assess the mechanisms that explain these relationships toward improved glaucoma access and clinical outcomes.

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