

The Impact of Housing Assistance Programs on Cancer Screening

BY CATLIN NALLEY

A recent analysis, which examined the relationship between cancer screenings and receiving government housing assistance among low-income adults, found that policies related to housing affordability could potentially improve access to breast cancer screening for some subgroups of individuals, including women in urban areas, as well as Hispanic and younger women (*Am J Prev Med* 2023; doi:10.1016/j.amepre.2023.10.005).

“Socioeconomic disparities in cancer screening are stark and contribute to inequities across the cancer continuum. Some policy interventions like the Affordable Care Act and state Medicaid expansions have reduced health care costs for adults with low income,” noted study author Jordan Baeker Bispo, PhD, MPH, Principal Scientist of Cancer Disparity Research at the American Cancer Society. “However, disparities in cancer screening still exist, indicating that while reducing health care costs has been helpful, other sources of financial and social strain can also impact uptake of preventive health care services. Housing may be one of these.



“The housing cost burden in the U.S. has skyrocketed in recent years and disproportionately impacts marginalized groups and adults with limited income. Access to affordable and stable housing might positively impact cancer screening in a variety of ways, like freeing up financial resources to cover the indirect costs of routine health care seeking (e.g., transportation and childcare) and facilitating growth of social capital,” she said while discussing what prompted their research. “For this reason, we were curious about whether programs that reduce the housing cost burden for economically strained adults might impact their participation in cancer screening.”

Baeker Bispo and colleagues found that housing assistance was not significantly associated with increased breast, cervical, or colorectal cancer screening participation in the overall population of screening-eligible adults with low income.

“However, there were certain subgroups where we saw strong associations for uptake of mammogram,” she said. “Specifically, the odds of being up to date with the American Cancer Society guidelines for breast cancer screening were about 30 percent higher for housing assistance recipients than non-recipients in urban settings. The odds were about twofold higher for Hispanic women, as well as for younger women (aged 45-54) to whom the American Cancer Society recommends an annual mammogram.”

These findings suggest that access to housing assistance can facilitate breast cancer screening among some financially marginalized

groups, according to Baeker Bispo and team. However, this study also underscores the need for additional solutions.

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“Despite the promising evidence for these groups, improving housing affordability may not be sufficient to eliminate socioeconomic disparities in cancer screening,” said Baeker Bispo. “Programs that address other key determinants, like access to routine care providers and health literacy, are still needed to enhance access to screening for everyone and help detect cancer early to save lives.”

Clinical Trial Design

With this study, Baeker Bispo and colleagues aimed to compare utilization of breast cancer, cervical cancer, and colorectal cancer screening exams among renters with low income who did and did not receive government housing assistance. Data are from the 2019 and 2021 National Health Interview Survey (NHIS), which is a nationally representative cross-sectional household survey of the non-institutionalized population and includes items on breast, cervical, and colorectal cancer screening.

“Social policies that improve breast cancer screening could have important implications for inequities across the cancer continuum.”

—Jordan Baeker Bispo, PhD, MPH,
at the American Cancer Society

“Analyses were restricted to screening-eligible renters with low income,” Baeker Bispo and team noted. “Consistent with prior studies examining associations between income-based government assistance programs and health outcomes, low income was defined as having a family income below 200 percent of the federal poverty line.”

In this study, multivariable logistic regression was used to model guideline-concordant screening by receipt of government housing assistance, overall and stratified by urban-rural status, race/ethnicity, and age, according to the study authors.

To ensure they had suitable comparison groups of housing assistance recipients and non-recipients, the investigators used a propensity score weighting methodology. This was essential for addressing selection bias, explained Baeker Bispo, while noting that “the propensity score weighting methodology allowed us to balance our comparison groups on important potential confounders and mitigate bias.”

Study Findings

The analyses of breast cancer, cervical cancer, and colorectal cancer screening among adult, low-income renters with complete data included 2,258, 3,132, and 3,233 respondents, respectively.

“Among all screening-eligible groups, the distribution of most covariates differed significantly between those who did and did not receive housing assistance,” said Baeker Bispo and colleagues. “In general, housing assistance recipients tended to be older; had lower mean income-to-poverty ratios; were less likely to be married, uninsured, or employed full-time; and were more likely to self-report their health status as fair or poor than good, very good, or excellent.”

Data showed that there was no difference in cervical cancer screening by housing assistance status. However, screening for breast cancer and colorectal cancer was higher among individuals who received assistance when compared to those who did not (59.7% vs. 50.8%, $p < 0.01$ for breast cancer; 57.1% vs. 44.1%, $p < 0.01$ for colorectal cancer), the study authors reported.

Models adjusted for sociodemographic characteristics, health status, and insurance showed that these differences were not statistically significant for either breast cancer or colorectal cancer screening, according to the study data.

"In stratified analyses, housing assistance was associated with increased odds of breast cancer screening among women in urban areas (aOR=1.35, 95% CI: 1.00-1.82), Hispanic women (aOR=2.20, 95% CI: 1.01-4.78), and women 45-54 years of age (aOR=2.10, 95% CI: 1.17-3.75)," noted Baeker Bispo and team. "The stratified effects of housing assistance on cervical cancer and colorectal cancer were not statistically significant."

The study authors acknowledged that this research does have limitations. "Analyses that involve direct comparison of outcomes between individuals who do and do not receive housing assistance may be prone to bias because the exposure is not random," they noted. "The analytic approach for this study attempted to correct for this using propensity-score weighted adjustment of NHIS survey weights, which balanced the distribution of measured covariates between housing assistance groups."

While the conclusions of this research were consistent with prior studies using this approach, Baeker Bispo and colleagues said there is still the possibility of bias due to unmeasured confounders, such as social integration and caseworker support.

The statistical power of this study was limited due to the small sample sizes, especially in the stratified analyses. This raises concerns about Type II error, according to the investigators, who noted, "Because NHIS was redesigned in 2019, only data from two recent survey cycles were included, but future studies with additional years of data may yield more precise estimates for effects that were of borderline statistical significance."

There was also a possibility for misclassification of colorectal cancer screening and employment status due to minor changes in survey item wording and branching logic from 2019 to 2021. Another limitation is the study's inability to account for the geographic accessibility of screening services. Additionally, this analysis did not include NHIS data on self-reported reasons for not participating in screening and related psychosocial factors.

"Incorporating measures like these in future research will help advance hypotheses about the various potential pathways (e.g., affordability vs. residential stability and access to social resources) that might link housing assistance programs to downstream health behaviors like cancer screening in certain populations," Baeker Bispo and team suggested.

When highlighting what makes their research unique, Baeker Bispo told *Oncology Times*, "Research on cancer control in relation to housing-related hardship and housing policy is limited. Our finding that housing assistance was not associated with cancer screening in the overall study population is consistent with an earlier study, but prior research has not reported on whether the association varies for different subgroups.

"This is one of the strengths of our study, as we were able to unmask heterogeneous associations by stratifying on factors like age, race/ethnicity, and residence in urban versus rural settings," she emphasized.

Implications & Next Steps

Findings from this study suggest that access to housing assistance can benefit breast cancer screening in some groups, Baeker Bispo said. "This is important because social policies that improve breast cancer screening could have important implications for inequities across the cancer continuum, like the burden of late-stage breast cancer diagnosis among Hispanic women and the burden of aggressive disease diagnosed at younger ages among Black women.

"Importantly, though, barriers to cancer screening are diverse and intersect many social determinants of health, and housing is just one piece of the puzzle," she noted. "While access to affordable housing may help reduce screening inequities, it won't eliminate them entirely."

Discussing next steps, Baeker Bispo emphasized the need to understand more about the specific mechanisms that link housing assistance to participation in preventive care. "There may be a variety of financial and social pathways involved (e.g., affordability, residential stability, and access to social capital), and better understanding these pathways could advance cancer control efforts for under-screened adults," she said.

"It is also notable that the U.S. Preventive Services Task Force recently proposed lowering the recommended age for beginning screening mammography from age 50 to age 40. In light of our age-stratified findings, it will be important to monitor associations between housing assistance and mammograms in future studies that apply the revised guidelines, and to consider hypotheses about life-course stages during which social policies like housing assistance are particularly critical for supporting engagement in preventive care." **OT**

Catlin Nalley is a contributing writer.

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Learning Objectives for This Month's Activity:

After participating in this activity, readers should be better able to

1. Explain how receiving housing assistance can impact individuals' participation in cancer screening.
2. Identify which subgroups of individuals receiving housing assistance have higher odds of adherence to the American Cancer Society (ACS) guidelines for breast cancer screening.

Disclosure: All authors, faculty, staff, and planners have no relevant financial relationships with any ineligible organizations regarding this educational activity.