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POLICY RESEARCH BRIEF

Housing and Cardiovascular Disease among Latinos

Cardiovascular disease is higher among Latino public housing residents than Section 8 voucher holders and low-income Latinos in general.

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The link between housing and health is a strong one; poor-quality housing is firmly associated with poorer health outcomes.[1] In places where there are more resources to be healthy, people tend to be healthier and poor-quality housing is often located in disadvantaged neighborhoods. In addition, individuals who live in poor-quality housing tend to be poor with lower levels of education, both of which have been strongly linked to health.

This brief, based on research published in the *Journal of Urban Health*, is the first to examine differences in cardiovascular disease among low-income Latinos living in government-subsidized housing in the Bronx—both public housing and Section 8 voucher holders—and other low-income Latinos living in unsubsidized, market-rate housing in the Bronx.[2] The results show that the prevalence of cardiovascular disease is significantly higher among public housing residents than Section 8 voucher holders and low-income Latinos in general.

Public Housing Residents Fared Worst on Health Measures

Compared with Section 8 voucher holders or low-income Latinos in general, those in public housing units fared worse on several health measures, including cardiovascular health, diet, and exercise, with a few exceptions.

KEY FINDINGS

- Public housing residents were more likely than Section 8 residents to report cardiovascular disease.
- Public housing residents were more likely to have diabetes (25 percent) than Section 8 residents (19 percent). Low-income families in general were least likely to have diabetes (13 percent).
- 10 percent of public housing residents had suffered a heart attack compared with 4 percent of Section 8 voucher holders and less than 1 percent of those eligible but receiving no housing subsidies.
- 53 percent of public housing residents had hypertension, compared with 33 percent of those without any housing assistance.
- Public housing residents had more soda in their homes and had larger waist circumference—both risk factors for cardiovascular disease—than other groups.
- There were no differences in the availability of fresh produce, smoking, exercise, or obesity across the three housing groups, though public housing residents were less likely to regularly eat fast food.

One-quarter of public housing residents had diabetes compared with 19 percent of Section 8 families and 13 percent of low-income families in general. The differences were even

greater for heart attack. Ten percent of public housing residents had suffered a heart attack compared with 4 percent of Section 8 voucher holders and less than 1 percent of those eligible but receiving no housing subsidies. Hypertension affected more than half of public housing residents (53 percent) but only one-third of those without any housing assistance. Again, Section 8 voucher holders fell in between.

A different pattern emerged for health behaviors. Alcohol use, for example, was less common among public housing residents. A little more than one-fourth (26 percent) had never drunk alcohol, compared with 20 percent and 16 percent, respectively, of Section 8 voucher holders and those without any housing assistance.

Healthy eating was relatively rare (as measured by fresh fruit and vegetables in the home). Only about 5 percent in each of the three groups had either fresh fruits or vegetables in their home. Public housing residents were more likely to drink soda regularly (46 percent) than were Section 8 users or unassisted participants. On the other hand, public housing residents were much less likely to have eaten fast food in the prior two days. Only 4 percent had done so, compared with 14 percent of Section 8 holders and 16 percent of families without any federal housing assistance.

There were no significant differences in obesity rates across the three groups or in self-reported poor health. Exercise rates were also similar, and quite high. About nine in ten had reported having exercised in the prior month.

The study also tested whether factors other than housing were driving the results. It might be, for example, that public housing residents had less education than the other two groups, which is highly correlated with health. These other factors, including education, household income, and fast food consumption, do explain some of the difference, but housing remains an important influence.

What is it about public housing that underlies the association with poor health? One factor may be the role of housing quality and neighborhood quality. Nationwide, public housing residents tend to live in poorer neighborhoods than do voucher holders. Past studies have found a link between poverty and poorer cardiovascular risk, perhaps because such areas tend to lack safe and accessible places to be physically active and less access to healthy food options.[3] The Bronx is no exception. The Mott Haven/ Melrose neighborhood in the Bronx had the largest share (35 percent) of public housing and the second largest share of Section 8 housing (19 percent) in the city.[4] The neighborhood also had the lowest median income in 2012 and highest poverty rate (41 percent in 2010). Serious crime and housing code violations were problems as well.

Policy Implications

Housing policy and public health can work in tandem to reduce cardiovascular disease among low-income Latinos. Overall, the results show a distinct effect of housing (and neighborhood) on cardiovascular health. Those in public housing fared the poorest on measures such as diabetes, high blood pressure, and heart attack, and the distinctions cannot be fully explained by other factors such as education, age, income, ethnicity, or certain health behaviors.[5]

The findings point to fact that housing policy can create a public good by improving health. The costs and benefits of preventing cardiovascular risk factors such as diabetes, hypertension, obesity, and smoking has great social value. Health economist Dana Goldman finds, for example, that a person aged 51 or 52 who was successfully treated for diabetes would save $34,483 in lifetime medical expenses.[6]

Providing more Section 8 vouchers that allow families to move beyond the most underserved neighborhoods could contribute to better health and lower health costs to society. However, in tight housing markets such as New York City, landlords have little need to accept housing vouchers. The Department of Housing and Urban Development (HUD) has recently proposed reforms that create incentives for the public housing authorities to make moving between public housing developments easier for voucher holders. In addition, reforms to provide pre- and post-move counseling to help voucher holders find housing in "high-opportunity" areas could help. HUD has initiated a Small Areas Fair Market Rent Demonstration designed to give voucher holders improved housing options in every ZIP code within a metropolitan area.

The findings on diet and other lifestyle choices point to the importance of larger context in counseling on diet and health. People do not live in a vacuum. They live in a neighborhood, and the neighborhood may or may not make it easy or even possible to adapt healthier strategies.

Making neighborhoods safer and greener can help encourage adults and children to exercise more, both those living in public housing and subsidized housing. Creating incentives for supermarkets and green grocers to move into low-income neighborhoods can help improve diets. Ensuring that units are free of safety hazards and are ventilated and that the heat and air conditioning are functioning are also important to health. As another brief in this series shows, poor housing quality increases adults' risk for depression and increased stress. Rather than being a source of stability and security, a home lacking some of the most basic elements of comfort may exacerbate other pressures that poor families face. Chronic stress in turn has known negative health effects.[7]

Study Design

The study used data from AHOME, a cross-sectional survey of 385 low-income Latinos living in both subsidized and market-rate housing in the Bronx in 2010. The respondents were largely Puerto Rican and Dominican. To be eligible, family income must not exceed 30 percent of the area's media income. Rather than relying on self-reports of health status, which can be biased, trained clinical interviewers visited the individual and measured weight, height, waist circumference, and blood pressure. They also provided a pedometer-like monitor to record activity in a seven-day span. Researchers also measured the kinds of food in the home and asked about how foods were prepared.

The study was based on 371 individuals of whom 38 percent were living in public housing, 30 percent were in housing using Section 8 vouchers, and 31 percent received no federal assistance even though eligible for it. ■

Endnotes

1. R.G. Wight et al., "A Multilevel Analysis of Urban Neighborhood Socioeconomic Disadvantage and Health in Late Life," *Social Science Medicine*, 66 (4) (2008): 862-72; R. Harrison et al., "The Population Effect of Crime and Neighborhood on Physical Activity," *Journal of Epidemiologic and Community Health*, 61 (1) (2007): 34-39; K. Morland et al., "Neighborhood Characteristics Associated with the Location of Food Stores and Food Service Places," *American Journal of Preventive Medicine*, 22 (1) (2002): 23-29; Nancy Adler et al., "Biology of Disadvantage: Socioeconomic Status and Health," *Annals of the New York Academy of Sciences*, 1186 (2010).
2. Earle C. Chambers and Emily Rosenbaum, "Cardiovascular Health Outcomes of Latinos in the Affordable Housing as an Obesity Mediating Environment (AHOME) Study: A Study of Rental Assistance Use," *Journal of Urban Health: Bulletin of the New York Academy of Medicine* (November 5, 2013). Available at http://link.springer.com/article/10.1007/s11524-013-9840-9
3. E.T. Lemelin et al., "Life-course Socioeconomic Positions and Subclinical Atherosclerosis in the Multi-Ethnic Study of Atherosclerosis," *Social Science and Medicine*, 68 (3):2009): 444-51; R.G. Wight et al., "A Multilevel Analysis of Urban Neighborhood Socioeconomic Disadvantage and Health in Late Life," *Social Science and Medicine*, 66(4) (2008): 862-72; P.A. Estabrooks, R.E. Lee, and N.C. Gyurcsik, "Resources for Physical Activity Participation: Does Availability and Accessibility Differ by Neighborhood Socioeconomic Status?" *Annals of Behavioral Medicine*, 25(2) (2003): 100-04; S. Inagami et al., "You Are Where You Shop: Grocery Store Locations, Weight, and Neighborhoods," *American Journal of Preventive Medicine*, 31 (1) (2006): 10-17.
4. Furman Center for Real Estate and Urban Policy, "State of New York City's Housing and Neighborhoods, 2012" (New York: Furman Center, 2012).
5. Selection bias may come into play in these findings. It could be, for example, that the more health conscious use Section 8 than those in public housing. The data are limited in their ability to determine whether this type of bias occurred, although the study did analyze the data using a variable that identifies whether a resident has applied for other types of rental assistance in an effort to adjust for the likelihood that Section 8 and unassisted individuals are somehow different from those in private market.
6. Dana Goldman, "The Benefits of Risk Factor Prevention in Americans Aged 51 Years and Older," *American Journal of Public Health, vol. 99 (11) (November 2009)*
7. "Biology of Disadvantage: Socioeconomic Status and Health" (special issue) *Annals of the New York Academy of Sciences, 1186 (2010): 1-275*

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ABOUT THE HOW HOUSING MATTERS TO FAMILIES AND COMMUNITIES RESEARCH INITIATIVE

This brief summarizes research funded by the John D. and Catherine T. MacArthur Foundation as part of its How Housing Matters to Families and Communities Research Initiative. The initiative seeks to explore whether, and if so how, having a decent, stable, affordable home leads to strong families and vibrant communities. By illuminating the ways in which housing matters and highlighting innovative practices in the field, the Foundation hopes to encourage collaboration among leaders and policymakers in housing, education, health, and economic development to help families lead healthy, successful lives. The views expressed herein are not necessarily those of the MacArthur Foundation.

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