

Household Food Insecurity, Food Assistance Program Participation, and the Use of Preventive Medical Care

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Research Objective and Policy Relevance. The objective of the present work was to examine, within the 2001 California Health Interview Survey, relationships between household food insecurity and non-utilization or postponement of primary and secondary preventive medical care. Among adults with diagnosed chronic disease requiring ongoing management (diabetes, heart disease, high blood pressure, asthma, and arthritis) we examined relationships between food insecurity and reported postponement or foregoing of prescribed care, including prescription drugs, recommended medical tests and treatment, and other medical care. We hypothesized that food insecurity would predict low rates of utilization of preventive health services and for adults with chronic diseases, poorer disease management as indexed by postponement or failure to get needed care. We further hypothesized that these relationships would be stronger for adults in households with children, and that health insurance and participation in food assistance programs would mitigate these relationships. If food insecurity contributes to increased medical care costs and ill health, the argument is strengthened for effective food security safety nets for the low-income population.

Contribution to Existing Research. It is well established that some types of preventive medical services reduce morbidity and save health care costs. Particularly for individuals with chronic disease, effective clinical preventive services have been shown to markedly improve outcomes. For the individual with a chronic disease that requires ongoing medical, nutritional or pharmacological management, foregoing or postponing medical care or the purchase of necessary drugs and supplies may result in increased rates of complications and poorer outcomes. There is now a considerable descriptive literature on food insecurity at the household level, indicating that the management of scarce resources in the face of food insecurity and hunger often results in sacrificing or postponing other basic needs. There has been to date little attention to food insecurity in relation to use of medical care; there is indication both from a hospital based study¹ and a national sample² that among adult diabetics, food insufficiency is associated with higher complication rates, poorer disease management, and increased medical care utilization.

Highlights of Research Methods. The California Health Interview Survey (CHIS) is the largest state health survey conducted in the United States . It is to our knowledge the only large database from the US that incorporates both a measure of household food security and extensive data on use of preventive medical services as well as health insurance status and data on food and other public program participation. CHIS is a telephone survey, modeled in part after the National Health Interview Survey. In the 2001 survey, data were collected from 55,428 households. Individual interviews were completed for one adult per household and from one adolescent (aged 12-17) and with a parent on behalf of one child under 11 years when these were present in the household, resulting in 55,428 adult interviews, 5801 adolescents and 12,592 parents about a child under 11 years. The survey was conducted in six languages (English, Spanish, Mandarin, Vietnamese, Hmong, and Korean). The basic statewide sample was selected through a random-digit dial process, and certain ethnic groups were over-sampled to yield stable estimates. The food security measure that was utilized is the six-item screener that has been derived from the 18-item federal instrument. Food security questions were only asked of adults residing in households with per capita incomes <200% of the federal poverty level. . Throughout our analyses, we utilized data weighted by the CHIS data access system to represent statewide population, using SUDAAN. We examined distributions and bivariate relationships; multivariate logistic regression analysis was utilized to examine predictors of key dependent variables.

Preliminary Findings. The prevalence of food insecurity among this population of low-income adults (incomes <200% of the federal poverty level) was 28.3%; 8.3% reported food insecurity with hunger. More than one-quarter (28.9%) had no current health insurance, and for younger adults (<65 years of age) the figure was higher at 35.6%. Food stamp participation was only 10.2% among individuals in households with incomes below 130% poverty; WIC participation was higher, with 58.5% of income-eligible (<185% poverty) of pregnant women reporting their own or their child's participation.

Use of basic preventive medical services. Contrary to our hypothesis, there was no consistent relationship between living in a food-insecure household and several basic preventive indicators – including having a medical home, having had a flu shot in the last year, and several screening indicators including mammograms, Pap smears, stool blood tests and bone density screening. There was a significant association of food insecurity with never having had a PSA test in men over 40, with never having had a blood cholesterol check, and with never having had endoscopic colon cancer screening.

Utilization of medical care. Food insecure adults reported significantly higher utilization of medical care, including number of doctor visits in the previous year and having utilized an emergency room in the previous year. Dental care, on the contrary, showed lower utilization, with adults in households reporting hunger more likely to have had their last dental visit more than five years ago than adults in food secure households.

Indicators of chronic disease management. Among adults with diagnosed chronic disease, there was a striking and consistent relationship of food insecurity, particularly with hunger, with the likelihood of having failed to get or postponed filling prescriptions or obtaining recommended care or treatment for that disease. There was also a clear and significant relationship, across all diseases examined, with likelihood of having had an emergency room visit for complications of that disease in the previous year. In multivariate models, the relationships remained significant when controlled for income, age, gender, ethnicity, family type and health insurance, with food insecure individuals two to five times more likely to have postponed or foregone needed care. When we examined failure to get or postponement of care “because I couldn’t afford it”, health insurance coverage was the strongest predictor but food insecurity remained independently predictive, in models controlled for income.

Discussion and Implications. Based on these preliminary analyses, it appears that food insecurity, particularly with hunger, is associated with the postponement or foregoing of effective care, including prescription drugs, for low-income adults independent of other contributing factors, and with higher medical care utilization including the likelihood of having had to seek emergency room care for their disease in the previous year. These relationships are strikingly consistent across all chronic conditions examined. Further analyses are in progress, including various ways of modeling household income and insurance variables, and examining the role of participation in food assistance programs in these relationships.