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Neighborhood Differences in the Availability of Healthy Foods in the City of Worcester

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INTRODUCTION. Neighborhood food environment is important to healthy eating. The availability and proximity of healthy foods has been shown to affect dietary quality, obesity, and overall health. We surveyed food stores throughout City of Worcester to assess the variability of food availability in neighborhoods and inequalities in access to fresh produce, unprocessed foods, and other healthy food options by neighborhood socioeconomic status (N-SES).

METHODS. Where permitted by the store manager, the Community Nutrition Environment Evaluation Data Systems (C-NEEDS) survey was completed inside the store by trained staff. Healthy Food Availability Index (HFAI; range 0-56) and Unhealthy Food Availability Index (UFAI; range 0-39) were calculated for each store. Higher HFAI indicates higher availability of healthy food items, and higher UFAI indicates high availability of unhealthy foods. Median household income and car ownership data were derived at the census tract level as measures of N-SES using the 2013 US Census American Community Surveys 5-Year estimates.

RESULTS. Convenience stores (mean HFAI 7.9, UFAI 21.1) had lower availability of both healthy and unhealthy foods than grocery stores (HFAI 32.4, UFAI 29.8). However, convenience stores had a higher proportion of unhealthy foods to healthy foods. Neighborhoods with lower median income and car ownership had a greater density of convenience stores. Neighborhoods with higher SES and car ownership had less access to convenience stores. Grocery stores in higher SES neighborhoods had more healthy food options.

DISCUSSION. These results demonstrate that residents in lower SES neighborhoods may be disadvantaged when it comes to availability of healthy foods. These neighborhoods have higher density of convenience stores that may promote an unhealthy eating environment. Residents in these neighborhoods may wish to make healthy choices, but without access to a car may be unable or unwilling to walk to the nearest store where healthy alternatives are available.

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