Title of Project: Are Sprawl and Obesity Related? Evidence from the Chicago Area

Sponsors: Illinois Department of Transportation
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Status: Completed

Objective: Determine to what extent urban sprawl contributes to obesity. Some suggest that highways cause urban sprawl and therefore expansion of the highway network is at the root cause of obesity. While we have shown in our earlier reports that there is only a tenuous connection between highways and sprawl and other factors seem to be much more important, the perception that highways cause sprawl persists.

Strategy: Driver’s license data were obtained from the Secretary of State’s office. The approximately seven million records received provide three critical pieces of information, height, weight and address. The height and weight allows a computation of the BMI—no other information is needed. The address indicates where in the metropolitan area the person resides.

While we have very detailed geography of the place of residence, we aggregated the BMI data by ZIP code. This allowed us to bring extensive socioeconomic and demographic data into the analysis. Data on income, education, ethnicity, race, commuting modes, age and population density were used. From other sources we also included road density and intersection density as well as distance from downtown Chicago.

Results and Products: The primary result is that there are many sociodemographic variables that exhibit a stronger association with obesity than sprawl. Disadvantaged neighborhoods have the highest BMI levels. In particular neighborhoods with low education levels, low income and high proportions of African Americans and Latinos are most likely to have high BMI levels. Conversely the North Shore communities of Kenilworth, Glencoe and Winnetka have the lowest BMIs. In the city of Chicago the Lincoln Park and Gold Coast areas have the lowest BMIs.

Generally the communities that are ten to twenty miles from the Chicago downtown have the lowest levels and the city of Chicago neighborhoods have higher levels than suburbs in the 20 to 50 mile radius from Chicago.

Walking to work is negatively associated with BMI, i.e., as walking increases BMI decreases. Oddly, the same is true for driving to work, though the regression coefficient is lower. Lastly, population density is also negatively associated with BMI though the strength of the relationship is not as pronounced as it is for the socioeconomic variables.

A technical report has been prepared and is available at the web site provided below.

Contact Information:

Website: The report is available at: http://www.utc.uic.edu/Publications/BMIReportColor1jan2006.pdf