

Failing provisions and failing hearts: The association between grocery store access and cardiovascular disease

Author: Theresa Rager

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Abstract

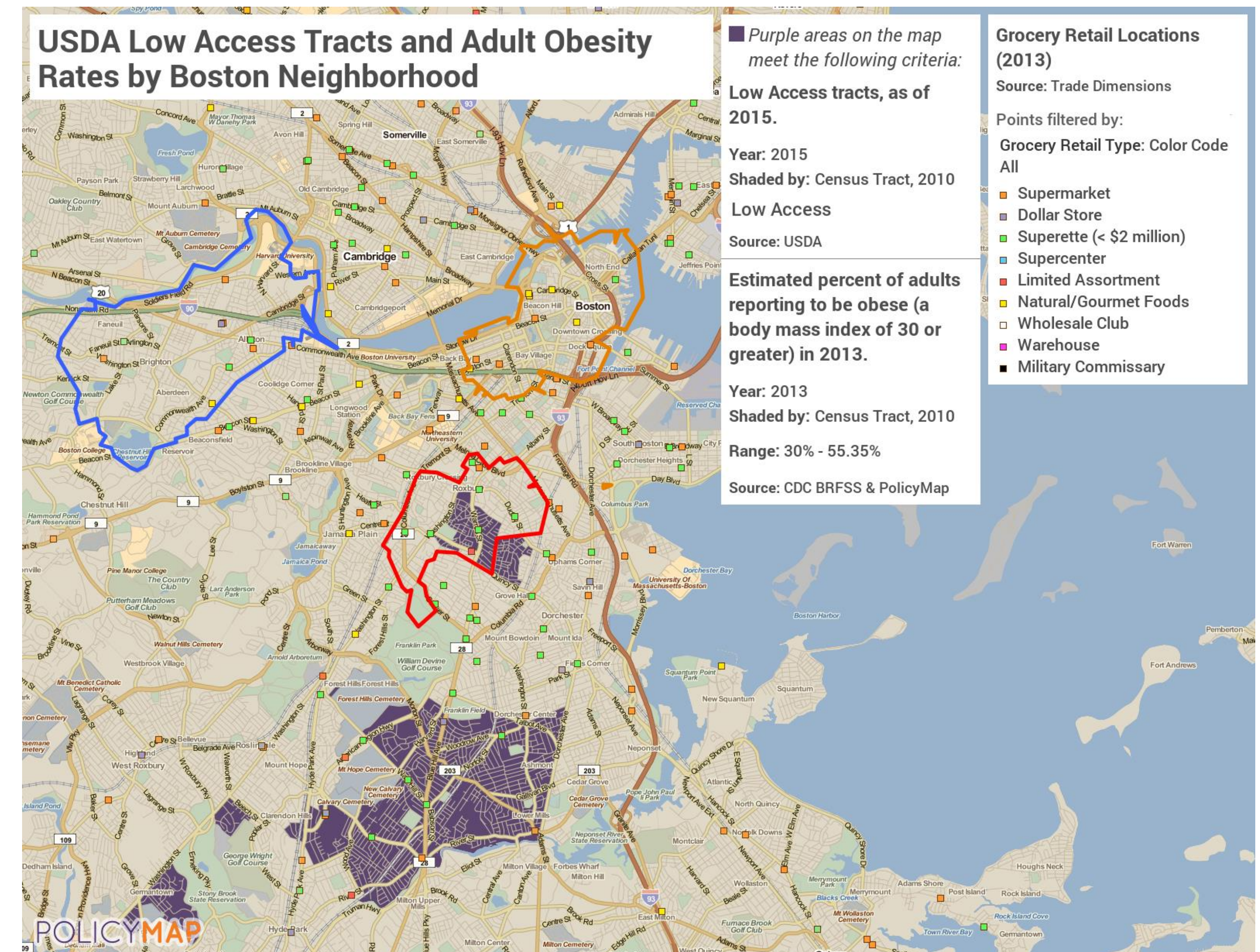
This research explores the relationship between food access and cardiovascular disease (CVD) among three Boston neighborhoods: Allston/Brighton, Back Bay/Beacon Hill/North End/West End/Downtown (BB/BH/NE/WE/D), and Roxbury. Recent research has demonstrated decreased access to fresh foods leads to early CVD.¹ To examine this in Boston, obesity was used as a CVD indicator, and increased rates of adult obesity (>30%)* were studied in USDA low access tracts, areas in urban regions where residents live more than 1 mile from a full-service grocery store. Results demonstrate that Roxbury suffers from decreased food access and increased adult obesity.

Results & Conclusions

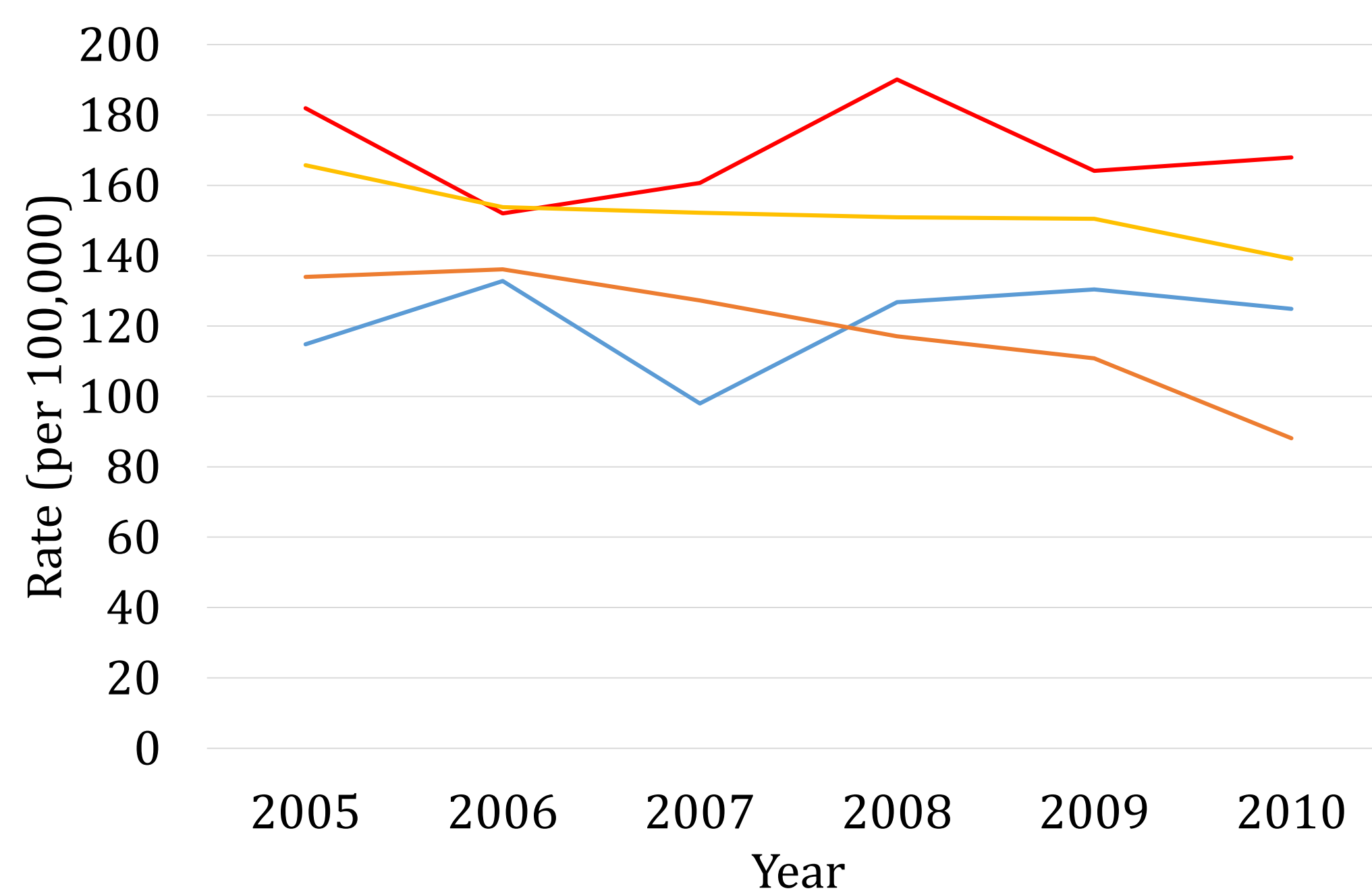
Map results demonstrate that Roxbury has USDA low access tracts with increased adult obesity rates, whereas Allston/Brighton and BB/BH/NE/WE/D do not show such correlation. The Milton area (south of Boston) has an even broader region of low access with increased adult obesity rates.

Roxbury has the most limited grocery retail options, where most locations are only Superettes. BB/BH/NE/WE/D has a higher concentration of Natural/Gourmet Foods, the lowest, most stable adult obesity rates, and was the only neighborhood to demonstrate a steady decline in CVD rates. Thus, location access and type correlate to the selected CVD indicator.

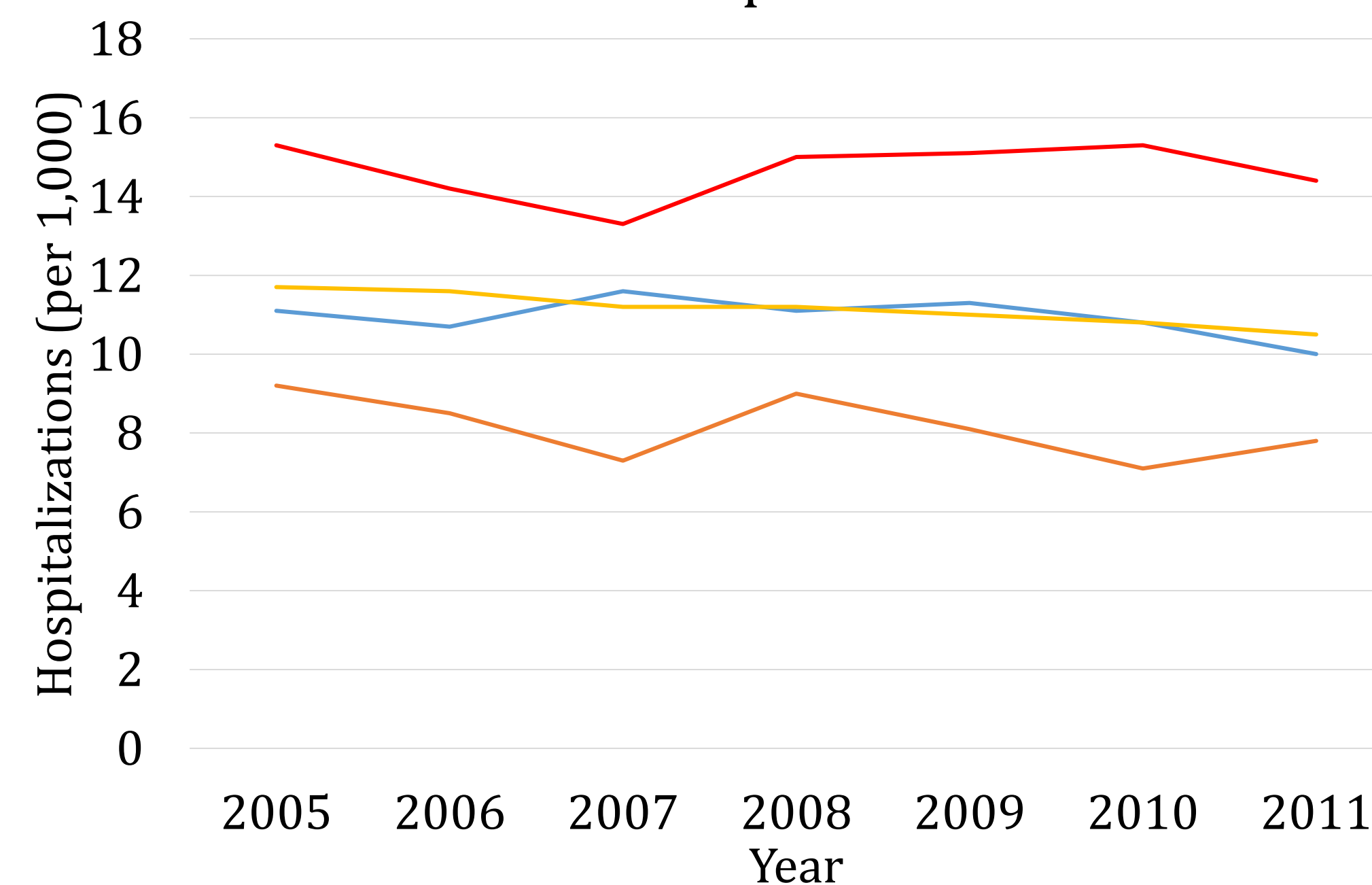
Examining the graphic data, Roxbury has the highest CVD rates, CVD hospitalizations, and adult obesity rates, greater than Boston and Massachusetts averages. The CVD rate peaked during the Great Recession, suggesting means to purchase healthy, expensive foods may influence heart health. Overall, this research illustrates there is a correlation between low food access and adult obesity, supporting recent studies with data from the Boston area.



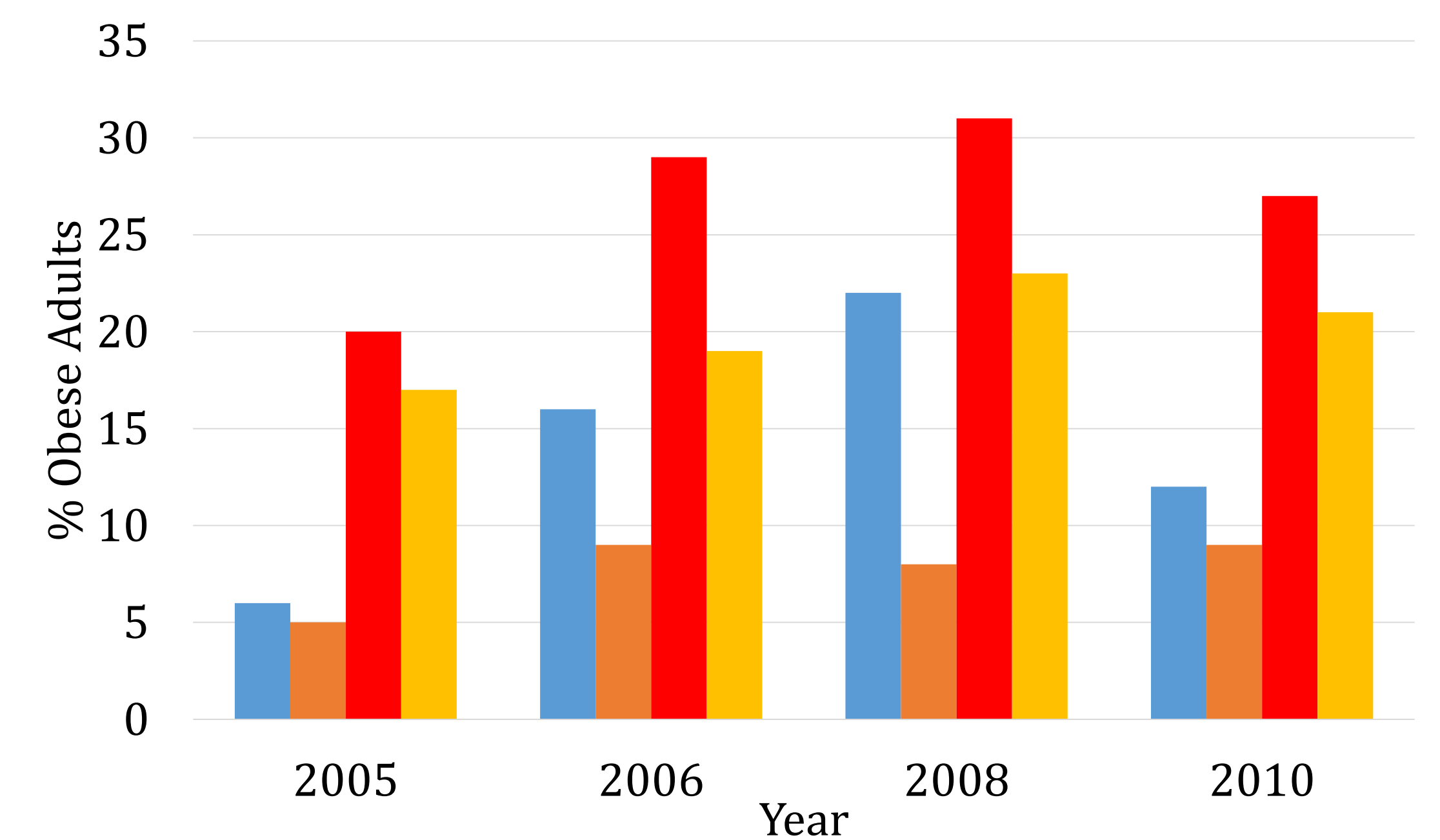
Rate of CVD



CVD Hospitalizations



Adult Obesity Rate



Master Legend

- Allston/Brighton
- Back Bay/Beacon Hill/North End/West End/Downtown
- Roxbury
- Boston

Data & References

*Increased adult obesity rates are defined as greater than 30% because Massachusetts' average adult obesity rate is 24.3% (2016).²

1. American Heart Association News. 2016, Aug. Lack of fresh food in neighborhoods linked to early heart disease. Retrieved from: <http://news.heart.org/lack-of-fresh-food-in-neighborhoods-linked-to-early-heart-disease/>

2. Trust for America's Health and Robert Wood Johnson Foundation. *The State of Obesity: Better Policies for a Healthier America*. 2016, Sept. Retrieved from: <http://stateofobesity.org/states/ma/>
3. USDA. (2015). Low Access Tracts.
4. CDC BRFSS & PolicyMap. (2013). Estimated Adult Obesity Rates.
5. Boston Public Health Commission. (2013). Health of Boston 2012-2013 Report.