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HEALTHY INCENTIVES PILOT (HIP) SPATIAL ANALYSIS REPORT — SUMMARY

Background

The Food, Conservation, and Energy Act of 2008 authorized and funded pilot projects to determine if financial incentives provided at the point of sale to Supplemental Nutrition Assistance Program (SNAP) participants would increase their consumption of fruits, vegetables, and other healthful foods.

The U.S. Department of Agriculture's Food and Nutrition Service used this authority and funding to implement the Healthy Incentives Pilot (HIP). Under HIP, SNAP participants received an incentive of 30 cents for every SNAP dollar spent on targeted fruits and vegetables (TFVs) at participating retailers. TFVs included fresh, canned, frozen, and dried fruits and vegetables without added sugars, fats, oils, or salt, but excluded white potatoes and 100% fruit juice. The incentive was immediately credited back to the participants' electronic benefit transfer (EBT) card to be spent on any SNAP-eligible foods and beverages.

Implemented by the Massachusetts Department of Transitional Assistance (DTA) in Hampden County, HIP operated between November 2011 and December 2012. Retailer participation in HIP was voluntary and not all area retailers participated. Participating retailers accounted for approximately 60 percent of total Hampden county SNAP redemptions. SNAP participants only earned incentives for fruit and vegetable expenditures in participating stores and only for purchases using SNAP.

This report investigates how the food retail environment influenced Hampden County SNAP participants' fruit and vegetable purchases in general and the HIP impact estimates in particular. Specifically, it addresses the following research questions:

(1) How did relative physical access to HIP participating stores affect household shopping patterns, HIP incentive earnings, and TFV consumption?

(2) Are there "neighborhood effects" with respect to consumer responses to the incentive? That is, did HIP participants living in close proximity to one another, and therefore sharing access to the same food retail environment, exhibit similar responses to the pilot?

Methods

HIP was evaluated using a rigorous research design with random assignment to treatment and control groups. Of the SNAP households in Hampden County, 7,500 were randomly assigned to the HIP group and the remaining households to the non-HIP group (control group). This experimental study design provides the strongest evidence of causal impact.

The report presents maps and tabulations to describe the food retailer environment in Hampden County, identifying areas with limited food retailer access. Regression analyses are used to estimate the relationship between the distance to food retailers on food spending and food intake outcomes for SNAP participants. Spatial autocorrelation and spatial regression models determine whether "neighborhood effects" may have influenced key spending and dietary intake outcomes.

Multiple data sources supported the spatial analysis, including:

- EBT transaction data that provided detailed information on households' SNAP EBT purchases

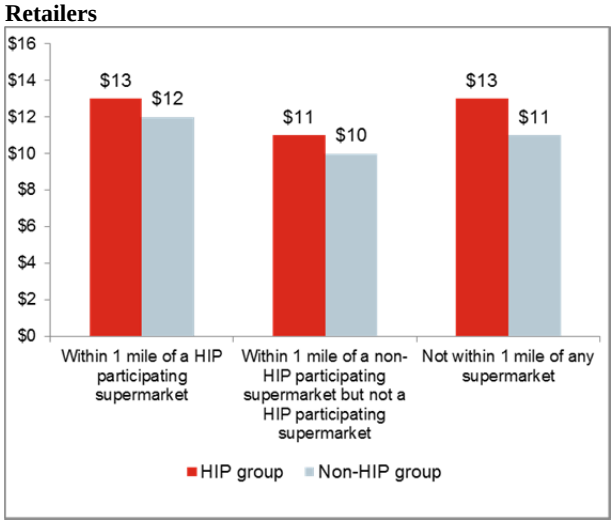
- DTA Retailer EBT Data Exchange (REDE) files that provided information on retailer location and type
- Public-use data files that provided community demographics, road networks, and geographic boundaries
- Participant surveys of a random subsample of HIP and non-HIP participants that provided 24-hour dietary recall data including measures of targeted fruit and vegetable intake.

Findings

The impact of HIP on the key outcomes of TFV spending and consumption in HIP participating retailers did not vary significantly by food environment conditions.

Approximately two-thirds (65 percent) of Hampden County SNAP participants lived within 1 mile of a supermarket, and roughly one quarter (26 percent) lived within 1 mile of a supermarket that participated in HIP. Each additional mile that a SNAP household lived from a HIP-participating supermarket was associated with $0.69 less in purchases of TFVs.

Figure 1. Targeted Fruit and Vegetable Purchases in HIP Participating Supermarkets, by Distance to Food Retailers



SNAP households, both HIP participants and others, that lived closer to one another were more similar in their purchases of fruits and vegetables than they were to SNAP households that lived farther away. However, when analyses control for this similarity by including this information in the model, the estimated impacts of HIP do not substantively change.

Households typically did not shop in the supermarket that was closest to their residence. Less than one-fifth of all the benefits SNAP households spent in supermarkets were spent in the supermarket that was closest to home. Although Hampden County SNAP participants lived an average of 1.02 miles from the nearest supermarket, they spent the largest portion of their monthly household benefits at retailers that were an average of 3.22 miles from where they lived.

Hampden County SNAP households spent the bulk of their benefits (78 percent) at supermarkets and superstores. This preference for supermarkets was consistent regardless of whether or not the families lived within 1 mile of a supermarket, but it differed based on other household characteristics. Households in which Spanish was spoken, non-White households, households headed by a person with a disability, and households with no income were less likely to shop primarily in supermarkets.

For More Information

Grindal, Todd, Gabe Schwartz, Jacob Klerman, and Susan Bartlett. *Healthy Incentives Pilot (HIP) Spatial Analysis Report.* Prepared by Abt Associates for the U.S. Department of Agriculture, Food and Nutrition Service, October 2014. Available online at http://www.fns.usda.gov/ops/research-and-analysis.

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