

Availability of Healthy Food in Corner Stores in Hartford, CT



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Lack of Access to Healthy Food

Healthy, affordable food is less available in low-income urban neighborhoods than in wealthier, non-minority suburbs. (Jetter, K.M., Cassady, D.L. *Amer J Prev Med* 2006;30(1):38-44. Moore L, Diez Roux A.. *Amer J Pub Health* 2006;96(2);325-331.)

Small markets are ubiquitous in urban neighborhoods and they can contribute to unhealthy eating habits and health disparities.

Many low-income families must rely on corner stores for their routine shopping needs.

Among a random sample of 400+ customers shopping in corner stores, 82% did not own a car.



Food Access and Obesity

Food insecure households are more likely to be obese than food secure households.

(Martin K & Ferris A. *J Nutr Educ & Behav.* 2007; 39(1):31-6.)

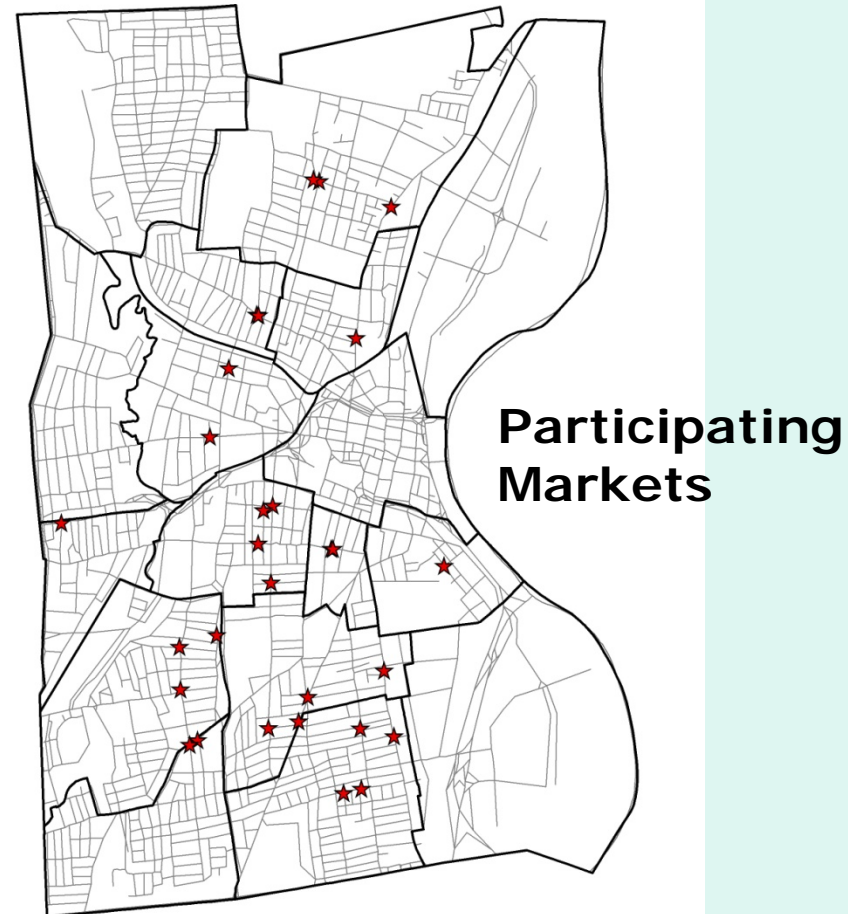
In a recent study of elementary students shopping in corner stores, children spent approximately \$1 on 2 items per trip to the store, totaling 1,497 calories per trip.

(Borradaile K et al. *Pediatrics.* 2009 Nov;124(5):1293-8.)



Healthy Food in Hartford: Examining Perceptions and Barriers

- Hartford, CT is considered a food desert due to its lack of healthy, affordable food.
- In 2006 The Hartford Food System (HFS) created the “Healthy Food Retailer Initiative” (HFRI) to encourage small markets to sell healthier items.
- Goals of HFRI are to shift 5% of store inventories from “junk” food to “regular” groceries.
- Emphasis of HFRI is community organizing.



Qualitative Research

Understanding the perceptions and barriers of buying and selling healthy food in small markets.

- We conducted:
 - 6 focus groups with customers
 - 6 interviews with store merchants
 - 4 interviews with food distributors
- GIS Mapping of stores participating in the HFRI.



Martin K, Perham K, Sawyer V, Havens E.
Buying And Selling Healthy Food In Corner Stores:
Perceptions And Barriers. *In Press*.

Qualitative Results

- **Price of food** – key determinant on where to shop, above quality or location.
 - “I’m just saying I can’t afford to buy no fresh vegetables or fruits and stuff like that.”
- **Location** – preference for medium sized stores
 - “The bigger stores, they got a lot a good things, but we don’t have the money sometimes, you know, to buy it.”
 - “We go to Save-a-Lot, Price Rite. The prices are cheaper.”
- **Perceptions of healthy food**
 - Importance of vitamin and mineral content of food
 - “Healthy foods are things like bananas for potassium”
 - “If it got calcium I buy it”
 - Food preparation with healthy oils and baking
 - “No fried food, anything broiled or either on the grill, steamed broccoli stuff like that you know”

Examining the Food Environment – Quantitative Research

Comparing 30 HFRI stores with 30 control stores

- Matched by size, neighborhood and WIC certification

Measuring changes to store inventories

- Created instrument to measure availability and quality of healthy food
- Conducted 4 measurements in stores
 - Jan 2009 – Jan 2010

Measuring changes to customer purchases

- Recruited 400+ customers in corner stores



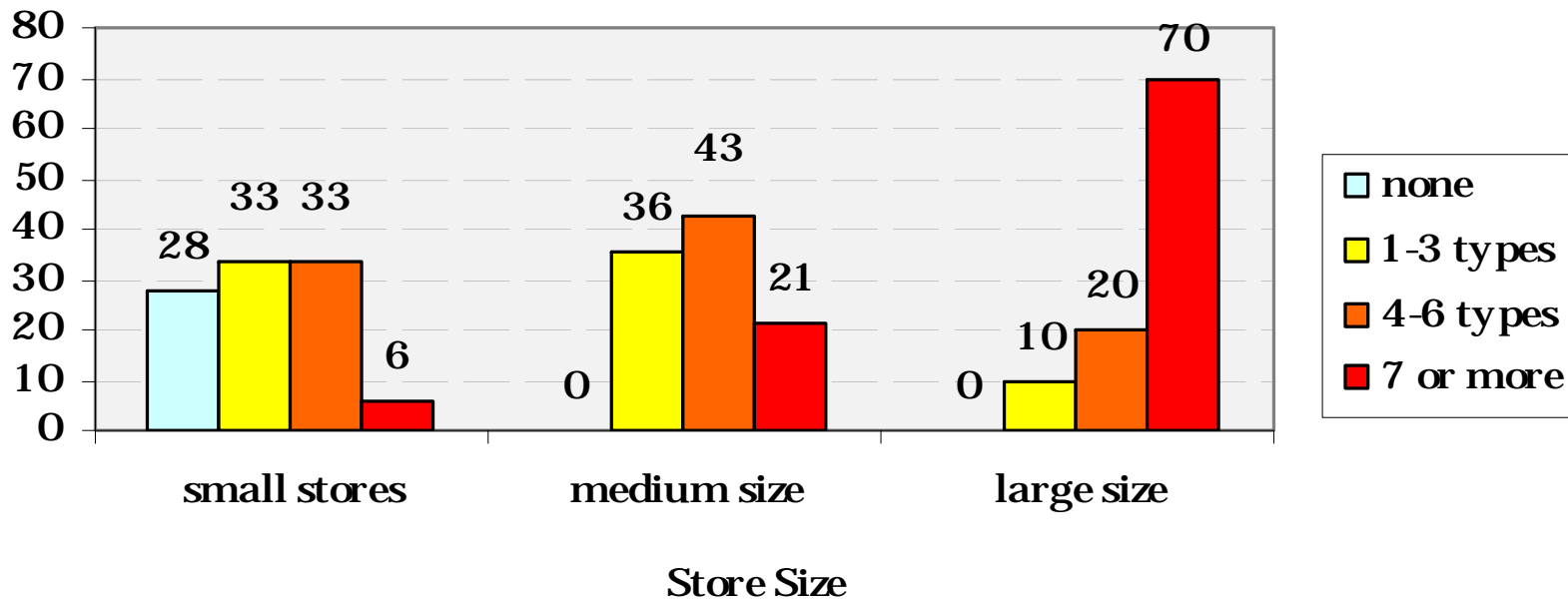
Store Characteristics

- Store size ranges from 168 – 2,428 ft²
- Average neighborhood poverty rate = 38%
- Neighborhood ethnicity = 47% Hispanic, 36% Black and 12% White
- All stores carry a variety of “regular” groceries such as canned vegetables, rice and beans.



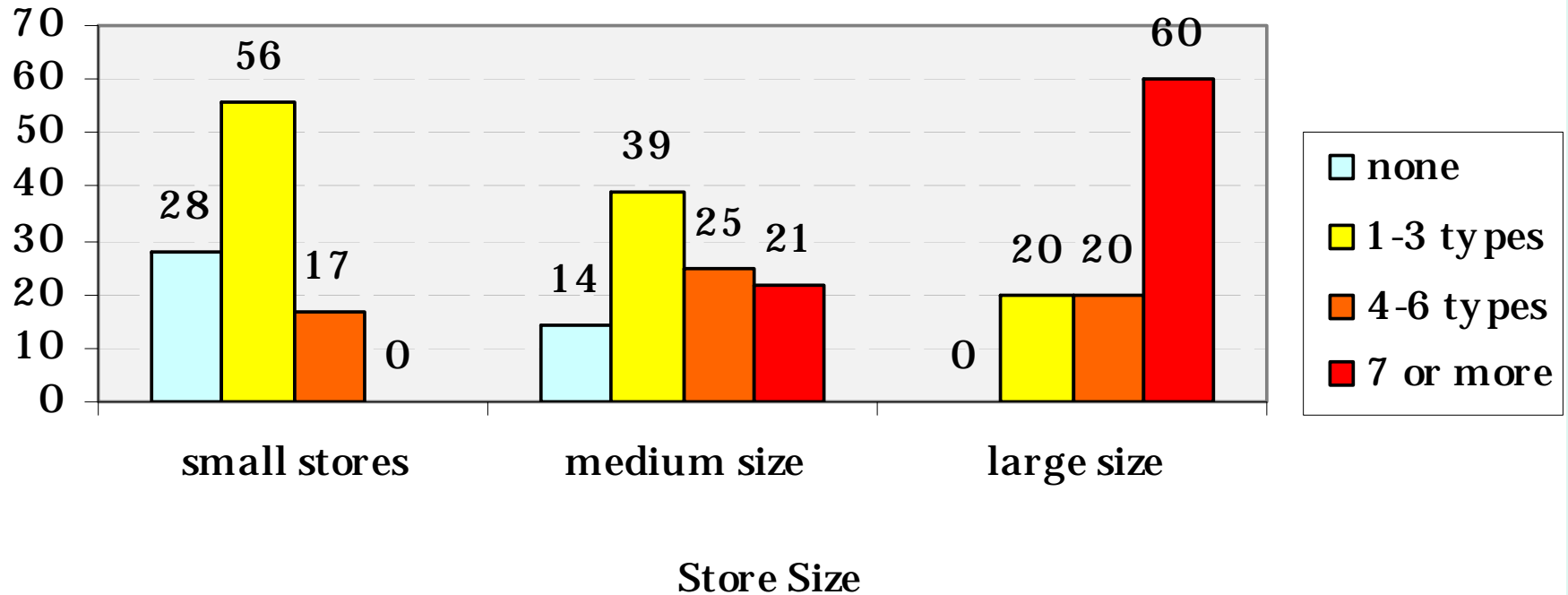
Fruit and Vegetable Availability

Vegetable Variety by Store Size



On average, stores carry 3.5 types of fruit and 4.7 types of fresh vegetables.

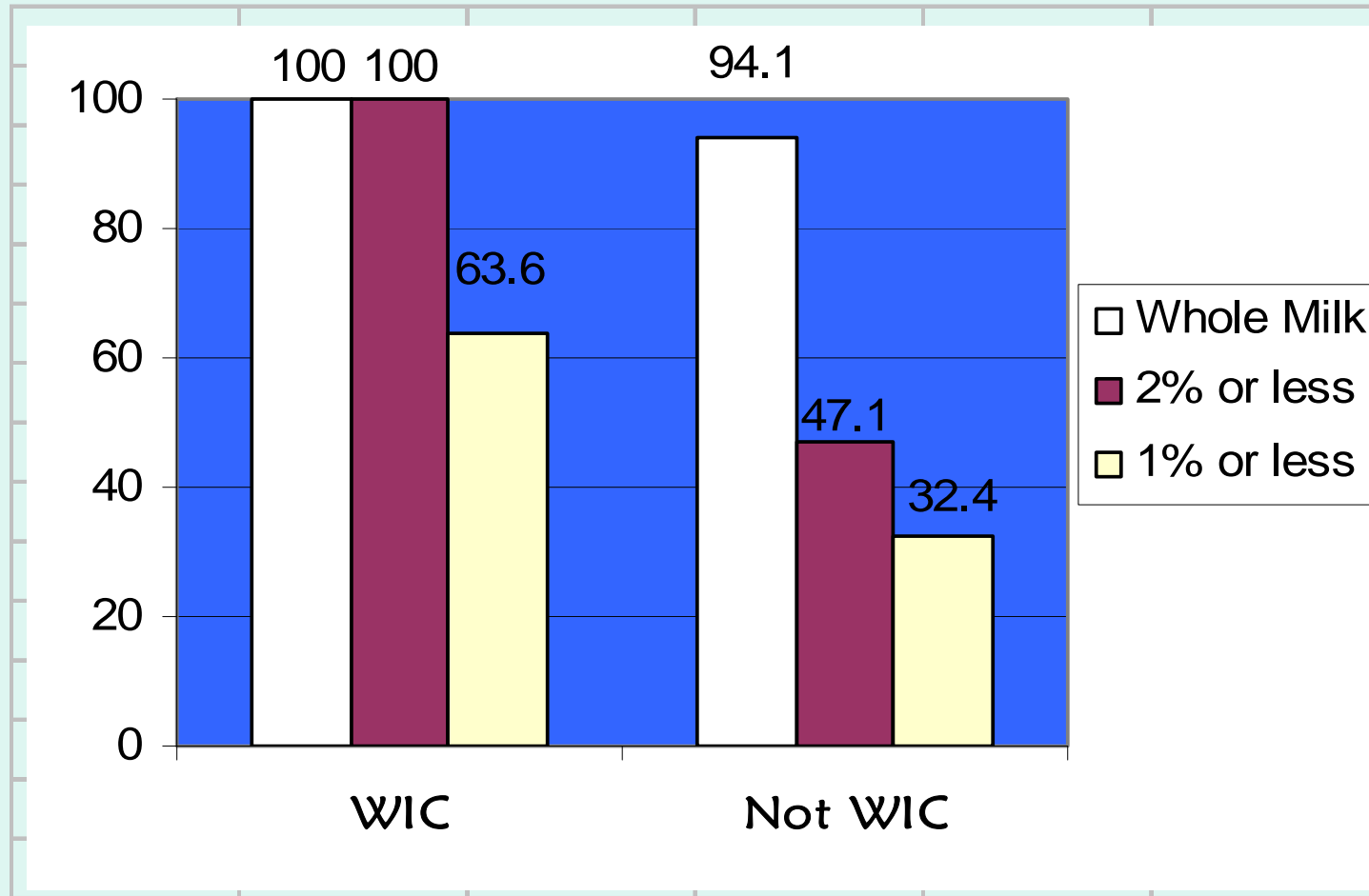
Fruit Variety by Store Size



Larger corner stores carried more fresh fruits than medium-sized stores ($p=.03$) which carried more fruit than small stores ($p=.05$).

Larger stores carried more fresh vegetables than medium-sized stores ($p=.04$), which in turn carried significantly more vegetables than small stores ($p=.02$).

Milk Availability by WIC Status



Less than half (47%) of non-WIC stores carried low-fat milk. WIC stores were more likely than unauthorized stores to carry 2% or less ($p < .001$) and 1% or less ($p = .021$).

Preliminary Findings

Before WIC changes

- 47% of stores carried low-fat milk (65% of these stores were WIC certified)
- Average # of fruit sold = 3.5 (no significant assoc with WIC certification)

After WIC changes

- 62% of stores carried low-fat milk (71% of these stores were WIC certified)
- Average # of fruit sold = 5.2 (significant assoc with WIC certification $p=.00$)

Implications

- Corner stores can play a key role in food access for low-income households.
- Large room for improvement - more interventions are needed.
- WIC changes have improved food selection
- Advocate for local or state policies to provide minimum healthy items.
- Targeting healthy snacks is critical



Next Steps



Examining impact of WIC changes: differences between WIC and non-WIC stores, and pre-post differences among WIC stores.

Collaborating with local schools and the Hartford Health Department to promote healthy snacks in targeted markets.

Mapping stores that score well on Healthy Corner Store Score, including medium sized stores.

Working with snack distributors to provide healthier options.

Thank You!

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