Data Tools for Health Food Investments

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October 17, 2013

Session Outline

★ Introduction
★ A National Perspective
  – USDA Food Research Atlas
  – USDA Food Environment Atlas
★ A State and Local Perspective
  – Maryland Food System Map Project
  – Baltimore, MD Healthy food Availability Index
★ A Lender’s Perspective
  – Data tool application including TRF Limited Supermarket Access Analysis
★ Q&A
A National Perspective: National-Level Tools for Understanding Food Access and the Food Environment

Shelly Ver Ploeg
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The views are those of the author(s) and should not be attributed to the Economic Research Service or USDA.

USDA’s national-level tools for understanding food access and the food environment

★ Food Access Research Atlas (FARA)
   - Presents a spatial overview of food access indicators for low-income and other census tracts using multiple measures of supermarket accessibility.

★ Food Environment Atlas (FEA)
   - Assembles statistics on over 160 food environment indicators to provide a spatial overview of a community’s ability to access healthy food and its success in doing so.
   - Indicators are presented at the county, state, or regional level.
Food Access Research Atlas (FARA)

- Create maps showing food access indicators by census tract using different measures and indicators of supermarket accessibility;
- View indicators of food access for selected subpopulations; and
- Download census-tract-level data on food access measures.

Low-income and Low-Access Measures in the FARA

- Low-income defined to correspond to New Markets Tax Credit definition.
- Low-access using 1 mile (urban) and 10 miles (rural) (original food desert measure)
- Low-access using ½-mile (urban) and 10 miles (rural)
- Low-access using 1 mile (urban) and 20 miles (rural)
- Low-access using vehicle availability.
Other census tract indicators

- Separate low-income & low-access components

- Low vehicle availability
  - At least 100 households do not have a vehicle and are more than ½ mile from a supermarket.

- High group quarters
  - At least 2/3rds of the tract lives in group quarters.

- Access indicators for seniors (age 65+), children (age <18) and low-income populations

FARA website

FARA data and methods

★ Population data
  – 2010 Decennial Census (population, age, group quarters population)
  – 2006-2010 American Community Survey (income, vehicle availability)
★ 2010 Supermarket and large grocery store list
  – Combined list of SNAP-authorized stores and TDLinx stores.
  – Stores have annual sales of $2 million or more and all major grocery departments.
★ Grid-level analysis aggregated to census tract level.
  – Population data downcast to ½-kilometer square grids.
  – Distance to store measured from grid centroid.

Plans for updating

★ Every two-years.
  – Next update in 2015.
★ Will consider adding new measures or indicators of access to healthy foods.
  – Indicators that can be measured consistently on a national level.
Food Environment Atlas (FEA)

- Compiles statistics on 3 broad categories of food environment factors:
  - Food Choices
  - Health and Well-Being
  - Community Characteristics

- Users can:
  - Create maps showing the variation in a single indicator across the United States;
  - View all of the county-level indicators for a selected county;
  - Zoom in to specific areas and export or print maps;
  - Download the full dataset in Excel format.

Categories of viewable statistics

- Store availability
- Restaurant availability and expenditures
- Food assistance
- Food insecurity
- Food prices and taxes
- Local foods
- Health and physical activity
- Socioeconomic characteristics
FEA website


Plans to update

★ Updated annually or more frequently if data become available.
Contact information

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A State and Local Perspective
Maryland and Baltimore, MD

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www.mdfoodsystemmap.org
Center for a Livable Future

★ **Our mission:**
  - To promote research and to develop and communicate information about the complex interrelationships among diet, food production, environment and human health; and
  - To promote policies that protect health, the global environment and the ability to sustain life for future generations.

★ An interactive *resource* for public health, nutrition and agriculture communities who are developing research and activities to strengthen local food systems through improving farm viability, increasing access to healthy food, and addressing health disparities and inequities

★ [www.mdfoodsystemmap.org](http://www.mdfoodsystemmap.org)
Data Collected

- Agriculture
- Land Conservation
- Processing and Distribution
- Food Retail
- Nutrition Assistance
- Health
- Environmental Indicators
- Demographics
- Points of Interest – Institutions, etc.

Farms Selling Food Locally

MARYLAND FOOD SYSTEM MAP
A PROJECT OF JOHNS HOPKINS CENTER FOR A LIVABLE FUTURE
Nutrition Assistance Data

MARYLAND FOOD SYSTEM MAP
A PROJECT OF JOHNS HOPKINS CENTER FOR A HEALTHY FUTURE

TOOL5:

FOOD CONSUMPTION

NUTRITION ASSISTANCE

- School Free and Reduced P.
- SNAP Retailers
- WIC Offices
- More
- % Residents in SNAP Participants
- % SNAP Participation (County)
  - 4.7 - 6.6
  - 6.7 - 10.6
  - 10.6 - 14.6
  - 14.6 - 19.6
  - 19.6 - 30.7
- % SNAP Participation (Zct Dsg)
- Agribusiness SNAP Participants

Special Achievement in GIS 2013 Award Winner

RAND MAP

SPECIAL PROJECTS

www.policymap.com
20-year life gap separates Baltimore's poorest, wealthiest

What is Baltimore's *food environment*?

- 20% of the city's residents live in Food Deserts (as defined by CLF)
  - 1 in 4 school age children
  - 1 in 4 African Americans

- The quality of foods sold in “high end” versus “discount” supermarkets varies greatly
  - And the neighborhoods these stores are in also vary greatly

- 48 Supermarkets, 436 Corner Stores
  - May be typical for most U.S. cities, but corner stores are densely concentrated in low income areas
CLF's Food Access Research

- 2006, first Healthy Food Availability Index* (HFAI) survey conducted in MESA** study areas (about 1/3 of the city)
  - *The HFAI adapted from Emory's Nutrition Environment Measurement Survey (NEMS)
  - ** MESA = Multi-Ethnic Study of Atherosclerosis

- 2008, developed first Food Desert Map (released 2009)

- March 2012 – updated Food Desert Map to include HFAI scores and access to vehicles. Partnership with Baltimore Food Policy Initiative

- Summer 2012, updated HFAI survey, visited ALL food stores, and developed unique “Supermarket HFAI” survey

Cont. on next page...
2012 Food Desert Analysis

★ For a city block to qualify as a food desert, it must meet this criteria:

1. >¼ mile from a supermarket
2. Median Household Income ≤ 185% Federal Poverty Level (roughly $40,000 for family of 4)
3. 40% or more of the population does not have access to a vehicle
4. The average HFAI score for the neighborhood is Low (in the lowest 1/3 of all possible scores)

★ Data Sources: US Census, American Community Survey, CLF
Community Food Assessments - Groundtruthing

★ Consumer Survey:
   - Questionnaire about
     • food purchasing habits
     • personal and family health
     • nutrition knowledge
   - Helped conduct 5 in Baltimore so far. CLF can train others.

★ Store Survey – can use HFAI tool

2013 OPPORTUNITY FINANCE NETWORK CONFERENCE

Results from a Community Food Assessment: Southwest OROSW

What is a Community Food Assessment?

A Community Food Assessment (CFA) is a collaborative and participatory process that systematically examines a broad range of community food issues and assets, to take action to make the community more food secure. OROSW discovered challenges in the local food system with food environments and identified community assets to help solve these issues.

OROSW (Oroswa a Tshimologo) is an association to improve food security in the region through food-based initiatives.

Assessment Objectives

- Understand residents' current habits regarding how and where they currently access food.
- Identify reported barriers and readiness for change at the neighborhood level.
- Describe residents' satisfaction with food available in their neighborhood.
- Assess residents' awareness of diet and disease.
- Determine interest and feasibility of a community garden for better health and nutrition.

Lifestyles and Diet (cont.)

Most residents stated they knew how to read all (65%) or most (35%) of the nutrition facts labels.

Current Habits

Dining Habits: 50% prepare meals from scratch several times per week, and 20% prepare meals on a weekly basis. And 50% are interested in learning about healthy food preparation.

 Reported Barriers

- Fifty-two percent of respondents stated that they use a sometimes (25%) or often (27%) unable to buy healthy food because they are out of money or cash assistance.

Average Affordable Shopping Frequency

Average Affordable Shopping Expenses

Transportation: When asked about the ease of getting to a supermarket or grocery store, most respondents felt it was very easy (40%), or fairly easy (28%). The youngest (15-24 year old) and oldest (65 year old) age groups most often reported difficulty getting to a supermarket.
Average monthly expenditures:
$140 at corner stores                                    $280 at supermarkets

2013 HFAI Update

★ Visited ALL stores in the city in summer 2012 - over 800 stores total
★ Added a new “Supermarket HFAI” to further identify quality differences
★ Scores still being tallied and verified, the new food desert map due out this winter
★ The food environment is constantly changing!
Thank you!

- Please feel free to keep in touch: abehrens@jhsph.edu
- www.jhsph.edu/clf
- www.mdfoodsystemmap.org

A Lender’s Perspective

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Lending Decisions: How do I use this Data?

- **Eligibility**
  - Who (customers) will benefit from this intervention?
  - Are we increasing / improving / preserving their access?

- **Feasibility**
  - Is there enough demand ("rooftops") to support a new supermarket of X size?
  - What size supermarket should go here?
  - Is a renovation enough? Would an expansion be supported? What about just another piece of equipment?

Limited Supermarket Analysis (LSA)

TRF Policy Solutions, 2011 Analysis & Results

Viewable at [www.policymap.com](http://www.policymap.com)
What are LSA areas?

- Areas where residents must travel significantly further to reach a supermarket than the “comparative acceptable” distance that residents in well-served areas travel to stores.

- 1,519 clusters around the US including 18,630 block groups. With an average size of 9,000 people.

- Areas with strongest need for supermarkets and includes demand and leakage data.

TRF’s assumptions about markets

Supermarket industry is highly competitive and a low profit margin industry.

Block groups with household income at/or above 120% of Area Median Income (AMI) are, generally, adequately well served by supermarkets.

TRF uses comparative travel distances to establish benchmarks (areas above 120% are our baseline) and then applies these distance to all block groups.
Eligibility: Income, Location, Programmatic

★ Income
- Depends on your program
- AMI - HUD definitions; Free & Reduced Lunch, other
- Supermarket projected to serve LSA residents (market study, SNAP as % of sales, etc.)

★ Location
- Operating store, LSA, Low Access Score
- Dark store location

★ Programmatic
- Healthy food
- Farmers Market
- Urban Farming

Feasibility: Leakage, Market Studies

Leakage estimated the unmet demand for food items for LSA areas.

LSA Grocery Assessment
Retail Demand: $70,734,000
# of Limited Service Stores: 3
Existing Store Sales: $354,900
Retail Leakage: $67,185,000
Leakage Rate: 95%
# of Retail Sq Ft
Leaked: 103,601

All numbers are estimated.
Feasibility: Density, Accessibility, Rules of Thumb

★ Population Density
   – Count rooftops

★ Accessibility
   – Car Ownership
   – Mass Transit
   – Barriers for access (literal and figurative)

★ Rules of Thumb
   – # of rooftops
   – Reasonable market share assumption?
   – Brand awareness?

Location not showing up as eligible?

★ Do your own research; form own thesis
   – AMI – Low/Mod
   – Population Density
   – Car Ownership
   – Existing full-service supermarkets and superettes
   – Community support, redevelopment plans

★ Other definitions of food access
   – Opening up a dark store = increased competition and lower prices for consumer?
   – Opening up a dark store = increased competition and higher quality?
Contact information

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