

# Physical and Geographic Access to Healthy Foods



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# Terms

- **Healthy Food**
  - A food that provides the nutrients necessary to meet the dietary guidelines and provide a balanced diet
- **Access**
  - Defined as Proximity, Economic Access, Nutritional Access & Cultural Access
- **Food Insecurity**
  - Inadequate access at any time in the previous year to the healthy, nutritious food needed to live an active life

# Determinants of Access to Healthy Food

- Distance to a healthy food provider such as a supermarket, garden, farmer's market or full-service restaurant (1, 2, 3, 4)
- Income Level: ability to afford healthy food or live in a neighborhood with safe walking access to healthy food (1, 5, 6)
- Ethnicity and living in an specific ethnically dominated neighborhood (7, 8, 9)
- Living in a rural area (10,7)
- Availability of nutritionally adequate to culturally appropriate foods at accessible stores (2, 9, 8)

# Determinants of Access to Healthy Food Studies

- Multivariate analysis study of 28 thousand US zip codes
  - Rural area and African-American neighborhoods = least access to supermarkets (7)
  - African American neighborhoods = most access to low cost fast food (11)
- Food access studies in US 1985-2008
  - Rural, Low Income, Ethnic Minority = less access to stores with healthy foods (3)

# Determinants of Access to Healthy Food Studies

- Fruit and vegetable intake increases when they are more available in the household – Availability is determined by supermarket choices for fruits and vegetables (2)



# Rates of Healthy Food Access

- In the US
  - 14.7% in 2009 food insecure (highest rate since 1995)
- In WA State
  - At least 15% of WA residents are food insecure
- In King County
  - 6% are food insecure: 6 out of every 100 people are unsure where they will get their next meal

# Differences in Food Prices

# Difference in Food Prices

Three components:

- Price disparities

Who charges what?

- Store availability

Where are they located?

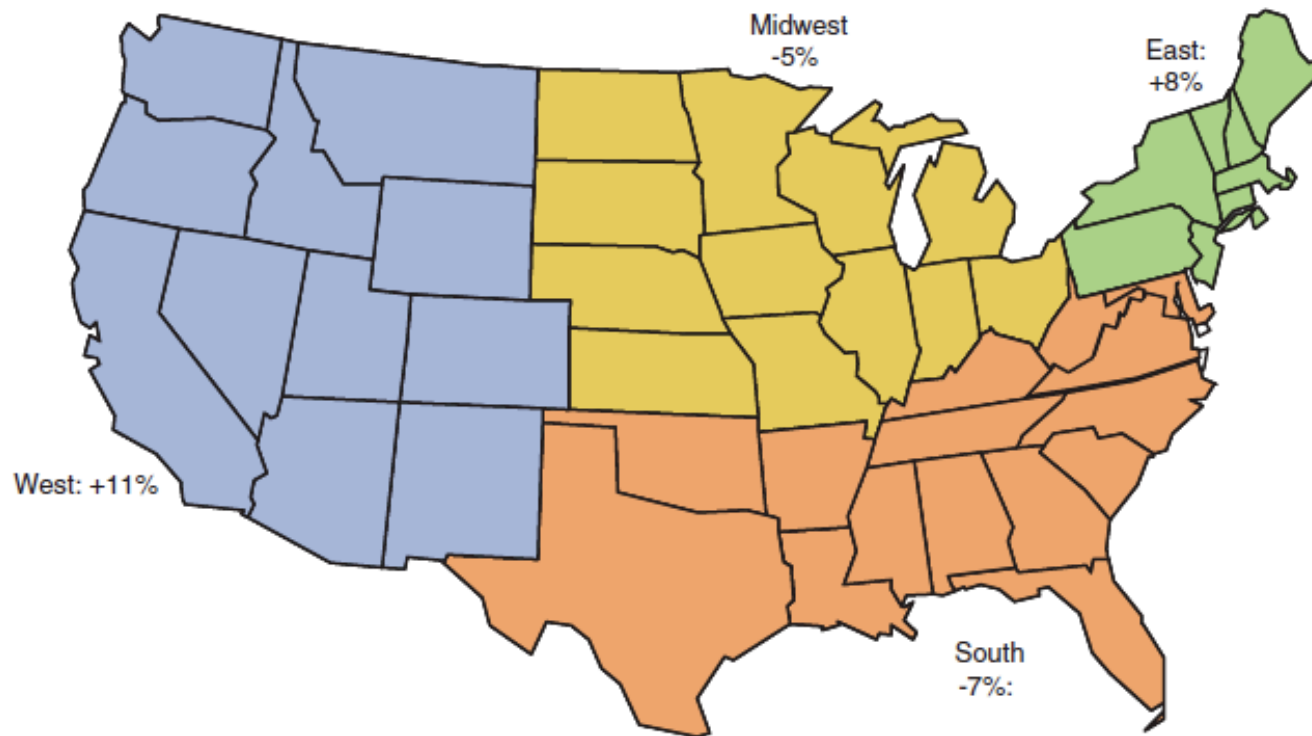
- Market-basket prices

What are you getting for your money?



# Price Disparities

## Regional Differences (17)



Source: Economic Research Service/USDA, using Bureau of Labor Statistics' average price data and Nielsen Homescan Data, 1998-2003.

# Price Disparities

- No disparities within a given supermarket chain.
- Chain stores tend to have lower prices than convenience stores or small grocers.
  - *New Haven, CT*: on average, prices were 51% higher in small neighborhood stores than supermarkets. (18)
  - *Twin Cities, MN*: With few exceptions, prices are lower by 10-40% in chain vs. small grocery or convenience stores.(19)

# Store Availability

- There are fewer supermarket chains in low-income and minority neighborhoods.
  - It is believed that the lowest income neighborhoods had ~30% less supermarkets than the highest income neighborhoods. (20)
  - Twin Cities study, only 22% of chains located in inner-city, and 89% of chains located in areas with < 10% poverty rates. (19)
  - Availability of chain supermarkets in Black neighborhoods was 52% less than their White counterparts. (21)

# Market Basket Prices

- Are lower in:
  - Chain stores vs. non-chain
  - Suburbs vs. inner cities
  - Non-poor vs. poor (19)
- The average thrifty food plan cost for small/medium stores was \$102 compared to \$81 in supermarkets.(22)
- Quality, variety, and availability are often diminished as well.(23-25)

# Seattle-King County

Drewnowski studies (26-27):

- No price differences within a given supermarket chain.
- Geographical distribution indicates no food deserts.
- Market basket studies show that major differences are due to:
  - Brand availability
  - Characteristics of meat and produce

Grocery Gap (28):

- Higher food availability in more affluent areas.

# King County Food and Fitness Initiative

- Community coalition in White Center and Delridge to support nutrition and exercise (29)
- There are three action teams
  - School fitness and nutrition
  - Healthy food retail
  - Safe spaces to be active
- Healthy Corner Stores
  - Challenging store owners to change business model. Initial results positive!

# FEEST (Food Empowerment, Education & Sustainability Team)

- Engage youth in Delridge
- Strong youth social justice group for food access
- Host monthly community potlucks
- Volunteer and network
- Support community development and access to food (30)



# Communities Putting Prevention to Work

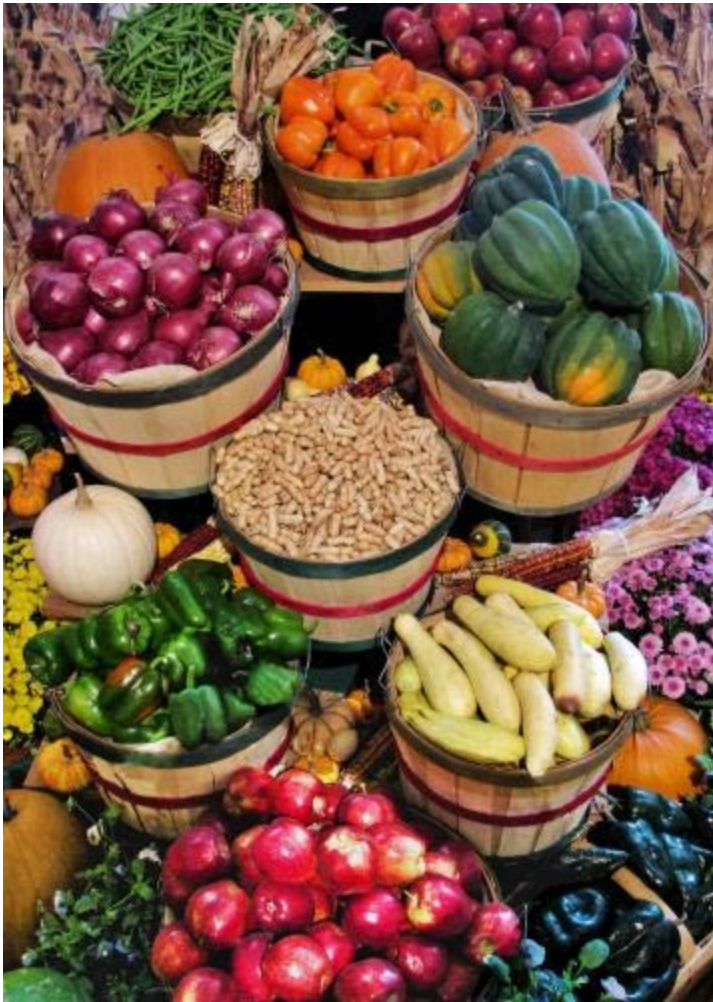
- Funding for schools, local governments, and community organizations
- \$8.9 million to increase healthy choices in King County (31)



# CPPW: Healthy Food Economic Incentive Program (Healthy Foods Here)

- City of Seattle partners with Office of Economic Development
- \$1.1 million dedicated to providing business incentives to increase healthy food retail
- Assistance in finding suppliers, marketing campaigns, and inventory management
- Goals:
  - Increase availability of healthy products
  - Increase both supply and demand of healthy foods
  - Increase store participation in WIC/EBT (32)

# Farmers Markets



- SNAP and WIC partnerships to encourage purchasing of fresh local produce
- Host farmer's markets at corner stores during the weekends
- WIC Farmers Market Nutrition Program (33)

# Clean Greens Farm and Market

- Started by Rev. Robert Jeffery as a way of bringing poor people together to eat and grow good food
- Enough crops to operate CSA, market, and outreach (Giveback Program)
- Largely run by volunteers (34)



# White Center Community Development Association

- 54 languages spoken!
- Neighborhood Revitalization: repair and rehabilitate neighborhood amenities, largely supported by Habitat for Humanity
- Create neighborhood walking map and groups, supported by Feet First and Neighborhood House
- Fresh Marketplace Initiative: Media and assistance for healthy foods by White Center CDA
- Support fresh and healthy produce at food banks  
(35)

# Delridge Neighborhoods Development Association: TEAM Delridge

- Thrive to Eat healthier, take Action and Move
- SOUL Community Kitchens, monthly meetings
- Training with recipes, cooking, awareness (36)

# Recommended Interventions

- Working Together!
  - Families
  - State and Local Agencies
  - Institutions
  - Community Groups
  - Regional Food Systems

# Recommended Interventions

- Further support & promotion for Healthy Corner Stores Initiative
  - Improve access to healthy food in local low income environment
  - Develop business relationship between local farmers to provide fresh fruits/vegetables to corner stores
  - Ability to use WIC checks at these stores
    - Give assistance to small business owners to become WIC providers

# Recommended Interventions

- Re-zoning in low income areas
  - Discourage fast food establishments
  - Encourage grocery stores
  - Increase land use for urban agriculture and community gardens



# Recommended Interventions

- Increase Information given to WIC clients
  - Hand out ethnically appropriate recipes that use fresh foods to WIC clients
  - Provide information in several languages
  - Develop and give out a bus route brochure that depicts how to take the bus in low income areas to WIC provider grocery stores
    - Rate grocery stores according to how much fresh produce is available

# Recommended Interventions

- Increase funding and information for community kitchens in low income areas
  - Give information about these kitchens to WIC clients
  - Promote cooking classes and recipe exchanges using fresh foods with ethnic recipes to demonstrate how to cook with fruits and vegetables
  - Provide day care at these classes
  - Use school kitchens as make-shift community kitchens

# References

1. Alpert, S., Agrawal, A., & Lewis, D. (2006). Disparities in access to fresh produce in low-income neighborhoods in Los Angeles. *American Journal of Preventive Medicine, 30*(5), 365-370.
2. Jago, R., Baranowski, T., & Baranowski, J. C. (2007a). Fruit and vegetable availability: a micro environmental mediating variable? *Public Health Nutrition, 10*(07), 681-689.
3. Larson, N. I., Story, M. T., & Nelson, M. C. (2009). Neighborhood environments: Disparities in access to healthy foods in the U.S. *American Journal of Preventive Medicine, 36*(1), 74-81.e10.
4. Garasky, S., Morton, L., & Greder, K. (2005). The food environment and food insecurity: Perceptions of rural, suburban, and urban food pantry clients in Iowa. *Family and Economics Nutrition Review, 16*(2), 41-48.
5. Drewnowski, A. Obesity and the food environment: dietary energy density and diet costs. *Am J Prev Med. 2004; 27*(3S):154-162.
6. Jetter KM, Cassady DL. The availability and cost of healthier food alternatives. *Am J Prev Med. 2006; 30*(1):38-44.
7. Powell, L. M., Slater, S., Mirtcheva, D., Bao, Y., & Chaloupka, F. J. (2007a). Food store availability and neighborhood characteristics in the United States. *Preventive Medicine, 44*(3), 189-195
8. Franco, M., Diez Roux, A. V., Glass, T. A., Caballero, B., & Brancati, F. L. (2008). Neighborhood characteristics and availability of healthy foods in Baltimore. *American Journal of Preventive Medicine, 35*(6), 561-567.
9. Baker, E., Schootman, M., Barnidge, E., & Kelly, C. (2006). The role of race and poverty in access to foods that enable individuals to adhere to dietary guidelines. *Preventing Chronic Disease, 3*(3), 1-11.
10. Hosler, A. S., T Rajulu, D., Ronsani, A. E., & Fredrick, B. L. (2008). Assessing retail fruit and vegetable availability in urban and rural underserved communities. *Preventing Chronic Disease, 5*(4), 9.
11. Block, J. P., Scribner, R. A., & DeSalvo, K. B. (2004). Fast food, race/ethnicity, and income: A geographic analysis. *American Journal of Preventive Medicine, 27*(3), 211- 217.
12. USDA Economic Research Service. Household Food Security in the United States, 2009. <http://www.ers.usda.gov/features/householdfoodsecurity/>
13. Andrews, M., Nord, M. (2009). Food Insecurity Up In Recessionary Times. *Amber Waves, 7*(4), 32 – 36.
14. Opportunities for Increasing Access to Healthy Foods in Washington. A Report for the Access to Healthy Foods Coalition. Developed by the Access to Healthy Foods Coalition, The Washington State Department and the University of Washington Public Health Nutrition Department, June 2010.
15. Healthy Corner Stores Brief from The Food Trust. <http://www.thefoodtrust.org/php/programs/Winter2011issuebrief.pdf>
16. FoodLifeLine.org. Hunger in King County. 2010. [http://www.foodlifeline.org/hunger/resources/documents/King\\_web.pdf](http://www.foodlifeline.org/hunger/resources/documents/King_web.pdf)

# References

17. Leibtag, Ephraim S. *The Impact of Big-Box Stores on Retail Food Prices and the CPI, Economic Research Report No. 33, U.S. Department of Agriculture, Economic Research Service, December 2006, available at: <http://www.ers.usda.gov/Publications/err33/>.*
18. Andreyeva T, Blumenthal DM, Schwartz MB, Long MW, Brownell KD. Availability and prices of foods across stores and neighborhoods. *Health Affairs*. 2008;27(5):1381-88.
19. Chung C., and Myers S.L., Do the poor pay more for food? An analysis of grocery store availability and food price disparities. *The Journal of Consumer Affairs*. (33)1999; 276-296.
20. Weinburg, Z., 1995. No Place to Shop: The Lack of Supermarkets in Low-Income Neighborhoods. Public Voice for Food and Health Policy, Washington, DC 3.
21. Powell, LM., Slater, S., Mirtcheva, D., Bao, Y., Chaloupka, FJ. 2007. Food store availability and neighborhood characteristics in the United States. *Preventive Medicine* 44, 189-195.
22. Morris, PM., Neuhauser, L., Campbell, C., 1992. Food security in rural America: a study of the availability and costs of food. *Journal of Nutrition Education* 24(1);52S-58S.
23. Glanz, K., Sallis, JF., Saelens, BE., Frank, LD. 2007. Nutrition environment measures survey in stores (NEMS-S). *American Journal of Preventive Medicine*. 32(4): 282-289.
24. Hendrickson, D., Smith C., Eikenberry, N. 2006. Fruit and vegetable access in four low-income food deserts communities in Minnesota. *Agriculture and Human Values* 23, 371-383.
25. Zenk, SN., Schulz, AJ., Israel BA., James, SA., Bao, SM., Wilson, ML. 2006. Fruit and vegetable access differs by community racial composition and socioeconomic position in Detroit, Michigan. *Ethnicity & Disease* 16, 275-280.
26. Mahmud NK., Monsivais P., Drewnowski A. *The search for affordable nutrient rich foods: A comparison of supermarket food prices in Seattle-King County*. CPHN Public Health Research Brief. July 2009, UW Center for Public Health Nutrition: Seattle. 1-5.

# References

27. Drewnowski A., Eichelsdoerfer P. *Can Low-Income Americans Afford a Healthy Diet?* CPHN Public Health Research Brief. March 2009, UW Center for Public Health Nutrition: Seattle. 1-6.
28. Jordan, Jamillah. *The Grocery Gap Project: Race, Hunger, and Food Access.* Solid Ground. February 2007, 1-23.
29. King County Food and Fitness Initiative. <http://king.wsu.edu/foodandfarms/KCFFI.html>
30. KCFFI FEEST Program <http://king.wsu.edu/foodandfarms/KCFFIYouthCoordination.html>
31. Communities Putting Prevention to Work. DOH.  
<http://www.kingcounty.gov/healthservices/health/partnerships/CPPW.aspx>
32. CPPW Healthy Foods Here  
<http://www.kingcounty.gov/healthservices/health/partnerships/CPPW/whosinvolved.aspx>
33. Farmers Markets <http://www.seattlefarmersmarkets.org/markets/ebt-senior-and-wic-fmnp-vouchers>
34. Clean Greens Farm and Market <http://www.cleangreensfarm.com/>
35. White Center Community Development Association <http://www.wccda.org/index.php>
36. TEAM Delridge. <http://www.dnda.org/programs/team-delridge>