

Consumer food sources are not evenly distributed leading to areas of concentration and places where access to choices of foods are limited or non-existent.

Food deserts are places where few or no retail food stores are available (Lang & Caraher 1998; Whitehead 1998; Furey et al. 2001; Land & Rayner 2002).

Morton et.al. 2005. "Solving the Problems of Iowa Food Deserts: Food Insecurity and Civic Structure" Rural Sociology 70(1) 94-112

The retail consumer food environment is complex: How is the concept food desert operationalized?

Daily supply [food at home; food away from home]

Affordable [affordable to whom? relative to income?]

Nutritious [which foods? whose diet objectives?]

Should we use some proportion of retail food sales that are nutritious to select which establishments to include? Should we use the list of items food stamp eligible? Should convenience stores be included?



One way to define consumer food sources and retail food stores (food at home)

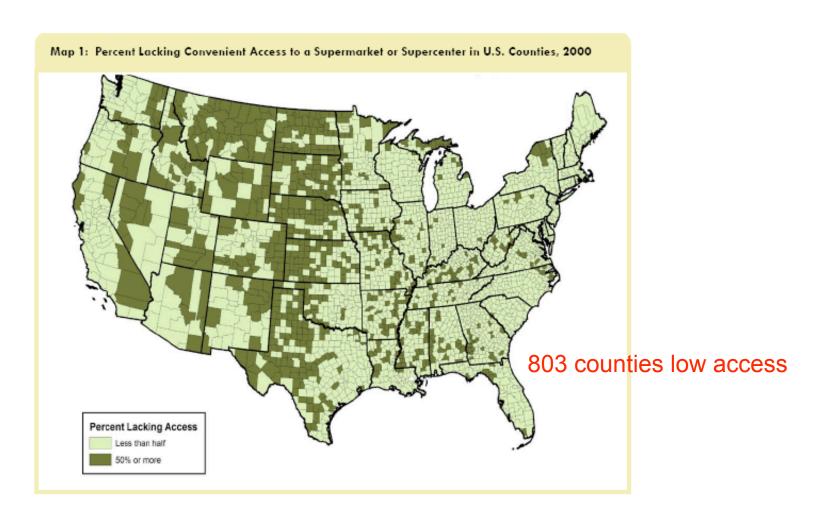
SIC (Standard Industrial Codes) 1997 NAICS (North American Industry Classification System)

www.naics.com

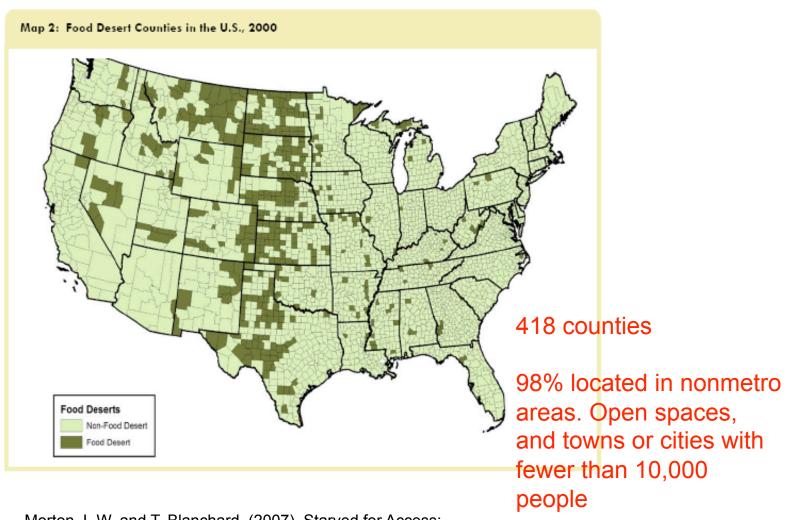
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445110 Supermarkets and Other Grocery (except Convenience) Stores
445120 Convenience Stores
445210 Meat Markets
445220 Fish and Seafood Markets
445230 Fruit and Vegetable Markets
445291 Baked Goods Stores
445292 Confectionery and Nut Stores
445299 All Other Specialty Food Stores
452910 Warehouse Clubs & Supercenters
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Low Access: Proximity to large supermarket or supercenter.

Half of the county population lives more than 10 miles from large food stores



Morton, L.W. and T. Blanchard. (2007) Starved for Access: Life in Rural America's Food Deserts *Rural Realities* (February) Rural Sociological Society http://www.ruralsociology.org/pubs/RuralRealities/lssue4.html Food desert: Counties where all residents have low access to large food Retailers (e.g. live more than 10 miles away)



Morton, L.W. and T. Blanchard. (2007) Starved for Access:
Life in Rural America's Food Deserts *Rural Realities* (February)
Rural Sociological Society http://www.ruralsociology.org/pubs/RuralRealities/lssue4.html

Availability of affordable foods is a structural issue

Market economies are based on a concentration of people with ability to purchase foods... food stores locate where it is profitable

Food desert counties tend to have

- *higher % individuals without HS degree/GED
- *higher individual & family poverty rates
- *higher % individuals living in sparsely populated open country outside of towns/cities
- *higher numbers of small grocers & convenience stores per capita

So why does the consumer food environment matter? Is it a problem if you live in a food desert?

It depends on who you are

- *At risk are low income households that must use limited dollars to own/operate a working vehicle and purchase gas to travel to a food store
- *At risk are elderly who can not/should not drive and don't have access to public transportation or personal networks
- *At risk are time limited households who may take nutritional shortcuts (eat out frequently, use vending machines & convenience stores as main food source)

Access and distance to food stores

In two high poverty Iowa counties (random sample)

Most use their own car to travel to the grocery store 3 % are dependent on others for transportation

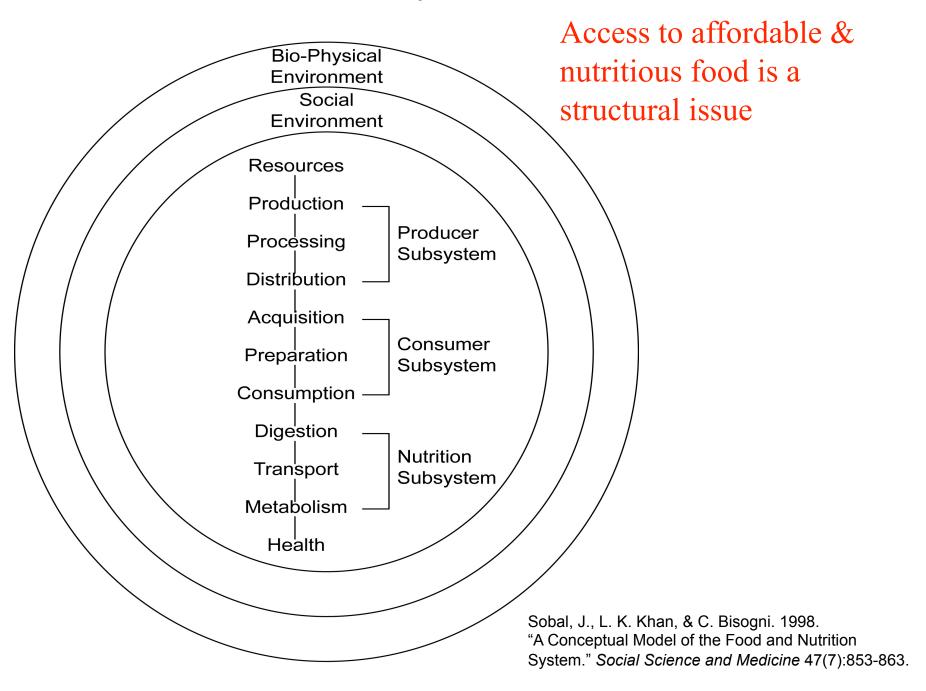
50 % are 10-12 minutes from their regular store

25 % are 12-25 minutes from their regular store

25 % are more than 25 minutes from their regular store [travel time range up to 80 minutes]

HOWEVER,
11% OF THOSE AGED 70 YEARS AND OLDER
DO NOT USE THEIR OWN CAR BUT DEPEND ON OTHERS
TO GET TO THE GROCERY STORE

The Food and Nutrition System





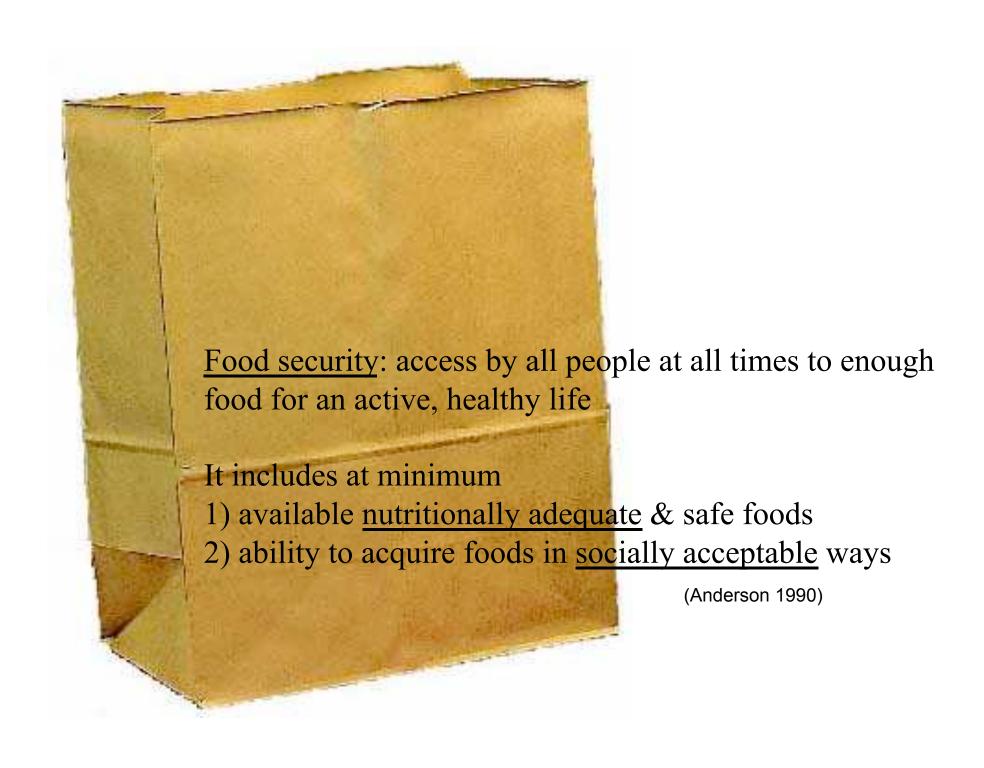


Table 4. Food Insecurity

	Rural Users of Food Safety Net Services ^a				General Rural Population ^b						
	County A, MN N=198	County B, MN N=197	County C, IA <u>N=149</u>	County D, IA N=121	County C, IA N=374	County D, IA N=349	County E, IA N=400	County F, IA N=393	Minnesot a ^c	<u>Iowa</u>	United States
1. Percent food secure (0-1)	65.2	46.7	74.8	71.0	85.7	88.4	89.0	91.4	92.9	90.5	89.0
2. Percent food insecure (2-6)	34.8	53.3	25.2	29.0	14.3	11.6	11.0	8.6	7.1	9.5	11.0
3. Percent food insecure with no hunger (2-4)	28.2	34.5	12.6	15.9	6.3	6.7	5.2	6.0	4.9	6.5	7.6
4. Percent food insecure with hunger (5,6)	6.6	18.8	12.6	13.1	8.0	4.9	5.8	2.6	2.2	3.0	3.4

Morton and Smith (forthcoming) "Accessing Food in Rural Food Deserts in Iowa and Minnesota" Great Plains Sociologist

^a Purposeful sample of rural food safety net services.

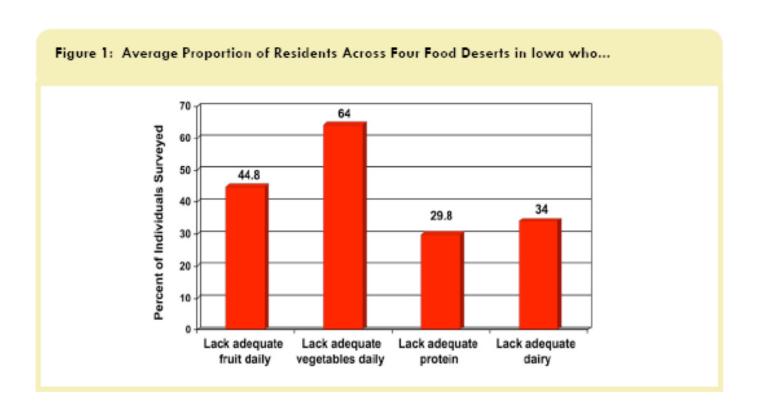
^b Random sample of general county population.

^c Nord, M., M. Andrews, S. Carlson Household Food Security in the United States 2003 http://www.ers.usda.gov/publications/fanrr42 [Internet] Accessed December 5, 2006

Diet, health and well-being

"underlying factors that influence susceptibility to a whole range of diseases" suggest general rather than specific risk factors (Evans, Barer, and Marmor 1994)

Is access to affordable, nutritious foods an underlying factor in health?



Body Mass Index (BMI)

28 % normal weight (18.5-24.9 BMI)

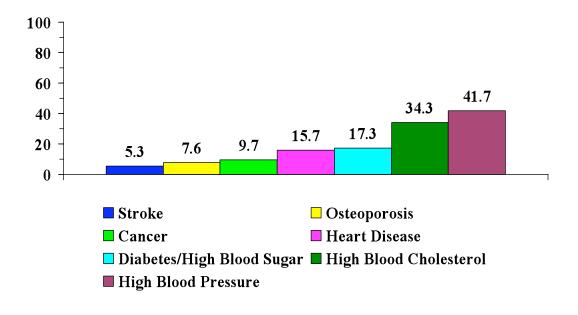
38 % overweight (25-29.9 BMI)

33 % Obese (over 30 BMI)

Those 70 years of age & older are more likely to weigh less than younger people however both groups are, on average, overweight

Diet related diseases

Has the doctor ever told you that you have/had



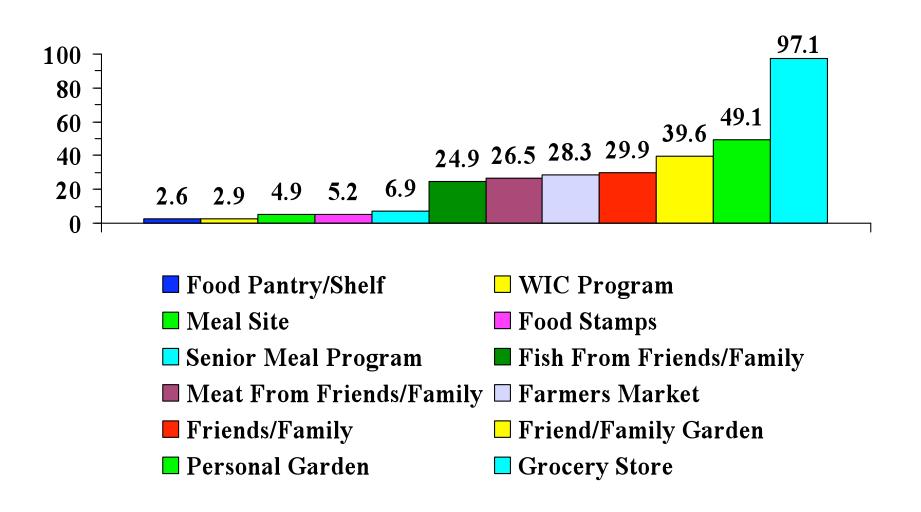
Access to food can come from <u>market based systems</u> (e.g. "normal" food systems) (Campbell 1991) and <u>non-market food systems</u> (socially acceptable?)

Non-market food economy

Redistribution (current public safety net system) food stamps, WIC, food banks, pantries, soup kitchens, senior meal sites, subsidized school breakfast, lunch and summer programs

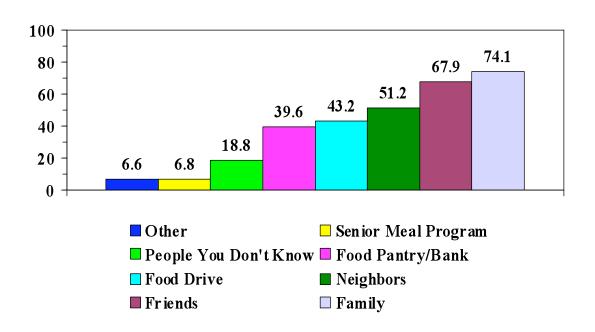
Reciprocity (exchange of food resources between members of society based on social networks civic structure of place) garden produce, meat, fishing

Food acquired from



Connections and relationships of trust among individuals that help solve personal food problems [Social capital]

Giving food to others



Social capital gives individuals and groups the capacity to solve individual food problems.

Civic structure gives communities the capacity to solve food problems that are larger than one individual or group...

such as problems of the food infrastructure.

Both are necessary to solve food insecurity and diet related health problems

Public-private partnerships to solve food problems

Government <u>food programs like food stamps and WIC</u> work together with churches & nonprofit organizations to coordinate efforts to meet food needs of people

Don't seem to work together	9 %
Work together a little	13 %
Work together/work together a lot	30 %
Don't know	49 %

Elected officials are aware of food access & affordability problems in your community

Not at all aware	5 %
A little aware	16 %
Aware, but not doing anything	12 %
Aware, trying to do something	13 %
Don't know	55 %

Where does the <u>leadership</u> for solving food problems in your community come from?

Government	74 %
Churches	56 %
Volunteer citizens	46 %
Nonprofit groups	
(farmer markets, community center, etc)	37 %
Schools	31 %
Local businesses	20 %
ISU Cooperative Extension	19 %

It appears that rural populations in these two sites are solving their food problems through personal networks of trust and community networks which have an interest in solving rural food infrastructure problems

Personal networks

Almost 3/4 of the sample give food to other family members and 68% give food to friends

There is a lot of sharing going on

50 % have a garden and 40 % report receiving food from family and friends gardens;

1/4 of the sample exchanged meat and fish from family/friends

19 % gave food to others they didn't know Over 40 % gave food to the food pantry and food drives

Unanswered questions

Those that are connected seem to be accessing food. What happens to those who live in food deserts and don't have a good network of friends or live in ahigh civic structure place?

Is civic structure enough to assure food access, adequate diets and reduce chronic diet related diseases?

Many people in rural areas are unaware of local food issues. How can we mobilize local resources to solve food access issues?

What are the implications of government as the "leader" in solving food problems?

Conclusion

To solve the problem of access to affordable and nutritious food we need to define, measure and track the following concepts

Food deserts. How is the normal food system distributed?

At-risk populations. Who has limited access to the normal food system?

Non-market food systems: Redistribution and reciprocity.

Complements and/or substitutes for the normal food system?

Food insecurity. Individual and community/regional levels

Civic structure. What is the capacity of communities to define their food access problems and act on them?

