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COLLEGE OF FOOD, AGRICULTURAL,  
AND ENVIRONMENTAL SCIENCES

***Addressing Food Insecurity, Diabetes and Chronic  
Disease through Community Food Systems and  
Choice Food Pantries***

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Disclosure: I do not have (nor does any immediate family member have) a vested interest in or affiliation with any corporate organization offering financial support or grant monies for this continuing education activity, or any affiliation with an organization whose philosophy could potentially bias my presentation.



# What your doctor didn't tell you about preventing or managing diabetes...

- Don't be poor
- Live near good supermarkets
- Live in a safe neighborhood
- Don't have any type of hearing, site, or physical disability
- Work in a rewarding and respected job
- Don't lose your job or get laid off
- Don't get divorced
- Don't live in low quality housing
- Own your own car
- Have regular access to a Registered Dietitian, CDE, or health coach



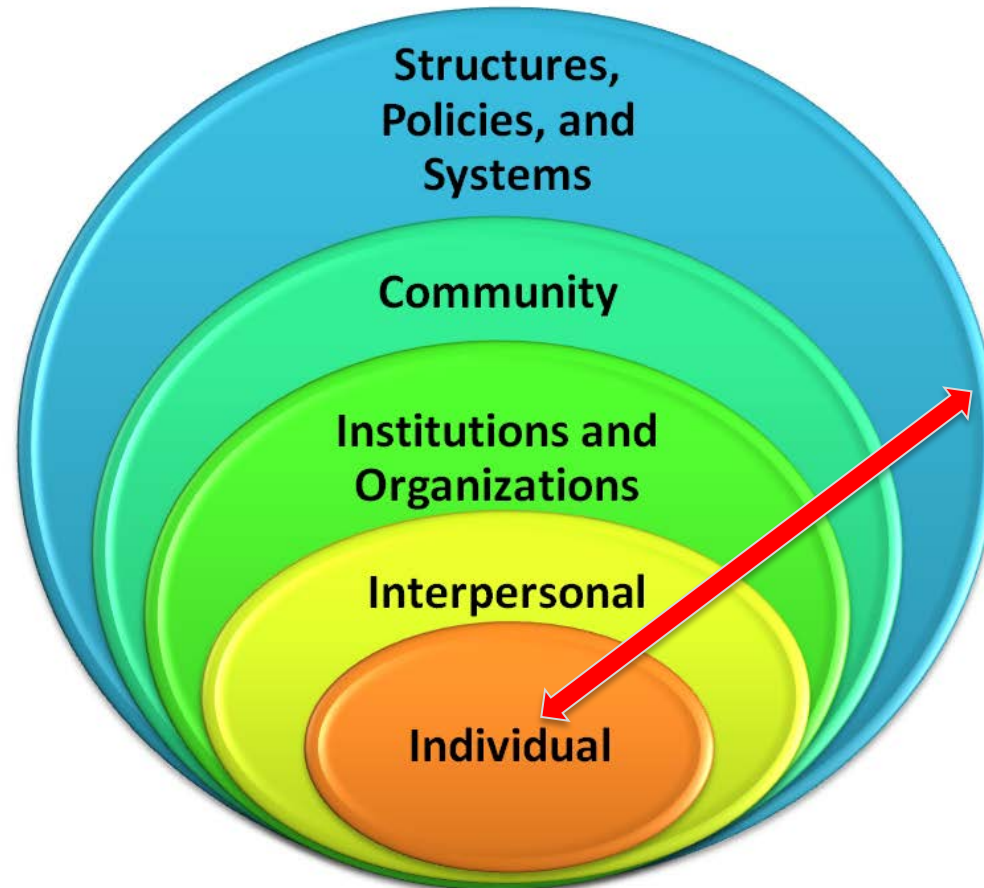
## Objectives

- Describe how choice food pantries can be organized.
- Plan how pantry volunteers and staff can be trained to help clients with diabetes and other chronic conditions make health choices within the pantry.
- Explain how food pantries can procure healthy foods through food drives.





## Social-Ecological Influences On Health Behaviors and Diabetes Status





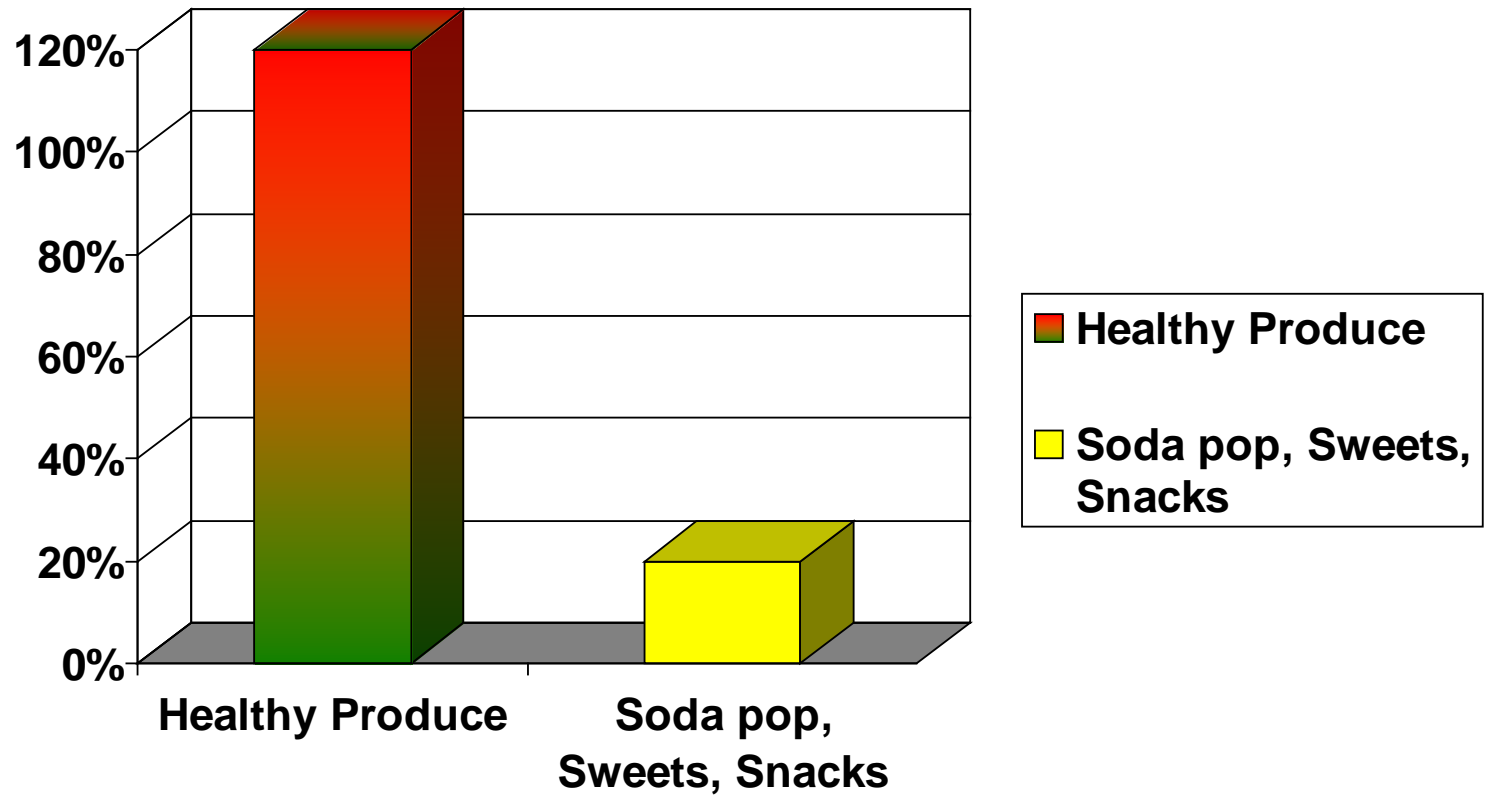


# Nutrition- Too Much!





## Cost of Fresh Produce





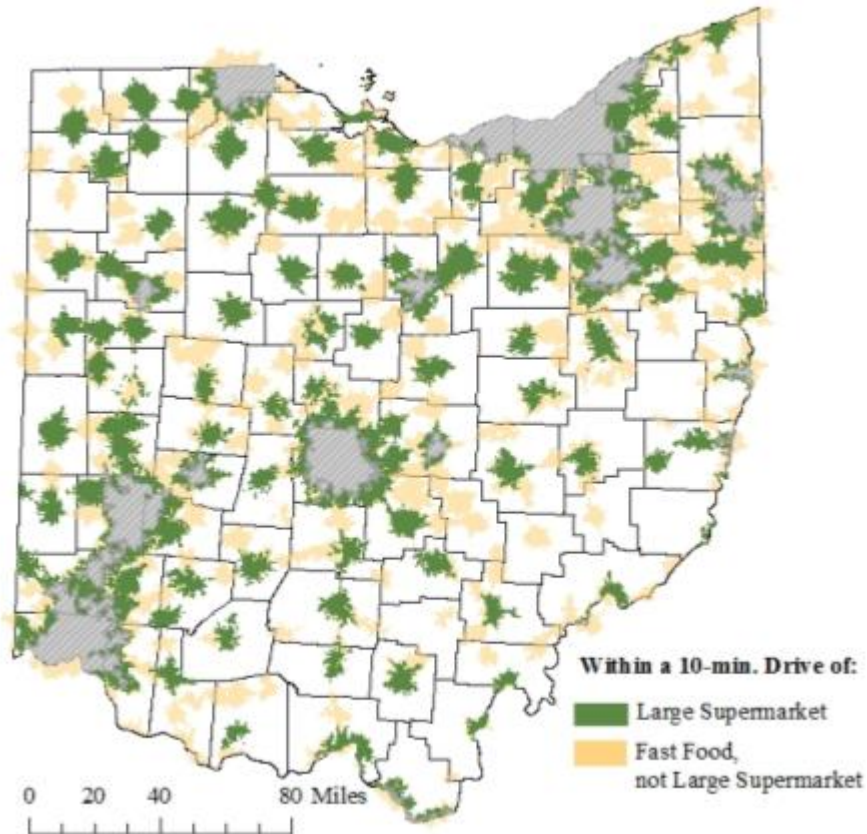


# Poor Dietary Quality





## Health: Access to Large Grocery





# Food Insecurity: Another Influence on Diabetes

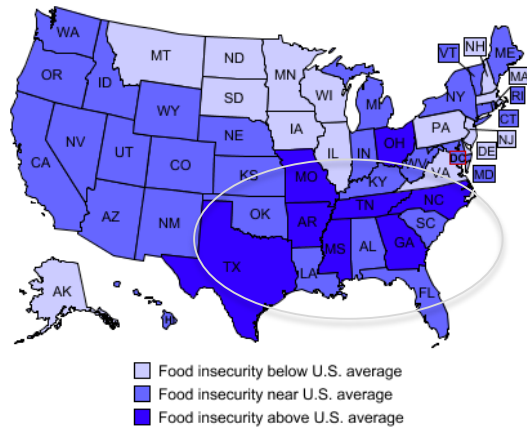
Food insecurity is a situation of "limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways", according to the United States Department of Agriculture (USDA).



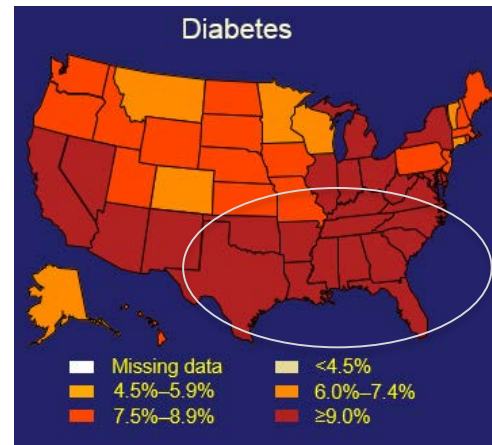


# Diabetes and Food Insecurity?

Prevalence of food insecurity, average 2011-13



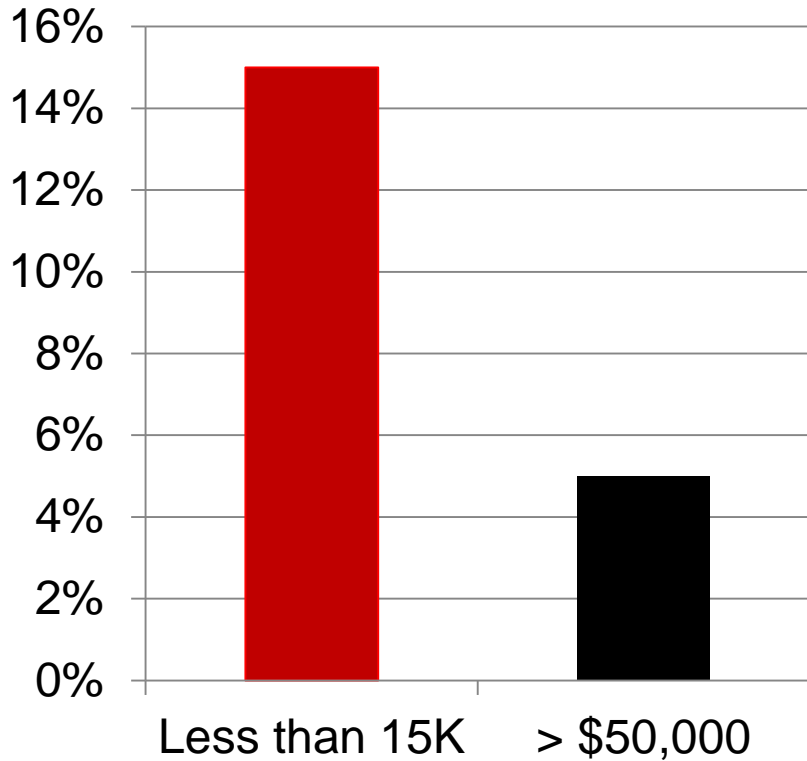
Source: USDA, ERS (2014)



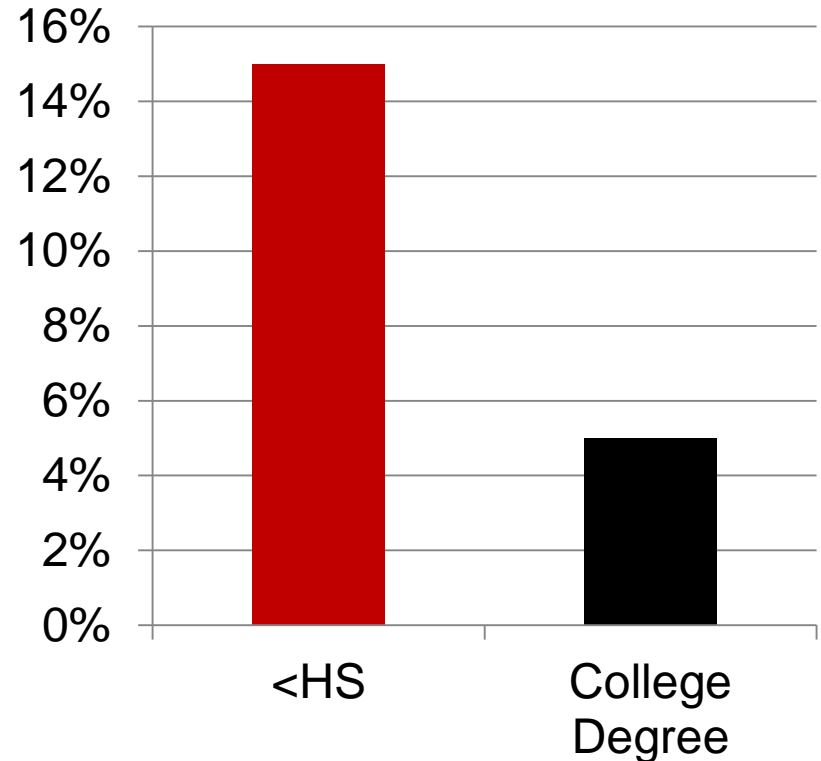
Source: CDC's Division of Diabetes Translation. National Diabetes Surveillance System



## Diabetes Prevalence and Income



## Diabetes Prevalence and Education





## Other social-ecological risk factors for Diabetes

- Marital Status
- Ethnicity
- Cycles of food deprivation, binging
- Limited access to healthy food
- Low cost of energy dense food

Seligman et al., 2011, *Journal of Nutrition*, v.141 n3



People who are food insecure and have diabetes have:

- competing resources for diabetes management
- lower diabetes self-efficacy
- higher rates of diabetes distress, depression
- more frequent ER visits for hypoglycemia
- higher Hemoglobin A1C averages

Seligman et al., 2011, *Journal of Nutrition*, v.141 n3

Seligman et al., 2012, *Diabetes Care*, v. 35



## Extreme Food Security: Hunger Avoidance Behaviors

- processed food, low fruit and vegetables
- binging when food is available
- overconsumption of satiating foods
- limited dietary variety



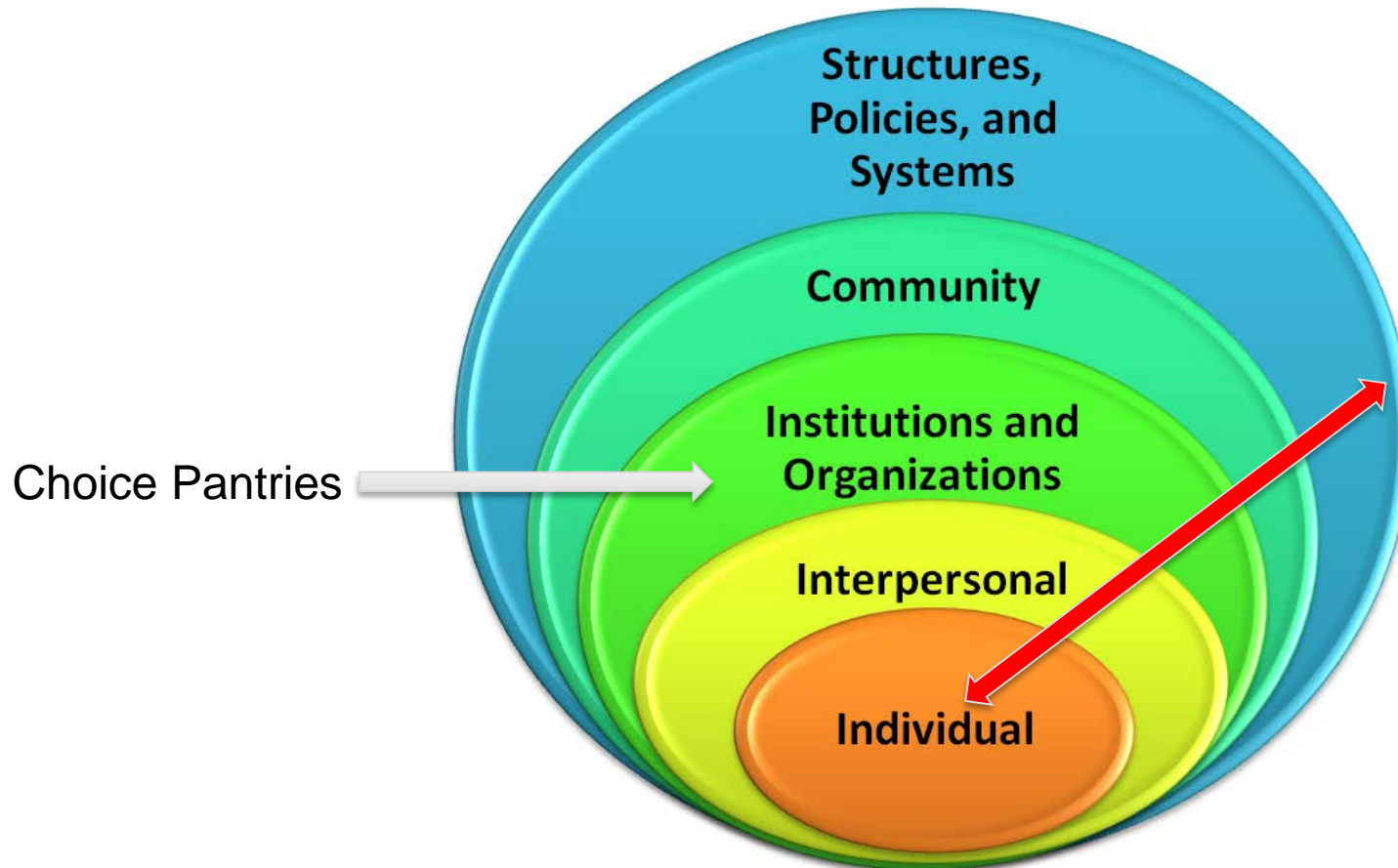


# Rainbow of Colors Choice Food Pantries

Opportunities to Address Food  
Insecurity and Chronic Disease



## Food Councils and Food Pantries: Social Ecological Approaches





# The Traditional Pantry Model

- Client receives food in box or bag
- Pre-selected items
- Volunteer spends most of his/her time putting food in box or bag



## Advantages and Disadvantages of Traditional Pantries

### Advantages:

- Good for clients who do not want to choose
- Good for clients who do not want much interaction with volunteers
- Efficient: little or no wait time

### Disadvantages:

- Less opportunity to interact with clients
- Can be an undignified experience for people used to choice
- Wasted food



# The Client Choice Model

- Set up like grocery store. Client has the choice
- Volunteer spends more time interacting with clients





## Advantages and Disadvantages of Choice

### Advantages

- Produces less food waste
- Often preferred by clients and volunteers
- Offers dignified experience to some
- More opportunity to interact with clients
- Could promote long-term food security and health

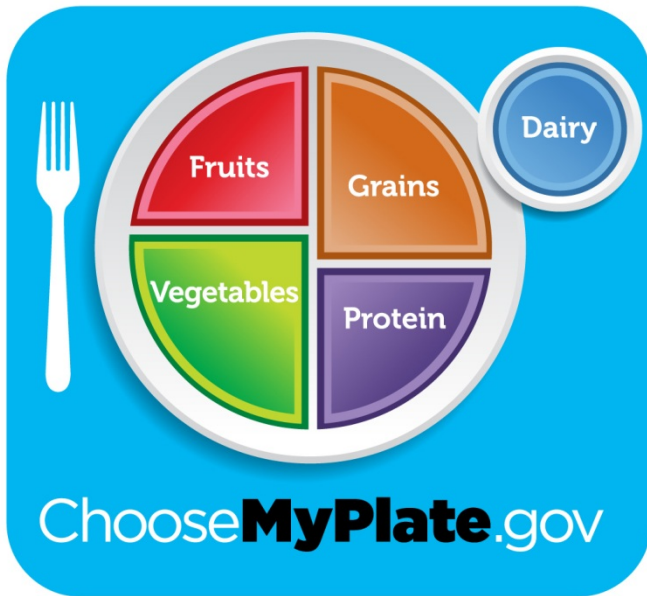
### Disadvantages

- Inefficient: waiting period
- Volunteer training often needed
- Volunteer management critical
- Some clients don't like choice





# Rainbow of Colors Choice Pantries Address Food Insecurity and Nutrition

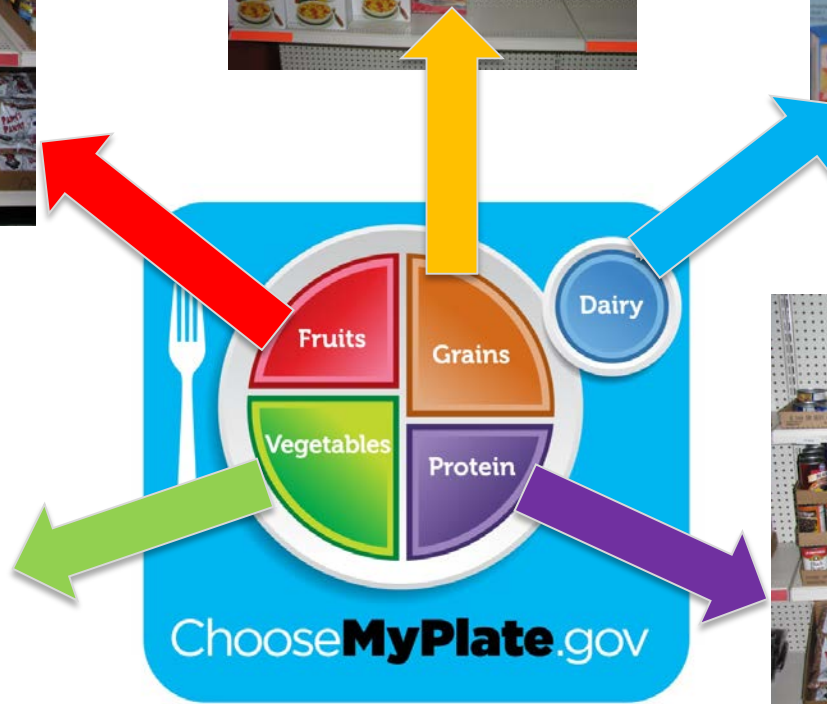




## The “Rainbow of Colors” System

- Allows families to choose foods based on the USDA MyPlate Food Guidance System.
- Based on household size.
- Number of food choices per household are based on pantries' inventory/availability
- Commodities are placed on color-coded shelves based on MyPlate colors.
- Draws from Social Marketing Theory







Miscellaneous



Combination



Welcome to Butler County

**The Lord's Cupboard Choice Pantry  
Value Selection Sheet**


**Family Size 1 or 2**

Date Issued \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_


Name \_\_\_\_\_  
Last First




**Grains**

3 orange choices   
Whole grain bread items are free\*

**Fruits**

2 red choices   
Fresh produce choices are free\*

**Vegetables**

3 green choices   
Fresh produce choices are free\*

**Meat and Beans (including Fish and Eggs)**

3 purple choices 


**Milk (including Yogurt and Cheese)**


1 blue choice 

**Combination Foods**

3 brown choices 

**Miscellaneous (fats, oils, ingredients)**

3 yellow choices 

Personal items - 3 choices\* 

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A member of Butler County F.F.E.D. Alliance

\*based on availability of product

**Steps to a Healthier You**

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Choose a  
**RAINBOW**  
of color

OHIO STATE UNIVERSITY

SPEAK UP FOR CHILDREN

CVS/pharmacy

CVS/pharmacy

Apricots

Mixed Fruit

Sliced Peaches

Sliced Peaches

Spaghetti Sauce

Sweet Peaches





# Enhancing Nutrition Education within the Rainbow of Colors System

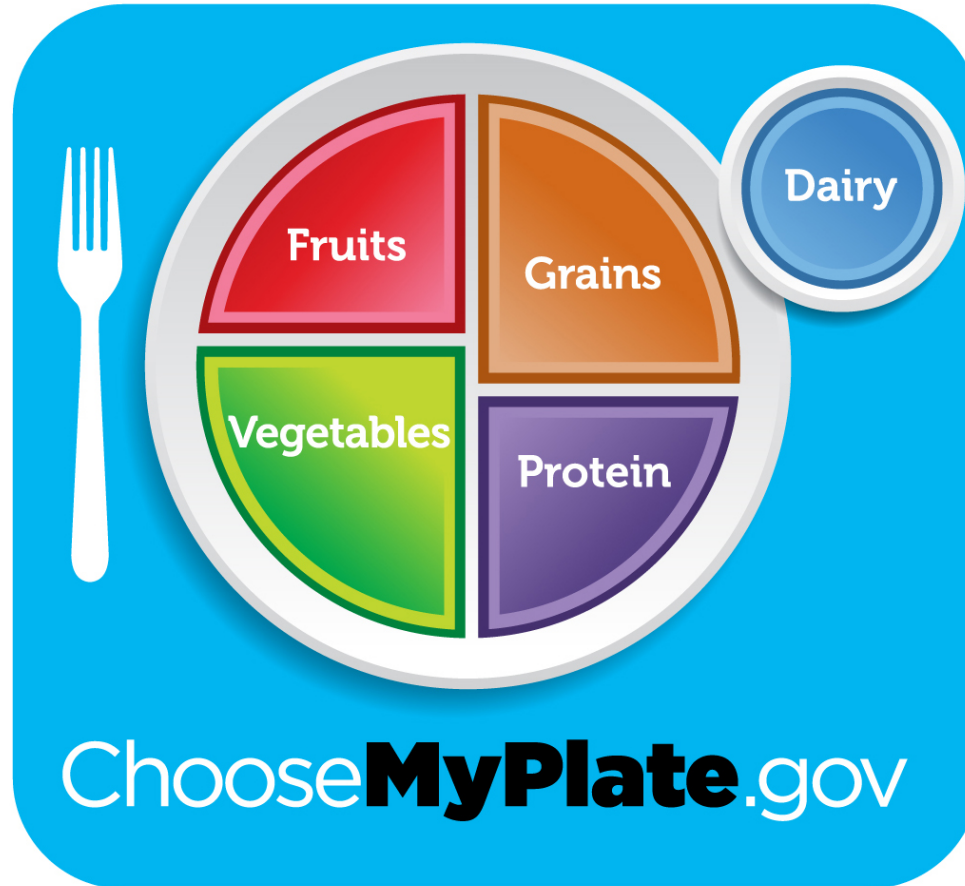




# Social Marketing Strategies

*Main message: Include a variety of food groups in meals and snacks (MyPlate Food Model)*

- Myplate Food Groups
- Nutrition Education DVD
- Cooking Demonstrations and Nutrition Workshops
- Volunteers promote MyPlate messages and label reading
- Product Placement





**WE NEED SHOPPING BAGS FOR THE PANTRY**

IF YOU OR ANYONE YOU KNOW COULD BRING US SHOPPING BAGS FROM KROGER, WALMART, AND TARGET, IT WOULD BE A HUGE HELP.

IF WE RUN OUT OF SHOPPING BAGS FOR THE PANTRY, WE DON'T HAVE ANY FROM ANY PLACE OTHER THAN KROGER, WALMART, AND TARGET. SO PLEASE BRING ANY AND ALL SHOPPING BAGS TO THE PANTRY ANYTIME !!!!!


PLEASE HELP!! WE NEED SHOPPING BAGS

**Seven Ways to Size Up Your Servings**

1. A portion of protein is about the size of a deck of cards.
2. A portion of grains is about the size of a fist.
3. A portion of vegetables is about the size of a baseball cap.
4. A portion of fruit is about the size of a tennis ball.
5. A portion of dairy is about the size of a small carton of milk.
6. A portion of oil is about the size of a thumb.
7. A portion of nuts is about the size of a handful.

**MOST IMPORTANT**  
1. 1/2 cup of cooked grains  
2. 1/2 cup of cooked beans  
3. 1/2 cup of cooked lentils  
4. 1/2 cup of cooked chickpeas  
5. 1/2 cup of cooked quinoa  
6. 1/2 cup of cooked farro  
7. 1/2 cup of cooked barley

**Alzheimer's Disease**



**Caring for Your Loved One**

Razadyne Ex

Visit The Ohio Benefit Bank at [www.obb.ohio.gov](http://www.obb.ohio.gov)

**Your Joint Pain is Personal. See in Your Treatment.**



For a lasting, pain-free life.



## \*HOPPIN' JOHN\*

GROUP:

INGREDIENTS:

2 ½ Cups instant white or brown RICE, uncooked

2 Cups chopped ONION

2 Cans (13 ¾ ounce each) CHICKEN BROTH

1 Teaspoon CRUSHED RED PEPPER

½ Teaspoon GROUND RED PEPPER

3 Cans (15 ½ ounce) BLACK-EYED PEAS, drained and rinsed

1 Package (14 ounce) TURKEY SMOKED SAUSAGE, browned, thinly sliced

Prep time: 15 minutes

Cooking time: 30 minutes

Servings: 3 servings, about 1 ¼ cups each

DIRECTIONS:

Combine peas, broth, sausage, onion, 1 cup water and seasonings in medium saucepan; bring to a boil. Add rice; cover. Simmer 10 minutes or until rice is tender. Garnish this dish with chopped fresh parsley.

Together



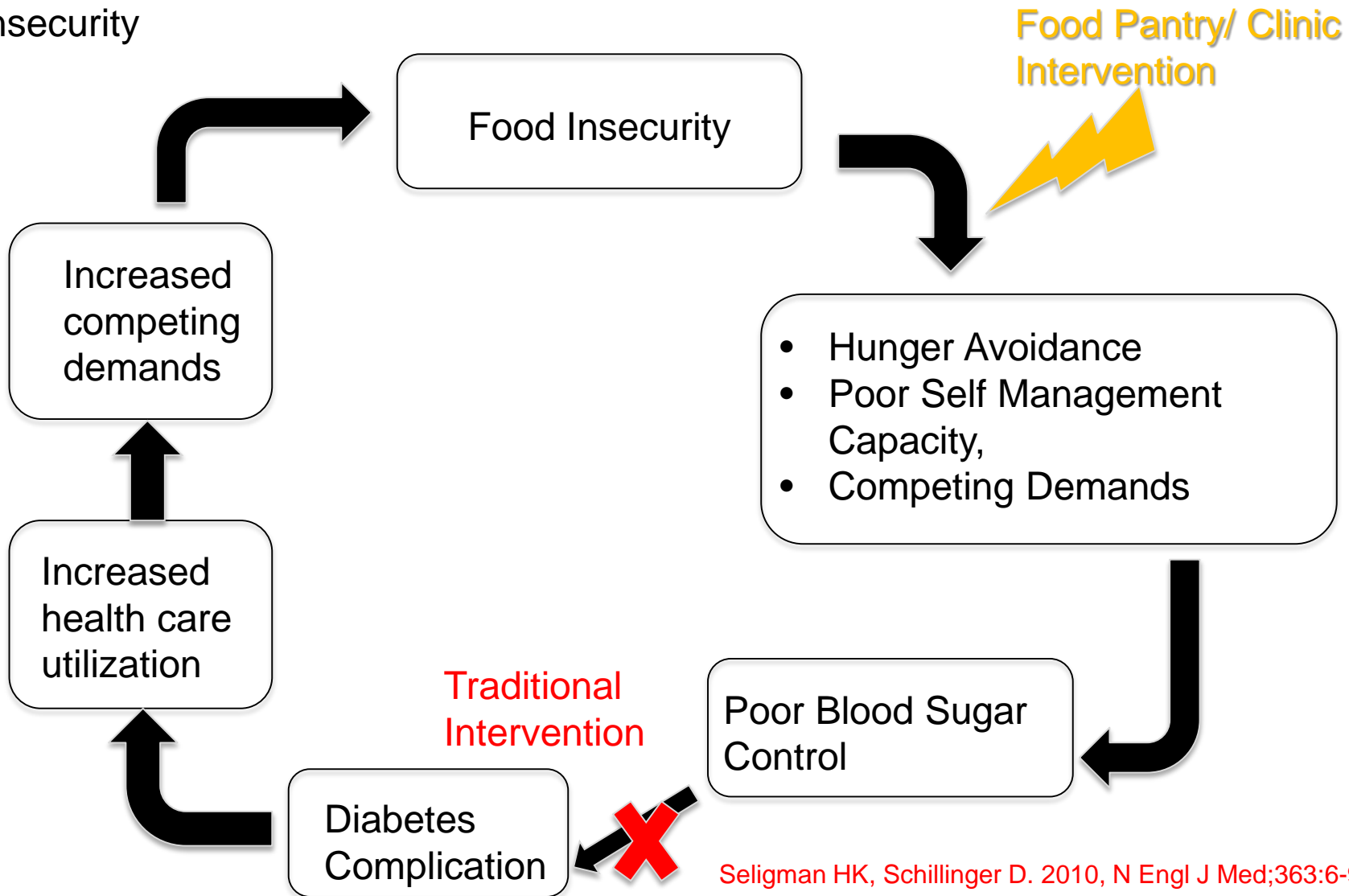
# Other Choice Pantry Best Practices

- Volunteers have conversations with clients
- Clients remove foods from the shelf
- Foods organized correctly according to food groups
- Ancillary services promoted or provided

Remley, et al. 2013. *Journal of Hunger and Environmental Nutrition*.  
Vol. 8, no. 3



# Diabetes and Food Insecurity





# Addressing Diabetes in a Rainbow Choice Food Pantry

## Dos

- Assess chronic disease status
- Screenings, Referrals
- Encourage MyPlate and Nutrition Messages
- Promote low fat, sodium choices especially within Combo and Misc. sections
- Offer fruit juice, high glycemic items
- Increase food allowance in main food groups
- Encouragement, Empathy



# Addressing Diabetes in Choice Food Pantry

- Don'ts
  - Offer Sugar-free junk food
  - Judgements
  - Food restrictions
  - Promoting special diets, dietary foods





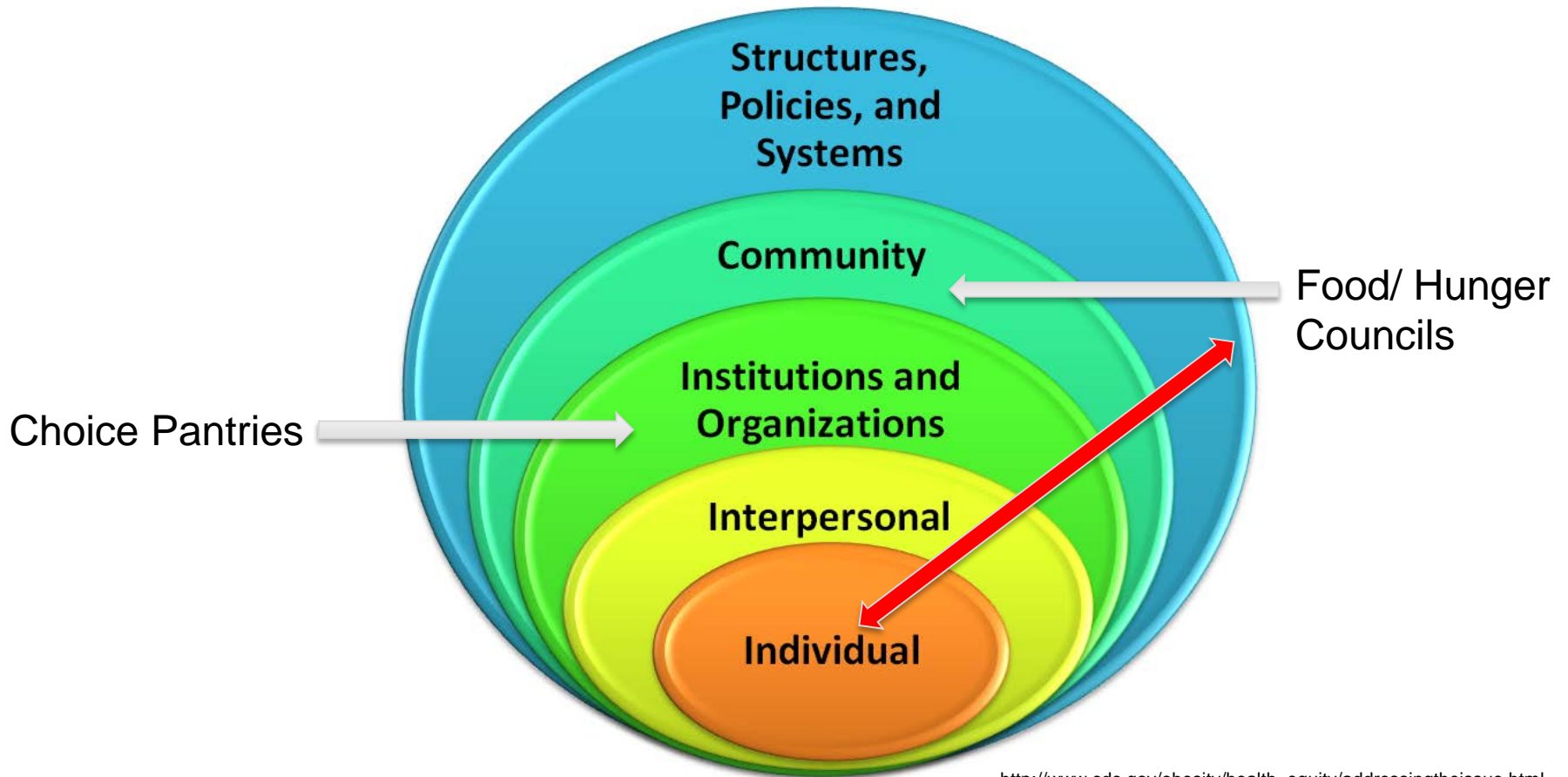
# Food/ Hunger Councils

Group of community stakeholders representing sectors of the food system- production through consumption, ancillary social service providers (including health care)





## Food/ hunger Councils and Food Pantries: Social Ecological Approaches







# Why Food/ Hunger Councils?

- Forum for food issues
- Projects (incentivizing choice food pantries, healthy food drives, establishing community gardens, etc.)
- Collaboration and Coordination
- Informing policy at local, state, and national levels

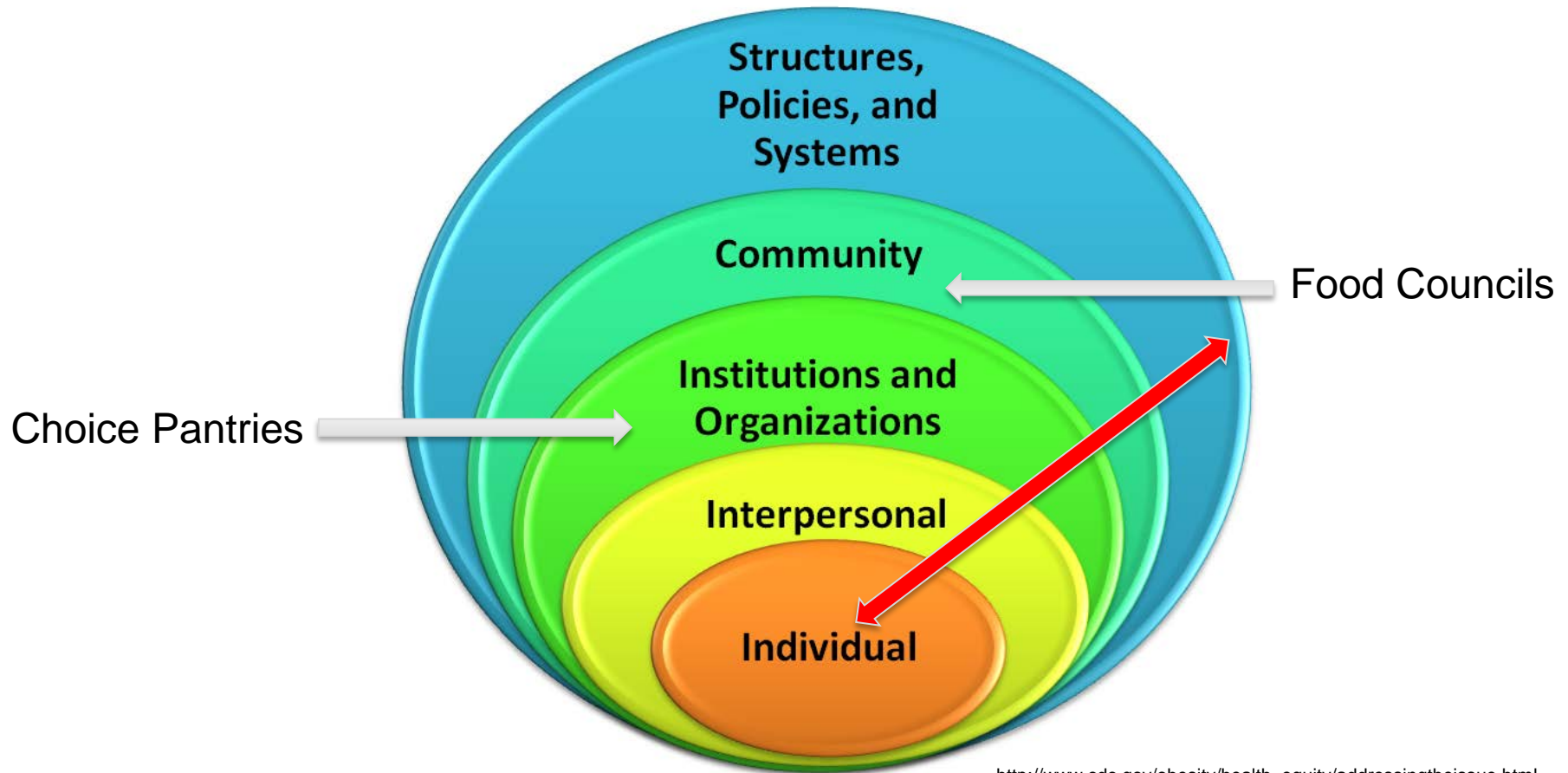


# Food Council collaboration with Shared Harvest Foodbank

- Developed the Rainbow System in consultation with OSU Extension
- Established set of “best practices”
- Established monitoring system
- Networking and collaboration



## Food Councils and Food Pantries: Invisible Cultural Walls



[http://www.cdc.gov/obesity/health\\_equity/addressingtheissue.html](http://www.cdc.gov/obesity/health_equity/addressingtheissue.html)



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# Great Resources

- Healthy Foodbank Hub  
<http://healthyfoodbankhub.feedingamerica.org/>
- Youtube: Making the Switch (OASHF)  
[https://www.youtube.com/watch?v=ztD\\_UobB0yE](https://www.youtube.com/watch?v=ztD_UobB0yE)
- Facebook: “Rainbow of Colors Choice Food Pantries”  
<http://www.facebook.com/#!/RainbowOfColorsChoiceFoodPantries>