

Community, Economic, and Health Development Outcomes Related to Food Security



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Existing Databases with Health Development Outcomes

Databases that provide information on health behaviors, health outcomes, and health care utilization across states and regions related to food insecurity.

Examples

- Behavioral Risk Factor Surveillance System (CDC)
- Youth Risk Behavioral Surveillance System (CDC)
- County Health Rankings (Population Health Institute, University of Wisconsin) (linkages to multiple databases)
- National Collaborative on Childhood Obesity Research (linkages to multiple databases)
- Federally qualified health centers (EMR, quality varies by site)
- Office of Research and Statistics (SC)

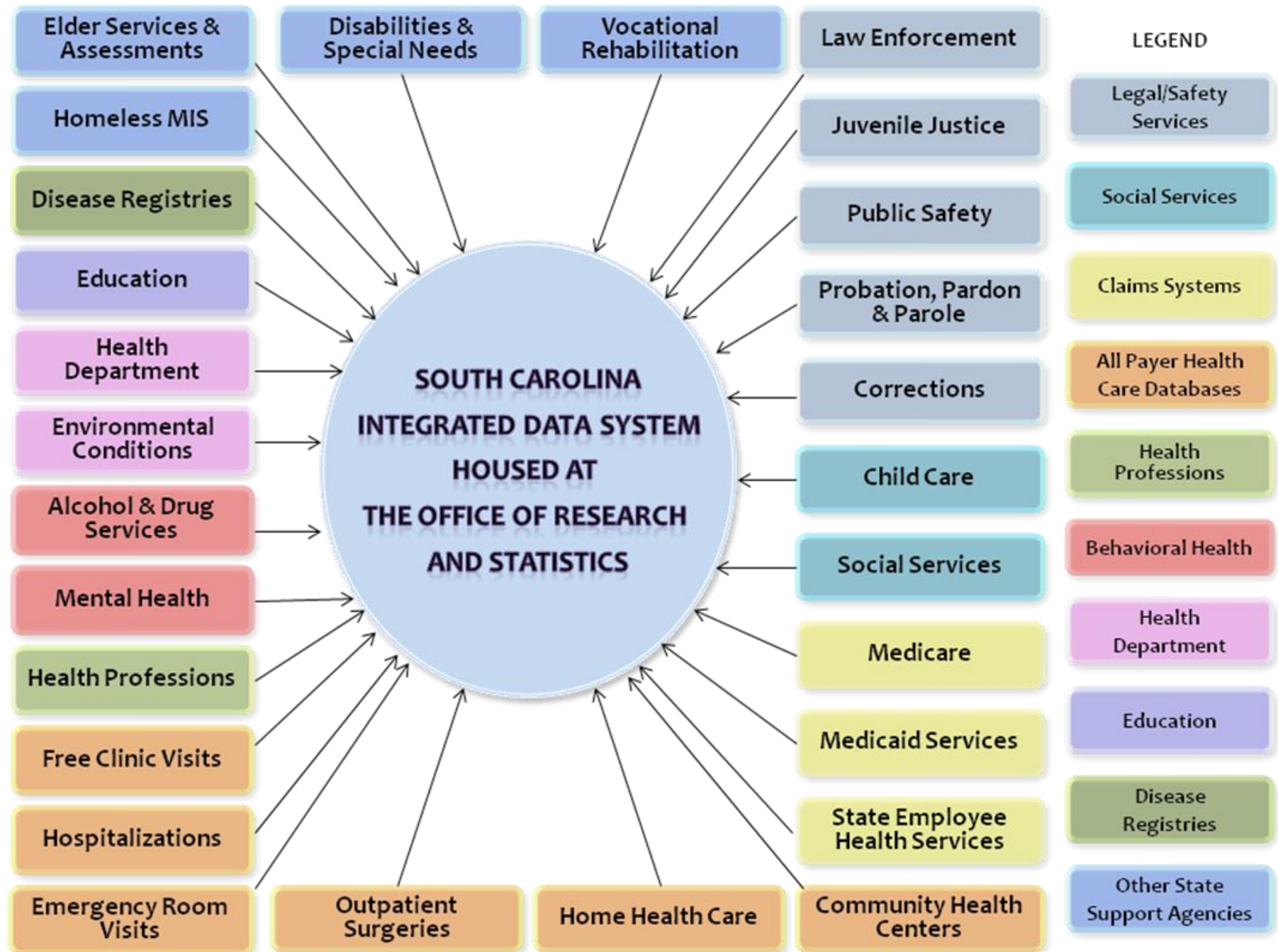


Office of Research and Statistics

- Linking of varied datasets
- Organized portal for accessing data from multiple agencies
- Data warehouse provides de-identified excerpts of data or they run analyses for you
- Fee for service; available to people across US
- Example: Children aging out of foster care lost to follow up; waiver signed at 18 years of age that they could be tracked through system to find last known address



South Carolina's Integrated Data System



Existing Databases with Economic Development Outcomes

Databases that provide information on economic landscape of communities, food subsidy and agricultural economy.

Examples

- Decennial Census, Current Population Survey (Census Bureau)
- Census of Agriculture (USDA)
- Supplemental Nutrition Assistance Program (SNAP) Data System
- Minimum wage rates by state (US Department of Labor)*



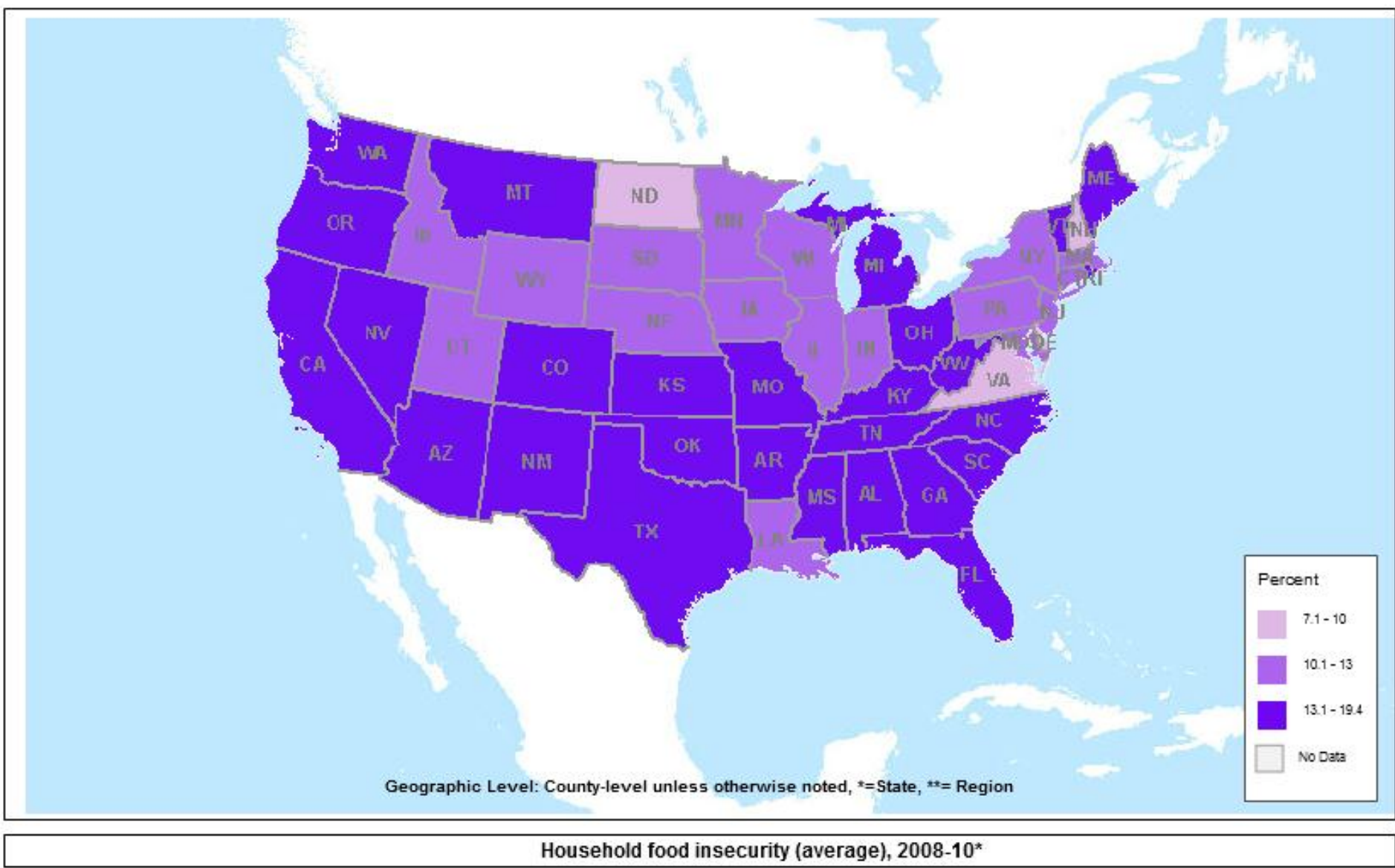
Existing Databases with Community Development Outcomes

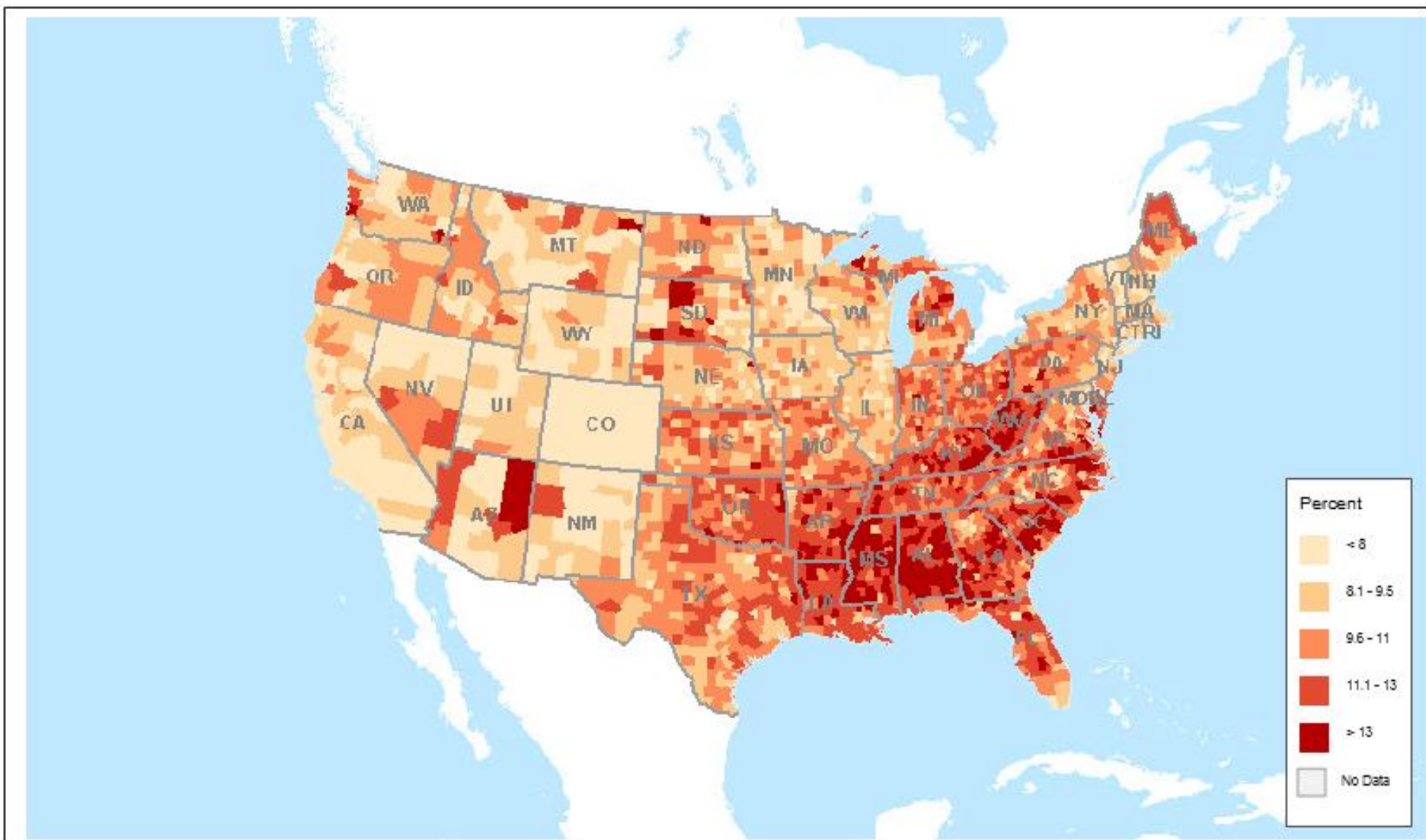
Databases that provide information on sociodemographics, community food environments, partnerships and coalitions.

Examples

- Food Environment Atlas (USDA)
- Community-based farmers' markets (SC Department of Agriculture)*
- Eat Smart Move Move South Carolina (list of local chapters)*

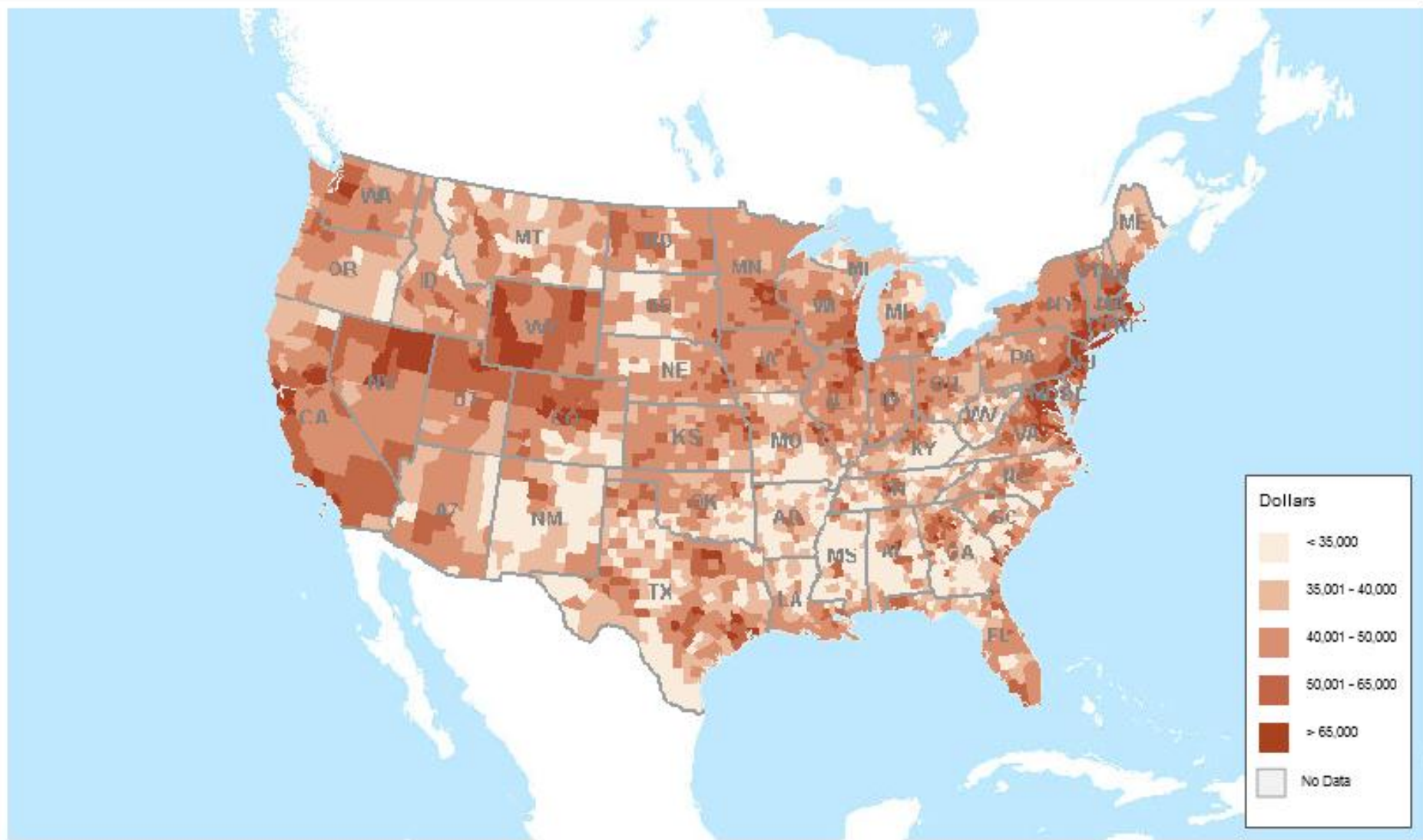






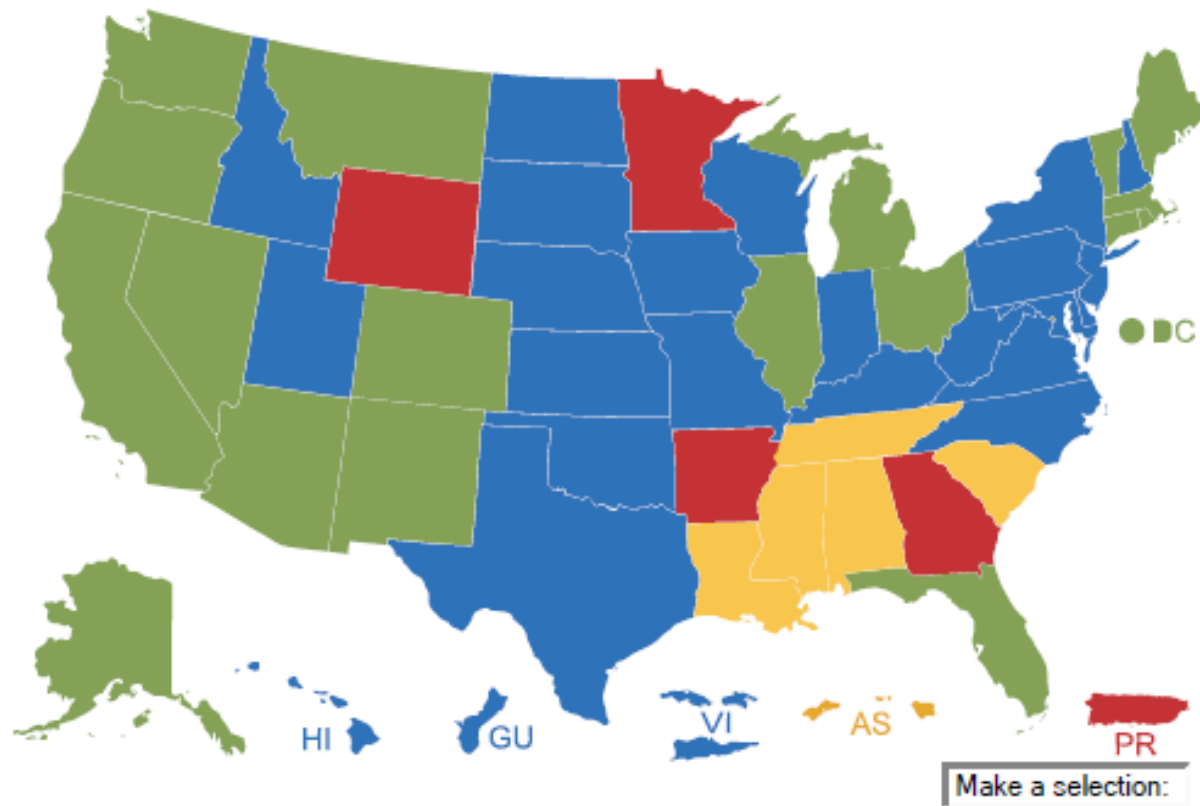
Adult diabetes rate, 2009





Median household income, 2010



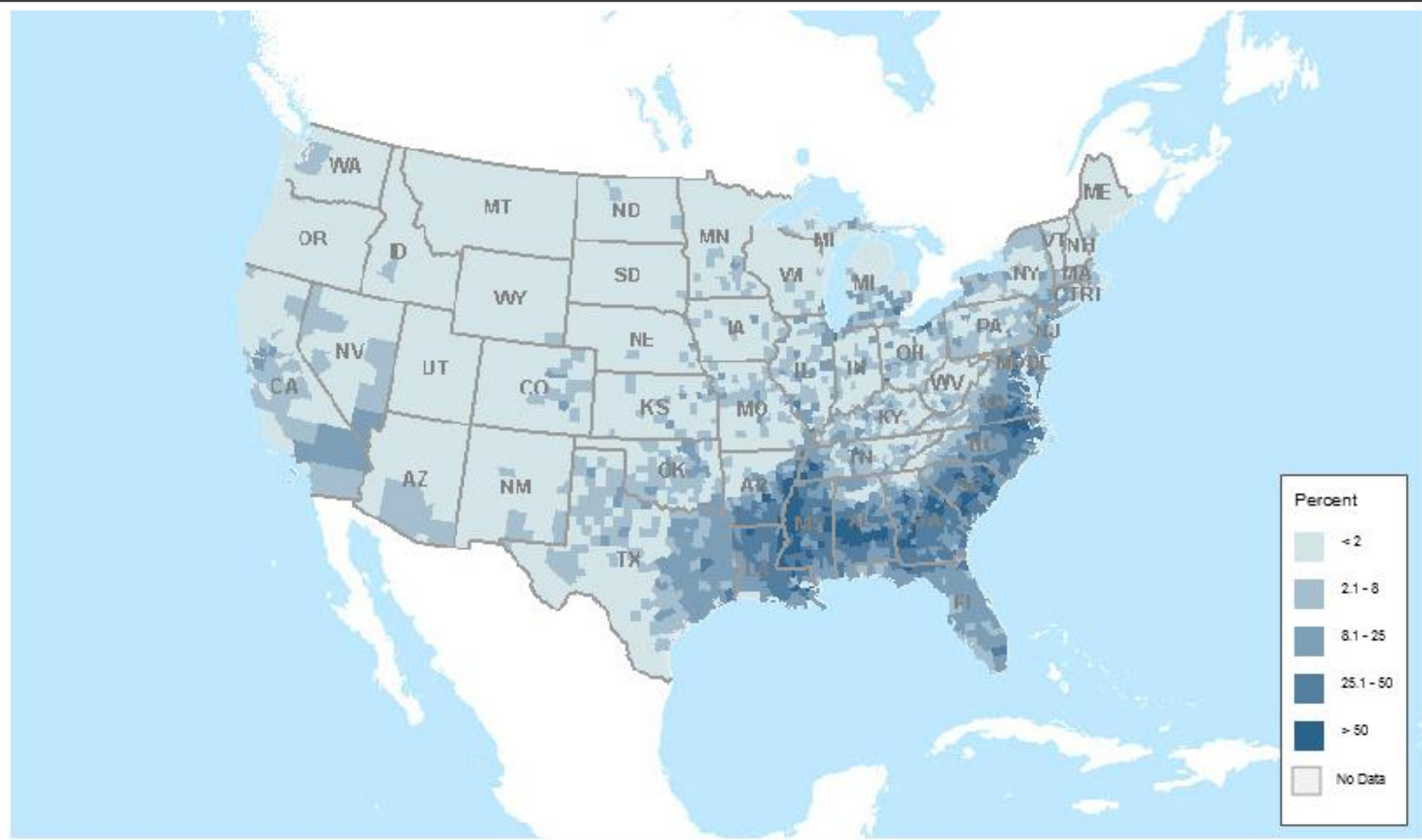


- States with minimum wage rates higher than the Federal
- States with no minimum wage law
- States with minimum wage rates the same as the Federal
- States with minimum wage rates lower than the Federal
- American Samoa has special minimum wage rates

Federal rate: \$7.25

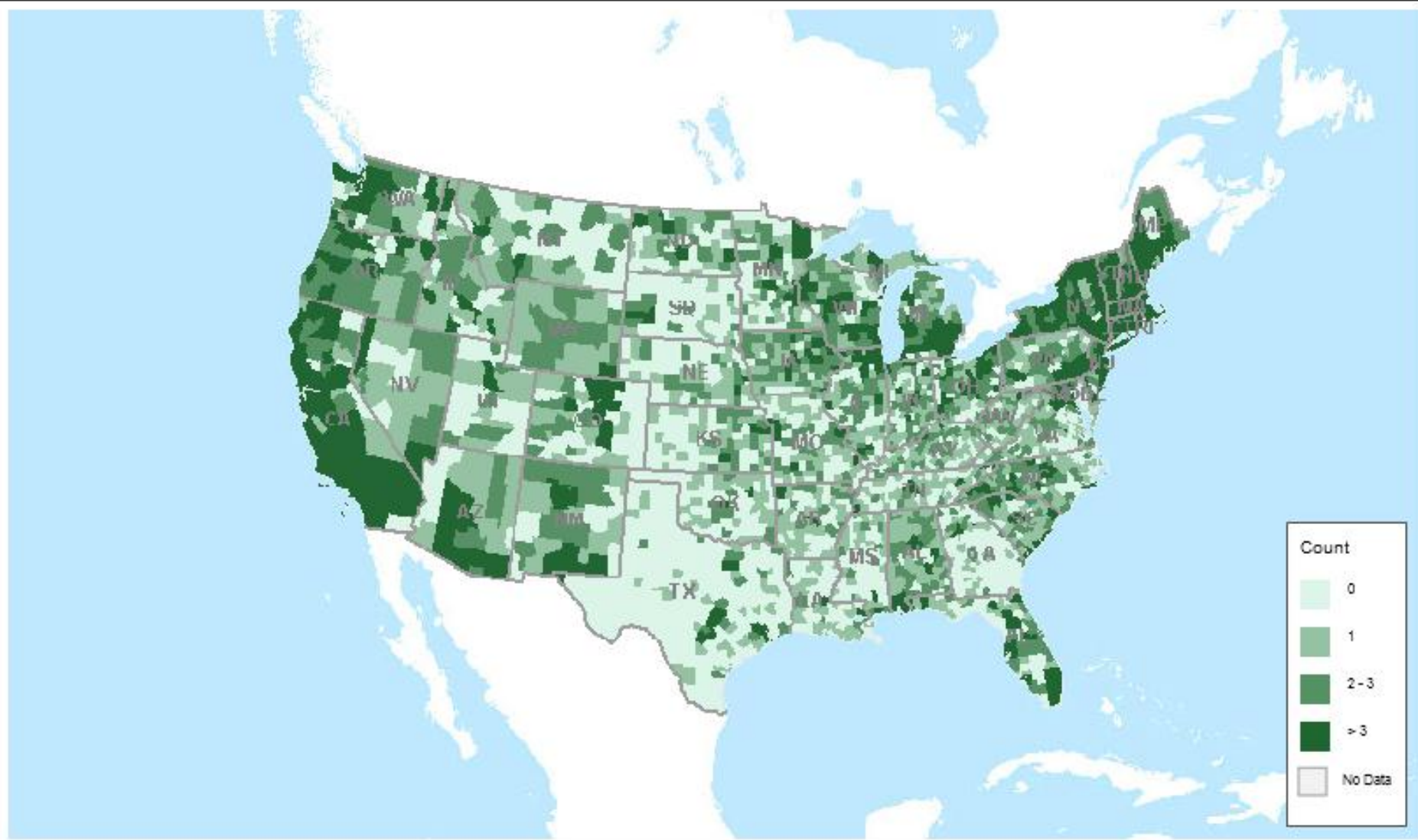
Minimum Wage and Overtime Premium Pay Standards Applicable to
Nonsupervisory NONFARM *Private Sector* Employment
Under State and Federal Laws
January 1, 2012¹





% Black, 2010





Farmers' markets, 2011



Strengths of Existing Databases

- Proxy data available for a variety of health, economic, and community development outcomes related to food security/food justice
 - Provide snapshot of broader context
- Inclusion of mapping function in many databases
- Central portals for integrating a variety of outcome data
- Open access
- Relatively easy to use for research and/or community activism



Weaknesses of Existing Databases

- Time lag in availability
- Cross sectional; difficult to establish causality related to interventions
 - Need to assess mediators and moderators



8063440364

Date / / Farmer ID F RA Initials: ID

Right Choice Fresh Start Farmers' Market Receipt (Form 02)

Type of Customer- Pick One: ☐ FHC Staff☐ FHC Patient☐ Community Member (from Orangeburg area)☐ Other, specify:

All Produce that can be purchased individually (e.g. apples, tomatoes, watermelons, etc.) can all be recorded as 1=1. All produce sold in a group (e.g., okra, grapes, peanuts, green beans, etc.) can be recorded as small basket or large basket. If Other unit is used (e.g., pound, pot, etc.) mark other and record and specify the unit.

PROD-Code	PRODUCE_Name	UNIT USED IN THIS SALE	OTHER UNITS, SPEC.	# UNITS	PRICE/UNIT (for calculations only)	COST
<input type="text"/>	<input type="text"/>	<input type="radio"/> 1=1 <input type="radio"/> Small Basket <input type="radio"/> Large Basket <input type="radio"/> Other	<input type="text"/>	<input type="text"/> . <input type="text"/>	<input type="text"/> X <input type="text"/>	\$ <input type="text"/> . <input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="radio"/> 1=1 <input type="radio"/> Small Basket <input type="radio"/> Large Basket <input type="radio"/> Other	<input type="text"/>	<input type="text"/> . <input type="text"/>	<input type="text"/> X <input type="text"/>	\$ <input type="text"/> . <input type="text"/>
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Total Cost \$.

PLEASE TURN PAGE OVER

3197440367

ID

Total cost from the other side:

TOTAL COST \$.

FORMS OF PAYMENT:

Type	Amount
Cash or Check <input type="radio"/>	\$ <input type="text"/> . <input type="text"/>
Shop 'n' Save Vouchers <input type="radio"/>	\$ <input type="text"/> . <input type="text"/>
\$1.00 off coupon* <input type="radio"/>	\$ <input type="text"/> . <input type="text"/>
EBT/SNAP* <input type="radio"/>	\$ <input type="text"/> . <input type="text"/>
Senior FM Voucher <input type="radio"/>	\$ <input type="text"/> . <input type="text"/>
WIC FM Voucher <input type="radio"/>	\$ <input type="text"/> . <input type="text"/>
FHC Voucher <input type="radio"/>	\$ <input type="text"/> . <input type="text"/>
Other payment: <input type="radio"/>	\$ <input type="text"/> . <input type="text"/>

Is this person a Shop 'n' Save participant?

☐ Yes ☐ No

If Yes, Participant ID:

(First Initial; Last Initial; Month; Day; Year e.g. JM022112)

Amount Customer Paid: \$.

Comment on Sales Transaction (Select One):

<input type="radio"/>	Customer paid exact price of produce
<input type="radio"/>	Customer unintentionally paid <u>more</u> than price of produce
<input type="radio"/>	Customer unintentionally paid <u>less</u> than price of produce
<input type="radio"/>	Customer bartered/used an alternative form of payment (e.g., exchanged produce)
<input type="radio"/>	Customer was given a deal that was less than the price of produce
<input type="radio"/>	Other:

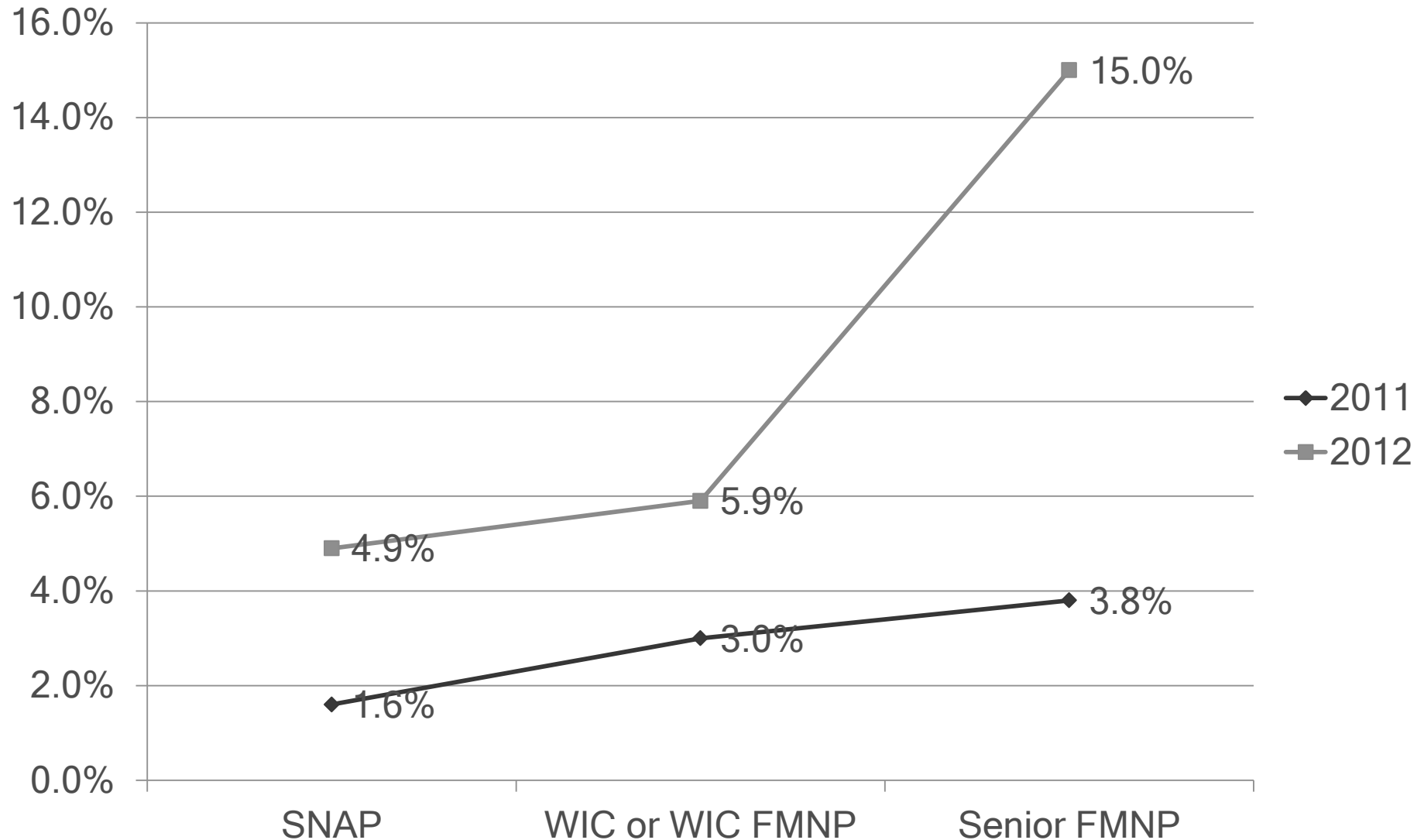
*If Shop 'n' Save voucher, \$ 1.00 off Coupon, or EBT/SNAP used,

Record Customer Name: Customer signature: **For Administrator Use Only:** This receipt resulted in a Shop 'n' Save Voucher. ☐ Yes ☐ No

**A receipt MUST be provided for ALL sales transactions using Shop 'n' Save Vouchers, \$ 1.00 off Coupon, and EBT/SNAP. Farmers will NOT be reimbursed for these sales by RCFS Staff without a receipt.

Food Subsidy Usage At Farmers' Market Before and After Food Subsidy Matching Intervention

12 weeks before (2011) and 12 weeks after (2012)



Weaknesses of Existing Databases

- Time lag in availability
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- Quality of measures (e.g., diet, food environment)



Measuring Diet

McCormack et al., 2010. *Review of the nutritional implications of farmers' markets and community gardens: A call for evaluation and research efforts.*

“conclusions need to be drawn with caution as many of the studies included in this review assessed dietary intake using tools with numerous limitations. ...Few studies used well-established measures of dietary assessment, such as 24-hour dietary recalls and validated FFQs or fruit and vegetable screeners.”



Measured Using Validated F/V Screener

(Greene et al., 2008; Peterson et al, 2008; Thompson et al., 2002)

Table 4. Odds ratios (ORs) and 95% confidence intervals (CIs) of improvements in fruit and vegetable consumption among diabetics frequenting a FQHC-based farmers' market.

Variables	OR	95% CI
Self-reported BMI at T1	1.04	0.92-1.18
Payment type		
Study voucher only	36.53[*]	3.27-407.95
Study voucher + other form of payment	1.00	Referent
Number of farmers' market visits	2.13^{**}	1.10-4.14
Total amount of money spent at the farmers' market	1.01	0.94-1.09
Receipt of food assistance in the past year		
Yes	0.37	0.07-2.00
No	1.00	Referent

^{*} p<0.01

^{**} p<0.05

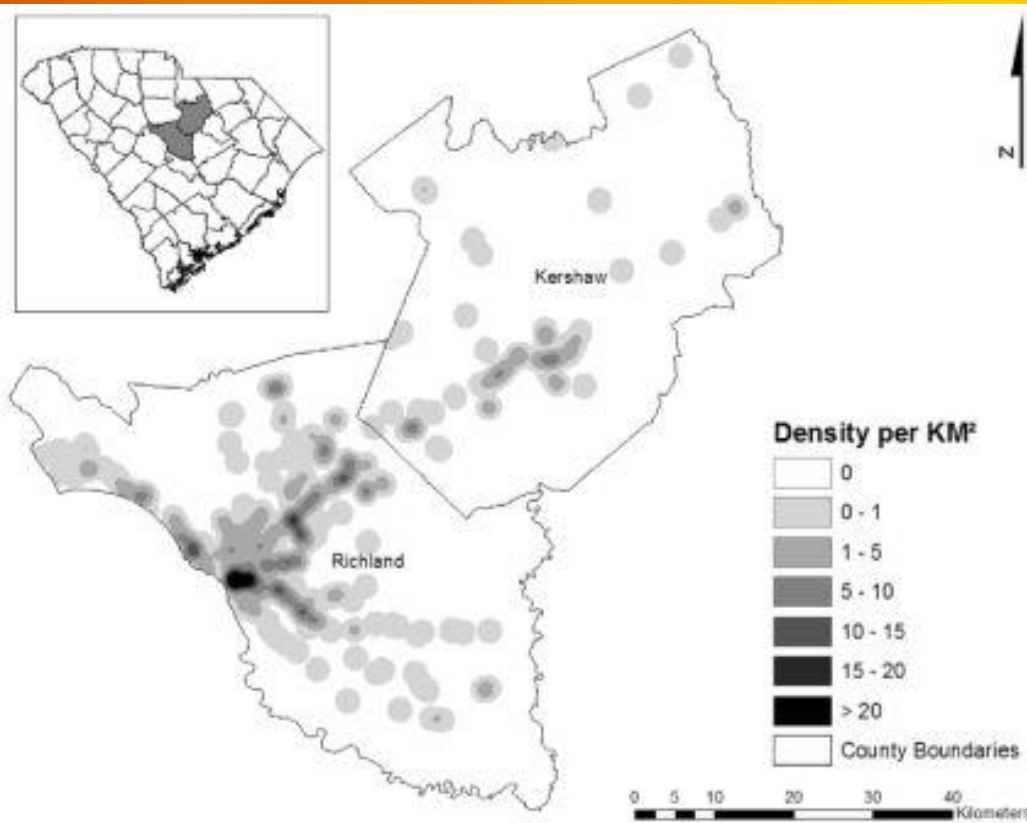


Inaccuracies in food environment measurement based on ground-truthing

Table 1. Disposition of Food Outlets Listed in Secondary Data Sources After an 8-County Field Census, South Carolina, 2008–2009

Data Source and Type of Food Outlet	No. of Outlets Listed	Disposition, %				No. of Outlets Found but Not Listed
		Located and Open	Closed	Not Found	Post Office Box	
South Carolina Department of Health and Environmental Control						
All food outlets	1,694	89.2	4.2	6.6	0.0	696
Stores	417	92.6	1.9	5.5	0.0	513
Supermarket and grocery	122	95.9	1.6	2.5	0.0	44
Convenience	271	91.1	1.5	7.4	0.0	257
Dollar and variety	6	100.0	0.0	0.0	0.0	114
Drug and pharmacy	0	0.0	0.0	0.0	0.0	78
Specialty	18	88.9	11.1	0.0	0.0	20
Restaurants	1,277	88.1	5.0	6.9	0.0	183
Full-service	653	85.3	5.5	9.2	0.0	93
Franchised limited-service	291	95.2	2.1	2.7	0.0	36
Nonfranchised limited-service	333	87.4	6.6	6.0	0.0	54
Dun & Bradstreet, Inc.						
All food outlets	1,573	77.7	7.6	12.3	2.3	985
Stores	751	75.8	5.3	14.8	4.1	330
Supermarket and grocery	157	77.7	7.0	12.7	2.5	39
Convenience	383	74.9	5.7	16.4	2.9	217
Dollar and variety	99	82.8	1.0	10.1	6.1	38
Drug and pharmacy	96	66.7	4.2	18.7	10.4	14
Specialty	16	87.5	12.5	0.0	0.0	22
Restaurants	822	79.6	9.6	10.1	0.7	655
Full-service	389	75.8	11.0	11.8	1.3	356
Franchised limited-service	212	93.4	1.9	4.7	0.0	115
Nonfranchised limited-service	221	72.8	14.5	12.2	0.5	184
InfoUSA, Inc.						
All food outlets	1,657	86.5	3.5	9.0	1.0	774
Stores	672	81.8	3.1	12.8	2.2	349
Supermarket and grocery	136	84.5	3.7	11.0	0.7	46
Convenience	426	82.4	3.0	13.6	0.9	153
Dollar and variety	7	100.0	0.0	0.0	0.0	113
Drug and pharmacy	88	71.6	2.3	14.8	11.4	15
Specialty	15	93.3	6.7	0.0	0.0	22
Restaurants	985	89.7	3.7	6.4	0.1	425
Full-service	481	87.3	5.2	7.3	0.2	231
Franchised limited-service	267	94.4	1.1	4.5	0.0	61
Nonfranchised limited-service	237	89.4	3.8	6.7	0.0	133

Kershaw and Richland Counties in central South Carolina shown with food outlet densities per square kilometer (GIS-based and ground-truthed)



Does NOT measure:
Costs, Quality,
Variety, Social
Climate, Display

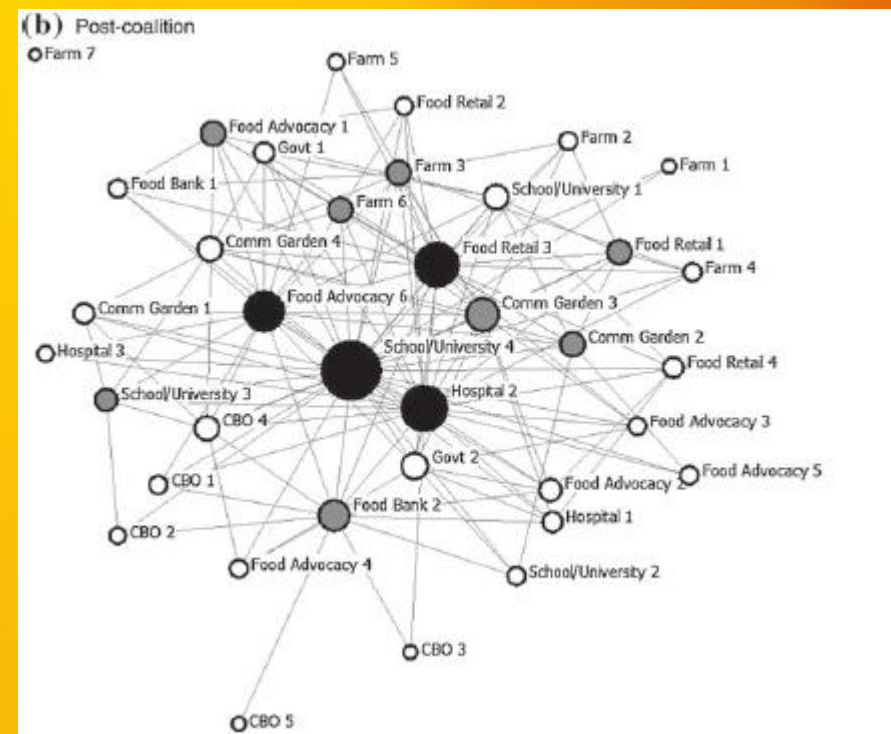
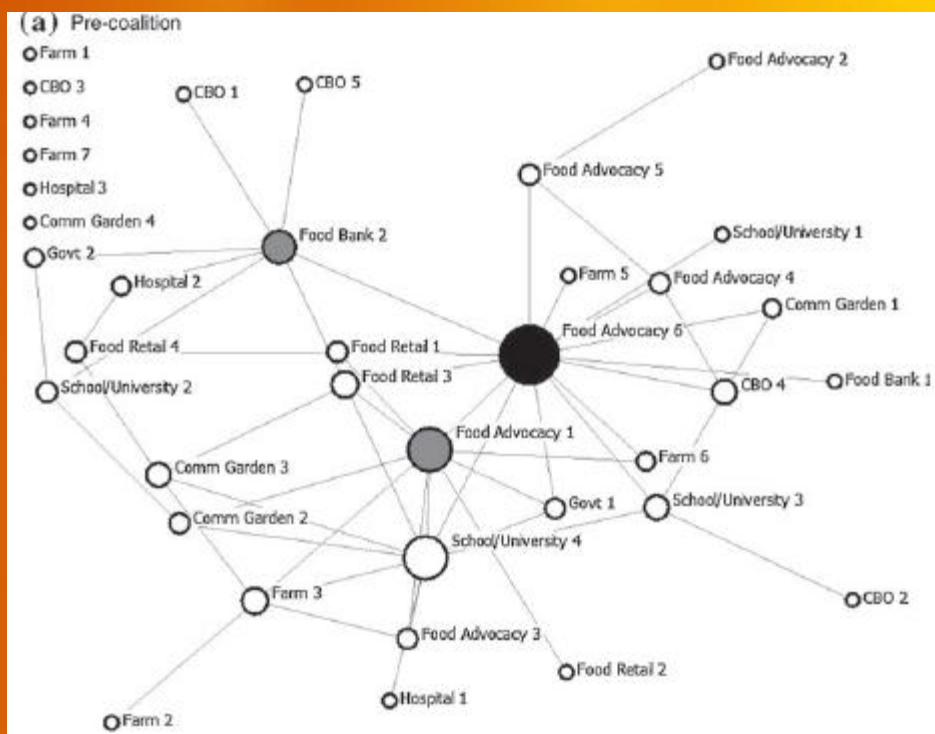


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 - E.g., grocery store added to edge of county
- Limited measures of community-organizational factors related to food security



Organizational ties related to information-seeking among food systems stakeholders before and after the formation of a food security coalition (Community Food Advocates)



Limited data on organizational actors influencing food systems change and very little or no data on connections among actors.



Community Readiness for Food Environment Interventions

Table 2 Dimensions of readiness for establishing an environmental intervention at a health center

Indicator of readiness	Definition	Dimensions
Capacity	Ability to mobilize health center and community resources to implement and sustain the environmental intervention.	Institutional support History of programming to increase access to healthy foods or improve diet
Social capital	Ties and connections available that may be leveraged to mobilize environmental interventions at the health center.	Partnerships and collaborations Collective efficacy Public image
Awareness of health problems and solutions	Understanding of community health concerns and needs and related solutions.	Ecological perspective of health problems Community-informed understanding of health concerns Awareness of barriers to accessing and eating healthy foods Vision that farmers' market will serve as the solution to community health problems
Logistical factors	Resources needed to implement and support an onsite farmers' market.	Physical location Patient volume Access to local farms and farmers
Sustainability	Resources needed to sustain the intervention.	Awareness of intervention demands Broad support for the intervention Ownership of the intervention

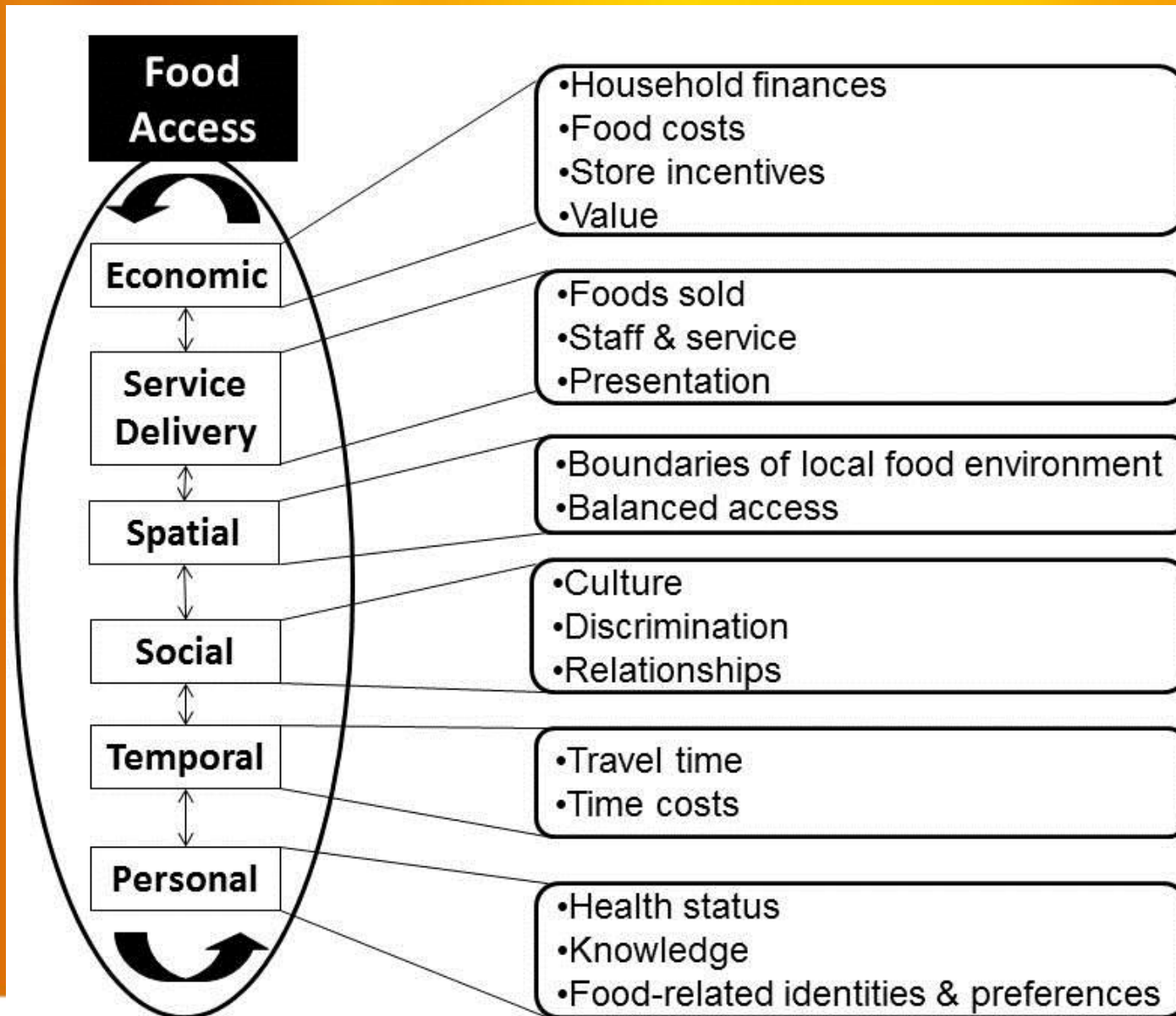


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- Limited measures of community-organizational factors related to food security
- No qualitative data
- Further data-driven but sometimes theory-limited actions



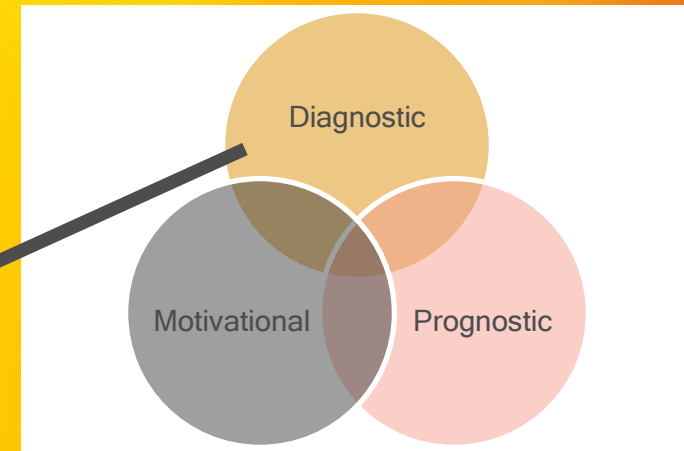
Grounded Theory of Food Access



Using Framing Theory to Understand Child Hunger

Why does child hunger exist?

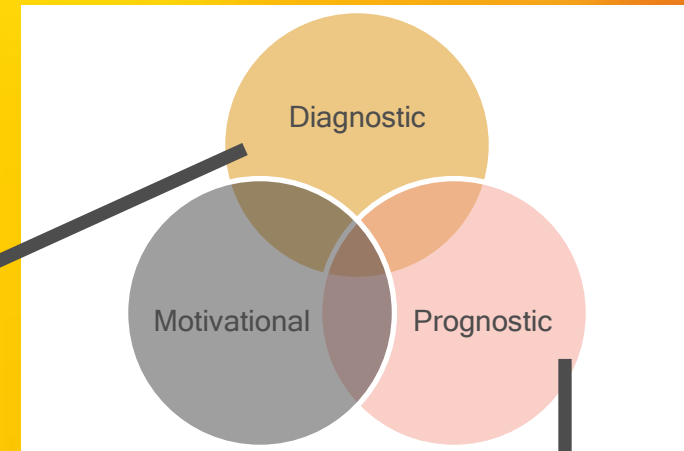
- Symptom of overall insecurity
 - Poverty, stress, limited community resources, limited family resources, limited program resources
- Lack of awareness of the problem
- Lack of coordination of resources
 - In communities, across sectors, silo-effect
- Politics
 - Politicians out of touch, divisiveness and partisanship, ending hunger not a priority



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Ex. More jobs with living wage



Conclusions

- Increasingly good options for documenting health, economic, and community outcomes related to food insecurity
- However, more data are needed...
 - Longitudinal
 - Better measures
 - Qualitative
 - Community-organizational level
 - Community-engaged



What additional data, if any, do we need to communicate with policy makers and other power brokers and stakeholders to improve food security?

Is data (or lack thereof) our problem?



“...patterned, persistent inequalities are due primarily to failed political struggles and power imbalances...”

Richard Hofrichter, 2003, p. 1



Thank you!

