February 20, 2020

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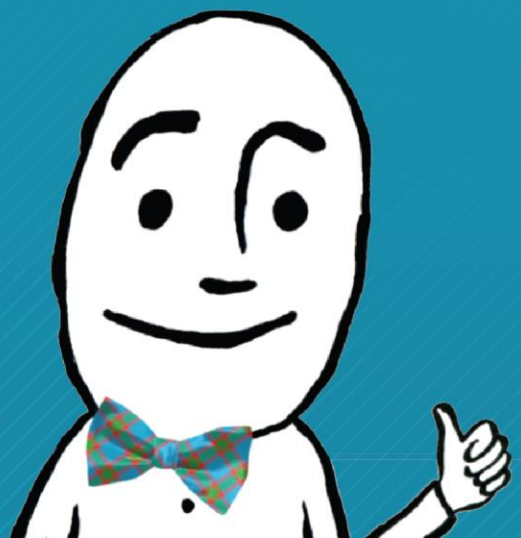
NCCOR
National Collaborative on Childhood Obesity Research

NATIONAL COLLABORATIVE ON CHILDHOOD OBESITY RESEARCH

1. Spotlight: Click, Click, Cook: Online Grocery Shopping Leaves “Food Deserts” Behind
   - Dr. Eric Brandt
   - Jerold Mande
2. One on One
3. NCCOR Announcements

TODAY’S PROGRAM



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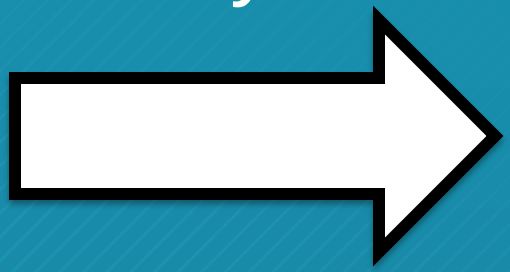

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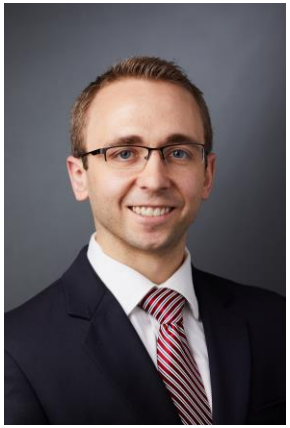
Today's Speakers



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Tufts UNIVERSITY | GERALD J. AND DOROTHY R. Friedman School of Nutrition Science and Policy

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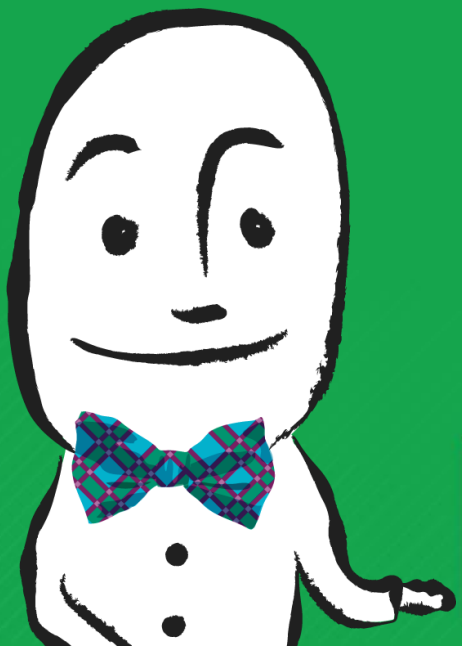
INTERACTIVE POLL



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SPOTLIGHT

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Grocery Delivery for SNAP Recipients: Irrigating Food Deserts

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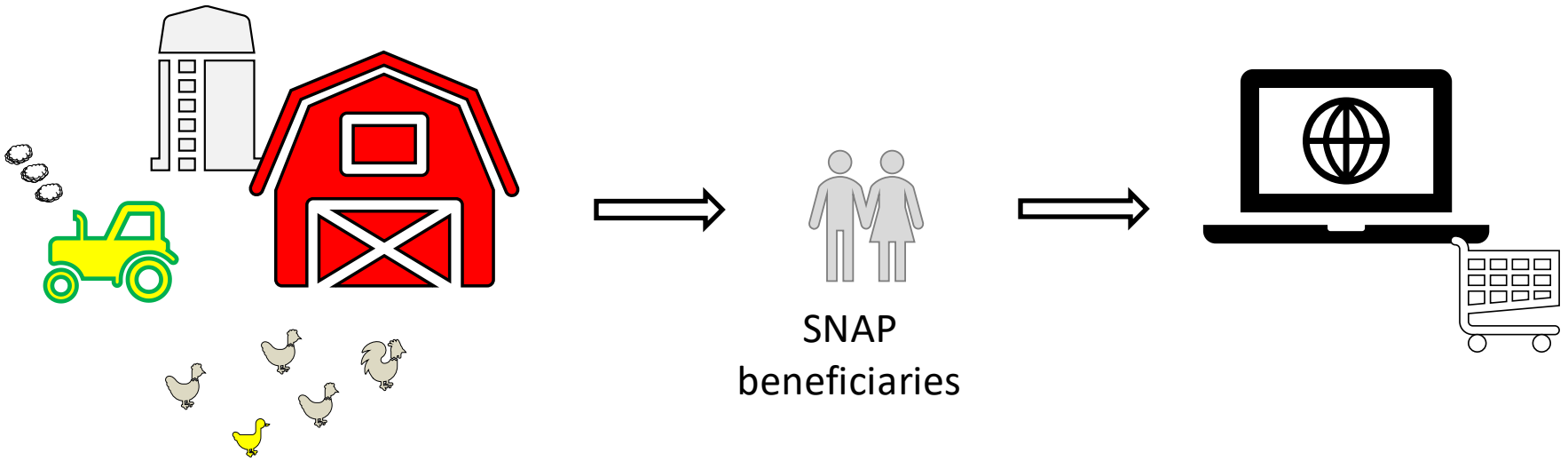
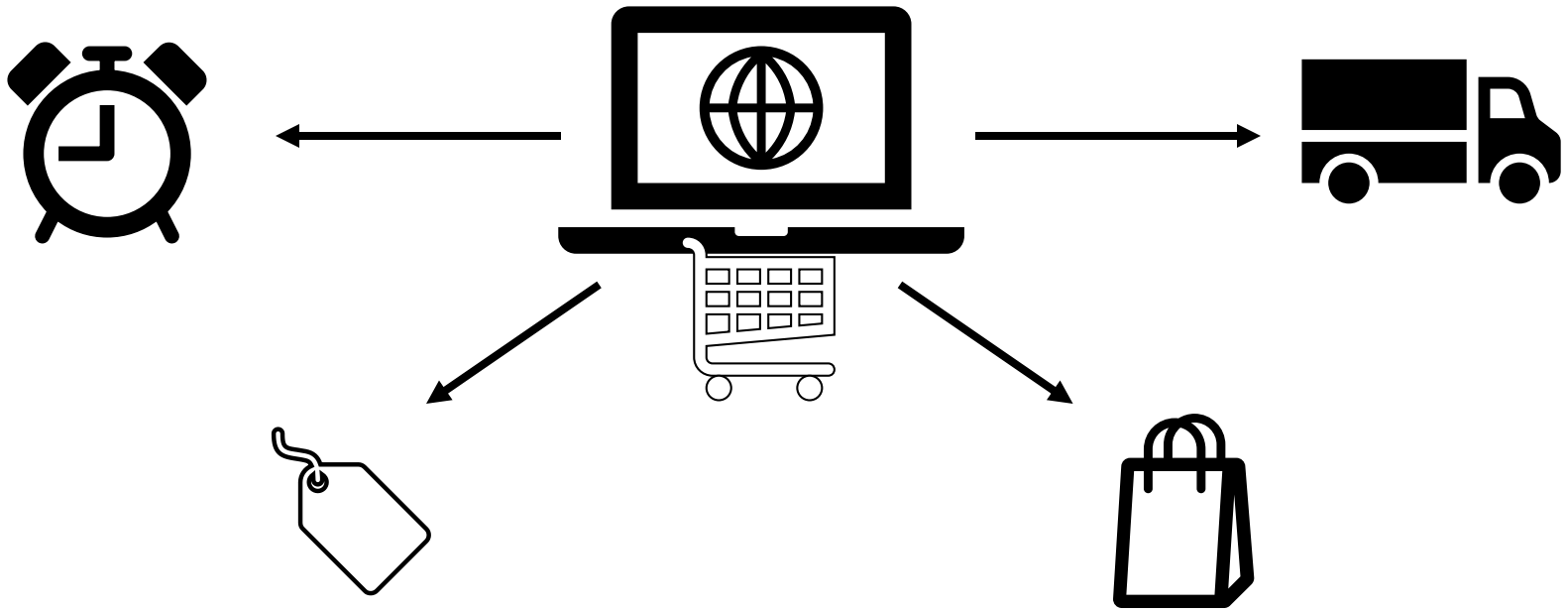
2014 Farm Bill mandated the Online Purchase Pilot (OPP)



2014 Farm Bill mandated the Online Purchase Pilot (OPP)



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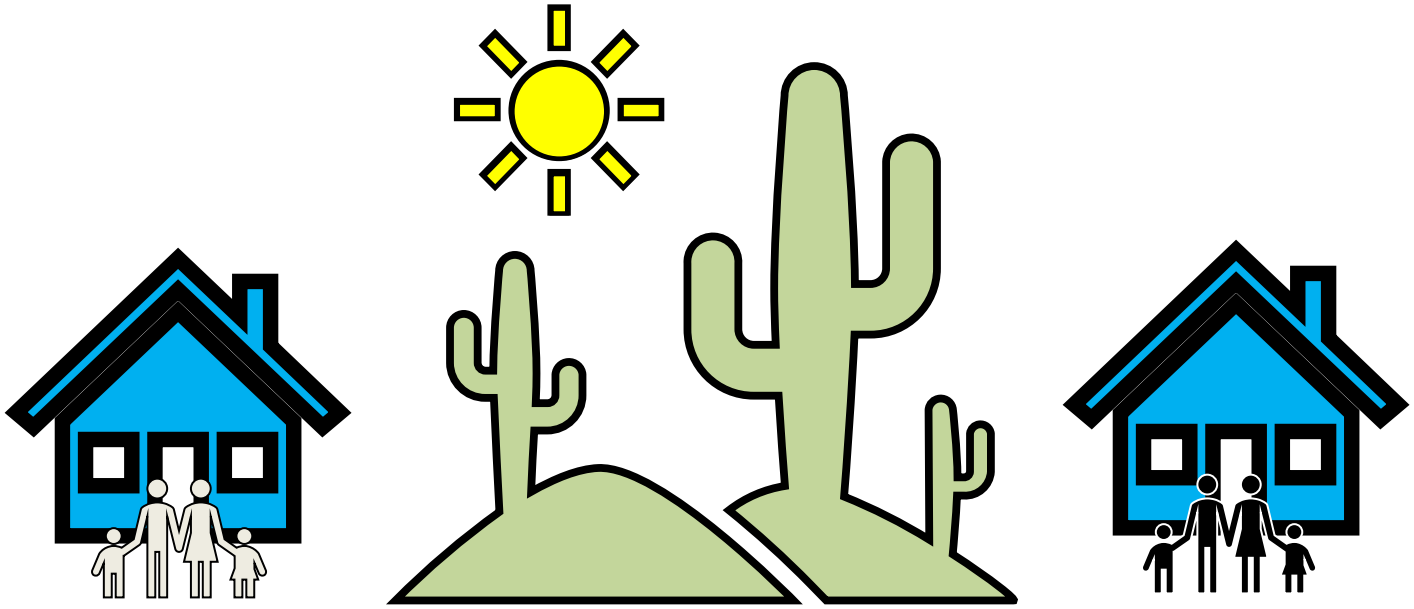
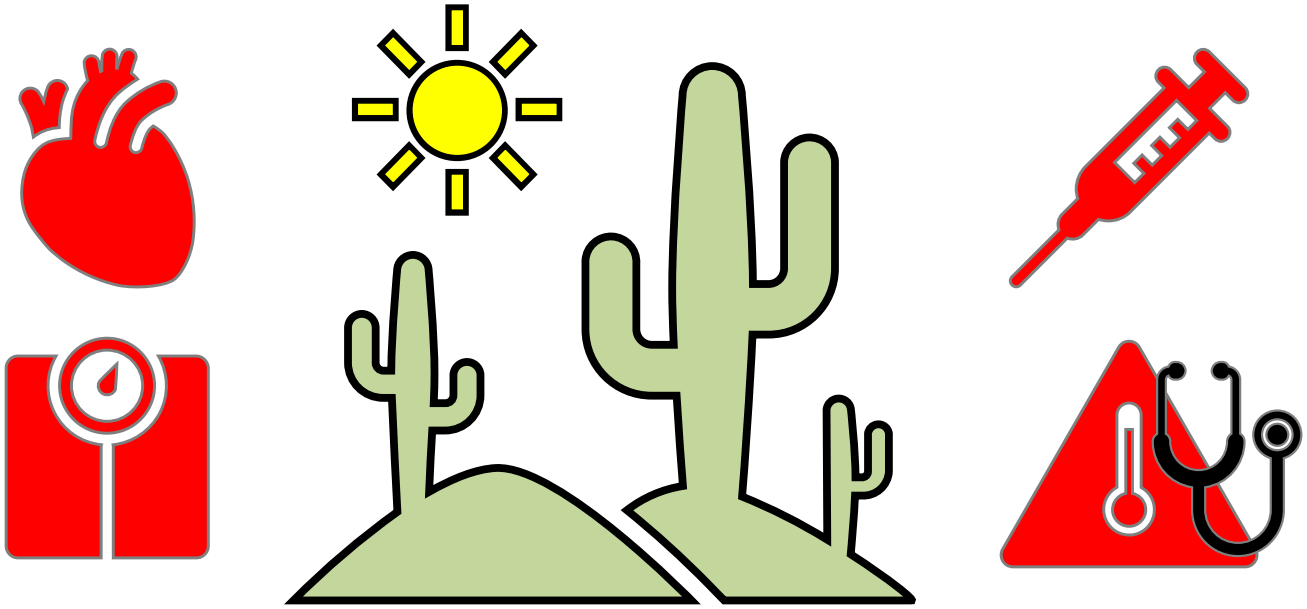
Importance





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Aim:

Determine how many food deserts in the eight Online Purchase Pilot (OPP) states (and households within them) are located within current grocery delivery areas

Methods

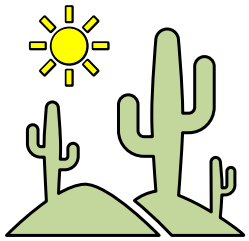
1. Identify food deserts

2. Identify delivery areas

3. Quantify food desert delivery availability

Method 1: Identify food deserts

USDA Economic Research Service Food Desert Atlas

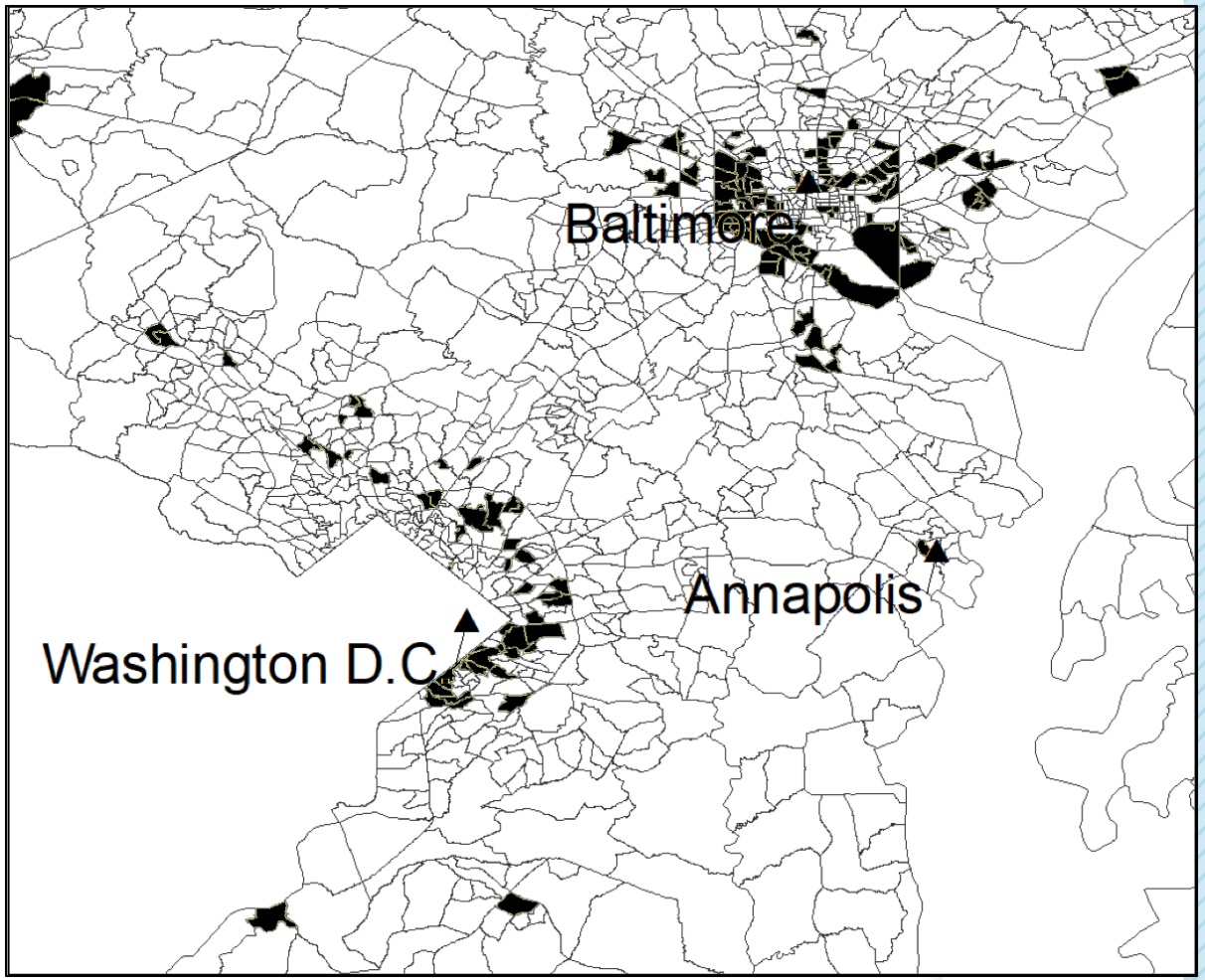


=

- Low income
- Limited access to grocery stores
- Low vehicle availability

Method 1: Identify food deserts

USDA Economic Research Service Food Desert Atlas



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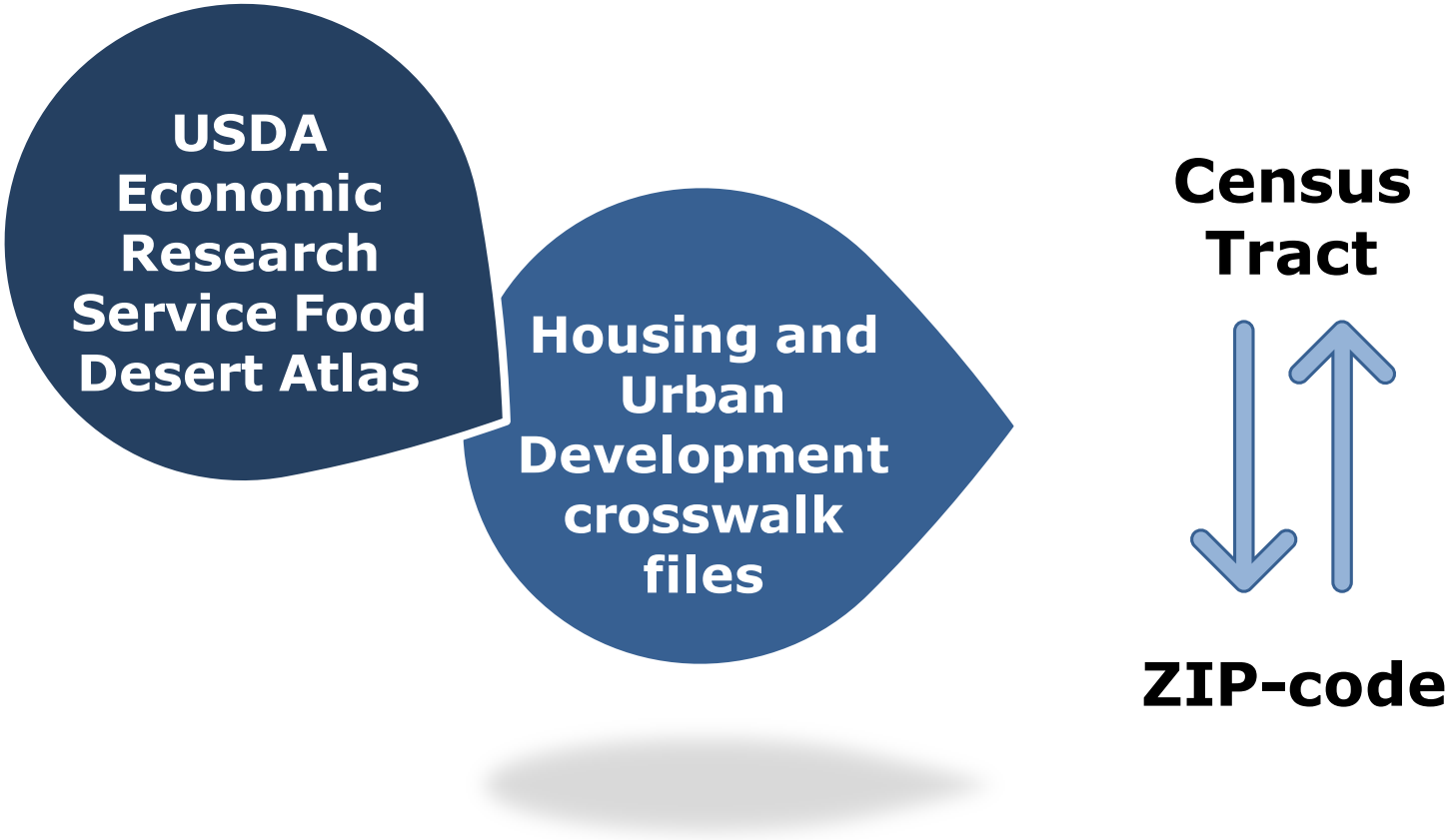
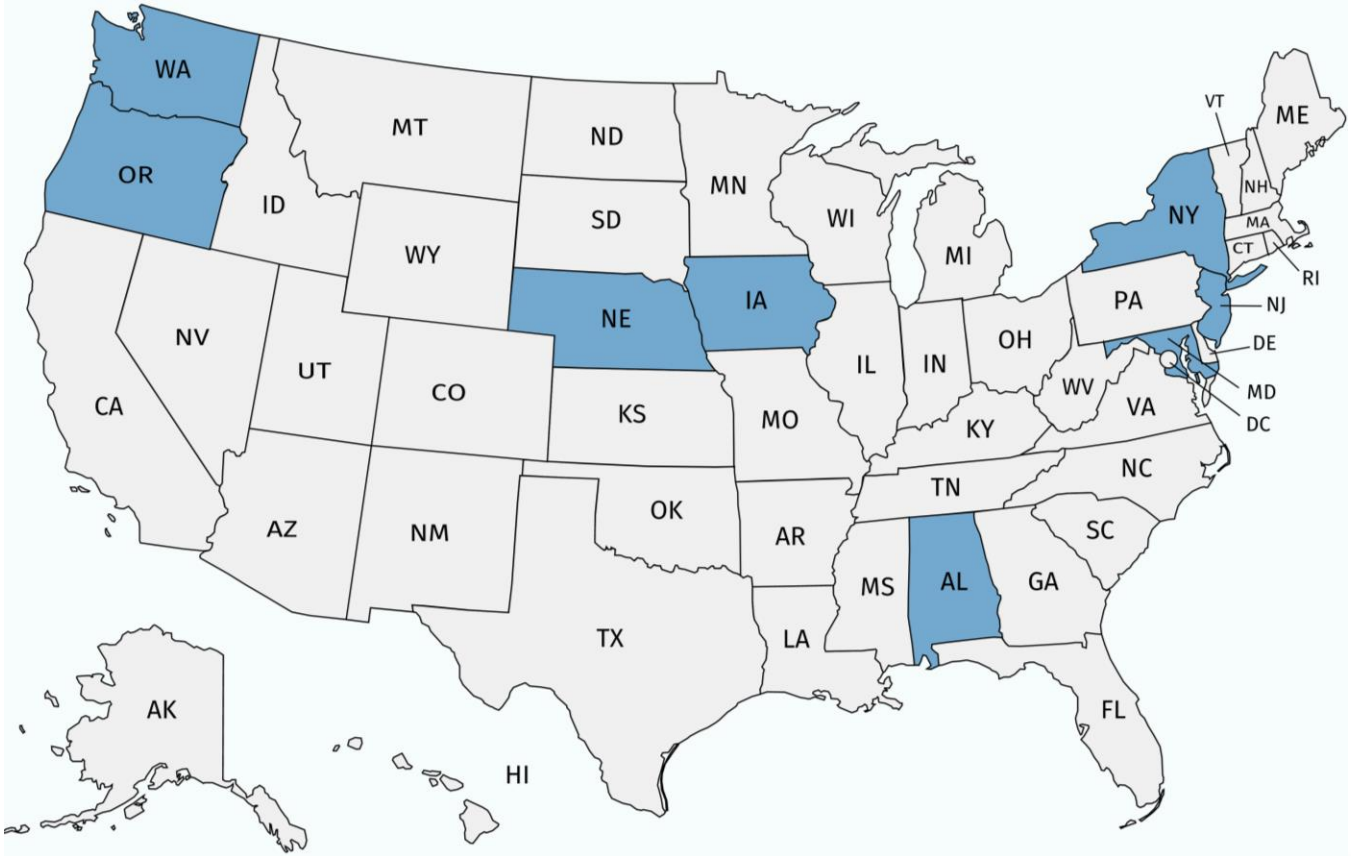
Method 1: Identify food deserts



Methods - Eight Online Purchase Pilot (OPP) States



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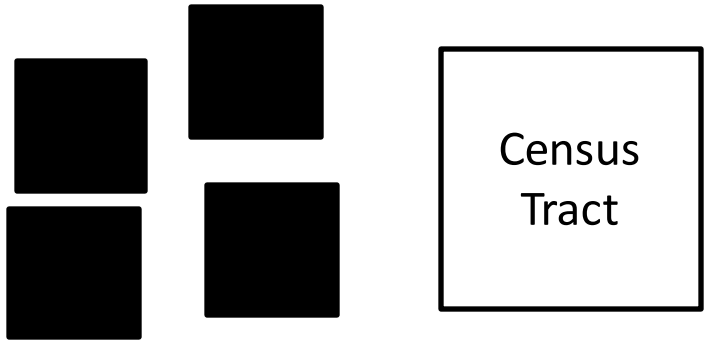
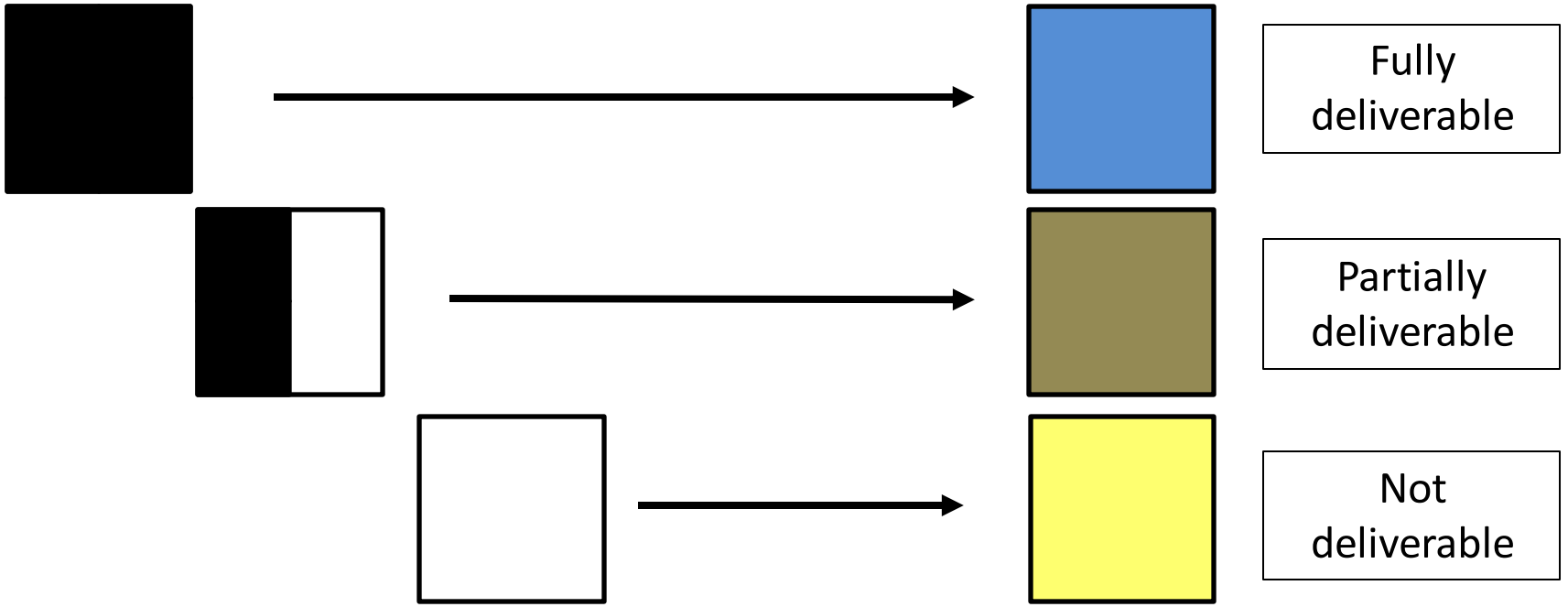
Method 2: Identify delivery areas

Method 2: Identify delivery areas

Method 3: Quantify food desert delivery availability



Method 3: Quantify food desert delivery availability



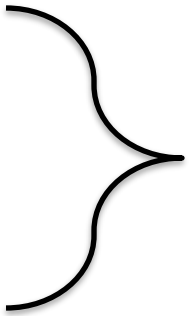
Outcomes

Primary: Percent of census tracts and SNAP households in each category (**fully**, **partially**, or **not** deliverable)

Secondary:

Results by rural/urban status

Results by state



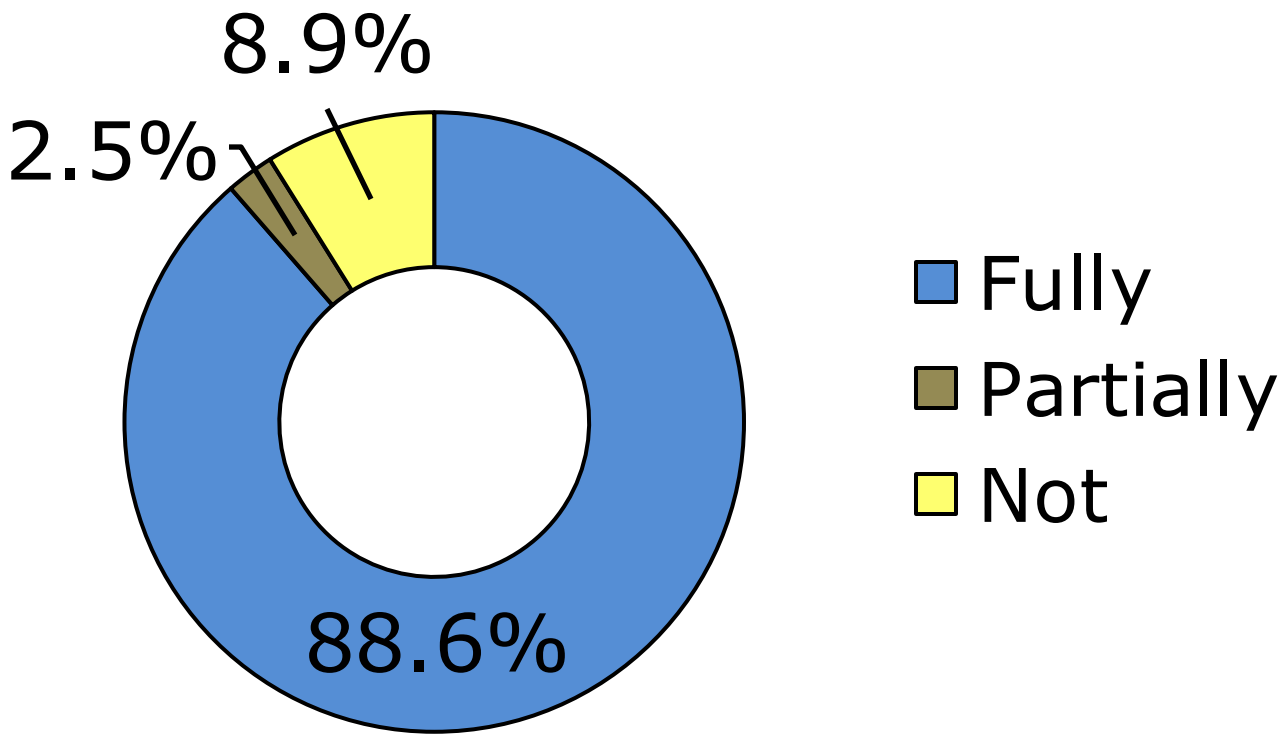
Monte Carlo simulations of the Fisher exact test

Results

Census Tracts (n=13,134)	
Food desert census tracts	1,250 (10%)
Urban census tracts	1,191 (95%)
Rural census tracts	59 (5%)
SNAP Households (n=2,760,482)	
SNAP households in food deserts	506,863 (18%)
SNAP households in urban food deserts	491,201 (97%)
SNAP households in rural food deserts	15,662 (3%)

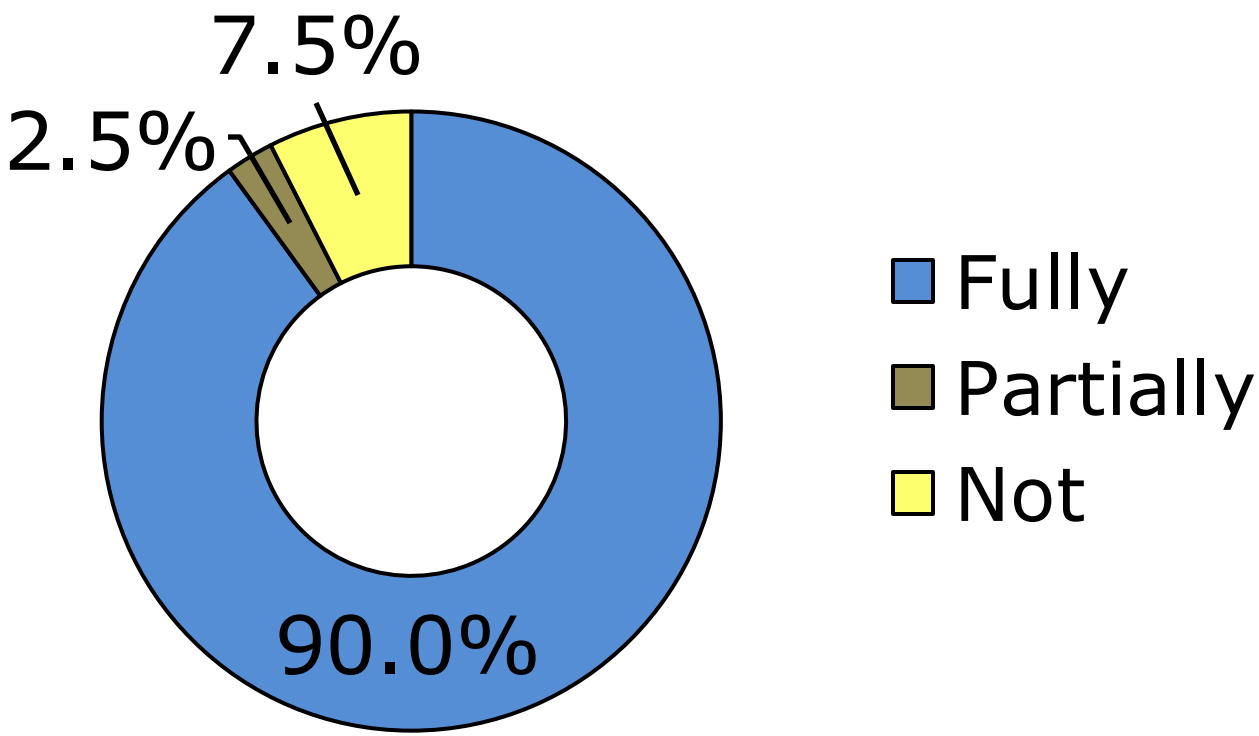
Results

Online deliverability to food desert census tracts (n=1,250)



Results

Online deliverability to food desert SNAP households (n=506,863)



In these eight Online Purchase Pilot states, this translates to:

>450,000 

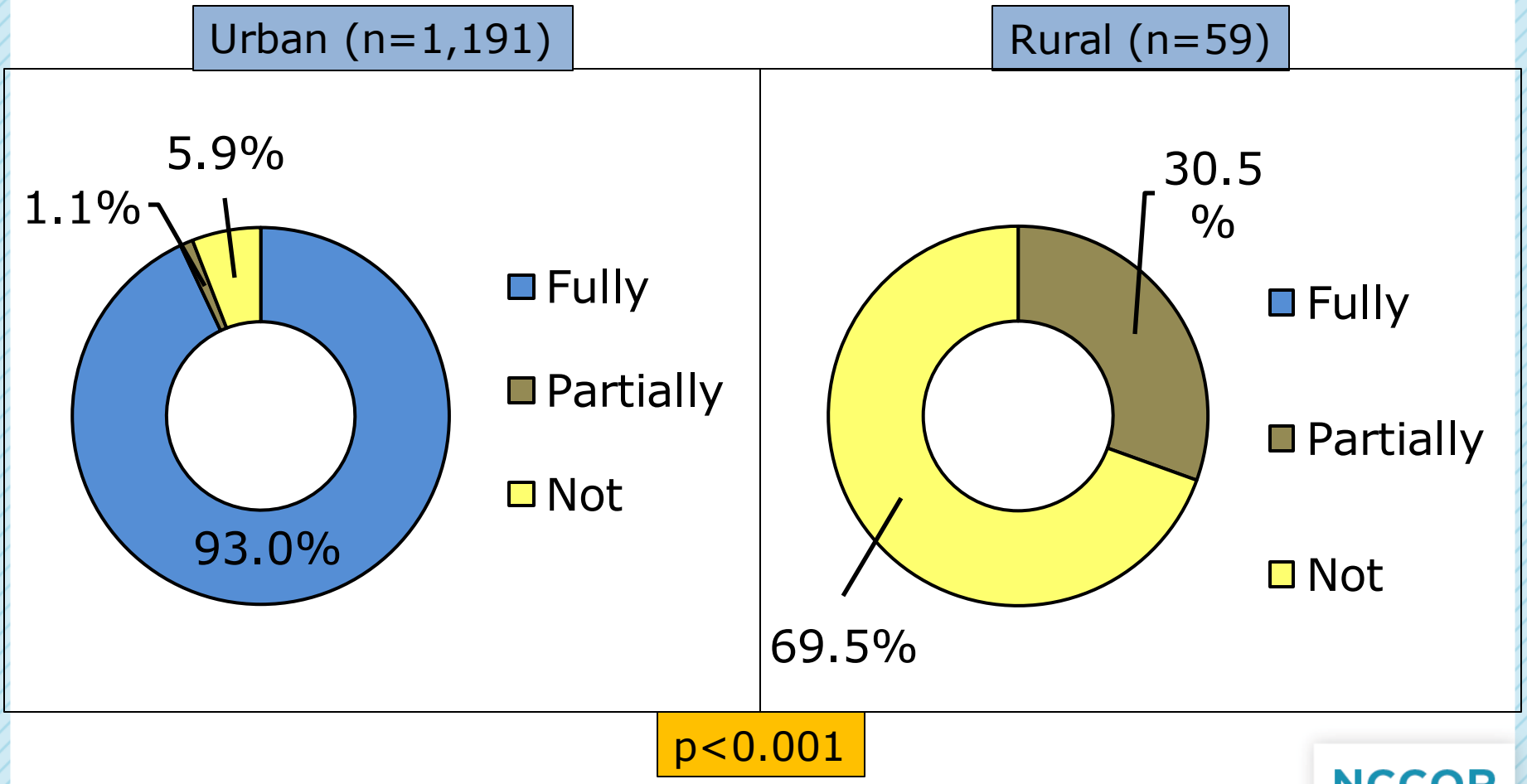
~900,000 

~400,000 

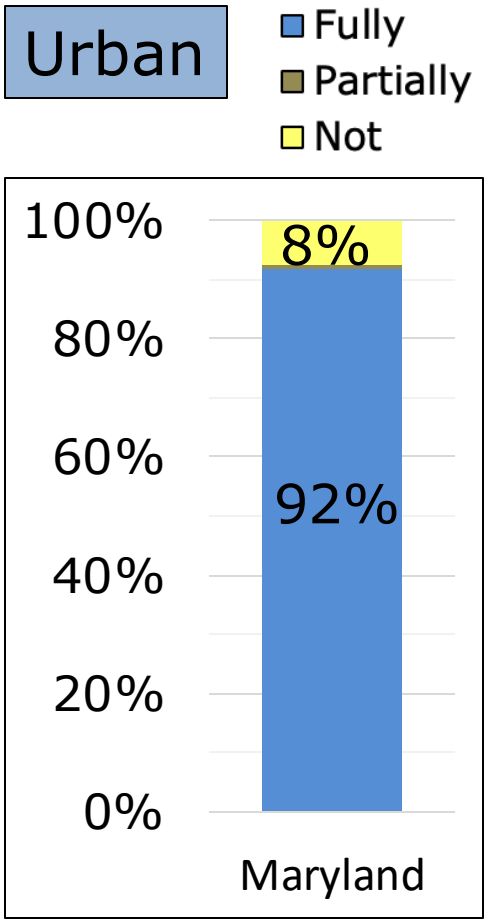
~120,000 

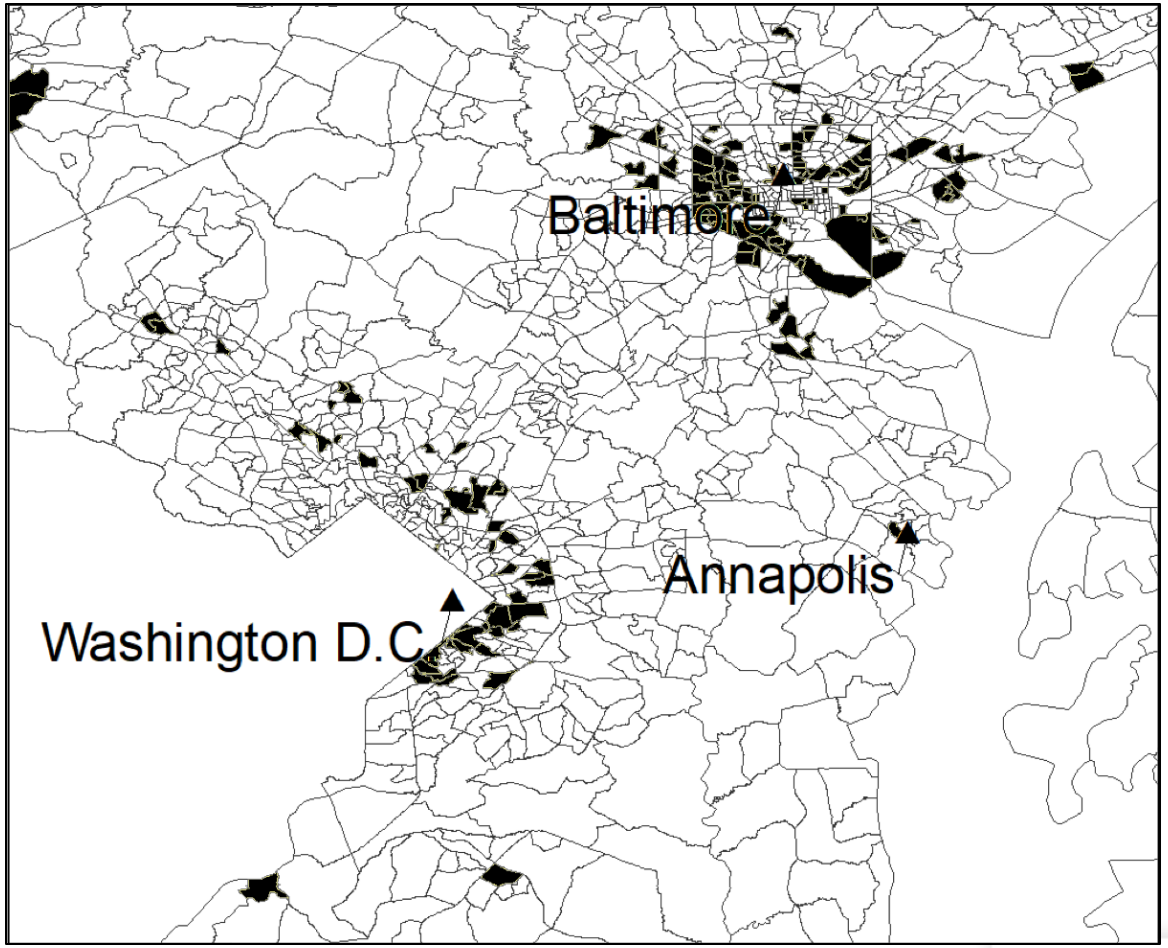
Results

Online deliverability to food desert census tracts by urban/rural status



Results





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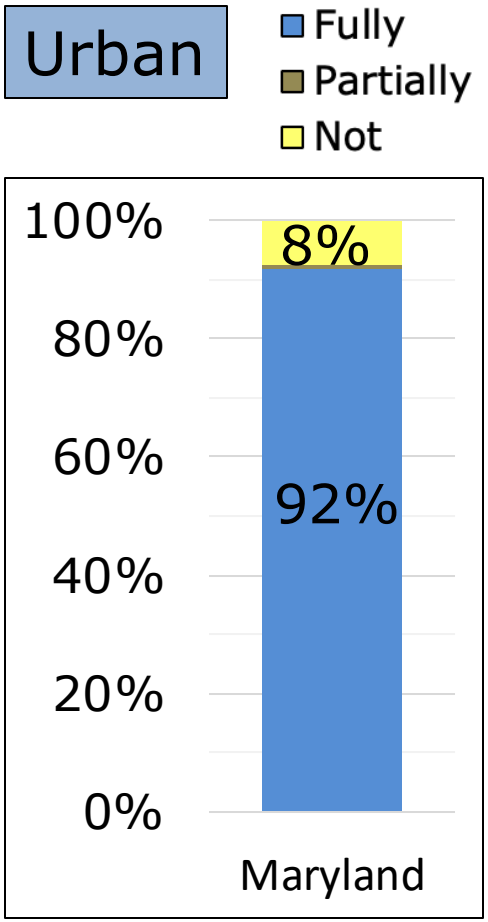
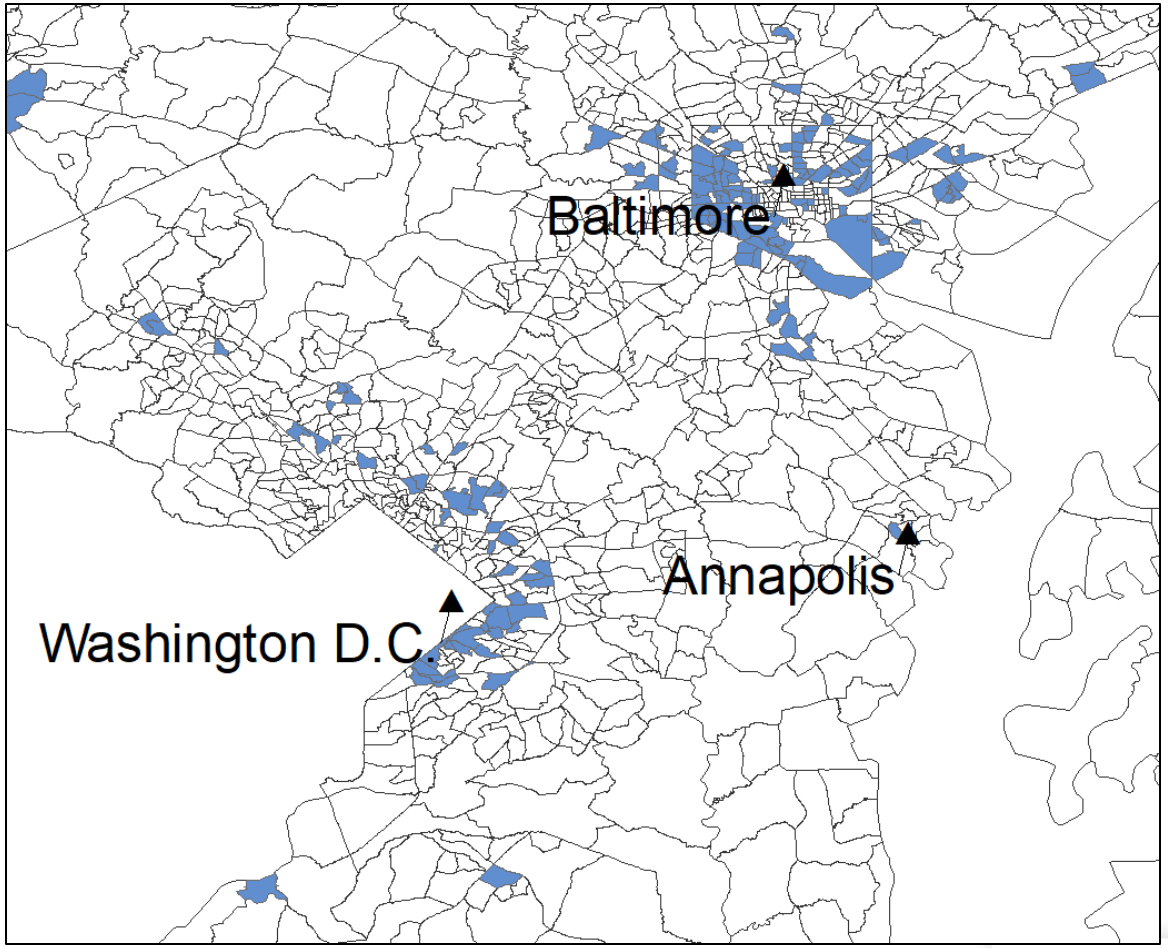
Results





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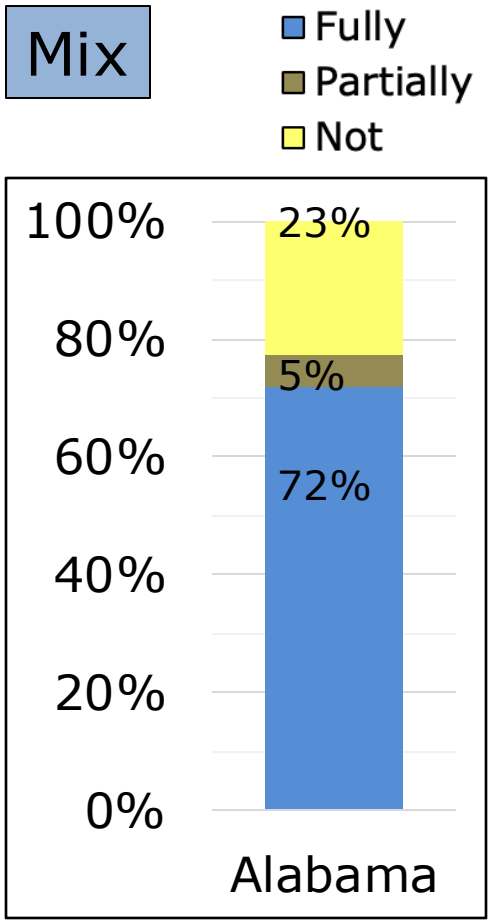
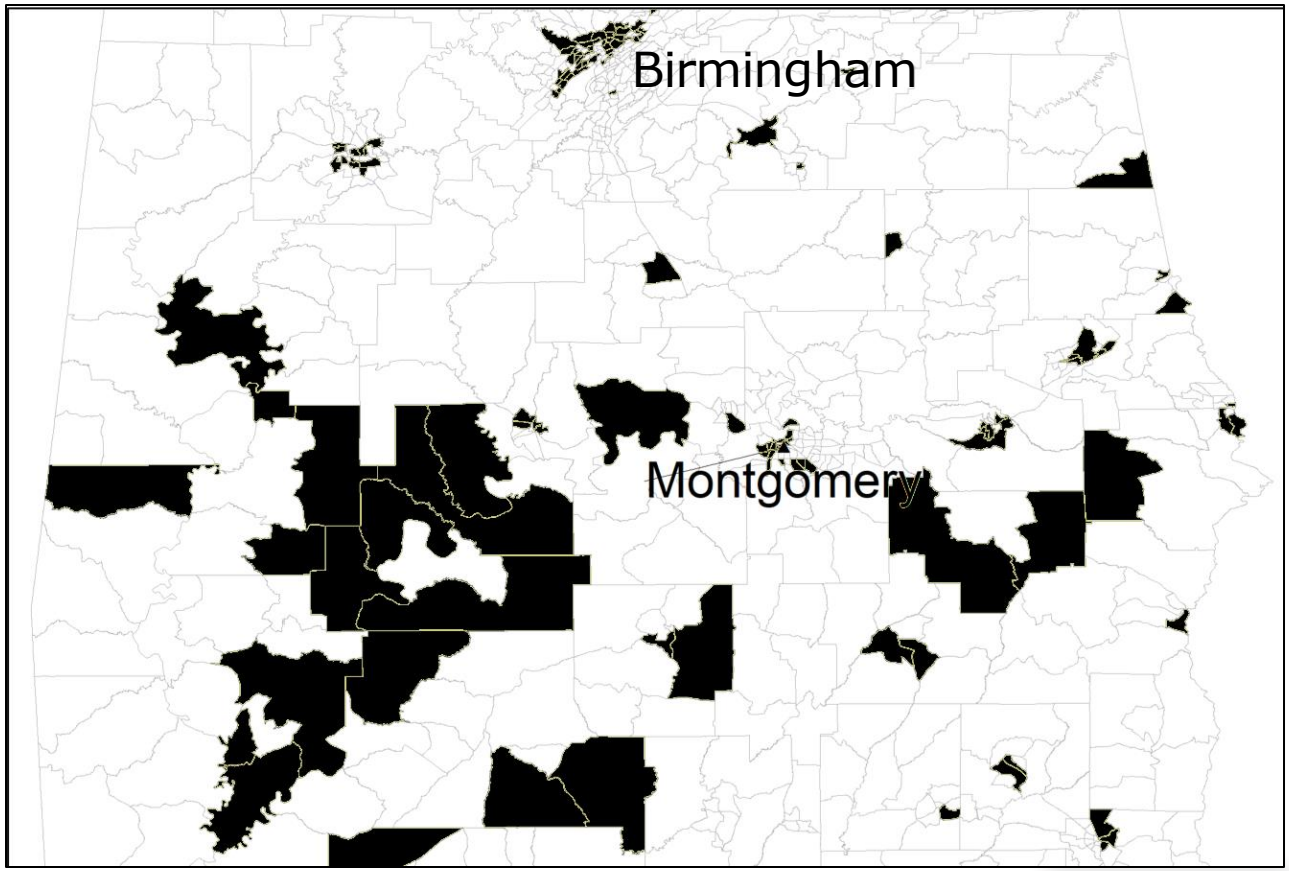
Results





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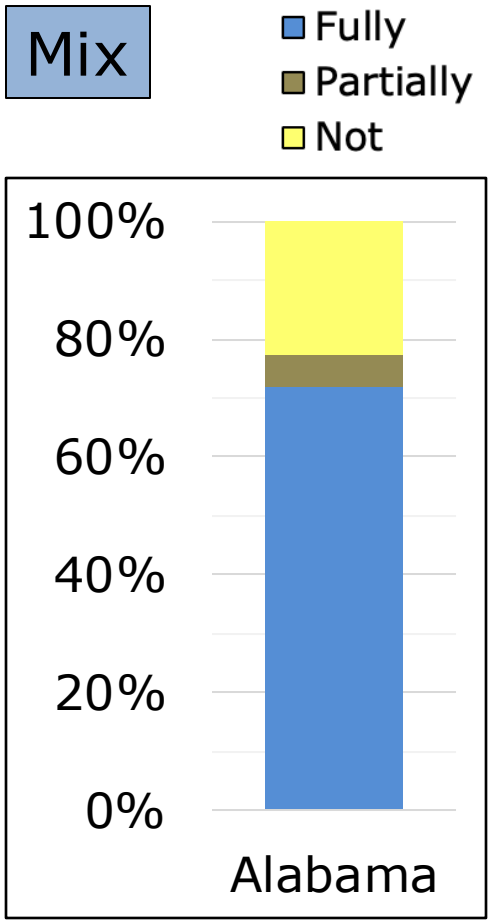
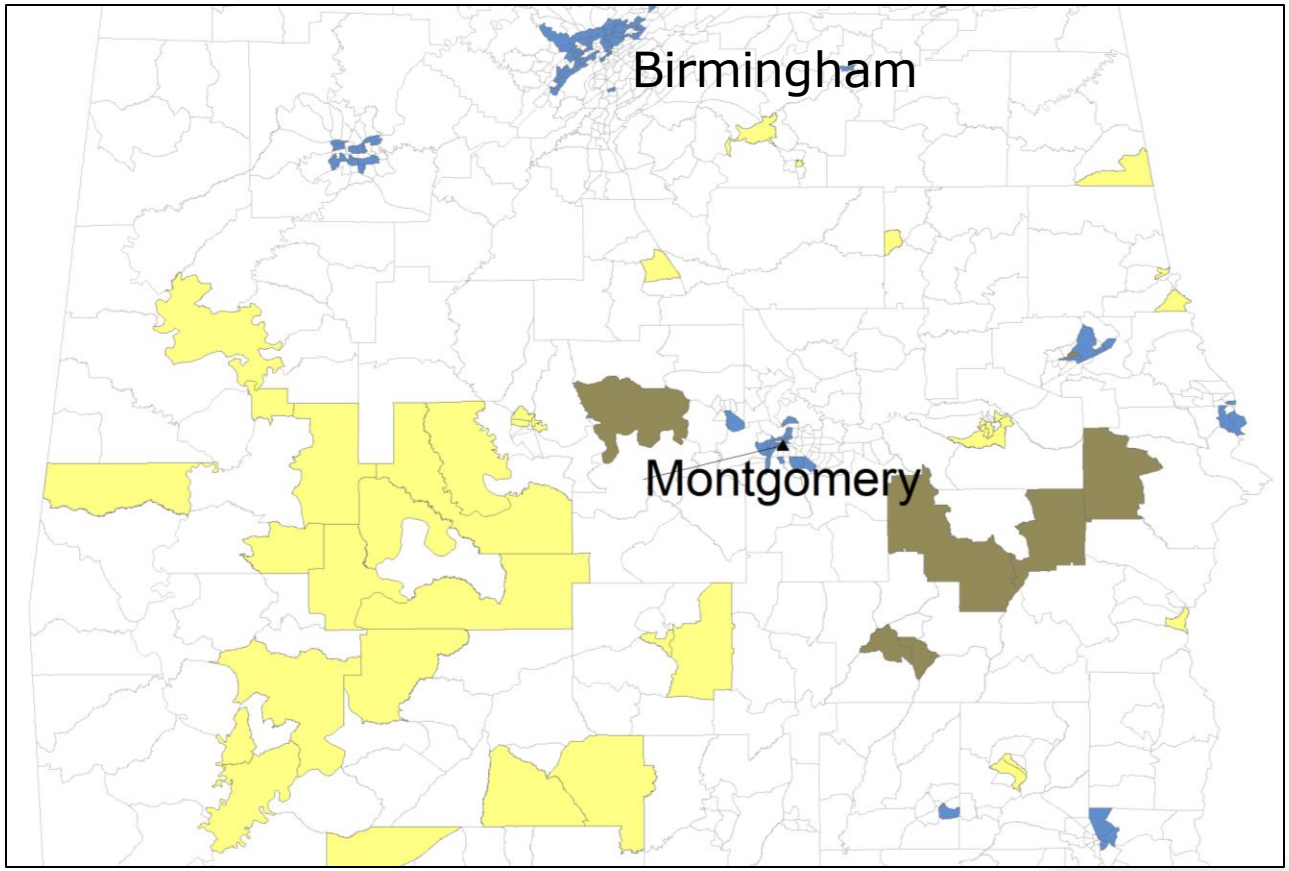
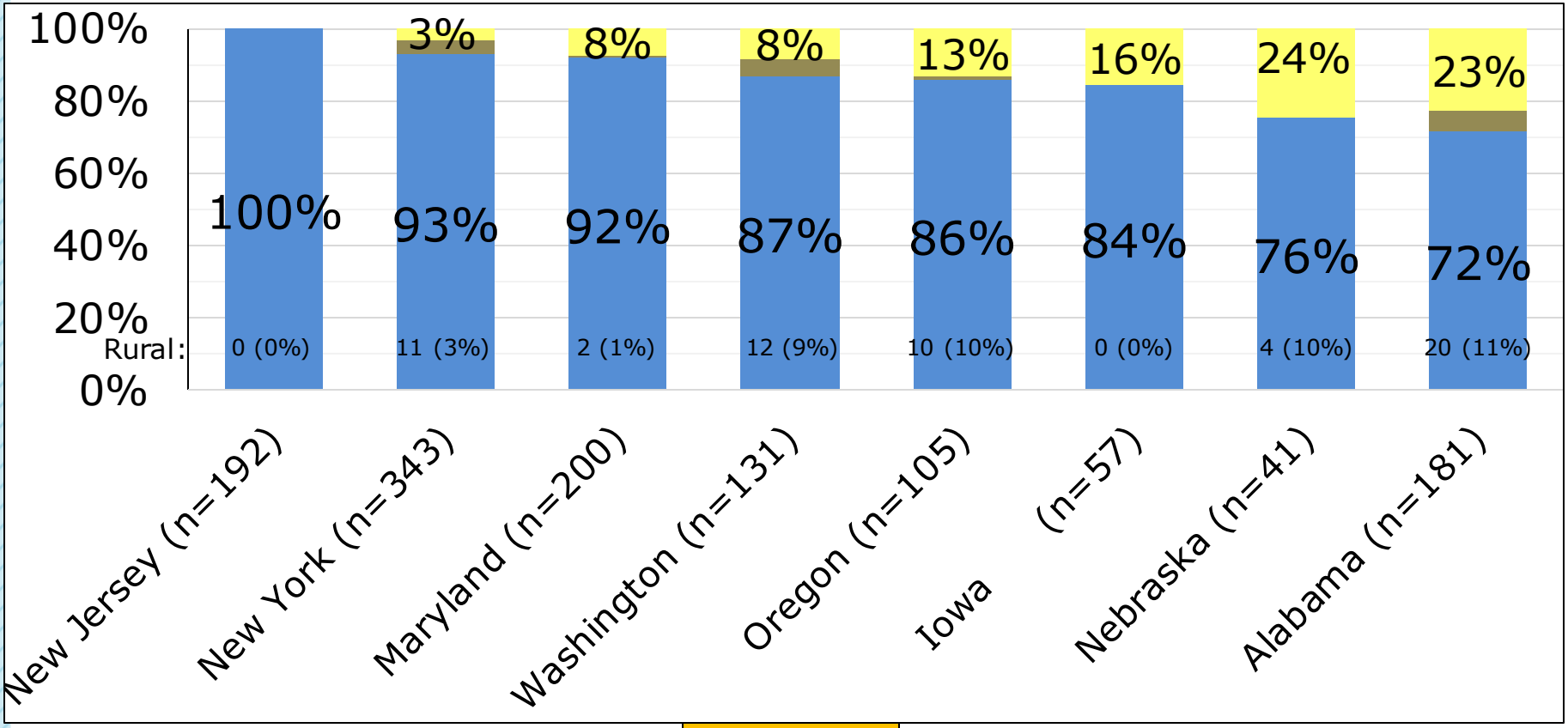
Results


Mix
Fully
Partially
Not
100%
80%
60%
40%
20%
0%
Alabama


Birmingham
Montgomery

Results

Online deliverability to food desert census tracts by state



p<0.001

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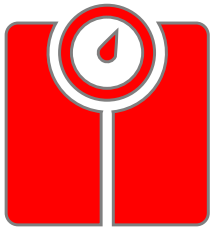
Conclusion

- Grocery delivery is available for most food deserts
  - 8 of 9 food desert census tracts fall within delivery networks
  - 9 of 10 SNAP households in food deserts fall within delivery networks

Conclusion

- Grocery delivery availability differed by urban vs. rural status and state



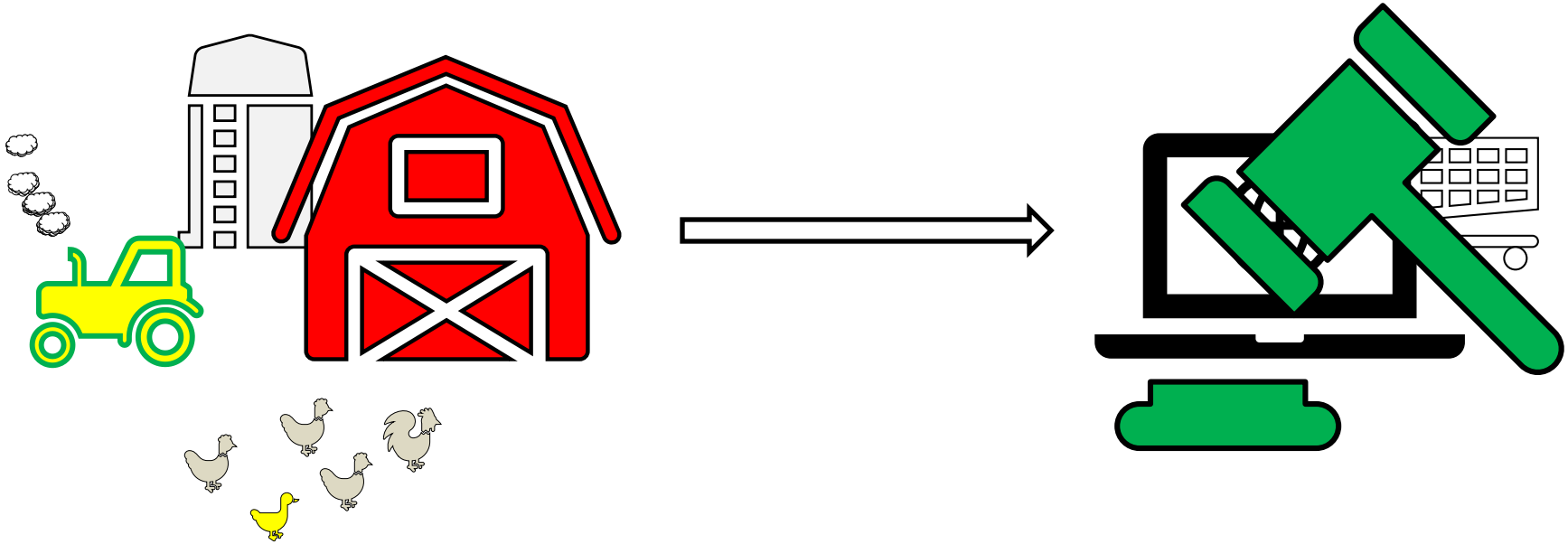
Limitations

- We studied the eight Online Purchase Pilot states; results may be different in other regions

- Delivery services not connected to brick and mortar stores may have been missed, therefore our results may be underestimated

Implications

- 2018 Farm Bill mandates online purchasing go nationwide after pilot completion (April 2021)



Implications

- However, the bill does not finance grocery delivery. This is likely to limit the impact.

Implications

- Future research should focus on:
  - How best to leverage grocery delivery to improve access and quality
  - Which groups will be most likely to use and benefit from online delivery
  - Utilizing incentives and disincentives within online purchasing platforms to improve SNAP diet quality

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Research Letter | Health Policy

Availability of Grocery Delivery to Food Deserts in States Participating in the Online Purchase Pilot

Eric J. Brandt, MD; David M. Silvestri, MD, MBA, MHS; Jerold R. Mande, MPH; Margaret L. Holland, PhD, MPH, MS; Joseph S. Ross, MD, MHS

Thanks to my co-authors!

David M. Silvestri MD, MBA, MHS

Jerold R. Mande MPH

Margaret L. Holland PhD, MPH, MS

Joseph S. Ross MD, MHS

Food Deserts and the Causes of Inequality

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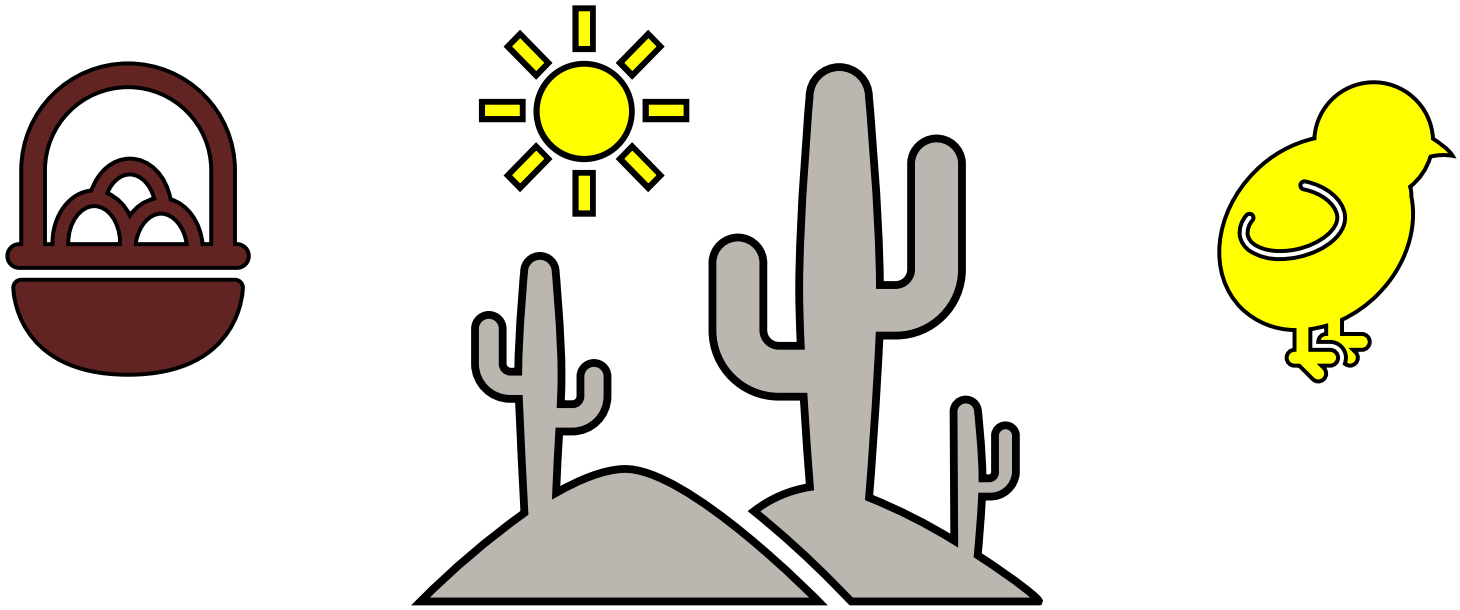
Are food deserts the chicken or the egg?

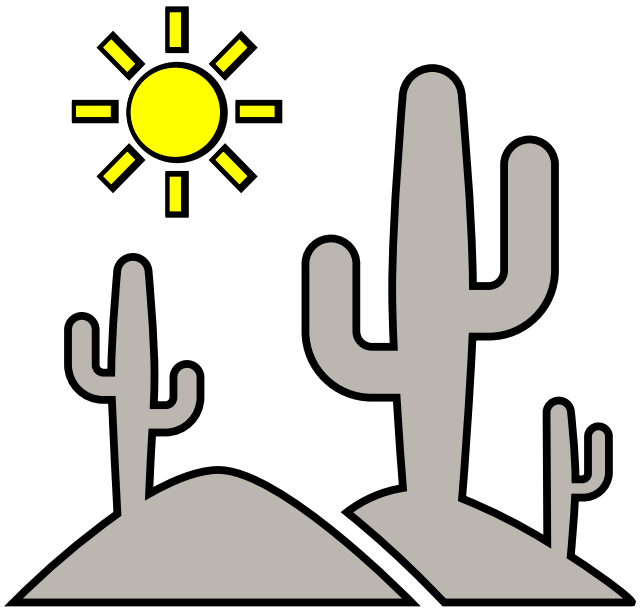


FOOD DESERTS AND THE CAUSES OF NUTRITIONAL INEQUALITY*

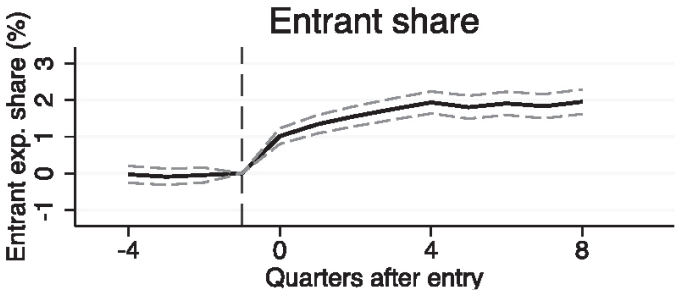
HUNT ALLCOTT
REBECCA DIAMOND
JEAN-PIERRE DUBÉ
JESSIE HANDBURY
ILYA RAHKOVSKY
MOLLY SCHNELL

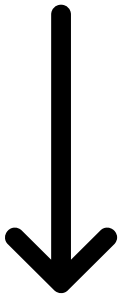
We study the causes of "nutritional inequality": why the wealthy eat more healthfully than the poor in the United States. Exploiting supermarket entry and household moves to healthier neighborhoods, we reject that neighborhood environments contribute meaningfully to nutritional inequality. We then estimate a structural model of grocery demand, using a new instrument exploiting the combination of grocery retail chains' differing presence across geographic markets

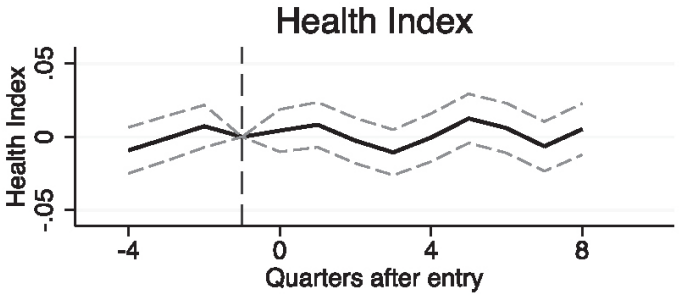
What happens when a grocery store is introduced into a food desert?



All geographies







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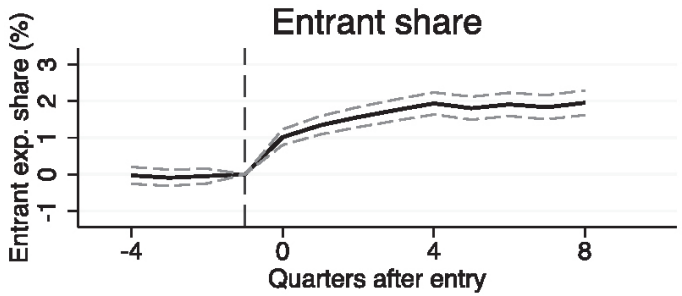
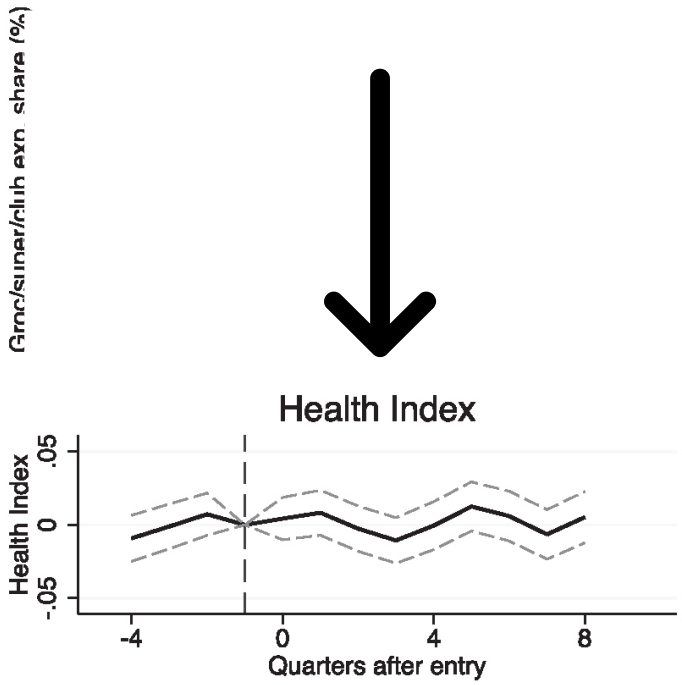
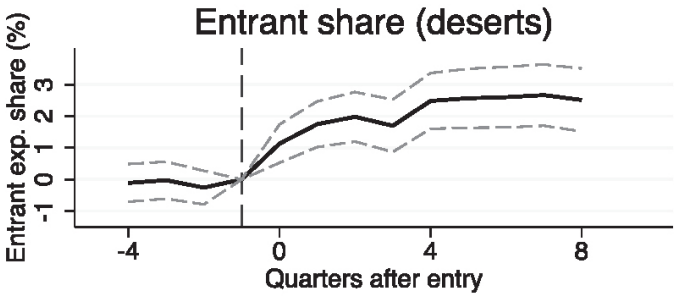
All geographies

Food deserts







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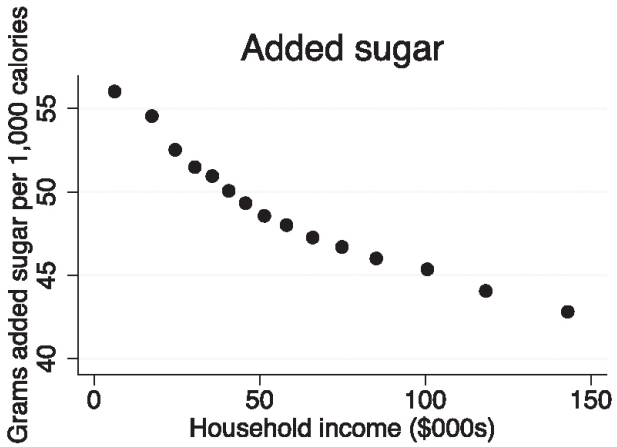
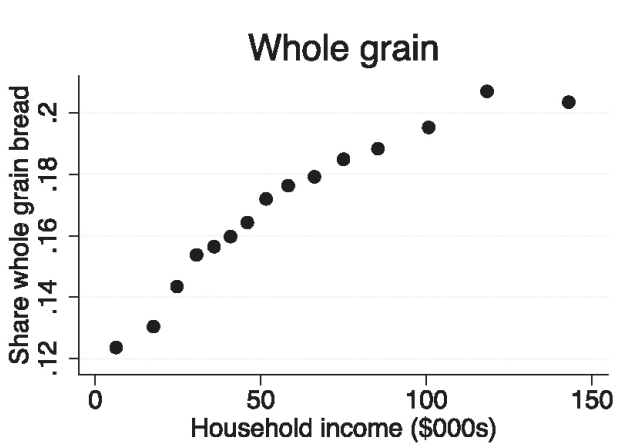
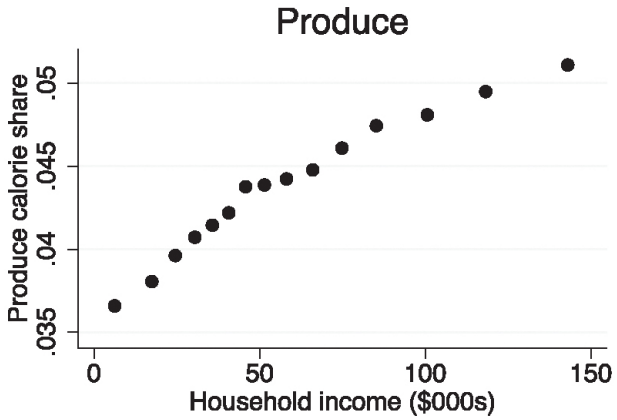
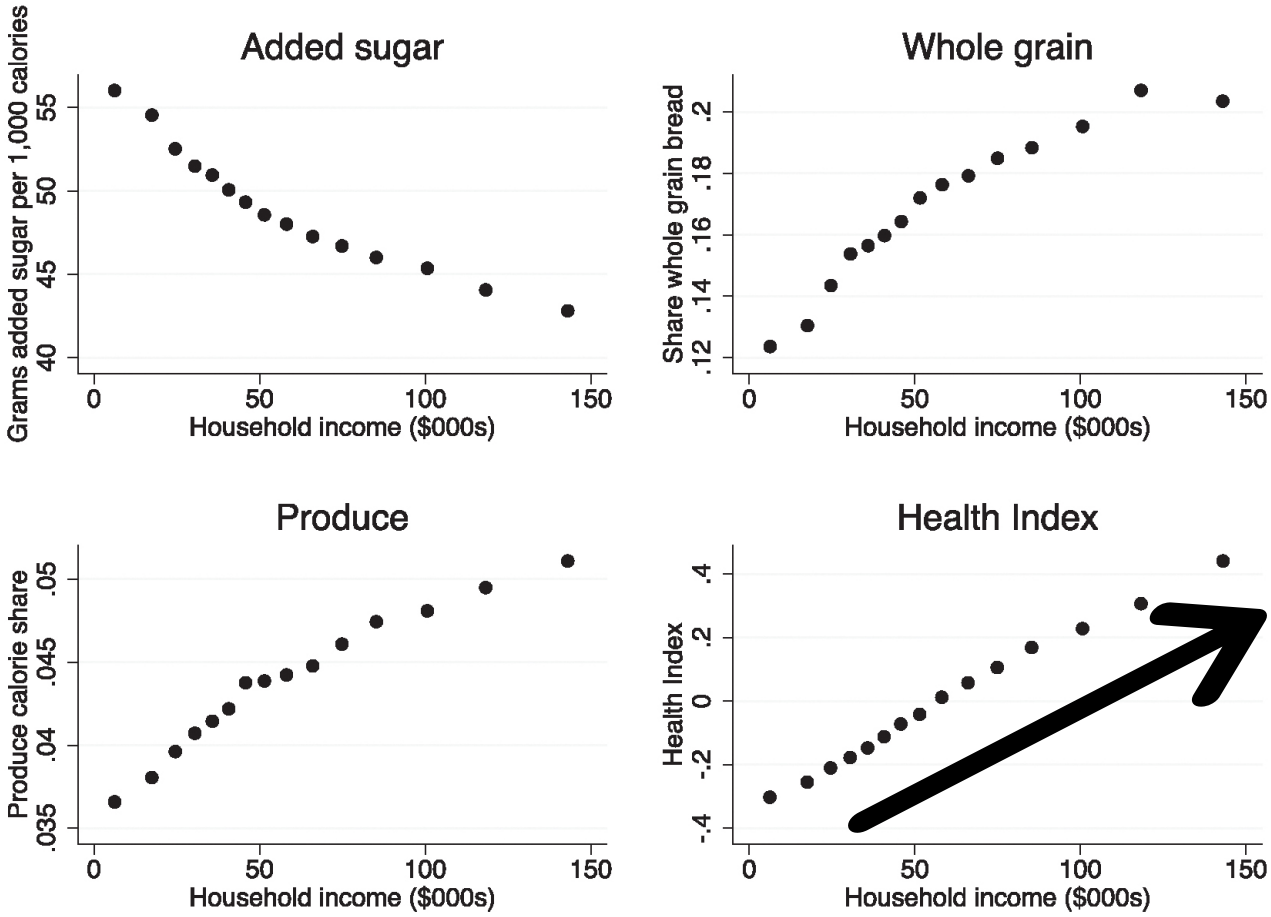
Food consumption categories by household income







Food consumption categories by household income



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Implications

- How best to leverage grocery delivery to improve access and quality

- Utilizing incentives and disincentives within online purchasing platforms to improve SNAP diet quality

Food Insecurity Nutrition Incentive (FINI) grant program

Food Insecurity Nutrition Incentive (FINI) grant program

Four strategies:

1. SNAP participants earn incentives through purchasing any SNAP-items, to be redeemed for qualifying fruits and vegetables. (75% of retailers)

2. SNAP participants earned incentives through the purchase of qualifying fruits and vegetables. Incentives were redeemed for any SNAP-eligible item. (11%)

3. SNAP participants earned incentives through the purchase of qualifying fruits and vegetables and redeemed incentives for qualifying fruits and vegetables. (12%)

4. No purchase was necessary because SNAP participants received a prescription/voucher. The voucher could be redeemed for qualifying fruits and vegetables. (7%)

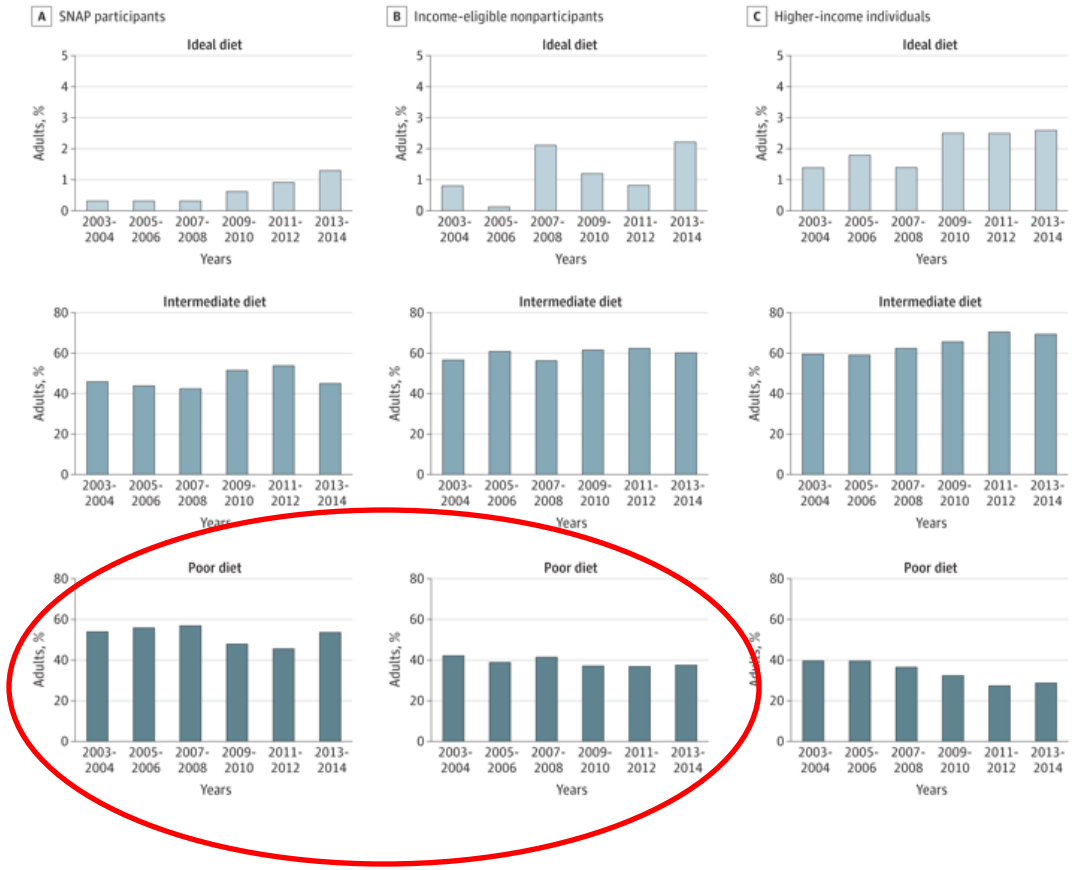
FINI increased expenditures

Table 8-1. Impact of incentives on monthly fruit and vegetable expenditures, by study group

Study group	n	Treatment group Regression-adjusted mean ($)	Comparison group regression-adjusted mean ($)	Incentive impact	
				β ($)	P-value
Farmers market general (N=833)	346	69.01 (2.93)	65.18 (2.60)	3.83 (3.68)	0.30
Farmers market shoppers (N=703)	376	96.29 (2.74)	80.97 (3.82)	15.32*** (4.65)	<0.01
Grocery store general (N=935)	400	71.13 (2.79)	61.77 (2.34)	9.37** (3.80)	0.02
Grocery store shoppers (N=454)	212	69.83 (4.15)	59.93 (2.60)	9.90** (4.88)	0.05

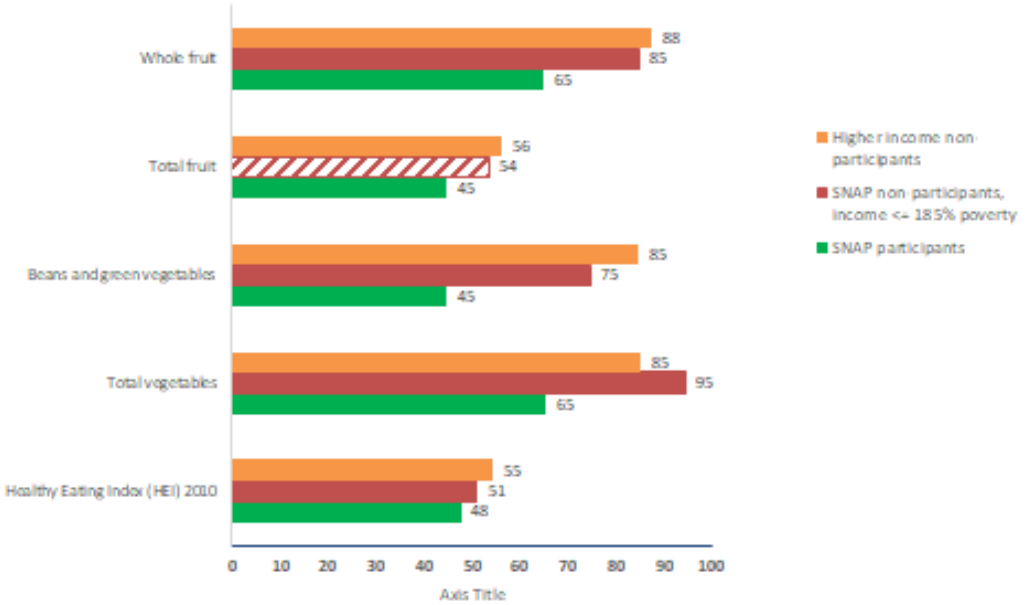
Trends and Disparities in Diet Quality Among US Adults by SNAP Status

(Zhang, 2018)



Most Americans Do Not Meet Fruit and Vegetable Recommendations
SNAP Households Are Especially At Risk

- USDA's National Household Food Acquisition and Purchase Survey or *FoodAPS* includes data on foods purchased, prices paid, store access and other factors that shed light on the challenges faced by SNAP participants.
- SNAP households obtain fewer fruits and vegetables relative to their needs.



Average HEI-2010 Score Relative to Maximum Component Score.
Dashed bar indicates difference from SNAP-participating households is **not** statistically significant

Source: Mancino et al. Nutritional Quality of Foods Acquired by Americans: Findings From USDA's National Household Food Acquisition and Purchase Survey; EIB-188, 2018.

How Are SNAP Benefits Spent? Evidence from a Retail Panel (Hastings, 2017)

Detailed transaction records from 2006–2012 for nearly .5 million regular customers of a large U.S. grocery retailer.

Payment method inferred SNAP participation.

"While conventional economic theory predicts that no more of every dollar from SNAP than other sources would go to food purchases, the authors find that between 50 and 60 cents of the SNAP dollar are spent on groceries, consistent with 'mental accounting' theory."

The Effect of SNAP on the Composition of Purchased Foods (Hastings, 2018)

Abstract

"We use detailed data from a large retail panel to study the effect of participation in the Supplemental Nutrition Assistance Program (SNAP) on the composition and nutrient content of foods purchased for at-home consumption. We find that the effect of SNAP participation is small relative to the cross-sectional variation in most of the outcomes we consider. Estimates from a model relating the composition of a household's food purchases to the household's current level of food spending imply that closing the gap in food spending between high- and low-SES households would not close the gap in summary measures of food healthfulness."

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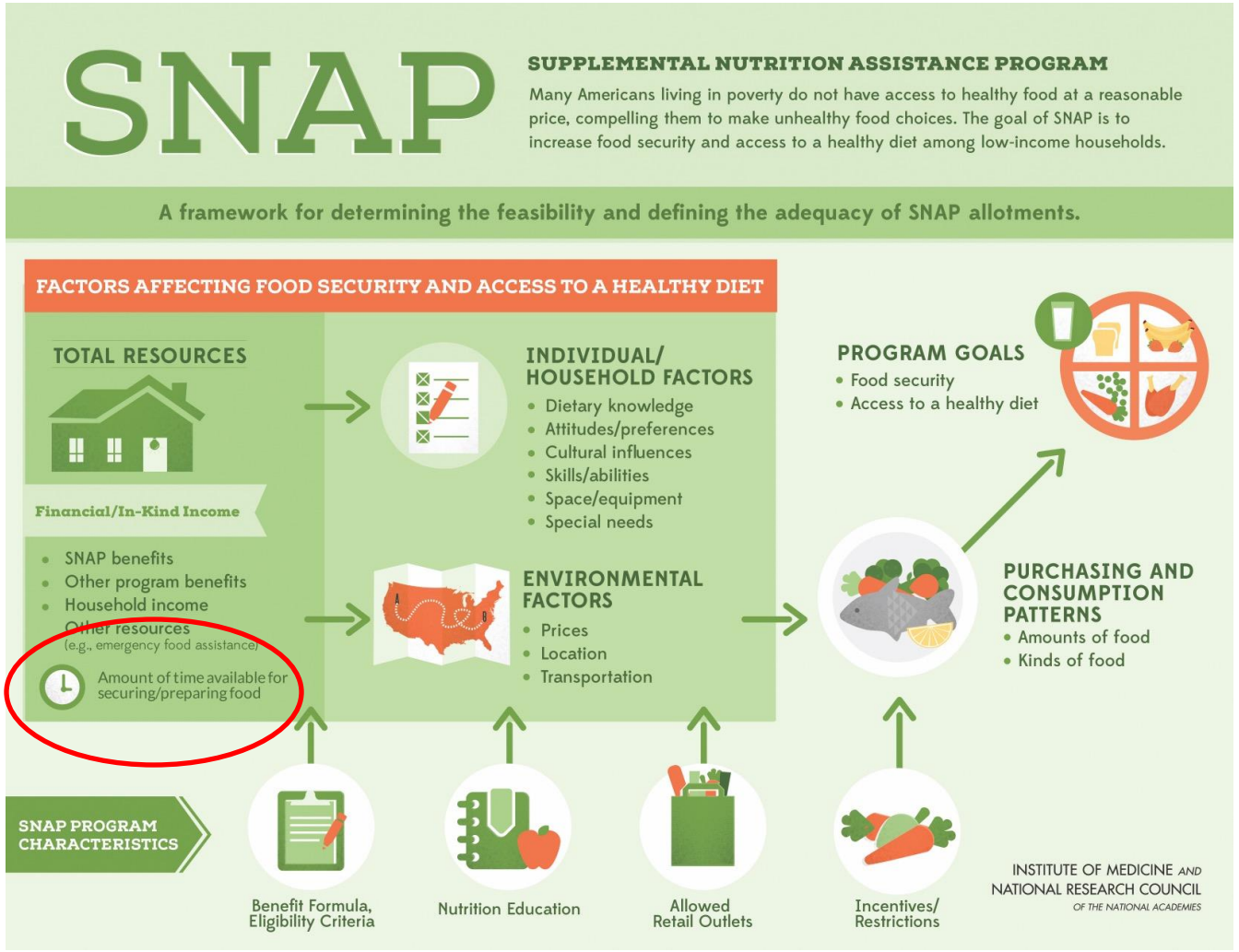
Foods Typically Purchased by SNAP Households (USDA, 2016)

Exhibit A-1: All Commodities

Commodity	SNAP Household Expenditures			Non-SNAP Household Expenditures		
	Rank	$ in Millions	% of Total Expenditures	Rank	$ in millions	% of Total Expenditures
Soft drinks	1	$357.7	5.44%	2	$1,263.3	4.01%
Fluid milk products	2	$253.7	3.85%	1	$1,270.3	4.03%
Beef:grinds	3	$201.0	3.05%	6	$621.1	1.97%
Bag snacks	4	$199.3	3.03%	5	$793.9	2.52%
Cheese	5	$186.4	2.83%	3	$948.9	3.01%
Baked breads	6	$163.7	2.49%	4	$874.8	2.78%
Cold cereal	7	$139.2	2.12%	7	$583.9	1.85%
Chicken fresh	8	$121.4	1.85%	11	$477.8	1.52%
Frozen handhelds & snacks	9	$101.5	1.54%	47	$214.6	0.68%
Lunchmeat	10	$99.4	1.51%	17	$386.1	1.23%
Candy - packaged	11	$96.2	1.46%	8	$527.7	1.67%
Infant formula	12	$95.7	1.45%	80	$124.8	0.40%
Frozen pizza	13	$90.2	1.37%	23	$305.7	0.97%
Refrigerated juices/drinks	14	$88.5	1.35%	14	$412.8	1.31%
Ice cream ice milk & sherbets	15	$86.0	1.31%	10	$481.8	1.53%
Coffee & creamers	16	$82.3	1.25%	9	$519.4	1.65%
Cookies	17	$78.2	1.19%	16	$408.3	1.30%
Water - (sparkling & still)	18	$77.0	1.17%	18	$379.2	1.20%
Shelf stable juice	19	$73.1	1.11%	28	$282.2	0.90%
Eggs/muffins/potatoes	20	$72.0	1.09%	20	$358.7	1.14%
Frozen ss premium meals	21	$68.6	1.04%	12	$447.1	1.42%
Cakes	22	$68.2	1.04%	38	$240.9	0.76%
Bacon	23	$66.1	1.00%	27	$283.2	0.90%
Traditional Mexican foods	24	$62.6	0.95%	25	$286.9	0.91%
Yogurt	25	$59.9	0.91%	13	$442.3	1.40%



Research from Food-PRICE, 2018
(Food Policy Review and Intervention Cost-Effectiveness)

- **Study aim:** To estimate and compare the health impact, cost, and cost-effectiveness of three policy strategies to improve diet and reduce cardiovascular disease in the SNAP population over 5 years, 10 years, 20 years, and a lifetime.
- **Data:** National data on adult SNAP participants (age 35+) from the National Health and Nutrition Examination Survey (NHANES) 2009-2014
- **Model:** Validated microsimulation model (CVD-PREDICT)

Mozaffarian D, Liu J, Sy S, et al. Cost-effectiveness of financial incentives and disincentives for improving food purchases and health through the US Supplemental Nutrition Assistance Program (SNAP): A microsimulation study. *PLoS Med.* 2018

Three Policy Scenarios

1. F&V Incentive:

30% incentive, fruits and vegetables (F&V)

2. F&V Incentive/SSB Restriction:

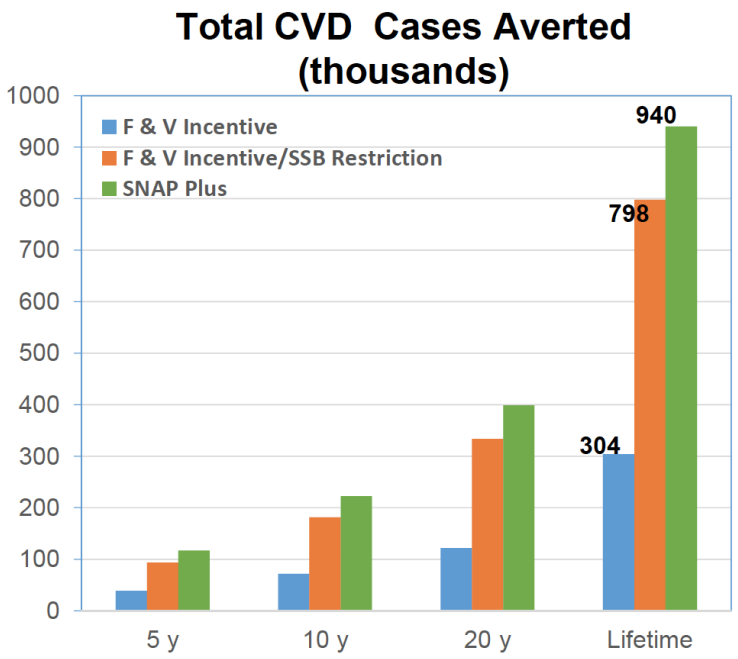
30% incentive, fruits and vegetables (F&V)
Restriction, sugar-sweetened beverages (SSB)

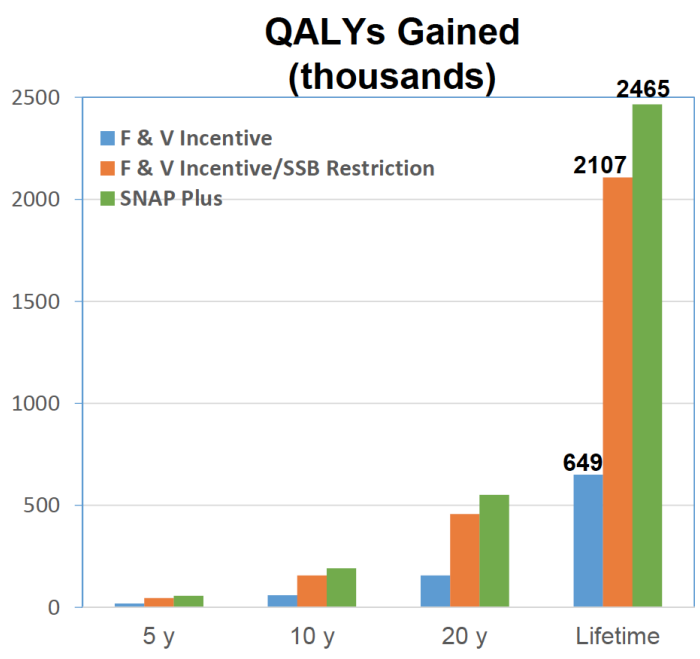
3. SNAP Plus:

30% incentive, fruits and vegetables, nuts, whole grains, fish, plant-based oils
30% disincentive, sugar-sweetened beverages, junk food, processed meats

Mozaffarian D, Liu J, Sy S, et al. Cost-effectiveness of financial incentives and disincentives for improving food purchases and health through the US Supplemental Nutrition Assistance Program (SNAP): A microsimulation study. *PLoS Med.* 2018

Cost Effectiveness Results





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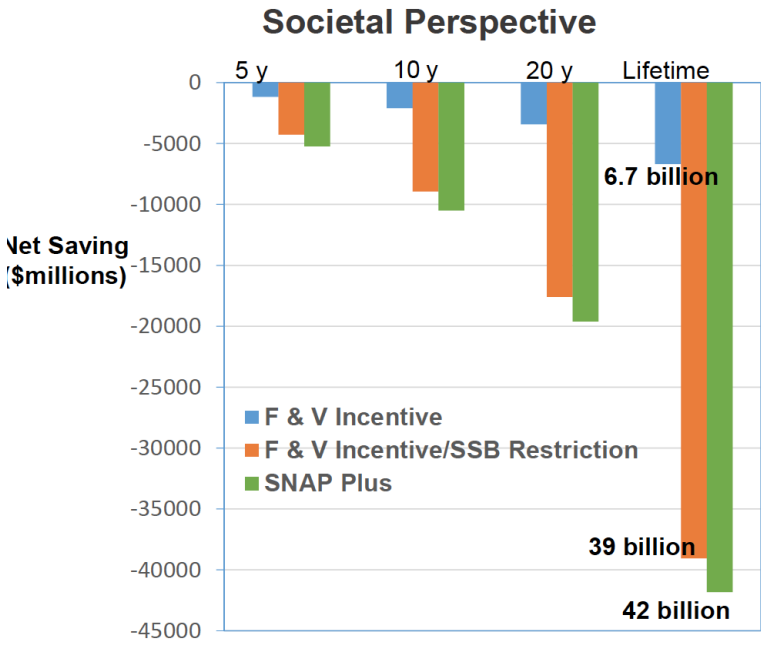

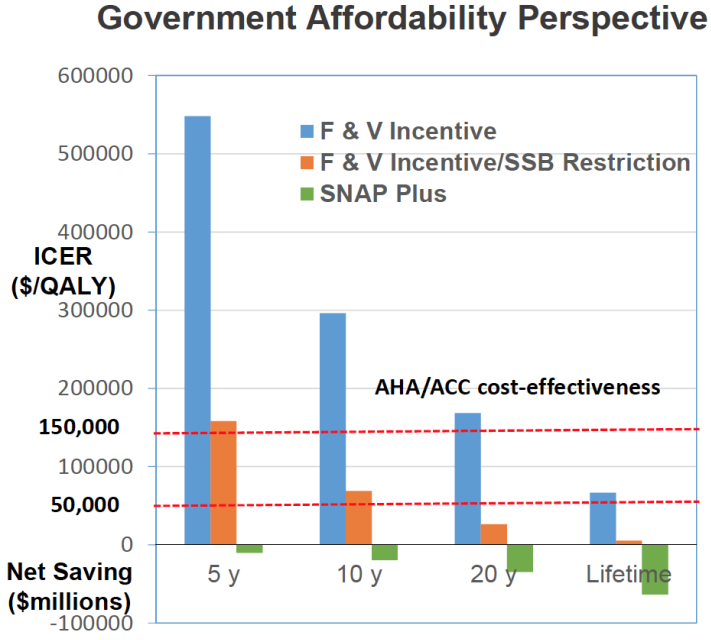

Mozaffarian D, Liu J, Sy S, et al. Cost-effectiveness of financial incentives and disincentives for improving food purchases and health through the US Supplemental Nutrition Assistance Program (SNAP): A microsimulation study. *PLoS Med.* 2018

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Conclusions

- All three SNAP interventions produced significant health gains and are cost-effective.
- SNAP Plus achieved the largest health gains and cost-savings, including direct savings for the SNAP program.

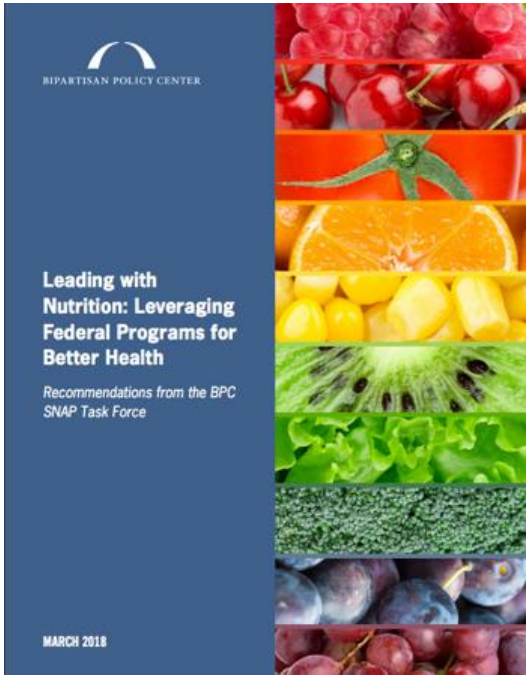
Implications

- A combined food incentive/disincentive program may be most attractive.
- These SNAP interventions should be tested in multiple state pilots in the 2020 Farm Bill to leverage and strengthen SNAP for better health and lower healthcare costs.

Bipartisan Policy Center SNAP Task Force Recommendations

Prioritize Nutrition in SNAP

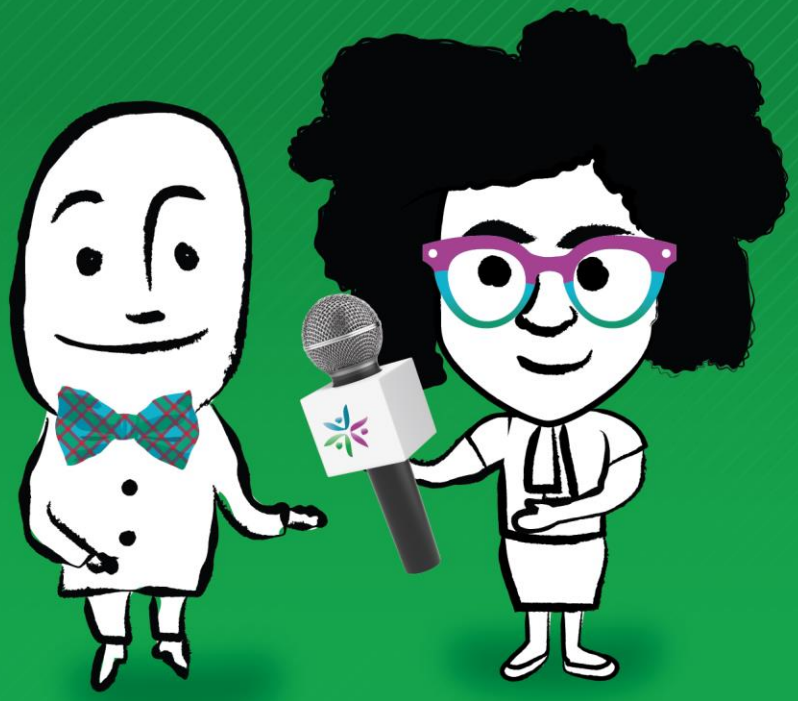
1. Make diet quality a core SNAP objective.
2. Eliminate sugar-sweetened beverages from a list of items that can be purchased with SNAP benefits.
3. Support healthy purchases by continuing and strengthening incentives for purchasing fruits and vegetables.
4. Authorize funds for the U.S. Department of Agriculture (USDA) to conduct a range of evidence-based pilots to improve SNAP participants' diets.
5. Consolidate USDA authority over the agency's nutrition standards and nutrition-education efforts
6. Authorize USDA to collect and share store-level data on all products purchased with SNAP funds.
7. Strengthen SNAP retailer standards to improve the food environment for all shoppers.



50th Anniversary White House Conference Report - March 24, 2020

SNAP Policy Recommendations:

- *Increase access and participation*
- *Protect structure and update benefit*
- *Diet quality as core objective*
- *Innovative pilot programs*
- *SNAP-Ed infrastructure*
- *Retailer standards and data*



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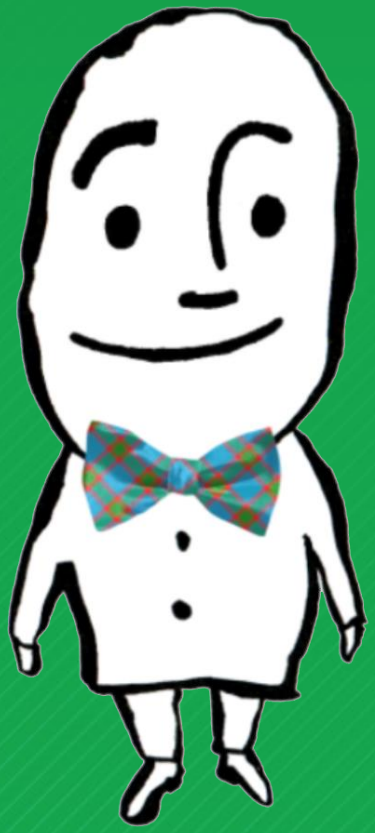
QUESTIONS?

Please type your question(s) in the chat box located on the right.



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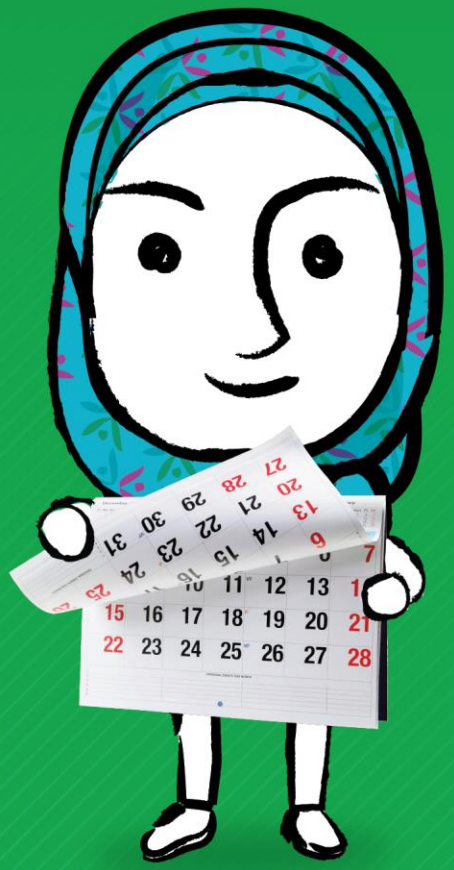
UPCOMING EVENTS



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Upcoming Events

- Sign up for our newsletter
- Upcoming Connect & Explore: "NCCOR's Tools in Action: featuring the Summer Physical Activity and Friendship Study" on Thursday, March 5 at 2 p.m.
- NCCOR will have a booth at SOPHE in Atlanta, GA March 17-20
- NCCOR presenting at SOPHE Student Workshop Wednesday, March 18, 11:15–12:45 p.m.

NCCOR
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New Resources

- New White Paper: “Advancing Measurement of Individual Behaviors Related to Childhood Obesity: Implications and Recommendations for the Field”

FURTHER QUESTIONS?

Other questions about NCCOR or upcoming activities?

Email the NCCOR Coordinating Center
nccor@fhi360.org

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ABOUT ▾ PROJECTS ▾ TOOLS ▾ WEBINARS PUBLICATIONS EVENTS RESOURCES

WHAT'S HAPPENING IN

NCCOR NEWS

NCCOR publishes chapter: Behavioral Design as an Emerging Theory for Dietary Behavior Change

NCCOR is highlighting multidisciplinary partnerships to celebrate National Childhood Obesity Awareness Month 2018!

Utility of the Youth Compendium of Physical Activities

NCCOR to present at the Society for Prevention Research and the American College of Sports Medicine 2018 Annual Meetings

NCCOR updates the Catalogue of Surveillance Systems and seeks recommendations for new systems

Connect & Explore

Upcoming Webinars

Mark your calendar for these upcoming Connect & Explore webinars!

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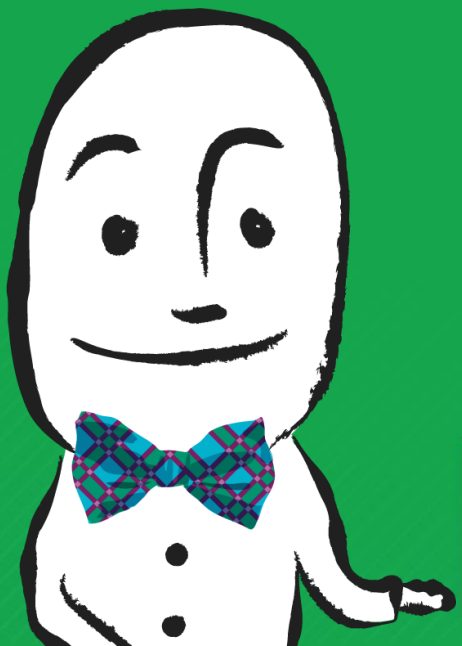
THANK YOU!



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