



*New sustainable service delivery model
addressing food insecurity and social needs of
low-income pregnant individuals*



Greater Cleveland
Food Bank



Better Health
Partnership

Collaborating for a healthy community

Community and Collaboration Core



Clinical and Translational Science Collaborative
at Case Western Reserve University



Prevention Research Center
at Case Western Reserve University

Nourishing Beginnings Team

Greater Cleveland Foodbank

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Community Health Worker Partner Organizations

United Way, Pregnant with Possibilities Resource Center, Village of Healing, Metrohealth Medical Center

Funders

Vitamix Foundation
Bruening Foundation
Clinical Translational Science Collaborative of Cleveland
Robert Wood Johnson Foundation
CareSource (Managed Care Organization)

Today's Talk

- Food Insecurity and Health Outcomes
- Introduce our community-academic partnership
 - Greater Cleveland Food Bank
 - Better Health Partnership Pathways Community HUB
 - Case Western Reserve University
- Brief history of Nourishing Beginnings
- Program Description
- Study Design and Data Collection
- Q&A!



Food Insecurity and Poor Health Outcomes

- Food insecurity associated with poor health outcome – especially strong for chronic disease
 - More likely to develop (heart disease, diabetes = 25%)
 - More difficult to manage (lower medication adherence, higher ER visits)
- Significant relationship between food insecurity and stress, depression
- High racially disparate rates of infant mortality in Cuyahoga County
 - Black babies 4x more likely to die than white in first year
 - Leading cause of infant mortality is premature birth
 - Food insecure pregnant people are 2x more likely to deliver premature
 - Food insecurity also linked with negative mental health outcomes during pregnancy
 - Additional factors: food deserts, poor transportation, insufficient SNAP

OUR PARTNERSHIP



Greater Cleveland
Food Bank



GCFB Overview



- One of 12 food banks in Ohio
 - 6 counties, serve 300-400k people per year through various programs, 50M lbs food
- Food sources
 - Government partners - Federal (USDA/TEFAP), Ohio (OACP, OFF)
 - Donation/Rescue – individuals & various food vendors (e.g., Giant Eagle, Orlando)
 - Purchased – for certain programs and to fill in needed items
 - Strategic focus on quality – (18M produce, 9M perishable)
- Food as Medicine initiatives (FAM clinics, mobile produce, FI screen/refer programs, nutrition ed, food intervention research)
- Policy shifts to increase SDOH research/interventions across the country, affecting food banks and encouraging state-wide collaborative strategies

Pathways Community HUB

- HUB is administered by Better Health Partnership
- A centralized care coordination model for individuals/families on Medicaid
- Leverages CHWs – employed by local agencies
- CHWs engage with high-risk individuals and work with them to complete a comprehensive needs and risk assessment. Identify “pathways”, such as a pregnancy pathway or a housing referral pathway.
- CHWs navigate client through evidence-based “pathways”
- The HUB contracts with Medicaid Managed Care (MCOs) to offer payments to CHWs to support address client needs



Case Western Reserve University

- School of Medicine and the Prevention Research Center for Healthy Neighborhood.
- Large translational grant (CTSA) supported the development of NB and provided the funds for research team initially.
- Case Team responsible for study design, data collection tools and protocols, participant tracking, IRB submissions, budgetary oversight, grant writing
- PRCHN provides interactive healthy foods resources for one intervention arm.



Developing Nourishing Beginnings

- 18-month process to develop the program and study for Nourishing Beginnings
- Partners co-designed the shell of the program and then brought CHWs in for input on recruitment, delivery, measures and impact. CHWs continue to be engaged.
- Aim: address the negative effects of food insecurity during pregnancy by: (a) integrating and streamlining referral and food delivery systems to increase access to healthy food and (b) being facilitated by a community health worker, who also provides support for other unmet social needs.
- Ultimately, goal (of the study) is to determine if NB will improve maternal and baby health outcomes, which in turn should reduce health care costs.
- Savings in health care cost may lead to a reimbursable pathway for direct food access in the future.

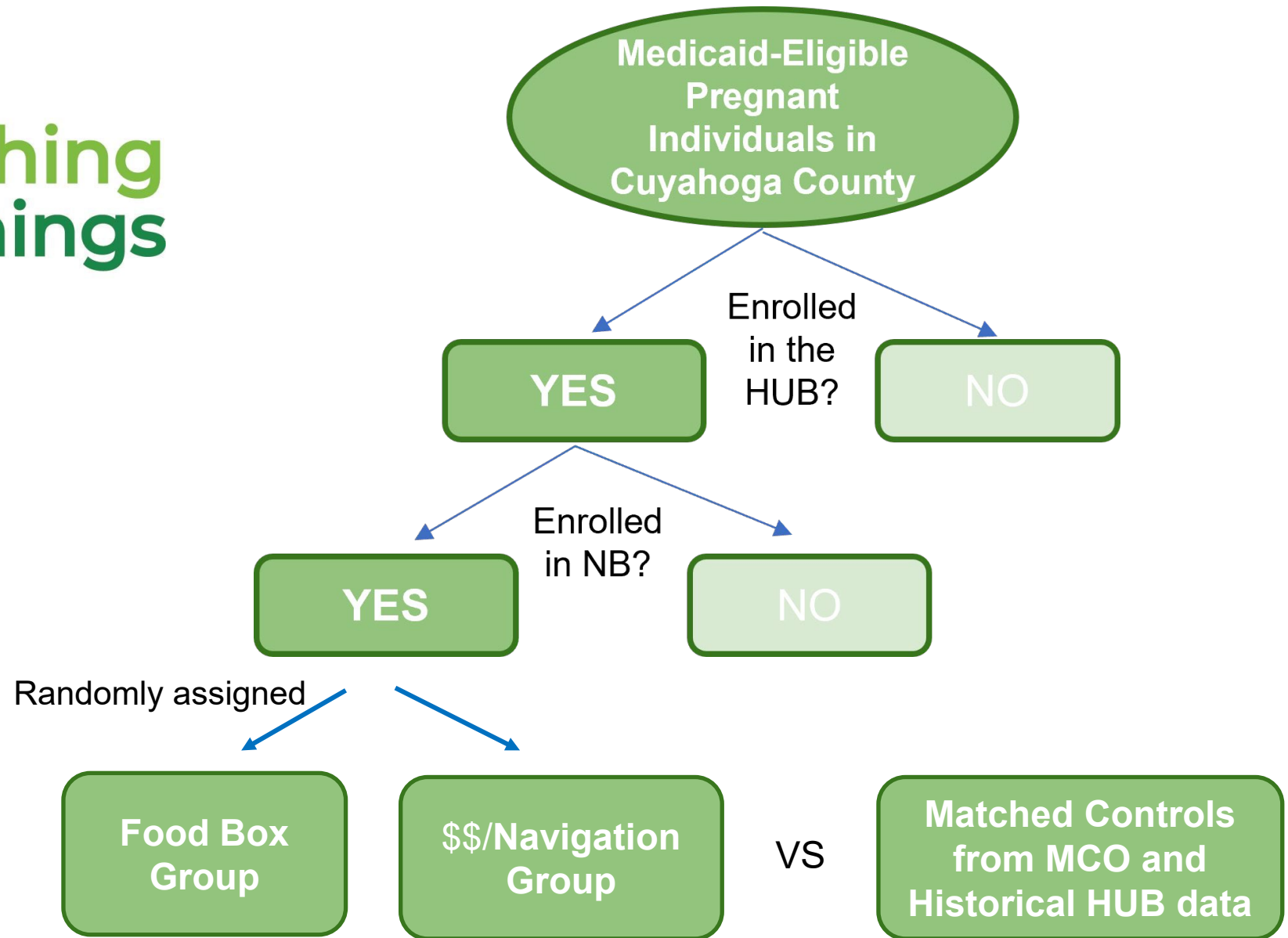


Methods

- **Participants** (n=160) recruited from population of pregnant women **referred to HUB**, referrals from MCOs, health organizations, community organizations, health systems, participating CHW outreach, GCFB food assistance referrals.
- **Eligibility:** 18 years or older, pregnant at or less than 22 weeks gestation, English speaking (all population is Medicaid-eligible, low-income).
- Participating **CHWs** are from grass-roots community organizations and health providers contracting with HUB, extensively trained, **involved in co-design of study**.
- **Two intervention arms** (food box delivery or financial assistance).
- **Control group:** Two sources for control group comparisons – historical controls from HUB prior to intervention launch, matched controls from MCO population.

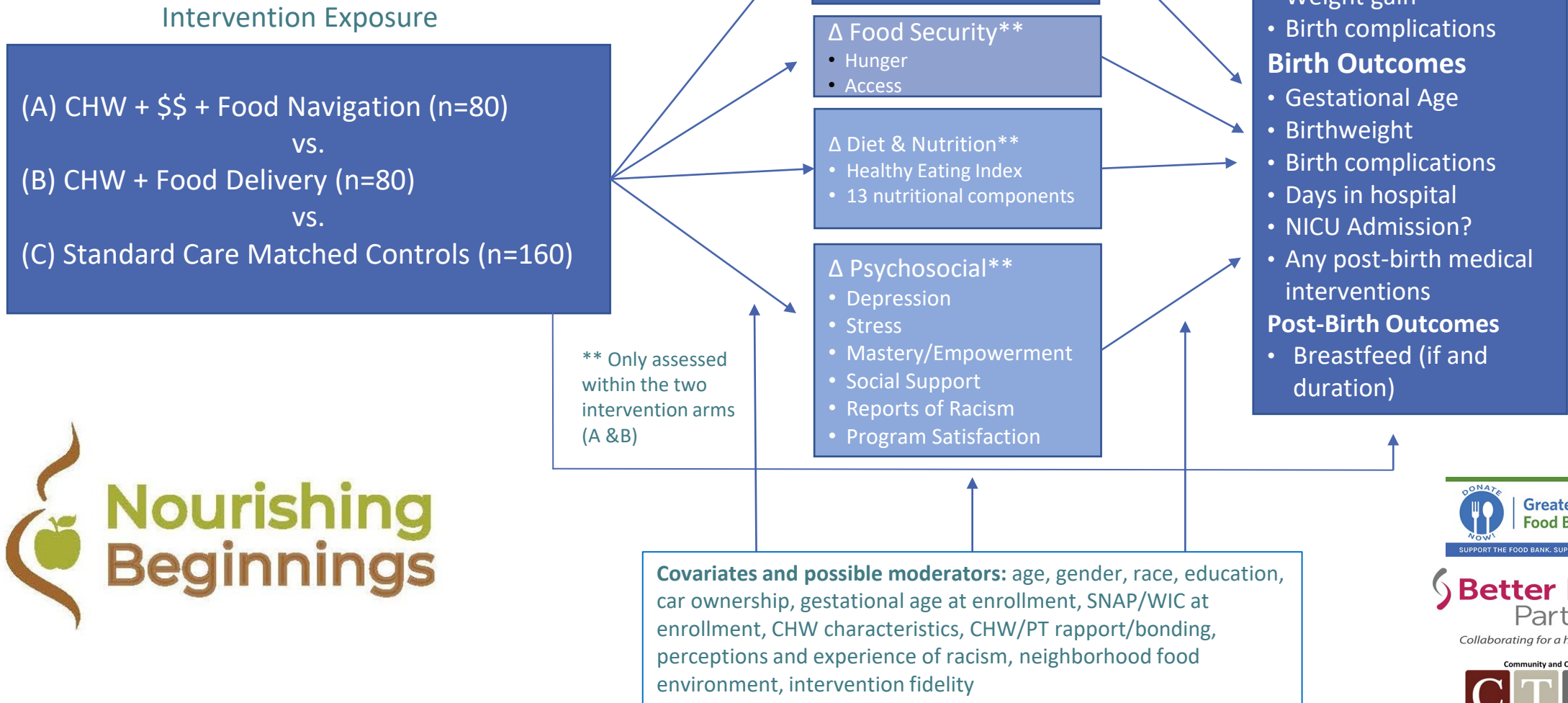


Nourishing Beginnings



Conceptual Framework for *Nourishing Beginnings* Intervention Study

Proximal Outcomes and Possible Mediators (Collected Baseline, after 10 wks of intervention, near delivery)



Intervention Arms:







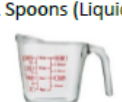









Food Box Delivery vs. Cash Assistance + Navigation



Intervention Both Arms: Cooking Tools

- \$100 budgeted for every participant
- With many items, may need advice on which ones to prioritize
- Many food items in boxes require boiling, baking, sautéing

Participant Name: _____ ID Number: _____ Program: _____

COOKING TOOLS SURVEY							
Please <u>circle</u> items you need. Also <u>circle</u> items you own if they are broken or in poor condition.							
Baking Sheets  \$9	Bowls  \$12	Can Opener  \$15	Casserole Dish  \$15	Chef's Knife  \$18	Colander/Strainer  \$16	Cutting Board  \$10	Dish Towels  \$9
Drinking Cups  \$10	Food Storage  \$12	Grater  \$14	Measuring Cups & Spoons (Dry)  \$11	Measuring Cups & Spoons (Liquid)  \$15	Meat Thermometer  \$14	Mixing Bowls  \$14	Mixing Spoons  \$10
Muffin Tin  \$15	Plates  \$18	Potholders  \$10	Rubber Spatula  \$10	Saucepan  \$17	Skillet  \$20	Sponge/Dishrag  \$6	Tongs  \$10
Spatula/Turner  \$10	Utensils  \$16	Vegetable Peeler  \$14	Vegetable Scrubber  \$10	Dish Drying Rack  \$15	Fire Extinguisher  \$20	Slow Cooker  \$28	Juicer  \$10
Are you missing any of these items? 			Freezer 	Microwave 	Oven 	Refrigerator 	Stove 

Intervention Arm 1: Food Delivery

Goals:

- Reduce the stress of shopping and food selection
- Improve nutrition and self-efficacy with food

Services:

- 1 week's worth of food, home-delivered, every other week based on preferences
- Delivery-specific recipes with each box
- \$100 in cooking supplies
- Pantry staples box every 3 months (olive oil, spices, vinegar)
- Nutrition education tips

Regular Feedback:

- Text surveys every other week to participant
- Open feedback from CHWs monthly



Food Preference Form

- Link in CCS directly to GCFB Portal (*data integration*)
- Information collected:
 - Allergies
 - Specific diets (vegetarian, kosher, etc)
 - Preferences (NO broccoli, extra sweet potatoes)
 - Delivery window (3 options)
 - Who can accept food deliveries
 - Text confirmations?
 - Name, address, phone

Sample Box Contents: Family of 4

Food Group	Perishable	Shelf Stable
Vegetables (9-11)	Cabbage, onions and bell peppers	Low-sodium collard greens (2), canned peas (2) and spaghetti sauce (2)
Fruits (8-10)	Frozen blueberries, oranges	Applesauce (2), mandarin oranges (2), pears in juice (2)
Proteins (6-7)	1 lb frozen turkey sausage, fresh eggs	Peanut butter, canned lentils (2), canned tuna (2)
Dairy (7-9)	2 lbs shredded cheddar cheese	Shelf-table milk (3), dried milk (1), vanilla soy milk
Starch (5-6)	1 loaf fresh bread, 2 lbs potatoes	Bran flakes, honey toasted Os

Recipes:

- Jamaican-style steamed cabbage
- Lentil Minestrone Soup
- Southern Black-eyed peas
- Turkey Meatloaf



Sample Recipe

Jamaican-Style Steamed Cabbage

Serves 12

Prep time: 15 minutes

Cook time: 15 minutes



INGREDIENTS

- 1 head cabbage
- 1 tablespoon coconut or vegetable oil
- 4 carrots, sliced or shredded
- 1 onion, chopped
- 3 cloves of garlic, minced (or 1 teaspoon garlic powder)
- 1 sweet bell pepper, chopped
- 3 sprigs fresh thyme (or 1 teaspoon dry)
- 1 teaspoon salt (or to taste)
- 1/4 cup coconut cream or butter
- 1 Scotch Bonnet pepper, or 1/2 teaspoon crushed red pepper flakes (or to taste)
- Optional: For protein, add shrimp, salted cod or butter beans

DIRECTIONS

1. Remove outer leaves of cabbage; cut into four, and thinly shred
2. Heat oil in large skillet on medium-high heat.
3. Sauté cabbage, carrot, onion, garlic and bell pepper; cover.
4. Let cook for 10 minutes; stir.
5. Add thyme, salt, coconut cream and hot pepper; stir and taste.
6. Cover and allow to cook for about minutes stirring occasionally; adjust seasoning if desired.
7. Serve hot with steamed rice to complete the meal.

Adapted from HealthierSteps.com



**Greater Cleveland
Food Bank**

Intervention Arm 2: \$ and *FreshFinder*

Goals:

- Provide additional financial support to purchase healthy foods during pregnancy
- Reduce the stress of locating healthy food retail and other food outlets
- Improve nutrition and self-efficacy with food

Services:

- \$30 every two weeks, deposited to Cash App
- Navigational support to locate and create a plan for shopping for healthy foods
- Easy recipes cookbook
- \$100 in cooking supplies
- Nutrition education tips

Regular Feedback:

- Text surveys every other week to participant
- Open feedback from CHWs monthly



Intervention Arm 2: *FreshFinder*

- FreshFinder is an interactive map to look at the food options near an address, based on the annual Cleveland Inventory of Food and Tobacco Retail (CIFTR) Project.
- CIFTR is conducted annually by the Prevention Research Center for Healthy Neighborhoods by a small army of student interns. Audit approximately 1600 retail stores each summer.
- CHW uses FreshFinder as a tool to help talk with client about finding healthy food near them.

The Assessment Tool



PRCHN Food Retail Audit Tool 2022

LABEL with Census ID

Visit Number	1	2	3
Time of visit			
Month/Day			
Status (✓)	Open		
	PC		
	Closed at time of visit		
	Unsure		

Store Name: _____
 Team: _____
 Address: _____
 Observations? _____

1a. Does the store sell gasoline? (✓)	YES _____	NO _____
1b. Does this store have a pharmacy? (✓)	YES _____	NO _____
2. Do you have to be 21 or older to enter?	YES _____	NO _____
3. Does the store only or predominantly sell tobacco products (might sell snacks)?	YES _____	NO _____
4. Does it only or predominantly sell alcohol (might sell snacks)?	YES _____	NO _____
5. Number of food/beverage aisles:	_____	10+
6. Total number of aisles in store:	_____	10+

7. Does the store have the following items?	YES, in stock (✓)	YES, out of stock (✓)	NO (✓)
a. Alcohol (wine, beer, or liquor sold as packages or individuals)			
b. High-sugar drinks (≥16 oz. non-diet beverages, soda, non-100% juice, energy drinks)			
c. Chips and/or Candy			
d. Raw Meat (Butcher on premises NOT required. Raw, prepackaged meat okay; not hot dogs)			
e. In-store Bakery (must bake goods in store)			
f. Eggs (cartons of 6 or more eggs, any size)			
g. Milk: Whole or 2% Whole/2% PRICE/GAL (\$) _____			
h. Milk: 1% or skim 1%/skim PRICE/GAL (\$) _____			
i. Dairy Alternative Milk (of any type e.g. almond, coconut, soy, Lactaid, etc.)			
j. Whole Wheat Bread (Whole Wheat is first ingredient)			
k. Low Sugar Cereal (<8g of sugar)			
l. High Fiber Cereal (10g or more of fiber)			
m. Beans (beans, lentils, chickpeas; dried or canned)			
n. Brown Rice			
o. Infant Formula			

8. F&V Availability: Write the number of varieties available. If more than 10, circle 10+		
a. Fresh Vegetables	(#) _____ 10+	Quality (✓): ACCEPTABLE _____ UNACCEPTABLE _____
b. Processed Vegetables	(#) _____ 10+	
c. Fresh Fruits	(#) _____ 10+	Quality (✓): ACCEPTABLE _____ UNACCEPTABLE _____
d. Processed Fruits	(#) _____ 10+	

PREPARED FOODS	YES (✓)	NO (✓)
9. Does this store sell prepared foods?		
a. If yes, pay before eating?		
b. If yes, is there a kitchen or food prep space at the location?		
10. Is there a dining/seating area (at least one table and chair)?		
11. Does this store only sell one type of food?		
a. If yes, what type of food?: _____ Type: _____		

13. Tobacco: Product Placement & Advertising *check all that apply							
a. Product Available	NONE (✓)	BEHIND COUNTER (✓)	ON COUNTER/ KIOSK (✓)	BY CANDY (within 1 ft) (✓)	ELSEWHERE IN STORE (✓)	CHARACTERIZING FLAVOR (✓)	CONCEPT FLAVOR (✓)
Cigarettes							
Menthol Cigarette						n/a	n/a
Little Cigars							
Cigarillos							
E-cigarettes							
Nicotine Replacement Therapy						n/a	n/a

b. Interior Advertising	INSIDE				
	NONE (✓)	BELOW 3 ft. (✓)	3+ ft. (✓)	CHARACTERIZING FLAVOR (✓)	CONCEPT FLAVOR
Cigarettes					
Little Cigars/Cigarillos					
ENDS					
Nicotine Replacement Therapy				n/a	n/a

c. Outdoor Advertising	# ON BUILDING				# ON PROPERTY			
	NONE (✓)	#	CHARACTERIZING FLAVOR (✓)	CONCEPT FLAVOR (✓)	NONE (✓)	#	CHARACTERIZING FLAVOR (✓)	CONCEPT FLAVOR (✓)
Cigarettes								
Little Cigars/Cigarillos								
ENDS								
Nicotine Replacement Therapy			n/a	n/a			n/a	n/a
d. Is compliant "Tobacco 21" signage posted at store?	YES _____				NO _____			
e. Is other tobacco 21 signage posted? (✓)	YES _____				NO _____			

This is the Near Me tool of the Freshfinder App! Use this to search for an address or locate on the map. When using this tool, you will see SuperMarkets, Large Grocery Stores, Small Grocery Stores, and Corner Stores. If you want to view fast food locations or restaurants zoom in, and they will become visible.

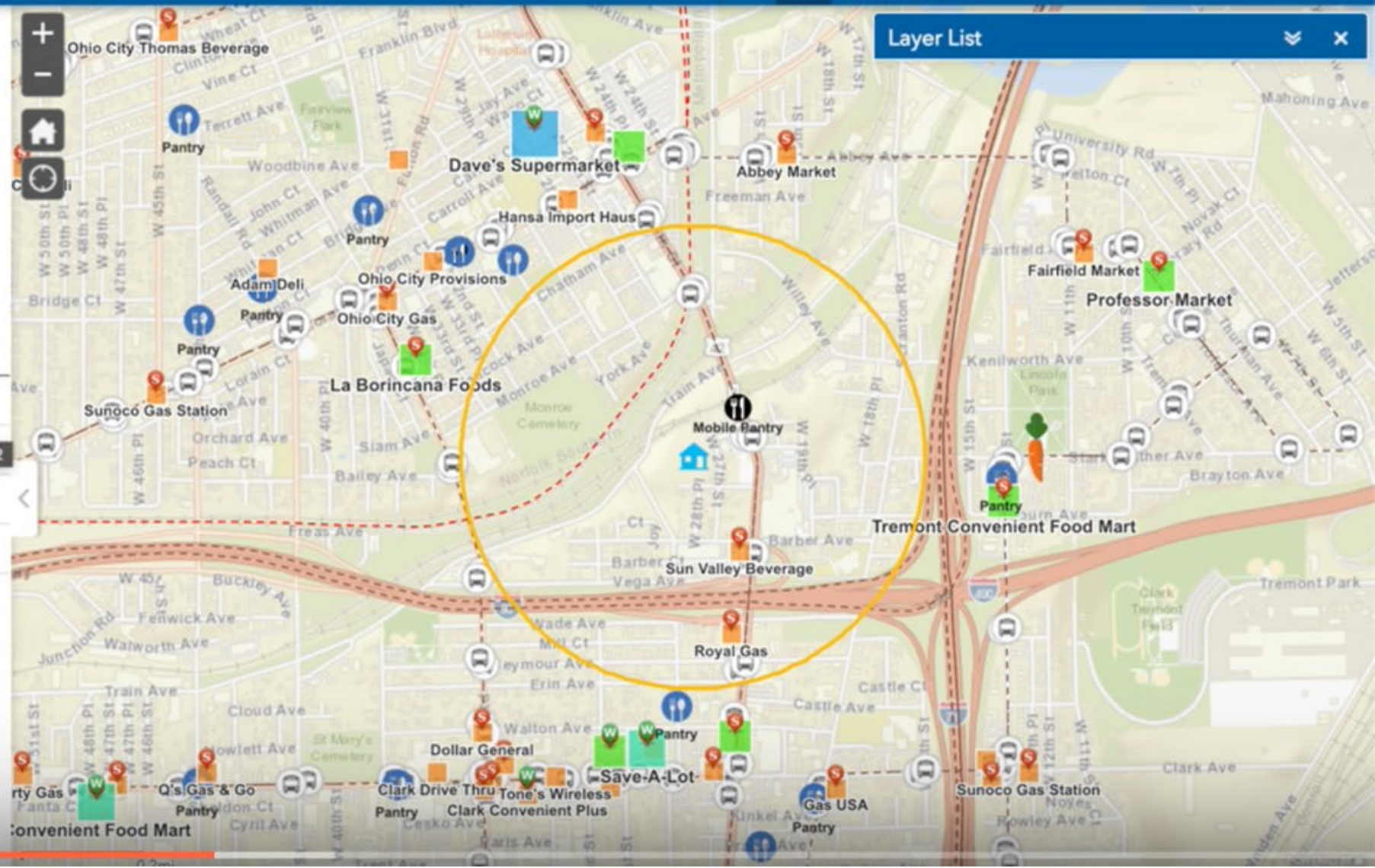
2500-2598 W 27th St, Clk X

Show results within (Miles)

0 15

- Cornerstore or Convenience Store (2) >
- Cuyahoga County Food Bank **Cornerstore or Convenience Store 2**
- RTA Stops (8) >
- RTA Lines (4) >

Layer List



Data Sources

- **Pathways HUB:** Participant demographics, CHW visits, maternal and infant outcomes. Outcomes verified by MCO data whenever possible.
- **Parent Survey:** Collected at baseline, 10 weeks post-intervention, and near delivery. Measures include food insecurity, psychosocial health (depression, stress, mastery, social support, racism/discrimination), eating/ grocery shopping patterns, belief in importance of health eating, healthy eating self-efficacy.
- **Diet and Nutrition:** 24-hr diet recall (NDSR), measured at baseline and near delivery
- Participant **Satisfaction/Utilization** –measured by text survey 7 days after food box/ cash deposit.



THANK YOU!

Questions?

FOR MORE INFORMATION:

<http://prchn.org/nourishingbeginnings/>

<https://www.betterhealthpartnership.org/better-health-pathways-hub-1>



HELP WHEN YOU NEED IT

Better Health Partnership is working with the Greater Cleveland Food Bank, Case Western Reserve University, and First Year Cleveland to bring the Nourishing Beginnings program to Pathways HUB participants.

Nourishing Beginnings is a collaborative study project that investigates the impact of nutritional resources and their effects on expecting parents and their babies during pregnancy and postpartum.



??? QUESTIONS

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For Participant's Rights Questions
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This project has been approved by the Case Western Reserve University Institutional Review Board under protocol numbers 20000000.

**Better Health
Partnership**
Collaborating for a healthy community



**First Year
Cleveland**



Offering parents extra support during and after pregnancy



Supporting pregnant people by
connecting them to fresh, nutritious food,
during pregnancy and postpartum.

PARTICIPATION IN THE PROJECT

The Nourishing Beginnings project's goal is to identify the most effective way to support people during and after their pregnancies. Participants will be asked a series of questions to help researchers understand the impact of the program.

ENROLLMENT & EVALUATION

Once enrolled in the Better Health Pathways HUB, participants will be randomly placed into one of two program study groups. Based upon response, the research team will evaluate which group's approach best benefits pregnant people and their babies. Both groups are of equal value and neither group is better than the other. During enrollment in this project – and throughout the 12-18 months study afterward – participants will be asked questions about the following categories:

**HEALTH • DIET • LIFESTYLE
PREGNANCY & DELIVERY INFO**

GROUP 1 Participants receive boxed food items delivered every other week from the Greater Cleveland Food Bank containing fresh, quality ingredients to make healthy meals at home:

- 🍏 Foods are unprocessed, highly nutritious, and customized to fit the pregnant person's preferences.
- 🍏 Boxes are sized to feed all members of the household.
- 🍏 Participants will provide monthly feedback on the food boxes, which can be adjusted.

GROUP 2 Participants receive:

- 🍏 Cash card for groceries which is reloaded every other week.
- 🍏 Access to a web-based food resources tool.
- 🍏 Training from community health workers about how to find healthy and affordable foods near home.

PARTICIPANTS IN BOTH GROUPS will be offered resources to help them with their food needs, including:

- 🍏 Financial support to purchase kitchen items for their home.
- 🍏 Access to personalized and easy-to-understand recipes that reflect their dietary needs during pregnancy and after delivery.

**Better Health
Partnership**



**Greater Cleveland
Food Bank**

SUPPORT THE FOOD BANK. SUPPORT YOUR NEIGHBORS.

Nourishing Beginnings Participant Timeline

