



Addressing Food Insecurity as a Social Determinant of Health

Challenges and Interventions in Rural Michigan

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Agenda

- About Us
- Food Insecurity in Michigan
- Rural Food Insecurity: Current Data, National and State
- Food Insecurity as a Social Determinant of Health
- Fresh Food Pharmacy Pilot
- Home Delivery Interventions





Food Bank Council of Michigan

The Food Bank Council of Michigan (FBCM) was founded in 1984 by Michigan's regional food banks in an effort to implement a unified strategy to address hunger in Michigan.

As the state association, FBCM represents the seven Feeding America affiliated regional food banks in Michigan.

The regional food banks, along with their subsidiary distribution organizations and branch warehouses, safely store and provide millions of pounds of surplus vegetables, fruits and other grocery items to over 2,000 local agencies serving each of the 83 counties in Michigan.



Vision & Mission

Our Vision

The Food Bank Council of Michigan's mission is to create a food secure state through advocacy, resource management, and collaboration among stakeholders and Michigan's unified food bank network.

Our Mission

Michigan will become a food secure state when each person has access to proper nutrition acquired by dignified means.



What is Food Insecurity?

Understanding Food Security Versus Food Sufficiency



FOOD SECURITY

- ✓ Access at all times to enough nutritious food for an active, healthy life
- ✓ Always enough of the kinds of food you want to eat (**food sufficiency**)



FOOD INSECURITY

Low food security

- ✓ Reduced quality / variety of foods
- ✓ Worry about food running out



Very low food security

- ✓ Reduced quality / variety of foods
- ✓ Multiple signs of disrupted eating / reducing intake
- ✓ Sometimes or often not enough to eat (**food insufficiency**)

Source: Food Research & Action Center 2021 ©

Seniors Struggling With Food Insecurity may Experience a Number of Challenges:



Food running out



Skipping meals



Choosing between food and medicine



Postponing medical care



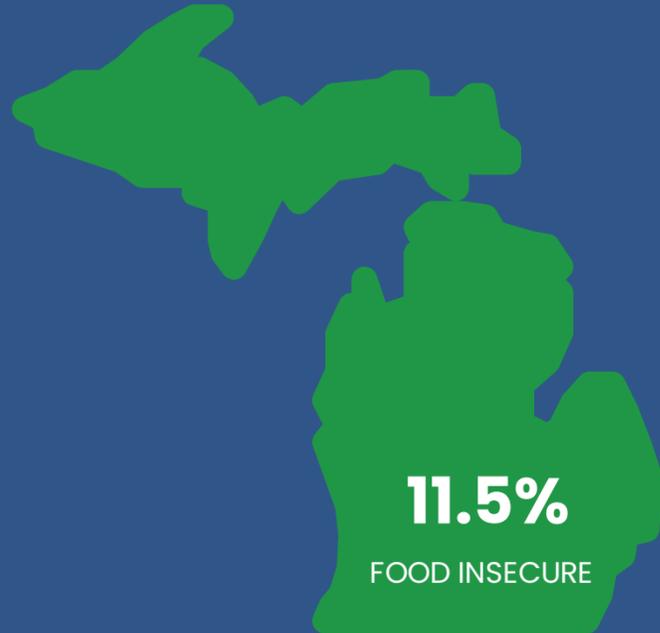
Poor health outcomes



Higher health care use and costs

SOURCE: FRAC's Hunger and Health series

Food Insecurity in Michigan



Food Insecure People:
1,150,150

11.5%
OF STATE
POPULATION

Food Insecurity in Michigan

1.15 million Michiganders struggled to put food on the table in 2020, nearly 300,000 of which were children.

1 in 9 Michiganders experience food insecurity.

For nearly 40 years, FBCM and Michigan's food banks have remained committed to addressing food insecurity in our state.

The network continues to develop effective strategies to respond to the specific needs of each community, through innovative programs and partnerships to increase food security for Michigan residents.



What Causes Food Insecurity?

- Food insecurity is caused by the lack of resources required to consistently access enough food for every person in a household to lead a healthy lifestyle.
- Poverty, income level, and unemployment all contribute to higher rates of food insecurity.
- Food insecurity is a systemic issue, not a personal failing.
- Income insecurity leads to trade-offs in type of food items purchased; nutritional content.



Rural Food Insecurity

Did You Know? Food Insecurity is Worse in Rural America Than in Urban America

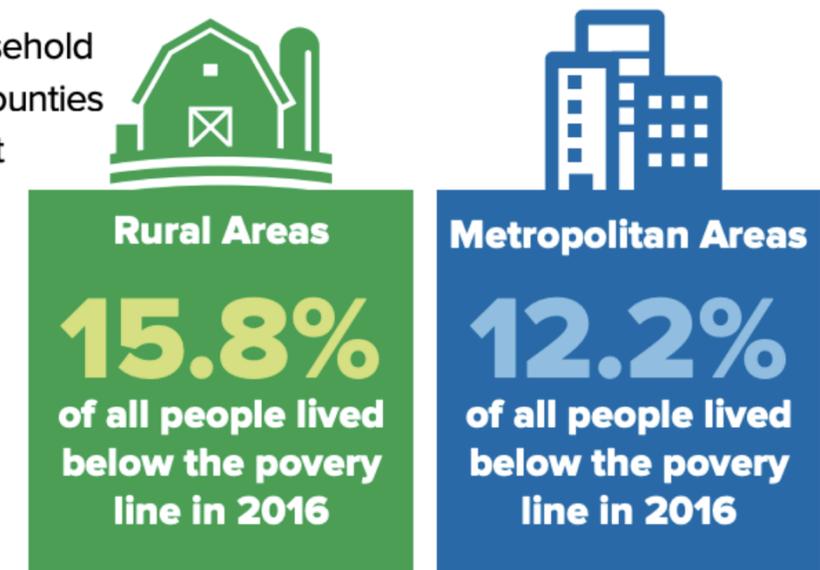
Rural households are more likely to experience food insecurity than households in metropolitan areas.



Did You Know? Poverty is Worse in Rural America Than in Urban America

Poverty is the root cause of hunger and is more acute in rural areas than in urban areas. Rural wages, on average, are lower, and work-support services (public transportation and child care) are unavailable or harder to find and access in rural America.

The median household income in rural counties was \$45,830, just 74.5 percent of the median income for households in metropolitan counties (\$61,521).



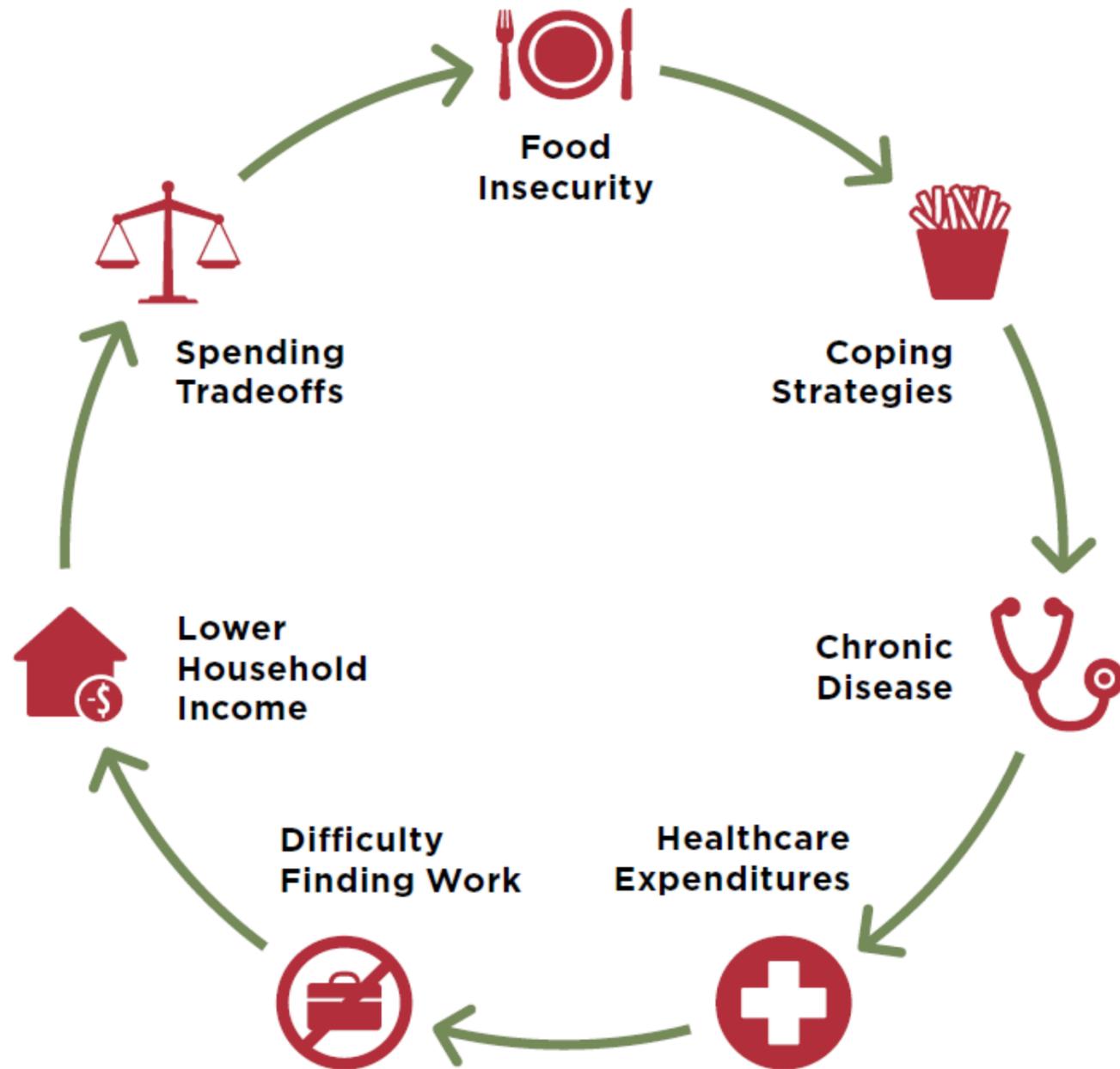
FRAC, Fact Sheet on Rural Hunger in America, 2018.

Table 2. Factors Influencing Rural Food Security

ECONOMIC	CULTURAL	SPATIAL
Rural poverty	Stigma associated with food assistance	Transportation infrastructure
Rural unemployment	Access to culturally appropriate foods	Proximity to traditional food retailers
Food affordability	Alternative food provisioning strategies	Land access & ownership
Rural agrifood systems	Systemic racism	Retail and distribution networks for fresh foods

** From No Kid Hungry's "Rural Child Hunger & Faith Community Engagement," September 2020.*

Food Insecurity as a SDoH



The Interconnectedness of Poverty, Health, and Food Insecurity

Zeroing in on Chronic Disease

- FI individuals have higher levels of chronic disease, such as diabetes, hypertension, coronary heart disease (CHD), hepatitis, stroke, cancer, asthma, arthritis, chronic obstructive pulmonary disease (COPD) and chronic kidney disease (CKD)^{1,2}
- Medication non-adherence ³
- Poor diabetes self-management ⁴
- Higher probability of mental health issues, such as depression ⁵
- Higher rates of iron-deficient anemia ⁶
- More hospitalizations and longer in-patient stays ⁷

1. Irving S.M., Njai R., Siegel P. 2009.

2. Seligman, H. K., Bindman, A., Vittinghoff, E., et al. 2007.

3. Ippolito, M., Lyles, C. Prendergast, K., Seligman, H. 2016.

4. Seligman, H., Jacobs, E., Lopez, A., Tschann, J., Fernandez, A. 2012.

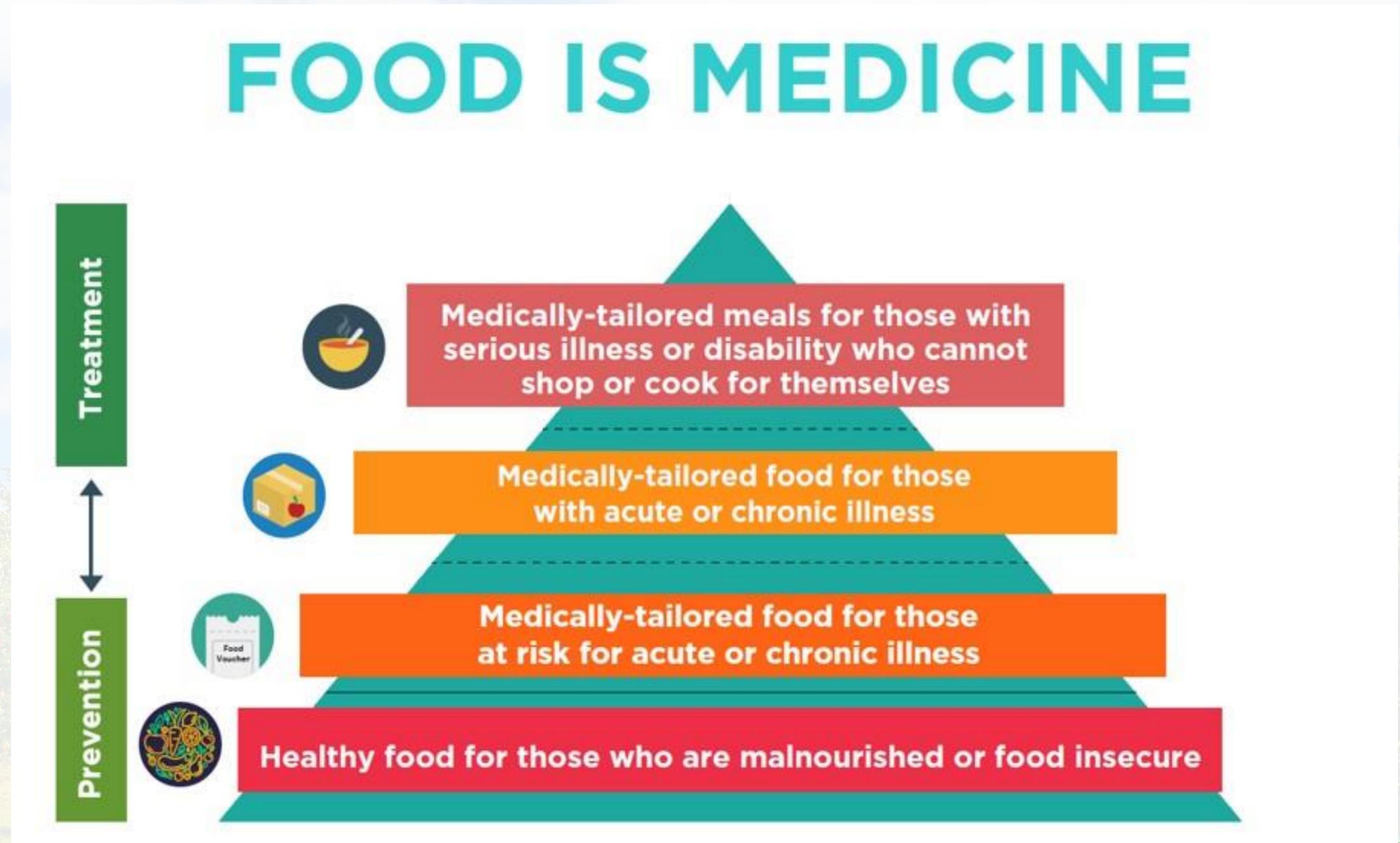
5. Silverman, et al. 2015.

6. Eicher-Miller, H.A., Mason, A., Weaver, C. M., et al. 2009

7. Seligman, H., Bolger K., Guzman A., et al. 2014.



Food-is-Medicine Interventions



Fresh Food Pharmacy Pilot



Pilot: March 2021 – Dec 2022

Michigan Health Endowment Fund Grant

Qualifying patients at Grace Health FQHC

- Over 300 enrolled

Nine-month program

- Starter box
- Supplemental food
- Health coaching
- Evaluating behavior change and health outcomes

Counties served

- Barry, Branch, Calhoun, Kalamazoo



Fresh Food Pharmacy Eligibility

Patients of Grace Health FQHC (Battle Creek)

Food insecure

Willingness and ability to prepare foods and participate in coaching

Not receiving dialysis

Nutrition related condition

- Diabetes
- Pre-Diabetes
- Gestational Diabetes
- Heart Disease
- Hypertension
- BMI over 30



(Pictured: Starter Box at Enrollment)

Fresh Food Pharmacy Food Boxes

Volume

- 25–30 pounds of food
- Double boxes for larger families

Received biweekly

- Delivery
- Pick up

Menu Choices

- Choice of 6 menu cycles
- Vegetarian options
- Dairy or almond milk
- Ingredients for 2 recipes
- Additional fresh produce and breakfast staples



(Pictured: Food Box Example)

Fresh Food Pharmacy Health Coaching

Healthy Lifestyles Team

- Registered Dietitian – patients with diabetes
- Healthy lifestyles coach – all other patients

Individualized monthly session

- 15-minute phone call – 9 sessions
- Focus on individual patient goals



Fresh Food Pharmacy Evaluation

Pre-Survey

- Diet Quality and Behavior – Fruits and Vegetables
- Chronic Disease Self-Management

Post-Survey

- Pre-Survey questions
- Food Security
- Food Box and Coaching Improvement and Use

Monthly Check-Ins

- Food usage
 - Percentage
 - Menu changes
 - Reasons for not using food
- Healthy days
 - Physical health
 - Mental health

Clinical data from Electronic Health Record for quality/pop health:

- Patient demographic data
- Qualifying health condition
- A1C, BMI, blood pressure, cholesterol, behavioral health referrals
- Preventive wellness visits
- Immunizations
- Health insurance status
- Educational level, dually eligible, language, PCP ID)

Fresh Food Pharmacy Success

Many patients request to enroll again

Reports of

- Lowered A1C and weight loss
- Increased movement
- Trying new foods
- Eating more consistently nutritious meals
- Enjoying recipes
- Feeling better mentally and physically

“It introduced me to using more fresh vegetables which helped a lot. I have more energy...it was a variety of different foods but I’ve really grown to like them and love them. In fact, it’s at a point now that I prefer to cook my food from fresh.”

Preliminary Biometric Results

- Average A1C change overall = -7.91%
- Average A1C change for patients with A1C >9.0 = -18.07%
- Average cholesterol change = -4.60%
- Average cholesterol change for patients with cholesterol > 200 = -24.53%
- Average weight change = -2.61% (244.7 average to 238.3 average)
- Average BP change for patients with BP over 140/90 = -32.35%

Lessons Learned

Foods Offered – Variety, recipes, box size

Food Distribution – Pick up and delivery

Education and Coaching – Support beyond nutrition

Case Management – Significant staff time

Screening and Evaluation – Ideal patient profiles

Program guidelines – Patient communication

Retention – Challenges

Pilot 2.0 coming Summer 2023!



Home Delivery Programs

South Michigan Food Bank Delivery Drivers

- Fresh Food Pharmacy Pilot
- Use routing software to determine schedules
- Text alert reminders for patients

DoorDash Delivery

- Senior Commodity Foods (CSFP)
- Identify homebound seniors through partners
- Screening at Food Bank for participants who stop attending distributions





Questions?



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