



American
Heart
Association.

Health Care  Food™

Anchor support from The Rockefeller Foundation

With additional support from Kroger, Walmart, KP, United Way and others

Updates on AHA's Health Care by Food Initiative

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Scientific Lead



<https://healthcarexfood.org>

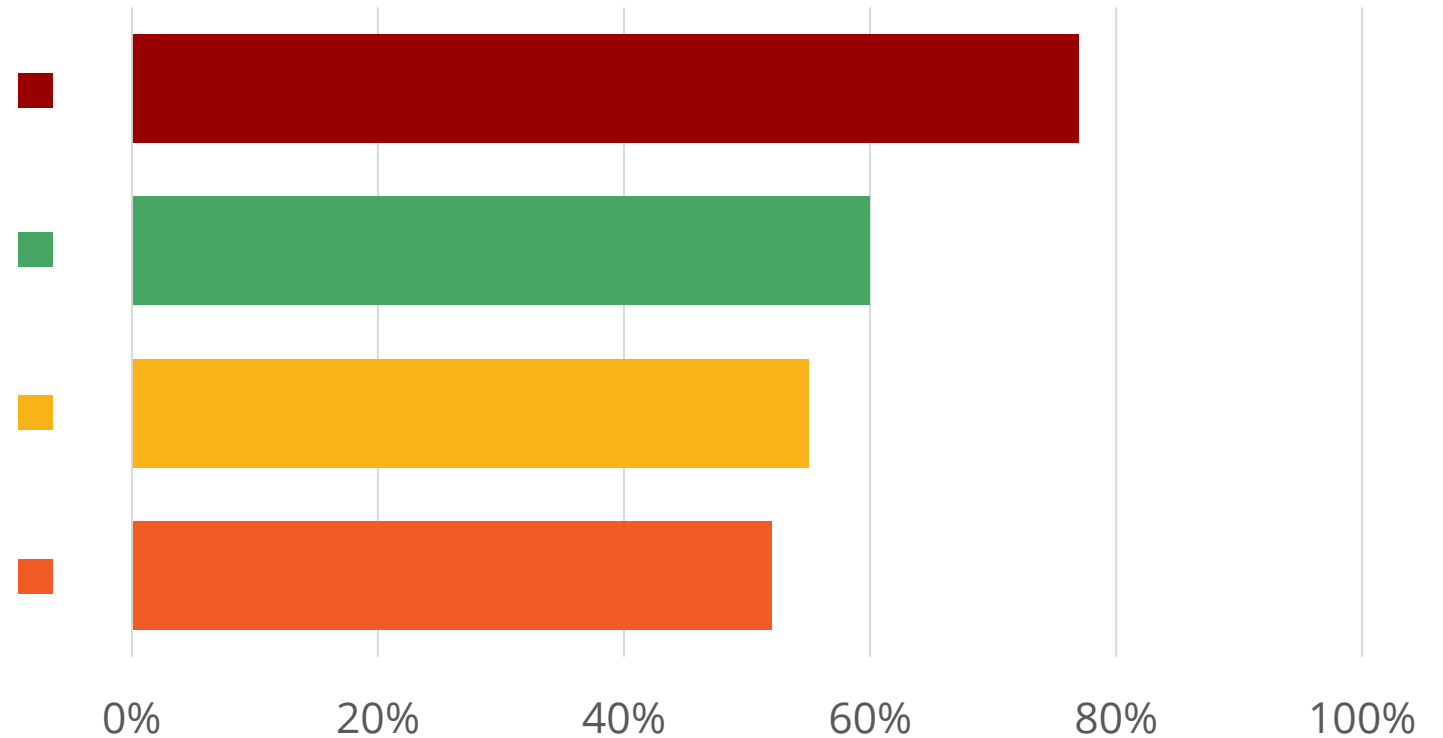
Affordability is a significant challenge for many Americans

77% of Americans would like to have **healthier diets**

The **top barrier** to eating a healthy diet is the **cost of healthy food (60%)**

55% indicated that it often happens that children are eating cheap, unhealthy foods so their families can **pay the rent**

52% indicated that seniors often have to choose between **paying for prescription drugs or paying for food**



The health system hasn't tried systematically to increase healthy food access for high-risk people

AHA PRESIDENTIAL ADVISORY

Food Is Medicine: A Presidential Advisory From the American Heart Association

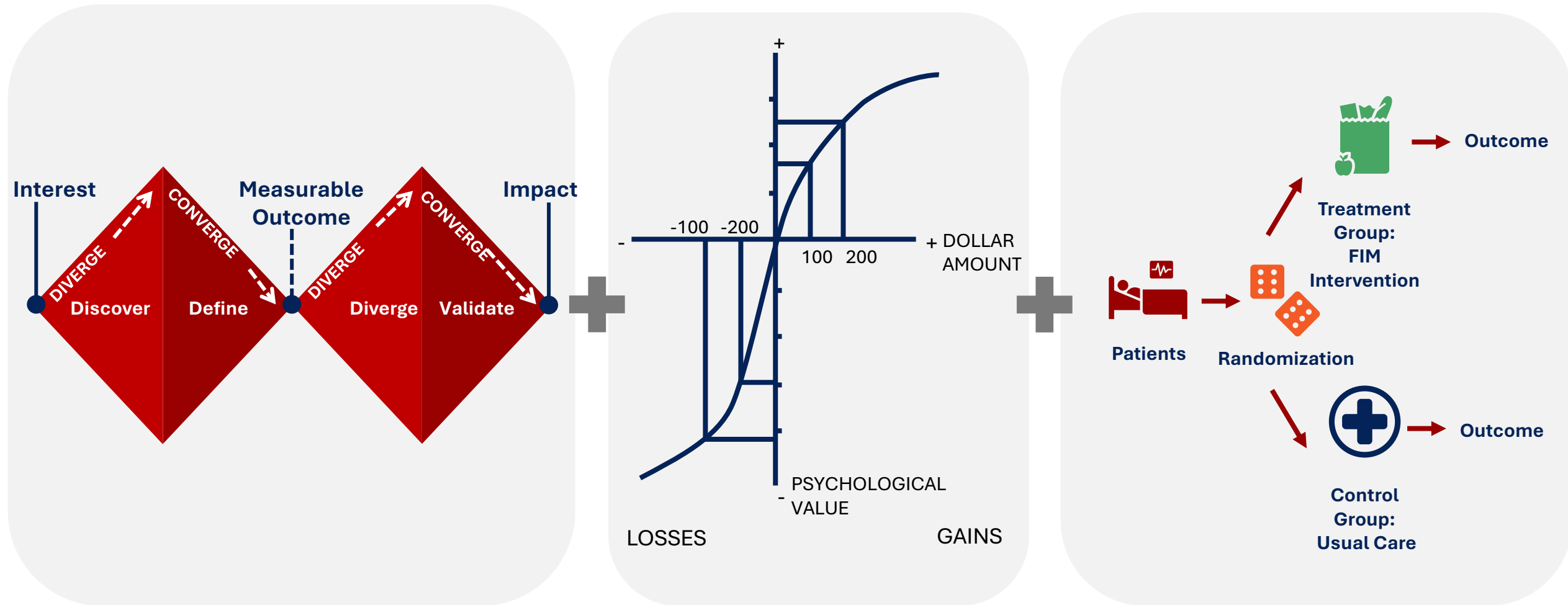
Kevin G. Volpp, MD, PhD, FAHA, Chair; Seth A. Berkowitz, MD, MPH, Co-Vice Chair; Shreela V. Sharma, PhD, RD, MA, Co-Vice Chair; Cheryl A.M. Anderson, PhD, MPH, MS, FAHA; LaPrincess C. Brewer, MD, MPH, FAHA; Mitchell S.V. Elkind, MD, MS, MPhil, FAHA; Christopher D. Gardner, PhD, FAHA; Julie E. Gervis, PhD; Robert A. Harrington, MD, FAHA; Mario Herrero, PhD, MSc; Alice H. Lichtenstein, DSc, MS, FAHA; Mark McClellan, MD, PhD; Jen Muse, MS, RD; Christina A. Roberto, PhD; Justin P.V. Zachariah MD, MPH, FAHA; on behalf of the American Heart Association

ABSTRACT: Unhealthy diets are a major impediment to achieving a healthier population in the United States. Although there is a relatively clear sense of what constitutes a healthy diet, most of the US population does not eat healthy food at rates consistent with the recommended clinical guidelines. An abundance of barriers, including food and nutrition insecurity, how food is marketed and advertised, access to and affordability of healthy foods, and behavioral challenges such as a focus on immediate versus delayed gratification, stand in the way of healthier dietary patterns for many Americans. Food Is Medicine may be defined as the provision of healthy food resources to prevent, manage, or treat specific clinical conditions in coordination with the health care sector. Although the field has promise, relatively few studies have been conducted with designs that provide strong evidence of associations between Food Is Medicine interventions and health outcomes or health

1. Achieving maximal impact in improving health requires doing more than providing free or subsidized food. . .

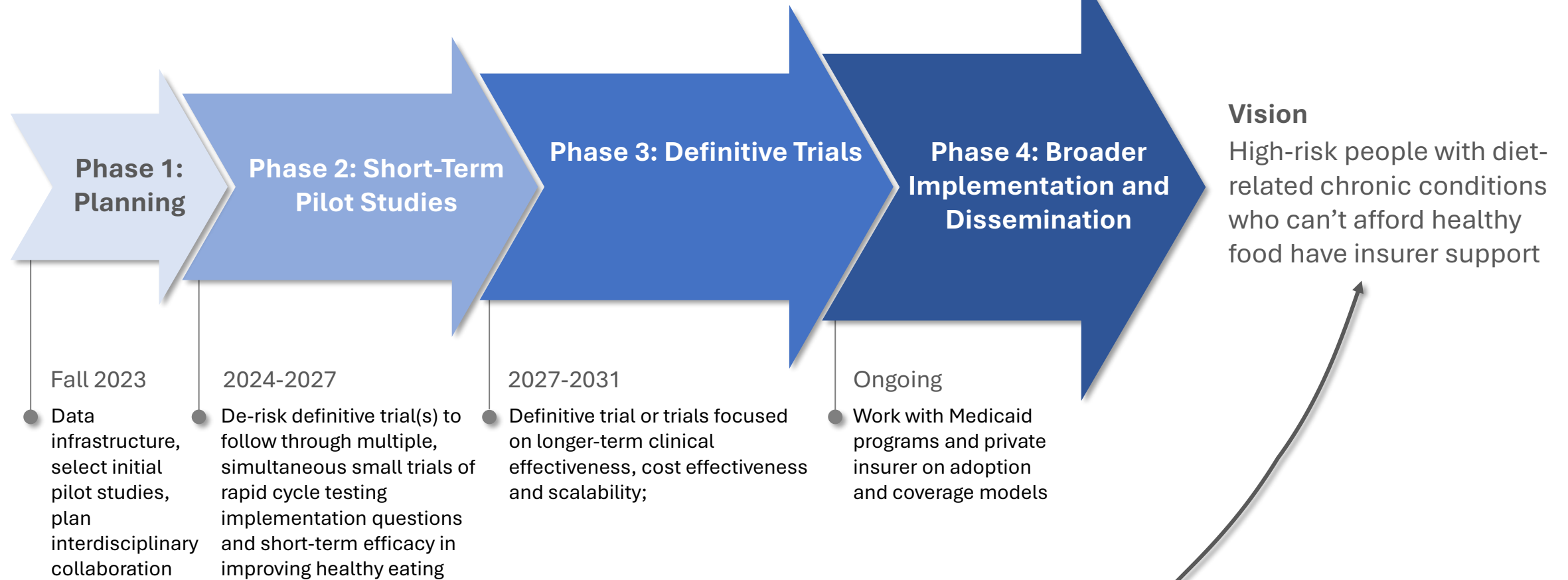
- About 50% of pregnant women eligible for WIC enroll nationwide
 - In the USDA's GusNIP program redemption rates of free vouchers averages about 65%
 - In 2022, California started offering FIM coverage through 1115 Medicaid waiver. In the first year 6,400 out of 15 Million Medi-Cal recipients (0.04 percent) were provided FIM
- We need to learn how to increase uptake and engagement and how to optimize the supporting ecosystem *if these programs are going to achieve their potential impact on health and health care costs*

2. Our approach: Human-centered Design + Behavioral Science + Rigor in testing



Kahneman Thinking Fast and Slow 2011; Volpp, Asch, Loewenstein
Harrisons Internal Medicine 2022

3. Strategy: Make a lot of small bets before making big bets. . .



Status Quo

1st in spending, 48th in life expectancy. . .healthy food accessibility a major challenge for many with diet-related chronic conditions

Our Collaborators: Health Care + Corporations



SEASON



instacart health



Our Collaborators: CBOs



**GOD'S LOVE
WE DELIVER®**



**CROSSROADS
COMMUNITY SERVICES**



brighterbites®



**MOM'S
MEALS®**



PERFORMANCE KITCHEN
FOOD IS MEDICINE™



**COMMUNITY
SERVINGS**
FOOD HEALS



**mid-ohio food
collective**

foodbank | farm | pharmacy | kitchen | market



THE MEDI
COMMUNITY RESOURCE CENTER



Cooks Nook



FreshFix
Buffalo, NY



**VOUCHERS
4 VEGGIES**
LOS ANGELES



MAP
Growing Green



Project Open Hand™
meals with love



Farmshare

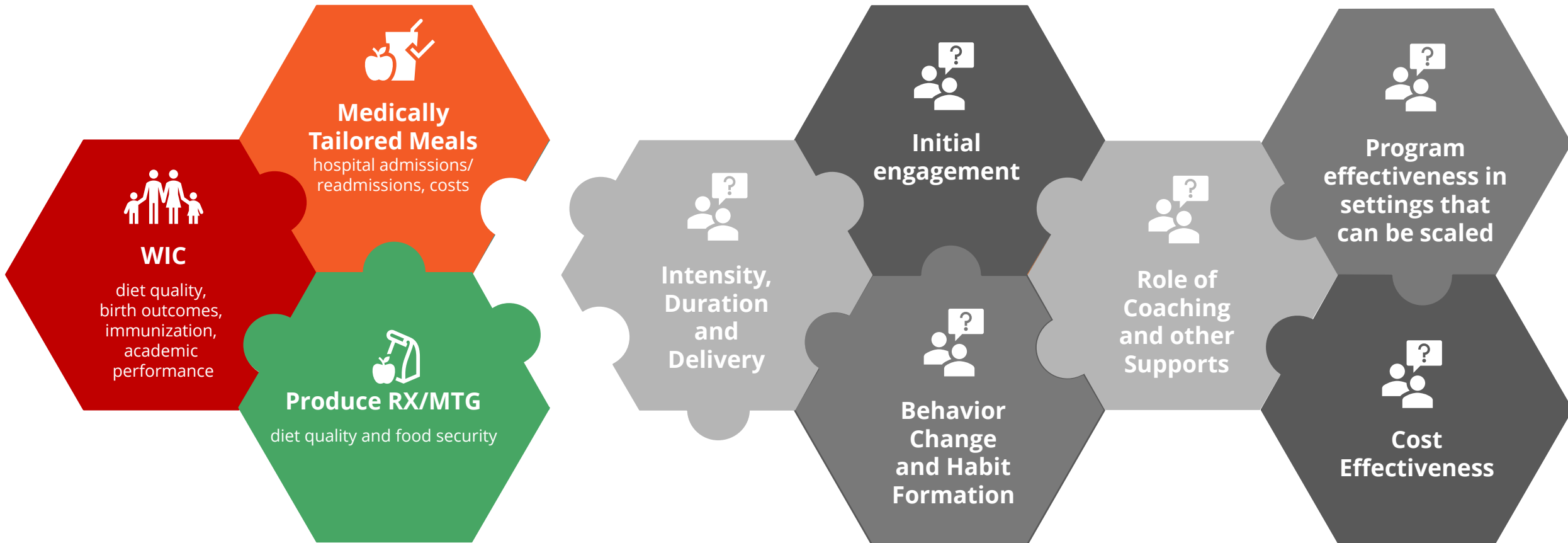
mama's kitchen



EL CONCILIO
CALIFORNIA

4. Answer the questions to lay groundwork to be a covered benefit

AHA HCXF building stronger foundation for scaled implementation



Existing Evidence

Gaps in Evidence to Address

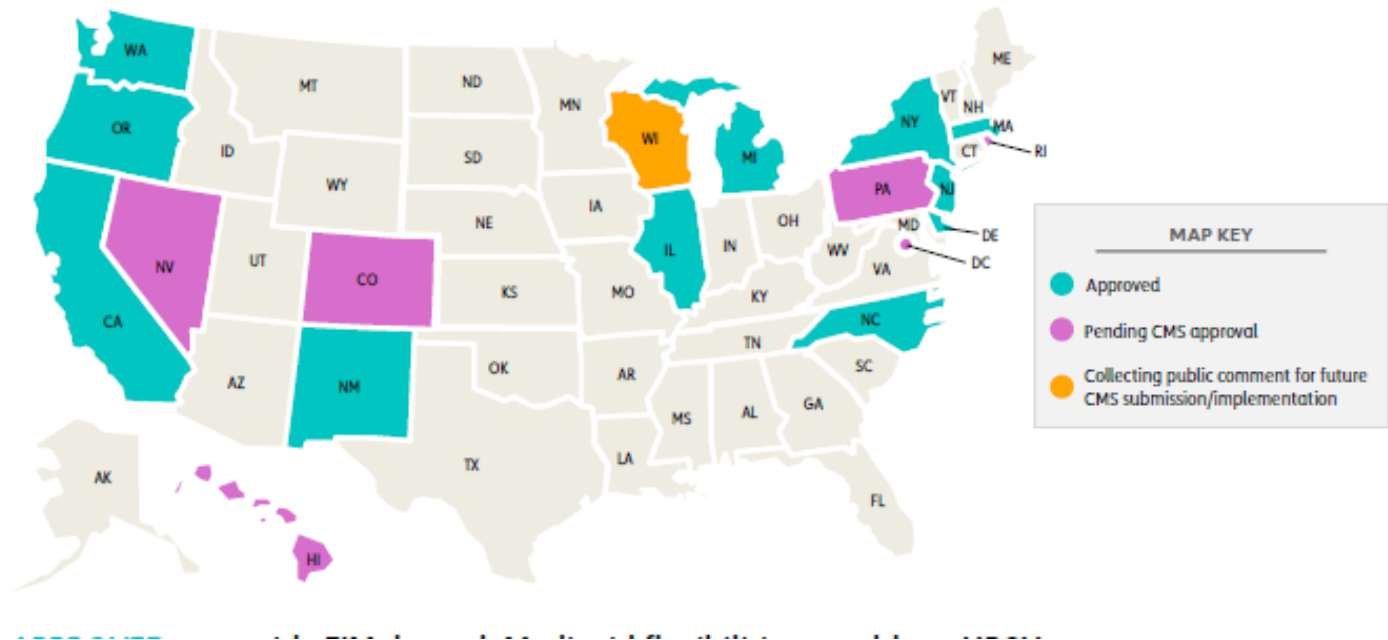
Focus on the populations that need FIM most:



5. Work in Parallel to Accelerate Progress

Vertical 1
+
Vertical 2 (Insurers/Employers)
+
Vertical 3 (Medicaid)

States in various phases of providing FIM through Medicaid flexibilities to address HRSN



Vertical 2: HCXF Insurer/Self-Insured Employer Framework



Objectives:

- Collaborate with insurers or employers to evaluate and co-design programs
- Provide technical assistance to improve program success.
- Support scalable implementation in benefits design.
- Leverage insurer/employer funds for implementation of FIM programs.



Potential Patient Populations:

- Diabetes, high-risk maternity, hypertension, obesity.



Methodology:

- Retrospective evaluation
- A/B testing
- FIM interventions to match population needs.



Potential Testing Components:

- Assessment of existing programs
- Design of new programs
- Employee engagement, improvement in health outcomes



Dissemination/Publication:

- Assess models being used in benefit design
- Influence next round of benefit design
- Share learnings more broadly

Vertical 3: Providing Medicaid Section 1115 Demonstration Waivers Support

The Need:

- States have indicated that they would benefit from advice on what to test and how to test it
- Many states are interested in being part of collaboratives but existing support is very limited

The Opportunity:

- 14 states have approved 1115 FIM waivers related to FIM
- 45 States have 1915 waivers
- AHA to provide technical support during implementation protocol refinement
- Focus on design, rapid cycle innovation, and testing

Goals:

- Guide evidence-based FIM interventions.
- Advise on matching of interventions to populations
- Leverage CMS support of states

Implementation:

- Focus on early stages for maximum impact.
- Support design, innovation, and testing with rapid cycle experiments.
- Initial focus on higher-touch support for 3-5 states, with potential expansion.
- Develop a virtual asynchronous curriculum for broader support for all states

How we describe ourselves to potential collaborators

One-stop shopping to build credible evidence:



Expertise in program design and evaluation related to Food is Medicine



Experience working with health plans on a wide range of projects



We pull in top experts from around the country



Help organizations determine what sort of programs to cover for whom



Capability of standing up teams to conduct many studies in parallel



Accelerate learnings on what works and what doesn't



American Heart Association.

Health Care  **Food**™

Accelerating the Integration of Food Is Medicine in Health Care





Strengthening and Sustaining Community Partnerships for Food is Medicine Research: Considerations, Implications, and Future Work

Lisa Goldman Rosas, PhD MPH
Assistant Professor
Department of Epidemiology and Population Health &
Department of Medicine

Recipe4Health

Food as Medicine Integration:

- Clinical Nutrition Education
- Clinic/EHR Workflow Integration



1



Food Farmacy:

- 16 weekly home deliveries of vegetables and fruits



2



Behavioral Pharmacy:

- Group medical visits to amplify food + sustain healthy life habits



3

Federally Qualified Health Centers in Alameda County, California



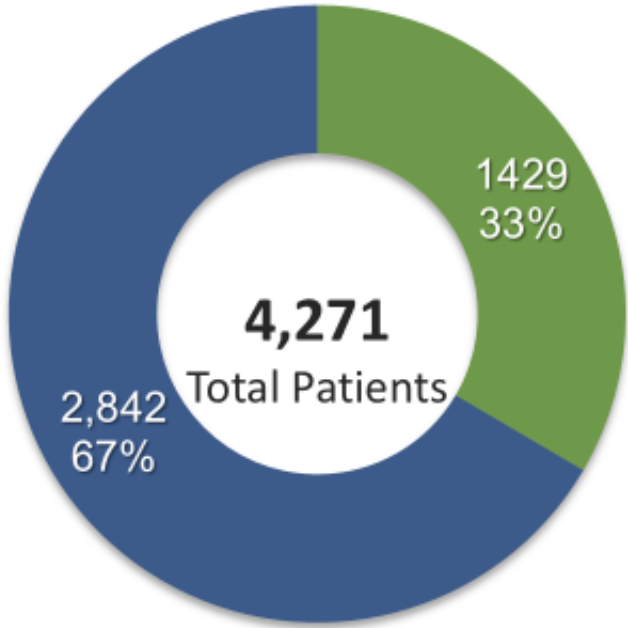
Images courtesy of: clipart;istockphoto; dreamstime



Stanford
MEDICINE

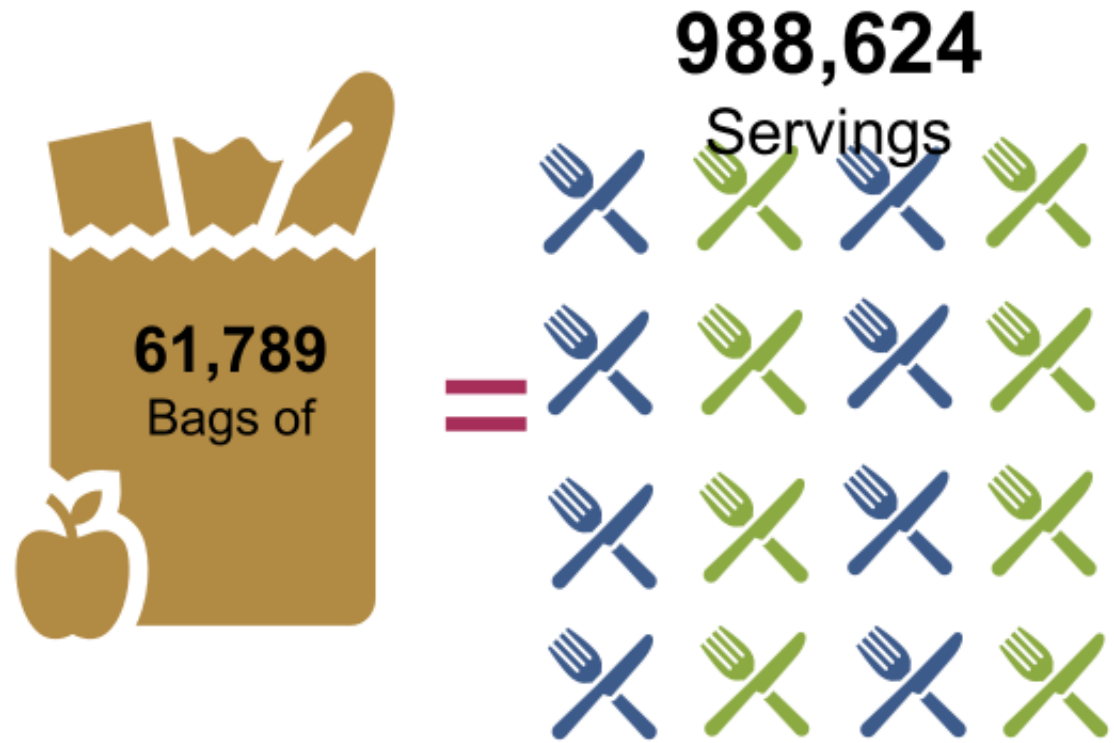
Recipe4Health Program Reach (1/20/2020 – 8/31/2023)

of Patients Served

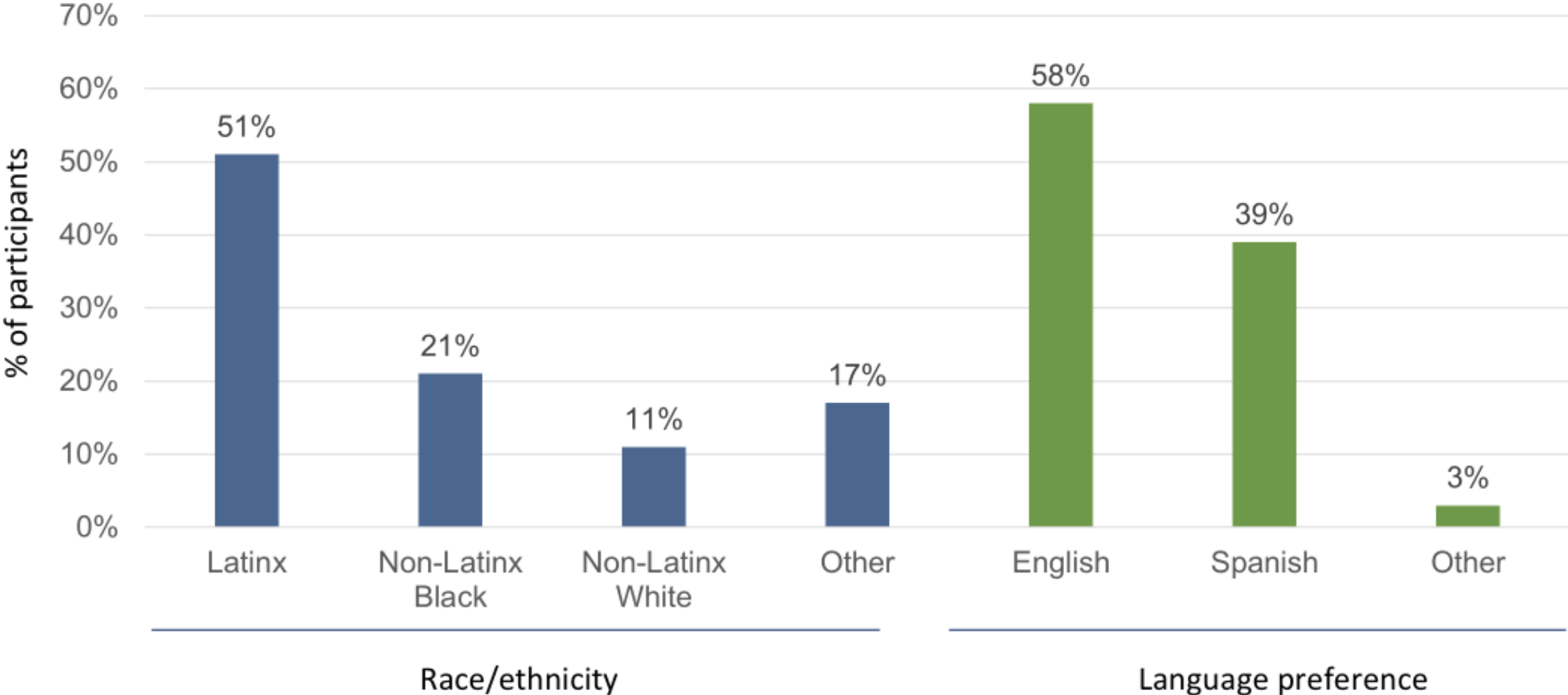


- Behavioral Pharmacy + Food Farmacy
- Food Farmacy Only

Total Amount of Food



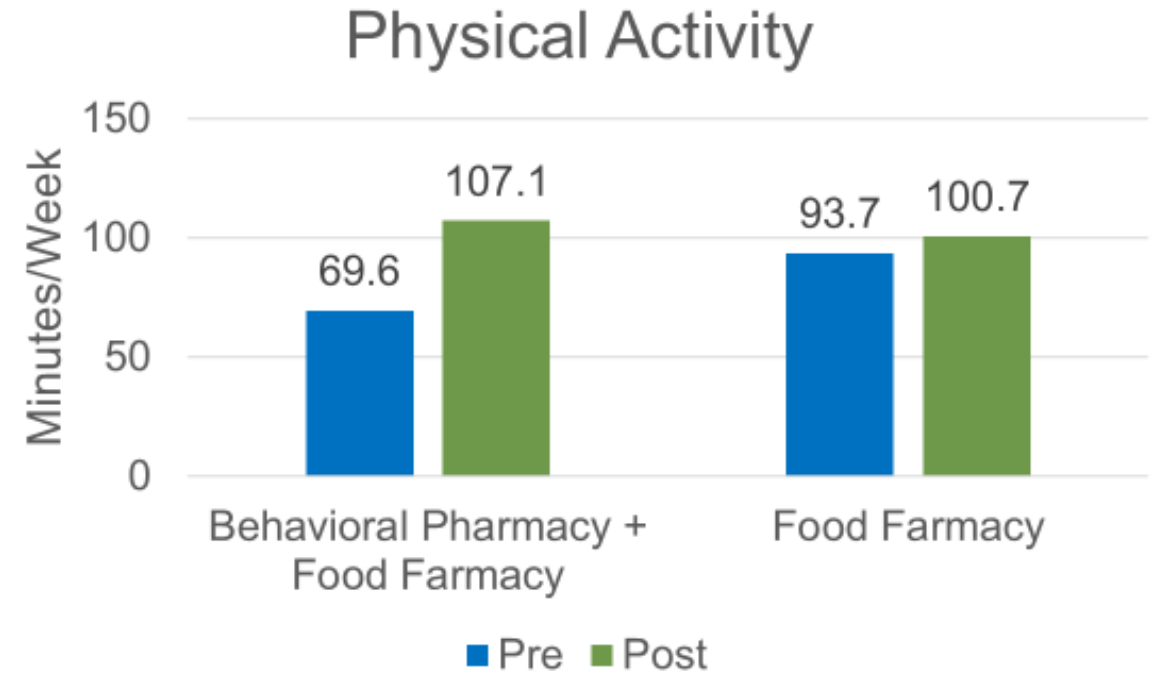
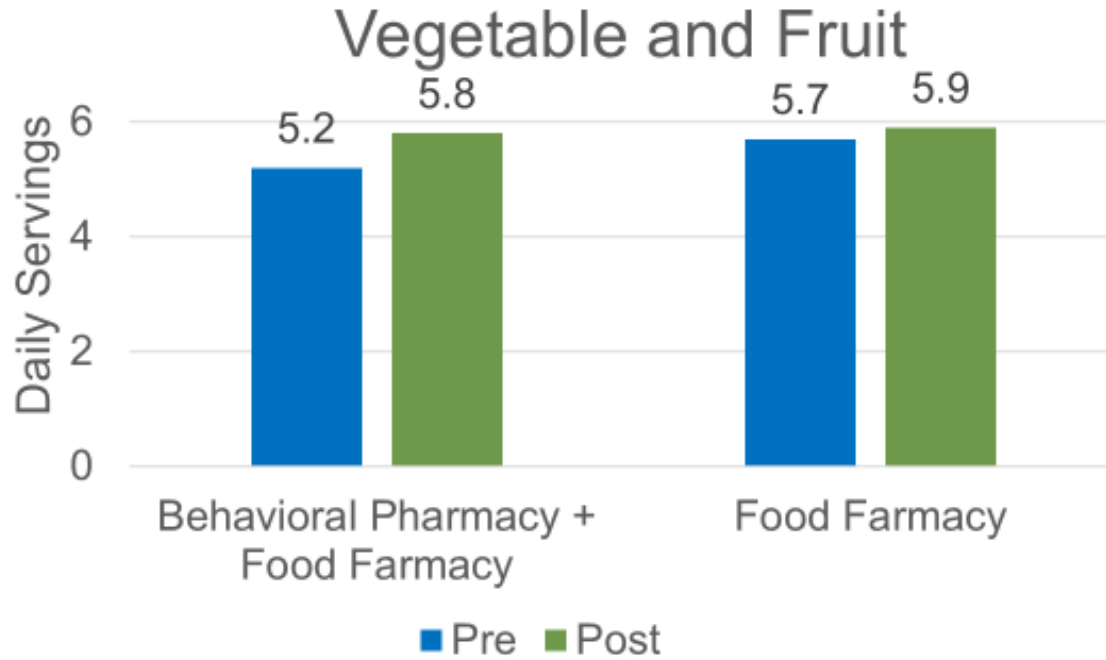
Recipe4Health reaches a diverse population



Recipe4Health improves health behaviors

National recommendations:

- 1.5-2 cups of fruit + 2-3 cups of vegetables daily
- 150 minutes of physical activity weekly



Adjusted Post-Pre Difference

Behavioral Pharmacy + Food Farmacy: 0.4 (0.1, 0.7) p=0.007
 Food Farmacy: 0.4 (-0.04, 0.744) p=0.08

Between Group Difference: 0.1 (-0.4, 0.5) p=0.79

Adjusted Post-Pre Difference:

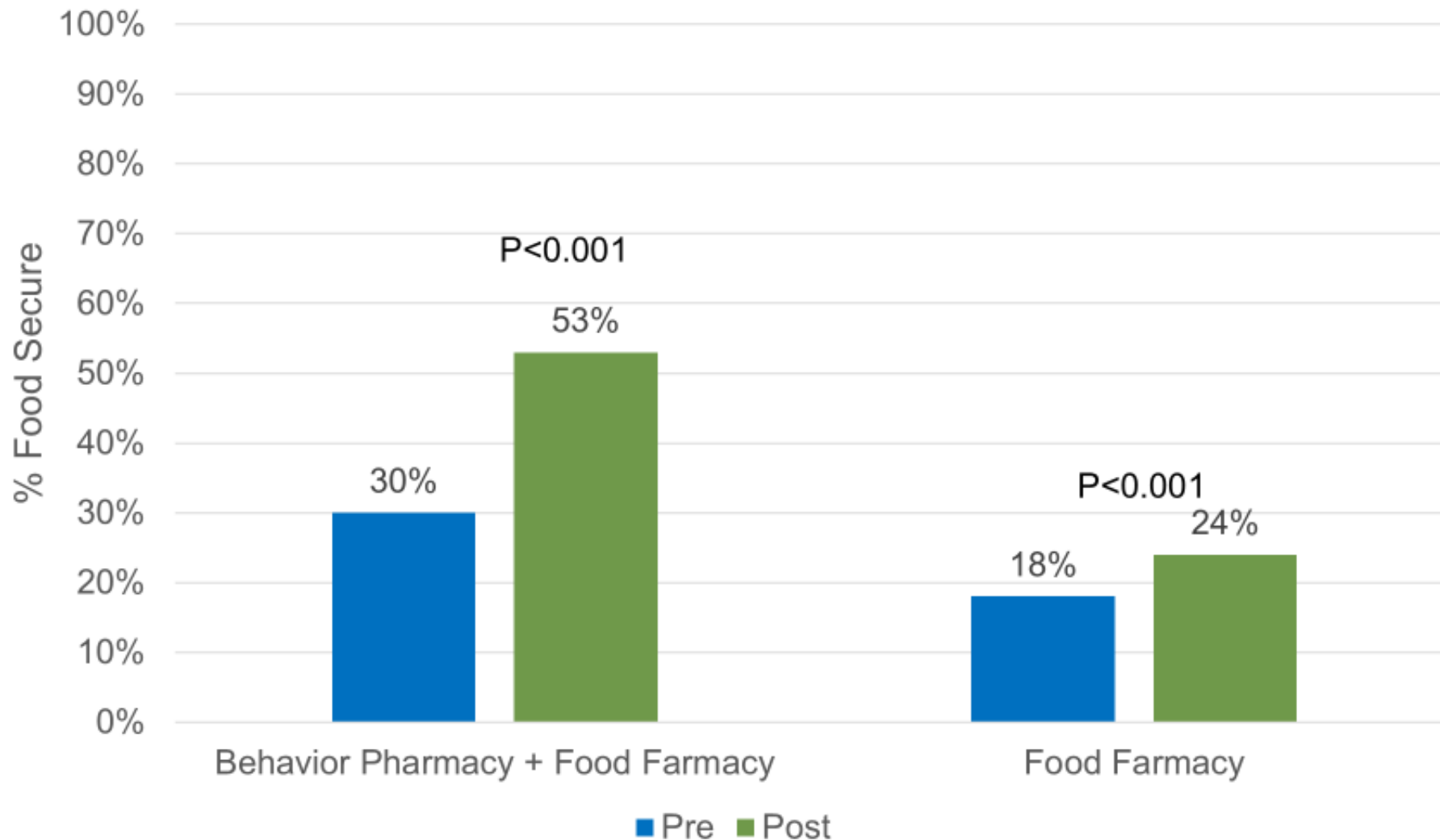
Behavioral Pharmacy + Food Farmacy: 42.0 (22.3, 61.6) p<0.001
 Food Farmacy: 14.7 (-8.3, 37.7) p=0.21

Between Group Difference: 27.3 (6.2, 48.3) p=0.01

Food Security

National food security:
• 87.2% secure

Percent of Participants Indicating Food Security



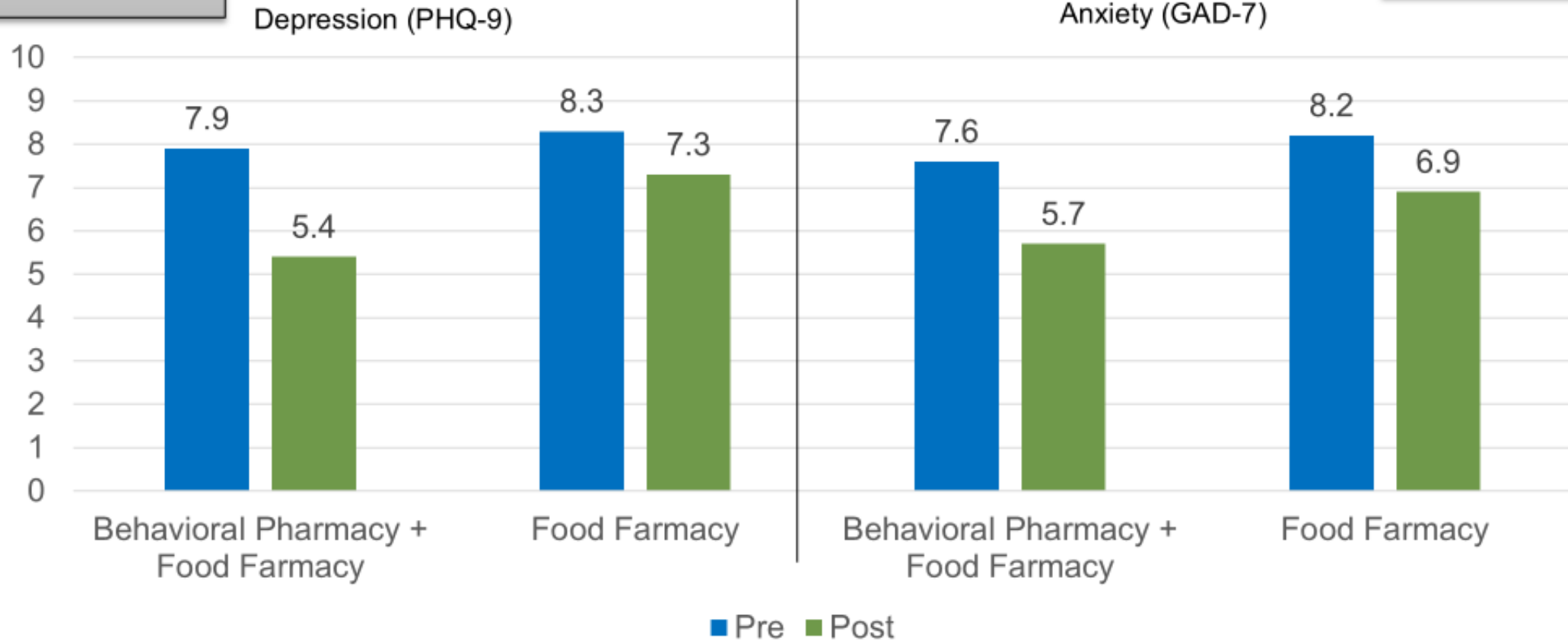
Mental health

Depression

- 0-4 None
- 5-9 Mild
- 10-14 Moderate
- 15-20 Moderately severe
- 20-27 Severe

Anxiety (0-21)

- 0-4 None
- 5-10 Mild
- 10-15 Moderate
- 15+ severe



Adjusted Post-Pre Difference

Behavioral Pharmacy + Food Farmacy -2.3 (2.8, -1.7) **p<0.001**

Food Farmacy: -0.1 (-0.7, 0.7) p=0.97

Between Group Difference: -2.2 (-3.0, -1.5) **p<0.001**

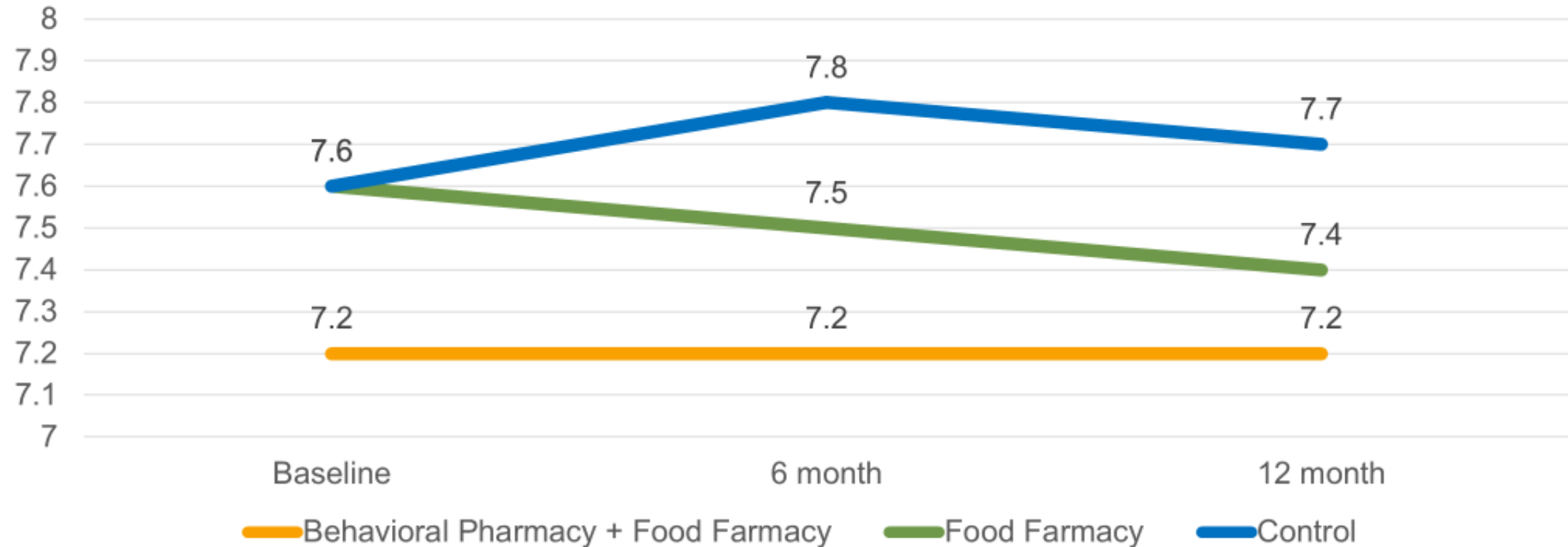
Adjusted Post-Pre Difference:

Behavioral Pharmacy + Food Farmacy: -1.7 (-2.3, -1.0) **p<0.001**

Food Farmacy: -1.1 (-1.9, -0.3) **p=0.01**

Between Group Difference: -0.6 (-1.6, 0.4) p=0.23

Hemoglobin A1c



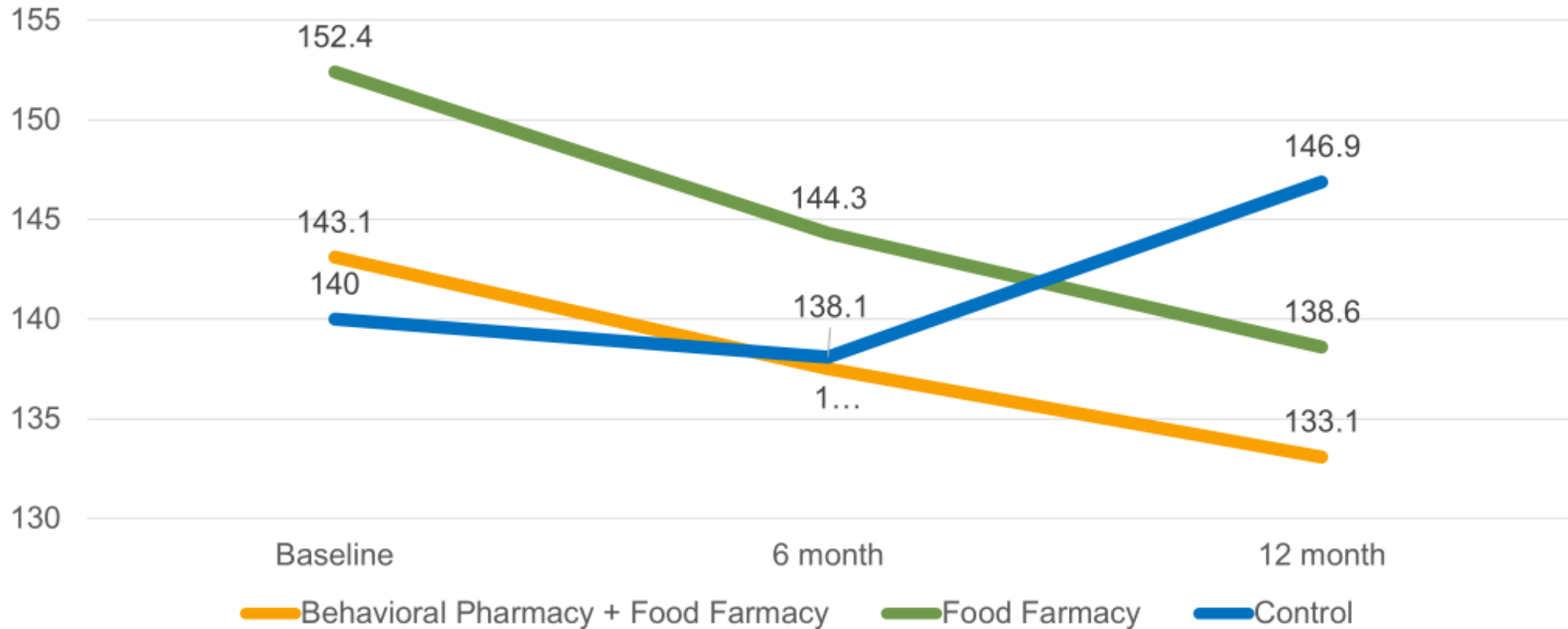
Treatment Difference: Food Farmacy + Behavioral Pharmacy

6 months: -0.3 (-0.7, 0.02) p=0.06
12 months: -0.2 (-0.6, 0.1) p=0.16

Treatment Difference: Food Farmacy

6 months: -0.3 (-0.6, 0.02) p=0.07
12 months: **-0.4 (-0.7, -0.1) p=0.01**

Non-HDL Cholesterol



Treatment Difference: Food Farmacy + Behavioral Pharmacy

6 months: -0.01 (-12.8, 12.8) p=0.99

12 months: **--17.01 (-28.3, 5.8) p=0.003**

Treatment Difference: Food Farmacy

6 months: 0.2 (-11.8, 12.2) p=0.97

12 months: **-17.1 (-26.9, 7.2) p<0.001**

Lessons learned: Food as Medicine interventions

-  Build, strengthen, sustain multi-sectoral partnerships
-  Celebrate and respect cultural foods and preferences
-  Support and grow the local food environment
-  Focus on sustainability
-  Do not expect a one-size-fits-all approach
-  Engage patients in developing and implementing interventions
-  Integrate evidence-based behavioral interventions to support sustainable behavior change



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Thanks!

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Health Care  Food™

Lived Experience

Community & Health Foundations Convening
Philanthropy Southwest



Stacey Chang

Principal, New Origin Studio

February 26, 2025



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Statements, opinions, and study results presented in this presentation may not reflect the policy or science position of the American Heart Association, unless otherwise noted.



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#HealthCareByFood

A Tacit Truth

Food can be medicine.

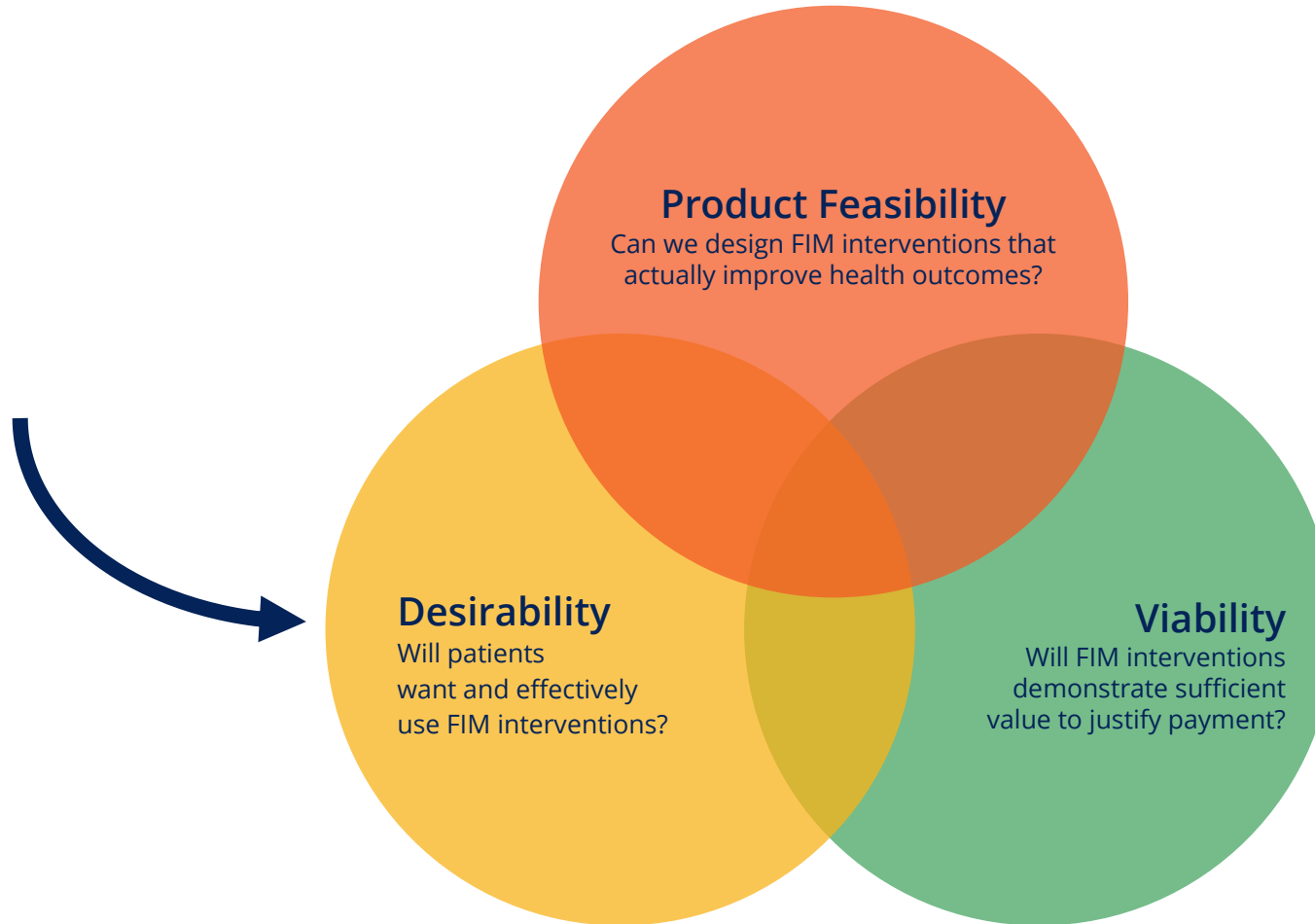
Food is also a lot more than medicine.

Identity, Preference, Access

“Beyond the science of nourishment, food is also inextricably woven into the fabric of social interactions and personal identity. What backyard party isn’t complete with an appetizing spread, what holiday doesn’t have its culinary traditions, and what emotional or physical recovery isn’t made better by food that reminds you of home?”

These tightly intertwined issues of cultural identity, social influence, and personal preferences, as well as systemic issues of affordability, access, and nutrition fluency that make Food is Medicine (FIM) a more complex space than traditional medical interventions.”

Human-Centered Design



Lived Experience

From the group's charter:

...To achieve (HCXF's) vision in **culturally relevant and equitable ways, people closest to the issue must be genuinely engaged in developing solutions.**

The Lived Experience/Patient Advisory Group will center diverse lived experiences into HCXF, reflecting **the priorities, voices, and perspectives of communities** the Initiative aims to impact.

Lived Experience

INDIVIDUAL

MOTIVATION

What personal reasons do you have for taking on new, healthy behaviors?

BARRIERS

Are there any personal issues that make it difficult to take on new, healthy behaviors?

CONTEXT

SUPPORT

Outside of your own personal motivation, are there external things or people that encourage your adoption of new, healthy behaviors?

CHALLENGES

Are there external things or people that discourage your adoption of new, healthy behaviors?

FOOD

RELATIONSHIP

Share a little about your relationship to food. What is your food heritage?

HABITS

What are your usual habits around purchasing, preparing, and consuming food?

A Human Journey



Clinician
interaction



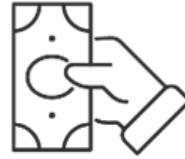
Prescription
by provider



Food and meal
planning



Food selection



Purchase



Acquisition



Preparation



Consumption



Health
Outcomes



Thank you!