



Fresh Food, Measurable Impact

Evidence from the Project FoodBox Effectiveness Study

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Introduction

Diet-related chronic diseases continue to drive the majority of healthcare costs in the United States.^{3,4} For low-income and medically vulnerable populations, lack of access to fresh, nutritious food exacerbates both disease progression and healthcare inequities.^{6,7}

Project FoodBox is a *Food as Medicine* initiative that delivers medically tailored produce to Medi-Cal members with diet-sensitive conditions such as diabetes, hypertension, and heart disease. In partnership with local farmers and registered dietitians, the program provides 15–18 pounds of fresh fruits and vegetables weekly to qualifying households across California.⁵

The **Project FoodBox Effectiveness Study (2025)** evaluated how consistent access to fresh produce influences members' health behaviors, perceived well-being, and symptom burden over a 12-week period. Over **3,000 survey responses** were collected at both the start (*baseline*) and end (*endline*) of the program. A subset of **336 participants** completed both surveys, allowing for longitudinal analysis of change over time.⁵

“

Since joining Project FoodBox, my blood pressure has improved and I feel more energetic every day.

– Maria, 54, Fresno County

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1. Study Design and Methodology⁵

- **Sample size:** 1,214 baseline surveys; 1,816 endline surveys; 336 matched-pair participants.
- **Program duration:** 12 weeks of weekly produce deliveries (15–18 lbs per household).
- **Measures included:**
 - Dietary behavior (produce intake, home cooking, fast-food frequency)
 - Symptom frequency and ER utilization
 - Self-efficacy (“confidence managing my health”)
 - Well-being using the **WHO-5 Well-Being Index (0–100 scale)**

The WHO-5 is a validated global instrument for assessing emotional and psychological well-being. Scores above 50 indicate good mental health; scores below 28 suggest possible depression.⁴ Statistical analyses used **Pearson correlations ($p < .05$)** and **paired t-tests** to assess within-subject changes.



“

Dear Project FoodBox team: I want to express my deepest gratitude for all your support. Your help truly improved my life and health.
– Alejandra, 38, Orange County

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2. Participant Demographics and Program Reach⁹

The participant base reflects Medi-Cal’s high-acuity and socioeconomically diverse membership:

- **Average age:** 53 years (range 24–88)
- **Gender:** 65% female (among known records)
- **Median household income:** \$42,500 (mean \$53,200)
- **58% of participants** earn less than \$50,000 per year
- **15% of participants** report two or more chronic conditions

These indicators confirm that Project FoodBox reaches households most at risk of food insecurity and chronic-disease burden.³

“
The boxes were a Godsend — especially now that SNAP benefits are on hold. Food banks mostly give processed food; this was real nourishment.
– Linda, 62, Riverside County
”

Table 1. Member Engagement Metrics (Baseline vs. Endline)

Metric	Baseline	Endline	Interpretation
Boxes received (median)	5–6	11–12	Confirms full 12-week participation
Members receiving ≥6 boxes	44%	63%	Strong retention curve
Members consuming ≥75% of produce	79%	82%	High utilization and satisfaction
Ease of making healthy choices (1–5)	3.1	4.0	Statistically significant improvement

Source: Project FoodBox Effectiveness Study, 2025

3. Baseline Behavioral Foundations

At program entry, participants already showed strong relationships between healthy eating, confidence, and well-being.

Table 2. Baseline Behavioral–Health Correlations

Predictor	Outcome	r	p
Ease making healthy choices ↑	Confidence managing health ↑	.68	<.001
Fruit & vegetable servings ↑	WHO-5 ↑	.47	<.001
Processed/fast-food meals ↑	WHO-5 ↓	–.30	<.01
Symptom frequency ↑	ER visits ↑	.22	<.05

Source: Project FoodBox Effectiveness Study, 2025

Participants who ate more fruits and vegetables and reported higher health confidence already showed stronger emotional well-being, underscoring the baseline link between nutrition and vitality.^{1,2}

“

I didn’t realize how much better I could feel just by eating more fresh food.
– Marta, 59, Alameda County

”

4. Endline Correlations: Reinforcing Healthier Behavior

After 12 weeks, these relationships strengthened—showing that consistent produce access amplifies healthy behaviors and perceived wellness.^{1,2}

Table 3. Endline Behavioral–Health Correlations

Predictor	Outcome	r	p
Home-cooked meals ↑	WHO-5 ↑	.43	<.001
Fruit & vegetable servings ↑	Diet quality ↑	.58	<.001
Processed/fast-food meals ↑	WHO-5 ↓	–.34	<.001
Symptom frequency ↑	ER visits ↑	.23	<.05

Source: Project FoodBox Effectiveness Study, 2025

“

The box encouraged me to cook more at home. My kids love helping me now — we sit down together more often.
— Juan, 45, Tulare County

”

5. Matched-Pair Results: Measuring Change Over Time

Among participants who completed both surveys, statistically significant behavioral improvements were observed across multiple domains.⁵

Table 4. Key Changes Among Matched Respondents (12 Weeks)

Metric	Mean Change (Δ)	p	Interpretation
Fast-food meals/week	-1.17***	<.001	Fewer processed meals
Symptom frequency (0–10)	-0.51**	.008	Fewer reported symptoms
Ease of making healthy choices (1–5)	+0.43	.016	Greater empowerment
Home-cooked meals/week	+0.27	.055	Trending upward
WHO-5 Well-Being	-1.9	>.05	Stable emotional health

*p < .05 **p < .01 ***p < .001
Source: Project FoodBox Effectiveness Study, 2025

“

I’m eating better, feeling better, and taking fewer medications. It’s really changed how I think about food.
– David, 52, San Diego County

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6. WHO-5 Analysis: Emotional Resilience Through Nutrition Access

WHO-5 well-being correlations grew stronger between baseline and endline, indicating that emotional vitality tracks closely with nutrition access and confidence.^{1,2}

Table 5. WHO-5 Correlations with Consumption and Confidence (Baseline vs. Endline)

Predictor	Baseline (r)	Endline (r)	Interpretation
Fruit & vegetable servings/week	+0.32	+0.39	Stronger association at endline
Home-cooked meals/week	+0.37	+0.43	Cooking predicts vitality
Processed / fast-food meals/week	-0.31	-0.34	Inverse relationship strengthened
Ease of making healthy choices (1-5)	+0.35	+0.43	Confidence improves well-being
Confidence managing health (1-5)	+0.45	+0.52	Strongest predictor of WHO-5

“

This program gave me energy again. I didn’t realize how much good food could change my mood.
– Marta, 59, Alameda County

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7. Clinical Profile of Participants

Beyond self-reported outcomes, the appended demographic data reveal a population with significant chronic-disease burden:³

- **2,413 participants** listed a medical diagnosis.
- **14.8% (≈1 in 7)** reported managing **two or more chronic conditions**.

Common conditions included diabetes, hypertension, arthritis, and depression — all diet-influenced.²

Table 6. Frequency of Reported Chronic Conditions by Category

Condition Group	Count	Percent	Diet-Related Implications
Diabetes / Metabolic (includes Renal & Blood Sugar)	708	29.3%	Shared management: balanced carbs, sodium control, moderated protein.
Heart / Circulatory	667	27.6%	Hypertension and heart disease—responsive to sodium/fat reduction and produce intake.
Autoimmune / Inflammatory	298	12.3%	Anti-inflammatory diets improve outcomes.
Mental Health / Stress	283	11.7%	Diet diversity linked to improved mood and WHO-5 results.
Cancer / Oncology	115	4.8%	Plant-based diets support recovery.
Weight / Obesity	86	3.6%	Balanced nutrition improves metabolic regulation.
Gastrointestinal / Liver	85	3.5%	Fiber and diet directly impact digestion and liver function.
Other / Unclassified	808	33.5%	Conditions outside direct nutritional control.

Source: Project FoodBox Effectiveness Study, 2025

8. Public Health and Economic Implications

The Project FoodBox model follows a well-documented public health pathway observed across Food-as-Medicine interventions:^{1,2}

Access → Behavior → Self-Efficacy → Well-Being → Reduced Utilization → Lower Costs

In the current study, participants who consumed more fruits and vegetables reported greater ease in making healthy choices, stronger confidence managing their health, and higher emotional well-being. These behavioral and psychosocial gains align closely with peer-reviewed research demonstrating the clinical and economic benefits of nutrition support programs.

Multiple evaluations of medically supportive food interventions have found substantial reductions in acute-care utilization. A 2022 **JAMA Network Open** meta-analysis reported a **47% reduction in hospitalizations** and a **19.7% reduction in total healthcare expenditures** among recipients of medically tailored meals.¹ A 2025 **Health Affairs** analysis of large-scale Food-as-Medicine implementation estimated **net annual savings between \$732 and \$6,299 per high-risk Medicaid patient**, depending on local cost structures and benefit design.²

Applying the *lowest* end of these published estimates to a hypothetical cohort of **5,000 high-risk Medi-Cal members** served by Project FoodBox indicates a defensible scenario of:

$\$732 \times 5,000 = \3.66 million in potential avoided healthcare costs per year²

This conservative projection suggests that sustained access to medically supportive produce—combined with measurable behavioral improvements—could generate **multi-million-dollar annual savings** for health plans and state agencies while improving quality of life across diverse chronic-disease populations.

These modeled savings should be interpreted as **evidence-based potential**, consistent with the outcomes of similar interventions, and validated through future claims-based analysis in partnership with Medi-Cal managed care plans.^{1,2}

Conclusion

The Project FoodBox Effectiveness Study provides compelling evidence that access to fresh, medically tailored produce leads to measurable improvements in **dietary behavior, confidence, and self-reported health**.^{1,2}

When analyzed alongside demographic and diagnostic data, the results confirm that Project FoodBox is serving precisely those Californians most affected by food insecurity, chronic disease, and limited access to preventive care.^{3,4}

By strengthening the bridge between agriculture and healthcare, Project FoodBox demonstrates that **food can be medicine — and that community nutrition programs can deliver measurable health impact at scale**.^{1,2,4}

References

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