

Article

Fresh Food for Health: The Impact of Onsite Produce Events at Federally Qualified Health Centers

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Abstract

This study assessed whether frequent attendance of onsite produce events at Federally Qualified Health Centers is associated with increased fruit and vegetable consumption, reduced food insecurity, and enrollment in food assistance. A deeper understanding of these relationships may help program implementers and health practitioners improve healthy food access among low-income patients by screening for food insecurity and offering onsite produce distribution events at clinic sites. Using a cross-sectional observational design, study data originated from an intercept survey of 886 adults who attended free produce events at 14 clinic locations in Los Angeles County during 2021–2023. Multivariable models assessed associations between attendance frequency and the main outcomes: fruit and vegetable consumption, food insecurity, and enrollment in food assistance (i.e., SNAP, WIC). Compared with first-time attendees, frequent attendees had higher odds of meeting the MyPlate recommendations for fruit (adjusted odds ratio [AOR] = 1.37, $p = 0.012$) and vegetable (AOR = 1.47, $p = 0.019$) consumption. Frequent attendees, compared with first-time attendees, also had marginally lower odds of food insecurity (AOR = 0.73, $p = 0.077$), with no effect on food assistance enrollment. These findings suggest safety-net health centers can play meaningful, multi-faceted roles in increasing patient access to healthy food by screening for food insecurity and offering onsite free produce distributions at their clinic sites.

Keywords: nutrition; onsite food distribution; SNAP-Ed; federally qualified health centers; healthcare setting



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1. Introduction

Food insecurity remains a significant public health challenge, affecting 13.5% of the U.S. population [1]. This social condition is associated with poor diet quality, as systemic barriers limit access to nutritious food options, particularly in low-income communities [2]. Only about 10% of U.S. adults routinely meet the daily Dietary Guidelines (2020–2025) for fruit and vegetable consumption, i.e., about two cups of fruit and two and one-half

cups of vegetables per day according to the United States Department of Agriculture (USDA) [3,4]. Limited access to nutrient-dense foods within communities along with other societal inequities contribute to disparities in dietary patterns and the growing incidence and prevalence of diet-related chronic conditions such as type 2 diabetes, hypertension, and obesity [5,6].

Federally Qualified Health Centers (FQHCs) are increasingly recognizing the need to address food insecurity to curb the rising rates of chronic disease among their patient populations [7]. Many FQHCs now screen for food insecurity and refer eligible patients to local resources, including food pantries or food assistance through the Supplemental Nutrition Assistance Program (SNAP) and/or the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) [8]. Some states have established Medicaid (Medi-Cal in California) waiver programs (e.g., the California Advancing and Innovating Medi-Cal [CalAIM]) to cover medically supportive food and nutrition services [9], known as “Food as Medicine” (FAM) interventions.

FAM interventions typically include medically tailored meals, medically supportive groceries, and increasingly, produce prescriptions. A complementary approach that can bring to scale food interventions that increase patients’ access to healthier foods is the regular distribution of free produce at FQHC clinic sites. These onsite produce events are less studied and typically have been considered outside the umbrella of FAM strategies [10]. Other complementary FAM approaches may include food pharmacy models and mobile food pantries that similarly provide food directly, in partnership with healthcare systems [11–13]. In their capacity, FQHC clinics are anchor institutions that can effectively reach groups with or at risk of diet-related disease, influencing those who rely on their clinics for usual care, serving as trusted access points for community members they serve [14]. At produce events, these clinics frequently facilitate healthy food access by simultaneously educating patients and distributing healthy foods alongside routine medical care [15]. That is, patients can access integrated nutrition education and produce distributions at the same time, benefiting from an onsite strategy that functions as a ‘de facto food pharmacy’ for the FQHCs [11].

Since 2020, the Los Angeles County Department of Public Health (DPH) has partnered with three FQHC systems to integrate Supplemental Nutrition Assistance Program Education (SNAP-Ed) interventions into clinical care. SNAP-Ed helps eligible households improve dietary choices, stretch food budgets, and increase physical activity. By embedding two-item screening questions directly into electronic health records, the partnership formalized food insecurity screening as a routine practice in clinical workflows, strengthening the infrastructure to identify and address this critical social driver of health.

Between 2021 and 2023, participating sites cumulatively screened 25,470 patients. Reported data shows that screening and referral capacity grew annually, from 3512 patients in 2021 to 13,470 patients in 2023 (Table 1). These screenings reached between 3% and 10% of the approximately 130,000 unique patients served by these FQHCs each year.

Table 1. Number of patients screened for food insecurity by year at each FQHC system, Los Angeles County, California.

Number of Sites		2021	2022	2023
FQHC 1	3	1585	1827	4313
FQHC 2	5	1777	5148	6791
FQHC 3	5	150	1513	2366
n=		3512	8488	13,470

FQHC = Federally Qualified Health Center system. Note: The “n=” row represents the sum of patients screened across all FQHC systems for each year.

When patients screened positive for food insecurity, clinic providers offer patients a variety of referrals, including free local resources such as food pantries, SNAP, and, if eligible, the FQHC's produce prescription program, designed to treat patients with diabetes [16]. Most patients are also provided with schedules and locations of onsite free produce events, and for distributions occurring at other sites within the same FQHC network. While these events were open to the public, they were promoted primarily among the FQHCs' own patients. Clinic sites designated a space at their facility and communicated times during the month for patients to pick up fresh fruits and vegetables for their household. Resources to enroll in nutrition assistance programs, along with nutrition education information, were also provided at these events. DPH supported many of them by facilitating partnerships between the FQHCs and food rescue organizations or the regional food bank in Los Angeles County. These organizations supplied the free recovered fruits and vegetables distributed on the day of the scheduled event.

This study assessed whether frequent attendance of onsite produce events at FQHCs is associated with fruit and vegetable consumption, food insecurity, and enrollment in food assistance. The intercept survey recruited patients from 14 FQHC locations in Los Angeles County. At the start of this study, each health system was already screening for food insecurity and referring patients to local food resources. We hypothesize that frequent attendance is positively associated with adequate fruit and vegetable consumption, reduced food insecurity, and higher enrollment (participation) in food assistance compared with first-time attendance.

2. Materials and Methods

The Healthy Food Access Survey was a cross-sectional observational survey administered during Spring 2021, 2022, and 2023 to attendees of onsite free produce events. The survey was administered at 14 clinic locations belonging to the three participating FQHC systems. Attendees included those who screened positive for food insecurity, patients of the clinics, and for some sites, local community members. All attendees who participated in the survey (participants) accessed the online questionnaire through a weblink and/or the QR code provided at the event. The survey was promoted at these events using large poster signs and recruitment flyers that were included in the free produce box distributed to attendees. In 2021, we did not promote the survey in person due to the COVID-19 pandemic stay-at-home orders. Following the expiration of these mandates, we resumed in-person outreach during 2022 and 2023.

All adults at the events were eligible for the survey if they met the inclusion criteria: 18 years of age or older, lived in Los Angeles County, and attended a free produce distribution event. The survey was available in English, Spanish, Korean, Chinese, and Armenian (only for 2022 and 2023). Compensation for completing the survey was provided in the form of a gift card; the amount ranged from \$5 to \$15 depending on the survey year. A supplemental small, longitudinal study was conducted with a subset of the sample who was willing to participate. The same survey questionnaire was administered to this sub-set (2022) and again two years after the initial survey (2023). Follow-up questions asked about referrals to food and social programs received at the food distribution (clinic) site where the survey was first administered and completed in 2021.

2.1. Variables

Four dependent variables (outcomes) were selected for this study: adequate fruit consumption, adequate vegetable consumption, food security status (food insecurity), and enrollment in food assistance.

To determine if survey participants met recommended guidelines for fruit consumption, the survey asked whether participants consumed two cups of fruit per day. Those who chose “Often (4–6 days)” or “Everyday” were categorized as meeting the fruit consumption guidelines. To assess vegetable consumption, participants were asked if they ate two and a half cups of vegetables per day. They were coded as meeting vegetable consumption guidelines if they chose “Often (4–6 days)” or “Everyday.” These thresholds for fruit and vegetable consumption were based on minimum (MyPlate) recommendations described in the 2020–2025 Dietary Guidelines for Americans for an average adult [3].

To assess food insecurity, the study utilized the six-item USDA module [17]. Participants were categorized as “food secure” if they scored 0–1 on the module or “food insecure” if they scored 2–6 on the module. All participants were asked if they were currently enrolled in public benefit programs, including SNAP and WIC; selection of either program resulted in being classified as enrolled in food assistance.

The primary independent variable used in the modeling analyses was the attendance frequency of an onsite produce event. Participants were asked “How often do you come to places similar to this one to get free food?” Those who selected “This is my first time” were categorized as first-time attendees, those who selected “Several months during the year” were categorized as occasional attendees, and those who answered “Monthly”, “Twice a month”, or “Weekly” were categorized as frequent attendees. Most participating sites hosted produce events twice a month or monthly—i.e., weekly events were not common.

Study covariates included age group (18–39, 40–64, 65 and older, prefer not to answer), gender (male, female, other), race/ethnicity (Hispanic/Latinx, White, Black, Asian, Other/Multi-race), educational attainment (less than high school, high school, some college or Associate’s degree, Bachelor’s degree or higher, prefer not to answer), employment (full-time, part-time, not working/retired, prefer not to answer), enrollment (or participation) in food assistance (yes, no), program involvement (produce distribution alone, nutrition education and/or physical activity class), and data collection year (2021, 2022, 2023).

2.2. Analyses

The study sample included 886 participants across three years of data collection. Those with missing data on selected covariates were excluded from the analytic samples, apart from age, educational attainment, and employment status where “prefer not to answer” responses were retained. The analytic sample size differed across models because each outcome variable had its own pattern of missingness. As such, final sample sizes were outcome-specific and ranged from 689 to 726 participants, representing 78% to 82% of the total sample. Multivariable analyses were conducted to examine the associations between attendance frequency at the onsite produce events and the main outcomes: adequate fruit consumption, adequate vegetable consumption, food insecurity, and enrollment in food assistance, controlling for socio-demographic characteristics.

For the supplemental study, 21 participants completed Follow-up Time 1 (one year after initial participation), and 25 participants completed Follow-up Time 2 (two years after initial participation). A descriptive analysis was conducted to understand the percentage of survey participants who received a clinic referral to a food and/or social program in the previous 12 months.

All statistical analyses were performed using SAS, version 9.4 (SAS Institute Inc., Cary, NC, USA) and Stata, version 14 (StatCorp LP, College Station, TX, USA). All survey protocols and materials were reviewed and approved by the DPH Institutional Review Board prior to field implementation.

3. Results

Table 2 shows the distribution of socio-demographic characteristics among survey participants. The sample was primarily female (77.1%) and Hispanic/Latinx (66.0%); 44.9% were between the ages of 40 and 64. They were distributed evenly across the three different FQHC systems. Approximately 65% did not participate in SNAP or WIC. Nearly one-third were first-time attendees at an event; 17% visited several months during the year; and half attended at least monthly. Approximately 26% of the survey participants self-reported high cholesterol, 31% diabetes or prediabetes, 21% high blood pressure, and 5% heart disease.

Table 2. Characteristics of survey participants from the three participating Federally Qualified Health Center systems in Los Angeles County, 2021–2023, n = 886.

	Overall	
	n	%
Attendance Frequency		
First-time	263	31.2
Occasional	146	17.3
Frequent	435	51.5
Age		
18–39	244	27.5
40–64	398	44.9
65+	140	15.8
Prefer not to answer	104	11.7
Gender		
Female	657	77.1
Male	164	19.3
Other	31	3.7
Race/Ethnicity		
Hispanic/Latinx	534	66.0
White	51	6.3
Black	17	2.1
Asian	177	21.9
Other/multi-racial	30	3.7
Educational Attainment		
Less than high school	277	33.6
High school	178	21.6
Some college/AA degree	148	17.9
Bachelor's degree+	108	13.1
Prefer not to answer	114	13.8
Employment Status		
Full-time	95	10.7
Part-time	148	20.1
Not working/retired	352	39.7
Prefer not to answer	261	29.5
Enrollment in Food Assistance		
No	544	65.2
Yes	202	24.2
Program Involvement		
Produce event alone	764	88.7
Nutrition education and/or physical activity class	97	11.3
Health Conditions		
High cholesterol	230	26.0%
Diabetes or prediabetes	275	31.0%
High blood pressure	186	21.0%
Heart disease	44	5.0%

Table 2. Cont.

	Overall	
	n	%
Data Collection Year		
2021	183	20.7
2022	285	32.2
2023	418	47.2

Table 3 shows the bivariate associations between the frequency of attending a produce event in the past 12 months and the study's outcomes. Participants who frequently attended produce events (monthly or more) had higher odds of adequate fruit consumption, adequate vegetable consumption, and reduced odds of experiencing food insecurity, compared to participants who attended the event for the first time. The odds of enrolling in food assistance did not differ significantly at the bivariate analysis level.

Table 3. Unadjusted odds ratios of fruit and vegetable consumption, food insecurity, and enrollment in food assistance by attendance frequency.

	Fruit Consumption		Vegetable Consumption		Food Insecurity		Enrollment in Food Assistance	
	OR	p-Value	OR	p-Value	OR	p-Value	OR	p-Value
Attendance frequency (ref = first-time)								
Occasional	1.23	0.571	1.27	0.234	0.84	0.178	0.99	0.980
Frequent	1.84	0.000	1.96	0.003	0.74	0.004	0.81	0.349

Note: ref = reference category, OR = Odds Ratio. Fruit and vegetable consumption were based on the MyPlate recommendations in the Dietary Guidelines for Americans: 2 cups of fruit per day and/or 2½ cups of vegetables per day often or every day. Food insecurity was assessed using the U.S. Department of Agriculture's six-item short form food security module. Enrollment in food assistance included participation in the Supplemental Nutrition Assistance Program (SNAP) and/or the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).

Table 4 shows that after adjusting for socio-demographic characteristics, frequent attendance of produce events was positively associated with adequate fruit (adjusted odds ratio [AOR] = 1.37, $p = 0.012$) and vegetable (AOR = 1.47, $p = 0.019$) consumption, compared to first-time attendance. Frequent attendees had reduced odds of food insecurity (AOR = 0.73, $p = 0.077$) compared to first-time attendees, albeit this finding was only borderline significant. In the multivariable model analyses, frequent attendance of onsite produce events was not found to be associated with enrollment in food assistance.

Table 4. Adjusted odds ratios of fruit and vegetable consumption, food insecurity, and enrollment in food assistance by attendance frequency.

	Fruit Consumption		Vegetable Consumption		Food Insecurity		Enrollment in Food Assistance	
	AOR	p-Value	AOR	p-Value	AOR	p-Value	AOR	p-Value
Attendance frequency (ref = first-time)								
Occasional	0.92	0.697	1.17	0.495	0.86	0.415	0.82	0.395
Frequent	1.37	0.012	1.47	0.019	0.73	0.077	0.86	0.510
Age (ref = 18–39)								
40–64	1.09	0.679	1.38	0.143	1.37	0.048	0.70	0.070
65+	1.93	0.002	1.97	0.002	0.90	0.700	1.06	0.846
Prefer not to answer	18.46	0.000	11.67	0.000	0.30	0.002	0.09	0.023

Table 4. Cont.

	Fruit Consumption		Vegetable Consumption		Food Insecurity		Enrollment in Food Assistance	
	AOR	p-Value	AOR	p-Value	AOR	p-Value	AOR	p-Value
Gender (ref = female)								
Male	0.71	0.100	0.74	0.294	1.14	0.381	0.42	0.008
Other	1.60	0.572	1.58	0.483	0.64	0.598	0.16	0.044
Race/ethnicity (ref = Hispanic/Latinx)								
White	1.22	0.576	1.62	0.015	1.04	0.895	0.80	0.368
Black	0.93	0.881	2.04	0.251	2.49	0.096	1.78	0.157
Asian	1.13	0.568	1.68	0.016	0.82	0.217	0.45	0.002
Other/multi-racial	1.03	0.935	1.61	0.013	3.61	0.007	0.85	0.531
Educational attainment (ref = less than high school)								
High school	0.92	0.743	0.77	0.253	0.78	0.287	1.24	0.495
Some college/AA degree	0.89	0.612	0.83	0.422	0.98	0.914	1.80	0.070
Bachelor's degree+	0.80	0.430	0.59	0.142	0.48	0.002	0.50	0.174
Prefer not to answer	0.87	0.645	1.00	0.996	0.87	0.695	0.75	0.474
Employment status (ref = full-time)								
Part-time	0.54	0.019	0.53	0.044	1.84	0.049	0.84	0.512
Not working/retired	0.57	0.008	0.61	0.103	1.97	0.021	1.92	0.011
Prefer not to answer	0.82	0.481	0.68	0.144	1.18	0.580	1.21	0.555
Enrollment in food assistance (ref = no)								
Yes	1.34	0.123	1.11	0.410	0.72	0.083	NA	
Nutrition education and/or physical activity class (ref = no)								
Yes	1.30	0.133	1.10	0.711	1.10	0.760	1.67	0.193
Data collection year (ref = 2021)								
2022	1.46	0.177	0.90	0.626	1.23	0.077	1.10	0.747
2023	1.11	0.635	0.74	0.253	1.96	0.001	1.30	0.154
n=	717		689		706		726	

Note: ref = reference category, AOR = Adjusted Odds Ratio. Fruit and vegetable consumption were based on the MyPlate recommendations in the Dietary Guidelines for Americans: 2 cups of fruit per day and/or 2½ cups of vegetables per day often or every day. Food insecurity was assessed using the U.S. Department of Agriculture's six-item short form food security module. Enrollment in food assistance included participation in the Supplemental Nutrition Assistance Program (SNAP) and/or the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). The "n=" row represents the number of study participants.

By employment status, participants who were employed part-time had lower odds of adequate fruit and vegetable consumption and higher odds of being food insecure, compared to those employed full-time. Those who were not working/retired also had higher odds of being food insecure compared to those employed full-time. By gender, male participants had significantly lower odds of enrolling in food assistance compared to female participants (AOR = 0.42, $p = 0.008$).

Table 5 shows the percentage of referrals to food and social programs among the small longitudinal sub-set of participants who completed the two follow-up surveys. At both follow up time points, a SNAP referral by the clinic was the most common referral type (52.6% at Follow-up Time 1; 41.1% at Follow-up Time 2), followed by referrals to nutrition education classes and produce events.

Table 5. Percentage of survey participants from 2021 who received a clinic referral to a food and social program after visiting the clinic in the past 12 months.

	Follow-Up Time 1 (%)	Follow-Up Time 2 (%)
SNAP	52.6	41.1
Nutrition education classes	47.6	36.0

Table 5. *Cont.*

	Follow-Up Time 1 (%)	Follow-Up Time 2 (%)
Produce Prescription Program	23.8	0.0
Food bank or pantry	19.1	4.0
Produce event	42.9	12.0
Affordable housing	4.8	0.0
Employment resources	9.5	0.0
WIC	9.5	0.0
Elderly Nutrition Program	14.3	8.0
School Meals	4.8	4.0
Other resources	4.8	0.0
n=	21	25

Note: SNAP = Supplemental Nutrition Assistance Program, WIC = Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). Follow-up Time 1 refers to completion of the survey approximately one year after the initial 2021 survey, and Follow-up Time 2 refers to completion of the survey approximately two years after the 2021 survey. The “n=” row represents the number of study participants.

4. Discussion

This study describes a sample of patients who visited onsite produce events at FQHC clinic sites that administered food insecurity screening and referred eligible patients to food assistance during 2021–2023. The intercept survey assessed whether attending onsite free produce events at these sites is associated with increased fruit and vegetable consumption, reduced food insecurity, and enrollment in food assistance (i.e., SNAP and/or WIC). While frequent attendance (versus first-time attendance) was significantly associated with increased fruit and vegetable consumption, frequent participation produced only modest reductions in food insecurity (borderline statistical significance) and, overall, no measurable effect on food assistance enrollment. Three essential insights can be drawn from these findings.

First, over half of the survey participants attended the produce events at least monthly, leading to the positive associations between frequent attendance of the events and adequate fruit and vegetable consumption, as defined by the MyPlate recommendations in the Dietary Guidelines for Americans 2020–2025 [3]. While this lends credence and justification for implementing more FAM interventions, the finding is not surprising, as prior research and experiential learning have shown produce distribution strategies, especially in healthcare settings, can improve dietary behaviors and overall health [18].

The study sample demonstrated high levels of fruit and vegetable consumption across all levels of event attendance; 44–45% met recommended fruit and vegetable intake levels, significantly exceeding the national average of 10% for U.S. adults [4]. However, for ease of administration, the survey assessed consumption over the past seven days using broad frequency categories (e.g., everyday, often). As a result, these findings may not be directly comparable to those from other nutritional measures that capture data for specific fruit and vegetable groups or utilize prediction algorithms to generate more precise estimates.

Emerging data suggest that sustained dietary improvements can significantly reduce healthcare costs over time [19]. FQHC patients have also expressed strong interest in receiving produce-related resources and healthy eating instruction [20]. Current research indicates that food access through FAM programming may enhance the diet quality in underserved communities [21]. For example, a multisite evaluation found that six months of FAM participation increased daily fruit and vegetable consumption by 0.85 and 0.26 cups among adults and children, respectively [18]. At the same time, food security and clinical outcomes for chronic conditions such as diabetes, hypertension, and obesity also improved [18]. Produce prescriptions have been found to be particularly critical during

times of economic recession [20], especially during the COVID-19 pandemic, when food insecurity was highly prevalent across the country, crossing socioeconomic boundaries [22].

The implementation of onsite produce events at Los Angeles County's FQHCs demonstrates the practical utility of this approach. Beyond imparting nutritional knowledge, these events possess the unique advantage of facilitating stronger patient-provider communication and fostering clinical trust, thereby creating a more patient-centered foundation for primary care in these low-income clinic settings [21].

Second, while attendance at onsite free produce events correlated with reduced odds of food insecurity in initial bivariate analyses, the association became only borderline significant after adjusting for socio-demographic characteristics in multivariable models. This suggests that providing produce alone may be insufficient to mitigate the complex, systemic drivers of food insecurity. While distributions may help supplement limited budgets, they ultimately cannot replace the stability of consistent income or comprehensive food assistance programs [23].

Our findings indicate that participants who were unemployed, retired, or employed part-time experienced much higher rates of food insecurity and lower fruit and vegetable consumption compared to those who were working full-time. This aligns with existing literature showing that recent job loss or income reduction significantly increased the odds of becoming food insecure [24]. These employment patterns underscore the central role of economic stability in shaping food access. Individuals who rely on fixed or limited incomes are particularly vulnerable to rising food costs and other financial pressures that free produce events cannot fully offset. Even frequent, well-coordinated distributions may not compensate for the chronic financial strain of unemployment or reduced earning potential [25]. Consequently, food distributions function effectively as a complementary strategy rather than as a cornerstone intervention for poverty-driven food insecurity.

Finally, attending onsite produce events was not associated with increased enrollment in food assistance. This aligns with previous research in Los Angeles County, which found no significant differences in SNAP participation based on the frequency of produce event attendance in the community [26]. While these distributions provide immediate access to fresh food, many attendees may either be ineligible for food assistance or face substantial barriers to enrollment.

Eligibility constraints, administrative burdens, stigma, and competing priorities, including limited time and transportation challenges, consistently impede participation in programs like SNAP and WIC [27,28]. For individuals on the "cusp" of poverty, free produce events likely serve as a short-term supplemental resource to mitigate episodic food insecurity rather than as a substitute for long-term support. Additionally, while clinics and distribution sites can provide referrals, the one-on-one support necessary to navigate the complex food assistance enrollment process is likely beyond the staffing capacity available at these onsite events. Notably, data from our longitudinal sub-set of participants showed that nearly half received a SNAP referral in the past 12 months; these referrals were likely initiated at routine medical visits rather than at these events.

An ancillary benefit for the FQHC systems hosting these produce events was the opportunity to gain direct experience with the county's food recovery infrastructure through coordination with DPH. By distributing produce that was largely "recovered", or diverted from landfill, clinics did more than reduce financial, transportation, and time barriers for patients, they also contributed to climate-related goals by reducing food waste and the carbon footprint associated with surplus produce. These environmental benefits highlight an additional dimension of value for healthcare-based food distribution models, particularly in regions like Los Angeles County that seek to align public health interventions with broader environmental sustainability objectives.

Future research should examine the longitudinal effects of repeated exposure to onsite produce events, specifically to determine potential cumulative impacts on diet quality, food security, and clinical outcomes. Utilizing more granular attendance data and conducting comparative analyses across diverse clinical settings will clarify the specific role and scalability of onsite produce distributions. Furthermore, additional study is needed to better understand the barriers to food assistance enrollment within healthcare environments and to identify FAM strategies that can effectively connect eligible patients to long-term nutrition supports.

Limitations

This study has several limitations. First, attendance frequency was assessed using broad categorical responses rather than precise counts, which may have limited the accuracy of exposure measurement. Second, because the study utilized an intercept survey and relies, to some extent, on the food insecurity screening workflows of the FQHCs (screening results often varied), its protocols may have introduced some selection bias; however, the sample remained representative of the FQHC patient populations that attended events between 2021 and 2023. Third, the focus on three FQHC systems in Los Angeles County may have limited the generalizability of these findings, as other regions across California and the U.S. possess different patient demographics and food access infrastructures. Finally, while multivariable models adjusted for key socio-demographic characteristics, unmeasured confounders, such as household food budgets, transportation constraints, or prior engagement with food assistance programs, may have influenced the observed associations.

5. Conclusions

Onsite produce events at FQHCs increase access to healthy food options and drive higher fruit and vegetable consumption among attendees. While frequent attendance correlates with only modest reductions in food insecurity and shows no association with food assistance enrollment, these findings highlight the promise of produce events as a complementary FAM strategy. By reaching many people simultaneously, these distribution events offer a cost-efficient alternative to highly structured interventions such as medically tailored meals.

This Los Angeles County model—anchored by partnerships between FQHC systems, food rescue organizations, food banks, and SNAP-Ed—illustrates how healthcare entities can leverage community resources to bridge gaps in food access. Such collaborations are vital in environments where funding is short-term or inconsistent, allowing health systems to sustain food access and maintain nutritional health during economic or operational disruption. Moving forward, designating produce events as reimbursable clinical interventions under commercial plans, Medicare, and Medicaid may amplify impact and further broaden food access for those managing food insecurity and diet-related chronic diseases.

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Abbreviations

The following abbreviations are used in this article:

USDA	United States Department of Agriculture
FQHC	Federally Qualified Health Center
SNAP	Supplemental Nutrition Assistance Program
WIC	Special Supplemental Nutrition Program for Women, Infants, and Children
CalAIM	California Advancing and Innovating Medi-Cal
FAM	Food as Medicine
DPH	Los Angeles County Department of Public Health
SNAP-Ed	Supplemental Nutrition Assistance Program Education
AOR	Adjusted odds ratio

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