RESEARCH REPORT

Advisory Board

Provider-Led Strategies to Address Food Insecurity

PUBLISHED BY

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Project Overview and Methodology

Introduction and Purpose

This brief provides original research on best practice models for implementing programs to address food insecurity, including details on:

- Patient identification and referral pathways
- Range of services offered
- Common community partners
- Considerations for staffing
- Tactics for patient and staff engagement

Project in Brief

1. **Executive Assessment:** Overview of local and national food insecurity trends, as well as recommendations and action steps for improving food security for patients.
2. **Range of Service Offerings:** Profiles from six organizations highlighting innovative food insecurity initiatives, as well as program scale and impact, where possible.
3. **Services In Depth**: Additional operational detail on profiled services.

Interview Methodology

The Population Health Advisor team conducted a literature review of hospital-led programming to address food insecurity and subsequently identified and interviewed stakeholders from organizations with strong commitment and plans to scale.

Profiled organizations were selected to represent a broad range of food insecurity interventions, in terms of both patient population targeted and level of resource intensity required for hospitals.

Organization	Organization / Program Description	Interview Participants
ProMedica	Thirteen hospital not-for-profit health system in northwest Ohio and southeast Michigan, with a broad suite of food insecurity programs that include: food pharmacies, a grocery store in a food desert, a mobile food van, and a summer feeding program	• Associate Vice President, Community Relations, Advocacy, and Grants
St. Christopher's Hospital for Children	Academic children's hospital in Philadelphia, PA with 150 beds. The hospital enrolls patients in SNAP through a medical-legal partnership, runs a WIC office that offers nutrition counseling, and sells discounted produce through a unique partnership	• Medical Director, Grow Clinic
Arkansas Children's Hospital	Not-for-profit, 357 bed children's hospital in Little Rock, Arkansas. Close relationships with local government officials, clinical researchers and hospital administration facilitated development of SNAP enrollment assistance program, a year-round free meal program, and nutrition education	• Director, Growth and Development Program; Co-Principal Investigator for Arkansas site of Children's Health Watch
Boston Medical Center	Not-for-profit safety net academic medical center in Boston, Massachusetts with 496 beds. Hospital runs an in-house food pantry that provides nutritious food to approximately 6,700 people per month	• Food Pantry Manager
Deerwood Children's Hospital Medical Center[1]	Nonprofit academic medical center and pediatric hospital in the Midwest. The hospital offers individual nutrition counseling and group education sessions for obese pediatric patients, 50 percent of whom are also food insecure	• Medical Director, Specialty Nutrition Center • Dietitian, Specialty Nutrition Center • Associate Program Director, Division of General and Community Pediatrics
University of Chicago Medical Center	Academic health system located in Chicago, Illinois with 617 beds. Partners with local institutions on multifaceted intervention to improve outcomes for diabetes patients on the South Side, including grocery store tours and health programming	• Principal Investigator and Associate Professor, Division of General Internal Medicine
Lankenau Medical Center	Acute care hospital and medical complex, part of Main Line Health System, in Wynnewood, Pennsylvania with 331 beds. Partners with local non-profit to develop and maintain an on-site farm, providing fresh, free produce to patients in need. Health educators offer nutrition counseling across the continuum	• Associate Administrator • Deaver Wellness Farm Manager

1) Pseudonym.

Source: Population Health Advisor research and analysis.

Executive Summary

Food Insecurity Dramatically Impacts Health Care Spending and Outcomes

Already-Vulnerable Populations Are Disproportionately Affected – Particularly Low-Income Children

Hunger and Food Insecurity: Key Definitions

- **Food insecurity:** limited or uncertain access to nutritionally adequate and safe food
- **Food hardship:** not having enough money to purchase food needed for self or family, usually measured over the course of a year
- **Food desert:** a "low-access community" or census tract with at least 500 people or 33% of its population residing more than one mile from a supermarket (10 miles for rural areas)

Food Insecurity: Negative Health Implications

- **Increased incidence of chronic conditions:** including diabetes, cardiovascular disease, and poverty-related obesity
- **Exacerbation of existing health issues:** particularly for elderly patients with chronic and acute diseases; can also speed the onset of degenerative diseases
- **Poor maternal and infant health:** linked to higher rates of infant mortality and low birthweight babies
- **Fragile pediatric health:** associated with two to four times as many individual health problems in children, including weight loss, fatigue, headaches, stomach aches, and frequent colds
- **Psychosocial deficiencies:** linked to developmental delays, learning and behavioral problems

2014 Estimated Costs Attributable to Food Insecurity in the U.S.

$155B	Direct health-related costs (e.g., hospitalizations, treatment of nutrition-related conditions like upper GI disorders, anemia, diabetes, mental health problems)
$5B	Indirect health-related costs (e.g., lost work time due to illness or caring for sick family members)
$19B	Additional indirect costs (e.g., special education and school dropouts)
$179B	

15%

Individuals living in food-insecure households in 2014

Sources: Project Bread, "Hunger in the Community: Ways Hospitals Can Help", http://www.projectbread.org/reusable-components/accordions/download-files/hospital-handbook.pdf.;
Cook, J et al., "Estimating the Health-Related Costs of Food Insecurity and Hunger," Bread for the World Institute, November, 2016, http://www.childrenshealthwatch.org/wp-content/uploads/JohnCook_cost_of_hunger_study.pdf.; Population Health Advisor research and analysis.

Providers Can Offer a Range of Interventions to Address Food Insecurity

Initial Focus Usually Dictated by Available Resources and Presence of a Champion

	Connection to Federal/State Benefits		Increased Access to Healthy Foods			Nutrition Education and Food Literacy	
Organization	**SNAP Enrollment Assistance Program**	**WIC Office**	**Free Meal Program**	**Food Pantry**	**Discounted Produce Partnership**	**Nutrition/Cooking Classes**	**Grocery Store Tours**
ProMedica	✓		✓	✓		✓	✓
St. Christopher's Hospital for Children	✓	✓			✓	✓	
Arkansas Children's Hospital	✓	✓	✓	✓		✓	
Boston Medical Center				✓		✓	
Deerwood Children's Hospital Medical Center[1]	✓					✓	
University of Chicago Medical Center				✓	✓	✓	✓
Lankenau Medical Center	✓			✓	✓	✓	✓

1) Pseudonym.

Source: Population Health Advisor research and analysis.

Recommended Action Steps for Improving Food Security

Recommendation	Rationale	Action Steps
1. Reframe hunger as a health issue, leveraging trusted health care provider relationship	• Stigma is a major barrier to discussing or accessing food-related support services • Hospitals are uniquely positioned to address hunger issues and boost resource utilization because of the link between food insecurity, nutrition, obesity, and overall health	❑ Create a comfortable, sensitive environment that addresses patients' cultural and linguistic needs, minimizes stigma, and empowers patients ❑ Consider offering sensitivity training for clinicians who may be asked to screen for or discuss patient food security challenges ❑ Solicit feedback on root causes of patient resistance in discussing hunger-related issues or accessing services to inform process refinement
2. Implement routine screening for food insecurity to identify what may otherwise be an invisible need	• Health outcomes are profoundly impacted by social and economic circumstances • Embedding food insecurity screening questions in universal psychosocial risk assessments minimizes stigma while enabling collection of critical data	❑ Incorporate short, validated screening questions into risk assessment tool ❑ Embed screening questions into EMR; automate referrals ❑ Consider deploying a social worker or other care team member to confirm food insecurity and immediately follow-up with referral ❑ Create access points for patients that do not require a provider referral
3. Secure early leadership buy-in to ensure that patients who screen positively for food insecurity can access immediate assistance	• Executive leadership support identified as most critical driver of program success • Community health needs assessment results and board member commitment to hunger issues common drivers for action • Hospital financial inputs typically include staff salary, physical space (if needed), and community benefit dollars	❑ Select interventions that address the community's top food-related needs and overlap with available resources, existing community partners, and interest areas of existing physician champions ❑ Secure committed group of donors to sustain programs in the long term ❑ Plan for cyclical fluctuations in demand and secure supplemental food sources for high-need times
4. Engage clinicians by sharing prevalence and service utilization data to boost awareness and drive referrals	• Clinicians often unaware of magnitude of food insecurity challenges in population • Most programs rely on physician referrals to drive resource utilization	❑ Share national and service area data on food insecurity prevalence with clinicians to build initial awareness ❑ Consider sharing screening and prevalence data by department, provider, division, or other grouping to promote ongoing engagement ❑ Ideally, share utilization information with providers to close the loop on referrals and support follow-up conversations with reluctant patients
5. Be open to working with a wide range of partner organizations, but ensure expectations are clearly delineated	• Some organizations opt to work with existing partners, while others cast a wide net to identify new organizations • Many local groups may be interested in providing infrequent support; clear guidelines ensure efforts are mutually beneficial	❑ Select partners who fill an access gap or expand the availability of food to meet growing patient demand ❑ Consider an open RFP process to expand reach into community partner network, surfacing potentially unknown opportunities ❑ Share clinical expertise with partners to ensure they are providing nutritious food, rather than just caloric food

Source: Population Health Advisor research and analysis.

Range of Provider-Led Service Offerings

Hospitals Uniquely Positioned to Address Food Insecurity in Patients

Leverage Existing Resources and Relationships to Minimize Costs While Enabling Program Scale

Three Primary Types of Programming to Address Food Insecurity

	1  **Connection to Federal and State Benefits**	2  **Increased Access to Healthy Foods**	3  **Nutrition Education and Food Literacy**
Goal	Empower and support patients eligible for existing services	Provide supplemental assistance to patients and families who are food insecure and/or living in a food desert	Offer wrap-around support services that build healthy life skills and habits that acknowledge environmental limitations (e.g., limited access to produce)
Primary Services Offered	• SNAP enrollment assistance program • On-campus WIC Office	• Emergency food • On-site food pantry • Discounted produce partnership • Free meal program	• Nutrition/cooking classes • Budget-friendly, healthy recipes • Grocery store tours
Additional Services	• School meal program enrollment • Senior meal program enrollment	• Hospital-owned grocery store • Store discounts and vouchers	• Community garden • School food service enhancement support

Source: Population Health Advisor research and analysis.

Increase Patient Access to Federal Benefits as First Line of Defense

Families Receive SNAP Enrollment Support and Convenient Access to WIC Office

SNAP[1] Enrollment Support

A hospital-employed social worker or in-house lawyer with the Medical Legal Partnership (MLP) assists eligible patients in applying for SNAP benefits

Both utilize Solution for Progress' Benefit Bank® online platform, which enables rapid eligibility screening and application filing for various benefit programs

<40 min.

Time to complete and submit SNAP application, potentially saving weeks of effort

On-Campus WIC[2] Office

+

- State WIC agency determines staffing needs and employs team, including a dietitian and office coordinator
- Agency also provides necessary technology to connect to state databases and main office
- Hospital provides and maintains a conveniently located space for the office on its campus
- Hospital is also responsible for internally advertising the availability of services at the WIC office to providers and patients

500

Patient visits per month to WIC enrollment office

Case in Brief: St. Christopher's Hospital for Children

- 189-bed academic children's hospital located in Philadelphia, Pennsylvania
- Recently opened the Center for the Urban Child, an outpatient center that provides children with comprehensive services designed to address food insecurity and other issues contributing to health disparities
- Leveraged existing hospital social workers and in-house lawyers hired through new medical-legal partnership to provide SNAP enrollment support; secured a space for a WIC office inside newly constructed building
- Programs cover a patient population of 25,000 and have helped 25 households apply for benefits with a valuated return of $116K; WIC office now receives 500 visits per month

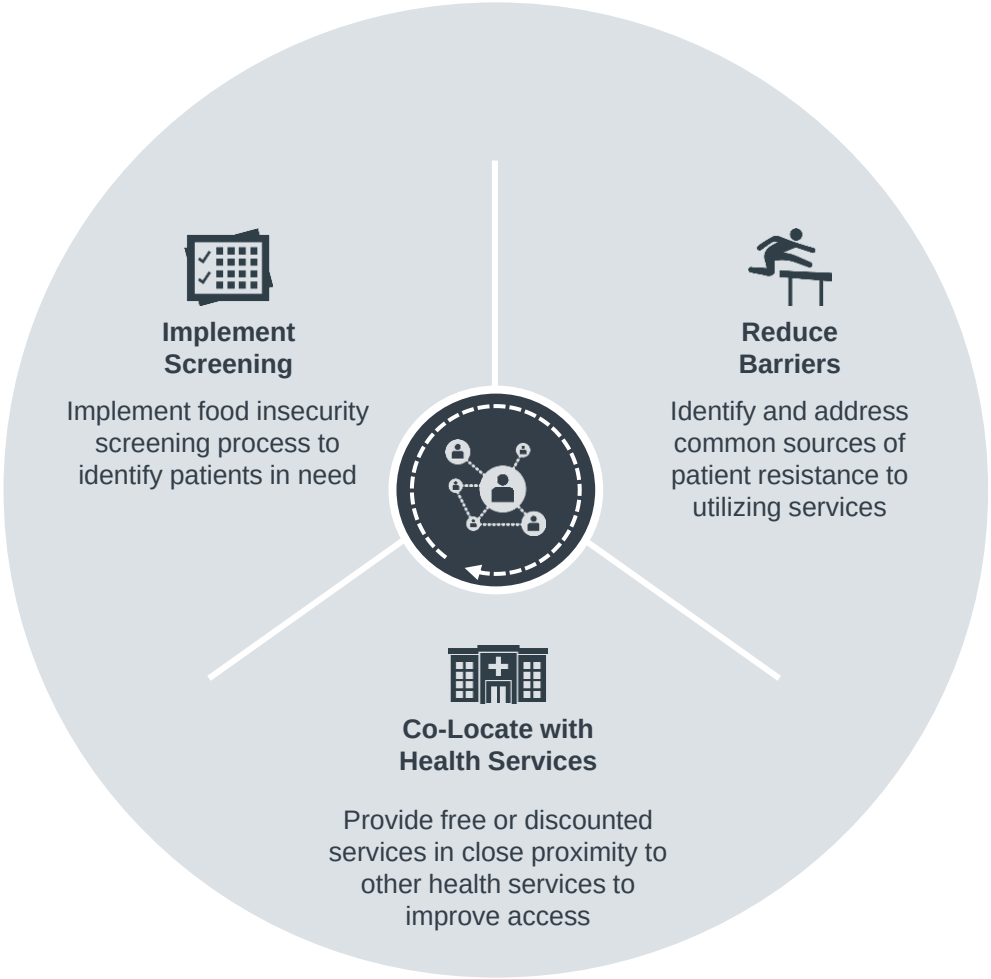
1) Supplemental Nutrition Assistance Program.
2) Special Supplemental Nutrition Program for Women, Infants, and Children.

Source: Population Health Advisory research and analysis.

Multi-Pronged Approach to Providing Supplemental Food Assistance

Successful Tactics Frame Hunger as a Health Issue

Three Considerations for Driving Food-Related Service Utilization

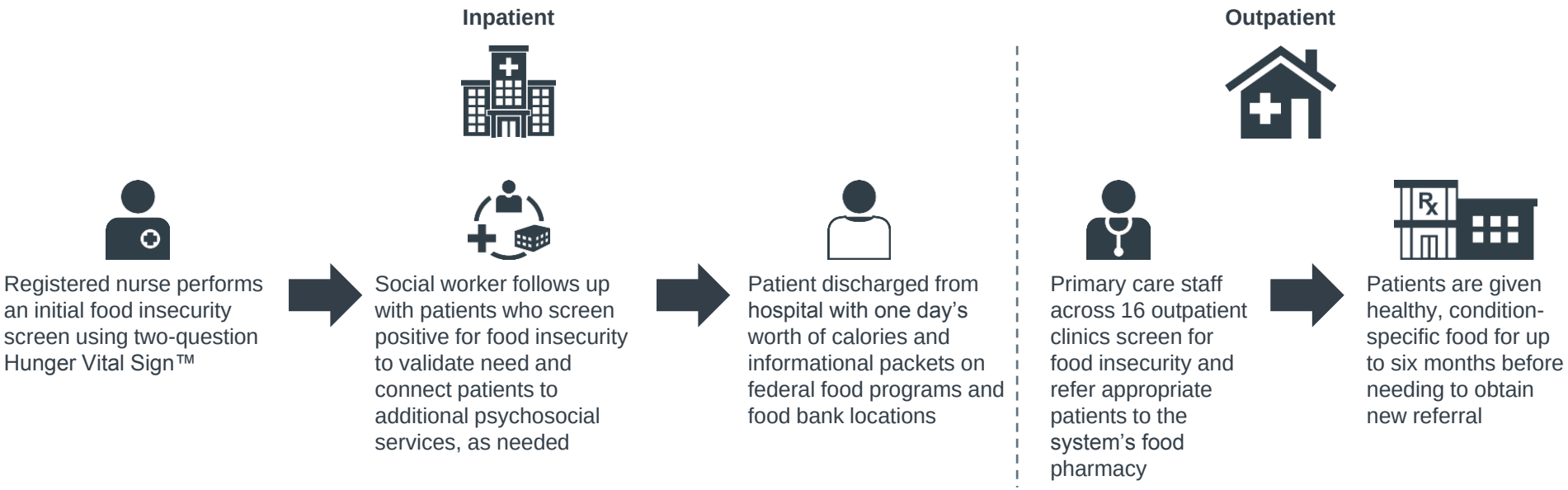


Source: Population Health Advisor research and analysis.

Screen System-Wide to Maximize Identification and Resource Connection

Long-Term Food Insecurity Support Concentrated in Primary Care Clinics for Sustainability

Overview of Food Insecurity Screening Process



Case in Brief: ProMedica

- Not-for-profit, 13-hospital health system serving 27 counties across Northwest Ohio and Southeast Michigan
- System-wide food insecurity screenings prompted by food insecurity prevalence and link to obesity
- Patients are screened for food insecurity in both the inpatient and outpatient setting, with differing interventions
- In the inpatient setting, patients are discharged with an emergency food supply and information on community resources. In primary care clinics, patients receive a longer-term prescription to access food at the system's food pharmacy
- Since April 2015, ProMedica has screened more than 30,000 patients in the inpatient setting and the system's two food pharmacies have served over 3,000 households

Sources: Population Health Advisor research and analysis.

Address Immediate Hunger Needs Via Hospital Free Meal Programs

Administrative, Clinical, and State-Level Buy-in Facilitated Program Implementation

Timeline for Free Meal Program Development and Implementation

Community Needs Assessment

Food insecurity identified as top priority

Leadership Buy-in

Board member simultaneously expressed interest in tackling food insecurity to support broader community health needs

Working Group Formation

Committee formed to develop food insecurity programs; consisted of hospital leadership (COO, VPs, department leaders) and community partners (Helping Hands, Hunger Relief Alliance, and Arkansas Department of Human Services)

Free Meal Program Development

Arkansas Department of Human Services coordinated program implementation with USDA; Seagate Food Bank and Hunger Relief Alliance offered food and implementation support

Program Management

Nutritional Services Director runs program and special education students from local high schools and hospital staff prepare meals

Impact

Since its inception, the program has distributed more than 40,000 lunches and expanded from summer- to year-round meal service

Case in Brief: Arkansas Children's Hospital

- Not-for-profit, 356 bed children's hospital in Little Rock, Arkansas with approximately 500 employed physicians
- Food insecurity identified as a hospital priority through community needs assessment and board member support
- In response, the hospital instituted a free meal program for all children and family members under 18. The Arkansas Department of Human Services and the USDA were key partners in the program's development and implementation, which began as a summer meal program and is now offered year-round
- Since the free meals program's inception, the hospital has distributed over 40,000 lunches. The hospital services approximately 200 children per day in the summer, and 50-100 the rest of the year

Source: Population Health Advisor research and analysis.

Identify and Address Root Causes of Patient Resistance

Common Challenges Related to Privacy and Cultural Competency

Tactics Used to Increase Patient Comfort in Accessing Boston Medical Center's Preventive Food Pantry

Identified Barriers to Adherence	*Solutions Implemented to Boost Utilization*
Visibility: Patients may be embarrassed about accessing a food pantry or being seen carrying food out of the pantry because of perceived stigma	**Location**: Food pantry is placed in an out-of-the-way location on the hospital's fourth floor to keep patient interactions private
	Carrying containers: Staff encourage patients to use luggage, backpacks, purses, or duffel bags to discreetly carry food; pantry keeps donated bags on hand
Language and cultural barriers: Patients may not feel comfortable expressing their preferences or concerns in English	**Language services**: Hospital's translation service is located adjacent to the food pantry, facilitating communication between pantry staff and users

Program Design Goals

- Minimize or eliminate perceived stigma
- Increase patient comfort level
- Boost referral adherence and utilization of food pantry

Case in Brief: Boston Medical Center

- Private, not-for-profit 496 bed safety net academic medical center in Boston, Massachusetts
- Nutritionists at Boston Medical Center's Growth Clinic encouraged clinicians to proactively identify and address food insecurity, prompting Boston Medical Center to open a food pantry on its campus to meet demand for services
- The food pantry addresses condition-specific and general food insecurity needs for low-income patients referred by a clinician. Patients can access the pantry Monday-Friday from 10am-4pm, twice per month and receive three to four days worth of food for their household each time
- Stigma was identified as a common barrier to initial utilization, so staff identified specific drivers and now ensure patients have translation services available and discreet ways of picking up food (e.g., in suitcases or inconspicuous bags, having a family member pick up food for them)
- The pantry serves 80-100 people per day and approximately 7,000 people per month

Sources: Population Health Advisor research and analysis.

Prescribe Nutritious Food and Provide Affordable Options for Purchase

Discounted Fruits and Vegetables Sold at Clinics Through Partnership With Local Farms

1

Patient Screening

- Providers ask two Hunger Vital Sign™ questions as part of 15-item psychosocial screening embedded in EMR and on paper questionnaire
- Provider collects questionnaire or EMR notifies provider if patient screens positive, prompting referral to resources

2

Food Prescription

- Providers write patients a prescription for the FreshRX program, giving access to discounted boxes of produce
- Boxes are available for weekly pick-up at six locations; patients can pay for boxes using cash, credit or SNAP benefits

3

Fruit and Vegetable Box

- Local farm cooperative packs a $10-$15 box with 5-8 kinds of seasonal produce
- Budget-friendly recipes are included with each box to help patients prepare nutritious meals with selected produce

Case in Brief: St. Christopher's Hospital for Children

- 189-bed academic children's hospital located in Philadelphia, Pennsylvania
- High poverty levels (40%) and lack of grocery store access exacerbates hunger and malnutrition in service area
- Developed a food prescription program that connects patients with local farm cooperative that brings weekly, affordable boxes of seasonal fresh fruits and vegetables to convenient pickup locations
- Approximately 25% of 3,000 patients who receive a prescription annually ultimately purchase a box of produce; there are now a total of 1,601 registered clients and an average of 25 boxes are distributed per week

Source: Population Health Advisory research and analysis.

Provide Supplementary Nutrition Education To Boost Confidence and Skills

Multidisciplinary Approach Addresses Complexity of Problem, While Maximizing Team Expertise

Nutrition Education Programming at Deerwood Children's Hospital

One-on-One Physician Visit Used to Plan Treatment

Screening: Piloting a multi-item screening questionnaire that asks about physical activity, eating habits, food insecurity, mental health, and interpersonal violence

Physician Visit: Physician assesses potential underlying causes of obesity or weight gain; connects patients to other specialists as needed

One-on-One Dietitian Visit Reinforces Nutritional Elements of Care Plan

Dietician Visit: Patients meet with one of five staff dietitians to develop an individualized healthy eating plan; follow up every 2-3 months

Cost: Dietitian visits billed to patient's insurance

Small Group Classes Provide Skills Training to Supplement Dietitian Visits

Group Nutrition Classes: additional education and skill development training led by dieticians supplement individual clinician visits; skills addressed include:

- Food literacy (identifying fresh produce)
- Food preparation (chopping, mixing)
- Portion control

Cost: no charge to patients

Case in Brief: Deerwood Children's Hospital[1]

- Not-for-profit academic children's hospital in the Midwest
- Specialty Nutrition Center[1] was created to treat children with obesity, the majority of whom are also food insecure, and now operates across sixteen sites
- Patients meet periodically with a dietitian to discuss nutrition education and food literacy as part of the multidisciplinary approach to address obesity and food insecurity
- Nutrition education classes complement discussions with dietitians and help patients learn skills for identifying, purchasing, and preparing healthy foods
- The Center treats approximately 1,500 patients annually and monthly nutrition classes accommodate an average of four to five families per group session

Food Insecurity Prevalence

1.5K Number of patients seen by the Specialty Nutrition Center[1] each year

50% Estimated food insecurity prevalence among patients seen at the Specialty Nutrition Center[1]

1) Pseudonym.

Source: Population Health Advisor research and analysis.

Promote Ongoing Learning and Engagement in the Community Setting

Offering Programs at Commonly-Frequented Locations Capitalizes on Existing Routines and Relationships

Save-a-Lot Grocery Store Tours

Diabetic Patients

- Attend 1-hour tour focused on healthy eating and shopping (e.g., reading nutrition labels, portioning)
- Receive $10-$20 gift card to spend in grocery store

Grocery Stores

- Donate gift cards and collect receipts for research team
- Receive additional foot traffic and gain reputation as a healthy community partner

Hospital Research Team

- Provide CDEs[1] to lead informational tours
- Evaluate program impact through analysis of gift card purchases

Monthly Health Programming at KLEO Food Pantry

Cooking Demonstrations

Local chefs demonstrate healthy cooking techniques and how to prepare budget-friendly recipes

Fitness Tips

Personal trainers and fitness instructors share tips and teach simple exercises that can be done at home

Health Screenings

Attending physician supervises residents and medical students to provide preventive screenings (e.g., blood pressure checks, retinal screening)

Case in Brief: University of Chicago Medical Center

- 617-bed academic health system located in Chicago, Illinois; partnered with federally qualified health centers (FQHCs), community-based organizations, patient advocacy groups, local businesses, the Chicago Health Department, Pritzker School of Medicine, and Kennedy King College for seven-year, multi-faceted intervention project to improve diabetes care and outcomes on the South Side of Chicago
- Offer programming at local discount grocery stores and a monthly food pantry at community center to maximize the relevance and effectiveness of diabetes self-management education
- Grocery store tours teach real-life healthy eating and shopping skills, provide gift cards; food pantry programming capitalizes on opportunity to screen patients and teach cooking and fitness tips while people wait for food
- Grocery store tours serve an average of 50 patients per month; food pantry visits average 150 people per month

1) Certified Diabetes Educators.

Source: Population Health Advisory research and analysis.

Leverage Existing Resources to Provide Holistic Nutrition Support

Fresh Produce from On-Site Farm Supplements Cross-Continuum Educational Services

Health Educators Combat Food Insecurity Across Care Continuum

	Inpatient	Outpatient	Community
Health educator role	Educate CHF patients and families about healthy eating to encourage long-lasting dietary changes	Lead pop-up nutritional classes and provide free produce and recipes in waiting rooms	Offer nutrition counseling at local farmers markets and corner stores; direct patients to fresh, low-cost produce sources
Added support	Fresh, free produce given to patients from onsite farm	Patients referred to community-based services based on results of Social Needs Survey also administered in waiting room	$10 Philly Food Bucks vouchers distributed to be redeemed at local farmers markets; corner stores host wellness and preventive care "Heart Smart" sessions

EMR Tracks pop-up class utilization, Philly Food Buck usage, harvest volume, and produce distribution

4,183	Pounds of food harvested
735	Patients receiving food during first 6 months of operation
1/2	Acre used for harvest

Case in Brief: Lankenau Medical Center

- 331-bed acute care hospital and medical complex in Wynnewood, Pennsylvania, a western suburb of Philadelphia, part of Main Line Health
- Partnered with the non-profit Greener Partners to develop and maintain on-site farm, providing fresh, free produce to patients in need. Lankenau used zip codes to identify and target the most at-risk communities in its service area with additional nutrition services
- Additional efforts to combat food insecurity include education classes in outpatient settings and partnerships with local farmers markets and corner stores
- In the first 6 months, the Deaver Farm harvested 4,183 lbs of fresh produce for 735 patients on only ½ of an acre of land

Source: Population Health Advisor interviews and analysis.

Services In Depth

- Federal Assistance Program Enrollment
- Primary Care-Based Food Pharmacy
- Federally-Subsidized Free Meal Program
- Hospital-Based Food Pantry
- Discounted Produce Partnership
- Nutrition Education
- Grocery Store Tour and Health Programming
- On-Site Farm and Cross-Continuum Health Education

Featured Program In Depth: Federal Assistance Program Enrollment

St. Christopher's Hospital for Children
Featured Offering: *SNAP Enrollment Support and On-Campus WIC Office*

Services Offered	• **Featured offering:**
	  ○ SNAP enrollment supported by social workers and lawyers using the Solutions for Progress Benefit Bank© online platform
	  ○ Full-service WIC office on hospital campus offers benefits eligibility verification, nutrition counseling, and breastfeeding support; originally offered via mobile van that came to hospital several times per week
	• **Other food security-related services:** Screening, resource guide, food prescription, nutrition education, outpatient growth clinic

Patient Identification and Referral Pathways	• **Screening tool:** 15-item risk assessment that includes the two Hunger Vital Sign™ questions; tool embedded into EMR so that positive screens automatically prompt providers to ask patients about potential eligibility or interest in applying for SNAP and WIC • **Provider referral:** Any provider (e.g., physician, social worker, non-clinical staff) can refer patients if they identify a need during a patient interaction and believe they could potentially benefit from the service • **Patient self-referral:** Patients can visit the WIC office without a provider referral
Staffing	• **SNAP enrollment support:** One full-time lawyer and one full-time social worker • **WIC office:** One full-time office coordinator and one full-time dietitian
Care Coordination	• **Data sharing:** Referring physicians must call WIC office to determine whether patient has visited; currently no feedback loop
Stakeholder Engagement	• **Providers:** Integration of tool into EMR eases provider burden and resulted in higher screening completion rates; development of various food security-related services provides clear follow-through actions for patients who screen positively • **Patients:** Posters across the hospital advertise availability and convenience of WIC office and other food security-related services
Hospital Contributions and Funding	• **Social workers:** Existing employees funded by hospital • **WIC office space:** Secured office space during planning phases of newly constructed building and maintained by the hospital • **Internal advertising:** Mailings and posters advertise the availability of services across the hospital, funded by donations to St. Christopher's Foundation for Children (nonprofit arm of the hospital)
Key Partnerships and Contributions	• **Legal Clinic for the Disabled (LCD):** Collaborates with hospital-based outpatient center to form unique medical-legal partnership and is funded by direct donations to the LCD • **State government:** Employs WIC office staff and provides necessary technology to connect with state databases • **Solutions for Progress:** Vendor supplying the Benefit Bank© online platform for screening and benefits application submission
Program Impact	• **Utilization:** 25 households applied for benefits in 2014 with a valued return of $116K; visits to the WIC office have increased by 150% since 2014 and now number 500 per month • **Operational efficiency:** Families are enrolled in SNAP benefits in 40 minutes or less, potentially saving weeks of effort; MLP also works with families on other SNAP issues (e.g., recertification, suspension, incorrect amounts)
Future Plans	• **Screening:** Would like to transition to tablet-based risk assessments • **SNAP enrollment support:** training other providers to use Solutions for Progress Benefit Bank© to help with benefit enrollment • **Funding**: Healthcare center and LCD working to secure funding for second lawyer in center; integrating financial counseling for families through Clarify Medical-Financial Partnership

Source: Population Health Advisory research and analysis.

Featured Program In Depth: Primary Care-Based Food Pharmacy

ProMedica
Featured Offering: *Outpatient Food Pharmacy*

Services Offered	• **Featured offering:**
	  ○ Food pharmacy offering healthy food choices aligned with condition-specific restrictions; patients must receive referral from PCP
	  ○ Service co-located at two primary care sites; each site open 3 days per week
	• **Other food insecurity-related services:** Free meals, grocery store, nutrition education

Patient Identification and Referral Pathways	• **Screening tool:** 2-item Hunger Vital Sign™ built into Epic; food insecurity questions also incorporated into community health needs assessment to asses broader needs for food insecurity interventions • **Inpatient provider-referral:** Registered nurse performs initial food insecurity screen and social worker follows up the next day to validate patient's response to the Hunger Vital Sign™ • **Outpatient provider-referral:** PCPs screen patients and refer to the system's food pharmacies
Staffing	• **Inpatient staff:** Existing registered nurses and social workers conduct majority of food insecurity screenings in the inpatient setting • **Outpatient staff:** 1 part-time dietetic technician manages daily operation of the food pharmacies and splits time between both; 1 FTE dietitian provides nutrition counseling at both locations and assists with operations; 1-2 volunteers at each site provide additional support
Care Coordination	• **Data sharing:** Food insecurity screening responses and food pharmacy utilization uploaded into EMR • **Clinical collaboration:** Non-clinical food pharmacy staff initially received "cheat sheets" to help them match the appropriate foods with select conditions, such as diabetes, hypertension, underweight, and vitamin D deficiency
Stakeholder Engagement	• **Provider engagement:** ProMedica met with existing community partners and hospital executives to identify community needs and address the linkage between hunger, obesity, and health • **Community partners:** ProMedica's Advocacy Fund used an RFP to identify community groups whose mission and values aligned with its own principles and strategic priorities, surfacing lesser-known organizations for partnership
Hospital Contributions and Funding	• **Contribution:** Staff (1 part-time diet tech and 1 FTE dietitian), space in outpatient medical office buildings • **Funding:** Grants, philanthropy, local business sponsorships that help cover cost of additional food
Key Partnerships and Contributions	• **Seagate Food Bank:** Toledo, Ohio-based food bank that donates healthy, nutritious food to ProMedica's food pharmacies
Program Impact	• **Utilization:** Since April 2015, over 30,000 patients have been screened for food insecurity in the inpatient setting and ProMedica's two food pharmacies have served over 3,000 households • **Operational efficiency:** Each inpatient is screened for food insecurity and 16 outpatient primary care practices have incorporated screening into their practice and EMR

Sources: Population Health Advisor research and analysis.

Featured Program In-Depth: Federally-Subsidized Free Meal Program

Arkansas Children's Hospital
Featured Offering: *Free Meal Program*

Services Offered	• **Featured offering:** year-round free meal program providing prepared lunches to any child 18 or younger as well as family members who visit the hospital; food prepared in cafeteria and distributed in cafe near hospital's main entrance; available 10am – 5pm • **Other food insecurity-related services:** SNAP enrollment assistance, WIC office, nutrition education
Patient Identification and Referral Pathways	• **Provider-identified:** providers assess patient need during inpatient visits or routine check-ups; no formalized screening tool • **Patient self-referral:** patients may prompt food insecurity discussion
Staffing	• **Meal Program:** 1 FTE Nutritional Services Director, community and hospital staff volunteers
Stakeholder Engagement	• **Patient engagement:** discussions take place in private settings to help patients feel comfortable discussing vulnerable topics • **Provider engagement:** Board and executive leadership buy-in signaled long-term commitment; internal education and posters to inform staff of food insecurity importance and availability of services to address • **Community partners**: familiarity with partners from past initiatives led to easy decision-making about collaborating
Hospital Contributions and Funding	• **Contribution:** space in the cafeteria kitchen to assemble bags • **Funding**: USDA reimburses meal costs
Key Partnerships and Contributions	• **Hunger Relief Alliance:** provided technical and material support to develop the free meals program • **Arkansas Department of Human Services:** coordinated free meals program with USDA • **USDA:** approved Arkansas Children's Hospital's for the Community Eligibility Provision, which allows organizations serving predominantly Medicaid patients to distribute breakfast and lunch without checking individuals' income • **Helping Hands:** provides packaged food for families with immediate need
Program Impact	• **Utilization**: 100 patients/day; since the program's inception in 2013, it has distributed over 40,000 lunches

Source: Population Health Advisor research and analysis.

Featured Program In Depth: Hospital-Based Food Pantry

Boston Medical Center
Featured Offering: *On-Site Preventive Food Pantry*

Services Offered	• **Featured offering:**
	  ○ Preventive food pantry connecting food insecure patients with a stable food supply while addressing condition-specific nutrition needs; located within Boston Medical Center facilities and open Monday-Friday, 10am-4pm
	  ○ Patients and families can visit the pantry twice a month and receive three to four days of food for the household at a time
	• **Other food insecurity-related services:** Nutrition education

Patient Identification and Referral Pathways	• **Screening tool:** 2-item Hunger Vital Sign™ embedded into hospital EMR • **Provider referral:** Social workers make approximately 50% of referrals, doctors 20%, and other hospital staff 30%
Staffing	• **Food pantry:** 1 FTE Dietetic Technician Pantry Manager, 1 FTE Assistant Pantry Manager, 2 FTE non-clinical assistants, 2 student volunteers
Care Coordination	• **Data sharing:** Department-specific food pantry utilization data entered into EMR and shared with department leaders to inform clinical staff of patient activity and promote awareness of food insecurity prevalence
Stakeholder Engagement	• **Patient engagement:** Offer translation services to make pantry accessible and suggest ways to reduce attention and minimize stigma (e.g., bringing inconspicuous carrying containers for food) • **Provider engagement:** Phased roll-out of food pantry facilitated buy-in by demonstrating initial effectiveness and impact; pantry first provided services to pediatrics and maternity units • **Community partners:** Clearly delineating responsibilities the Greater Boston Food Bank would take on versus the hospital helped simplify the relationship and transportation of food
Hospital Contributions and Funding	• **Contribution:** Staff (pantry manager, assistant pantry manager, assistants) • **Funding:** Grants and philanthropy
Key Partnerships and Contributions	• **Greater Boston Food Bank:** Donates approximately 90% of the food given out by the food pantry • **Ocean State Job Lot:** Donates food • **Lovin' Spoonfuls:** Donates food • **Whole Foods:** Places food collection bins at registers in two Boston-area stores • **Walmart:** Donated a truck to transport food from food banks to BMC's food pantry
Program Impact	• **Utilization:** Approximately 80-100 people/day and 7,000 people/month • **Operational efficiency:** Full-time assistants and volunteers package food for patients and families in approximately 3-4 minutes
Future Plans	• **Location change:** The food pantry plans to relocate within the hospital • **Service expansion:** Expand food nutrition and education classes

Sources: Population Health Advisor research and analysis.

Featured Program In Depth: Discounted Produce Partnership

St. Christopher's Hospital for Children
Featured Offering: *FreshRX Food Prescription Program and Farm to Families*

Services Offered	• **Featured offering:**
	  ○ FreshRX program enables physicians to write food-insecure patients a prescription to access discounted fresh produce
	  ○ Farm to Families delivers boxes of fresh produce for sale at $10-$15 to six pick-up locations in North Philadelphia
	• **Other food security-related services:** Screening, SNAP enrollment support, on-campus WIC office, resource guide, nutrition education, outpatient growth clinic

Patient identification and referral pathways	• **Screening tool:** 15-item risk assessment that includes the two Hunger Vital Sign™ questions[1]; tool embedded into EMR so that positive screens automatically prompt PCP to connect patients to resources such as the FreshRX program • **Provider referral:** PCPs complete a FreshRX food prescription form for patient that includes program contact information and pick-up locations; providers often target patients who have specific health conditions linked to food insecurity (e.g., failure to thrive, poverty-related obesity, diabetes)
Staffing	• **Farm to Families:** One full-time coordinator (works with farmer cooperative, gathers budget-friendly recipes to include with produce boxes, coordinates with clinics and community organizations)
Care Coordination	• **Clinical collaboration:** Each week, the farmer cooperative communicates with the coordinator about what types of fruits and vegetables will be included in the box of produce so that they can gather budget-friendly recipes to include in the box that help patients decide what and how to prepare
Hospital Contributions and Funding	• **Program staff:** Hospital-employed coordinator, funded by St. Christopher's Foundation for Children
Key Partnerships and Contributions	• **Lancaster Farm Fresh Cooperative**: Local co-op of 100+ farmers; packages, sells, and distributes boxes of seasonal produce • **St. Christopher's Foundation for Children**: Subsidizes cost of produce boxes for low-income families
Program Impact	• **Utilization:** 25% of the approximately 3,000 patients who receive a prescription annually purchase a box of produce; total of 1,601 clients have registered with the program since its inception in 2012; average of 25 boxes distributed per week
Future Plans	• **Food prescription:** Efforts underway to expand prescription program to subspecialty clinics and ER and increase uptake • **Farm to Families:** Recently secured additional funds to expand the coordinator role; goal is to increase purchases by 400%

1) Hunger Vital Sign™ Questions: "Within the past 12 months we worried whether our food would run out before we got money to buy more" and "Within the past 12 months the food we bought just didn't last and we didn't have money to get more."

Source: Population Health Advisory research and analysis.

Featured Program In Depth: Nutrition Education

Deerwood Children's Hospital[1]
Featured Offering: *One-on-One and Group Nutrition Education Programming*

Services Offered	• **Featured offering:** Individual and group nutrition education to children ages 2 to 19 with BMI at the 85th percentile or higher. Program acknowledges the link between nutrition, food insecurity and obesity and connects patients with a dietitian to develop healthy meal plans, as well as offers classes on proper food selection and preparation • **Other food insecurity-related services:** Food insecurity screening, SNAP enrollment assistance, grocery store tours
Patient Identification and Referral Pathways	• **Screening tool:** Piloting multi-item risk assessment screening tool that includes two Hunger Vital Sign™ questions; assessment offered to patients in the waiting room and an MA or RN enters assessment results into EMR before patient sees physician • **Provider-referral:** 95% of referrals come from community providers such as pediatricians, PCPs, PAs, and NPs • **Patient self-referral:** Family members can refer children if their BMI is at the 85th percentile or above, the child experiences rapid weight gain, or the parent has health concerns related to a child's obesity
Staffing	• **Specialty Nutrition Center[1]:** Interdisciplinary staffing model with 5 FTE dietitians, 4 FTE exercise physiologists, 1 FTE psychologist, 1 RN responsible for care coordination and follow-up with high-risk patients, general pediatricians, and social workers. Dietitians develop individualized nutrition plans with patients and run food education classes
Care Coordination	• **Clinical collaboration:** Staff interface with endocrinologists, cardiologists, pulmonologists, and gastroenterologists to treat address the comprehensive range of factors affecting food insecurity, obesity, and treatment outcomes
Stakeholder Engagement	• **Patient engagement:** Conduct outreach at 9 community sites and run on-site obesity clinics in 5 schools; hospital also publishes information online to educate patients about the Specialty Nutrition Center[1]and available services • **Provider engagement:** Deerwood Children's started a hospitalist-led, community-based health initiative and included obesity as one of its focus areas; leadership agreed the Specialty Nutrition Center[1] was a viable way to address obesity in the community
Hospital Contributions and Funding	• **Contribution:** Staff, conference rooms available to host nutrition education classes, food • **Funding:** Hospital subsidies, grants
Key Partnerships and Contributions	• **Self-administered:** Nutrition education offered by staff dietitians
Program Impact	• **Utilization:** Approximately 1,500 patient visit the Specialty Nutrition Center[1] each year, nearly 50% of whom are food insecure
Future Plans	• **Updated screening:** Current screening questions administered in paper format; the Specialty Nutrition Center[1] is in the process of uploading questions into electronic form on tablets

1) Pseudonym.

Source: Population Health Advisor research and analysis.

Featured Program In Depth: Grocery Store Tour and Health Programming

University of Chicago Medical Center
Featured Offering: *"Shop Right, Save-a-Lot, and Be Healthy" Grocery Store Tour and KLEO Food Pantry Health Programming*

Services Offered	• **Featured offering:**
	  ○ Grocery store tours at Save-a-Lot: One-hour Informative tour for 5-15 patients led by a certified diabetes educator. The tour covers healthy eating and shopping skills (e.g., reading nutrition labels, portioning, setting goals) and is offered monthly at four participating stores. At the end of the tour, patients receive a $10-$20 Save-a-Lot gift card
	  ○ Health programming at KLEO Food Pantry: Cooking demonstrations, fitness and exercise tips, health screenings, and a presentation on additional resources available in the community are offered while individuals wait for food to be distributed at monthly pantry
	• **Other food security-related services:** Screening, food pantry, discounted produce partnership

Patient Identification and Referral Pathways	• **Provider referral:** Any provider (e.g., physician, social worker, non-clinical staff) can refer patients if they identify a need during a patient interaction and believe they could potentially benefit from attending a tour or the food pantry • **Patient self-referral:** Patients can sign up for a grocery store tour without a provider referral. All families who go to the monthly food pantry at KLEO are exposed to the free health programming
Staffing	• **Grocery store tour:** Certified Diabetes Educators and dieticians hired as independent contractors • **Health programming:** Local chefs and personal trainers hired as independent contractors

Care Coordination	• **Clinical collaboration:** Health screenings at KLEO food pantry are provided by residents and medical students under the supervision of an attending physician. Patients without a regular PCP are referred to the South Side Diabetes Collaborative, a network of clinics who will treat people without insurance
	• **Data sharing:**
	  ○ Research staff collects receipts to track and analyze purchases made using the gift card patients receive at the end of the tour
	  ○ Patients at the food pantry receive a KLEO identity number and card to track and make sure patients receive screenings without requiring HIPAA-protected information. When patients receive test results, they are instructed to take the information back to a PCP

Stakeholder Engagement	• **Patients:** Rotating schedule at four different neighborhood Save-a-Lot stores increases convenience and access for patients across the South Side of Chicago, while the gift card to Save-a-Lot incentivizes attendance
Hospital Contributions and Funding	• **Contribution:** Staff including one part time certified diabetes educator, as well as contracted chefs and personal trainers • **Funding:** Grants for the "Improving Diabetes Care and Outcomes on the South Side of Chicago" project from the NIH and Merck Foundation
Key Partnerships and Contributions	• **Save-a-Lot Food Stores:** Accommodate tour groups and donate gift cards • **KLEO Community Family Life Center**: Provides space for demonstrations

Program Impact	• **Utilization:**
	  ○ Grocery store tours serve an average of 50 patients per month
	  ○ Approximately 150 people visit the monthly KLEO food pantry and view demonstrations

Future Plans	• **Screening:** Implementing an EMR-based food insecurity screening tool across the system

Source: University of Chicago Medical Center, Chicago, IL.; Population Health Advisory research and analysis.

Featured Program In Depth: On-Site Farm, Cross-Continuum Health Education

Lankenau Medical Center
Featured Offering: *On-Site Farm and Cross-Continuum Health Education*

Services Offered	• **Featured offering:**
	  ○ On-site farm offers fresh, free produce to patients in need
	  ○ Cross continuum health education
	  ▪ Inpatient dietary counseling for CHF patients and families
	  ▪ Pop-up nutritional classes and food demonstrations in outpatient waiting rooms
	  ▪ Health screenings and nutrition counseling at local farmers markets and corner stores regarding where to obtain low-cost produce and how to connect with a primary care provider
	• **Other food security-related services:**
	  ○ Social Needs Survey administered to patients in waiting rooms to identify areas for additional support (e.g., child care, employment, housing, transportation)
	  ○ $10 Philly Food Bucks vouchers distributed to patients to be redeemed at farmers markets and corner stores

Patient Identification and Referral Pathways	• **Provider or health educator referral:** Volunteer medical students screen patients with a Social Needs Survey and offer produce and nutritional education in the waiting room; patients enter appointment with produce, priming providers to consider nutritional needs
Staffing	• **Nutrition counseling:** Health educators provide counseling in inpatient, outpatient, and community settings
Care Coordination	• **Clinical collaboration:** Volunteer medical students administer Social Needs Survey to patients in clinic waiting rooms • **Data sharing:** EMR tracks utilization, offering real time information on how many patients have received produce from the farm and redemption rates of the Philly Food Bucks
Stakeholder Engagement	• **Patients:** Staff distribute weekly harvests from the farm to patients at clinics serving most at-risk communities; patients receive nutrition counseling and social needs screening in waiting room • **Community**: Health educators offer nutrition counseling and preventive health screenings at local farmers markets, distributes Philly Food Bucks vouchers, host wellness and preventive care sessions at local corner stores

Hospital Contributions and Funding	• **Contribution:**
	  ○ ½ acre of hospital land repurposed for the Deaver Wellness Farm
	  ○ Health educators administer nutrition counseling on farm tours, in clinic waiting rooms, local farmers markets, and corner stores

Key Partnerships and Contributions	• **Greener Partners:** Non-profit contributes funding and an FTE to launch and maintain the Deaver Wellness Farm • **The Food Trust:** Non-profit partner on Philly Food Bucks and Healthy Corner Store Initiative; tracks redemption of Philly Food Bucks across 25 farmers markets in Philadelphia • **Philadelphia Department of Public Health:** Government partner on Philly Food Bucks program
Program Impact	• **Utilization:** 4,183 pounds of produce harvested and 735 patients received food in the first six months of operations
Future Plans	• **Utilization:** Tracking repeat users of services and satisfaction of pop-up farmers market, assessing how clinical providers integrate produce from the Deaver Farm into health care delivery, measuring long term health outcomes for patients receiving produce, health education, and social needs support

Source: Lankenau Medical Center, Wynnewood, PA; Population Health Advisory research and analysis.

Appendix

Common Food Insecurity Screening Tools

Validated Food Insecurity Screening Tools and Questions

Screening Tool	Source	Questions
The Hunger Vital Sign™	Children's HealthWatch	1. Within the past 12 months we worried our food would run out before we got money to buy more. 2. Within the past 12 months the food we bought just didn't last and we didn't have money to get more.
Six-Item Food Security Module	Economic Research Service, United States Department of Agriculture	1. "The food that (I/we) bought just didn't last and (I/we) didn't have money to get more." Was that often, sometimes, or never true for (you/your household) in the last 12 months? 2. "(I/we) couldn't afford to eat balanced meals." Was that often, sometimes, or never true for (you/your household) in the last 12 months? 3. In the last 12 months, did (you/you or other adults in your household) ever cut the size of your meals or skip meals because there wasn't enough money for food? 4. How often did this happen – almost every month, some months but not every month, or in only 1 or 2 months? 5. In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food? 6. In the last 12 months, were you ever hungry but didn't eat because there wasn't enough money for food?

Sources: "U.S. Household Food Security Survey Module: Six-Item Short Form," Economic Research Service, United States Department of Agriculture.; "The Hunger Vital Sign™: A New Standard of Care for Preventive Health," Children's Health Watch.; Population Health Advisor research and analysis.

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