SOCIAL DETERMINANTS OF HEALTH SERIES

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Food Insecurity and the Role of Hospitals

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American Hospital Association™

Advancing Health in America

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Accessible at: www.hpoe.org/FoodInsecurity

Contact: hpoe@aha.org or (877) 243-0027

Table of Contents

Introduction

As health care delivery transformation moves toward a population health paradigm that incentivizes keeping people healthy, hospitals and health systems are recognizing the significance of addressing social determinants of health. Research has shown that only 20 percent of health can be attributed to medical care, while social and economic factors account for 40 percent (see Figure 1).[1] To improve the health of the communities they serve, hospitals must recognize and address the behavioral, socio-economic and environmental factors that contribute to health.

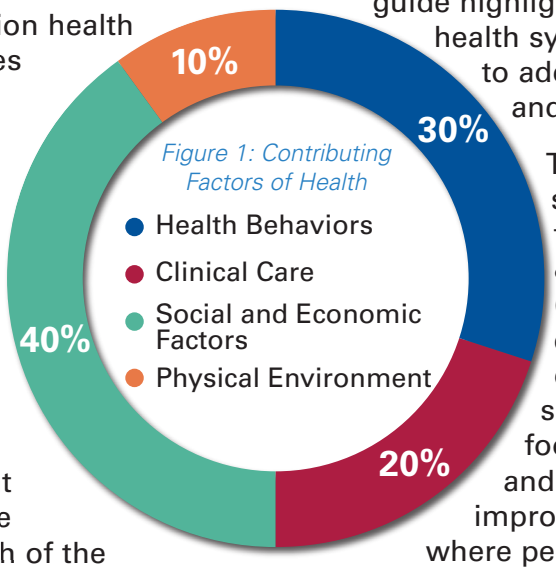


Figure 1: Contributing Factors of Health

Food insecurity is a social determinant of health that should be accounted for in any population health strategy. Food insecurity is defined as a household-level economic and social condition of limited or uncertain access to adequate food, with either disrupted eating patterns or reduced food intake.[2]

This guide discusses the link between food insecurity and health issues, including chronic illness and child development, and the role of hospitals in identifying food-insecure individuals and households to help address this determinant of health. Hospitals and health systems can screen patients for food insecurity and partner with community organizations to offer programs and resources that increase access to healthy foods and raise awareness of the issue in the community. This guide outlines strategic considerations and clinical and nonclinical approaches that hospitals can use to build a healthier community that addresses the physical, behavioral and socio-economic needs of individuals and families and to improve population health. Case examples in the guide highlight several hospitals and health systems that are working to address food insecurity and seeing solid results.

This guide is the first in a series of resources from the Health Research & Educational Trust (HRET) on how hospitals can address the social determinants of health—such as access to healthy food, adequate housing and quality education—to improve the environment where people live, work and play.

The American Hospital Association (AHA) and HRET are committed to supporting community health and advancing health in America through innovative campaigns, initiatives, partnerships, publications and awards. In addition to social determinants of health, this work focuses on several areas, including health equity and eliminating care disparities, community health workers, violence and safety, and health system and community collaborations. To learn more about community health initiatives at the AHA, visit hpoe.org/communityhealthinitiatives.

Food Insecurity, Hunger and Health

Lack of accessible and affordable food is a major population health issue in the United States. In 2015, 12.7 percent of U.S. households—that is, 15.8 million households—were food insecure at some time during the year.[3] Food insecurity can have permanent effects on the health of all individuals, regardless of age, gender, ethnicity or other demographic characteristics.[4] A community or individual can experience different levels of food insecurity.

The U.S. Department of Agriculture (USDA) defines food insecurity as "the limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways."[5] Food insecurity has multiple dimensions, and those who are food insecure are not necessarily suffering from hunger. Households that experience "very low" food insecurity have very limited to no food, but some households that have adequate quantities of food can experience "low" food security. Annually, the USDA measures food insecurity through the Food Security Supplement of the U.S. Census Bureau's Current Population Survey for the Bureau of Labor Statistics. Based on responses from this series of 18 survey questions, households are grouped into one of four categories:

- *High food security*: Households face no problems in acquiring adequate food.
- *Marginal food security*: Households face some problems in acquiring adequate food, but the quality of food consumed is not jeopardized.
- *Low food security*: Households consume low-quality foods, but quantity of food is insignificantly reduced.
- *Very low food security*: Eating patterns are disturbed in households from reduced food intake due to lack of money and resources.[6]

Food insecurity can occur from:

- Hunger or limitation of food
- Lack of nutritious and safe foods
- Abnormal eating patterns
- Consumption of foods with higher counts of calories and carbohydrates, contributing to the adverse risk of acquiring chronic health conditions such as diabetes, or obesity in some age groups[7]

Responses from the USDA survey show that families experiencing food insecurity:

- Worry food will run out
- Don't have enough food
- Struggle to afford balanced meals
- Cut the size of meals or skip meals
- Eat less than they feel they should
- Feel hungry but do not eat
- Lose weight
- Go full days without eating[8]

Many physical, behavioral, clinical and socio-economic factors that determine the health and well-being of an individual are associated with food insecurity, making it a significant health care issue. Table 1 describes how the causes and effects of food insecurity are linked to factors that determine health.

Table 1. How Social Determinants of Health Affect Food Insecurity

Social Determinants of Health	Related Causes of Food Insecurity	Related Effects of Food Insecurity
Socio-economic factors	» Inability to afford healthy foods due to poverty, lack of education and employment	» Maximized calorie consumption due to purchasing high-calorie, often lower cost food items » Malnutrition

Social Determinants of Health	Related Causes of Food Insecurity	Related Effects of Food Insecurity
Physical environment	» Lack of access to grocery stores and farmers markets with fresh, healthy and shelf-stable foods » Difficulty getting to grocery stores due to lack of transportation or unsafe neighborhoods	» Limited consumption of fresh, healthy foods » Unhealthy diet that can lead to chronic diseases
Clinical care	» Inability to access health insurance » High costs of health care leading to financial trade-offs » High cost of healthy foods » Lack of adherence to MyPlate recommendations » Irregular eating habits and limited intake of food	» High risk of chronic diseases like diabetes, and obesity in some age groups » Difficulty self-managing chronic diseases such as diabetes, obesity, HIV, etc. » Increase in health care costs due to hospital readmissions and medical treatments[9] » Developmental delays in children » Inability to learn and focus, whether in school or at work » Increased stress levels and behavioral health issues

Source: HRET, 2017.

Impact of Food Insecurity

Chronic illness

Food insecurity limits people from consuming a balanced diet, increasing their risk for chronic disease and mental illness. Chronic food insecurity can lead to obesity and diabetes. Insufficient food intake or malnutrition can increase the risk of:

- Hypertension, asthma, tooth decay, anemia, infection and birth defects
- Behavioral health issues, including depression, anxiety and emotional imbalance
- Stress and starvation

Lack of access

Food-insecure households strive to eliminate hunger but, due to a lack of finances and resources, are unable to maintain a healthy and balanced diet. The median amount that U.S. households spend on food weekly is $50 per person; however, food-insecure households spend $37.50 per person.[10] To cope with financial limitations, food-insecure households substitute cheaper, less nutritious food items for healthy foods.

Food insecurity is prevalent in vulnerable, low-income communities and for some minorities, immigrant populations and disabled individuals. Many vulnerable, low-income neighborhoods have few grocery stores and lack readily available

food, limiting access to many basic healthy food items such as fruits and vegetables.[11] Lack of access to full-service grocery stores, nutrition education, convenient and affordable health care and appropriate housing facilities affects the physical heath of individuals and forces them to apply various coping mechanisms to overcome their food insecurity.

Reportedly, food-insecure households may use coping strategies such as:

- Eating food past the expiration date
- Asking for help from friends and family
- Watering down food and drinks to make them last longer
- Purchasing inexpensive, unhealthy food
- Selling or pawning personal property
- Growing their own food[12]

Coping with food insecurity can lead to spending trade-offs for other household expenses such as:

- Utilities
- Transportation
- Medical care
- Housing
- Education[13]

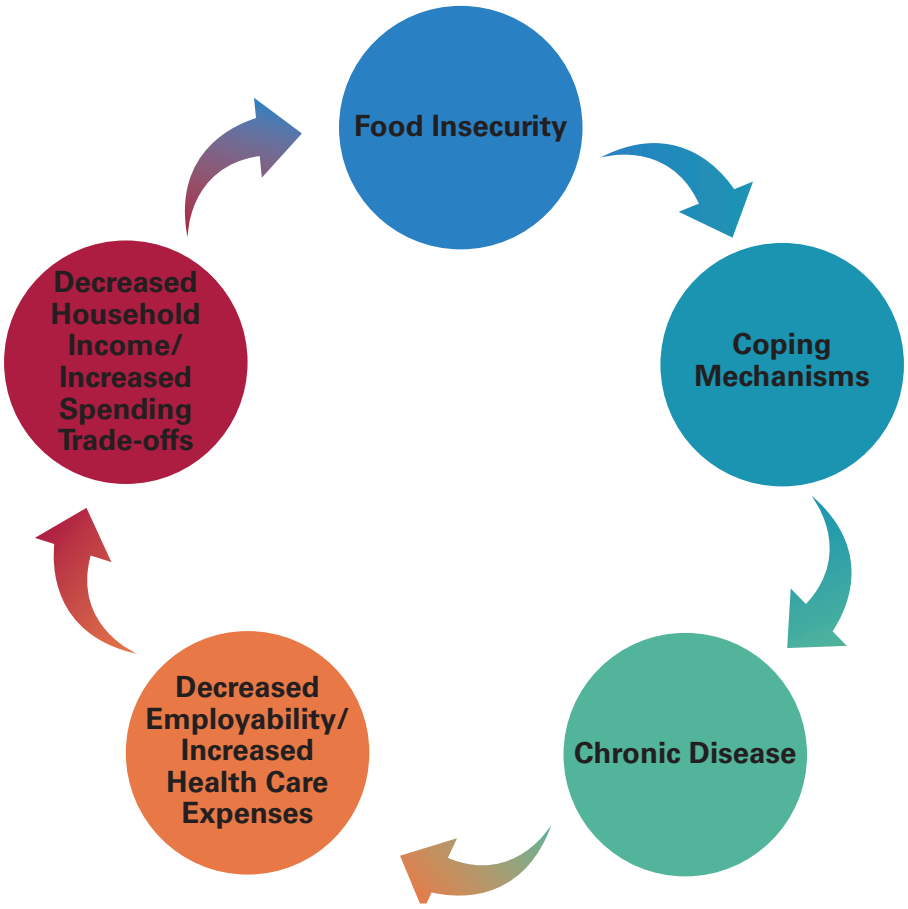
Cost of care

Individuals living in food-insecure households are often unable to purchase healthy food, may have been unable to eat regular meals and snacks as recommended for disease management, and may frequently run out of food, leading to poor disease self-management. With health care costs already rising, the cost of assessing and treating individuals who are suffering from food insecurity is also increasing.

Many people with food insecurity suffer from health care issues that increase their expenses for medical care. Increased health care expenses disturb the financial stability of a household. According to the Hunger in America 2014 National Report, 55 percent of households had unpaid medical bills and 66 percent of households had to make the difficult choice between paying for food or paying for medicine or medical care or both.[14]

For low-income populations that are already at a higher risk for food insecurity and chronic disease, lack of access to affordable health care may limit them from obtaining appropriate and timely treatment, resulting in worse health status. When chronic disease symptoms worsen, this leads to the need for more acute health care services, resulting in increased health care expenses, lost work days and more financial trade-offs for the household, worsening the cycle of food insecurity. Low-income families that have inadequate or no health insurance coverage may be forced to delay or forgo treatment until conditions worsen. This leads to more costly care. Figure 2 shows links between food insecurity and chronic disease.

Figure 2: The Cycle of Food Insecurity and Chronic Disease



Source: Essential Hospitals Institute, 2016.

Child development

Food insecurity in children can contribute to the likelihood of developing health issues, some of which may require medical attention. Food insecurity in children has resulted in $1.8 billion in additional child hospitalizations and $5.9 billion in additional special education services for students in public primary and secondary schools.[15] Children experiencing food insecurity may have:

- Two to four times more health problems than children from low-income households who are not food insecure
- Behavioral issues, such as being less attentive, more aggressive and at a higher risk of delays in cognitive and social development
- Low birth weight and high risk of infant mortality
- Anemia, asthma and worse oral health
- Increased school absences, reduced concentration and poor performance on cognitive tests
- Fatigue, headaches and depression[16]

The Role of Hospitals

Hospitals are investing in interventions beyond their community's physical and medical health needs and identifying socio-economic factors such as food insecurity as a significant population health issue. However, the stigma associated with being food insecure may prevent households from readily discussing the situation with their health care providers or from seeking benefits and services. For example,

adults affected by food insecurity may be reluctant to apply for federal nutrition programs such as the Supplemental Nutrition Assistance Program (SNAP) or food stamps because of pride, citizenship status or fear of being questioned about their ability to provide for their family. The stigma also may prevent many families from seeking information about available resources to prevent or reduce food insecurity. Many qualifying families are still unaware of beneficiary programs. Only 61 percent of food-insecure households use benefits provided by SNAP or the Special Supplemental Nutrition Program for Women, Infants and Children (WIC).[17]

Because health care providers are trusted by patients for their knowledge and recommendations, encouraging food-insecure individuals and families to seek help may reduce the stigma associated with food insecurity. Hospitals and health care providers can:

- Screen for food insecurity
- Educate their patients about available federal nutrition programs
- Guide patients and families to local departments of human services during wellness check-ups or visits
- Connect patients and families with dietitians and nutritionists for counseling services
- Provide free food or healthy snacks at clinics on-site food pantries or hosting summer or year-round feeding programs
- Enlist patients in free on-site education class
- Promote existing resources such as food trucks, food shelters, food shelves, food pantries, emergency food programs, community kitchens, and more
- Develop on-site food pharmacies, food pantries and community gardens
- Collaborate with existing grocery stores and farmers markets
- Support or fund the development of local grocery stores and farmers markets

Strategic considerations

Improving the health of the community using upstream interventions that are affordable, patient-centered and equitable has become the mission of many hospitals. Integrating evidence-based clinical and nonclinical interventions reduces the prevalence of food insecurity and creates a greater and sustainable impact. Benefits of implementing clinical and nonclinical measures are:

- Clinical benefits
  - Helps identify target population
  - Reduces the prevalence of food insecurity and its related side effects
  - Advances culturally competent care
  - Promotes a healthier environment
- Nonclinical benefits
  - Leverages partnerships with local, state and national organizations in the food industry
  - Helps advocate for food and nutrition-related policies and businesses
  - Helps overcome the stigma associated with hunger by offering educational services that reduce food insecurity in households

Clinical approaches

Many hospitals and clinics have integrated the Children's HealthWatch Hunger Vital Sign™, a two-question screening tool based on the U.S. Household Food Security Scale, as part of their annual population health survey given to children and adults at clinical and hospital visits. Using this tool in new and reoccurring patient surveys will help identify households or individuals experiencing food insecurity:

The questions in the screening tool are:

- Within the past 12 months, we worried whether our food would run out before we got money to buy more.
  - Was that often true, sometimes true or never true for your household?
- Within the past 12 months, the food we bought just didn't last and we didn't have money to get more.[18]
  - Was that often true, sometimes true or never true for your household?

Table 2 describes clinical approaches for hospitals to address food insecurity.

Table 2: Clinical Approaches to Reduce Food Insecurity

Approach	Benefits
Screening patients for food insecurity in physician, pediatric and geriatric offices and in outpatient clinics	» Identifies people experiencing food insecurity » Allows physician or other staff to: • Make referrals to support access to healthy food • Determine whether individuals are aware of and use federal nutrition programs or need information about applying for benefits • Discuss other associated physical or social conditions • Educate patients about good nutrition and strategies to improve food security • Provide tailored clinical care based on a patient's needs, food security status and financial stability
Including food insecurity screening in electronic health records	» Allows food insecurity status to be tracked Helps identify patients at the next visit in order to discuss changes or ongoing needs » Allows the use of appropriate ICD-10 code » Supports data analysis over time to measure readmissions and other health care utilization rates » Helps determine a patient's eligibility for SNAP, WIC, Temporary Assistance for Needy Families (TANF) or National School Lunch Program
Distributing food on-site via food pharmacies, food pantries, mobile food pantries and produce markets	» Provides patients with immediate access to healthy food » Offers opportunities to collaborate with other health care staff, such as dietitians, to provide education about healthy eating habits

Source: HRET, 2017.

Nonclinical Approaches

Community Health Needs Assessments

Hospitals can determine food-insecure populations in the community through their community health needs assessment (CHNA). By integrating the Children's HealthWatch Hunger Vital Sign™ questions within a hospital's annual population health survey—distributed to collect information on health needs for CHNAs—hospitals can identify the prevalence of food insecurity and prioritize health needs related to food insecurity and food deserts in the community. Hospitals can analyze the community's capacity to provide access to food, eliminate food

insecurity and decrease the prevalence of chronic illnesses caused by it.

Investment in Food Systems

Building partnerships with organizations in the food industry provides a larger perspective of the community and aligns people and resources needed to identify those who are hungry or food insecure. Through partnerships with local food organizations such as food banks/trucks, local emergency food services, food pantries, grocery stores and farmers markets, hospitals can develop ways to raise awareness about food insecurity, assess individuals who are unaware of their food insecurity status and help them access affordable food. Hospitals can financially support food-related programs developed by community organizations and also form alliances with state and national food organizations to promote these programs on a larger scale. Hospitals can collaborate with government agencies, food councils and local public health departments to help survey communities for food insecurity. Partnerships with these entities also provide an opportunity for hospitals to invest and support policies and businesses related to food. Food retail development through these measures alleviates food insecurity in target communities. Supporting food innovation enhances the food economy through improved access to healthy food options and job creation, thus potentially increasing food security and reducing poverty levels.

Additionally, including these food systems as partners in the CHNA development process strengthens engagement between hospitals and various sectors of the community. The Tackling Hunger project's guide, *Making Food Systems Part of Your Community Health Needs Assessment,* provides a thorough overview of tools and measures for determining the prevalence of food insecurity in a community. The guide also discusses benefits of collaborating with community organizations to combat food insecurity.[19]

Table 3 describes nonclinical approaches to reduce food insecurity.

Table 3: Nonclinical Approaches to Reduce Food Insecurity

Approach	Benefits
Invest in food systems such as food banks/trucks, local emergency food services, food shelters and food pantries	» Provides food to those in need » Introduces healthier food options » Increases access to healthier options in low-income communities and food deserts » Encourages food donations from partnering organizations, restaurants and health systems » Provides access to food for those with limited transportation » Develops a system to distribute leftover prepared, unused and perishable foods to those who are food insecure

Approach	Benefits
Partner with local farmers markets and grocery stores	» Raises awareness about food insecurity » Increase access to food » Increases inventory and supports food systems » Incorporates locally grown foods in hospital and school cafeteria meals » Provides incentives such as discounts, coupons or vouchers: can be provided upon discharge or through mailing services after screening patients for food insecurity to encourage patients to purchase healthier food
Partner with schools and community organizations	» Develops reduced-price meal plans for students and elderly patients
Develop strategic and financial plans to include food insecurity	» Allocates finances to sponsor more food-related programs and extend care and access to resources in disadvantaged locations » Allocates finances to integrate the Children's HealthWatch Hunger Vital Sign™ systemwide through electronic health records
Advocate to inform public policy on the health effects of food insecurity	» Raises awareness about food insecurity » Encourages the implementation of antihunger programs » Increases access to food and associated benefits » Increases benefits of food assistance programs

Source: HRET, 2017.

Hospitals can also provide on-site services to raise awareness about food insecurity and healthy eating, including:

- » Classes led by health educators
  - Educate hospital staff about food insecurity and community resources
  - Reduce language barriers
  - Educate patients about low-cost strategies for healthy food choices
- » Services to connect to food resources
  - Provide on-site help and applications for SNAP, WIC, TANF benefits
  - Provide referrals to local food pantries, emergency food organizations, local departments of health and human services
- » Community gardens
  - Provide space for farmers to grow produce
  - Serve as a catalyst for neighborhood interaction
  - Promote job opportunities
- » Food stands from local farmers
  - Provide free, on-site nutrition education
  - Encourage acceptance of SNAP and WIC benefits to ensure eligible populations are receiving the benefits of locally grown produce
- » Social support groups
  - Connect patients and community residents to resources with the help of culturally competent social workers and public health workers
  - Reduce stigma related to hunger and food insecurity
  - Reach out to other food-insecure individuals

Conclusion

Food insecurity affects the health status of individuals and families on many levels, so hospitals are treating it as a health care issue. Hospitals and health systems can improve the health of their communities by strategically implementing evidence-based approaches to reduce food insecurity. Because food insecurity is linked to many socio-economic factors, addressing food insecurity as a population health issue highlights other risk factors that challenge individuals and households, including issues related to finances, employment, housing and access to resources such as grocery stores or SNAP benefits.

Hospitals and health systems are redefining themselves and their approaches and focusing on improving the health of their communities beyond physical health status. Efforts by hospitals and health systems to reduce food insecurity will lead to improved population health, encouraging hospitals to continue addressing social determinants of health in their communities.

By screening for food insecurity and hunger, building community partnerships, working to overcome stigmas and providing programs and resources to serve those suffering from hunger, hospitals and health systems can create a healthier environment—an environment that fully encompasses and addresses the community's physical health, behavioral health and socio-economic needs.

Arkansas Children's Hospital – Little Rock, Arkansas

Introduction

In 2013, Arkansas Children's Hospital (ACH), based in Little Rock and the only pediatric medical center in Arkansas, recognized the need to address food insecurity as its community was ranked the highest in childhood hunger and second highest in overall population rate of food insecurity. As part of a research project, ACH, along with faculty from the University of Arkansas for Medical Sciences, surveyed families in the ACH emergency department for a number of years and discovered that 20 percent of families reported some level of difficulty in accessing food. Because food insecurity can risk the well-being and development of a child, ACH has developed strategies to assist children and families suffering from food insecurity.

Approach

Key Partnerships

A partnership with the hospital, Arkansas Children's Research Institute, and the National Park Service–Central High site helps maintain an on-campus garden with fresh vegetables that are provided to a neighborhood food pantry, Helping Hand of Greater Little Rock. A GardenCorps service member oversees the garden with volunteer help from neighborhood residents and hospital employees, creating a true spirit of community for the project.

ACH collaborates with the U.S. Department of Agriculture to serve free lunches to children in both hospital and clinical care settings. One young patient visits ACH often for MRIs and multiple doctors' appointments. At every visit, he receives a healthy lunch bag from the hospital, as part of ACH's free lunch program. Long days at the clinic are tiring, and he says being able to pick up a healthy lunch during his visits makes them endurable. One of his parents says, "*If you spend a lot of time at the hospital or at clinic appointments, you know how costly food away from home can be, no matter what your financial situation. Costs add up quickly. This meal has always been the highlight of [his] MRI/ clinic days because he loves the chocolate milk and fruit cup*." It is not only the young patient who is benefiting from this program; his parents benefit as well by saving time and money while dealing with the stress of their child being hospitalized.

In partnership with the Arkansas Hunger Relief Alliance and the local Children's Library, the hospital offers the Share Our Strength's Cooking Matters classes/tours to patients, families, employees and the community to educate attendees about preparing affordable and healthier meals. Staffed by local chefs and nutritionists, these classes teach how to plan, budget, shop and cook with health in mind. This initiative has encouraged many participants to cook and eat healthy. One participant said, "*This tour was very informative. The tips for buying produce and what's in season gave me great ideas for meals.*"

Arkansas Children's Hospital's Initiatives

More than two-thirds of the hospital's served community is under Medicaid, so ACH has worked with the state's health department to establish an on-site Women, Infants and Children (WIC) office to encourage families to apply for benefits like federal nutrition programs during their hospital stay or office visits.

The Helping Hand bus comes to the hospital one day each week to provide groceries for patients and families. These visits not only have improved the health of patients but also have influenced the life of an employee who runs the bus. The employee now has built a deep connection with her clients from Circle of Friends Clinic. "*The young people treat me like their grandmother — maybe it's the gray hair. They tell me everything — like the nurse told them no more pizza or the nurse encouraged them to walk more. Sometimes the child and I just walk around the bus area to get in those extra steps,*" says the employee.

ACH implemented a social determinants of health screening tool in one of its busiest clinics to help determine the food insecurity status of individuals and families in the community. This screening tool gives an opportunity for physicians and staff to recognize food-insecure individuals and families instantly at a health visit. Clinical nurses provide additional information about resources at the hospital along with a grocery bag filled with food once a patient is identified as food insecure. One clinical nurse at the clinic observed, "*When I returned with a grocery bag of food as well as information about emergency housing assistance including a shelter list, the patient's mother started to cry. She was concerned about where she was going to get food for her children. She expressed relief and gratitude for the resources and information.*"

Impact

Results and Data

The on-campus garden provided 1,791 pounds of fresh produce to Helping Hand food pantry in 2016. Through its partnership with the USDA, Arkansas Children's Hospital offered 21,165 free lunches in 2016 and more than 60,000 since the program began in 2013, making it the first hospital in the nation to take this initiative of serving free meals year-round. In 2016, the Cooking Matters classes/tours were attended by 102 people and the WIC clinic had 299 visits. The mobile food pantry bus visits at the hospital provided groceries to 488 families in 2016. The impact this program has made on the community is larger than just numbers. A community has been built because of this as patients and families regularly visit the bus with smiles and updates on their health and well-being. In 2016, 7,048 screening forms for the pilot social determinants of health screening program were completed with the tool identifying 29.4 percent (2,074) of respondents as food insecure.

Lessons Learned

Arkansas Children's Hospital is constantly evaluating and tracking its programs to measure their effects on food insecurity in the community. The hospital measures its success by:

- Implementing evidence-based interventions
- Surveying participants in clinical settings
- Integrating local data to drive initiatives

Next Steps

- Expanding the social determinants of health screening tool and grocery bags distribution to a new hospital clinic in southwest Little Rock
- Expanding the community garden to produce more for the Helping Hand food pantry
- Offering pop-up Cooking Matters presentations in schools across the state
- Adding a second day that the WIC office is open on campus.

Contact Information

Anna Strong
Executive Director
Child Advocacy and Public Health
(501) 364-1413
strongac@archildrens.org

Patrick H. Casey, M.D.
Vice Chairman, Faculty Affairs
(501) 364-6591
caseypatrickh@uams.edu

Photos courtesy of Arkansas Children's Hospital

Boston Medical Center – Boston, Massachusetts

Introduction

Located in Boston's historic South End, Boston Medical Center (BMC) is a private, not-for-profit hospital with 487 beds. It is the largest safety-net hospital in New England. BMC offers a wide array of services including primary care, family medicine, advanced specialty care, pediatrics and adult care. BMC first recognized the need to address food insecurity through extensive research led by the medical center's Children HealthWatch program. This study identified the need to re-examine the existing standards to qualify for nutritional assistance and redefine what it means to be hungry or food insecure in the community. Children and families are screened for food insecurity at BMC during inpatient and outpatient visits. Through these screening practices, BMC became aware that patients were going to sleep hungry. Additional research pushed BMC to address food insecurity. Though Supplemental Nutrition Assistance Program (SNAP) is critical in reducing food insecurity, SNAP and other federal nutrition programs are unavailable to many patient families and do not provide adequate resources for a healthy diet throughout the month, even to families who receive those benefits.

BMC leaders believe hospital intervention is necessary to identify and better serve food-insecure populations. BMC has a preventive food pantry and a demonstration kitchen and helps patients receive supplemental food and cook healthy and affordable meals. The preventive food pantry has become a therapeutic food pantry. "*I was scheduled to have weight loss surgery, but now — since I learned how to cook and eat healthy — I lost weight on my own*," says one BMC patient. BMC has identified many other patients who have benefited from the food pantry and demonstration kitchen, which has helped patients improve their health and reduce medical expenses. BMC hosts an annual Food for Thought dinner and raises over a million dollars for programs within the hospital, including the food pantry.

Approach

Boston Medical Center's Initiatives

Since its start in 2001, the on-site Preventive Food Pantry at BMC has influenced many lives. Initially only for pediatric patients and pregnant moms, the pantry took five years to expand and reach all other departments in the hospitals. Funded solely by donations, this food pantry operates through aid from the Greater Boston Food Bank and donations from other community organizations. Patients are screened for food insecurity upon visit or admission and, if eligible, referred to the pantry with a prescription. These prescriptions help eliminate the stigma associated with food insecurity, as patients are directed to meals advised by doctors. Every month, BMC's food pantry gives access to more than 7,000 patients and their family members or 1,600 to 1,800 families. About 15,000 pounds of culturally appropriate, nutritious and therapeutic food goes out to referred patients and their families every week. Patients are given a three- to four-day supply twice a month for themselves and their families.

BMC also has additional resources such as:

- an on-site Woman's, Infant and Children (WIC) program;
- staff to help patients apply for food stamps;
- gift cards (from donors) for patients to buy additional food; and
- a demonstration kitchen, offering classes for cooking, cardiac rehabilitation, weight reduction and diabetic diets.

Impact

Results and Data

BMC's food pantry and demonstration kitchen is a recipient of the 2012 James W. Varnum National Quality Health Care Award. It has helped change the lives of many patients and families. Over the course of its existence, the pantry has always received a satisfaction rate of over 90 percent by its clients. Through generous donations from the Greater Boston Food Bank and other community organizations, financial contributions of the hospital, and work by staff and volunteers, BMC is able to provide over 1 million pounds of food every year to its served community. Watch how the food pantry influenced the community.

Lessons Learned

- Get strong philanthropic support to expand outreach, build community buy-in and sustain an on-site food pantry
- Establish a common nutrition agenda
- Reduce barriers in implementation and funding by demonstrating to administration the importance of addressing food insecurity
- Start small, expand more by advocating for additional funding and space

Next Steps

- BMC will be developing a rooftop garden to further expand healthy food services to its community.

Contact Information:

Latchman Hiralall
Director, Preventive Food Pantry
(617) 414-3834
latchman.hiralall@bmc.org

Megan Sandel, M.D.,
Associate Director, GROW Clinic,
Boston Medical Center
(617) 733-6989
megan.sandel@bmc.org

Deborah Frank, M.D.,
Director, Grow Clinic for Children
Boston Medical Center
Founder and Principal Investigator,
Children's HealthWatch
Professor of Child Health and Well-Being,
Boston University School of Medicine
Dowling Ground Boston Medical Center
(617) 414-5251
dafrank@bu.edu

Photos courtesy of Boston Medical Center.

Eskenazi Health – Indianapolis, Indiana

Introduction

Eskenazi Health, Indiana's largest safety-net hospital, has 11 outpatient health centers across Marion County and a hospital with 315 beds in downtown Indiana. Eskenazi Health primarily serves people with no insurance, low-income patients and those insured by Medicaid or Medicare. The health system has recognized the burden of food insecurity and the prevalence of food deserts in the community. Food insecurity levels have increased in Indiana. The USDA reports that in 2013, 14.1 percent of households in Indiana were identified as food insecure, while 6.1 percent were experiencing hunger or very low food security. According to Map the Meal Gap 2016, a report by Feeding America, approximately 15 percent of Indiana households still struggled to purchase or afford food in 2015. Eskenazi Health is working to reduce the effects of food insecurity on all age groups.

Approach

Key Partnerships

Eskenazi Health and Meals on Wheels (MOW) of Central Indiana have been partners for over 40 years. Together, they developed a program that provides recently discharged patients of all ages with 30 days of medically tailored meals for free. The hospital predicts readmission rates will decline through the efforts of this program. MOW delivers more than 500 meals on weekdays to homebound residents across seven routes in the Indianapolis area. The program reaches out to an additional 170 clients by providing two bulk deliveries to local adult day care centers.

The success of this program stemmed from a partnership between MOW, Eskenazi Health and the Central Indiana Senior Fund, resulting in a nationally recognized Head Start Nutrition Program for Seniors. This program also offers 30 days of medically tailored meals to seniors being discharged in an effort to reduce readmission rates. A patient suffering from irregular eating habits and a suspected heart attack says the Head Start program has been a blessing. Her recent separation from her husband left her without a place to live. Currently living with her nephew, she worried about being a burden. The program's daily food delivery and a full month's worth of food helped her eat healthy meals and regain energy. She says, "*The food portions were just the right amount, and consistently tasted good*."

Eskenazi Health works with the local St. Luke's United Methodist Church, Dow AgroSciences and Gleaners Food Bank to run the Crooked Creek Food Pantry at Eskenazi Health Center Pecar and a food pantry at the Forest Manor Health Center, which are located in disadvantaged areas with food deserts in Northwest Indiana. Within walking distance of most area residents, these food pantries provide food-insecure patients with additional healthy food options. The pantries are stocked with the help of volunteers from the local, partnering community and faith-based

organizations. Dawn Haut, chief physician at the health center, has noticed that many patients deny they are food insecure when screened at the clinic. To help patients feel comfortable, Hunt raises questions about food face-to-face and indirectly, suggesting that patients direct anyone they know who has difficulty accessing food to visit the food pantry. By the end of their visit, most patients ask to be reminded of the pantry's hours of operation. Hunt sees this as an opportunity to reduce the stigma associated with food insecurity and hunger.

Eskenazi Health Center Pecar and Gleaners Food Bank partnered to establish the Senior Shopping Day, a program that gives residents over the age of 55 an extra shopping day at the Gleaners Food Bank each month. Knowing that this population may be at risk due to low, fixed incomes and the inability to purchase enough needed protein, produce and dairy items, Gleaners Food Bank is providing access to additional low-sodium, low-sugar and high-protein foods. With the help of dietitians, the program is promoting a healthy food focus each month—e.g., no salt seasonings—to educate clients about food and nutrition.

Eskenazi Health's Initiatives

The Sidney & Lois Eskenazi Hospital on the Eskenazi Health main campus has a rooftop "Sky Farm" garden accessible to patients and community members at all times. This 5,000-square-foot space has grown into an engaging environment as many people visit to learn how food grows, discover how to prepare fresh produce and gain a greater understanding of why food is important to health. Open 24 hours a day, seven days a week, the Sky Farm garden offers large growing spaces for fruits and vegetables that are used in hospital meals and in menu items at the Ingram Micro Mobility Marketplace and Café Soleil, both at Eskenazi Health. The garden also features a beehive with 500 bees.

Impact

Results and Data

Eskenazi Health hopes to reduce its current 22 percent readmission rate to 8 percent through its partnership with MOW. This initiative reduces readmission rates and provides better care for seniors suffering from chronic illnesses. Additionally, partnerships that support Eskenazi Health's food pantries not only address needs of the food-insecure population but they also promote community engagement and sustainability. Besides offering more than 3,000 pounds of freshly grown produce, the Sky Farm garden encourages patients and community members to engage with one another through cooking and food demonstration classes.

Lessons Learned

To overcome challenges and barriers when implementing similar initiatives, Eskenazi Health encourages other hospitals to:

- Recognize the impact food insecurity has on health and health outcomes
- Research and identify the best location for food-insecure populations to access food
- Secure food pantries in safe and effective storage places to ensure freshness
- Integrate financially affordable programs to make food access easier for low-income populations

Next Steps

Due to the success of the Head Start

Nutrition Program for Seniors, MOW, Eskenazi Health and the Central Indiana Senior Fund collaborated again for the Step Up Frozen Food Program for Seniors. This program gives central Indiana residents the ability to purchase frozen, medically tailored meals that are available for delivery at a convenient time. This is part of Eskenazi Health's approach to take extra but necessary measures to deliver services that fulfill residents' basic day-to-day needs. These medically tailored meals are easily reheated and can be supplemented with any other meals.

Additionally, as an in-kind gift, the health system will work with MOW to deliver 75,000 meals for those in need in 2017. Eskenazi Health will continue to support MOW and other programs to help battle malnutrition and food insecurity for seniors and homebound, disabled residents in the community.

Contact Information

Alisha P. Jessup
Associate Director
Population Health & Healthy Families Program, Marion, Ill.
(317) 880-7552
alisha.jessup@eskenazihealth.edu

Deanna Reinoso, M.D.
Pediatrician
Eskenazi Health Center Pecar
Assistant Professor of Pediatrics
Indiana University
(317) 517-0988
dreinoso@iu.edu

Photos courtesy of Eskenazi Health.

ProMedica – Toledo, Ohio

Introduction

ProMedica, a large nonprofit health system serving counties in northwestern Ohio and southeastern Michigan, recognized nutrition and access to affordable food choices as priority health concerns in its community health needs assessment process. Ohioans are significantly affected by food insecurity. According to the Hunger in America 2014 National Report by Feeding America, 1 in 6 people in Ohio struggle with hunger. Additionally, the study reported an estimate of 576,000, or 1 in 5 people, use food pantries or meals service programs to feed themselves. The 2014 Household Food Security Report showed 16.9 percent of Ohio residents lived in food-insecure households.

As the largest health care provider in Northwest Ohio, ProMedica is collaborating with local and statewide organizations to source high-quality and efficient anti-hunger programs for the community, raise awareness about food insecurity and combat hunger-related health issues. ProMedica's collaboration in developing the *Come to the Table* advocacy initiative has recognized the significant link between food insecurity, obesity and diabetes.

Approach

Seeing how food insecurity is linked to obesity and chronic illnesses, ProMedica is taking various measures to tackle hunger in its communities. Some of ProMedica's initiatives involve collaborating with other community organizations while other key programs were implemented by the health system itself.

Key Partnerships

ProMedica's Root Cause Coalition is a national, nonprofit organization that addresses the root causes of health disparities by focusing on hunger and other social determinants. The coalition shares best practices, engages with communities in collaborative projects and participates in research to advance public policy to improve health.

The local community has benefited from an untraditional partnership with Hollywood Casino Toledo. Prepared, but unserved, food from the local casino's restaurants is repackaged by ProMedica staff and picked up by SeaGate Food Bank of Northwest Ohio for redistribution to food service venues such as soup kitchens and shelters.

ProMedica's Initiatives

ProMedica has two food pharmacies in the metropolitan Toledo area. Physicians provide referrals or prescriptions for patients who screen positive for food insecurity. Patients visit the food pharmacy to receive several days of healthy foods for themselves and their families. Food choices are compliant with any nutrition-related diagnosis the patient may be managing. Patients receive a two- to three-day supply of food and can revisit the pharmacy once a month for six months. At the end of six months, if they are still in need, patients can request a new referral from their physician. These food pharmacies also offer free nutrition counseling with a registered dietitian.

ProMedica's biggest and most effective approach to tackle food insecurity has been its food pharmacy. One patient with type 2 diabetes, who has several children and grandchildren, has struggled to purchase food for multiple years due to her low income. Now, since her nurse practitioner introduced her to the benefits of food

pharmacy referrals, once a month she has access to fruits, vegetables, milk, healthy snacks and much more. This patient feels like her health has improved and is grateful for the assistance the food pharmacy provides to her family. *For this patient, it is not just a food pantry; it is her "lifesaver."*

To help identify food-insecure patients, ProMedica integrated the Children's HealthWatch Hunger Vital Sign™ survey in its inpatient admission database. Patients with positive results are assigned to a social worker to further discuss their food and financial stability. Upon discharge, patients are provided with a care package designed by a dietitian containing a day's worth of meals and a resource guide with information on available food-related programs such as food pantries, soup kitchens and food delivery services in the community.

Impact

Results and Data

ProMedica has helped various sectors of the community work together and battle hunger. Integrating screening services in the hospital has helped identify food-insecure patients so they can be referred to social workers for additional evaluation. The partnership with the local casino also has enhanced food security as it has already distributed more than 300,000 pounds of food, or 275,000 meals, across the community. Additionally, ProMedica's food pharmacies have helped chronically ill patients manage their health by providing healthy food.

The health system's screening tools have also advanced its approach in tracking hunger-related statistics and care. Furthermore, physician referrals to food pharmacies have ensured healthy diets for patients with chronic illnesses such as heart disease or diabetes, encouraging them to eat more healthful meals.

In 2016, ProMedica experienced some great advancements due to their initiatives. ProMedica screened more than 57,200 patients for food insecurity. Out of 2,243 patients who screened positive, 1,100 patients used their referrals and became new clients of the food pharmacy. Today, ProMedica screens more than 51 percent of patients in primary care and refers those in need to the food pharmacy, reducing the number of emergency department visits and avoidable hospital admissions. Medicaid patients also have benefited from the screening and referral process. ProMedica calculated a 3 percent decline in emergency department usage, 53 percent reduction in readmission rates and a 4 percent increase in primary care visits after screening. It has referred 4,000 Medicaid patients to the food pharmacy.

Lessons Learned

ProMedica's initiatives emphasize the need to address basic social determinants of health because of their correlation to health. To do so, ProMedica has learned to:

- Use food as medicine
- Form partnerships with local and statewide organizations to further invest in health-related initiatives
- Provide individual care to understand proper nutrition choices
- Integrate food-related initiatives in strategic plans
- Embed screening tools in electronic health record systems across the health system

Next Steps

ProMedica will continue to identify food insecurity in its patient populations. Though the current focus has been reducing food insecurity and hunger, ProMedica has recognized it as a by-product of poverty. In the future, ProMedica will work toward reducing poverty by collaborating with other organizations to address housing, job training and other social determinants of health. ProMedica understands that while it cannot and should not do this work alone, health care needs to be at the table for sustainable, community-based solutions to improve health and well-being.

Contact Information

Barbara J. Petee
Chief Advocacy and Government Relations Officer
(419) 469-3894
barb.petee@promedica.org

Stephanie Cihon
Senior Specialist
(419) 469-3896
stephanie.cihon@promedica.org

Photos courtesy of ProMedica.

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