



COMBATING FOOD INSECURITY TO IMPROVE THE HEALTH OF PATIENTS AND COMMUNITIES



How have health systems addressed food insecurity to improve the health of patients and communities?

Overview

Food insecurity impacts the health and well-being of patients and communities by increasing their risk of chronic disease, poor mental health, and morbidity and mortality. The rapid increase in food insecurity during the COVID-19 pandemic served as a call to action for many health systems to develop or enhance food insecurity programs. Effectively combating food insecurity requires health systems to set clearly defined goals and implement strategies that incorporate patient and community preferences, diet and nutrition support, and their own food procurement process.

Food Security Is a Key Determinant of Health and Well-being

Food is essential to life. While most people living in the US are concerned with what, where and with whom they will eat, one in eight families in the US are more concerned about whether they will have enough to eat.

Food insecurity, a household-level social and economic condition of limited or uncertain access to adequate nutritious food, is a closely related but distinct concept from hunger, which refers to the personal, physical sensation of discomfort or pain caused by the lack of food. Food insecurity is caused by several complex social and economic drivers.

Low household income and economic challenges that reduce household purchasing power directly impact food affordability. Food insecurity is also driven by food availability, such as in rural or urban food deserts characterized by a community's distance from food retailers.

Food security impacts health through complex physical and social pathways. People experiencing food insecurity may be limited in the amount of food they consume or are constrained to less healthy food options. It contributes to adverse health outcomes, including risk of chronic disease, poor mental health, and increased morbidity and mortality. It may also increase the risk of health care utilization or complicate the efficacy of medical treatment, possibly rendering care ineffective. Limited access to nutritious food is also associated with delaying utilization of health care, leading to higher acuity and chronicity of cases and greater emergency department utilization.

While low-income households spend less than one-third the amount that high-income households do on food, food expenditures comprise about 36% of low-income households' disposable income.



The State of Food Insecurity in the US





The US Department of Agriculture (USDA) estimates that food insecurity declined year over year since 2011, to a low of 10.5% in 2019 (37 million people). This trajectory changed during the COVID-19 pandemic as food insecurity increased sharply in the early months of the pandemic. During this time, one estimate found that the number of households experiencing food insecurity doubled, with food insecurity tripling for households with children. As demand for food skyrocketed, community-based organizations, such as food pantries, were overwhelmed.

Throughout the pandemic, Black and Hispanic/Latinx households have experienced a disproportionate share of food insecurity. Data from the Census Household Pulse Survey reported that in the summer of 2020, Black household food insecurity was twice as high as White household food insecurity; for Hispanic/Latinx households, it was 60% higher than White households. Even as food insecurity began to fall in White households, food insecurity in Black and Hispanic/Latinx households remained elevated.

While food insecurity has declined since the 2020 peak, possibly due to enhanced Supplemental Nutrition Assistance Program (SNAP) benefits and modestly improved economic conditions, Feeding America estimates that 42 million people may have experienced food insecurity in 2021. The rising cost of food and other pandemic-related economic effects may impact food affordability. The racial disparity in food insecurity, which existed before the pandemic, will likely have consequences in the form of health disparities, especially for children.

Health Systems' Call to Action on Food Insecurity

There is now a greater awareness of how social determinants of health—like food security—shape people's health status and outcomes. Food insecurity programs have evolved to be more focused, data-informed and collaborative. Since 2017, health systems have publicly announced the development of over 25 food insecurity programs, with a total financial commitment of \$294 million. This increased interest may be due to evidence that food insecurity is associated with increased ED and acute care utilization and that people with the highest health care costs are often food insecure. According to the CDC in 2016, food insecurity was associated with over \$52 billion in national health care costs. Food insecurity is associated with an increased risk of certain conditions, including:

 <p>CV</p> <p>Greater number of diagnoses of coronary artery disease, stroke, heart failure and hypertension</p>	 <p>Chronic Disease</p> <p>Greater prevalence of chronic conditions like diabetes, hypertension and obesity, and greater risk of acute complications for people with chronic conditions</p>	 <p>Pediatrics</p> <p>Worse child chronic and acute health; worse access to care; increased ED use; and, in young children, greater developmental risks</p>	 <p>Behavioral Health</p> <p>A 257% higher risk of anxiety and a 253% higher risk of depression during the COVID-19 pandemic</p>
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Interest from external stakeholders may also be contributing to health system interest in decreasing food insecurity. Payers, especially in the Medicare Advantage and managed Medicaid space, are focused on identifying and addressing food insecurity for their beneficiaries. Some state and local governments, as well as communities, are increasingly scrutinizing nonprofit health systems' tax-exempt status—the tax-exemption value was estimated to be about \$25 billion in 2011.



Strategies to Address Food Insecurity

1 Define Your Goals and Scope of Ambition

Determining the best approach for a food insecurity program is challenging since programs will differ based on local needs and available resources. Health systems should first define the goals they are trying to accomplish with a food insecurity program. Goals can range from those that are health system focused (eg, readmissions, cost savings) to those that are community focused (eg, diabetes prevalence rate, community food insecurity level).

Clearly defined goals enable the health system to determine the scope of its ambition for the food insecurity program, including populations of focus, partners involved, how the program is resourced and how success will be defined. For more on how health systems can define their role in addressing food insecurity, please see the framework in the Sg2 report *Social Determinants of Health: Stitching Together Solutions*.

2 Identify Your Population of Focus

A numbers and narratives approach is key to understanding food needs and determining a population of focus. Social needs screening can help spot patient populations experiencing food insecurity. Findings from community health needs assessments can help identify areas with the greatest food need. Hospitals' clinical data, claims data and community data can also help determine populations of focus.

Gathering perspectives from patients and community members, whether through focus groups, surveys or interviews, also provides important context and insights on areas of need, available resources and drivers of food insecurity. This will help the health system develop a more effective approach.

COMMON INDICATORS HEALTH SYSTEMS USE TO DETERMINE THE POPULATION OF FOCUS

- Clinical conditions: Patients with conditions such as diabetes, cancer or hypertension
- Food insecurity screening: Patients and/or families that have indicated they are having trouble affording food
- Geography: Neighborhoods, communities or ZIP codes experiencing high levels of food insecurity
- Vulnerability: Children, the elderly or people experiencing homelessness

3 Collaborate With Partners

Health systems can align with local organizations to address food insecurity. Two important partners will be food pantries, which distribute food directly to people, and food banks, which have the physical infrastructure to house perishable food. Health systems can work with one or many food pantries as part of their food insecurity program.

Social service agencies, faith-based organizations and other community-based organizations can also be key partners to any health system food insecurity program. These organizations have built relationships and trust with the community and have experience providing food resources and helping people navigate the food assistance system.

Private businesses, such as grocery stores, restaurants and local food suppliers, can also be valuable partners. Health care providers, such as Federally Qualified Health Centers, may already have food insecurity programs with which health systems can partner. Health plans are a burgeoning partner in health system food insecurity programs. Government programs exist that help people access nutritious food.

FEDERAL FOOD PROGRAMS

- SNAP: Provides food benefits to eligible people
- Child and Adult Care Food Program: Provides reimbursement for nutritious meals provided to eligible children and adults at participating sites
- Summer Food Service Program: Reimburses program operators (such as hospitals) that serve free meals to children in low-income areas



People may be unaware of benefits they are eligible for or may not have the wherewithal to navigate social benefit systems, which can vary considerably by state.

Partnerships prevent redundant efforts, augment and scale impact, and may provide an easier-to-follow path for patients and community members navigating the food assistance system.

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Fund and Resource Your Program

If a health system food pantry, food pharmacy or medically tailored meal program requires its own food supply, food can be procured from vendors, through donations, or by working with a food bank or food depository. Many community-based organizations are primarily funded by government grants and donations. These financial resources can be inadequate or inconsistent, which can hinder scale and impact. Direct funding from the health system through grants or other financial arrangements can provide stability to these partners. Beyond financial support, health systems can provide physical space, or administrative or workforce support.

While grant funding is imperative for kick-starting food insecurity programs, allocating funding as part of the health system's budget can provide stable funds that food insecurity programs need to carry out their work. Budgetary commitments can signal to partners and communities that the health system is serious about addressing food insecurity. In communities where resources are scarce, health systems may need to make greater financial investments and work with partners from food production, food processing and food distribution.

CASE EXAMPLES

Children's Hospital of Philadelphia (CHOP) Healthy Weight Food Pharmacy

The Healthy Weight Program is a multidisciplinary initiative that focuses on pediatric obesity. Families in the program are taught about the relationship between nutritious food and health. However, families cannot always afford nutritious food. Approximately one in five people in Philadelphia experience food insecurity. In 2018, CHOP launched a pediatric food pharmacy that provides nutritious food to food insecure pediatric patients and their families.

During visits to the Healthy Weight Program, families are screened for food insecurity and referred to the Healthy Weight Food Pharmacy, located in a clinic, if they screen positive. The food pharmacy provides families with a three-day supply of healthy food that includes fruits, vegetables, grains, proteins and dairy. Families can access the food pharmacy up to four times a year. As part of the Healthy Weight Program, a social worker meets with the family to discuss their circumstances and connect them to benefit programs, such as SNAP or the food assistance program Women, Infants, and Children (WIC), as well as other community resources. As of 2019, the food pharmacy enrolled 219 and benefitted over 800 people. The food pharmacy is funded by a philanthropic donor.

Sources: Children's Hospital of Philadelphia. Healthy Weight Food Pharmacy. Accessed December 2021; Children's Hospital of Philadelphia. Food pharmacy is just what the doctor ordered. October 20, 2020.

Kaiser Permanente and Children's Hospital Colorado (CHC) Hunger Free Colorado

Hunger Free Colorado (HFC) is a nonprofit organization launched in 2009, with grant support from Kaiser Permanente Colorado and the Denver Foundation. It connects people experiencing food insecurity to food resources using a bilingual, resource hotline. HFC also connects eligible people to benefit programs, such as SNAP and WIC. Multiple health systems in Colorado, including Kaiser Permanente, CHC and Denver Health, refer patients who screen positive for food insecurity to HFC.



Between 2011 and 2016, HFC provided food assistance to over 36,000 households. HFC is funded by various grants from local health systems, philanthropies and businesses. It employs 24 individuals, including food assistance navigators. Local buy-in from health care providers and health plans has been key to sustainability. Health system champions were critical to gain leadership support in adopting food insecurity screening and partnering with HFC.

FIGURE I. HFC–HEALTH SYSTEM FOOD INSECURITY SCREENING AND REFERRAL PROCESS



Sources: Center for Health Care Strategies. Hunger Free Colorado: connecting vulnerable patients to food and nutrition resources. August 2018; Hunger Free Colorado website. Accessed December 2021.

ProMedica Market on the Green

In Ohio, ProMedica began its journey to address food insecurity by learning from local elementary schools that a core challenge children and families faced was food insecurity. ProMedica began screening for food insecurity and referring patients who screened positive to a food pharmacy. Seeking to tackle food insecurity in the community, ProMedica, with the help of food desert experts, determined which Toledo neighborhoods were too far from a grocery store, the quality of available food in neighborhoods, and the frequency with which community members shopped at corner stores. Grocery store chains had left Toledo’s urban core, leaving few healthy, affordable food options. As a solution, ProMedica sought a joint venture with existing grocery stores. However, both local and national grocery chains declined because of a perceived “risky” business model.

With philanthropic support, ProMedica acquired a 6,500-square-foot building to house its own grocery store. There was a sharp learning curve in learning store operations, pricing and permitting. The key to success was engaging partners with experience in the grocery business. ProMedica’s yearlong planning process helped build trust and relationships in the community and led to the development of a community advisory committee. In 2015, ProMedica opened Market on the Green, a full-service grocery store in downtown Toledo that is fully owned and operated by the health system. ProMedica serves over 3,000 customers a month and chooses to keep prices almost at cost. As Market on the Green moves toward financial sustainability, its foundation will likely continue to provide financial support.

Sources: Hospitals Aligned for Healthy Communities. ProMedica: Ebeid Institute for Population Health. 2016; Ray B. Why health care systems are funding (or building) grocery stores. Next City. November 17, 2020.

Outlook and Additional Considerations

In the short term, health system food insecurity programs, when implemented collaboratively, can effectively augment the existing food insecurity safety net to provide people with the healthy food they need. As food insecurity programs demonstrate the ability to reduce acute care utilization and costs, their adoption may be further incentivized by payers through reimbursement.

Long-term investments to improve community food security may begin to show improved health outcomes. Health systems may also look to work further upstream to address the root causes of food insecurity in communities. Given their purchasing power and influence, health systems can be indispensable advocates for federal and state policies that transition the US to a more sustainable, nutritious and equitable food system.



As health systems look to address food insecurity, the following considerations will be key to developing an effective program.

Ensure Food Needs Are Actually Addressed

For health systems conducting food insecurity screening, it is imperative to have a plan for patients who screen positive. It can be disheartening for a patient who screens positive to not be provided the food assistance they need. Closed-loop referrals, where the health system is provided with confirmation that a patient referred to food assistance or resources actually received the resource, or following up with patients directly, are ways in which health systems can ensure patients receive the resources and assistance they need.

Incorporate Diet and Nutrition Support

Since food insecurity impacts dietary patterns and subsequent nutrition, consider including diet and nutrition support as part of the food insecurity program. Families may not know how to cook certain foods because of a lack of familiarity with them. This issue can be particularly important for populations with certain conditions, such as diabetes, where attention to diet is necessary for effective care management. As part of their programs, health systems should consider providing consultations with a dietician or cooking classes for patients and families who opt in.

Consider Patient and Community Preferences

Food is a biological need, but its acquisition, preparation and consumption are social processes. Any food insecurity program should be informed by the unique cultural factors that impact how people access and consume food, including:

- **Norms, beliefs and practices regarding food preparation and consumption.** There may be cultural or religious reasons why certain foods are or are not consumed, when food is consumed, and in what setting.
- **Language barriers.** This can be an obstacle for people seeking food resources or trying to sign up for food and nutrition benefits.
- **Social stigma.** In some places there is still stigma associated with receiving food assistance. People may have reservations about receiving food assistance, especially if it is their first time.

Include the Health System's Existing Food Procurement in Your Strategy

The health care sector spends about \$35 billion annually on food services. Consider opportunities to align the health system's food procurement more closely with its food insecurity strategy. Unused food can be repurposed for health system food pantries and food pharmacies or those of partners. In communities that lack food resources, health systems may be able to procure healthy food at a lower price.

By sourcing healthy food from local farmers and suppliers, health systems can build greater supply chain resiliency and impact the local economy by recirculating dollars within communities. This can help drive local wealth and job creation, which addresses some of the economic drivers of food insecurity, while laying the groundwork for a healthier community.



Sg2 RESOURCES

- Executive Briefing: Finding a Footing in Social Determinants of Health Strategy
 - Report: *Social Determinants of Health: Stitching Together Solutions*
 - You Asked: Health Systems Address Housing Needs to Manage Costs and Improve Community Health
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Sources: USDA Economic Research Service. Definitions of food security. September 08, 2021; Feeding America. What is food insecurity? Accessed December 2021; Bauer L. Hungry at Thanksgiving: a fall 2020 update on food insecurity in the US. The Brookings Institution. November 23, 2020; George C and Tomer A. Beyond “food deserts”: America needs a new approach to mapping food insecurity. The Brookings Institution. August 17, 2021; Fanzo J et al. *Am J Clin Nutr*. 2020;112:1162–1169; Whitaker R et al. *Pediatrics*. 2006;118(3):e859–e868; Janio E and Sorkin D. *J Aging Health*. 2020;33:171–186; Stuff J. *J Nutr*. 2004;134:2330–2335; USDA Economic Research Service. Food security in the US: key statistics and graphs. September 8, 2021; Schanzenbach D and Pitts A. Food insecurity triples for families with children during COVID-19 pandemic. Northwestern Institute for Policy Research. May 13, 2020; *US News*. USDA to permanently boost food stamp benefits by more than 25%. August 15, 2021; Feeding America. The impact of the coronavirus on food insecurity in 2020 and 2021. March 2021; Feeding America. Trends in food insecurity detailed in America’s health rankings health disparities report. October 26, 2021; Berkowitz S et al. *Am J Manag Care*. 2018;24(9); Berkowitz S et al. *Prev Chronic Dis*. 2019;16:180549; American Diabetes Association. Food insecurity and diabetes. Accessed December 2021; Thomas M et al. *Pediatrics*. 2019;144(4); Delson M et al. *Circulation*. 2020;142:A15214; Fang D et al. *BMC Public Health*. 2021;21:607; Drennen C et al. *Pediatrics*. 2019;144(4); Kaiser Family Foundation. States reporting social determinant of health related policies required in Medicaid managed care contracts. Accessed December 2021; Kacik A. Oregon sets first hospital-specific community benefit spending floor. *Mod Healthc*. February 4, 2021; Bai G et al. *Health Aff (Millwood)*. 2021;40(4); Rosenbaum S et al. *Health Aff (Millwood)*. 2015;34(7); USDA Food and Nutrition Service. Child and adult care food program. Accessed December 2021; Food Research and Action Center. *Hospitals and Summer Food*. December 2018; Waite T. What is the difference between a food bank and a food pantry? Feeding America. February 20, 2019; Ver Ploeg M et al. Where do Americans usually shop for food and how do they travel to get there? Initial findings from the National Household Food Acquisition and Purchase Survey. USDA Economic Research Service. March 2015; Kahlon M and Patel R. To bring food into health, we must bring health to the food system [blog]. Health Affairs. September 27, 2021; Hospitals Aligned for Healthy Communities. Purchasing. Accessed December 2021.