THE HEALTH EQUITY PROJECT
Advancing Health & Economic Opportunities for All Communities

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BUILDING THE VALUE CASE: MEDICAID'S ROLE IN ADDRESSING SOCIAL DETERMINANTS OF HEALTH

FOOD INSECURITY

States, and state Medicaid programs, can play a pivotal role in addressing food insecurity. In January 2021, the Centers for Medicare & Medicaid Services (CMS) issued guidance to state Medicaid Directors designed to drive the adoption of strategies that address social determinants of health (SDOH) in Medicaid and the Children's Health Insurance Program (CHIP) so states can improve beneficiary health outcomes, reduce health disparities, and lower overall costs.

Third Horizon Strategies (THS) conducted an extensive literature review and worked with its data partners, Pareto Intelligence and Algorex Health, to perform quantitative data analyses (including health care claims data analysis and predictive data modeling to measure social risk) to assess the value case for addressing SDOH through Medicaid benefit design or other programming. The research examined a range of determinants including housing instability, food insecurity, isolation and loneliness, non-emergency medical transportation, joblessness, and activities of daily living.

Based on that research, this issue brief explores food insecurity as an important SDOH. It suggests strategies that policymakers and market stakeholders can pursue to improve access to sufficient and healthy food among Medicaid beneficiaries, and Medicaid-eligible populations.

Food insecurity is a household-level economic and social condition of limited or uncertain access to adequate food. Household food insecurity is measured on a range from **"concern that food will run out"** (very low) to **"not eating for days or weeks"** (high).[1] The United States Department of Agriculture (USDA) introduced the scale in 2006 in response to recommendations of an expert panel convened at USDA's request by the Committee on National Statistics (CNSTAT) of the National Academies.

INTRODUCTION

According to the USDA, in 2020, about 38 million people total—or 10.5 percent of Americans—lived in food-insecure households. The rate of food insecurity for households with children increased from 13.6 percent in 2019 to 14.8 percent in 2020.[2] Furthermore, Black and Hispanic households experienced increased rates of food insecurity. The USDA report showed that food insecurity for Blacks increased from 19.1 percent in 2019 to 21.7 percent in 2020, and Hispanic households saw about a 1.5 percent increase, from 15.6 percent to 17.2 percent.

Food insecurity can result from inadequate income or other financial constraints. Geographic and social conditions may also affect physical access to food. Communities that lack affordable and nutritious food are sometimes called "food deserts."

Research has shown that food insecurity can increase risk for unmanaged diabetes, obesity, or other chronic conditions. Food-insecure children may also be at an increased risk for a variety of negative health outcomes, including developmental delays.

LITERATURE REVIEW

Third Horizon Strategies conducted a literature review to examine research-based linkages between food insecurity and health outcomes, and the evidence base around interventions that address food and nutritional needs. Analysts reviewed 22 studies; 15 of which they scored as "highly relevant," meaning they were published in the last four years, appeared in peer-reviewed or otherwise objective publications, had a strong evidence-base, and had clear, statistically significant outputs demonstrating the correlation between food insecurity and health outcomes.

There is extensive research on food insecurity, food deserts, and interventions to close the gaps. The plurality of literature focused on the ability to increase food consumption and decrease food insecurity, while some interventions – driven primarily by health systems – also measured health outcomes. For instance, Geisinger's Fresh Food Farmacy[3] targeted low-income individuals with type-2 diabetes and wrote them prescriptions for free food from the Farmacy, a Geisinger-owned grocery store. The program provided participating patients with access to a network of support—including a nurse, primary care physician, dietician, and health coach—who helped patients stay on track and required patients to attend group counseling regarding the basics of diabetes. After 18 months, participants had fewer hospital admissions and Emergency Department (ED) visits, and visited their primary care provider more often than food insecure, diabetic patients not enrolled in the program. Participants also reduced their Hemoglobin A1C by two percentage

points. The Geisinger research initially estimated that each percentage point decrease in HbA1c leads to savings of $8,000 per year in overall health care cost. However, according to claims data, the pilot actually led to an 80 percent reduction in costs, decreasing from an average of $240,000 to $48,000 per member per year.

The literature review found that the range of community programs include direct home-delivered meals, food voucher programs, food pantries co-located with service facilities (i.e., clinics, hospitals), and external referrals to community sources. Some interventions focus deeply on either a geographic community or population defined by a set of chronic conditions. Population-based interventions predominately targeted persons previously diagnosed with diabetes, obesity, or other chronic conditions rather than serving as a preventive intervention.

A systematic review and meta-analysis of 29 studies examined the impact of various interventions to reduce food insecurity. The anaylsis[4] found that home-delivered meals had the greatest efficacy in reducing food insecurity and offered the strongest evidence base for improving eating habits, and on some measures of health and health care utilization, including ED and inpatient utilization. One study in the meta-analysis also found that the intervention resulted in a reduction in the number of days where participants reported their mental health interfered with their quality of life. Linking Medicaid beneficiaries to food assistance programs (e.g., Supplemental Nutrition Assistance Program (SNAP); Women, Infants, and Children (WIC); and food pharmacies) significantly reduced health care utilization for those with chronic conditions and low incomes. The least impactful method was passive referrals to community-based organizations (CBOs).

QUANTITATIVE REVIEW AND METHODOLOGY

The Health Equity Project is tracking pilots from industry partners to gauge success to date on executing food support. Algorex Health compiled primary data with strong statistical controls on several pilot interventions.

One intervention implemented by a Medicaid Managed Care Organization (MCO) in New York State showed promising results. The MCO contacted Medicaid members by phone and then mailed them gift cards for healthy food trucks that provided fresh produce to areas of high economic distress. Algorex Health used benchmark data six months prior to the first time the gift cards were issued, and comparison data six months following the member's first use of the gift card. The pre/post data demonstrated that Medicaid members receiving the assistance increased primary care provider visits, decreased ED and inpatient hospitalization usage by 8 percent and 40 percent, respectively, and decreased their medical costs by 14 percent.

The potential returns of scaling these results would be transformative to Medicaid plans. The sponsoring plan in this pilot is tracking Return on Investment (ROI) across two dimensions:

- Direct medical expense reduction realized through the healthy benefit of fresh fruits and vegetables and stronger coordination with the member and their primary care team.
- By reducing inpatient and ED usage and increasing preventive care, the plan qualifies for increased quality bonus payments leading to increased revenue. That quality gain share is reflected in the ROI calculation below.

	50 patients	100 patients	1000 patients
Food Acquisition and Fulfillment Costs (12 months)	**$ (48,000.00)**	**$ (96,000.00)**	**$ (960,000.00)**
Medical Expense Reduction	**$ 65,250.00**	**$ 130,500.00**	**$ 1,305,000.00**
Quality Gain Share	**$ 3,138.00**	**$ 6,276.00**	**$ 62,760.00**
Total:	**$ 20,388.00**	**$ 40,776.00**	**$ 407,760.00**

Algorex Health supported another intervention where a Massachusetts MCO provided nutritional assistance via monthly credit towards fresh fruit and groceries available at local curbside markets, as well as nutrition education at the distribution sites, to nearly 500 Medicaid members. After six months, the program decreased self-reported levels of food insecurity by 14 percent: upon enrollment, 19 percent of members stated they "never worried" about running out of food; after the program, 33 percent of members reported that they were "never worried."

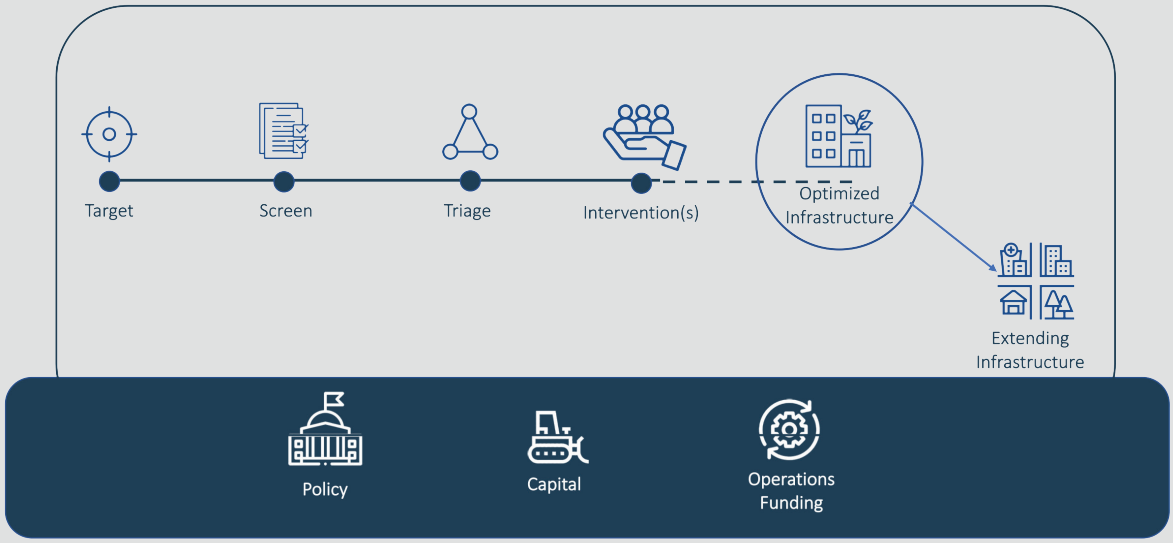
The program also aimed to improve member engagement and experience. The client care team wanted to enroll members who had previously declined care management. At the end of the program, 83 percent reported that the program made them feel supported by their health plan as compared to 20 percent at the start of the program.

Algorex Health projects that scaling the food assistance programs and targeting them effectively will sustain the gains realized. States and Medicaid MCOs have several pathways to create programs like this or linkages to existing programs for assistance (like SNAP/WIC).

STRATEGIES STATES CAN USE TO ADDRESS FOOD INSECURITY

Exhibit 1 illustrates the guiding framework for these issue briefs, as noted in the introductory paper. The framework outlines a pathway of six activities and three foundational levers that govern the way these activities are funded, implemented, and operated. The structural approach to this model encourages states to problem-solve by examining the multi-faceted options at their disposal.

Exhibit 1: SDOH Strategy Framework



The following section provides specific considerations in closing food insecurity gaps based on this framework.

1. Target

States should determine which groups are in greatest need or at greatest risk relative to food insecurity. Given the findings of the USDA study, Black and Hispanic households are at increased risk for food insecurity. Therefore, health equity should be a clear goal. Targeted populations may be determined by geographic community/neighborhood parameters, or by sub-populations defined by chronic conditions such as diabetes, cardio-vascular disease, or obesity. Either way, it is important that states define risk criteria and target interventions to those at greatest risk. Specific health related data elements

to be used for risk stratification may include Hemoglobin A1Cs, blood pressure, and Body Mass Index. Neighborhood factors such as distance to a full-service grocery store and availability of food pantries/ food banks may be used for risk stratification.

2. Screening

States are increasingly requiring SDOH screening of Medicaid members, whether that be conducted by MCOs, intermediary care coordination entities, or directly by health care providers. Questions related to food insecurity status should be included in these screenings. Medicaid beneficiaries in need can then be provided with an intervention as described in the subsequent section.

According to the Center for Health Care Strategies, 12 states require MCOs to screen for food insecurity and have mechanisms in place to refer patients to food and nutrition services. Some of these states require plans to establish partnerships with CBOs to connect community members with food insecurity to food and nutrition services and provide application assistance to programs like SNAP and WIC.[5]

The Accountable Communities SDOH screening tool[6] offers a replicable example. This tool asks two food insecurity related questions:

- Within the past 12 months, you worried that your food would run out before you got money to buy more.
  - Often true
  - Sometimes true
  - Never true
- Within the past 12 months, the food you bought just didn't last and you didn't have money to get more.
  - Often true
  - Sometimes true
  - Never true

The USDA suggests five questions to assess food insecurity:[7]

Least severe: Was this statement often, sometimes, or never true for you in the last 12 months? "We worried whether our food would run out before we got money to buy more."

Somewhat more severe: Was this statement often, sometimes, or never true for you in the last 12 months? "We couldn't afford to eat balanced meals."

Midrange severity: In the last 12 months, did you ever cut the size of your meals or skip meals because there wasn't enough money for food?

Most severe: In the last 12 months, did you ever not eat for a whole day because there wasn't enough money for food? In the last 12 months, did any of the children ever not eat for a whole day because there wasn't enough money for food?

3. Triage and Care Coordination

States must follow up on food insecurity screening with a systematized approach to triage and care coordination that connects Medicaid beneficiaries with needed community resources. States can accomplish this by establishing Primary Care Case Management programs (PCCM), requiring MCOs to carry out these functions, and/or paying for intermediary organizations designated to engage with these community members.

4. Interventions

Home Delivered Meals

Home delivered meal programs may provide basic nutrition assistance. Registered dietitians supervise the creation of medically tailored meals to meet the specific needs of patients with complex conditions or specific dietary needs. In 2018, California's Medi-Cal launched the Medically Tailored Meals Pilot Program to provide Medicaid members with congestive heart failure in eight counties three meals a day for three months.[8] This is a three-year funded pilot, so results from the pilot are not (yet) publicly available. Just this past year, the state finalized its CalAIM[9] initiative to improve the quality of life and health outcomes of Medi-Cal's members, which includes meal delivery services for Medicaid members. Coverage starts January 1, 2022.

Other states, such as New York[10] and North Carolina,[11] are implementing similar practices.

Food Vouchers

There are several pilot projects in which Medicaid beneficiaries are given vouchers to access healthy food that have had promising early outcomes. Washington State enacted legislation to establish a fruit and vegetable prescription program through which Medicaid beneficiaries can obtain vouchers for fruits and vegetables to be purchased at a participating farmers market or grocery store.[12] States and MCOs can implement similar models in partnership with CBOs or help initiate new programs.

Linkages to Other Federal, State, and/or Community-based Programs

Medicaid agencies can assist beneficiaries in accessing federal and state food assistance programs. Medicaid members may need assistance completing applications for SNAP or WIC, or warm handoffs to county departments of human services who can provide this assistance. The literature review revealed that referral programs that directly support the beneficiaries in navigating the processes are more impactful than passive referrals (e.g., providing a list of local resources).

5. Optimized Infrastructure

Many communities have developed a litany of resources that can be useful to food insecure individuals and families. Yet, challenges remain such as connecting the individual to the services, bi-modal communication between the service provider and the individual, inconsistency in the availability of nutritious food, and a high volume of needs to attend to.

There are now a range of solutions that can help health plans, health systems, and CBOs facilitate closed-loop referrals. These platforms – such as NowPow, UniteUS, Pieces, and Aunt Bertha – allow for improved coordination of services and facilitate or bolster work flows that ensure follow-up and patient continuity.

There are also numerous digital solutions that coordinate food delivery and vouchers through mobile apps, allowing community members to directly interact with food sponsors (health plans, health systems, etc.) and coordinate food delivery through CBOs. For example, a company called Tangelo launched an app in Los Angeles that coordinates the delivery of fresh fruit and produce with community members in need. Another company, Project Well, uses software to assess individual's food preferences and dietary needs and then match them with healthy options delivered to their home. Project Well seeks to address not only food insecurity, but also loneliness and isolation. Project Well has targeted Medicare Advantage members but the model could be replicated to address the needs of Medicaid beneficiaries.

6. Expanded Infrastructure

States can create new food access or distribution programs in communities or health care settings when existing community resources are insufficient. Some federally qualified health centers (FQHCs) and community mental health centers offer food banks within or adjacent to their clinical settings. Medicaid agencies could seek innovative ways to support these efforts.

States can also leverage other federal resources outside of the Medicaid program. In June 2021, the USDA announced an investment of up to $1 billion, including $500 million in American Rescue Plan Act funding, in The Emergency Food Assistance Program (TEFAP) to support and expand resources for emergency food networks administered by states, food banks, and local organizations.[13]

In recent years there has been an increase in non-traditional funding to establish grocers in communities where access to fresh food is deemed to be difficult. For example, Jubilee Food Market[14] was established in 2016 by Mission Waco to provide healthy and affordable food to residents living in and near the food desert of North Waco, Texas.

Policy

In January 2021, CMS issued new guidance to state Medicaid agencies that describes "how states can leverage existing flexibilities under federal law to tackle adverse health outcomes that can be impacted by SDOH and supports states with designing programs, benefits, and services that can more effectively improve population health and reduce the cost of caring for our nation's most vulnerable and high-risk populations."[15]

The guidance does not establish new regulations but rather details existing federal authorities that can be used to address SDOH and provides examples of various models in place in different states.

However, the 2021 guidance represents a proactive and renewed effort on the part of the federal government to encourage states to maximize federal authorities. Specifically, regarding food insecurity, the CMS memorandum indicated, "Older adults and individuals with disabilities who need Medicaid-funded home and community-based services (HCBS) may need additional assistance with meeting nutritional needs due to functional limitations or challenges that make it difficult to go shopping or prepare meals on their own. Home-delivered meals can help to supplement the nutritional needs of these individuals when there is an assessed need and the services are identified in the person-centered service plan."

States can use a variety of Medicaid policy levers to address food insecurity and other SDOH. These mechanisms include HCBS under section 1915(c) waivers or the Medicaid state plan, targeted case management services, managed care under section 1915(b) waivers, section 1115 demonstration waivers, and Medicaid managed care contract language.

States can incentivize MCOs to address food insecurity through quality measures in value-based payment models. They can also outline such requirements in contractual care coordination and population health management requirements. The state of Virginia, for example, requires MCOs to address access to healthy foods, among other SDOH. At least one plan covers home-delivered meals for patients and family members for a limited time after discharge from a hospital.[16]

Capital

Addressing food insecurity should be a multi-stakeholder effort, given its impact on multiple systems such health care, public health, and education. Health systems and MCOs throughout the country have invested in food insecurity initiatives to help lower clinically inappropriate utilization (particularly in the ED), lower costs, and/or achieve certain quality measures that promote bigger payments. Corporate partners - increasingly focused on diversity, inclusion, and equity (DEI) efforts - derive similar, albeit different benefits..

States can help broker partnerships and create new food access or distribution programs in communities or health care settings when existing community resources are insufficient. Replication of mobile food truck programs such as those described previously in the Algorex Health research may require an infusion of capital.

Capital funding for these resources and/or infrastructure can be achieved through any of the following platforms:

- Health food financing initiative
- Opportunity zone funding (specifically for brick-and-mortar infrastructure that provides access to food)
- Social impact investment
- Health care industry stakeholders (particularly those who derive an economic benefit from healthier patients)

Operations Funding

Many states are utilizing 1115 waivers to implement demonstrations designed to test new service delivery and payment models, including those that address SDOH. Through value-based and alternative payment models (APMs), states can create new opportunities for providers to gain flexibility to address SDOH. While traditional fee-for-service payment is tied to billable encounters, many APMs allow for providers to meet critical patient and community needs that may not qualify as "medically necessary" or billable services.

States can build financial incentives into their contracts with MCOs to ensure that Medicaid beneficiaries with food insecurity needs are best served, such as including SDOH related measures in pay-for-performance programs. States can also encourage MCOs to invest in food assistance programs to achieve required Medical Loss Ratio (MLR) requirements. The 2017 CMS Managed Care Final Rules clarified that states can financially incentivize health plans to address these needs by allowing certain nonclinical services to be included as covered services when calculating MCO capitation rates and medical loss ratios.[17]

CONCLUSION

Food insecurity impacts health and wellness and can lead to or exacerbate numerous chronic health conditions. Medicaid can be a valuable resource for helping states address food insecurity, reducing overall healthcare costs and improving health outcomes. States have a range of policy levers and practical strategies that can be used to address food insecurity. So, what should states do?

Key actions states can take include:

- Screen for food insecurity and triage Medicaid beneficiaries to ensure those in need are connected to appropriate supports
- Select an intervention, or multiple interventions
  - Based on the literature review, home-delivered meals have the greatest efficacy in reducing food insecurity and offered the strongest evidence base for improving eating habits, and on some measures of health and health care utilization
  - Food voucher programs offer promising results and opportunities for overall healthcare savings, as demonstrated by the Algorex Health pilots
  - Assistance navigating food related benefit programs will have greater impact than referrals with no follow-up support
- Establish partnerships across state and local agencies, and with CBOs to expand infrastructure and programming
- Optimize technology to support data sharing and population health management approaches
- Explore the use of waivers and creative financing mechanisms for capital and operations

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