

**A Case Review on the Independence Health System Food Institute**

by

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Bachelor of Science, Kansas State, 2021

Submitted to the Graduate Faculty of the  
Department of Health Policy and Management  
School of Public Health in partial fulfillment  
of the requirements for the degree of  
Master of Health Administration

University of Pittsburgh

2024

UNIVERSITY OF PITTSBURGH  
SCHOOL OF PUBLIC HEALTH

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2024

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## **Abstract**

The Food Institute was established with a mission to enhance public health by promoting education and increasing access to nutritious foods, thereby addressing food insecurity. As the Institute nears its third anniversary, this paper evaluates its effectiveness in fulfilling its public health objectives within the community. Through a comprehensive examination of the Institute's programs, initiatives, and outreach efforts, this study assesses the extent to which it has contributed to mitigating food insecurity. By analyzing quantitative data collected from program participants as well as national and local data, alongside gathering additional qualitative insights from program participants, community members, and stakeholders, this paper aims to provide valuable insights into the public health relevance and importance of the Food Institute's endeavors.

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## **1.0 Introduction: Food Institute Mission**

The overarching mission of the Food Institute is to empower individuals to maintain good health through education and the consumption of nutritious foods. By strategically addressing the prevalent issues of diet-related diseases, including obesity, type 2 diabetes, and various heart-related illnesses that affect communities and contribute to frequent hospitalizations and escalating healthcare costs, the Food Institute seeks to make a lasting positive impact. As the Food Institute approaches three years since its creation, this essay aims to assess the effectiveness of the Food Institute in achieving its mission within the community.



## 2.0 The Social Determinants of Health

The intricate relationship between social elements and health outcomes has gained significant attention among researchers, policymakers, and public health professionals. The recognition that health disparities are not solely the result of individual choices or genetic predispositions but are rather influenced by broader social determinants has led to a shift in understanding health inequities. The social determinants of health, as they are professionally termed, encompass the conditions in which people are born, as well as where they grow, live, work, and age. Each determinant is rooted in social, economic, and environmental elements that influence health disparities and ultimately shape the nature of individuals' health and well-being (Drake and Rudowitz, 2022) (Figure 1).

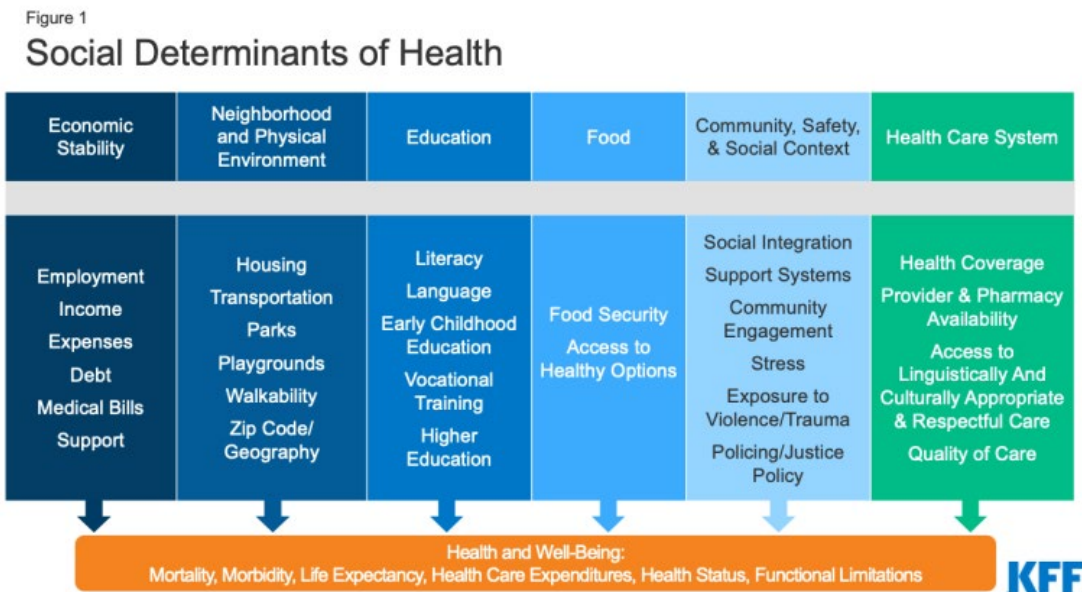


Figure 1

Research commonly demonstrates that factors such as education, employment, housing, and social support networks significantly impact health outcomes, with disadvantaged individuals experiencing poorer health and reduced access to healthcare. The physical environment, social determinants, and behavioral factors have shown to drive 80% of health outcomes (Figure 2). This understanding is essential for developing effective interventions and policies that address health inequities (CHN & Mercer, 2024).

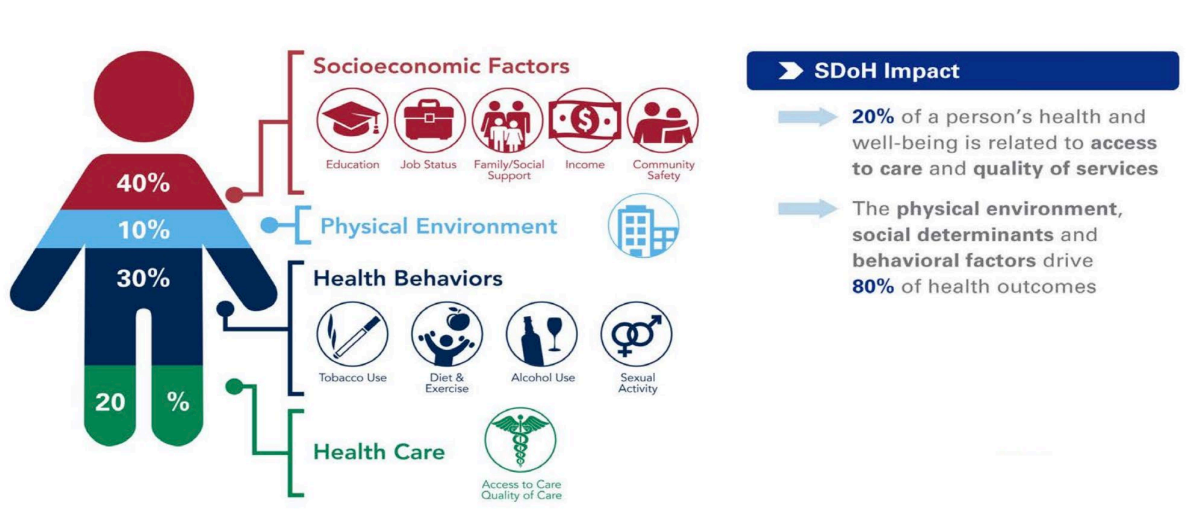


Figure 2

The United States Department of Agriculture defines food insecurity as the lack of consistent access to enough food for every person in a household to live an active, healthy life (Slupski, 2021). Food insecurity affects 33.8 million Americans and is intrinsically linked to poverty, unemployment, low wages, and social inequalities. (USDA, 2024) Food insecurity not only affects physical health but also has implications on mental health, human development, and overall well-being. Individuals who experience food insecurity are at higher risk for malnutrition,

chronic disease, compromised immune function, and stunted growth, especially among vulnerable populations like children and elderly adults (Decker, 2018).

Addressing the issues food insecurity presents requires an understanding of its underlying social causes and implementing comprehensive strategies that support both short-term relief and long-term solutions. Social factors like income inequality and employment opportunities can directly affect an individual's ability to afford and access nutritious food. They can also indirectly affect an individual's nutrition education, along with their health literacy and social support networks. Food insecure individuals are in turn subjected to a perpetual cycle of these health disparities, which are ultimately reinforced by the existing social inequities they are forced to live with every day (Figure 1). Utilizing the intricate connections between poor health and adverse social circumstances to develop holistic approaches that both improve health outcomes and reduce food insecurity then becomes essential, not just to promote overall community health but to also prioritize prevention over causation-based treatment.

According to the USDA, an estimated 33.8 million people -- including 5 million children -- lived in food-insecure households in 2022, representing roughly 12.8% of the total U.S. population (USDA, 2024). Such figures disproportionately represent certain populations that are already disenfranchised, further exacerbating existing social inequalities. For example, households with low incomes -- particularly those below the federal poverty line -- accounted for 26.5% of food insecure households in 2021, more than double the national average (Feeding America, 2022).

Furthermore, Black and Hispanic households experience higher rates of food insecurity compared to White households. In 2021, Black households accounted for 19.5% of the food insecurity rate and Hispanic households accounted for 15.6%. For White households in the same

year, the rate was just 7.4%, more than twice as less compared to populations of color (Rabbitt, 2022).

Beyond the racial disparities among food insecure people, age disparities have far-reaching consequences, especially in children, who risk lapses in their physical and cognitive development. In 2021, for example, approximately 1 in 6 children in the United States faced food insecurity, leading to long-term health issues, compromised educational achievements, and increased risk of chronic diseases (Rabbitt, 2022).

The COVID-19 pandemic further exacerbated food insecurity among children in the United States, as disruptions to the economy such as widespread job losses and school closures strained households' ability to access sufficient food. In the first 9 months of COVID-19 school meal programs served 30% fewer students (Jowell, 2023)

Food insecurity has severe implications for adults' health and well-being as well. Dietary practices stemming from food insecurity contributes to malnutrition, obesity, and a higher risk of chronic conditions such as diabetes, hypertension, and heart disease in adults in addition to mental health problems, including depression and anxiety. These health-related outcomes not only impact individuals' quality of life but also impose substantial burdens on healthcare systems and the economy as a whole. A study found that food-insecure individuals had significantly higher rates of hospitalization compared to their food-secure counterparts, showing a clear association between food insecurity and increased healthcare utilization (Berkowitz, 2018). Food Insecurity has been associated with an extra \$1863.17 in healthcare expenditure per person per year. Overall, it has been estimated that healthcare expenditures related to food insecurity in the United States amounted to \$77.5 billion annually, specifically for costs incurred from hospitalizations,

emergency room visits, diagnostic tests, medications, and specialized treatments (Berkowitz, 2018).

### **3.0 Food Insecurity Rates in Pennsylvania**

As of 2021, Butler County, PA has a total population of 194,000, of which approximately 10.1% -- or 19,400 -- are food insecure. According to the Greater Pittsburgh Food Bank, the overall food insecurity rate among children in Butler County is 12.1% in comparison to the rate amongst adults of 8.7% (Greater Pittsburgh Community Food Bank, 2024). Focus groups during the 2019 Butler Memorial Hospital community health needs assessment identified limited retail options as a major contributor to food insecurity. Inner City residents are limited to dollar stores, gas stations, or smaller markets that offer processed foods and fewer healthy options. As a result, Butler City and many of the surrounding rural areas are considered food deserts. Food deserts are defined as an area in which at least 500 people, or 33% of the population, live more than half a mile (urban) or more than 10 miles (rural) from the nearest supermarket or large grocery store (USDA, 2024). Residents living in designated food deserts face regular difficulties with getting transportation to their nearest grocery store. Research suggests that such individuals decide what they eat based on what food outlets are most available to them. In areas that are food deserts people's option may only be fast-food restaurants or convenience stores. Diets from these establishments tend to be highly processed foods with low nutritional value. These diets contribute and lead to more complicated health challenges as well, including diabetes, heart disease, and cancer -- which are prevalent within communities living in food deserts (Walker, 2010).

#### **4.0 Demographics of Service Area**

Poverty is a significant factor when it comes to receiving healthcare and addressing food insecurity in Butler City (16001/16002). With a total population of 13,176 people, the poverty rate stands at 21.7%, which is considerably higher than national (11.4%) and state (11.8%) levels. The median household income in Butler City is \$32,746, which is also considerably lower than other parts of the county. For example, Cranberry, Pennsylvania (Butler County) has a median household income of \$120,554. Additionally, for those under the age of 65 in Butler City, roughly 22.0% were considered disabled, and 5.8% do not have health insurance. Only 22.3% of the population possesses a Bachelor's degree or higher, although 91% have graduated high school. Ethnicity of Butler City is as follows: 89.7% of the population identify as White; 2.7% Black, 2.9% Hispanic, and 5.4% Mixed (U.S Census, 2023).

Compared to other parts of Butler County, the residents of Butler City face significant economic disparities and food insecurity with a higher prevalence for poverty. To improve the well-being and health of the community Butler Memorial Hospital developed the Food Institute to improve nutrition education.

## 5.0 The Food Institute

Independence Health System (IHS), the parent of Butler Memorial Hospital (BMH) and Clarion hospital (CH), has been committed to supporting a healthy community for over 120 years. Every three years, the health system evaluates the region's needs through the Community Health Needs Assessments (CHNA). This information assists the organization in allocating resources and developing programs that best serve Butler and Clarion Counties, along with the surrounding areas. In 2019, the Butler CHNA identified access to adequate food and health education as a significant gap in the community. The 2021 Clarion CHNA identified the same problems.

The CHNA was conducted using qualitative and quantitative data gathered from community members, stakeholder organizations in Butler County, employees, and providers of Butler Memorial Hospital and Clarion Hospital. Secondary data from County Health Rankings, Center for Disease Control and Prevention, PAYS (Pennsylvania Youth Survey), and the U.S. Census were used to supplement data the hospital collected. An additional 529 community members, as well as 36 community stakeholders, completed surveys to provide even more comprehensive data. Focus groups met via ZOOM to discuss the survey data. Food insecurity and the lack of nutrition education were the issues that needed to be addressed in the immediate future.

As a result, a department of Lifestyle Medicine was developed at Independence Health System on the Butler Campus in January of 2021 under the direction of Dr. Kathy Selvaggi, Chief Community Health Officer. This department leads the charge in addressing the social determinants of health and its effects on the community. It provides education on multiple health related issues with a special interest directed toward food insecurity and nutrition education. Access to healthy,



nutritious food is a concern, as the previously mentioned “food deserts” throughout the service area of IHS service area account for many of the community’s growing issues. For example, the 2019 BMH CHNA identified that 30% of residents in the service area lived more than 5 miles away from a store that offers fresh produce. Another 50% lived approximately 1-5 miles away. There is no grocery store in downtown Butler City, an area highly populated with vulnerable, low-income residents. Clarion County faces many of the same challenges. Many low-income individuals rely on public transportation to get to and from the grocery store, causing residents to spend a significant amount of time and money on transportation just to buy food. Few can afford the transportation costs long-term and depend on convenience stores or fast-food restaurants within walking distance, limiting their fresh, healthy options to only what those stores are able to provide.

In response to the accumulating issues relating to food insecurity, Independence Health System opened a Food Institute (FI) on the Butler campus in April 2021 and a second FI on the Clarion campus in November 2022. The Food Institute is a free service provided to patients that are referred by an Independence Health System provider.

Before implementation of the program, a system-wide training session was held for all ambulatory providers, office staff, and hospital personnel. The training included an explanation of how food insecurity affects health outcomes, a video demonstration on empathetic questioning of the Centers for Medicare & Medicaid approved hunger vital signs, and referral procedures to enroll patients in the Food Institute. The hunger vital sign questions are as follows: Do you have difficulty accessing fresh fruits and vegetables? Do you utilize food banks or pantries to feed your family? and/or Do you run out of money before the end of the month to purchase food? A “yes” answer to any of these questions triggers a referral upon patient agreement.

Each referral is good for one visit per month for four months. Upon referral, patients complete an intake form to identify their food security concerns, assess their personal environment as it relates to their ability to cook and store food, dietary concerns like allergies and specialty diets, and other social determinant of health (SDoH) needs. Patient needs such as transportation or access to cooking utensils are addressed as part of their intake to reduce additional barriers, ensuring that they have the necessary resources to fully participate and complete the program. Patients are screened for other social determinants of health concerns through the health system's strong partnerships with community agencies, where they are linked to additional resources that advance health equities and reduce health disparities.

During each visit, patients receive basic nutrition education from a nutrition liaison, food shares, and recipes. Nutrition education topics include food safety, MyPlate, healthy fats, low sodium, low sugar, and menu planning. Education is conducted in a one-on-one setting and an educational booklet is provided so patients may refer back at any time. Patients also receive ingredients and recipes for 10 monthly meals that feed a family of four, and each recipe has a cost analysis average of ~\$1.50 per serving. Recipe cost analysis and education on sustainability of healthy eating is another important educational focus of the program, as it helps patients learn healthy eating habits in spite of their economic hardships. When it comes to sourcing the food, the Butler Memorial Hospital Dietary Departments obtain it through a competitive pricing process. Orders are placed twice a week to keep food fresh, reduce waste, and limit the potential for food outages. The health system has made financial investments in the program to ensure proper funding and has provided physical space, refrigeration, furniture, utensils, dietary personnel, and a full time Nutrition Health Liaison in the hopes of making the program as efficient and cost-effective as possible. The Food Institute has obtained other funding that has allowed the program to provide

and expand its services, including a grant from the Health Resources & Services Administration (HRSA), other grants from philanthropic organizations, and ongoing donations.

For operational purposes, patient and program data are collected to establish metrics documenting referrals, appointments scheduled, appointments attended, patient demographics, participation in food support programs (i.e, SNAP, TANF, etc.), food and delivery concerns, and health conditions. Weight and blood pressure are also recorded, as are qualitative patient surveys. Participants of the Food Institute are asked a series of specific questions prior to their first and after their 4<sup>th</sup> appointments to measure behavioral changes. These questions are: “Do you eat 5 or more fruits and vegetables per day?”, “Do you understand how what you eat relates to your health?”, “Are you able to prepare healthy fruits and vegetables?”, and “Are you able to prepare healthy recipes?” Measurement tools include internal electronic health record systems, online survey tools and additional database/spreadsheet tracking.

## **5.1 Lifestyle Coaching**

In addition to the Food Institute, patients may also be referred to the Lifestyle Coaching Program to address disease-specific nutrition and lifestyle needs. The overall goal of the Lifestyle Coaching Program is to provide evidence-based lifestyle education without barriers to patients, employees, and the communities it serves, to improve overall health, and increase health literacy. The curriculum focuses on the mitigation of cardio-metabolic risk factors to help patients manage chronic diseases.

The Lifestyle Coaching educational programs are provided free of charge. Referrals and medical insurance are not required and invites participation from then entire community.

Multiple methods of registration including online, and email facilitates enrollment for interested participants. This program offers a diverse range of classes (**Appendix A**), not solely centered on nutrition. In contrast, the Food Institute operates on a referral basis, prioritizing nutrition education and facilitating connections between patient's and community resources.

Prior to COVID-19 lessons were taught in person. However, during the COVID-19 pandemic, it was transitioned virtually. As the hospital and community emerged from the pandemic, the program's online usage illustrated the value of a hybrid model, providing both virtual and in-person options to best meet the needs of the community. Between January 1<sup>st</sup> 2023-December 31<sup>st</sup> 2023 the Lifestyle Coaching program has provided 2,260 education contacts.

## **5.2 Good Foods Healthy Hospitals**

Independence Health System recognizes the importance of improving the health and wellness of the community it serves. Additionally, the system recognizes that as a healthcare provider, it needs to address concerns within its own employees. The Butler Memorial Hospital dietary department partnered with Good Food Healthy Hospitals (GFFH), an initiative recognized in the PA Department of Health, the CDC, and the American Heart Association. The program's overall goal of is to improve community health through better nutrition in the hospital setting. In 2023, both Butler and Clarion hospitals received the silver level of recognition for implementing GFHH standards, including offering healthier and more sustainable food and beverage choices, eliminating industrially produced trans fats and decreasing sodium. In addition, the health system is expanding options for fresh and healthy food choices by acquiring locally grown produce and increasing plant- based options and whole grain foods. To encourage individuals to choose those

options, the health system subsidizes healthy choices and offers discounts for healthier food purchases.

### **5.3 Farmers Markets**

In combination with the Good Foods Healthy Hospitals program, the Food Institute has partnered with the Butler Farm Bureau to conduct in hospital farmers markets so both employees and visitors can access locally grown fruits and vegetables. Food Institute patients are given vouchers for the markets as a way of encouraging them to eat fresh produce. Additionally, Butler Memorial Hospital also participates in a Community Supported Agriculture Program, where local farms deliver seasonal fruits and vegetables weekly.

### **5.4 Butler Memorial Hospital SDoH Program**

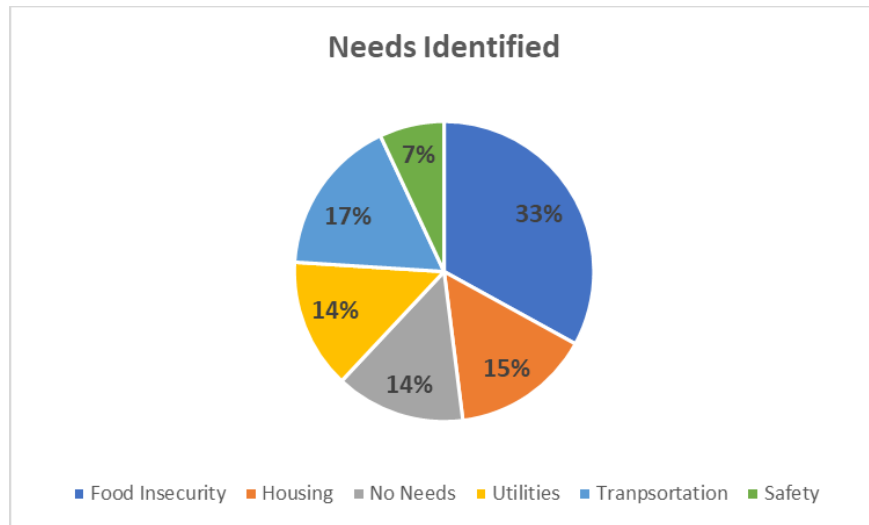
The Butler Memorial Hospital SDoH Program works closely with the Food Institute to evaluate patients' needs in accordance with the various aspects of their residential, occupational, and recreational lives. The program ensures that patients possess the essential tools for their day-to-day living, promoting their well-being and enhancing their quality of life in their specific surroundings. The SDoH program actively engages with multiple community agencies to provide needed services for Butler Residents. The program manager holds multiple roles, including serving as an advisory board member for the Butler County Area Agency of Aging; chairing a local transportation committee; managing the BHS Food Institute; participating in a task force with the

Greater Pittsburgh Food Bank – Butler County working group; attending Local Housing Options Team (LHOT) meetings; and co-chairing the Butler Collaborative for Families (BCF), comprising of members from 50 community agencies. In addition, the BMH SDoH program participates in community events to raise awareness about its ability to address SDoH needs and facilitate information sharing about available resources.

By actively collaborating with these community partners, BMH stays informed about external services and needs, such as transportation needs. The program has played a crucial role in a local transportation initiative aimed at addressing ongoing transportation concerns, with barriers and strategies being identified to help mitigate the issue. BMH was also awarded a grant for \$5,000 to support safe and reliable transportation for employment, healthcare, housing, and family visits. The grant amount was matched by Family Pathways, a local human service provider, allowing for more funds to help support community transportation. The transportation committee collects data and reports on the impact of increased transportation on healthcare utilization in the area. The goal is to eliminate transportation issues as a barrier to accessing health care. Additionally, Butler Memorial Hospital maintains transportation agreements with various providers to help patients get to and from appointments or to their homes after being discharged from the hospital. The Community Health program manager closely monitors agreements with Pittsburgh North Aire Ride and Alliance for Non-Profit Resources, Inc., ensuring accurate invoicing and appropriate payment routing to confirm that the allocated transportation funds are used for their intended purpose. Overall, in 2023 the program manager coordinated 106 rides for patients to access healthcare services and 89 rides to help patients access food.

The SDoH program has also prioritized the collection and analysis of data on racial, ethnic, and language (REaL) health disparities. An advisory board for REaL data was established, holding

quarterly meetings with community leaders and internal stakeholders. Diversity, Equity, and Inclusion (DEI) have been focal points for the health system, promoting collaboration and education on the topic for patients and system members alike. Furthermore, a joint SDoH project with UPMC was launched in 2020 to target portions of emergency department discharges, hospital discharges, and outpatient providers' patients, ensuring access to the five social determinants of health domains: housing, transportation, food security, utilities, and safety. **Figure 3** shows the percentage distribution the program manager has identified within the targeted population. Overall, the Center for Medicare and Medicaid Services (CMS) Health-related social needs screening tool is utilized to gather this information.



**Figure 3**

## **6.0 National Strategy on Hunger, Nutrition, and Health**

Recently, the Biden-Harris administration released a national strategy on the federal government plan to end hunger, increase healthy eating, and reduce health disparities. The federal government aims to gain support from state, tribal, and territory governments, along with academia, civil society, philanthropy, and the private sector. In order to receive that support, the administration has outlined specific actions it will take to fundamentally help change the country's food, nutrition, and health policies using five pillars (Biden, 2022).

### **6.1 Pillar One: Improve Food Access and Affordability**

The first pillar of the National Strategy on Hunger, Nutrition, and Health focuses on improving food access and affordability for all individuals. Key programs addressed by this pillar include the Supplemental Nutrition Assistance Program (SNAP), Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), and the Child Nutrition Program.

In October 2021, the administration took a significant step towards achieving this goal by increasing SNAP benefits by an average of \$36 per person per month. The administrations also aims to expand school lunch programs, summer electronic benefits transfer programs (EBT), SNAP eligibility, and overall funding for federal programs that provide food at school. School lunches play a vital role in the administration's strategy, as they feed over 30 million children. The goal is to equip schools' nutrition workforce with adequate training and resources to provide nutritious meals while also offering educational initiatives to promote healthy eating habits.



Cultural diversity in food options is also a particular focus so that diverse student populations are included during meals.

The administration's second focus for school lunch programs stems from food insecurity concerns during the summer months when children are not in school to receive meals. The issue is particularly prominent among the Latino and Black populations, as Black and Latino children must often skip meals that they typically would have received at school. Building on the success of the expanded EBT program during the COVID-19 pandemic -- which provided food to 36 million children -- the administration intends to extend eligibility for SNAP and improve access to these essential programs.

The current federal laws create barriers that contribute to food insecurity and disparities, something the administration seeks to update. Given how restricted the use of these programs are, expanding benefits to encompass online shopping will facilitate access for individuals with limited mobility, transportation challenges, heightened health risks, and those facing stigma or discrimination. The Biden-Harris Administration is seeking collaboration with various government agencies to invest in community and economic development to further combat these hardships. They also seek to support community-based outreach, case management programs, farmers markets, culturally based nutrition education, more grocery stores and neighborhood markets, and improvements in transportation to facilitate access to these essential services (Biden, 2022).

## 6.2 Pillar Two: Integrate Nutrition and Health

The second pillar of the National Strategy for Hunger focuses on prioritizing the role of nutrition and food security in overall health outcomes. The Biden-Harris Administration recognizes that preventing diet related disease can improve well-being and reduce healthcare cost. This has led the Administration to work on an expansion of Medicare and Medicaid coverage. Their plan to include "Food is Medicine" interventions would encompass programs such as fruit and vegetable prescriptions, nutrition counseling, and nutrition education. Moreover, the administration seeks to broaden access to nutrition-related services beyond Medicare and Medicaid, extending coverage through private insurances and other federal programs to address specific diseases and encompass preventative therapies and counseling. As part of these efforts, the administration plans to pilot programs like a National Produce Prescription initiative to further support preventative care (Biden, 2022).

Another goal within this pillar is to implement and enhance screenings for the social determinants of health. The social determinants of health play a crucial role in health disparities, making it essential to incorporate screenings for factors like food insecurity within healthcare settings. Currently, healthcare policy does not require these types of screenings, nor are they universally implemented. However, they can help providers better understand the underlying causes of patients' healthcare issues and assist in providing higher-quality care. These screenings can also guide patients toward other resources they may need, such as programs like the BHS Food Institute. To ensure better healthcare outcomes, the National Strategy for Hunger seeks to implement universal screenings in all healthcare settings for social determinants like food insecurity, with the Centers for Medicare and Medicaid Services (CMS) leading the effort. Should those efforts succeed, hospitals will be required to establish procedures and create codes that

enable them to offer nutritional services and receive proper compensation. The data collected through these codes and procedures can also inform the development of future interventions (Biden, 2022).

Lastly, the strategy seeks to strengthen and diversify the nutrition workforce. Registered dietitians and nutritionists (RDNs) play a vital role in preventing, treating, and managing diet-related diseases. However, patients are less likely to seek care or share information if they perceive ethnic or social differences in their healthcare providers. Currently, the majority of RDNs are white (80%), with limited representation for Latino (6%), Asian (5%), and Black (3%) professionals. Increasing the diversity of the nutrition workforce is crucial to ensuring that diverse patients are comfortable seeking and receiving the appropriate care (Commission of Dietetic Registration, 2022).

### **6.3 Pillar Three: Empower All Consumers to Make and Have Access to Healthy Choices**

In the National Strategy for Hunger's third pillar, the Biden-Harris administration aims to enhance food labeling, foster healthier food environments, and support nutrition education. To empower consumers, the administration plans to develop a front-of-package labeling system that provides clear and concise nutrition information. They also intend to ensure that foods labeled as "healthy" align with current nutrition science and dietary guidelines, promoting accurate and reliable information for consumers when they shop. Creating healthier food environments and improving the food supply is another key objective. The administration intends to re-incentivize SNAP users to seek more fruits and vegetables. It also seeks to address the marketing of unhealthy foods to children, where it will utilize federal nutrition assistance programs to promote healthy

habits and access to local and nutritious foods. These efforts may help individuals make healthier choices and improve the overall food landscape (Biden, 2022).

Supporting nutrition education is a critical component of empowering consumers. The administration plans to continually update the Dietary Guidelines for Americans and launch a national education campaign that will provide nutrition education materials in multiple languages, ensuring broad accessibility and promoting informed choices. Additionally, the administration aims to leverage SNAP-Ed to promote healthy foods and beverages by utilizing the MyPlate Shop Simple digital tool. This tool will offer a comprehensive database of resources and guidance to help users find affordable and nutritious foods. It will also assist in locating local farmers markets and outlets that accept SNAP benefits (Biden, 2022).

Through these initiatives, the administration seeks to empower consumers with clear nutrition information, foster healthier food environments, and provide access to comprehensive nutrition education. These efforts will contribute to a more informed and healthier population, making positive strides towards reducing food insecurity and improving overall well-being (Biden, 2022).

#### **6.4 Pillar Four: Support Physical Activity for All**

Physical activity plays a crucial role in maintaining and enhancing overall health, yet a significant portion of the American population fails to meet recommended activity levels. This deficiency is often attributed to various environmental barriers, for which the Biden-Harris Administration has devised a comprehensive approach to promote physical activity and cultivate environments that facilitate active lifestyles. The first step of this approach involves expanding

physical activity programs, such as the State Physical Activity and Nutrition Program, to encompass all states. In doing so, evidence-based strategies like the Active People, Healthy Nation initiative can be universally implemented among different institutions. The administration also aims to address the issue of nature-deprived communities by connecting individuals to parks and green spaces. By fostering these connections, people will have safer and more accessible opportunities for physical activity in nurturing environments. They might also be able to combat transportation barriers, as community designs that prioritize safety, convenience, and inclusivity allow for active transportation methods (Biden, 2022).

The second step revolves around enhancing the education surrounding physical activity. Increasing awareness of its benefits and its recommended guidelines is vital for individuals to make informed decisions about their health. The administration plans to update the Physical Activity Guidelines for Americans through various campaigns targeting diverse demographics. Recognizing the significance of promoting physical activity among children, the administration intends to provide guidance and funding to support physical education programs within schools (Biden, 2022).

Overall, the Biden-Harris Administration places a high priority on promoting physical activity to improve the overall health and well-being of its constituents. By addressing these areas comprehensively, the administration seeks to empower individuals to lead active and healthy lives.

## **6.5 Pillar Five: Enhance Nutrition and Food Security Research**

In the last pillar of the plan, the Biden-Harris Administration dedicates itself to developing innovative, inclusive, impactful, and science-based policy solutions to tackle nutrition and food

insecurity. To achieve this goal, they have outlined several key strategies. First and foremost, they aspire to strengthen nutrition research funding to support evidence-based policies and ensure consistent and groundbreaking research efforts. In addition, the administration plans to establish a coordinated federal vision for advancing nutrition science by fostering collaborative research practices and identifying crucial research needs and data gaps.

Recognizing the importance of diversity and inclusion in nutrition, health, and food security research, the administration emphasizes the selection of a diverse 2025 Dietary Guidelines Advisory Committee. It also prioritizes conducting research focused on specific populations, such as American Indians and Native Alaskans. The administration intends to invest in advanced training in artificial intelligence to recruit trainees from historically excluded groups and leverage extension programs to reach underserved populations (Biden, 2022).

The administration also acknowledges the need for innovative approaches in research related to the prevention and treatment of diet-related diseases. They plan to employ machine learning and artificial intelligence methods to better understand the complex interactions between food, nutrition-related data, and health outcomes. Exploring the interplay between nutrition and overall well-being, as well as developing methodologies to assess 24-hour patterns of diet, physical activity, and sleep, are also key objectives (Biden, 2022).

To improve data collection and inform strategic decisions, the administration aims to enhance data collecting methods and infrastructure. This includes updating national data collection processes to monitor population intake of sodium and added sugars. Additionally, they will conduct surveys and evaluations of federal assistance programs to understand their impact and identify areas for improvement. Recognizing the significance of social determinants of health (SDOH), the administration plans to measure social risk factors, such as food insecurity, among

at-risk Medicare Advantage beneficiaries. They will also develop research agendas focused on food insecurity, hunger, malnutrition, and behavioral health issues among older adults (Biden, 2022).

The administration further endeavors to map food access with housing data, address food insecurity among HUD-assisted individuals, and analyze the root causes and impacts of food insecurity. By implementing these strategies, the Biden-Harris Administration seeks to advance nutrition and food security research, promote health equity, and develop evidence-based policies that address the diverse needs of all Americans (Biden, 2022).

## **7.0 Does the Food Institute Meet the Five Pillar Requirements?**

The primary objective of this section is to undertake a comprehensive evaluation of the competencies and overall successes of the Food Institute programs. By employing the five pillars outlined in the Biden-Harris National Strategy on Hunger, Nutrition, and Health as the framework and standard for this analysis, a multifaceted assessment will be conducted to gauge the program's effectiveness and impact. To accomplish this, a rigorous examination of the program's various components, such as its educational structure, operational strategies, and resource allocation, will be undertaken. The evaluation will delve into the extent to which the Food Institute program aligns with and contributes to the overarching objectives and targets set forth by the Biden-Harris National Strategy. Through an analysis of the program's outcomes, achievements, and challenges, this section aims to provide an in-depth understanding of the program's impact on hunger alleviation, nutrition improvement, and health enhancement. This section will also explore the program's implementation strategies, including its collaborations with key stakeholders, community engagement efforts, and policy advocacy initiatives. By examining the program's partnerships and collaborative endeavors, the evaluation will assess the effectiveness of the Food Institute in fostering sustainable solutions, mobilizing resources, and driving positive change in the domains of food insecurity, nutrition, and health. Lastly, the section will analyze the program's success indicators and performance metrics, considering both quantitative and qualitative data. This comprehensive approach will enable a nuanced evaluation of the program's outcomes, ranging from key statistical measures to testimonials and narratives of program beneficiaries, stakeholders, and experts.



## **7.1 Pillar One Competencies**

The Food Institute program is dedicated to addressing the needs of food-insecure individuals by providing them with valuable nutrition education. The Food Institute also recognizes the importance of connecting patients with essential community resources if needed. These connections can refer patients to a wide range of partners, including the Center for Community Resources, food banks, utility assistance programs, and transportation services. By providing this valuable assistance, the Food Institute ensures that individuals receive comprehensive support in addressing the various challenges associated with food insecurity. During the summer months, the program assists patients in acquiring farmer's market vouchers, promoting the consumption of fresh produce, and supporting local farmers. By leveraging this collaboration, the Food Institute takes a proactive approach in making nutritious options readily available and affordable for individuals facing food insecurity.

Overall, the Food Institute effectively fulfills the goals of the first pillar. By providing nutrition education, facilitating increased accessibility to farmers markets and healthy foods, offering tailored healthy eating education, engaging case managers, connecting individuals to community resources, and establishing meaningful partnerships throughout the community.

## **7.2 Pillar Two Competencies**

The Food Institute's establishment was rooted in an analysis of community data and input from key stakeholders, which revealed a pressing need to address food insecurity within the Butler community. Originally conceived as a program to combat this issue, it has since evolved into a

comprehensive Lifestyle Medicine Department within Independence Health System. The Food Institute operates on a referral-based system, where patients are screened, during medical appointments, for food insecurity and other social determinants. Notably, the program serves all individuals in the community, regardless of their insurance coverage, although most of the population currently served falls under Medicare, Medicaid, or self-pay coverage. Additionally, The Lifestyle Medicine Department provides free Lifestyle Coaching classes that patients and community members can participate in (Appendix A).

Through its comprehensive approach, the Food Institute aligns with the competencies outlined in the second pillar of the National Strategy for Hunger, Nutrition, and Health. The program not only provides nutrition education and food support but also aims to address the underlying causes of food insecurity. By offering interventions that can be classified as “Lifestyle Coaching,” the entirety of the Lifestyle Medicine Department supports the prevention of diet-related diseases and thus the overall objective of reducing healthcare costs. The program's commitment to expanding access to these services and advocating for universal screening for social determinants of health further exemplifies its alignment with the second pillar.

### **7.3 Pillar Three Competencies**

The third pillar encompasses various objectives aimed at improving the food labeling system, creating healthier food environments, supporting nutrition education, and empowering consumers to lead healthy lifestyles. The Food Institute effectively aligns with these goals through its comprehensive approach.

During their time in the Food Institute, patients receive four lessons from a nutrition liaison in basic nutrition. These one-on-one lessons are conducted in a nurturing environment to foster personalized learning. Upon completing the program, patients have the option to participate in graduate courses conducted in a group setting. By transitioning to group sessions, the Food Institute aims to create connections among its participants and cultivate a supportive environment. The lessons cover a range of topics, including MyPlate information, food safety, label reading, fat intake, sodium intake, sugar intake, and meal planning. To ensure ongoing access to educational materials, each participant receives a lesson book containing all the covered content, allowing them to re-read the material whenever needed. Participants also receive a packet of healthy recipes tailored to the food ingredients provided during each meeting. They also have access to a healthy, budget-friendly recipes through the Food Institute database. Regular review of recipes and content by the nutrition liaison and a registered dietician ensures that the information remains up to date with MyPlate guidelines while keeping the patient experience fresh and exciting.

Beyond the Food Institute program, patients can further enhance their knowledge and skills through the Lifestyle Coaching program within the Department of Lifestyle Medicine. The Lifestyle Coaching Program provides patients with additional education and ongoing support groups to help connect patients with others on similar health journeys. The Food Institute promotes education of the MyPlate Shop Simple digital tool. The Food Institute integrates the tool into menu planning lessons and the Lifestyle Coaching Menu Planning course. By encouraging the adoption of this user-friendly resource, the program supports individuals in making informed choices and simplifies the process of selecting nutritious foods.

Overall, the Food Institute, along with the entire Lifestyle Medicine Department, fulfills the competencies and goals outlined in the third pillar of the national strategy. By providing

comprehensive nutrition education on menu planning, healthy purchasing options, access to healthy recipes, facilitating group learning and support, collaborating with local farmers for a monthly farmers' market, and promoting the use of digital tools, the Food Institute plays a vital role in creating healthier food environments, supporting nutrition education, and empowering individuals to lead healthy lifestyles.

#### **7.4 Pillar Four Competencies**

The fourth pillar focuses on creating environments that facilitate physical activity and enhancing physical activity education. The Lifestyle Medicine Department acknowledges the significant impact of physical activity on overall health and well-being. Through the various courses offered, participants gain a deeper understanding of the benefits of regular physical activity, including improved cardiovascular health, stress reduction, weight management, and enhanced mood and mental well-being. By incorporating physical activity education within the Lifestyle Coaching program, the department recognizes that a comprehensive approach to health includes both nutrition and exercise.

Within the Lifestyle Medicine Department, the Lifestyle Coaching Program offers a class titled "Reducing Barriers to Physical Activity," (Appendix A). Participants take a quiz to identify their specific barriers to being physically active. The class then explores strategies to overcome each identified barrier, providing practical guidance and support. Moreover, the class discusses general guidelines for physical activity, as well as in other Lifestyle Coaching courses such as Stress Management, Heart Health, Diabetes Management, and Volumetrics.

While physical activity is briefly addressed in the Food Institute lessons, patients are encouraged to further discuss their specific physical activity needs and considerations with their primary care providers. The Food Institute primarily focuses on nutrition education, but it also reinforces the importance of physical activity as a key component to a healthy lifestyle. The Food Institute serves as a steppingstone to inspire patients to adopt a more active lifestyle by emphasizing the interplay between nutrition and physical activity. By promoting the importance of physical activity and providing guidance within the scope of its programs, the Food Institute contributes to the objectives of the fourth pillar of the national strategy. While it may not have a dedicated physical activity arm, the program recognizes the vital role of exercise in achieving optimal health outcomes and supports patients in pursuing a more active lifestyle through the integration of physical activity education and referrals to appropriate resources.

### **7.5 Pillar Five Competencies**

The fifth pillar focuses on investing time and resources into expanding food and nutrition research, diversifying the nutrition workforce, and emphasizing the collection and utilization of data for advancing the field.

The Food Institute recognizes the significance of data collection and utilization in driving program improvement and serving as a catalyst for the development of similar initiatives statewide. Data is gathered via surveys and the hospital's electronic medical records system. The collected data encompasses a wide range of information, including body mass index (BMI), blood pressure, insurance type, gender, zip code of residence, ethnicity, transportation type, household size, and numerous other data points. This comprehensive data collection approach enables the

Food Institute to gain valuable insights into the demographics, health profiles, and specific needs of its patient population.

In addition to survey-based data collection, the Food Institute team has developed a recipe database made available on the hospital's website. The database undergoes quarterly updates conducted by the Lifestyle Medicine Department and ensures that fresh and relevant food content is made available to the public. By providing access to this database, the Food Institute supports individuals in making informed food choices and encourages the adoption of healthy eating habits.

Beyond data collection within its own program, the Food Institute actively participates in collaborations with health systems throughout Pennsylvania. Through these collaborations, similar programs across the state join forces to create innovative changes and address food insecurity more comprehensively. The exchange of data, sharing of ideas, and collaborative efforts contribute to the collective goal of advancing food security initiatives statewide. While the Food Institute itself does not conduct scientific research, its participation in data collection, trend identification, data sharing, and dissemination of updated materials aligns with the objectives of the fifth pillar. Moreover, the program's collaboration with other health systems fosters the exchange of knowledge and best practices, facilitating the development of evidence-based strategies to address food insecurity at a broader level.

## 8.0 Statistical Success

In addition to aligning with the objectives outlined in the National Strategy for Hunger, Nutrition, and Health, the Food Institute and the entire Lifestyle Medicine Department have achieved significant statistical success in reaching the target population and demonstrating positive outcomes. Despite currently utilizing a hybrid model, the Lifestyle Coaching program has begun to pilot an on-demand video series for some of its classes. Since the release of these videos, participation has increased from approximately 30 participants to approximately 170 participants per month. Survey data also shows that when asked, ‘If this class wasn’t offered, where would you have gotten this information?’ 56% of respondents said they would not have received this information. 41% would have looked for information on the internet, and 3% would have asked their doctor. Additionally, 90% of respondents agree or strongly agree that they will use the information they have learned. This data suggests that having access to these courses free of charge has reduced barriers, allowing patients to receive quality, science-based information to improve their health.

As of December 31, 2023, the Food Institute has received a total of 963 referrals, with a participation rate of 70% for 1<sup>st</sup> appointments. Among the participants, there is a gender distribution of 33% males and 67% females. Within this population, 25% require assistance or utilize public transportation to attend their appointments (Appendix B Figure 1). Furthermore, 45% of patients report using a food pantry, highlighting the prevalence of food insecurity among the target population. It is noteworthy that 40% of those served are beneficiaries of Medicaid, while 61% receive benefits from SNAP. These statistics indicate that the program effectively reaches individuals in need and provides crucial support to vulnerable populations.

Survey data collected from participants reveals valuable insights into their specific needs. The analysis shows that 56% of patients require kitchen tools to facilitate the consumption of fruits and vegetables. These items are provided by the Food Institute when identified. Commonly distributed kitchen tools include a can opener, vegetable peeler, meat thermometer, and kitchen shears. These tools enable patients to prepare healthy food choices into their daily routines.

Participants of the Food Institute are asked a series of questions before their first visit and again after their fourth visit, to assess behavioral changes. One question used is related to fruit and vegetable consumption, asking whether participants eat five or more servings per day. Initially, less than 50% of participants consumed five or more servings of fruits and vegetables more than three times a week. Upon completion of the program, this figure increased by 25%, resulting in 82% of graduates consuming five or more servings at least three times a week (Appendix B Figure 2). Another question measures the ability to prepare healthy recipes, and initially, 69% of patients agreed or strongly agreed with this statement. Upon completion of the program, this number increased by 26%, indicating that 95% of graduates agree or strongly agree that they possess the knowledge to prepare healthy meals (Appendix B Figure 3). These self-reported data points reflect positive improvements in self-efficacy and behavioral changes among program participants. Completion of the Food Institute program also offers a twice-a-month class for ongoing nutrition education, recipes, and food demonstrations. In its first full year of implementation, over 180 people have engaged with these graduate classes. Biometric reports have also shown positive trends in patients' BMIs and blood pressure.

The combination of self-reported data indicating improved self-efficacy and behavior change, along with positive trends observed in biometric reports, and continued involvement with



the program showcases the significant impact and success of the Food Institute and the entire Lifestyle Medicine Department has achieved.

## 9.0 Barriers

Barriers exist that impact the mission of the Food Institute. These barriers necessitate innovative strategies and resource management to overcome the challenges and make a positive impact on the community. One barrier is transportation and some patients may have to travel considerable distances to access the Food Institute's services. Approximately, 29% of patients require assistance or rely on public transportation to attend appointments (Appendix B Figure 1). The travel burden can discourage potential participants who would benefit from the Food Institute. To address this issue, the Food Institute has proactively implemented video and telephonic sessions as an alternative for patients who face difficulty traveling to an onsite location. This adaptation allows patients to receive nutrition education remotely, increasing accessibility and convenience. Additionally, to further alleviate the transportation challenge, the Food Institute has established a partnership with a local resource that offers limited funding to support patients in getting to and from their appointments. This collaboration aims to remove financial constraints as a barrier and facilitate access to vital services for those in need.

Another significant obstacle faced by the Food Institute is funding for food shares provided to program participants. As a program funded entirely through grants and donations, the Food Institute operates under budgetary constraints, limiting its capacity to function as a walk-in service for the community. The increasing cost of food due to a 9.9% inflation in 2022 (USDA, 2024) has further compounded the challenge. As a result, the cost of food per patient has risen from \$58.53, for 10 meals for a family of four, to \$83.13. This increase has a direct impact on the number of patients the program can serve effectively. To address the funding barrier, the Food Institute continuously seeks additional grant opportunities and donor support. The program's success relies

heavily on the generosity and commitment of the funding sources willing to donate so that operations are maintained, and availability of healthy food rations can become more of a guarantee. Despite facing financial challenges, the Food Institute remains steadfast in its mission, leveraging available resources effectively and exploring innovative approaches to maximize its impact on the community.

In navigating these barriers, the Food Institute exemplifies resilience and adaptability by implementing telehealth options and forging partnerships to support patient transportation needs. By prioritizing accessibility and exploring sustainable funding avenues, the program remains committed to building healthier communities and empowering individuals with the knowledge and resources to lead healthy lives despite the challenges it faces. Overall, the Food Institute continues to make a positive impact on the lives of those it serves, fostering healthier communities one step at a time.

## 10.0 Recommendations

To further enhance the effectiveness of achieving the Food Institutes mission of building healthier communities and addressing food insecurity, several key initiatives can be enacted that improve the program's efficacy. First, to continue aligning with the National Strategy on Nutrition, Hunger, and Health, the Food Institute should further develop and implement culturally tailored educational materials. Although the current population of the service area is predominantly white, consideration of diverse cultural preferences, traditional foods, and cooking practices can potentially foster greater engagement and acceptance of the program's nutritional guidance among the diverse patient populations that do exist. By incorporating cultural relevance into the educational materials, the Food Institute can ensure that its messages resonate with individuals from different backgrounds, enhancing their ability to adopt healthier eating habits.

To improve the program's participation rate, the Food Institute could identify and engage ambassadors within the community who can extend the program's outreach. These ambassadors can be local leaders, healthcare providers, community volunteers, or other influential members. By actively promoting the Food Institute's services and sharing success stories, these ambassadors can help increase awareness and encourage individuals who may benefit from the program to participate. The building of relationships with local businesses, organizations, and philanthropic entities can lead to in-kind donations, resources, and other forms of support that can help alleviate funding challenges. By actively engaging with these partners and showcasing the positive impact of the program, the Food Institute can foster a sense of shared responsibility and generate ongoing support for its initiatives.

To address the challenges posed by budgetary constraints due to rising food prices, the Food Institute should consider creating a fundraising campaign to establish long-term donor relationships. By reaching out to individuals and organizations that align with the program's mission, the Food Institute can cultivate ongoing financial support. Additionally, exploring opportunities for generating revenue, such as fee-based services or partnerships with insurance providers, can provide alternative funding sources to sustain the program's operations and expand its reach.

In addition to community partnerships, the Food Institute should collaborate with local schools and youth organizations to extend its impact to younger generations. By engaging with schools and youth programs, the program can develop age-appropriate nutrition education content, conduct workshops in classrooms, or actively participate in existing school wellness programs. These collaborations can empower children and adolescents to make informed food choices and positively influence the eating habits of their families. Investing in the health and well-being of younger generations will have long-term benefits for the community's overall health. Furthermore, the Food Institute should establish a strategic social media presence to reach a broader audience within the community. By leveraging popular social media platforms, the program can share science-based educational content, success stories, and program updates in real-time. This online presence will allow the Food Institute to interact with the community, respond to inquiries, and disseminate valuable information that can contribute to increased awareness, engagement, and support.

By implementing these recommendations, the Food Institute can bolster its efforts to address food insecurity, promote nutrition education, and build healthier communities. By leveraging technology, embracing diversity, and strengthening partnerships, the program can

become a model for effective, accessible, and sustainable food security initiatives not only within its region and beyond. The continued dedication to innovation and community engagement will pave the way for lasting positive change and improved well-being for individuals and families facing food insecurity.

## 11.0 Summary

In this comprehensive evaluation, the Food Institute stands as a shining example of how dedicated efforts and strategic alignment with the Biden-Harris National Strategy on Hunger, Nutrition, and Health can create a transformative impact on food insecurity and health in communities. The Food Institute has encompassed all five pillars of the strategy in the pursuit of its mission.

Recognizing that knowledge is a powerful tool in driving positive behavioral change, the program invests significantly in educational initiatives. Through its curriculum and engaging materials, participants gain valuable insights into making informed and healthier food choices. This approach empowers individuals to adopt sustainable dietary habits, thereby reducing the risk of diet-related diseases. Furthermore, the Food Institute has been instrumental in bridging the gap between individuals and essential community resources. By facilitating access to case management and support services, the program addresses the multifaceted causes of food insecurity. Recognizing that food insecurity is often intertwined with various social determinants of health, the Food Institute ensures that its participants receive comprehensive support, enhancing their overall well-being.

A key aspect that sets the Food Institute apart is its unwavering commitment to collaborating with local farmers and suppliers. By promoting healthier food options and sourcing from local agricultural communities, the program not only improves the nutritional content of the food provided but also supports regional economies. This symbiotic relationship benefits both the participants and the community at large, fostering a sense of shared responsibility in tackling food insecurity.

Data collection and utilization are central to the Food Institute's operation. Through data gathering, the program not only evaluates its own effectiveness but also contributes to filling in the gaps that exist. By collaborating with local partners and health systems across the state, the Food Institute enhances the collective understanding of food insecurity and health-related challenges, driving evidence-based interventions on a larger scale. The impressive success of the Food Institute is evident in the tangible improvements observed in patient outcomes. Self-reported data and biometric reports reveal positive trends, affirming the program's effectiveness in positively influencing the health of its participants. These outcomes not only underscore the importance of food security initiatives but also highlight the transformative potential of comprehensive and community-driven interventions.

In conclusion, the Food Institute serves as a valuable resource in the fight against food insecurity and poor nutrition. Its alignment with the standards set forth by the Biden-Harris National Strategy on Hunger, Nutrition, and Health has yielded exceptional results. By prioritizing nutrition education, forging community partnerships, addressing barriers to physical activity, and promoting data-driven approaches, the program has become a model for sustainable and impactful food security initiatives. As it continues to build on its achievements and implement the recommended strategies, the program has the potential to inspire and guide similar efforts nationwide.



# Appendix A




**JULY-DECEMBER 2023 VIRTUAL SCHEDULE**
FREE  
CLASSES

**■ VOLUMETRICS WEIGHT MANAGEMENT PROGRAM**

The Volumetrics Weight Management Program is available with video on demand viewing. Biweekly videos will be emailed to you for viewing at your convenience. Virtual support groups will be on the following dates:

**Wednesdays – 5:30 pm - 6:30 pm**

- July 12, 26
- August 9, 23
- September 6, 20
- October 4, 18
- November 1, 15, 29
- December 6, 20

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**■ DIABETES LIFESTYLE COACHING 4-WEEK SERIES**

This 4 week series is based on ADCE57 Self-Care Behaviors for people with diabetes. You will learn about reducing risk, monitoring, taking medication, healthy eating, being active, and more!

**Video on Demand Series with Virtual Support Group\***

- Thursdays, July 6 & 13 – 4:30 pm - 5:30 pm
- Thursdays, November 7 & 14 – 4:30 pm - 5:30 pm

**Virtual Series**

- Tuesdays, September 5, 12, 19, 26 – 5:00 pm - 6:00 pm

\* Video on Demand Series – the Diabetes Lifestyle Coaching 4 lesson videos will be sent via email to view at your leisure and 2 virtual support groups will be available to discuss content and ask questions.

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**■ HEART HEALTHY SEMINARS MEDITERRANEAN LIFESTYLE**

- Tuesday, August 1 – 4:30 pm - 5:30 pm
- Thursday, October 19 – 1:00 pm - 2:00 pm

**DASH - Dietary Approaches to Stop Hypertension**

- Tuesday, September 5 – 4:30 pm - 5:30 pm
- Thursday, November 16 – 1:00 pm - 2:00 pm

**■ PLANT-FORWARD EATING**

- Tuesday, August 17 – 4:30 pm - 5:30 pm
- Thursday, October 3 – 4:30 pm - 5:30 pm

**■ AMERICAN HEART ASSOCIATION LIFE'S ESSENTIAL 8™**

- Thursday, September 21 – 1:00 pm - 2:00 pm
- Tuesday, December 12 – 4:30 pm - 5:30 pm

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**■ MINDFULNESS FOR BRAIN HEALTH**

Explore mindfulness and meditation benefits and techniques to lower your risk of heart and brain disease.

- Wednesday, September 27 – 12:00 pm - 1:00 pm

**■ BRAIN HEALTHY LIFESTYLES**

Learn key brain healthy lifestyles including how to socialize more, get active, eat better, and sleep well.

- Wednesday, October 25 – 12:00 pm - 1:00 pm

**■ REDUCING BARRIERS TO PHYSICAL ACTIVITY**

Daily physical activity improves health and well-being, join this seminar for information, support, and motivation to get moving.

- Tuesday, October 10 – 5:00 pm - 6:00 pm
- Tuesday, December 12 – 12:00 pm - 1:00 pm

**■ MENU PLANNING**

- Tuesday, July 18 – 12:00 pm - 1:00 pm
- Thursday, October 12 – 4:30 pm - 5:30 pm

**■ NEW! STRESS MANAGEMENT**

- Tuesday, September 19 – 5:00 pm - 6:00 pm

**■ NICOTINE CESSATION**

Learn about the science behind a successful quit attempt.

- Tuesday, August 15 – 12:00 pm - 1:00 pm
- Tuesday, November 14 – 5:00 pm - 6:00 pm



## ON-SITE COOKING DEMOS

Tasting is believing! Independence Health System is hosting on-site cooking demos as a part of the Lifestyle Coaching curriculum at both the Butler and Clarion campuses. Learn delicious, economical recipes to help meet nutrition goals.

### BUTLER

The following classes will host in-person cooking demos in the Food Institute found at Butler Memorial Hospital, Brady Street entrance:

- **MEDITERRANEAN LIFESTYLE**  
Tuesday, August 1 – 4:30 pm - 5:30 pm
- **DASH - Dietary Approaches to Stop Hypertension**  
Tuesday, September 5 – 4:30 pm - 5:30 pm
- **PLANT-FORWARD EATING**  
Tuesday, October 3 – 4:30 pm - 5:30 pm
- **DIABETES LIFESTYLE COACHING SUPPORT GROUP**  
Tuesdays, November 7 & 14 – 4:30 pm - 5:30 pm
- **AMERICAN HEART ASSOCIATION LIFE'S ESSENTIAL 8™**  
Tuesday, December 12 – 4:30 pm - 5:30 pm

### CLARION

The following classes will host in-person cooking demos at the Health and Wellness Center in the Richard A. Clark Conference Room at Trinity Point:

- **DIABETES LIFESTYLE COACHING SUPPORT GROUP**  
Thursdays, July 6 & 13 – 4:30 pm - 5:30 pm
- **PLANT-FORWARD EATING**  
Thursday, August 17 – 4:30 pm - 5:30 pm
- **AMERICAN HEART ASSOCIATION LIFE'S ESSENTIAL 8™**  
Thursday, September 21 – 1:00 pm - 2:00 pm
- **MEDITERRANEAN LIFESTYLE**  
Thursday, October 19 – 1:00 pm - 2:00 pm
- **DASH - Dietary Approaches to Stop Hypertension**  
Thursday, November 16 – 1:00 pm - 2:00 pm

### NEW!

#### Video on Demand

This will be available in the near future for the heart healthy seminars: Mediterranean, DASH, Plant-Forward Eating and AHA Life's Essential 8. Videos include Q&A with a cardiologist, PowerPoint lesson, cooking demonstration and electronic handouts. A Menu Planning video is also available. Please check our website frequently as we roll out this new viewing option.

#### Masters Cooking Classes

**Coming Soon!** An in-depth cooking experience on the Mediterranean eating plan. Participants will receive a cookbook, cooking demos with a take home ingredient kit, taste testing and more. Visit our website for more information, or to register. Space is limited! Fee is \$50 per class.

## REGISTER FOR CLASSES TODAY!

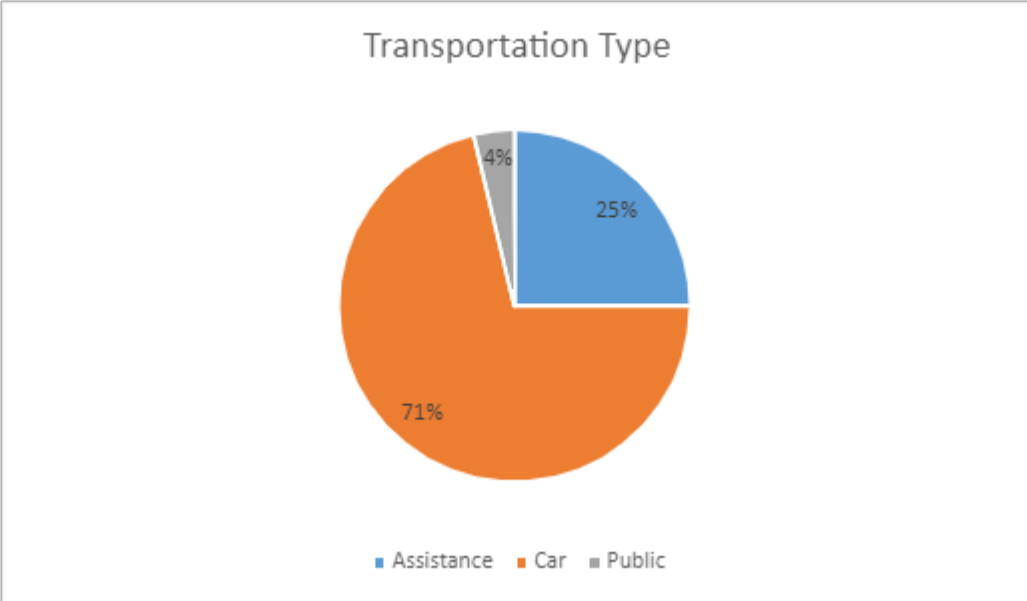


Scan QR code for more information and to register online, or email [BHSLifestyleCoaching@butlerhealthsystem.org](mailto:BHSLifestyleCoaching@butlerhealthsystem.org)

Questions? Call 724-284-4504.

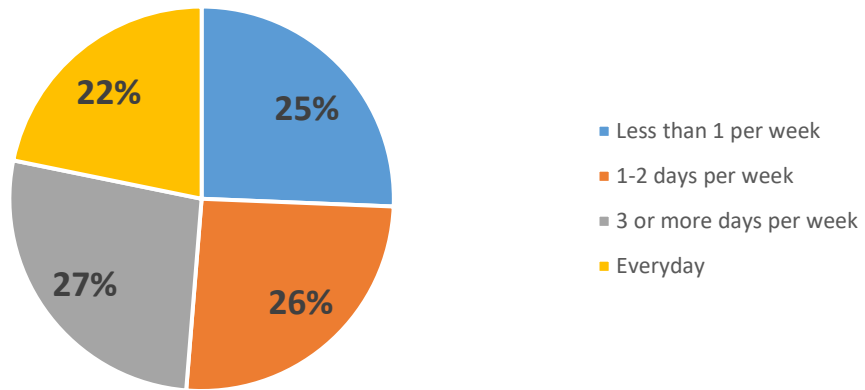
The Lifestyle Coaching programs are provided complimentary by Independence Health System.

**Appendix B**



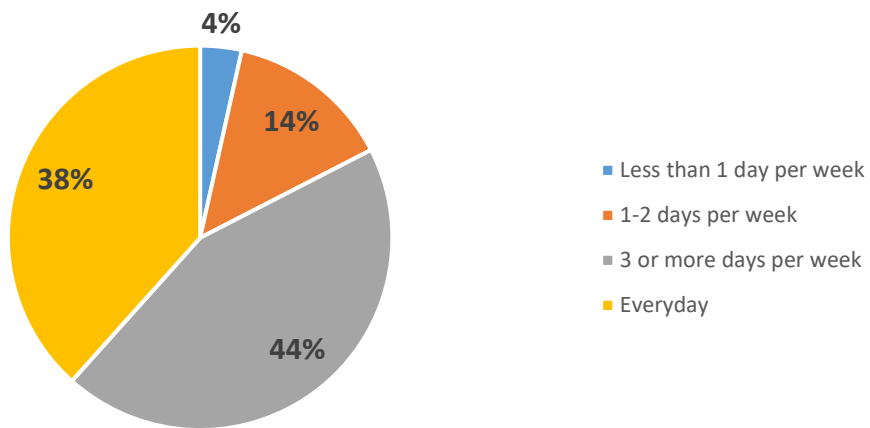
**Appendix B Figure 1**

### How Often Do You Eat 5 or More Vegetables?



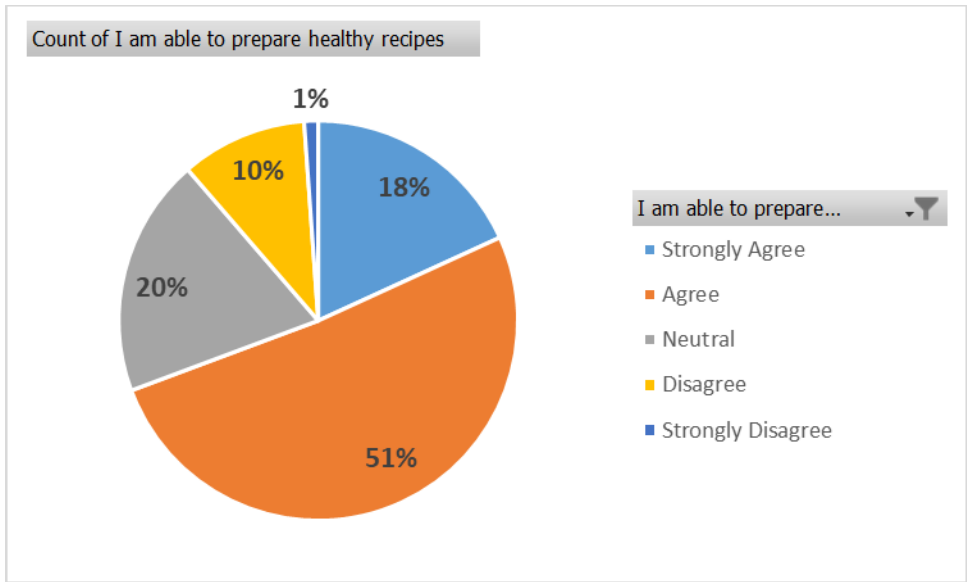
Before

### How Often Do You Eat 5 or More Vegetables?

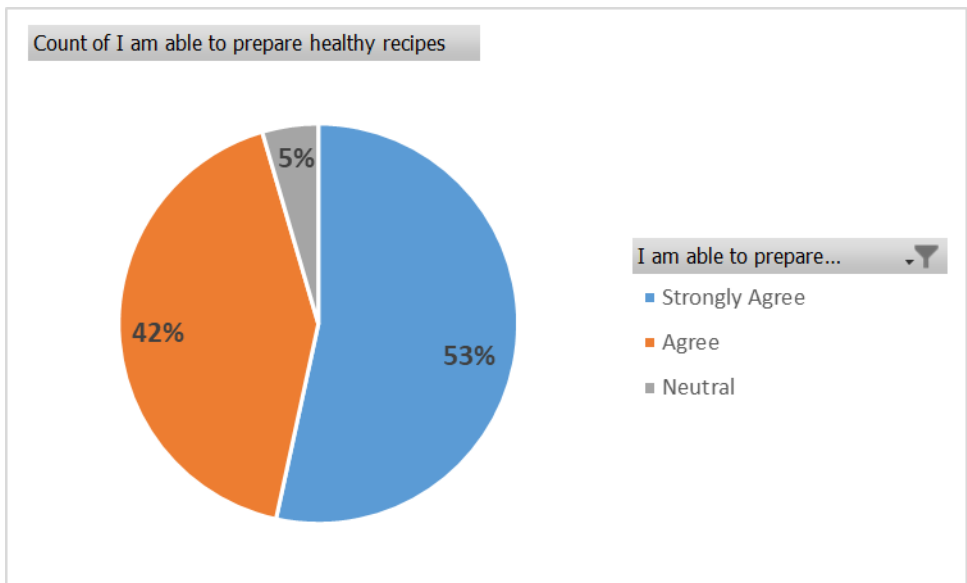


After

**Appendix B Figure 2**



Before



After

Appendix B Figure 3

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