**Summary/Overview**

Food insecurity and tobacco use are major public health issues in the U.S. with serious implications for population health and well-being. Food insecurity – or insufficient access to the amount of affordable, nutritious foods needed to live an active and healthy lifestyle – affects approximately 42.4 million people in the U.S. and can lead to poor health outcomes such as heart disease and diabetes.\(^1\) Despite a decline in rates in recent decades, tobacco use, especially cigarette smoking, remains a leading cause of death and preventable diseases in the U.S.\(^2\) Though they may seem unrelated, research suggests that these phenomena are intertwined\(^3,4\) and may be addressed more equitably and effectively if targeted together rather than separately. This report discusses the relationship between food insecurity and tobacco use including who they impact, how they impact health, and how upstream factors like transportation and housing can exacerbate their consequences. It then provides considerations for addressing these health concerns including:

- Bringing culturally relevant food and nutrition programs to people where they live in the community,
- Removing transportation barriers to address structural inequities,
- Addressing low socioeconomic position (SEP) to reduce food insecurity,
- Focusing on cultural sensitivity and the needs of diverse populations, and
- Providing access to tobacco cessation and healthcare.

We use Worcester, Massachusetts as a case example to demonstrate what is possible and suggest strategies that policymakers and other stakeholders can implement to address upstream factors associated with food insecurity and tobacco use.

**Introduction**

**Food and Nutrition Insecurity**

Food insecurity is a household-level socioeconomic stressor influenced by a variety of upstream factors including income, access to transportation, and neighborhood conditions.\(^5\) Households in neighborhoods with lower average socioeconomic position (SEP) — an indicator that accounts for markers of socioeconomic status (SES) including income, education, employment status, housing security, and transportation barriers such as car ownership — are more likely to experience food insecurity.\(^6,7\) Food insecurity is most highly concentrated in neighborhoods and regions designated as food deserts or food swamps (see Food Deserts and Swamps pop-out box). Such neighborhoods can be urban or rural and tend to be characterized by lower average SEP.

Food insecure households experience more nutrient deprivation than their counterparts, placing families at greater risk for negative health outcomes, including diabetes, heart disease, obesity, and various mental health conditions.\(^8,9\) Those experiencing the most severe and chronic forms of food insecurity are more likely to experience the harshest consequences including undernourishment, malnourishment, and even death.\(^10\) Food insecurity also poses significant costs to society. In the last five years, the economic burden associated with food insecurity was estimated to exceed $167 billion each year.\(^11\)
Food Deserts and Food Swamps

**Food deserts** are neighborhoods with limited access to vendors of affordable and nutritious food. **Food swamps**, or neighborhoods where fast food and junk food vendors far outnumber healthy food vendors, have been added to discussions and descriptions of food insecurity more recently. Depending on the prevalence and proximity of healthy and unhealthy food vendors in one area, a neighborhood can be considered both a food desert and a food swamp. Recent research indicates that residence in a food swamp is a stronger predictor of diet-related diseases like obesity than residence in a food desert. These findings suggest that measuring food insecurity by physical access to supermarkets and full-scale grocery stores alone does not capture the full scope of food insecurity and its negative impact on health. The extent of food insecurity may be broader than what has been documented.

Tobacco Use

In a 2020 national survey, more than 47 million adults in the U.S. endorsed use of tobacco products. More than eight million adults reported using multiple tobacco products. Nearly thirty-one million adults indicated they smoked cigarettes, over nine million used e-cigarettes, over eight million smoked cigars. Seventeen million adults used other forms of tobacco such as smokeless tobacco products like chewing tobacco. Rates of tobacco use have declined over several decades. However, smoking rates remain almost twice as high among adults living in poverty relative to those who are not (27% vs 14%, respectively). People in vulnerable socioeconomic situations are more likely to smoke and have greater exposure to the negative effects of smoking. They are also less likely to have successful quit attempts. Consequently, these populations are at greater risk for developing tobacco-related diseases and chronic health conditions (e.g., lung cancer and type 2 diabetes, respectively) relative to communities with higher SEP.

The Relationship Between Tobacco Use and Food Insecurity

Studies have found that cigarette smoking is more common among individuals experiencing food insecurity relative to those who are not. Compared to individuals without food insecurity, individuals facing food insecurity have greater odds of smoking cigarettes and having more unsuccessful quit attempts. This disparity may be due in part to the reciprocal influence that food insecurity and smoking can have on one another. Food insecurity may perpetuate cigarette smoking as smoking can curb hunger and is often used as a means of coping with life stressors like food insecurity. Simultaneously, the cost of cigarettes and tobacco products conflicts with one’s ability to afford healthy foods, and the addictive properties of nicotine and use of cigarettes for coping make it difficult to quit for financial reasons alone. Thus, programs and strategies that target both food insecurity and smoking cessation among individuals with co-occurring tobacco use and food insecurity may be more effective than those targeting each problem individually.

Impact on Physical and Mental Health

Tobacco use has been linked to many types of cancers including lung cancer. Smoking tobacco products has also been associated with respiratory conditions such as chronic obstructive pulmonary disease (COPD), bronchitis, stroke, and increased risk for type 2 diabetes. Food insecurity has also been associated with many health risks including increased susceptibility to obesity, type 2 diabetes, hypertension, mood/anxiety disorders, and disordered eating. Studies have found evidence that adults facing more severe forms of food insecurity are more likely to report higher levels of eating disorder pathology, dietary restraint, anxiety, depression, and poorer overall health. Individuals with diet- and/or tobacco-related diseases like diabetes may experience further stress from the burden of choosing between treatment of their health conditions versus ensuring sufficient caloric intake for themselves and their families. While these individuals can seek support from existing systems like food banks and food pantries, the limited presence of foods appropriate for those with diabetes,
hypertension, and other diet-related diseases like Celiac’s is often limited or absent. This “Catch-22” can increase psychological distress, compound existing diet-related diseases, and lead to the development of additional health complications including kidney disease, eye disease, and nerve damage in the case of those with diabetes. Among tobacco users, this increase in psychological distress could further derail any attempts to quit and exacerbate risks and symptoms for more tobacco- and diet-related diseases.

**Populations Disproportionally Affected by Both Food Insecurity and Tobacco Use**

**Children and Young Adults**

Prior to the COVID-19 pandemic, households with children were almost 1.5 times more likely to experience food insecurity than households without children. Children in lower SEP households experience tobacco smoke exposure at more than twice the rate of children in higher SEP households (54% and 23%, respectively). Among children, severe food insecurity has been associated with negative socio-emotional outcomes including increased hyperactivity, behavior problems, and insecure attachment in early childhood. Among school-aged children, a similar relationship has been found between food insecurity and externalizing behavior problems (e.g., hyperactivity and delinquency), and challenges with concentration and performance in school. In the most severe cases of food insecurity, clinical levels of aggression can develop in older children. Young people who experience food insecurity in the period between adolescence and early adulthood are also more likely to experience precursors to serious health problems like elevated blood pressure and prediabetes. Children exposed to tobacco smoke in the home are also at increased risk for sudden infant death syndrome (SID), acute respiratory infections, ear infections, asthma, and asthma attacks. Taken together, children experiencing both food insecurity and tobacco smoke exposure are at higher risk for experiencing physical and socioemotional health conditions relative to their peers.

Among college students and emerging adults, food insecurity has been linked to engaging in less moderate-to-vigorous physical activity and getting less days of sufficient sleep. It has also been associated with reduced diet quality and dietary habits that promote weight gain, including skipping breakfast, eating more fast food and less fruits and vegetables, binge-eating, and less cooking. In a national survey from 2014–2015, adolescents facing food insecurity were more likely to report skipping breakfast, having poorer sleep, smoking cigarettes, and drinking alcohol relative to their peers. These behaviors are thought to be driven and maintained by poverty and cycles of food scarcity. Poverty can contribute to greater dependence on lower-cost, nutrient deficient, and energy dense foods like junk food and fast food, while cycles of food scarcity can lead to dietary cycles of overeating when food is available and food-restricting when food is less available.
Populations with Low Socioeconomic Position (SEP)

Food insecurity prevalence rates tend to be higher among populations in low SEP neighborhoods. Tobacco users in these groups have fewer successful quit attempts and face more challenges when trying to quit. People in low SEP communities can face significant life stressors such as unemployment, financial strain, family problems, physical or mental health challenges, substance use, and/or crime. Smoking cigarettes may be one way that they cope with these stressors. Cigarette smoking may also serve as a tool to curb feelings of hunger among those with limited access to food. Common symptoms of nicotine withdrawal include insomnia and feelings of restlessness, frustration, irritability, anxiety, and depression. These withdrawal symptoms can amplify stress or be misinterpreted as stress. Taken together, these factors may intensify stress associated with low SEP which can also foster selection or overeating of unhealthy foods as an additional coping strategy.

Black, Indigenous, and People of Color (BIPOC) and Culturally Diverse Populations

Black, Indigenous, and People of Color (BIPOC) populations are disproportionately affected by food insecurity. In 2021, 20% of Black households and 16% of Hispanic households experienced food insecurity which is more than double the number of White Non-Hispanic households that experienced food insecurity. Relative to non-Hispanic White individuals, people of color in the U.S. — particularly Latinos and Black Americans — are disproportionately impacted by smoking-related diseases like lung cancer and heart disease. They also tend to have lower rates of successful smoking cessation. These trends persist even though adult smoking prevalence rates tend to be lower among Latinos and African Americans, and these populations have larger proportions of light and intermittent smokers than non-Hispanic White individuals. On average, African American smokers initiate smoking at a later age, report greater interest in smoking cessation, and report use of fewer cigarettes per day than non-Hispanic White individuals; yet they bear the burden of poor smoking-related health outcomes and are more likely to continue smoking after being diagnosed with a smoking-related disease. These disparities may be due in part to healthcare-related disparities. Receiving advice to quit from a healthcare professional and the use of nicotine replacement therapies (NRTs) like nicotine patches, gum, and lozenges have both been associated with successful smoking cessation. However, compared to non-Hispanic White smokers, African American and Latino smokers are less likely to be advised to quit by a healthcare professional or to use or receive prescriptions for NRTs.

In 2021, African American and Latino households were more than twice as likely to experience food insecurity compared to White Americans in the U.S. Similar trends have persisted for American Indian/Alaskan Native households over the last 20 years. While some attribute these disparities to the disproportionate impact of poverty and other socioeconomic factors on communities of color, others have reported that racism is independently associated with food insecurity, separate from poverty and socioeconomic status. Specifically, forms of structural and institutional racism that have a long history in the U.S. (e.g., residential segregation by race/ethnicity and discriminatory financial practices) contribute to disparities in food insecurity. Thus, interventions to decrease these inequities may be less effective if they do not also address underlying structural racism and discrimination.

Figure 2: Percent of Food Insecure Households in 2022 by Race/Ethnicity

Food Accessibility, Insecurity and Health Outcomes (nih.gov)
Upstream Factors That Contribute to Food Insecurity and Tobacco Use

There are several upstream factors related to the social determinants of health that impact food insecurity, tobacco use, and other health disparities. These upstream factors include the neighborhood environments, sociocultural inequities, and economic factors like income and wealth. We highlight some of these factors below.

### Housing

High rent and housing costs contribute to food insecurity. The burden of high rent may force families with lower income to pay a disproportionate amount of their income on housing costs. This financial strain is further exacerbated in households with one or more tobacco users given the cost of tobacco products and the decreased likelihood of successful tobacco cessation in these populations. Consequently, these families are left with less money for food and an increased risk for unstable housing and/or homelessness. Financial strain from this situation may necessitate skipping meals or going without food to maintain stable housing. Establishing a rent control policy or offering housing assistance or rent subsidies to populations with lower SEP may help address unstable housing, food insecurity, and the financial stress that maintains tobacco use.

Historically marginalized groups such as people with low SES, those that were homeless or mentally ill, and/or minority segments living in the U.S. were targeted by tobacco companies marketing their products. Implementing tobacco-free policies in apartment buildings can limit the amount of exposure to second hand smoke and help reduce tobacco use. Having a smoke-free home has been shown to help decrease the amount of tobacco consumed or with remaining tobacco-free for at least ninety days. The extent of protection from establishing smoke free homes may vary across racial and ethnic groups. For example, Hispanic/Latino (78.0%) and Asian American/Pacific Islander (79.2%) individuals were more likely to have a complete smoking ban at home compared with non-Hispanic White individuals (64.0%) and African Americans (64.4%). However, smoking rates remain high in the groups and more research and culturally sensitive interventions are needed.

### Transportation Limitations

Neighborhoods with lower average SEP are less likely to have farmers markets, supermarkets, or large grocery stores with options for fresh fruits, vegetables, and other healthy foods. Consequently, people living in these neighborhoods may rely heavily on corner stores or convenience stores where healthy food options are limited and where food may cost more. They are also more likely to rely on cheaper fast-food restaurants which can contribute to poor diet, higher caloric intake, obesity, and other diet-related diseases.

Urban areas (downtown) or rural areas may not have large grocery stores or markets, and the distance people may need to travel to obtain affordable healthy foods can be prohibitive. Limited public and private transportation options may compound the challenges associated with accessing healthy foods. Public transportation systems can be unreliable, and they have limitations in where and when they can be used. Those who do not own cars may only be able to purchase as much as they can carry home from public transit stops, or they may have to rely on others for transportation. As a result, they cannot buy food as often as they can carry home from public transit stops, or they may have to rely on others for transportation. As a result, they cannot buy food as often as needed, which may limit the amount of fresh food they purchase. This inconsistent access may also support the continued use of tobacco products to curb hunger during periods of food scarcity. These urban and rural communities may also be further away from quality healthcare, education, and jobs that could help alleviate many of the issues that populations with low SEP face.

### Current Approaches to Addressing Food Insecurity

Communities have implemented a variety of approaches to address food insecurity. These approaches include non-profit food banks or food pantries that serve people in the community, schools, or in other health service organizations. There are also mobile food pantries that deliver food throughout the community. Individuals and families who meet set low-income requirements may apply to receive food subsidies like SNAP (Supplemental Nutrition and Assistance Program). These subsidies may be in the form of a pre-paid debit card or cash vouchers that can be used to purchase food at participating stores in the community. Food insecurity among
children and college students has been addressed via free or reduced school lunches and/or breakfasts through school meal programs and/or summer meal programs. Community gardens which provide space for people to grow their own vegetables or fruits have also become a popular strategy for targeting food insecurity in low-access neighborhoods. However, even when resources are available, a lack of culturally diverse food options may deter potential recipients of food assistance from utilizing existing services.

Many states are piloting Medicaid 1115 waivers which expand the scope of Medicaid coverage and address many social determinants of health including food insecurity. These waivers may allow for Medicaid funds to cover the costs of nutrition education, meals designed to address health issues like diabetes, or upstream factors contributing to food insecurity such as the costs of rent and utilities.

**Worcester as a Case Study**

Worcester, Massachusetts, is the second largest city in New England with a population of approximately 206,000. It is part of Worcester County located in central Massachusetts and approximately one hour west of Boston, MA. There are 76,000 households and 84,000 housing units in Worcester. Forty-three percent (43%) of housing units are occupied by their owners. Rates of households in Worcester exceeding 30% or 50% of their income were higher in Worcester than in Massachusetts or in the USA (Figure 3). In Worcester, MA, there was an 11–12% increase in the cost of renting one- or two-bedroom apartments in the last year alone.

**Figure 3: Percentage of Households with Housing Costs Exceeding 30% or 50% of Income**

Twenty-eight percent of people living in Worcester have a high school or high school equivalency degree. About one third of residents have a bachelor's or higher education degree. Of the population enrolled in school, half are in kindergarten to 12th grade (49.1%). Worcester has eight universities and colleges and over 30% of the Worcester County population is enrolled in undergraduate or graduate study.
Worcester’s public transit system consists of a bus system through the Worcester Regional Transit Authority (WRTA) and a commuter rail system to Boston via the Metro Boston Transit Authority (MBTA). The primary mode of transportation in Worcester is driving. Less than three percent of Worcester residents use public transit to get to and from work. One third of those employed in Worcester work in health care, educational services, or social assistance settings. Additional large occupational categories include professional, scientific, and management, and administrative and waste management services, retail, and manufacturing.

The employment rate in Worcester is approximately 58% and the median household income is approximately $63,000 which is much lower than the county average of $85,000. In the past year, almost twenty percent (18.6%) of all people living in Worcester and about one in four residents under age 18 had poverty status.  

The racial breakdown of Worcester residents based on data from the 2020 US Census is displayed in Figure 4. Over 26% of Worcester residents are Hispanic or Latino of any race.

Massachusetts has a mandated health insurance law (MGL c.111M). The law provides subsidized health insurance for residents earning less than 300% of the Federal Poverty Level and low-cost insurance for residents above the poverty level threshold but ineligible for insurance through their employers. Three percent (3%) of Worcester residents do not have health care coverage. Approximately one in five adults (20.3%) in Worcester smoke cigarettes which is about 1.6 times greater than statewide adult cigarette-smoking rates (12.7%).

### Food Security and Insecurity in Worcester

In 2013, a community food assessment of Worcester was conducted to examine the existing food system, identify ways to increase the availability of nutritious and healthy foods in low-income neighborhoods, and propose ideas for change. This assessment led to the development of a Worcester Food Hub and strategies for increasing access to healthy foods like expanding mobile markets and accepting EBT (Electronic Benefits Transfer) cards at farmers markets (WPI Worcester Community Food Assessment). A new assessment is currently underway and will be available at the end of 2023. The goal of the Worcester Community Food Assessment is to identify opportunities and gaps in the local food system to facilitate decision making in high priority areas. The Affordable Care Act mandates the performance of a Community Health Assessment and Community Health Improvement Plan (CHAP) every three years. Worcester’s CHAP covers food insecurity and access to health care.

### Table 1. Worcester, MA, Demographics

<table>
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<th>Age</th>
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<tbody>
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<td>Less than 5 years old</td>
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<tr>
<td>5–19 years</td>
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<tr>
<td>20–25</td>
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<tr>
<td>25–64</td>
<td>52.2%</td>
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<tr>
<td>Over 65</td>
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<table>
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<th>Racial category</th>
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<tr>
<td>Black or African American</td>
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<tr>
<td>Multi-racial</td>
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<td>Asian</td>
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<tr>
<td>American Indian or Alaska Nativa</td>
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<tr>
<td>Native Hawaiian &amp; Other Pacific Islander</td>
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<tr>
<td>Other</td>
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<table>
<thead>
<tr>
<th>Gender</th>
<th>%</th>
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<tbody>
<tr>
<td>Female</td>
<td>52%</td>
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<tr>
<td>Male</td>
<td>48%</td>
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<table>
<thead>
<tr>
<th>Languages spoke at home other than English</th>
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<tr>
<td>Spanish</td>
<td>18%</td>
</tr>
<tr>
<td>Other Indo-European languages</td>
<td>8%</td>
</tr>
<tr>
<td>Asian and Pacific Islander languages</td>
<td>5%</td>
</tr>
<tr>
<td>Other languages</td>
<td>6%</td>
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<table>
<thead>
<tr>
<th>Percent of residents with a disability</th>
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<tbody>
<tr>
<td>0.5%</td>
<td>7%</td>
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<tr>
<td>0.5%</td>
<td>11%</td>
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<tr>
<td>13%</td>
<td>15%</td>
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<tr>
<td>53%</td>
<td>53%</td>
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</table>

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of Community Health Needs Assessments (CHAs or CHNAs) every three years to identify key health needs and concerns. Findings from the CHAs are to be used to engage the community and develop strategic plans — known as a Community Health Improvement Plans (CHIPs) — that address community-specific health concerns and disparities. While these efforts have yielded positive results, food insecurity is still an ongoing issue and food deserts persist in Worcester.

In 2020, approximately 13% of residents, or 30,000 people, faced food insecurity in the City of Worcester compared to 9% or 88,000 people in Worcester County. County- and city-wide rates of food insecurity varied by zip code and neighborhood. The COVID-19 pandemic has exacerbated rates of food insecurity and in 2023, approximately 20% of households in Massachusetts were food insecure.

In Worcester, more than one in five households receive SNAP benefits (21.59%; 5-year estimates from 2015–2019) compared to 12.34% in Worcester County, 11.66% in Massachusetts, and 11.74% nationwide. Households consisting of people of color (Black or African American (21.59%); Asian (17.36%); American Indian or Alaska Native (53.82%), Hispanic or Latino (43.79%) and Multiracial individuals (31.57%)) had higher food insecurity rates compared to Non-Hispanic White individuals (12.88%). Of Worcester City’s 44 census tracts, there are four major census tracts where low-income residents reside in food deserts as defined as more than one mile from the nearest supermarket.

The Worcester Regional Research Bureau has developed interactive story maps that users can use to create visual representations of where food insecurity, food access, and other indicators such as families receiving SNAP benefits exists in the city.

In the following section, we summarize existing policies related to food insecurity in Worcester, MA and recommend policy considerations that can be used to address food insecurity, tobacco use, and other related health concerns.
Existing Policies in Worcester, MA

Over the last twenty years several agencies and organizations have collaborated to address food insecurity and hunger in Worcester County. Today, the Worcester Food Policy Council (WFPC) addresses systemic inequities and food insecurity in Worcester. These agencies collaborate to engage and inform policymakers and the public about these critical issues. The WFPC has been involved with several initiatives including:

- **The SNAP Restaurant Meals Program (RMP program)** allows adults ages 60 and over, homeless individuals, and people living with disabilities to purchase food at certain restaurants and food trucks using their SNAP EBT cards. The RMP is designed to support SNAP recipients who face barriers to purchasing healthy foods and/or cooking healthy meals.

- **The Massachusetts Hunger Free Campus Coalition (HFCC) initiative** began in 2019. The HFCC is designed to ensure equity and address food insecurity among high-need students enrolled in public colleges and universities in Massachusetts.

- **Universal School Meals for All** is legislation designed to provide free breakfast and lunch to every child enrolled in a Massachusetts school. This program is designed to reduce parental financial burden and allow students to focus on their studies without worrying about food.

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**Policy Considerations to Address Food Insecurity and Tobacco Use**

The following can be considered to address food insecurity and related upstream factors:

- Bringing culturally relevant food and nutrition programs to people where they live in the community,
- Removing transportation barriers to address structural inequities,
- Addressing low SEP to reduce food insecurity,
- Focusing on cultural sensitivity and the needs of diverse populations, and
- Providing access to tobacco cessation and healthcare.

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**Bringing Culturally Relevant Food and Nutrition Programs to People Where They Live in the Community**

Some people facing food insecurity may be unaware of available benefits or think they are not qualified to receive them. The Central MA Tobacco Free Partnership at UMass Chan Medical School developed a resource sheet that agencies (e.g., food pantries) can give to individuals who are seeking support. Connecting individuals and families with benefits coordinators who can help them determine their eligibility, navigate the complexities of food assistance systems, and access food insecurity and/or tobacco cessation solutions is crucial. Coordinators could highlight existing solutions such as SNAP & the Healthy Incentives Program (HIP), the SNAP retail locator tool, Community Supported Agriculture Shares (CSAs), school gardens, and partnerships with farms and/or community fridges. To minimize inequities among seekers of food assistance, multi-lingual benefits coordinators and/or translators will be needed in community agencies. This support is particularly critical for non-English-speaking, undocumented immigrants who may be hesitant to pursue food assistance and other supportive services for fear of deportation. These individuals may lack identification and/or be hesitant to provide contact information that could be used to connect them with services.

It is also imperative to offer links to resources in a variety of languages. Existing pamphlets and resource sheets offering solutions to food insecurity and hunger are often only available in English which may not be accessible to primary speakers of other languages. Translating these materials into the wide range of languages spoken by those in need of food assistance can help decrease inequities between English and non-English speakers seeking food assistance.
Current and future food assistance programs can eliminate language barriers and a lack of diverse food options by increasing the range and volume of their culturally sensitive food offerings. For example, food banks and food pantries could expand the cultural diversity of their food options by requesting individual and corporate donations of food staples common to the range of cultures represented in the communities they serve.

Today, many people are familiar with concepts such as community gardens or CSA shares from local farms, but there are other examples of creative solutions to address this important health concern. Massachusetts also has legislation for Food as Medicine interventions. These interventions can include medically tailored meals consisting of specific types of food (for example, fruits and vegetables, dairy, and meat) to accommodate recipients with varying dietary, cultural, and nutritional needs. The Food as Medicine boxes could also be tailored to persons in a variety of situations (for example, recipients without homes or transportation). Additional creative solutions include offering food literacy courses (for students) and developing mapping apps that show where to find free and affordable fresh foods.

In 2021, Massachusetts created legislation for public schools and school districts to provide Universal School Meals (breakfast and lunch) to get food to children and youth who are food insecure. The Massachusetts Hunger-Free Campus Coalition was developed to leverage existing resources such as SNAP to address food insecurity among students at Massachusetts public colleges and universities. Free breakfasts/lunches for all students have the potential to eliminate stigma, improve diets, and increase school attendance (students coming to school to get a healthy meal). Another creative way of helping students access food is locating food pantries inside schools and other educational institutions. For example, Worcester State University has a food pantry for college students (Thea’s Food Pantry | Worcester State University) and UMass Chan Medical School partnered with local businesses to create food pantries in the local public schools in Worcester.

Removing Transportation Barriers to Address Inequities

Limited options for public transportation also limit options and access to employment or education (e.g., college) opportunities that can help address factors linked to food insecurity. Communities that offer free or low-cost transportation may help low SEP communities access culturally relevant foods from larger markets. Worcester, Massachusetts implemented a free fare policy during the COVID-19 pandemic. The feedback has been positive, and Worcester will keep the policy in place at least through June 2024. Boston, MA has a similar program.

Individuals with disabilities can face additional barriers related to transportation. For example, Worcester does not have wheelchair accessible taxis. There are no transportation programs for people who have hearing or visual impairments. Offering transportation options more inclusive of people with disabilities is essential to decreasing transportation barriers for all Worcester residents.

Individuals who are food insecure may have difficulty getting to food pantries or getting food home from a large grocery store. Developing ways to deliver food or help people get food home from the grocery store is one way to increase equity and access to healthy and culturally relevant foods. For example, using mobile markets to get healthy foods to key locations in the community such as a church, school, public housing, a library, a YMCA, or a healthcare agency. Schedules for these mobile markets can be posted in advance so people in need of these resources know when they will be available. Similarly, a van service that provides transportation between grocery stores and neighborhoods with limited options for healthy and culturally relevant foods could further increase access.

Addressing Low SEP to Address Food Insecurity

In addition to the items described above, it is essential to provide support and resources that alleviate risks associated with low SEP like food insecurity. Having less access to education and employment opportunities is linked with poorer health outcomes and lower use of health care services. People may be unaware of additional opportunities for employment and education through Temporary Assistance for Needy Families (TANF) or SNAP’s Path to Work Program. The TANF program is designed to help low-income families with children
achieve economic self-sufficiency. States use TANF funds to provide services and monthly cash assistance payments to low-income families with dependent or disabled children to cover the cost of utilities, housing, and basic needs like health insurance, clothing, child-care in the home or in relatives’ homes, and provide opportunities for education, training, and job preparation that support employment and reduce reliance on public benefits. SNAP’s Path to Work Program is a federal- and state-funded program administered by the Department of Transitional Assistance in Massachusetts. States have flexibility in who can access SNAP. The Path to Work program is designed to help SNAP recipients develop skills and access opportunities for education, resources for job preparation, job searches, and networking with employers so they can be successful in in-demand jobs with good wages and long a career paths.

Consider establishing affordable housing policies or rent control policies to increase equity and opportunities for stable housing in the community. Low SEP populations may pay a disproportionate amount of income towards housing costs leaving little room for purchasing food. Establishing smoke-free housing policies may help discourage tobacco use.

Additional legislation that can be considered to address low SEP and food insecurity includes increasing access to SNAP benefits or raising the minimum wage. Massachusetts is already one of the highest states in minimum wage. Increasing the minimum wage can address low SEP by reducing poverty and reliance on government benefits, and income inequality.

Massachusetts has also passed bills and has budgeted state funds designed to provide subsidies to expand affordable access to quality childcare. Access to early education can offer children to develop better social skills, cognitive skills, and communication skills. Improvements in these skills can lead to higher academic achievement and earnings later in life.

**Focusing on the Needs of Diverse Populations**

Cultural and language barriers have been a recurring issue in various food pantries. Food pantry users from diverse cultural backgrounds may have different food preferences, experience language barriers, or feel uncomfortable going to food pantries that may not understand their cultural backgrounds. Not being able to communicate with staff or volunteers or read information on the food pantry’s website about availability can reduce their likelihood of accessing services. The cultural stigma of asking for assistance with free food prevents a lot of immigrants from accessing the tools they need to survive.

In FY23, El Buen Samaritano Food Pantry in Worcester made major changes to their food distribution system by incorporating more culturally appropriate foods by partnering with local grocery stores and local farmers to increase the availability of culturally and religiously appropriate foods at pantries. Increasing access to healthy, nutritional, and culturally relevant foods in the neighborhoods where people need them most can help decrease these barriers associated with food insecurity. Forging relationships with community gatekeepers such as formal or informal community leaders who have influence over that community’s culture – may help facilitate this process. Partnering with community gatekeepers can help build trust and buy-in by ensuring community involvement in identifying access barriers and developing strategies and solutions to address them.

**Providing Access to Tobacco Cessation and Healthcare**

Because food insecurity and tobacco use are intertwined, approaches that target both problems may be more effective than those targeting each problem individually. Food pantries could partner with medical or human service agencies to offer tobacco cessation supports or connect food pantry clients with free tobacco cessation resources like QuitWorks or free tobacco cessation coaching. The Massachusetts Health Promotion Clearinghouse has free resources on tobacco cessation and other health topics that can be mailed or downloaded for free in various languages. Partnerships with health care agencies could also be used for health fairs, mental health screenings, and linkages to other health care services such as dental or vision care. In Worcester, UMass Memorial Health partnered with Ronald McDonald House Charities to provide mobile medical and dental services throughout the city using a large wheelchair accessible vehicle that makes scheduled visits to public schools, churches, the YWCA (formerly Young Women’s Christian Association of the United States of America, Inc.), parks, and public housing sites. In addition to receiving care, eligible individuals and families can receive assistance with health insurance enrollment.
Overall, if tobacco cessation and healthcare services are provided in tandem with the above policy considerations, communities can capitalize on reducing stressors, addressing food insecurity, and increasing access to resources for quitting tobacco to support their residents.

### Conclusions

Worcester, MA, has developed various strategies and solutions to address food insecurity and other health concerns. Local governments and community agencies can utilize these solutions detailed in this brief to implement policies that address food insecurity and upstream factors to help people out of poverty and lead healthier lives. Improving transportation options, removing language barriers, and providing access to tobacco cessation aids and healthcare in the neighborhoods and communities that need it most may help increase equity and access to care. Focusing on the needs of diverse populations by delivering culturally relevant foods, nutrition programs, and healthcare to transportation options, removing language barriers, and providing access to tobacco cessation aids and healthcare that address food insecurity and upstream factors to help people out of poverty and lead healthier lives. Improving low SEP through opportunities for employment and education, and job preparation can support approaches designed to address food insecurity and help people obtain the skills needed to earn a living wage and avoid poverty.

### References


