

Health Implications of Food Insecurity



Healthy bodies and minds require nutritious meals at every age. Inconsistent access to adequate amounts of nutritious food can have a negative impact on the health of individuals of all ages. The USDA estimates that as of 2016, 41 million people, including nearly 13 million children, in the United States are food insecure. That means 1 in 8 individuals (13%) and 1 in 6 children (18%) live in homes without consistent access to adequate food for everyone to live healthy, active lives. This is a national problem with local health implications for individuals and communities across the country.

An analysis of county data on health indicators and food insecurity shows that **communities with the highest rates of food insecurity face a higher prevalence for diseases** such as diabetes and obesity, **as well as a higher incidence for other metrics that are tied to health**, including lack of health insurance. For the eighth consecutive year, Feeding America has conducted the *Map the Meal Gap* study to estimate the prevalence of food insecurity for every county and congressional district in the United States. To better understand the relationship between food insecurity and poor health outcomes, the following analysis considers food insecurity in the context of health, one of four related topics that make up the *Map the Meal Gap 2018* report briefs.

41 million

-or-

1/8

people are food insecure.

In counties with high food insecurity:

1/8

people have diabetes.

1/5

people have a disability.

1/3

people experience obesity.



The Cycle of Hunger and Health

The intersection of hunger and health can be most accurately depicted as a cycle.¹ First, a food-insecure household is forced to engage in coping strategies, often including the consumption of cheaper foods that are high in calories but low in nutritional value. Reliance on less healthy foods can lead to toxic stress², poor nutrition, and chronic diet-related diseases such as diabetes³ and obesity. In turn, these chronic illnesses can worsen existing disabilities or other illnesses, or result in inability to work⁴ and increased healthcare costs, which further restrict the household food budget. **Once a person or family enters the cycle, it can be increasingly difficult to escape it.** A significant number of households served by the Feeding America network have members living with a chronic disease like diabetes (33% of households) or hypertension (58% of households), and are regularly confronted with these challenges to managing their health.^{5,6}

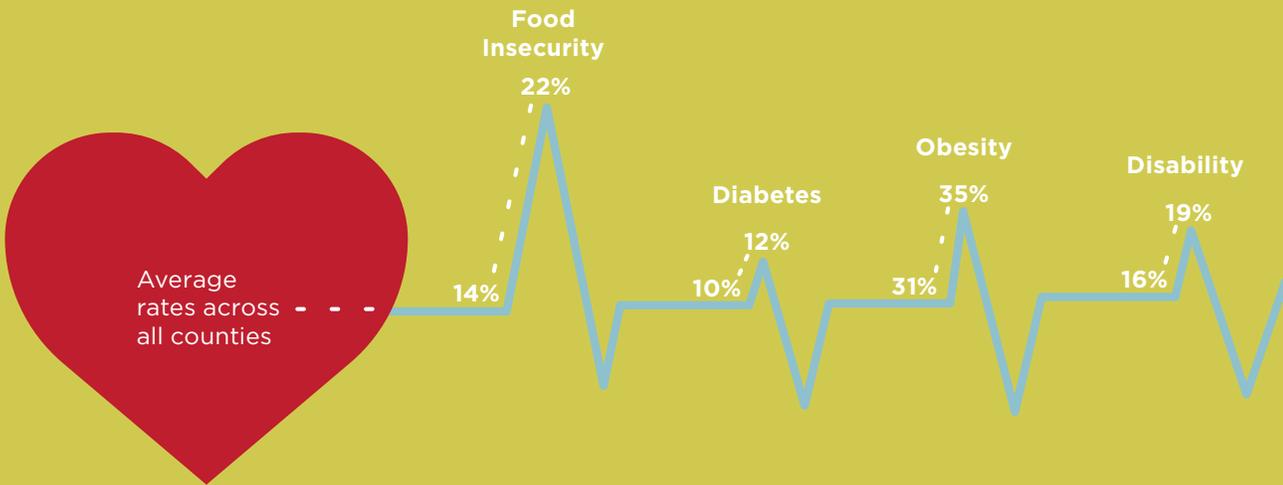


Key Findings

Food Insecurity and Health at the County Level

The county-level analysis that is part of *Map the Meal Gap* reflects the previously stated narrative: **counties with the highest rates of food insecurity also have a higher prevalence of diabetes, obesity and persons with a form of disability.** Within counties whose estimated rate of food insecurity falls in the top 10% of all counties, one in eight individuals has a diabetes diagnosis, one in three individuals experience obesity and one in five has some form of disability.

Health Indicators of Individuals in High Food Insecurity Counties Compared to All Counties



The local confluence of food insecurity and poor health conditions underscores the need for collaborative, cross-sector public-health and food-security interventions, especially in counties with higher rates of people struggling with hunger.

Food Insecurity, Health Insurance and Housing

Some households that are struggling to make ends meet may not have room in their budget for health insurance. Insurance helps pay for medical expenses, such as doctor visits and medications. For a household without health insurance, the cost of these expenses can take families from just above the poverty line to below it.⁷ However, a food-insecure household may not be able to afford health insurance, or the copays that come with it. Data from *Map the Meal Gap* indicate that **counties with the highest rates of food insecurity also tend to have higher uninsured rates.**

Research also suggests a relationship between housing instability and poor health outcomes in a household. For example, bouts of homelessness can have a profoundly negative impact on a family's mental and emotional stress,⁸ and unstable housing increases the likelihood that a family will not be able to comply with a prescription or treatment for a chronic illness.⁹ High rental burden, which occurs when a household pays 35% or more of their income on rent, may also indicate a lack of resources for a household to afford adequate food and health insurance coverage, potentially increasing the risk for negative health outcomes. **Compared to all counties, those with higher rates of food insecurity tend to have higher rates of rental burden.**



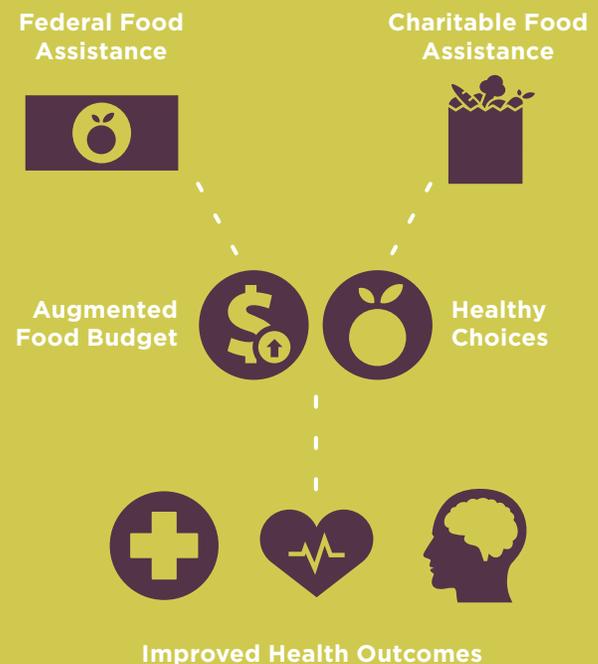
*Data are taken from ACS 2016 5 year estimates.

Public and Charitable Food Assistance

The Supplemental Nutrition Assistance Program (SNAP) and the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) play a critical role in helping low-income families break out of the cycle of hunger and diet-related disease. Both programs augment households' food budgets, allowing them to purchase more healthful foods, and provide nutrition education to participants. A 2013 review of SNAP nutrition education, also known as SNAP Ed, found that it increased both consumption and willingness to consume fruits and vegetables among child participants.¹⁰ These programs, along with other federal nutrition programs that target specific populations, make up the front line of defense against hunger.

The federal programs, however, cannot break the hunger and health cycle alone. As the diabetes epidemic mounts, food banks and food pantries within the Feeding America network, which in 2017 distributed 1.3 billion pounds of fresh fruit and vegetables to people across the country, have emerged as important partners in addressing diabetes outside of the healthcare setting. A three-year initial study conducted with three Feeding America food banks found that a targeted, food bank-led diabetes intervention resulted in improved diets, increased medication adherence, and overall better control of diabetes. Interventions included: diabetes appropriate food, education, blood sugar monitoring and referrals to primary care physicians.¹¹

In addition to providing healthy food, Feeding America is working to improve the consumption of fresh produce for all people who experience food insecurity. A collaboration with Cornell University that tested small environmental changes known as “nudges” at pantries found that when implemented, visitors were more likely to choose healthy food.¹² But, this work is just the beginning. Feeding America's website, HungerandHealth.org, caters to professionals across numerous sectors providing research, high-quality nutrition and health education materials, toolkits for partner engagement and intervention implementation, and much more. There are many ways in which the charitable food and public health sectors can work together, including health practitioners screening for food insecurity in medical check-ups.¹³ By joining together to help Americans struggling with hunger break out of the cycle of food insecurity and poor health, food banks and public health institutions can not only end hunger but have a powerful impact on health in the United States.



Map the Meal Gap Methodology

Map the Meal Gap estimates the number of people, including children, that are food insecure in every county and congressional district in the country. To accurately estimate the number of people who may be food insecure in every U.S. county and congressional district, Feeding America uses publicly available state and local data from the U.S. Census Bureau and Bureau of Labor Statistics on factors that research has shown to contribute to food insecurity. These factors include unemployment and poverty, as well as other demographic and household characteristics. Public health and spending tradeoffs were then analyzed at the county level, based on data collected by the Centers for Disease Control (CDC) and the American Community Survey (ACS). More information and full methodology details are available in the [technical brief](#). *Map the Meal Gap 2018* also features [report briefs](#) on other topics, including an [executive summary](#), an overview of [child food insecurity](#), and on [food price variations](#).

