



Map the Meal Gap 2020

A Report on County and Congressional District Food Insecurity and County Food Cost in the United States in 2018



Foreword

This release of *Map the Meal Gap* represents the 10-year anniversary of our effort to understand food insecurity and food costs geographically. Our local estimates are based on the most recent available data from 2018 — a year with the lowest food insecurity rates in the U.S. since before the Great Recession of 2008. However, even in 2018, 37 million people lived in households without consistent access to adequate food.

In 2020, our nation faces a new crisis, the novel coronavirus (COVID-19) pandemic. We would be remiss if we did not acknowledge that this release comes during very trying times, as COVID-19 threatens lives and livelihoods globally. While public health measures have protected citizens' health, they have adversely impacted many of our neighbors economically. Using the updated *Map the Meal Gap* model and projections of unemployment and poverty, we estimate that as many as 17 million more people may experience food insecurity due to COVID-19 in 2020. During this crisis, the charitable food system is even more critical to meeting the needs of families facing hunger.

The strength of *Map the Meal Gap* lies in its ability to initiate data-driven conversations, insights and actions across a broad spectrum of legislators, hunger-relief partners, academics and community organizations. The foundation it creates for evidence-based initiatives and strategies will be needed even more during the time of COVID-19 recovery. We will continue to develop, test, and expand creative hunger-relief initiatives to address domestic hunger.

Feeding America is deeply grateful to the Conagra Brands Foundation and Nielsen for supporting this study. On behalf of our network, hunger-relief partners and, most importantly, the neighbors we serve, thank you for your visionary leadership.



Tom Summerfelt
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Acknowledgements & Credits

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Executive Summary

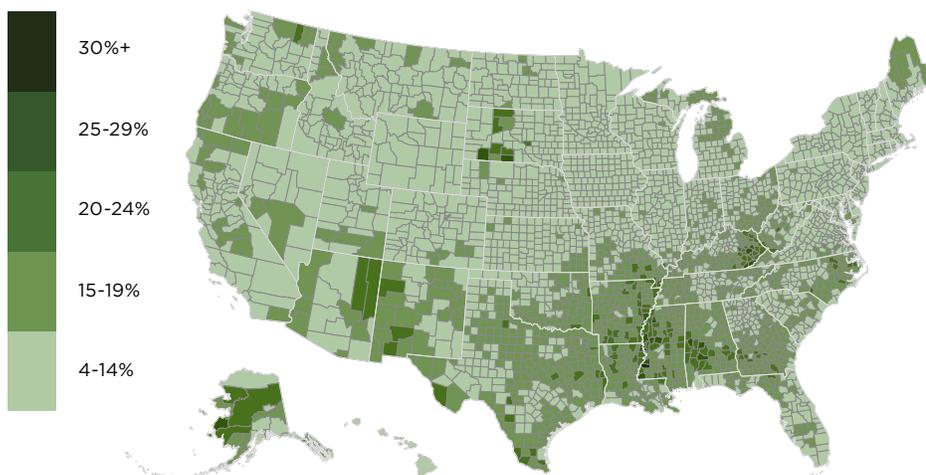


As of 2018, the prevalence of food insecurity in the United States finally declined to levels not seen since before the Great Recession began in 2007. However, millions of people continued to struggle. The USDA estimates that 37 million people, including more than 11 million children, in the United States were food insecure in 2018.¹ That means 1 in 9 individuals (11.5%) and 1 in 7 children (15.2%) lived in households without consistent access to adequate food.

In 2020, the novel coronavirus (COVID-19) pandemic threatens the lives and livelihoods of people across the country. Closures and social distancing orders that limit the spread of the disease have impacted communities large and small. The economic ramifications are felt by individuals already at risk of hunger, such as those who have lost their jobs due to the pandemic. The pandemic will likely reverse the improvements to food insecurity that have occurred over the past decade.

For the tenth consecutive year, Feeding America conducted the *Map the Meal Gap* study to improve our understanding of how food insecurity and food costs vary at the local level. This year *Map the Meal Gap* uses an updated methodology and is released with a companion study on the potential impact of COVID-19 on food insecurity at the local level utilizing the underlying *Map the Meal Gap* model. To better assess the current and future state of local food insecurity, it is critical to understand the prevalence prior to the pandemic. By examining variations in local need as of 2018, communities can develop more targeted strategies to reach people at risk of hunger today.

Prevalence of Food Insecurity by County, 2018



4-30%

is the range of the population experiencing food insecurity across US counties. No county is free of food insecurity.

1/3 

people who are food insecure may not qualify for federal food assistance.

\$19.5B

needed by individuals at risk of hunger to purchase just enough food to meet their needs.

\$3.09

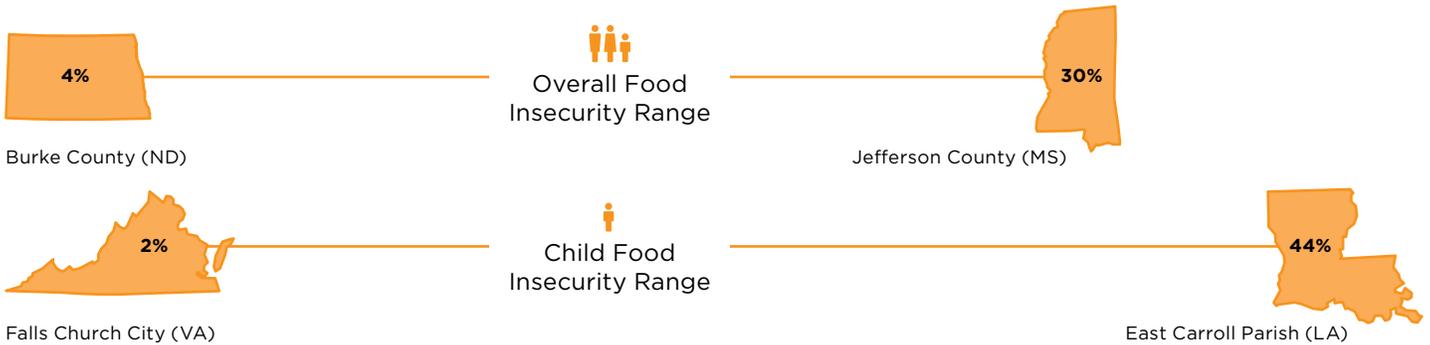
is what a person who is food secure is likely to spend per meal. Meal costs are nearly twice this amount in some counties.

Key Findings

County and Congressional District Findings

Every U.S. county and congressional district is home to people who face hunger. Estimated rates of county food insecurity range from 4% to 30% for the overall population and 2% to 44% for households with children. Food insecurity among congressional districts spans a similar range. Mississippi is home to the highest overall county rate and Michigan is home to the highest overall district rate in the country, and no community is free of food insecurity.

Range of County Food Insecurity Rates



Highest Rates of Food Insecurity

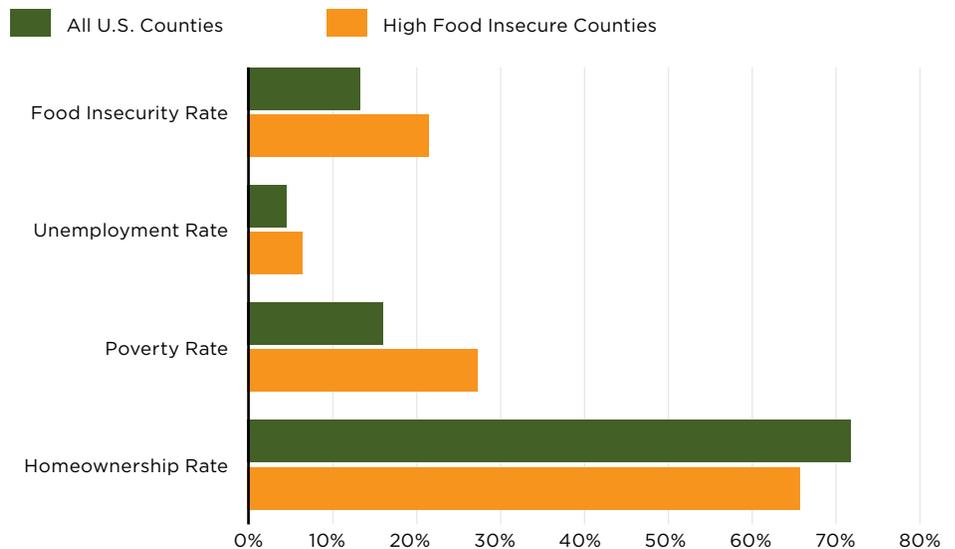
Counties with the highest rates of food insecurity—those in the top 10% of all counties—tend to have poor economic indicators: higher rates of unemployment² and poverty,³ and lower homeownership⁴ and median income⁵ compared to all counties in the country.



High Food Insecurity counties are the counties with the top 10% of food insecurity rates.

The majority (64%) of counties with the highest rates of food insecurity also experience persistent poverty, which the USDA defines as at least 20% of the population living in poverty for more than 30 years.⁶ This confluence of complex challenges underscores the need for solutions that can effectively address both the immediate and long-term needs of food-insecure families living in these communities.

Average Economic Indicators by County Type



Largest Numbers of Food Insecure People

While the prevalence of food insecurity is an important indicator of need, **counties with large populations and comparatively low rates of food insecurity are home to some of the largest absolute numbers of food-insecure people.** For example, Los Angeles County, California has a food insecurity rate (11%) close to the national average but is home to an estimated 1.1 million food-insecure individuals, including more than 340,000 children at risk of hunger. To effectively address food insecurity in America, it is important to consider both the number of food-insecure people as well as the rate of food insecurity.

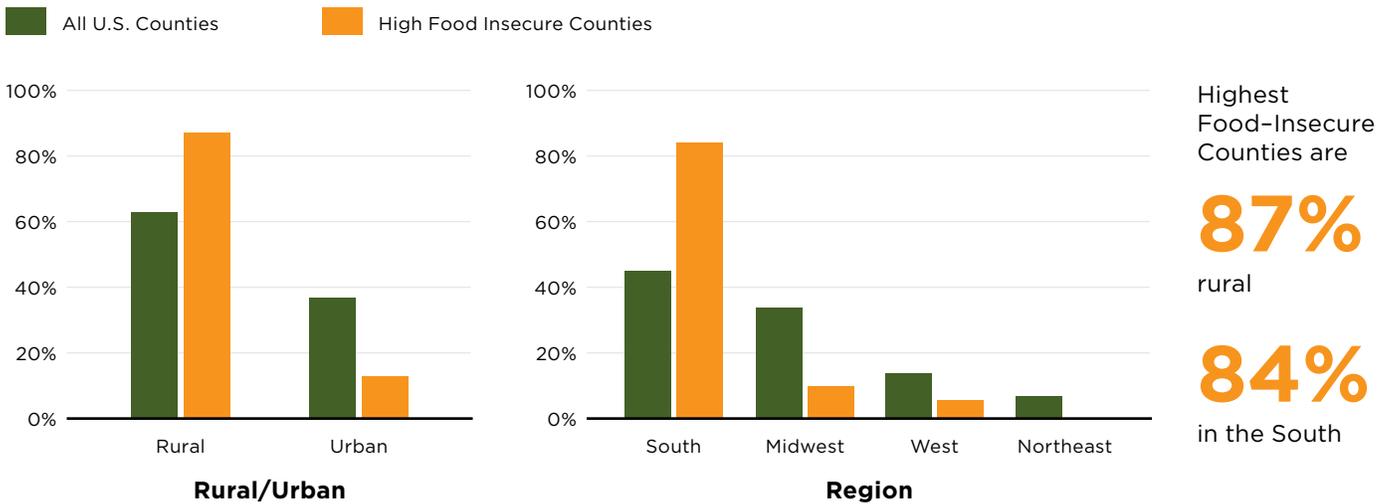
Los Angeles county is home to more than

1 million

food-insecure individuals

Rural and Regional Demographics of Food Insecurity

Rural (nonmetropolitan) counties make up 63% of all U.S. counties but 87% of counties with the highest rates of food insecurity. Regionally, the highest average rates of county food insecurity are found in the South, which represents 84% of counties with the highest rates of food insecurity and has the widest variation in county food insecurity. The lowest average food insecurity rates are in the Northeast.



Many Southern counties located outside major metropolitan areas are home to large communities of color living at elevated risk of food insecurity. These communities face persistently high rates of unemployment and poverty. For example, the population of Jefferson County, Mississippi, is 86% African American, faces an unemployment rate that is three times the national county average (13% versus 4%), and struggles with poverty at a rate that is almost three times that among all counties (50% versus 16%). As a result, the local rate of food insecurity is the highest in the nation (30%). County-level analysis also helps illuminate the obstacles faced by reservation communities,^{7,8} such as Apache County, Arizona, which includes parts of the Navajo Nation, Zuni and Fort Apache reservations. A persistent-poverty county with poverty (35%) more than twice the national county average and food insecurity (23%) nearly twice the national county average. These examples underscore the deep and pervasive nature of the systemic challenges that many communities of color face.

Food Budget Shortfall and Average Meal Costs

In total, food-insecure individuals across the United States needed an additional \$19.5 billion (in 2018 dollars) to meet their food budget needs. This resource gap, or national food budget shortfall, is an annualized approximation of need as reported on the Current Population Survey (CPS) by people who are food insecure. It reflects the average additional amount of money per week that a food-insecure person is likely to spend on just enough food to meet their needs. After accounting for inflation, the weekly shortfall (\$17.24) decreased for the third year in a row in 2018 after rising for four consecutive years.



However, with average meal costs nearly twice as high as the national average (\$3.09) in some areas like New York County, the additional burden of high food prices can make it difficult for food-insecure households to make ends meet. This is especially true if they also struggle to afford housing, utilities, transportation and other basic necessities.

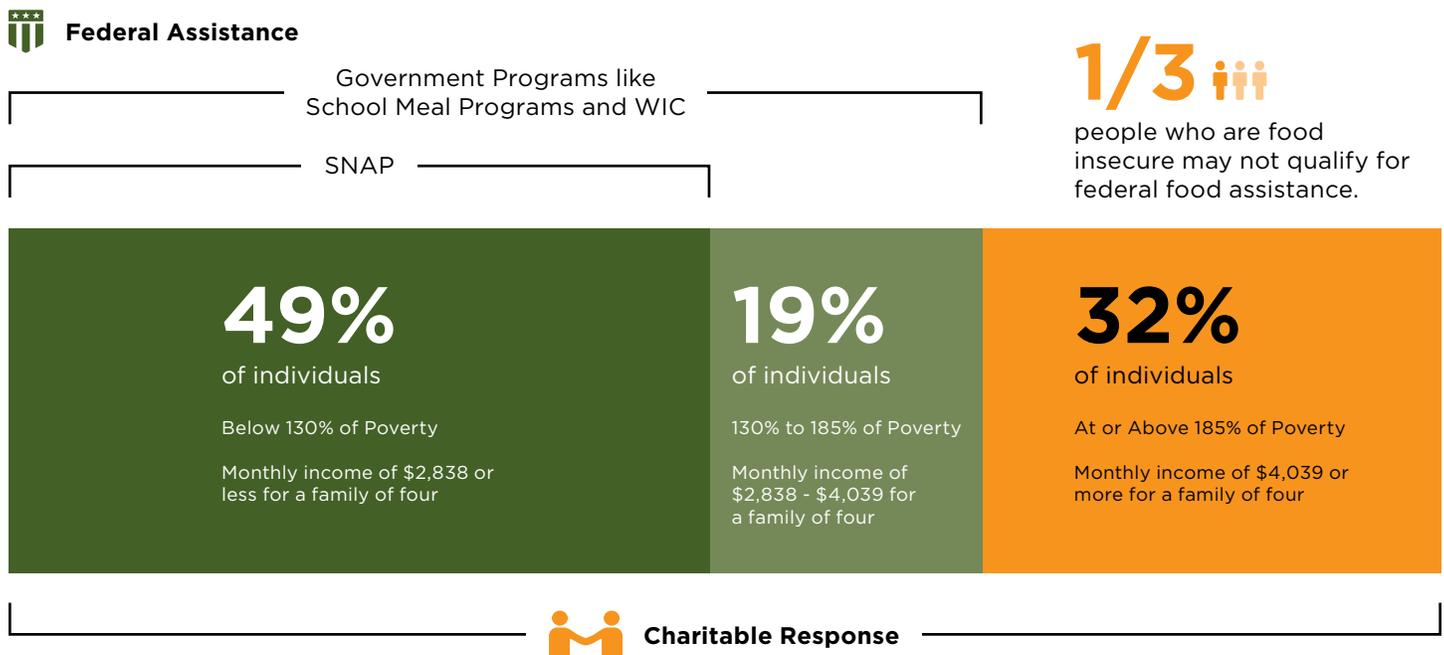


Implications

Map the Meal Gap focuses on equipping communities, service providers and policymakers with data and analytical tools to help them understand the prevalence and dynamics of food insecurity at the local level so they may better respond to the need.

Federal nutrition assistance programs, such as the Supplemental Nutrition Assistance Program (SNAP), serve as the first line of defense against hunger. However, not everyone who is food insecure qualifies for these federal programs. As of 2018, one in three (32%) food-insecure individuals who reported income lived in households unlikely to qualify for most federal food assistance.⁹ Given the variation in food insecurity and income and asset limits for certain programs across states, data from *Map the Meal Gap* indicate that the share of food-insecure individuals not eligible for public food assistance is as high as 76% in some places, such as Daggett County, Utah. As a result, the charitable sector may be a critical source of food for many individuals and families who are food insecure but ineligible for these programs. These findings underscore the importance of protecting and strengthening the existing safety net of public food assistance while also investing in the charitable programs that help to fill the gap for those not eligible.

Share of Food-Insecure Individuals by Income Thresholds¹⁰



Map the Meal Gap Methodology

To accurately estimate the number of people experiencing food insecurity in every U.S. county and congressional district, *Map the Meal Gap* 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 socioeconomic and demographic characteristics. Beginning in 2020, the estimates also account for disability status, one of the key risk factors for food insecurity. In addition to measuring how pervasive the need is, the study also estimates the cost of a meal and the additional amount of dollars needed among people who are food insecure using local data from Nielsen and national survey data from the Census Bureau. More information on methodology is available online in our [technical brief](#).

Findings from *Map the Meal Gap* are presented in a series of four standalone [briefs](#) including this executive summary, child food insecurity, food price variation, and an analysis of health, disability and food insecurity. Additionally, the [interactive map](#) allows for the exploration of food insecurity across geographies throughout the U.S.

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Child Food Insecurity



Food insecurity has the potential to be harmful to individuals of any age, but it can be especially devastating to children. The USDA estimates that more than 11 million children in the United States lived in food-insecure households 2018.¹ That means that 1 in 7 children (15.2%) may not have consistent access to enough food for an active, healthy life.

For the tenth consecutive year, Feeding America conducted the *Map the Meal Gap* study to improve our understanding of how food insecurity and food costs vary at the local level. This year *Map the Meal Gap* uses an updated methodology and is released with a companion study on the potential impact of COVID-19 on child food insecurity at the local level utilizing the underlying *Map the Meal Gap* model. Included here are findings related to food insecurity among children, one of four related topics that make up the *Map the Meal Gap 2020* report briefs.

11.2 million

-or-

1/7

children are at risk of hunger.

50

states and D.C. are home to food-insecure children.

86%

of counties with high child food insecurity are rural.

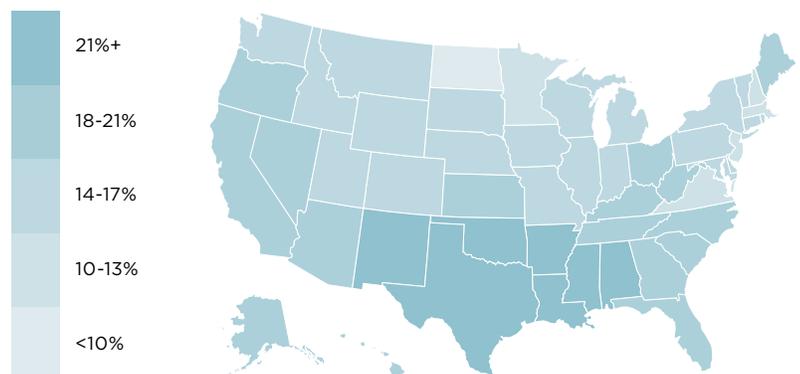
660,000

children may be food insecure in Los Angeles and New York City.

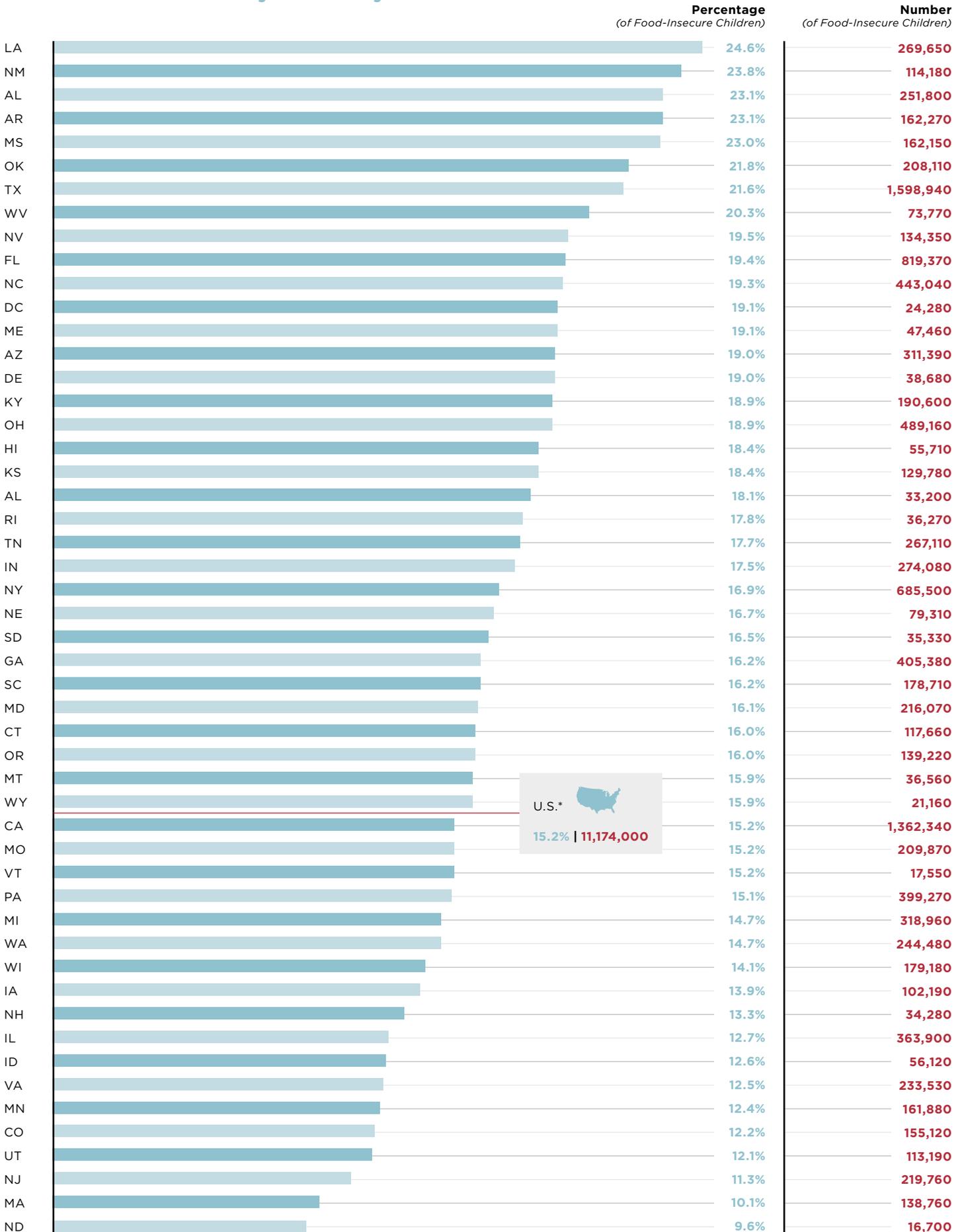
Key Findings

Child Food Insecurity Among States and Congressional Districts

In all 50 states and Washington, D.C., the estimated rate of child food insecurity is higher than the rate of overall food insecurity. Child food insecurity ranges from 10% in North Dakota to 25% in Louisiana. Eighty percent of the counties with the highest rates of food insecurity are in the South, and 55% of Southern counties have child food insecurity rates greater than 21%. Among congressional districts, rates of child food insecurity span from 5% (more than 12,000 children) in affluent districts like Virginia's 10th, bordering Washington, D.C., to a high of 31% (more than 45,000 children) in Alabama's 7th, which encompasses parts of Birmingham, Montgomery and Tuscaloosa.



Child Food Insecurity Rates by State



* USDA, 2019

Child Food Insecurity Among Counties

Just as every state is home to food-insecure children, no county is free of child food insecurity. Rates range from 2% in Falls Church City, Virginia to 44% in East Carroll Parish, Louisiana. The variation in rates of child food insecurity shows that need is more pervasive in specific communities. Counties with the highest rates of child food insecurity have notably higher unemployment and poverty rates and lower median incomes.



High Child Food Insecurity counties are the counties with the top 10% of child food insecurity rates.



29%

of children are food insecure



Higher poverty



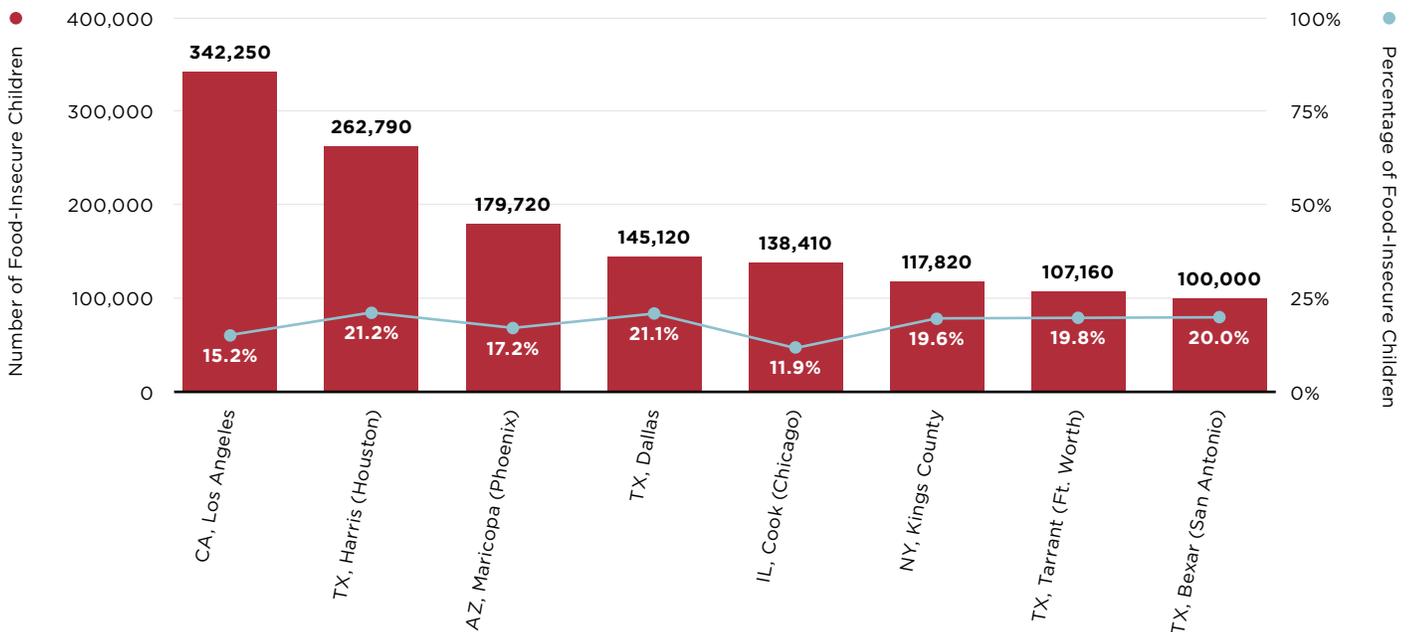
Higher unemployment



Lower median income

Although the child food insecurity rate is one important indicator of need, even counties with more modest rates may still be home to large numbers of children whose families are food insecure. For example, the counties encompassing Los Angeles and New York City have rates of child food insecurity (15% and 18%, respectively) close to the national county average (16%). However, there is high need in both areas: more than 342,000 food-insecure children live in Los Angeles County and more than 317,000 food-insecure children live in the counties encompassing the five boroughs of New York City. **Both urban and rural counties face unique challenges with food insecurity.**

Counties with more than 100,000 Food-Insecure Children



Implications of Child Food Insecurity

The consequences and costs of food insecurity for all ages make addressing the issue an economic and social imperative. In particular, inadequate nutrition can stunt children's development, affecting their learning and social interaction.²

Health, Behavior and Education

There is a broad base of literature illustrating links between food insecurity and poor child health and behavioral outcomes at every age. For example, food-insecure women are more likely to experience birth complications than food-secure women³ and have iron deficiencies.⁴ One indicator of child and maternal health is low birthweight among infants,⁵ which is more common among counties with the highest rates of child food insecurity than across all counties (10% versus 8%). Furthermore, children struggling with food insecurity may be at greater risk for stunted development,⁶ anemia and asthma,^{7,8} oral health problems,⁹ hospitalization,¹⁰ mental disorders,¹¹ and lower nutrient intakes.^{12,13} Overall, food insecurity is linked with poorer physical quality of life, which may prevent children from fully engaging in daily activities.¹⁴ At school, food-insecure children are at increased risk of falling behind their food-secure peers both academically and socially; food insecurity is linked to lower grades¹⁵ and non-cognitive skills,¹⁶ and they may be more likely to exhibit behavioral problems,^{17,18} including anxiety,¹⁹ psychological distress²⁰ and substance use²¹ and to experience bullying.²²

Policy and Programs

While charitable assistance plays a critical role in helping families meet their food needs, federal nutrition programs are the first line of defense against hunger.

Federal Nutrition Programs



17 million children
SNAP²³



5.2 million infants and children
Women, Infants, and Children (WIC)

Federal School Nutrition Programs²⁴



22 million children
National School Lunch Program



12.5 million children
School Breakfast Program



3.7 million children
Summer Food Service Program
+ Seamless Summer Option

Free and reduced-price lunch

Some families in need of public support, however, face challenges maintaining consistent enrollment while others may not even qualify for federal assistance. **One in four food-insecure children lives in a home that is likely ineligible for these important programs, underscoring the critical role of both the public and private sector in addressing child food insecurity.**²⁵ Together, these programs weave a comprehensive nutritional safety net that reaches children where they live, learn and play. Through collaborative efforts between the Feeding America network of food banks and partner agencies, policymakers, business leaders, community activists, and concerned citizens, every child in America could receive the nutrition they need.

Map the Meal Gap Methodology

To accurately estimate the number of people experiencing food insecurity in every U.S. county and congressional district, *Map the Meal Gap* 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 socioeconomic and demographic characteristics. Beginning in 2020, the estimates also account for disability status, one of the key risk factors for food insecurity. In addition to measuring how pervasive the need is, the study also estimates the cost of a meal and the additional amount of dollars needed among people who are food insecure using local data from Nielsen and national survey data from the Census Bureau. More information on methodology is available online in our [technical brief](#).

Map the Meal Gap 2020 also features report [briefs](#) on other topics, including an executive summary, an overview of food price variations, and an analysis of health, disability and food insecurity. Additionally, the [interactive map](#) allows for the exploration of food insecurity across geographies throughout the U.S.

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Food Price Variation



The USDA estimates that 37 million people, including more than 11 million children, in the United States were food insecure in 2018.¹ This means that 1 in 9 individuals (11.5%) and 1 in 7 children (15.2%) lived in households without consistent access to adequate food. The experience of food insecurity depends on individual circumstances, local economies, and broader social and economic forces. **Food prices, in particular, represent an important component of cost-of-living that affects households' ability to afford food.**^{2,3}

For the tenth consecutive year, Feeding America has conducted the *Map the Meal Gap* study to improve our understanding of how food insecurity and food costs vary at the local level. This brief focuses on the variation in local food prices and the average cost of a meal, one of four related topics that make up the *Map the Meal Gap 2020 report briefs*. **Through the lens of local meal costs, it is possible to see how people already struggling with hunger in communities across the country can find it difficult to afford enough food to live active, healthy lives.**

37 million

-or-

1/9

people are food insecure.

\$3.09

is the national average meal cost. In some counties, meal cost is more than twice this.

1,314

counties (42%) have meal costs higher than the national average.



Key Findings

County-Level Food Costs

In 2018, people who were food secure reported spending an average of \$3.09 per meal which, when accounting for inflation, is roughly equivalent to the average reported in 2017. **At the local level, meal costs range from \$2.14 in Llano County, Texas to more than twice the national average in places like New York County at \$6.19.** This means that \$1 in Llano County purchases 44% more food than the national average and 189% more than in New York County.

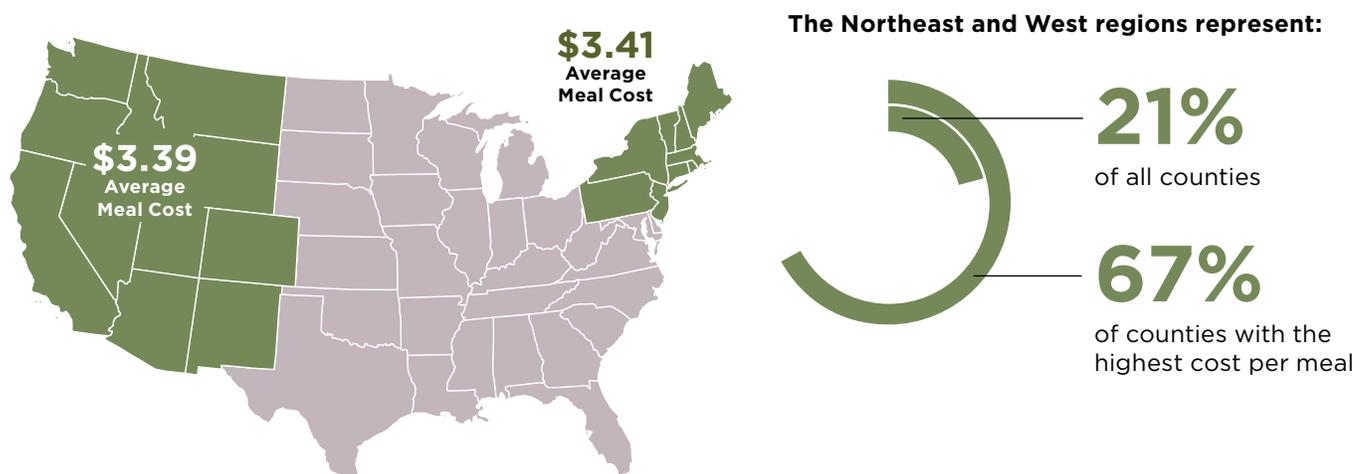
At \$3.09 per meal, a person who is food secure is estimated to spend \$281 on food per month. In New York County that person is likely to pay \$563 for the same amount of food, a grocery bill that would cover enough food for almost three months in Llano County. A family of four with two young children is estimated to spend \$1,122 per month in New York County to buy the minimum amount of food for a nutritious diet.⁴ This is considerably more than the national average (\$561) and what that same family would spend in Llano County (\$387).



In some cases, the meal cost may be high due in part to the expense of transporting food to a resort area or an island. For example, Nantucket County, Massachusetts is a popular island vacation destination, and the average cost of a meal is \$3.80. Aspen in Pitkin County, Colorado and Napa County, California also have a significant tourist presence and higher than average meal costs (\$3.66 and \$4.38, respectively). While local families in such areas typically have higher-than-average median incomes, these communities are also home to households with lower incomes for whom higher food costs can be particularly challenging.

Counties with High Food Costs

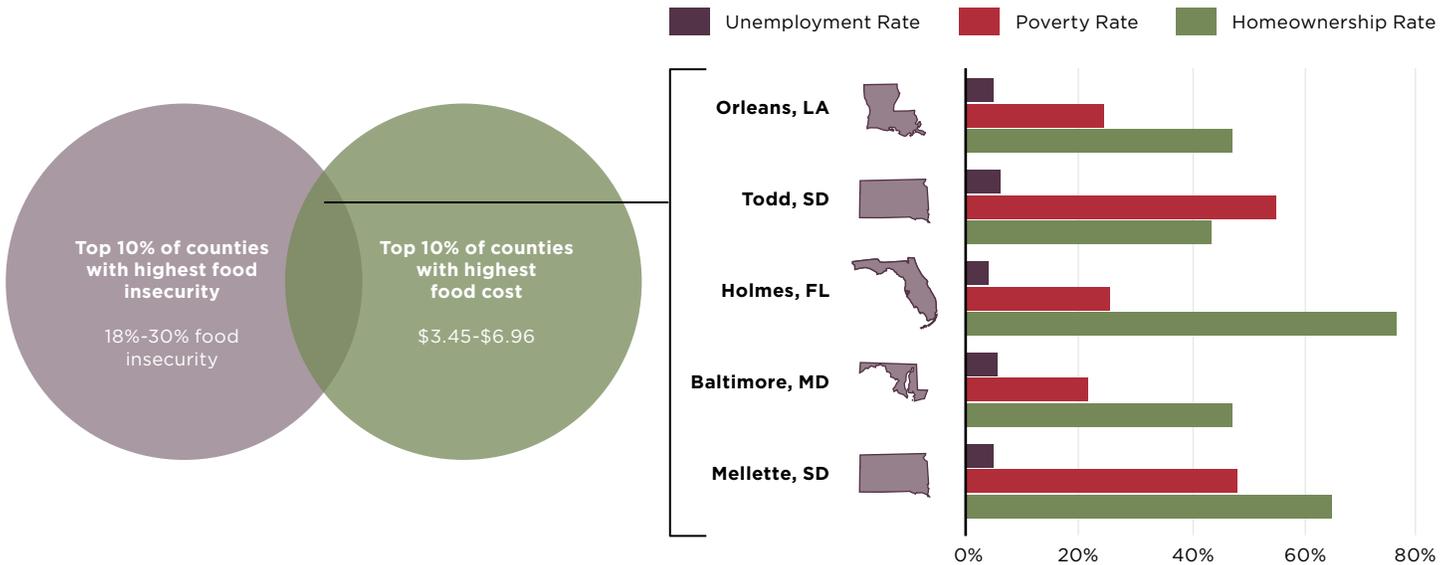
The top 10% of counties with the highest food prices have an average meal cost 22% higher than the national average (\$3.76 versus \$3.09). While there are pockets of communities across the country with high meal costs, counties with the highest estimated costs are regionally concentrated. The Northeast (\$3.41) and West (\$3.39) have a disproportionately high share of these high-cost counties. These two regions account for just 21% of all counties, but 67% of counties with the highest cost per meal. The South and Midwest have lower than average meal costs (\$3.02 and \$2.99, respectively) and relatively fewer counties in the top 10%.



Most counties with the highest meal costs (58%) are part of populous metropolitan areas. **Due in part to population density, urban counties with high meal costs are also home to large numbers of people who are food insecure.** An estimated 8.7 million people are at risk of hunger in these high-cost urban communities.

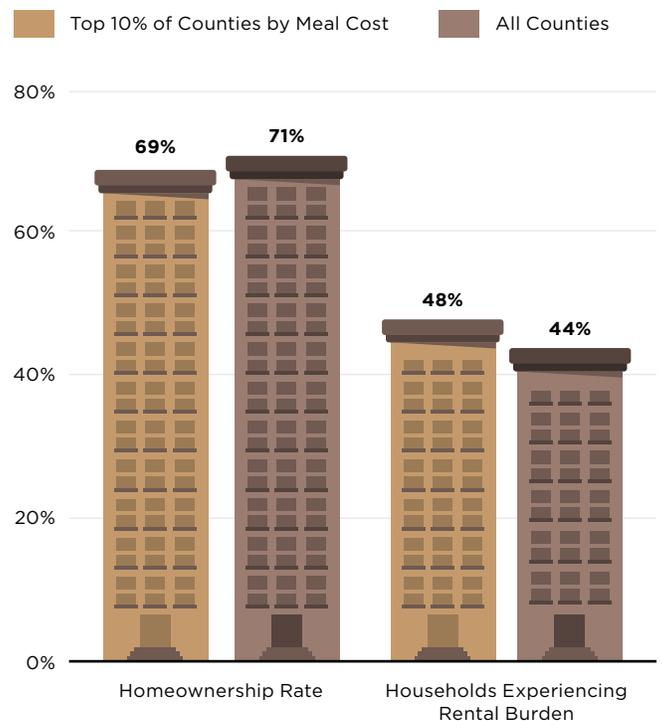
High Food Cost and High Food Insecurity

For a family struggling to afford housing, utilities, transportation and other basic necessities, the additional burden of high food prices can have a significant impact on their household budget. **Five counties fall into the top 10% for both food insecurity and meal cost.** An average of one in every five individuals in these counties is food insecure, totaling more than 187,000 food-insecure people who live in areas with some of the highest meal costs. Although, these counties may not face the highest food prices in the nation, the average cost per meal of \$3.55 is still 15% higher than the national average. Three of the five counties are in the South and four have persistent poverty.⁵ Four of the five counties have higher-than-average unemployment rates⁶ and below average homeownership rates,⁷ and all five have higher-than-average poverty rates.⁸



High Food Cost and Housing

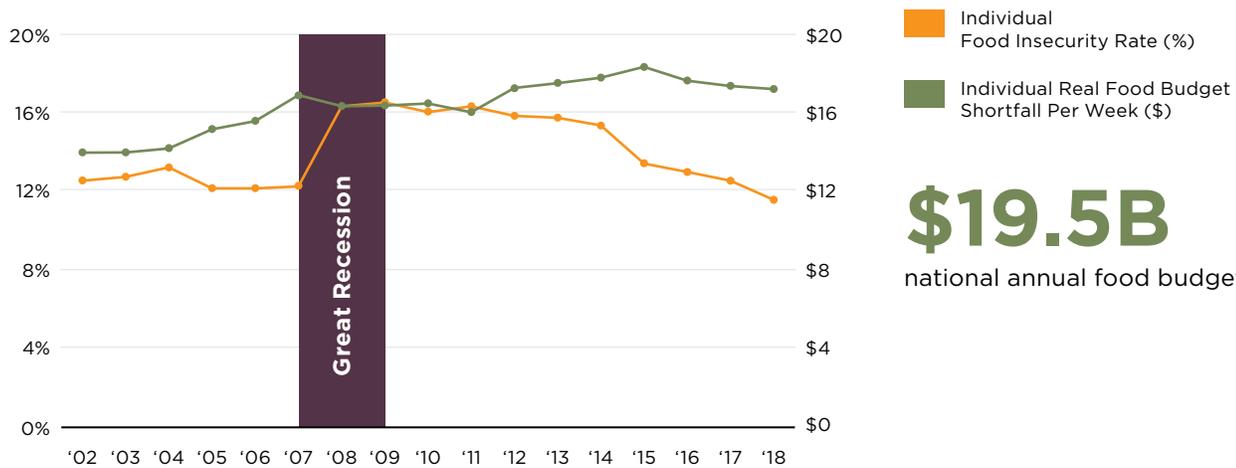
High meal costs can force food-insecure households to make tradeoffs that in turn make it difficult to invest in their long-term economic success. They may even force families to choose between buying food and paying for housing. **Compared to all counties, those with the highest meal costs tend to have lower rates of homeownership, higher rent, and a higher rental burden**—which occurs when a household pays 30% or more of their income on rent.⁷



Implications

Studying local food insecurity in the context of average meal costs illustrates just how much variation there is in both the prevalence of need and the price of food across the country. The cost per meal measure discussed here reflects the average amount of money that someone who is food secure is likely to spend on a single meal. It is also useful to consider reported need among people who are food insecure. An analysis of national survey data suggests that people at risk of hunger in 2018 report needing an additional \$17.24 per week on average to buy just enough food to meet their needs. After adjusting for inflation, this food budget shortfall is slightly lower than the \$16.99 reported in 2017 (\$17.40 in 2018 dollars). **When annualized across the 37 million people estimated to be food insecure, however, the national shortfall stands at nearly \$19.5 billion as of 2018.**

Food Insecurity and Reported Need Since Great Recession



\$19.5B

national annual food budget shortfall

When struggling to afford housing, utilities, transportation and other basic necessities, however, the additional burden of high food prices can have a significant impact on a family's budget. **For households at risk of hunger in certain parts of the country, high food prices can make it especially difficult to afford the food they need. This is a reality even for families who receive federal nutrition assistance benefits.**

The Supplemental Nutrition Assistance Program (SNAP), which served nearly 36 million people in 2019, is a key federal program that helps low-income households bolster their food budget¹⁰ and helps children and adults transition out of food insecurity.¹¹ SNAP benefits, however, are not adjusted¹¹ for higher cost of living except in Alaska and Hawaii, and even the maximum SNAP benefit falls short of covering the cost of a meal in 99% of U.S. counties.¹² This resource gap can cause families in certain areas to experience higher rates of food insecurity. Recent research suggests that a weekly increase in SNAP benefits of \$42 per household would lead to a 62% decline in national food insecurity rates.¹³

Map the Meal Gap Methodology

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Health, Disability and Food Insecurity



Food insecurity has been widely accepted as a key social determinant of health, recognizing that healthy bodies and minds require access to nutritious meals at every age. Inconsistent access to adequate amounts of nutritious food has a negative impact on the health of individuals at all ages. There is a growing body of literature that demonstrates that living with a disability is a key risk factor for food insecurity, adding another layer to our understanding of the dynamic relationship between food insecurity and health.¹⁻⁸ The USDA estimates that as of 2018, 37 million people, including more than 11 million children, in the United States were food insecure.⁹

An analysis of county data on health indicators, disability prevalence, and food insecurity shows that communities with the highest rates of food insecurity face a higher prevalence for diseases and other measures that are tied to health. Additionally, communities with higher proportions of households with a member who is disabled often have higher rates of food insecurity. For the tenth 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. The following focuses on the intersections between food insecurity, health outcomes and disability status at the local level and is one of four related topics that make up the *Map the Meal Gap 2020* [report briefs](#).

37 million

-or-

1/9 

people are food insecure.

In counties with high food insecurity:

1/5 

people have a disability.

1/7 

people have diabetes.

1/4 

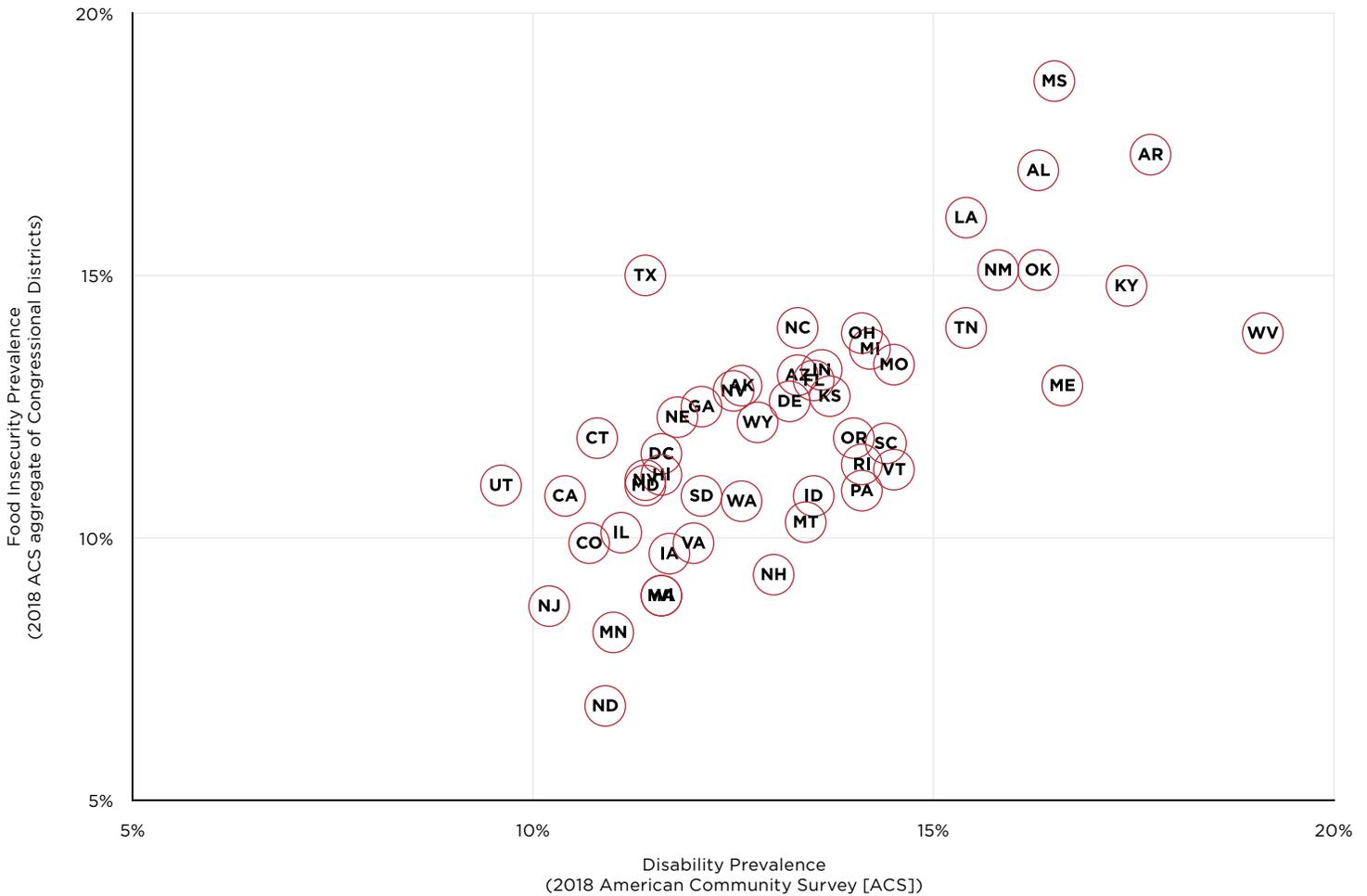
report poor or fair health.



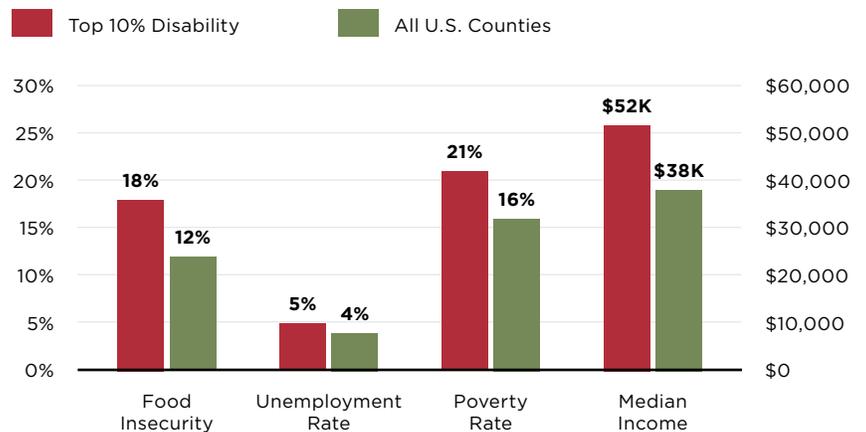
The Impact of Disability on Food Insecurity

In response to the growing body of research that demonstrates disability as a key risk factor for food insecurity, *Map the Meal Gap* estimates now account for disability status. This measure includes individuals that report any of the following disability types: hearing, visual, cognitive, ambulatory, self-care or independent living.¹⁰ States with a higher prevalence of individuals living with one or more disabilities also have higher rates of food insecurity.

Food Insecurity and Disability Status by State, 2018



The relationship between high rates of disability and high food insecurity is present in counties across the United States. The prevalence of individuals living with a disability ranges from less than 4% in Pitkin County, Colorado to nearly 34% in Breathitt County, Kentucky. In counties with the highest rates of disability, one in six individuals is food insecure, compared to the national average of one in nine individuals. These counties also have higher poverty and unemployment rates than the national average and median incomes 26% lower than the national average.

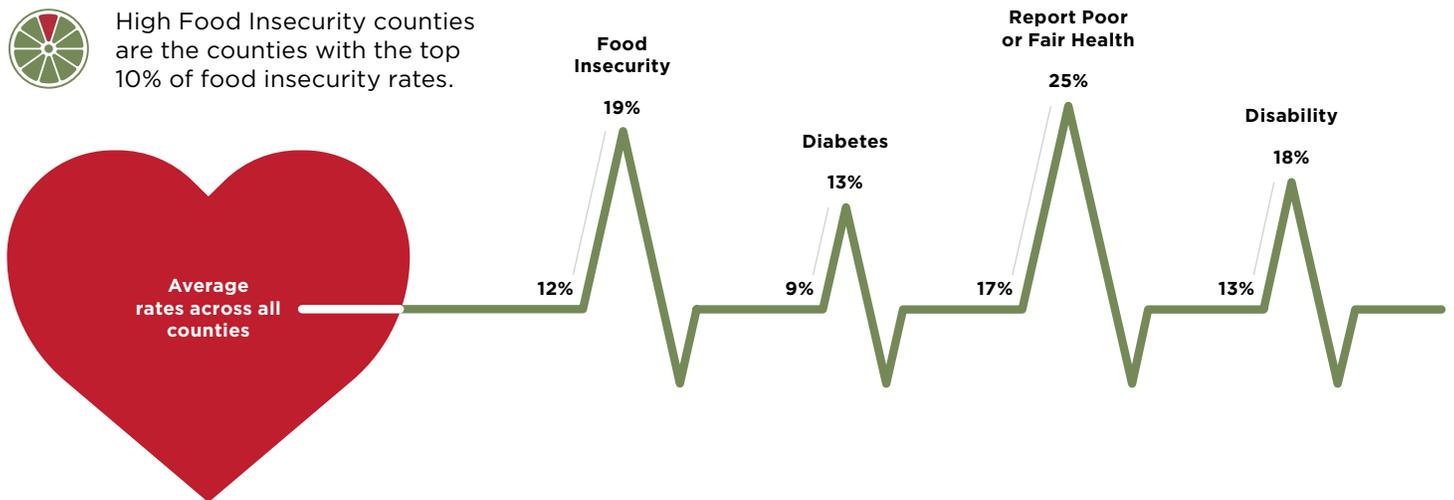


Key Findings

Food Insecurity and Health Implications at the County Level

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.^{11,12} Results from *Map the Meal Gap* show that **counties with the highest rates of food insecurity also have a higher prevalence of diabetes and disability.** Among counties whose estimated rate of food insecurity falls in the top 10% of all counties, one in seven individuals has a diabetes diagnosis, one in four report poor or fair health and one in five has some form of disability.

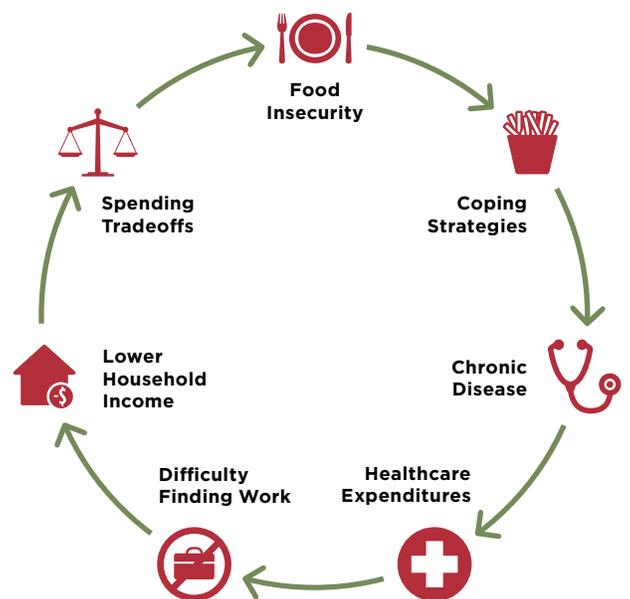
Health Indicators of Individuals in High Food Insecurity Counties Compared to All Counties



The Cycle of Food Insecurity and Health

Food insecurity and poor health outcomes can create a vicious cycle.¹³ Food-insecure households are often forced to engage in coping strategies such as purchasing cheaper foods that are high in calories but low in nutritional value. Reliance on less healthy foods can lead to poor nutrition and chronic diet-related diseases such as diabetes.¹⁴ In turn, these chronic illnesses can worsen existing disabilities or other illnesses, resulting in higher health care costs¹⁵ and difficulty keeping a job or finding work.¹⁶ These challenges further restrict the household food budget, resulting in fewer resources being allocated to food.

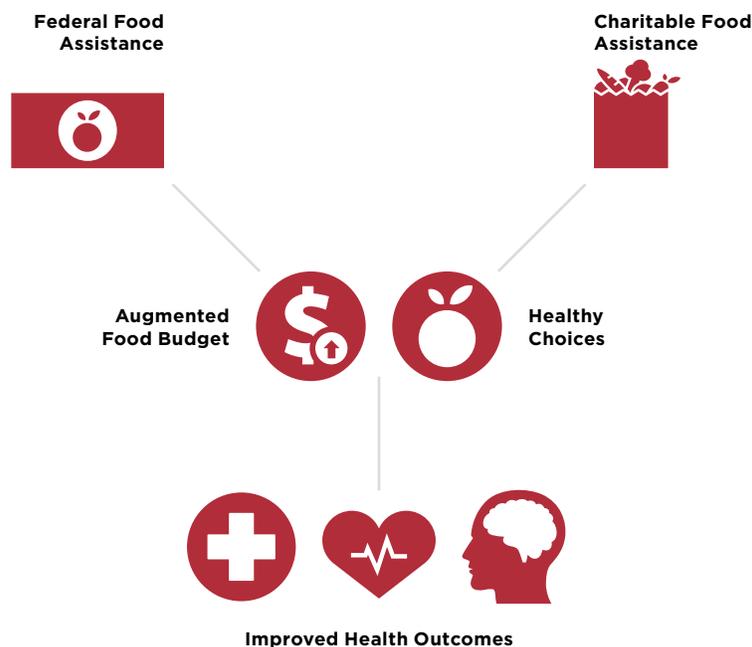
Addressing food insecurity can lead to improved health outcomes for individuals residing in food-insecure households, and consequently lower health care costs throughout the country. **Research using data from *Map the Meal Gap* finds that food insecurity is associated with higher health care costs across the United States and that these costs vary widely by geography.**¹⁷ This suggests that policies and practices at the state and local level that improve food insecurity can also improve health and associated health care costs.



Public and Charitable Food Assistance

The Supplemental Nutrition Assistance Program (SNAP), the SNAP-Education (SNAP-Ed) 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 food insecurity and diet-related disease. Both SNAP and WIC augment households' food budgets, allowing them to purchase more healthy foods; and WIC and SNAP-Ed provide nutrition education to participants as well. A 2013 review of SNAP-Ed found that it increased both consumption and willingness to consume fruits and vegetables among child participants.¹⁸ These programs, along with other federal nutrition programs that target specific populations, make up the front line of defense against food insecurity.

The charitable food system works to improve both food insecurity and health outcomes. The Feeding America network distributed 1.5 billion pounds of fresh fruits and vegetables in 2019. In addition to distributing nutritious food, food banks and food pantries have emerged as important partners in addressing diabetes outside of the healthcare setting. Building on a successful diabetes prevention pilot, Feeding America conducted a two-year randomized controlled trial to understand how food bank interventions can promote the health of food-insecure individuals living with diabetes. The trial demonstrated several positive results, including increased food security for participants. The intervention included diabetes appropriate food, nutrition education, blood sugar monitoring and referrals to primary care physicians.¹⁹ By joining together to help people struggling with hunger and diet-related disease, food banks and health care partners can have a greater impact on food insecurity and health in the United States.



Map the Meal Gap Methodology

To accurately estimate the number of people experiencing food insecurity in every U.S. county and congressional district, *Map the Meal Gap* 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 socioeconomic and demographic characteristics. Beginning in 2020, the estimates also account for disability status, one of the key risk factors for food insecurity. In addition to measuring how pervasive the need is, the study also estimates the cost of a meal and the additional amount of dollars needed among people who are food insecure using local data from Nielsen and national survey data from the Census Bureau. More information on methodology is available online in our [technical brief](#).

Map the Meal Gap 2020 also features report [briefs](#) on other topics, including an executive summary, an overview of child food insecurity and an overview of food price variations. Additionally, the [interactive map](#) allows for the exploration of food insecurity across geographies throughout the U.S.

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