MAP THE MEAL GAP 2016

HIGHLIGHTS OF FINDINGS FOR OVERALL AND CHILD FOOD INSECURITY

A Report on County and Congressional District Food Insecurity and County Food Cost in the United States in 2014

Made possible by the generous support of The Howard G. Buffett Foundation, Founding Sponsor of the Map the Meal Gap research series.

FOREWORD

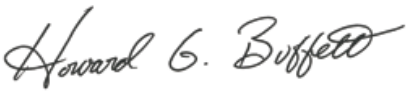
The United States is one of the richest countries in the world, and yet millions of Americans do not have enough to eat. The problem of hunger affects more than 48 million Americans and is not limited to certain regions or states. People struggle to provide enough food for themselves and their families in nearly every corner of our country.

In order to make our nation stronger and create a brighter future for everyone, we must first shine a light on the hidden hunger crisis in America. As a farmer, a businessman, and an advocate for improving the lives of others, I know that good information is an important starting point if we are going to solve big problems like hunger.

I am proud to partner with Feeding America to advance their mission to end hunger in our country and provide stability for those in need. The Howard G. Buffett Foundation is pleased to be the Founding Sponsor of Feeding America's signature study, *Map the Meal Gap.*

Since its inception in 2011, *Map the Meal Gap* has transformed the way Feeding America and anti-hunger advocates define and approach the need for food at the local level. By providing critical information about the nature and extent of hunger in communities across the United States, we are able to equip our citizens with the tools to fight for hunger relief where it is needed. Based on the most recent data available from 2014, we know that the need remains at historically high levels.

Now in its sixth year, *Map the Meal Gap* continues to build awareness and a growing understanding of the issue of food insecurity in different parts of our country. Working together, The Howard G. Buffett Foundation and Feeding America are on the leading edge of hunger research. It is our hope that, as we continue to produce innovative, insightful portraits of hunger in the United States, we are helping to inspire new ideas and shape the national conversation around hunger.



Howard G. Buffett
Chairman and CEO
The Howard G. Buffett Foundation

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FEEDING AMERICA

ABOUT FEEDING AMERICA

Feeding America is the nationwide network of 200 food banks that leads the fight against hunger in the United States. Together, we provide food to more than 46 million people through 60,000 food pantries and meal programs in communities across America.

Feeding America also supports programs that improve food security among the people we serve, educates the public about the problem of hunger, and advocates for legislation that protects people from going hungry.

Individuals, charities, businesses and government all have a role in ending hunger. Donate. Volunteer. Advocate. Educate. Together we can solve hunger.™

HOW WE WORK

WE SECURE DONATIONS

The Feeding America network secures donations from national and local retailers, food companies and government agencies.

WE MOVE FOOD

The Feeding America network of food banks moves donated food and grocery products to where they are needed most.

WE SAFELY STORE AND DISTRIBUTE DONATIONS

Member food banks ensure the safe storage and reliable distribution of donated goods to local charitable feeding programs.

WE FEED PEOPLE IN NEED

Food banks provide food and grocery items to people in need at food pantries, soup kitchens, youth programs, senior centers and emergency shelters.

GLOSSARY

AGENCY
A charitable organization that provides the food supplied by a food bank directly to clients in need through various types of programs.

AMERICAN COMMUNITY SURVEY (ACS)
A sample survey of 3 million addresses administered by the U.S. Census Bureau. In order to provide valid estimates for areas with small populations, the county-level data extracted from the ACS for *Map the Meal Gap* were averaged over a five-year period.

AVERAGE MEAL COST
The national average amount of money spent per week on food by food-secure people, as estimated in the Current Population survey, divided by 21 (assuming three meals eaten per day).

CHILD FOOD INSECURITY
A condition assessed in the Current Population Survey (CPS) and represented in U.S. Department of Agriculture (USDA) food-security reports. It is the household-level economic and social condition of limited or uncertain access to adequate food, as reported for households with children under age 18.

CHILD FOOD-INSECURITY (CFI) RATE
The approximate percentage of children (under 18 years old) living in households in the U.S. that experienced food insecurity at some point during the year. The child food-insecurity measures reflected in this study are derived from the same set of questions used by the USDA to establish the extent of food insecurity in households with children at the national level. "Child food insecurity" and "CFI" are used interchangeably throughout this report.

CURRENT POPULATION SURVEY (CPS)
A nationally representative survey conducted by the U.S. Census Bureau for the Bureau of Labor Statistics (BLS) providing employment, income, food insecurity and poverty statistics. Households are selected to be representative of civilian households at the state and national levels. The CPS does not include information on individuals living in group quarters, including nursing homes or assisted living facilities.

EMERGENCY FOOD ASSISTANCE
Charitable feeding programs whose services are provided to people in times of need. Examples include food pantries, kitchens and shelters.

FEDERAL NUTRITION PROGRAM ELIGIBILITY THRESHOLD
The point at which household income is deemed too high to allow for eligibility for federal nutrition programs such as the National School Lunch Program (NSLP) or the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).

FOOD BANK
A charitable organization that solicits, receives, inventories and distributes donated food and grocery products pursuant to industry and appropriate regulatory standards. The products are distributed to charitable social-service agencies, which provide the products directly to clients through various programs. Some food banks also distribute food directly to clients in need.

FOOD BUDGET SHORTFALL
The weekly (or annualized) additional dollars food-insecure people report needing to meet their food needs, as assessed in the Current Population Survey.

FOOD INSECURITY
A condition assessed in the Current Population Survey and represented in USDA food security reports. It is the household-level economic and social condition of limited or uncertain access to adequate food.

FOOD-INSECURITY RATE
The percentage of the population that experienced food insecurity at some point during the year.

HIGH FOOD-INSECURITY COUNTIES
The counties with food-insecurity (or child food-insecurity) rates falling into the top 10 percent, as compared with the food-insecurity (or child food-insecurity) rates among all counties in the United States.

THE MEAL GAP
A conversion of the total annual food budget shortfall in a specified area divided by the weighted cost per meal in that area. The meal gap number represents the translation of the food budget shortfall into a number of meals.

METROPOLITAN/MICROPOLITAN
Metropolitan areas contain a core urban area of 50,000 or more residents, and micropolitan areas contain a core urban area of at least 10,000 (but fewer than 50,000) residents, as defined by the U.S. Office of Management and Budget (OMB). Each metropolitan or micropolitan area consists of one or more counties and includes the counties containing the core urban area, as well as any adjacent counties that have a high degree of social and economic integration with the urban core. In this report, rural counties are those that are represented as neither metropolitan nor micropolitan by the OMB.

PERCENT OF POVERTY LINE
A multiple of the federally established poverty guideline, which varies based on household size. These percentages are used to set federal nutrition program thresholds for eligibility, such as the SNAP threshold.

PERSISTENT-POVERTY COUNTY
A term used by the USDA Economic Research Service (ERS) to refer to counties where at least 20 percent of the population has been living in poverty over the last 30 years.

PRICE INDEX/LOCAL COST OF FOOD INDEX
A number used to indicate relative differences in prices across geographies. In the case of this report, the index for any particular county is equal to the cost of a standard market basket of goods in that county divided by the average market basket cost across the U.S. as calculated by Nielsen.

RURAL-URBAN CONTINUUM CODES
Rural-Urban Continuum Codes (RUCC's) are county classification schemes that distinguish metropolitan counties by the population size of their metro area, and nonmetropolitan (including rural and micropolitan) counties by degree of urbanization and adjacency to a metro area.

SNAP ELIGIBILITY THRESHOLD
A dollar amount (based on percent of poverty line) at which a household's income is deemed too high to be eligible for the Supplemental Nutrition Assistance Program (SNAP, formerly the Food Stamp Program). Income eligibility is one aspect of eligibility, which also includes assets and net income. These income thresholds and other eligibility tests vary by state.

WEIGHTED COST PER MEAL
A local estimate of meal costs calculated by multiplying the average meal cost by the appropriate food cost price index for the specific geographic area.

ABOUT *MAP THE MEAL GAP 2016*

We believe that addressing the problem of hunger requires a thorough understanding of the problem itself. For the sixth consecutive year, Feeding America has undertaken the *Map the Meal Gap* project to continue learning about the face of food insecurity at the local level. By understanding the local need, communities can develop more effective strategies for reaching those who are struggling with hunger.

Although Feeding America continually seeks to meet the needs of food-insecure people, quantifying the need for food within a community can be challenging. In September of 2015, the Economic Research Service at the United States Department of Agriculture (USDA) released its most recent report on food insecurity, indicating that over 48 million people in the United States are living in food-insecure households, more than 15 million of whom are children (Coleman-Jensen et al., 2015). While the magnitude of the problem is clear, national and even state estimates of food insecurity can mask the variation that exists at the local level. Prior to the inaugural *Map the Meal Gap* release in March 2011, Feeding America used state- and national-level USDA food-insecurity data to estimate the need.

Food banks are rooted in their local communities, however, and need specific information at the ground level in order to be responsive to unique local conditions. Although state- and national-level food-insecurity data were available, food banks used poverty rates as the default indicator of local food needs because it was one of few variables available at the county level. National data, however, reveal that about 56 percent of people struggling with hunger actually have incomes above the federal poverty level, and 59 percent of people living in poor households are food secure (Coleman-Jensen et al., 2015). Measuring need based on local poverty rates alone provides an incomplete illustration of the potential need for food assistance within our communities. Better community-level data is a valuable resource for engaging community members, leaders and partners in our quest to end hunger through a quantifiable and data-driven approach. In order to do this, *Map the Meal Gap* generates four types of community-level data: overall food-insecurity estimates, child food-insecurity estimates, food price variations and food budget shortfalls.

RESEARCH GOALS

In developing the *Map the Meal Gap* analysis, Feeding America identified several research goals for the project. These goals and the mechanisms for achieving them have remained unchanged. Community-level analysis should:

Be directly related to the need for food. The analysis estimates food insecurity at the county- and congressional-district level.

Be based on well-established, transparent analytical methods. The statistical methods are well known and use data from publicly-available sources.

Provide data on all counties in the U.S. Using the American Community Survey (ACS) data for all counties, this is possible.

Be updated on an annual basis to reflect changing conditions. By using the national and annual USDA food-insecurity data, county-level estimates can be calculated each year. The data presented in this report are drawn from 2014 Bureau of Labor Statistics data and the American Community Survey averages from the rolling 2010-2014 period (the most recent data available across all counties).

Reflect major known determinants of the need for food, such as unemployment and poverty. The model estimates food insecurity by examining the relationship between food insecurity and unemployment, poverty and other factors.

Help identify need by the income categories that inform eligibility for major federal nutrition programs so that communities can better understand what strategies can be leveraged in the fight against hunger. The model draws on information about income levels in counties. The income data is used to estimate the number of food-insecure individuals whose resources suggest they are eligible for federal assistance programs. It also estimates the number of people whose incomes may be too high to qualify for federal nutrition programs but who still need help meeting their families' food needs.

METHODOLOGY OVERVIEW

The following provides additional information on the methodology for this study.

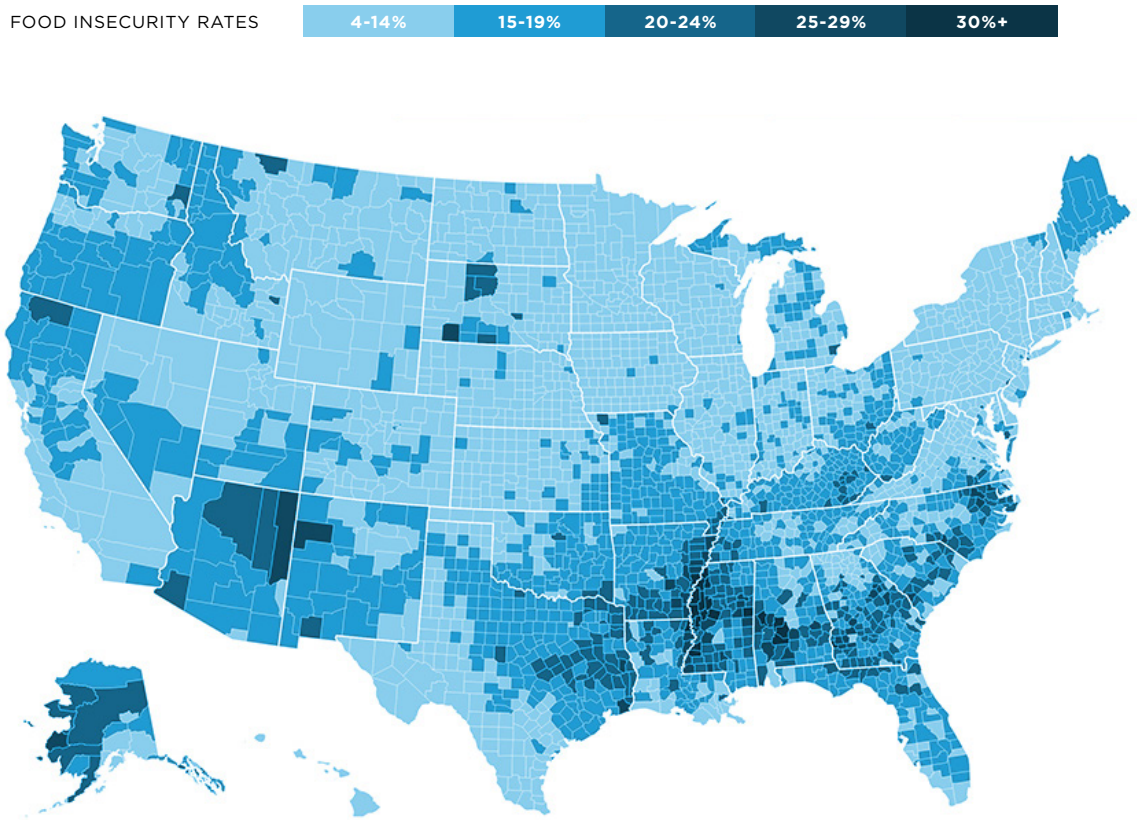
A more detailed technical brief is available online at map.feedingamerica.org.

FOOD-INSECURITY ESTIMATES

Current Population Survey (CPS) data supplemented with data from the Bureau of Labor Statistics (BLS) were used to assess the relationship between food insecurity and associated factors at the state level. In particular, the following variables were used: the unemployment rate, the poverty rate, the homeownership rate, and other demographic variables that are publicly available at both the county and state level. County-level estimates were derived from the state-level relationships that exist between these variables and food insecurity. Food-insecurity estimates at the county level may be less stable from year to year than those at the state or national level due to smaller geographies, particularly in counties with very small populations. Efforts are taken to guard against unexpected fluctuations that can occur in these populations by using the five-year averages from the American Community Survey (ACS). Unemployment, however, is based on a one-year average estimate for each county as reported by the BLS. Estimates were sorted by income categories associated with eligibility for federal nutrition programs, such as the Supplemental Nutrition Assistance Program (SNAP), using ACS data on population and income at the county level.

ESTIMATING FOOD INSECURITY AT THE COUNTY LEVEL

FIGURE 01



Using the annual USDA Food Security Survey, we model the relationship between food insecurity and other variables at the state level and, using information for these variables at the county level, we establish food insecurity by county.

Visit map.feedingamerica.org for a complete printable, interactive map of county-level food insecurity and food cost data.

WHAT ABOUT UNDEREMPLOYMENT?

Underemployment occurs when a person is in the labor force but is not obtaining enough hours or wages to make ends meet. This includes people who work part-time but would be working full-time if possible and people who are in jobs not commensurate with their training or financial needs. Although unemployment continues to be associated with food insecurity, underemployment can also lead to a limited household budget for food and is not accounted for in the unemployment rates produced by the Bureau of Labor Statistics. Unfortunately, underemployment cannot be included in the model estimating county-level food insecurity because the data are not available.

The food-insecurity model illuminates the relationship between food insecurity and the unemployment rate, the poverty rate and other factors.

As expected, all else equal, higher unemployment and poverty rates are associated with higher rates of food insecurity. A one percentage point increase in the unemployment rate leads to a 0.53 percentage point increase in the overall food-insecurity rate, while a one percentage point increase in poverty leads to a 0.17 increase in food insecurity. Although the effect of a one percentage point increase in unemployment is larger than a one percentage point increase in poverty as described above, the mean value of poverty is higher than unemployment. To control for this, we evaluate what occurs when unemployment and poverty are both at their mean values and consequently find that the relative effect of unemployment is higher than poverty for the full population.

CHILD FOOD-INSECURITY ESTIMATES

Recognizing that children are particularly vulnerable to the economic challenges facing families today, Feeding America has replicated the food-insecurity model used for the general population to reflect the need among children (see page 29 for results).

Similar to the methodology used to derive food-insecurity estimates for the overall population, CPS data were used to assess the relationship between the proportion of children in any state living in food-insecure households and variables associated with food insecurity (e.g., unemployment rates, child-poverty rates, homeownership rates for families with children, etc.) that are publicly available at the county, congressional district and state levels through the CPS, BLS and ACS.

Child food-insecurity estimates were sorted into income categories associated with eligibility for child nutrition programs (above and below 185 percent of the poverty line) such as the National School Lunch Program (NSLP), the School Breakfast Program (SBP) and the Special Supplemental Nutrition Program for Women, Infants and Children (WIC).

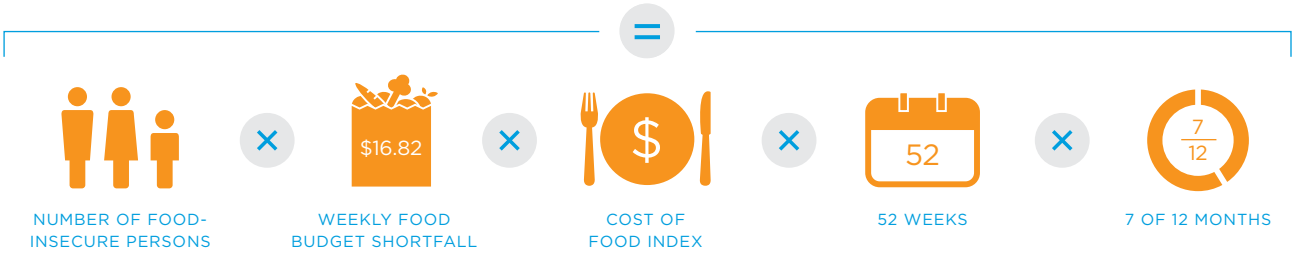
FOOD PRICE VARIATION

Nielsen, on behalf of Feeding America, analyzed nationwide sales data from Universal Product Code (UPC)-coded food items to establish a relative price index that allows for comparisons of food prices across the country.[1] Nielsen assigned each UPC-coded food item to one of the 26 food categories in the USDA Thrifty Food Plan (TFP). These categories were weighted within the TFP market basket based on pounds purchased per week by age and gender. This total market basket was then translated into a county-specific multiplier (normalized to a value of 1).

This multiplier can be applied to any dollar amount to estimate the relative local price of the item in question. The use of the TFP market basket is simply a standardized way to understand the relative differences in major food categories and was not selected to reflect any evaluation of the appropriate mix of food that people might purchase.

[1] In cases of counties with populations smaller than 20,000, Nielsen imputed a price based on data collected from all surrounding counties.

FOOD BUDGET SHORTFALL REPORTED BY FOOD-INSECURE INDIVIDUALS IN 2014



FOOD BUDGET SHORTFALL AND NATIONAL AVERAGE MEAL COST

There is a question on the CPS that asks respondents how much additional money they would need to buy enough food for their households (this follows questions regarding weekly food expenditures but precedes food-insecurity questions). On average, food-insecure individuals reported needing an additional $16.82 per person per week, a three-percent increase from $16.28 in 2013.

A general estimate of the total budget shortfall among the food insecure can be arrived at by multiplying this amount by the number of food-insecure persons. Because analyses of the CPS data by the USDA reveal that food-insecure households are not food insecure every day of the year, but typically experience food insecurity for about seven months per year, 7/12 is used as a multiplier to arrive at an estimated annual food budget shortfall (Coleman-Jensen et al., 2015).

In recognition that food costs are not the same across the nation, the average food budget shortfall was adjusted by the local cost-of-food index for each county. The national cost-of-food index is set at 1.

The food budget shortfall is then translated into an estimated meal shortfall, or "meal gap," using a national average per-meal cost. The national cost-per-meal estimate was derived from a question on the CPS asking how much the respondent's household spends on food in a week. We only include food-expenditure data as reported by food-secure households to ensure that the result reflects the cost of an adequate diet. According to CPS data, we find that food-secure individuals spend an average of $60.59 per week, which, when divided by 21 (based on the assumption of three meals per day, seven days per week), amounts to an average cost per meal of $2.89.

FOOD-SECURE INDIVIDUALS' AVERAGE COST PER MEAL

As with the food budget shortfall, the per-meal cost of $2.89 is adjusted for differences in food prices across counties by the cost-of-food index described previously in the Food Price Variation section. This local cost of a meal can then be used to translate the food budget shortfall into an estimated number of missing meals. The cost-per-meal and meal-gap estimates are not intended to be definitive measures; however, the concept of a "meal" provides communities with a context for the scope of need.

Although food prices are one of the many cost pressures that people face in meeting their basic needs (housing, utilities and medical expenses are other critical components), the ability to reflect differences in food costs across the country provides additional insight into the scope of the problems facing those who are food insecure and struggling to make ends meet.

COUNTY-LEVEL FOOD INSECURITY: RESULTS AND DISCUSSION

The *Map the Meal Gap* research provides detailed information for every county and congressional district in the United States, including the food-insecurity rate, the number of individuals who are food insecure and income-eligibility for federal programs within the food-insecure population.

TRENDS IN COUNTY FOOD INSECURITY

The following section reviews findings from the sixth year that Feeding America has conducted the *Map the Meal Gap* analysis. Food-insecurity rates and numbers in 2014 are compared to those in 2013, 2012 and 2011 to identify any notable shifts.

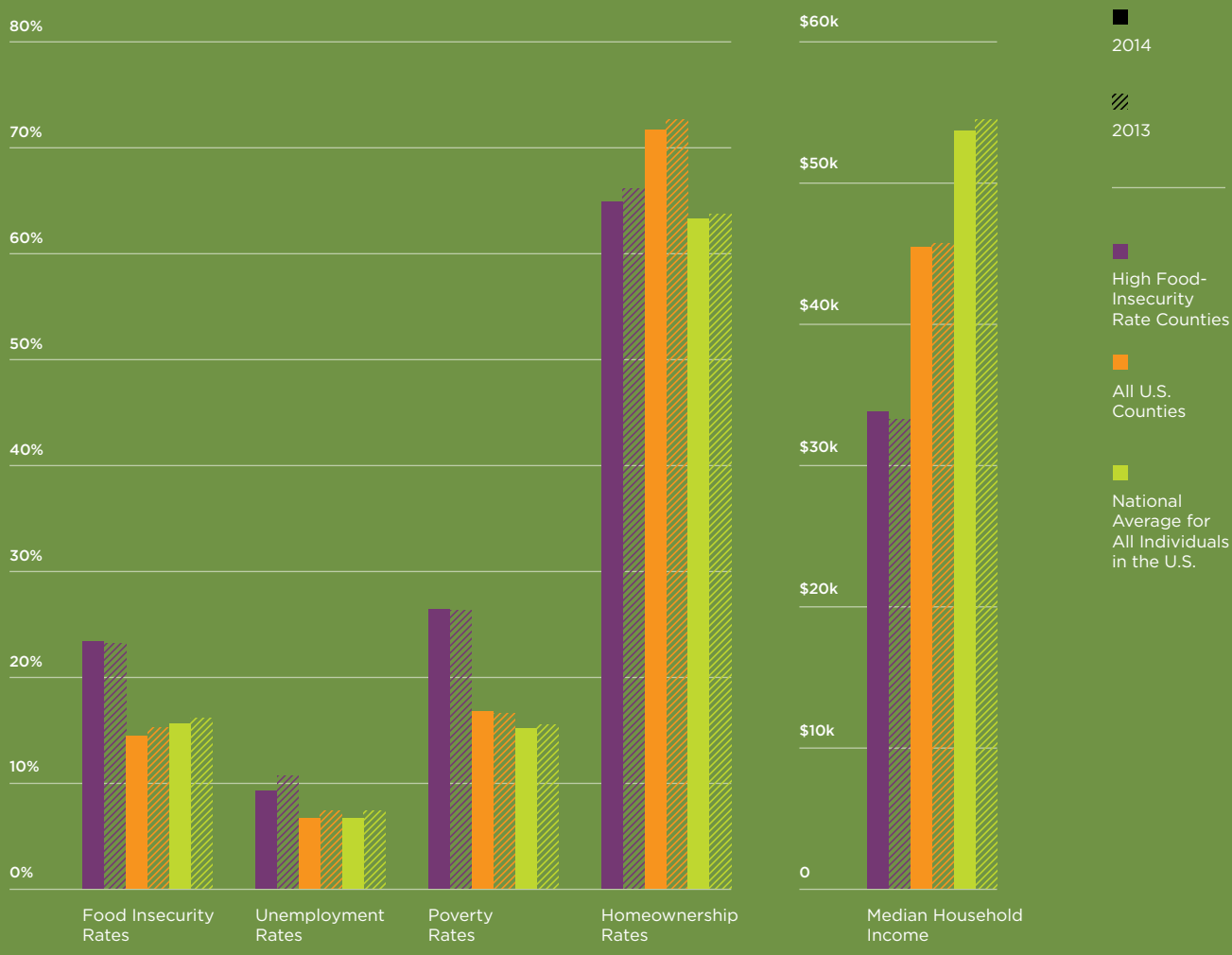
Nationally, the food-insecurity rate remained essentially unchanged in 2014 at 15.4 percent compared to 15.8 percent in 2013, but it experienced a statistically significant cumulative decrease since 2011 (Coleman-Jensen et al., 2015). Poverty, a national and county-level economic variable associated with food insecurity, stayed approximately the same, while unemployment, another covariate in the Map the Meal Gap food insecurity model, decreased (see Chart 01).

Reflecting the national trends, food-insecurity rates across counties remained historically high in 2014 at 14.7 percent, ranging from a high of nearly 38 percent in Jefferson County, Mississippi, to a low of roughly 4 percent in Loudoun County, Virginia. The average county food-insecurity rate of 14.7 percent was slightly lower than the 2013 average of 15.1 percent, but it was equivalent to the county average in 2012 and 2011. It is possible to see the gradual decline in food insecurity since 2011 when looking at the weighted county average (the sum of all food-insecure individuals across all counties divided by the total population). Based on this measure, the countywide food-insecurity rate has fallen gradually from 15.1 percent in 2011 to 14.9 percent in 2012 to 14.7 percent in 2013 to 14.3 percent in 2014. Although there are signs of improvement, the prevalence of food insecurity in counties across the country is much higher than it was prior to 2008, the first full year of the Great Recession.

Food insecurity in counties across the country is much higher than it was prior to 2008, the first full year of the Great Recession.

AVERAGE COUNTY-LEVEL ECONOMIC INDICATORS, 2014

CHART 01



The **average county food-insecurity rate** as of 2014 is **14.7 percent,** meaning that an estimated **1 in 7 people** in the United States struggles with hunger.

The estimated number of food-insecure individuals across all counties decreased by approximately 865,000 or roughly two percent between 2013 and 2014, equaling the national percentage change reported by the USDA. Since 2011, the estimated county total has fallen by nearly 1.5 million or roughly three percent. Only a handful of counties, however, saw a statistically significant change in their food insecurity rates. Less than one percent (22) of all 3,142 counties experienced a statistically significant change between 2013 and 2014, the vast majority (86 percent) of which were decreases. The number of counties with statistically significant changes is slightly higher, at two percent (67) since 2012 and just under nine percent (274) since 2011.

Poverty, a national and county-level economic variable associated with food insecurity, also stayed approximately the same, while unemployment decreased (see Chart 01). The average unemployment rate across counties decreased from 7.3 percent to 6.3 percent, while the average poverty rate remained about the same at 16.8 percent (compared to 16.7 percent in 2013). Similarly, the average poverty rate of the high food-insecurity rate counties (discussed in the next section) held steady in 2014, while unemployment rates continued to decrease,[2] reflecting the national-level findings (see Chart 01). Across all counties, including those with the highest rates of food insecurity, homeownership fell slightly from 2013 to 2014. Although the average median income among all counties edged upward from 2013 to 2014 ($45,937 to $46,544), this did not keep up with inflation (CPI, 2016), meaning that the average median income among all counties in 2014 was in real terms lower than that in 2013. In short, although there have been small decreases in food insecurity rates over the years, it has remained stubbornly high when compared to pre-recession rates.

The following sections explore current county-level findings in greater detail. Please note that substantial changes between 2013 and 2014 are highlighted, while small changes are not.

[2] The food-security module asks individuals about the prior 12 months, although it is plausible that individuals' responses may be most affected by their recent experience.

COUNTIES WITH THE HIGHEST RATES OF FOOD INSECURITY

To better understand those counties with the highest rates of food insecurity, we looked at those falling within the top 10 percent of the 3,142 counties in the United States (N=321; see Figure 03).[3]

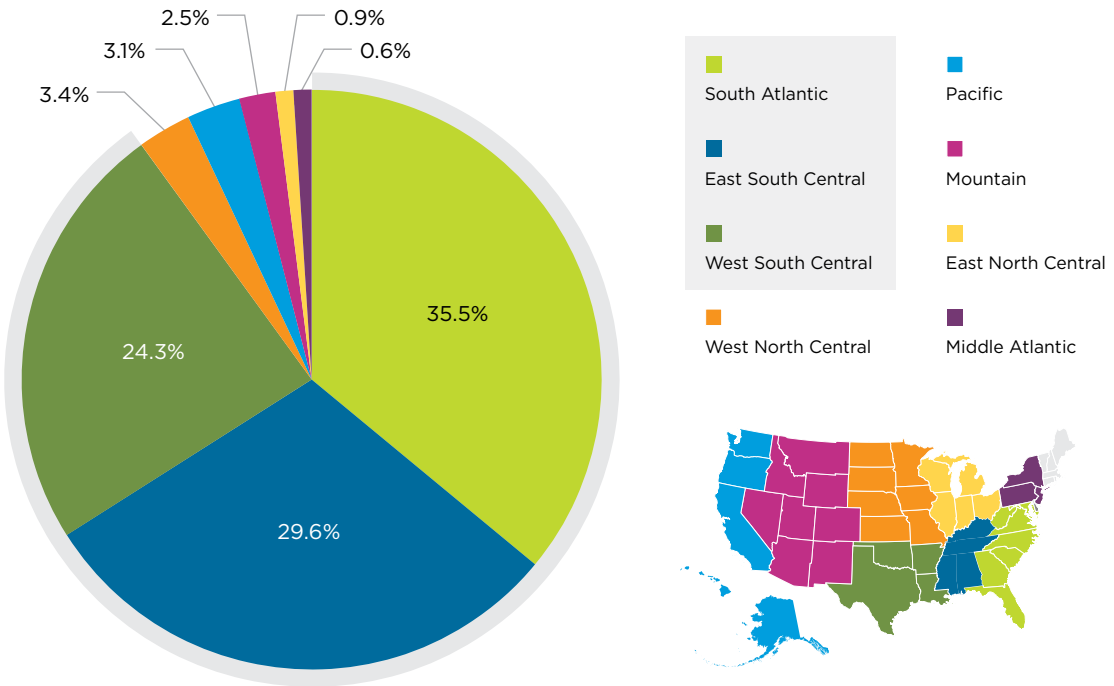
Although the average of all the U.S. counties' food-insecurity rates remains at roughly 15 percent, the average food-insecurity rate for these 321 "high food-insecurity rate" counties is 23 percent. In other words, within these highest-risk counties, nearly one in four residents is struggling with hunger.

GEOGRAPHY

High food-insecurity rate counties were analyzed according to metropolitan and micropolitan geographical classifications. In this study, counties that are neither metropolitan nor micropolitan are considered rural.[4] Consistent with findings in 2013, the high food-insecurity rate counties were less likely to be metropolitan than the average county in the U.S. and were more likely to be rural, as shown in Chart 02 on page 17. It is worth noting, however, that the proportion of high food-insecurity counties that were rural actually decreased in 2014 (50 percent in 2014 versus 54 percent in 2013). Conversely, the proportion of high food-insecurity counties that were metropolitan ticked upward in 2014 (26 percent in 2014 versus 22 percent in 2013). This is a reversal of two straight years of an increase in the proportion of these counties being classified as rural between 2011 and 2013. The high food-insecurity rate counties are found in eight of the nine Census geographic divisions identified by the U.S. Census Bureau (see Figure 03),[5] with the heaviest concentrations found in the South Atlantic and East South Central states. Encompassing the South Atlantic, East South Central, and West South Central divisions, the South contains nearly 90 percent of the high food-insecurity rate counties. Although the New England division is not represented in the high food-insecurity rate counties, this area includes some of the most populous counties in the U.S. and thus has some of the largest numbers of food-insecure individuals (see pages 20 and 21).

HIGH FOOD-INSECURITY RATE COUNTIES BY CENSUS DIVISION, 2014

FIGURE 03



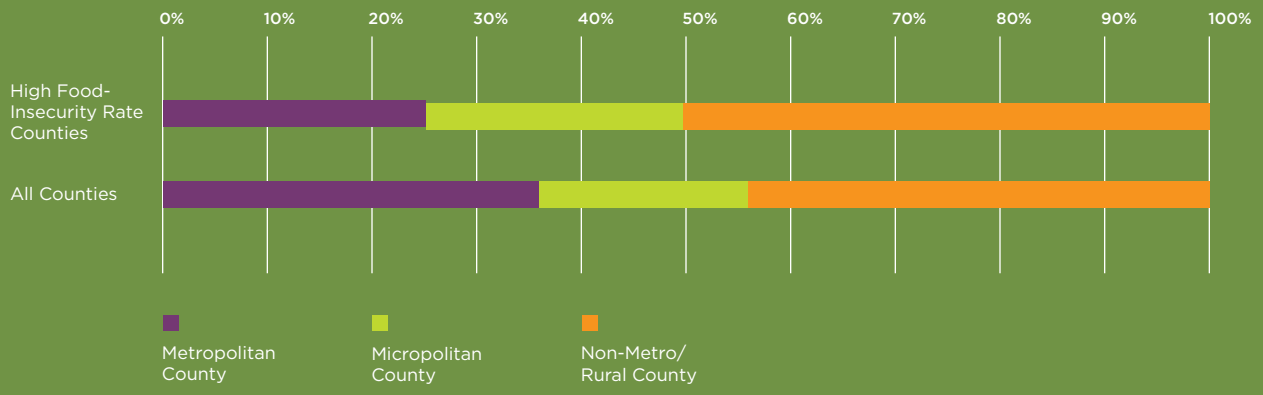
[3] All 3,142 counties defined by the U.S. Census Bureau were included in the analysis of 2014 data.

[4] These geographic entities are defined by the U.S. Office of Management and Budget (OMB). See Glossary for more information.

[5] Information about the U.S. Census Bureau Regions and Divisions can be found online at http://www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf.

HIGH FOOD-INSECURITY RATE COUNTIES BY GEOGRAPHIC AREAS, 2014

CHART 02



The average annual unemployment rate for high food-insecurity rate counties was more than nine percent in 2014, compared to six percent across all counties.

UNEMPLOYMENT, POVERTY, MEDIAN INCOME AND HOMEOWNERSHIP

By definition, the high food-insecurity rate counties are more economically disadvantaged than the national average for all counties and for the U.S. population as a whole, as seen in Chart 01 on page 14. The average annual unemployment rate for this group of counties was more than nine percent in 2014, compared to six percent across all counties. The county-equivalent Wade Hampton Census Area, Alaska had the highest unemployment rate in 2014 at 24 percent. The average of county-level poverty rates among this group was also high, averaging 27 percent in 2014 compared to 17 percent for all counties and as high as 53 percent in Shannon County, South Dakota. Not surprisingly, the average median household income in this group was lower than the national average: $34,052 versus $46,544 for all counties. The lowest median income in the group was $19,146 in Owsley County, Kentucky, less than half of the average of all counties. Homeownership rates were also lower in the high food-insecurity counties, at an average of 65 percent compared to 72 percent for all counties.

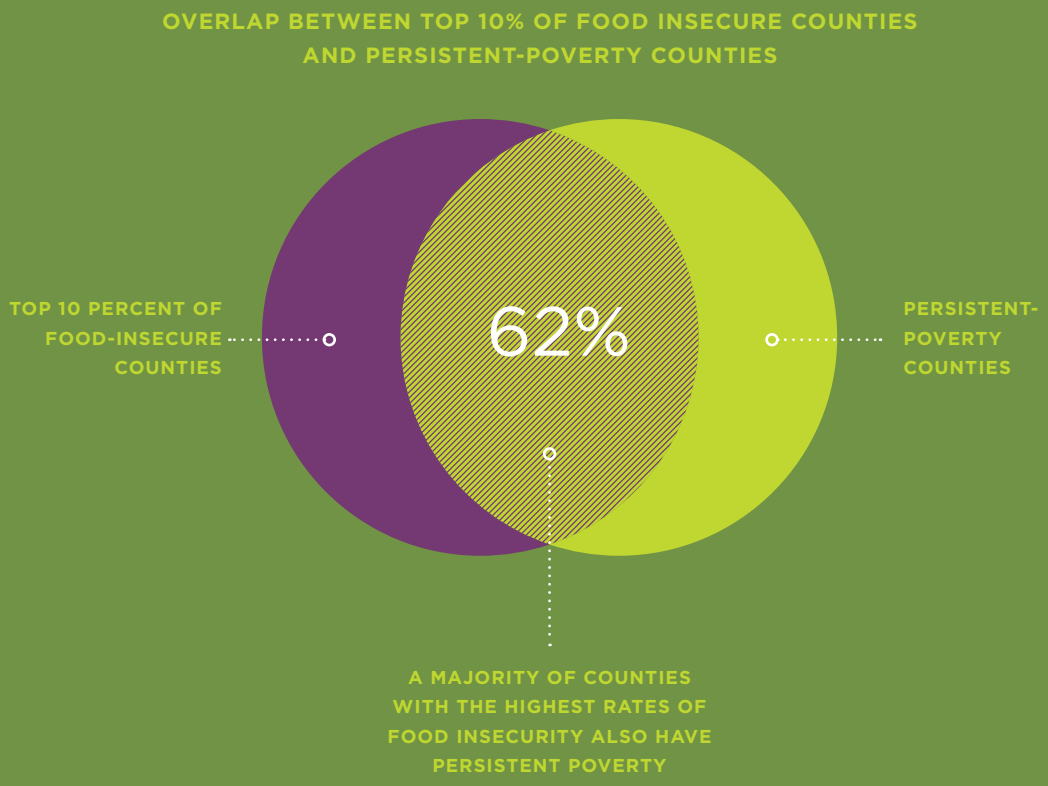
50.2%

More than half of the counties with the **highest rates of overall food insecurity** are **rural** (located outside both metropolitan and micropolitan areas) though rural counties make up **less than half of all U.S counties** (less than 43 percent of all counties are neither metropolitan nor micropolitan).

PERSISTENT-POVERTY COUNTIES

The USDA Economic Research Service (ERS) developed the term "persistent poverty" to track counties with consistently high percentages of the overall population living below the poverty line. A county is considered a persistent-poverty county if at least 20 percent of its population has been living in poverty over the last 30 years (USDA ERS, 2014). Based on the most recent USDA data, there are 353 of these counties, 63 percent of which are located in rural (neither metro nor micro areas), communities in 2014. There is a high degree of overlap between these counties and those that fall into the top 10 percent for food insecurity; nearly two-thirds (62 percent) of the counties with the highest rates of food insecurity in 2014 are also considered persistent-poverty counties. This confluence of poverty and food insecurity underscores the point that low-income people living in these areas are facing a number of interrelated problems that require complex, long-term solutions.

Some racial and ethnic minority groups in the U.S., such as African Americans and American Indians, are disproportionately at risk for food insecurity[6], especially in these counties that have consistently struggled with poverty. In addition to being more likely to have above-average food-insecurity rates, the USDA ERS' list of persistent-poverty counties includes a disproportionate share of counties with majority non-white populations, highlighting the deep and pervasive nature of the systemic challenges faced by some minority communities.



[6] Coleman-Jensen, A., C. Gregory, & A. Singh. Household Food Security in the United States in 2013: Statistical Supplement. U.S. Department of Agriculture, Economic Research Service, September 2014. Print.

Ninety-seven of the 3,142 counties in US had a majority African American population in 2014, and 96 percent (N=93) of these counties fall into the "high food-insecurity rate" county group. [7] Most (76%) of these majority-African-American counties are persistent-poverty counties, with an average poverty rate of 32 percent, which is higher than the poverty rate for all high food-insecurity rate counties (27 percent) and nearly double the average poverty-rate of all U.S. counties (17 percent). One such county is Jefferson County, Mississippi, which is 86 percent African American, has a poverty rate of 48 percent and the highest food-insecurity rate in the U.S. at 38 percent.

Similarly, 69 percent of majority-American Indian counties are persistent-poverty counties, with an average poverty rate of 37 percent. Most of these are counties that fall into the "high food-insecurity rate" group, even though they represent less than one percent of all counties in the U.S. (there are only 26 counties in the U.S. that are majority-American Indian).[8] Although a relatively small percentage of the total population in the U.S. identifies as American Indian, county-level analysis helps bring to light the obstacles, such as higher poverty and food-insecurity rates, found in reservation communities (Gordon & Oddo, 2012; Gundersen, 2008). For example, Apache County, Arizona, which includes parts of the Navajo Nation, Zuni and Fort Apache reservations, is designated as a persistent-poverty county with a poverty rate more than double the national average (36 percent as compared with 17 percent) and a food insecurity rate of 26 percent.

[7] This analysis was completed for all non-Hispanic African Americans.

[8] This analysis was completed for all non-Hispanic American Indians.

FURTHER EXPLORATIONS OF COUNTIES

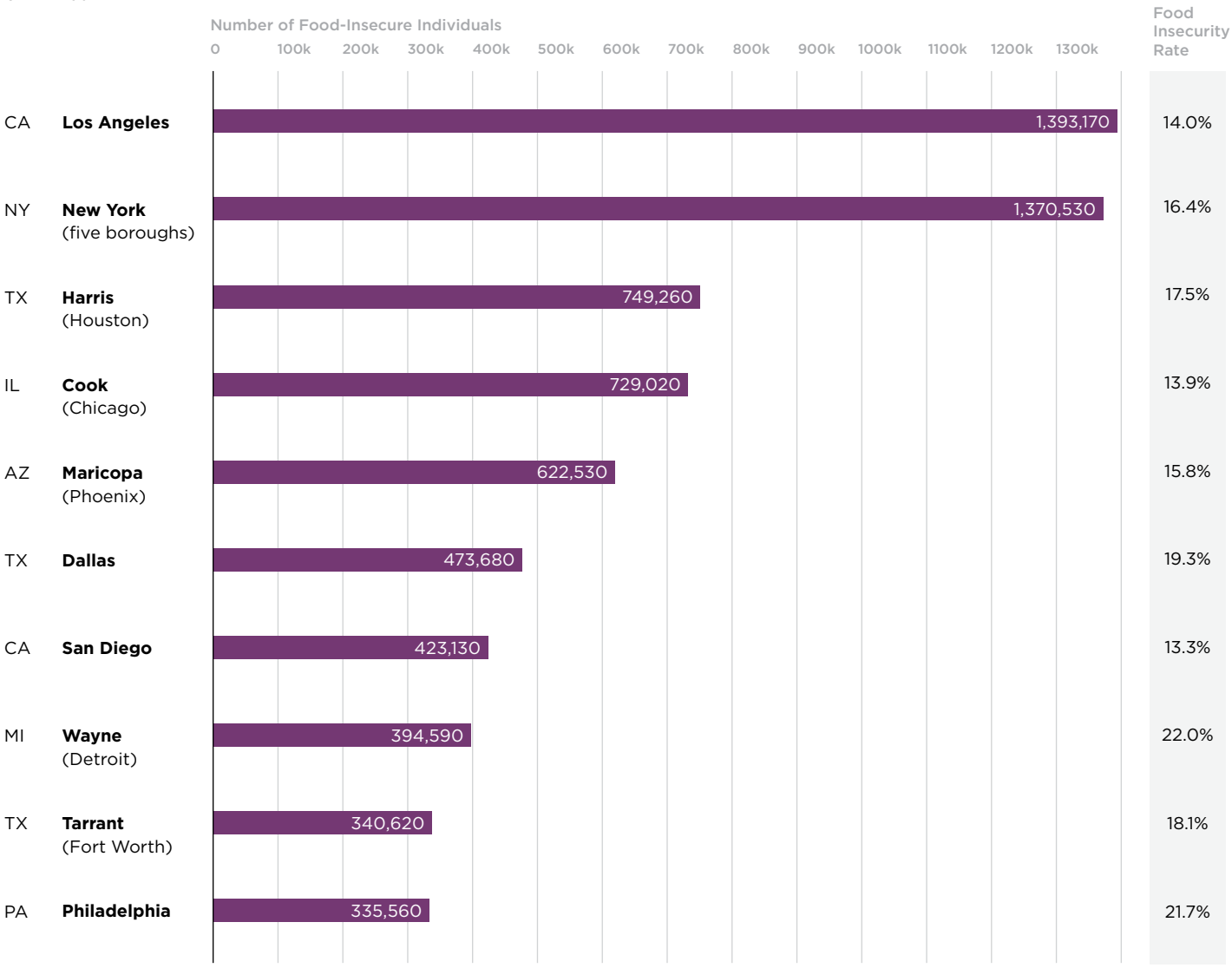
The following section provides detail on counties with low food-insecurity rates and counties with high numbers of food-insecure individuals.

LOW FOOD-INSECURITY RATES

More than half (26) of the 50 counties with the lowest estimated food-insecurity rates during 2014 are found in North Dakota. This is consistent with the state's low unemployment rate and below-average poverty rate. The estimated number of food-insecure individuals in these 26 North Dakota counties ranges from 30 to 5,400, and the food-insecurity rate ranges from five percent to seven percent. Fairfax County, Virginia, with a food-insecurity rate of just under six percent, is one of the 50 counties with the lowest estimated food-insecurity rates; however, there are still over 63,000 people who are food insecure in this county. It is important to note, as shown in Chart 03, that in more populous areas, low food-insecurity rates do not necessarily translate into low numbers of food-insecure people.

COUNTIES WITH THE HIGHEST NUMBER OF FOOD-INSECURE INDIVIDUALS, 2014

CHART 03



COUNTIES WITH THE LARGEST NUMBER OF FOOD-INSECURE INDIVIDUALS

While food-insecurity rates among the population are an important indicator of the prevalence of need, a number of counties may not have the highest food-insecurity rates but represent some of the largest numbers of food-insecure people, in terms of population. As seen in Chart 03, the top 10 geographies with respect to the number of food-insecure persons are all in large metropolitan areas, consistent with their large populations.

The average of the food-insecurity rates for the 50 counties with the highest number of food-insecure people is 16 percent, the average of unemployment rates is seven percent and the average of homeownership rates is 56 percent. The food-insecurity and unemployment rates exceed the national average for all counties, and the homeownership rate is lower. The average poverty rate among these counties is slightly higher than the national average at 17 percent.

Although most of the 50 counties with the largest number of food-insecure individuals contain large urban cities, there are some exceptions, such as Oakland County, Michigan (164,400 food insecure), which includes suburbs northwest of Detroit and DeKalb County, Georgia (146,360 food insecure), which includes parts of the city and the suburbs to the east of Atlanta.

FOOD INSECURITY BY POPULATION DENSITY AND REGION

In addition to the size of the population and region of the country, food insecurity varies substantially by proximity to a city. In many suburbs, there has been a significant growth in the low-income population, leading to a heavy strain on non-profit ecosystems that are inadequately equipped for the growing level of need (Allard & Roth, 2010). To examine this phenomenon, and to investigate how it varies regionally, an analysis was done looking at the average food-insecurity rate among counties in different Rural-Urban Continuum Codes (RUCCs). RUCCs classify counties by the size of the population and whether they are within, close to, or far from metropolitan areas; in addition to looking at variation by RUCCs, food insecurity was averaged by the four larger Census regions: the Northeast (New England and Middle Atlantic), Midwest (East North Central and West North Central), South (South Atlantic, East South Central, and West South Central), and West (Mountain and Pacific).

In the South, some of the most food-insecure counties are those with small towns that are not near any big cities. The average food-insecurity rate of these counties is 19 percent, well above the average of all counties, which is 15 percent. One such county is Leflore County, Mississippi, which has a food-insecurity rate of 34 percent and contains the town of Greenwood, population of 16,000. The nearest city to Greenwood is Jackson, Mississippi, which is nearly 100 miles away. In the West, some of the most food-insecure counties are those with small towns that are near big cities. The average food-insecurity rate of these counties is 16 percent. One such county is Madison County, Idaho, which has a food-insecurity rate of 21 percent and contains the town of Rexburg, population 26,000. Rexburg is close to the metropolitan area of Idaho Falls. As the community practitioners strive to better address the need in the United States, increased attention will be needed in areas that are more difficult to reach and where communities have insufficient infrastructure and resources to provide enough assistance to food-insecure families.

FOOD INSECURITY AND INCOME

Estimating food-insecurity rates by level of income can provide important insight into the potential strategies that can be used to address hunger.

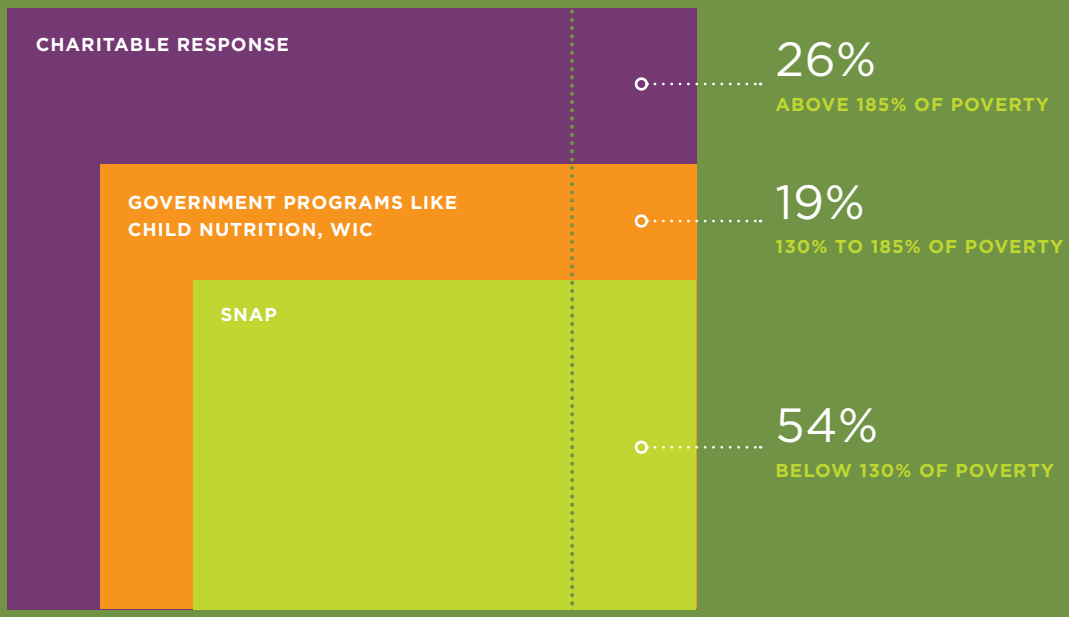
Eligibility for many food assistance programs is tied to multiples of the federal poverty line. The poverty guidelines, which vary by family composition, are set to reflect a minimum amount of money that is needed for a family to purchase basic necessities. The thresholds were first set in 1963 and were based on research that indicated that the average family spent about one-third of their annual income on food. The official poverty level was set by multiplying food costs for a "bare bones" subsistence meal plan by three (Blank & Greenberg, 2008). Although the figures have since been updated annually to account for inflation, they have otherwise remained unchanged despite the fact that modern family budgets are divided very differently than they were more than 50 years ago (Blank & Greenberg, 2008). Now household budgets include myriad expenses that have increased relative to food prices or were virtually non-existent when the official poverty measure was created.

SNAP AND OTHER FEDERAL NUTRITION PROGRAMS

Food assistance programs such as SNAP, WIC, SBP and NSLP determine eligibility by multiplying the official poverty line by 130 percent or 185 percent to provide a rough proxy for need beyond the scope of the official poverty level (see Figure 01).[9] State-specific SNAP eligibility ceilings range from 130 to 200 percent, while WIC and reduced-price lunches are typically not available for children in households with incomes above 185 percent of poverty. For example, the current poverty guideline for a family of four in the lower 48 states is a pre-tax income of $24,300. To determine the limit for SNAP eligibility, one would multiply $24,300 by 130 percent to arrive at $31,590, the income limit for a family of four to be eligible for SNAP benefits, among other eligibility criteria.[10]

SNAP AND OTHER GOVERNMENT PROGRAMS FOOD-INSECURE INDIVIDUALS AND INCOME ELIGIBILITY, 2014

FIGURE 01



Because of the common use of these federal nutrition program thresholds, the *Map the Meal Gap* analysis estimates the percentage of food-insecure people who fall into each income bracket. Specifically, we estimate the percentage of food-insecure individuals who fall within the SNAP eligibility level (at or below 130 percent of poverty or the state-specific threshold, when it is a higher multiple), the percentage of those whose incomes are within the threshold for other major federal nutrition programs (185 percent of poverty or the state-specific threshold) and those whose income places them above the ceiling for government food assistance (above 185 percent of poverty or above the state-specific threshold).

Areas with a particularly high percentage of food-insecure individuals eligible for SNAP (based on gross income) might benefit from increasing awareness and outreach for enrollment in the SNAP program. Looking across income eligibility estimates provides context for determining what federal and state programs are available to food-insecure people and what gaps are left to be addressed by private food assistance. Understanding the overlap between food insecurity and federal nutrition program thresholds also provides an additional level of information for concerned agencies to use when tailoring their programs to meet local need.

[9] Note that these numbers remained the same between 2013 and 2014, except in the state of Illinois, where the thresholds changed from 130 percent for SNAP and 185 percent for other governmental aid, to 165 percent for SNAP.

[10] The SNAP gross income eligibility level varies across states, ranging from 130 to 200 percent of the federal poverty level. The SNAP net income eligibility level must fall at or below 100 percent of the federal poverty level.

ELIGIBILITY FOR FEDERAL NUTRITION PROGRAMS

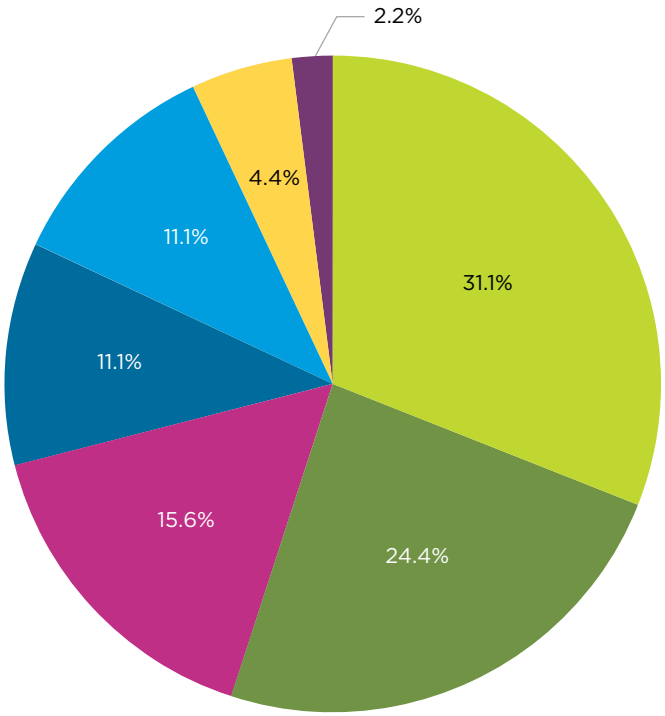
Nationally, 26 percent of food-insecure individuals are above 185 percent of the poverty line and are typically ineligible for most food assistance programs (see Figure 01). A closer look at income thresholds among the food-insecure population reflects significant variations in program eligibility within states and across the nation. Across the country, there are 115 counties where the majority of food-insecure people are likely ineligible for government assistance programs. Most of these (69 percent) are in metropolitan areas that tend to have higher-than-average median incomes. For example, Douglas County, Colorado (near Denver, Colorado), is home to 27,780 food-insecure people, 68 percent of whom are likely ineligible for SNAP. Additionally, most states contain counties where a majority of the food-insecure population is likely SNAP-eligible, as well as counties where the majority of food-insecure people are likely ineligible for any federal food assistance. For example, in the Commonwealth of Virginia, there are 11 counties where a majority (50 percent or more) of food-insecure individuals are estimated to have incomes too high to be eligible for any assistance programs (above 185 percent of poverty) and 76 counties where a majority of the food-insecure populations live in households that are likely SNAP-eligible (based on income at or below 130 percent of poverty).

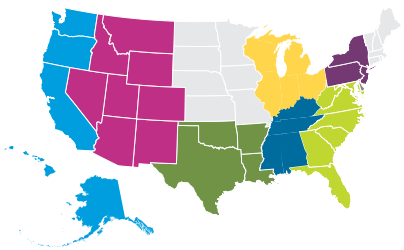
Among counties with food-insecurity rates in the top 10 percent, the incidence of food-insecure individuals with incomes above 185 percent of poverty is less common. On average, only about 20 percent of food-insecure people in these counties have incomes that render them likely ineligible for federal food assistance programs. Still, this indicates that even in high food-insecurity counties, there are food-insecure people who may fall outside the federal safety net and must instead rely primarily on family, friends and charitable response when they need help.

Even in high food-insecurity counties there are food-insecure people who may fall outside the federal safety net and must instead rely primarily on family, friends and charitable response when they need help.

HIGH FOOD-INSECURITY RATE DISTRICTS BY CENSUS DIVISION

CHART 04





FOOD INSECURITY IN CONGRESSIONAL DISTRICTS

In addition to developing county-level food-insecurity estimates, Feeding America developed estimates for congressional districts using the same methodology.

In congressional districts, food insecurity ranged from a low of five percent in Virginia's 10th congressional district to a high of 30 percent in Mississippi's second congressional district. Congressional districts that fell into the top 10 percent for high food-insecurity rates (N=44) had an average food-insecurity rate of 24 percent. When compared to national averages, the districts with the highest food-insecurity rates also had higher-than-average unemployment (11 percent versus 7 percent) and poverty rates (24 percent vs. 16 percent) and lower-than-average median income ($40,318 vs. $55,991). While high food-insecurity rate counties are heavily concentrated in the South (as noted in Figure 03 on p. 16), the high food-insecurity rate congressional districts are much more geographically diverse, as shown in Chart 04 on page 24. As with counties, it is important to note that no congressional district is free of food insecurity. Even in the most food-secure district, Virginia's 10th congressional district, five percent of the population (more than 40,000 individuals) is estimated to be food insecure. The wealthiest districts (the 10 percent of congressional districts with the highest median incomes) are home to an average of more than 76,000 people experiencing food insecurity. Cumulatively, those wealthiest districts are home to nearly 3.4 million food-insecure men, women and children.

FOOD PRICE VARIATION ACROSS THE UNITED STATES

The first phase of the *Map the Meal Gap* analysis focused on increasing understanding of the population in need by estimating county and congressional district food-insecurity rates. In conjunction, Feeding America sought to understand the additional resources people who are struggling with food insecurity feel they need and how the relative cost of meeting that need may vary due to local food prices.

To address this goal, a local-level estimation of the additional food budget that food-insecure individuals report needing was developed. Recent research indicates that food costs can directly impact food insecurity (Nord et al., 2014), thus food prices represent an important critical component of cost-of-living that affects households' ability to access food. In order to understand how regional and local variations in food costs may present challenges for the food-insecure population, Feeding America worked with Nielsen to create a county-level food cost index.

In 2014, the average meal cost across the continental U.S. was $2.89, a slight increase from $2.79 in 2013. Results indicate that local 2014 food prices vary from 70 percent to 194 percent of the national average, a cost variation ranging from as little as $2.02 in the Texas counties of Maverick and Willacy to as much as $5.61 in Crook County, Oregon.[11] An estimated 25.4 million food-insecure people live in counties where food costs are higher than the national average. Among the counties with the top 10 percent highest food-insecurity rates in the nation, food prices reach as high as 126 percent of the national average ($3.64 per meal in Richmond City (County), Virginia). For a household struggling to afford housing, utilities and other necessities, the additional burden of expensive food can have a significant impact on a household's budget.

[11] Alaska and Hawaii were excluded from this analysis, leaving 3,108 counties as opposed to 3,142.

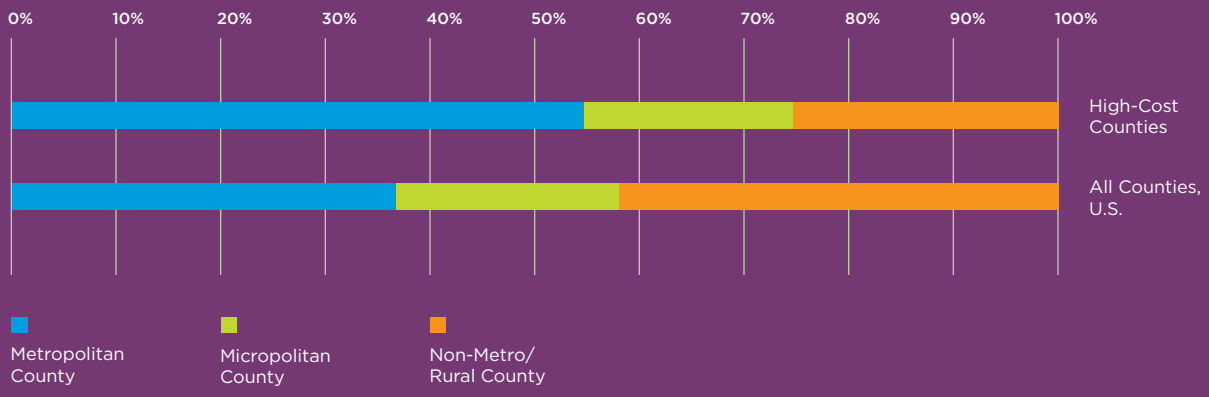
COUNTIES WITH HIGHER FOOD PRICES

The top 10 percent of counties with the most expensive food costs (N=331) have an average meal cost of $3.41, 18 percent higher than the national average of $2.89. There are 59 counties where the cost of a meal is at least 25 percent above the national average ($3.61 or higher), slightly more than the 55 counties in 2013. Once again, more than half (54 percent) of the high-cost counties are located in metropolitan areas (versus 37 percent of all counties), while 26 percent are in rural areas (versus 42 percent of all counties). See Chart 05 for a breakout of high-cost counties by geographic area.

In some cases, meal cost may be high in part due to the expense of transporting food to a resort or an island.

HIGH-COST COUNTIES BY GEOGRAPHIC AREA, 2014

CHART 05



In addition to variation by metro/rural designation, meal cost can also differ substantially by region. For example, some of the highest meal costs are in rural counties near metropolitan areas in the Northeast. In one of these counties, Lincoln County, Maine, the cost per meal is $3.88, almost a dollar higher than the national meal cost. Despite being rural, Lincoln County is only 56 miles from Portland, Maine. In the West, some of the highest meal costs are in metropolitan areas; one example is San Francisco County, California, where the meal cost is $4.05, making it one of the top 15 counties with the highest meal costs in the United States.

In some cases, the meal cost may be high in part due to the expense of transporting food to a resort area or an island. For example, Nantucket County, Massachusetts, where the average cost of a meal is $3.28, is a popular island vacation destination with a high median income. There are a few other counties with a significant resort/vacation presence among the highest meal-cost areas, such as Aspen in Pitkin County, Colorado ($3.30), and Napa County, California ($3.76). While households in such areas typically have higher-than-average median incomes, the local population may also include many service-industry workers for whom higher costs can be particularly challenging. Another set of counties with relatively high costs per meal include major metropolitan areas such as New York County, NY ($4.58), the District of Columbia ($3.62) and the surrounding Virginia counties: $3.73 in Arlington County, Virginia, and $3.80 in Alexandria City (County), Virginia).

Nearly 90 percent of counties with the **highest food-insecurity rates** in the country are located in the **South** in 2014.

HIGH FOOD INSECURITY COUPLED WITH HIGH FOOD COST

There are 12 high food-insecurity counties that also have high meal costs (falling into both the top 10 percent for highest food-insecurity rates and highest prices) (see Table 01). An average of nearly one in every four individuals in these counties is food insecure, totaling nearly 800,000 food-insecure people. While these counties do not face the highest food prices in the nation, the average cost per meal is $3.30, which is 14 percent above the national average of $2.89. Richmond City (County), Virginia, and Lafayette County, Mississippi, have the highest average meal costs in this group at $3.64 and $3.51, respectively.

These 12 counties also struggle with higher-than-average poverty rates (29 percent on average compared to the national average of 17 percent), high unemployment rates (eight percent compared to six percent) and low homeownership (52 percent compared to a 72 percent average for all counties). Seven of these 12 counties have experienced persistent poverty. These 12 counties are also relatively more geographically diverse when compared to the 11 counties with the highest food insecurity rates and food costs in 2013. While the majority (nine) of these counties are still located in the South census region, two are located in the Pacific and one in the Middle Atlantic. Half (six) of these counties are metropolitan, three are micropolitan, and three are neither metropolitan nor micropolitan. The populations of the six nonmetropolitan counties range from just under 20,000 to a little over 50,000.

HIGHEST FOOD INSECURITY AND HIGHEST FOOD COST COUNTIES, 2014

TABLE 01

		Unemployment Rate	Poverty Rate	Homeownership Rate	Food-Insecurity Rate	Local Weighted Cost Per Meal
VA	**Richmond City** Pop: 211,063	6.1%	25.5%	42.7%	**21.6%**	**$3.64**
MS	**Lafayette** Pop: 50,256	6.2%	26.1%	59.3%	**20.3%**	**$3.51**
WA	**Whitman** Pop: 46,003	5.5%	32.7%	45.0%	**20.0%**	**$3.41**
FL	**Alachua** Pop: 251,759	5.2%	25.4%	53.5%	**20.4%**	**$3.33**
CA	**Siskiyou** Pop: 44,261	11.3%	22.7%	63.1%	**20.0%**	**$3.27**
LA	**Orleans** Pop: 368,471	7.0%	27.7%	46.9%	**23.7%**	**$3.25**
MS	**Holmes** Pop: 18,965	15.8%	43.9%	66.7%	**35.7%**	**$3.23**
NY	**Kings** Pop: 2,570,801	7.7%	23.4%	29.5%	**20.0%**	**$3.23**
GA	**Muscogee** Pop: 198,247	8.5%	20.2%	50.8%	**21.7%**	**$3.22**
AL	**Macon** Pop: 20,505	9.1%	26.4%	65.7%	**27.9%**	**$3.20**
MS	**Oktibbeha** Pop: 48,639	7.5%	33.4%	52.5%	**24.9%**	**$3.18**
VA	**Radford City** Pop: 16,993	6.6%	39.6%	47.2%	**19.8%**	**$3.18**

CHILD FOOD INSECURITY: RESULTS AND DISCUSSION

The results of the *Map the Meal Gap 2016* child food insecurity research indicate that, as with overall food insecurity, children are at risk in every county in the United States.

County-level child food-insecurity rates in 2014 ranged from a low of eight percent to a high of 42 percent.[12] Food-insecurity rates among households with children are substantially higher than those found in the general population. Although households with children have slightly higher median incomes on average, they may also experience greater budgetary constraints, due to larger household sizes and the fact that some household members are dependent on caregivers (Coleman-Jensen, A., et al., 2013). The following summarizes key findings from state- and county-level child food-insecurity (CFI) results generated by the *Map the Meal Gap* food-insecurity model. The discussion focuses on the income and regional variations illuminated by the results.

[12] Results indicate that child food insecurity exists in every county in the U.S. with a population under age 18. The 2014 ACS dataset does not contain adequate data for Loving, TX, and Kalawao, HI. As a result, child food-insecurity rates could not be estimated for these two counties.

CHILD FOOD INSECURITY AT THE STATE LEVEL

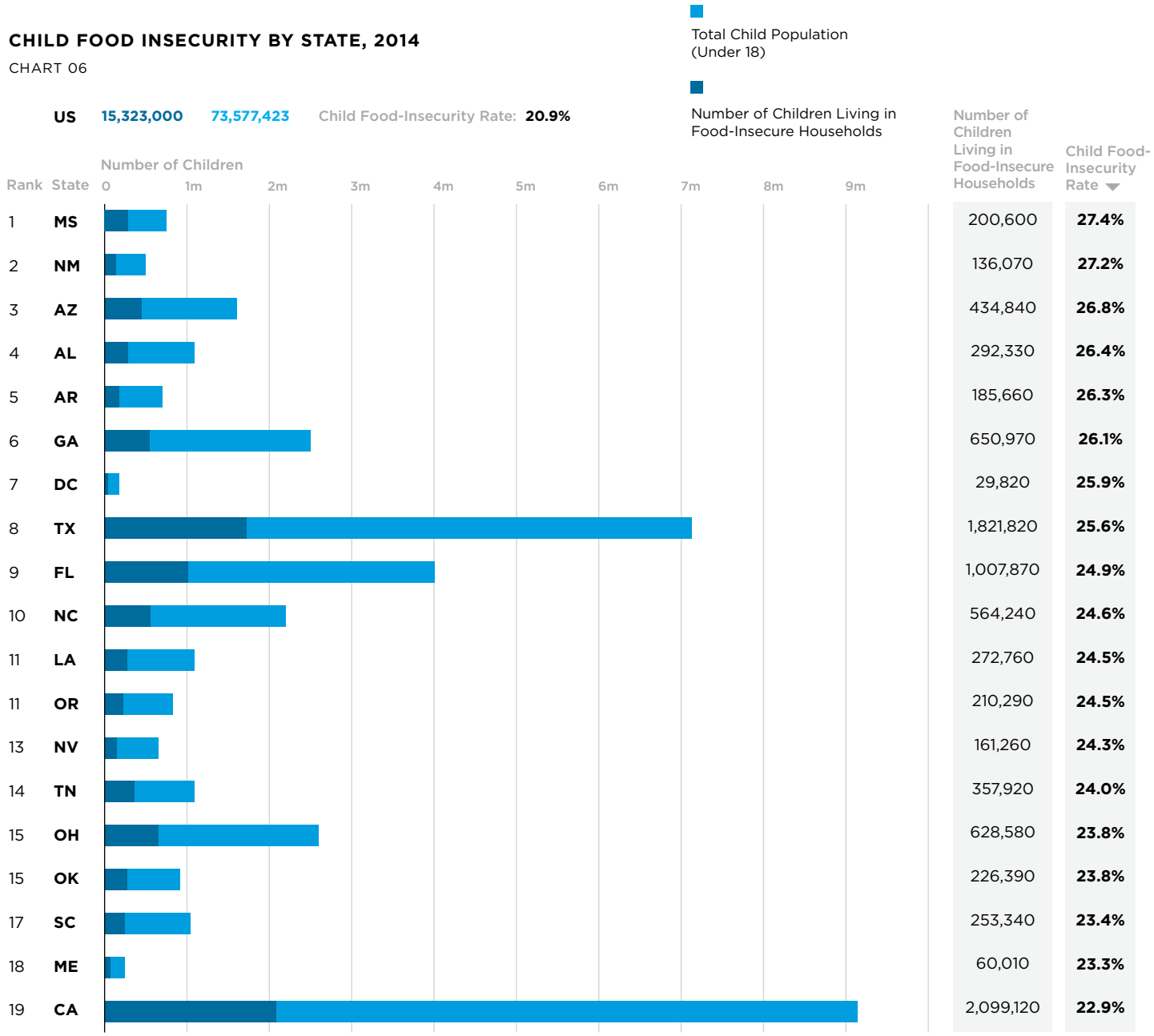
Child food-insecurity (CFI) rates are considerably higher than overall food-insecurity rates, a phenomenon observed at the national level in the annual USDA report and mirrored at the state and county level in this study. State-level estimates of child food insecurity are presented in Chart 06 along with national data from the USDA (Coleman-Jensen et al., 2015) and aggregated 2014 congressional district population data from the U.S. Census Bureau. The state CFI rates range from a low of 11 percent in North Dakota to a high of 27 percent in Mississippi. Even in the most food-secure state (North Dakota), one in nine children struggles with food insecurity. Additionally, 15 of the 20 states with the highest CFI rates also have the highest-ranked overall food-insecurity rates. This is slightly lower than the 17 states that fell into both groups in 2013 (Gundersen, C. et al., 2015).[13] These 15 states with the highest need are dispersed throughout the U.S., representing all areas of the country except the Mid-Atlantic, West North Central and Pacific regions.[14] Some states in the Mid-Atlantic region, despite having lower CFI rates, have high absolute numbers of children living in food-insecure households because they are densely populated. For example, Pennsylvania (19% CFI rate) is home to over half a million (520,000) food-insecure children.

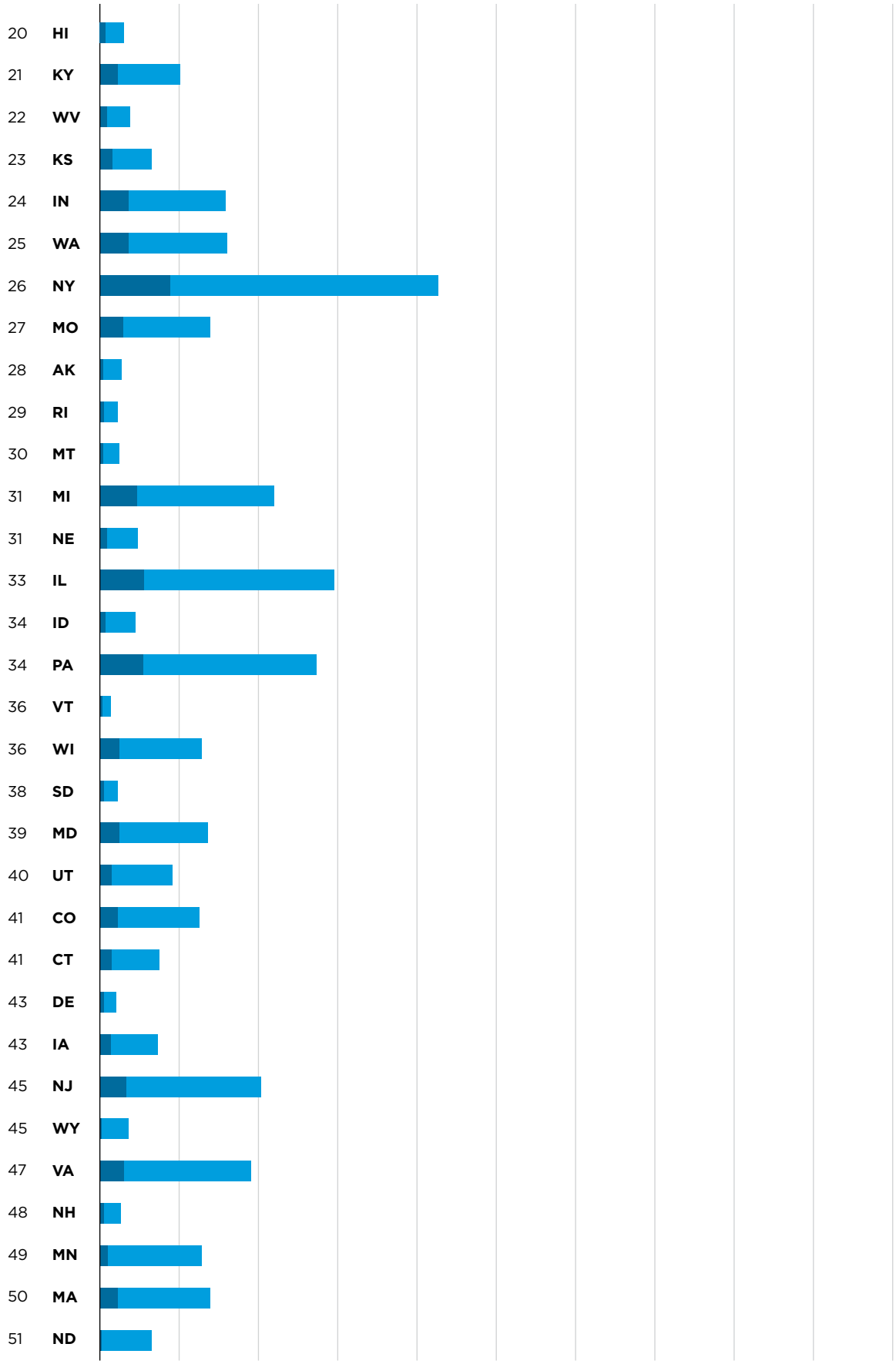
[13] Based on one-year state data aggregated from 2014 congressional districts rather than the three-year state averages provided in the USDA's annual report on household food security

[14] See footnote on page 16 for a complete list of states included in each region.

CHILD FOOD INSECURITY BY STATE, 2014

CHART 06





Rank	State	Number of Children Living in Food-Insecure Households	Child Food-Insecurity Rate
20	HI	67,690	22.0%
21	KY	222,380	21.9%
22	WV	82,220	21.5%
23	KS	153,940	21.3%
24	IN	335,410	21.2%
25	WA	337,320	21.0%
26	NY	884,170	20.9%
27	MO	289,210	20.8%
28	AK	38,080	20.4%
29	RI	43,210	20.3%
30	MT	45,110	20.1%
31	MI	437,100	19.7%
31	NE	92,230	19.7%
33	IL	583,000	19.5%
34	ID	83,110	19.3%
34	PA	521,750	19.3%
36	VT	23,310	19.1%
36	WI	248,570	19.1%
38	SD	39,030	18.5%
39	MD	247,560	18.3%
40	UT	164,440	18.2%
41	CO	226,350	18.1%
41	CT	140,290	18.1%
43	DE	36,380	17.8%
43	IA	129,270	17.8%
45	NJ	338,690	16.8%
45	WY	23,130	16.8%
47	VA	299,050	16.0%
48	NH	41,350	15.5%
49	MN	195,660	15.2%
50	MA	210,050	15.1%
51	ND	19,070	11.4%

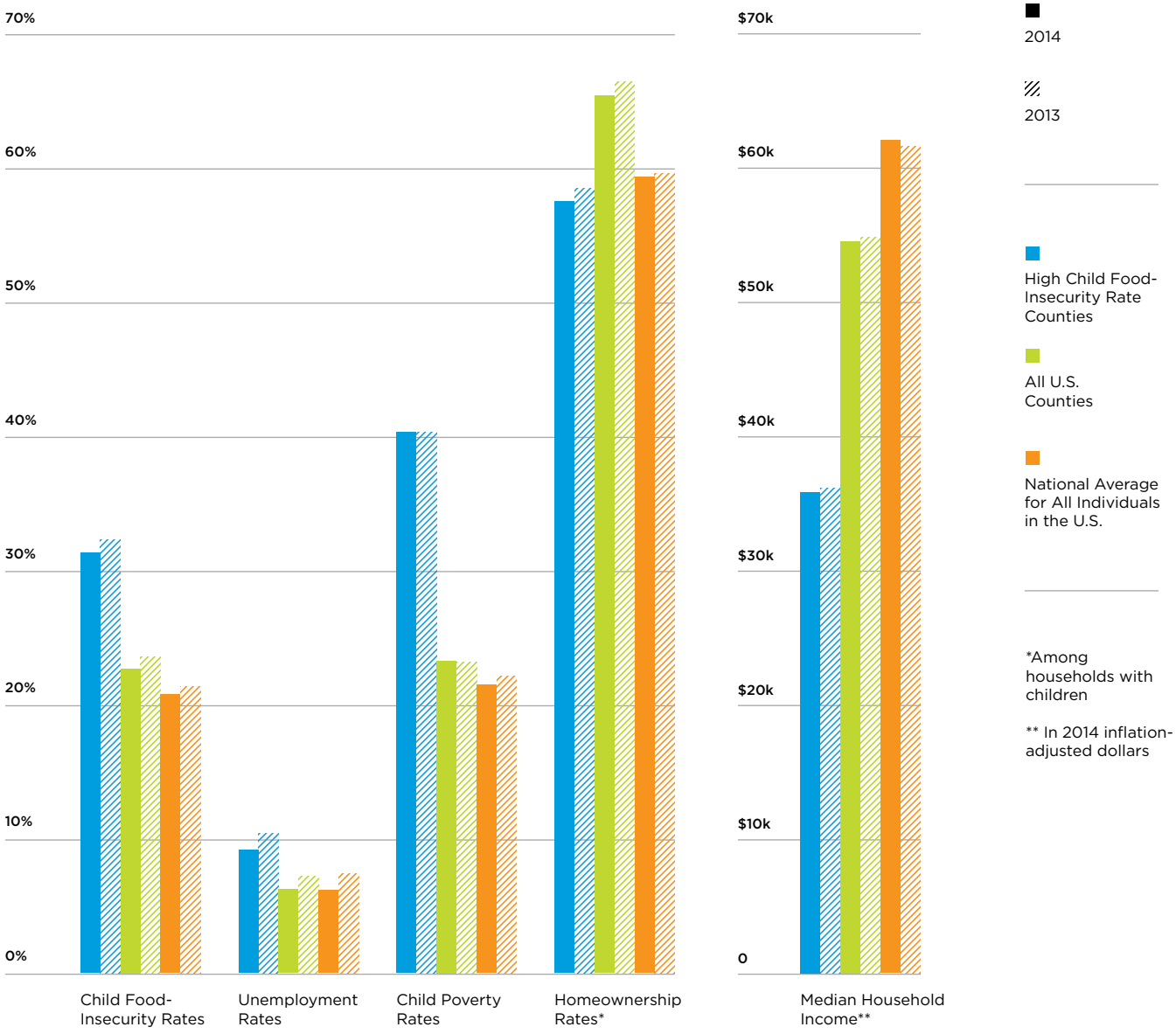
CHILD FOOD INSECURITY AT THE COUNTY LEVEL

COUNTY CHILD FOOD-INSECURITY RATES BETWEEN 2013 AND 2014

Nationally, food-insecurity rates for households with children remained essentially unchanged, from 21.4 percent in 2013 to 20.9 percent in 2014 (Coleman-Jensen et al., 2015) (see Chart 07). Consistent with this national trend, less than six percent of all counties showed statistically significant changes in child food insecurity. It is important to note that CFI estimates at the county level may be less stable from year to year than those at the state or national level due to smaller sample sizes, particularly in counties with very small child populations. For example, of the 186 counties with perceived shifts of three or more percentage points, only 23 have a child population greater than 10,000. Because of the likelihood for inaccurate estimates from smaller sample sizes, specific county comparisons between 2013 and 2014 are not provided in this report.

AVERAGE CHILD FOOD INSECURITY AND COUNTY-LEVEL ECONOMIC INDICATORS, 2014

CHART 07



COUNTY CHILD FOOD-INSECURITY RATE ESTIMATES

Child food-insecurity estimates at the county level demonstrate that this issue is much more pervasive in specific communities. In each of those counties that fall into the top 10 percent for the highest child food-insecurity rates (N=319), or "high CFI counties," at least a quarter of children are living in food-insecure households (ranging from 29 percent to 42 percent). In addition to having high CFI rates, these counties have notably higher poverty rates in comparison to the rest of the nation. An average of 40 percent of children in these counties live in poverty, compared to an average of 24 percent in all U.S. counties. These counties also suffer from low median incomes and high unemployment rates (see Chart 07).

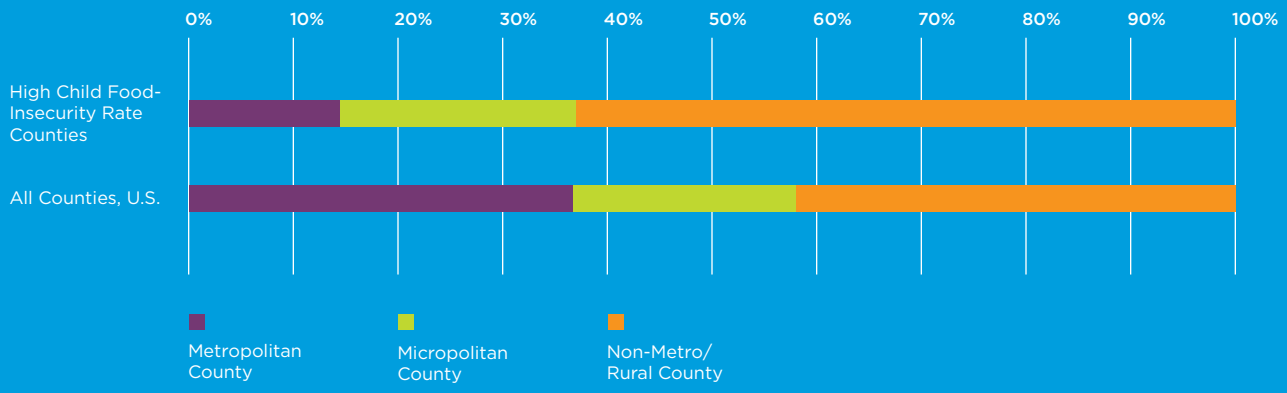
The highest rate of child food insecurity is 42 percent in Apache County, Arizona.

As seen in the county-level findings for the overall population, there is considerable overlap (162 out of 319) between the counties with the highest rates of child food insecurity and the persistent poverty counties identified by the USDA. Four counties (Apache County, Arizona; Jefferson County, Mississippi; Wade Hampton Census Area, Alaska; and Shannon County, South Dakota) have CFI rates near or above 40 percent. Apache County, Arizona, has the highest CFI rate (42 percent). All four of these are designated as persistent-poverty counties by the USDA and are home to a majority non-white population, consistent with the overall findings that minority groups in some of these communities are disproportionately affected by extensive poverty and systemic challenges. For example, Shannon County, South Dakota, is entirely encompassed by the Pine Ridge Indian Reservation, where the child poverty rate is over 60 percent and families with kindergarten-age children previously reported food-insecurity rates of 40 percent (Bauer et al, 2012). These findings are consistent with the *Map the Meal Gap* estimates reported here and illuminate the staggering challenges that these families face in the community where they live.

There are eight counties across the nation that have higher CFI rates than the highest reported county-level food-insecurity rate for the general population in Jefferson County, Mississippi, where the overall rate of food insecurity is 38 percent. Two counties that fall into the top 10 for agricultural sales (USDA, May 2014) also fall into the top 10 percent of all counties as measured by highest child food-insecurity rates. These counties, Fresno and Imperial, are both located in California and are majority-Hispanic and metropolitan. It is important to note, however, that child food insecurity is more pervasive in rural areas. Sixty-four percent of high CFI counties are classified as rural, even though only 42 percent of counties in the U.S. are rural (see Chart 08).

HIGH CHILD FOOD-INSECURITY RATE COUNTIES BY GEOGRAPHIC AREAS, 2014

CHART 08

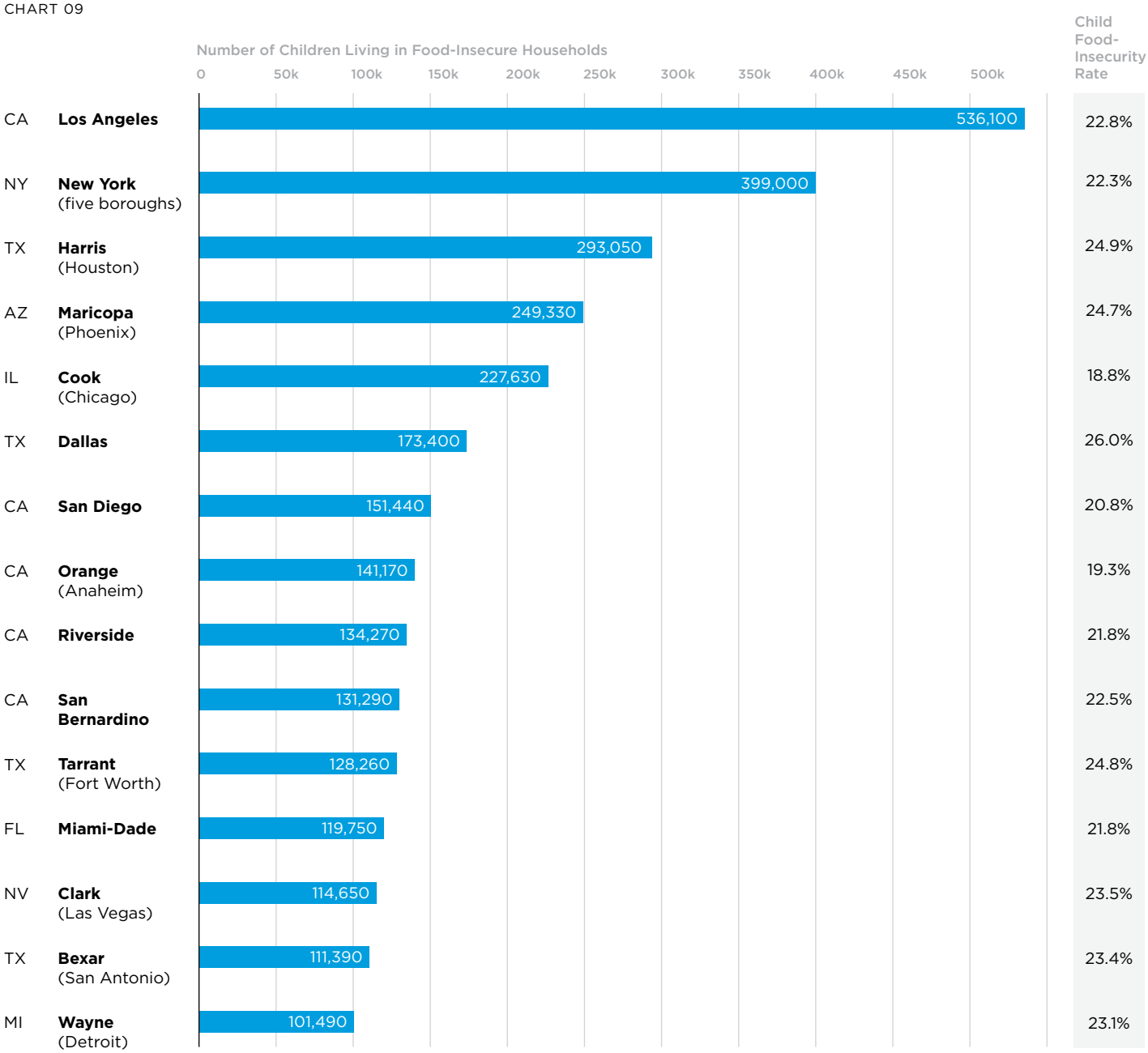


COUNTIES WITH THE LARGEST NUMBERS OF FOOD-INSECURE CHILDREN

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. There are 15 counties in the U.S. with more than 100,000 food-insecure children (see Chart 09). For example, Los Angeles County, California, is home to nearly 540,000 food-insecure children. Cook County, Illinois, and Harris County, Texas, both fall into this group and contain Chicago and Houston, respectively—the third and fourth most populous cities in the United States. When all five counties that comprise New York City are aggregated, there are nearly 400,000 food-insecure children in total. Counties with more than 100,000 food-insecure children have an average CFI rate of 23 percent, an average child poverty rate of 26 percent and an average unemployment rate of seven percent. In the case of child poverty and unemployment, these 15 counties are worse off than the average of all counties (24 percent and six percent, respectively), while they are approximately the same as the national average in the case of child insecurity.

COUNTIES WITH MORE THAN 100,000 FOOD-INSECURE CHILDREN, 2014

CHART 09



Counties with large numbers of food-insecure children face real challenges in addressing the need in their communities because of the sheer number of children who may need assistance.

Despite the fact that these counties may be perceived as less disadvantaged than counties with much higher rates of child food insecurity, these counties with large numbers of food-insecure children face real challenges in addressing the need in their communities because of the sheer number of children who may need assistance.

CHILD FOOD INSECURITY AT THE CONGRESSIONAL DISTRICT LEVEL

Analyzing child food insecurity rates and numbers by congressional district provides another way to highlight the need among children at risk of hunger across the United States. CFI rates range from an estimated low of 11 percent (more than 23,000 children) in Virginia's 10th congressional district to 34 percent (more than 56,000 children) in Georgia's 2nd congressional district. The largest estimated number of food-insecure children across all districts is 77,290 children (or 32 percent of all children) in Arizona's 7th congressional district, which encompasses much of metropolitan Phoenix. The congressional districts with the highest rates of CFI (top 10 percent among all districts, N=45) have CFI rates of 29 percent on average, compared to 22 percent of children in the average district. These districts are also much poorer; the average child poverty rate across these districts is 36 percent, compared to approximately 22 percent in the average congressional district.

CHILD FOOD INSECURITY AND INCOME

In recognition of the importance of federal nutrition programs, *Map the Meal Gap 2016* provides child food-insecurity estimates broken down by household income.

Breakouts of child food-insecurity by household income either above or below 185 percent of the poverty line—the typical eligibility cutoff for WIC and NSLP—provide insight into the safety-net resources that may be available to food-insecure children and their families, as well as the children whose families do not qualify for federal assistance. Millions of food-insecure children in America live in households with incomes above the eligibility threshold for federal nutrition programs.

These data can enable state and local legislators, food banks and other community leaders to tailor efforts to best address the need within their own communities and understand where they can strengthen the safety net to ensure no child suffers. Children's vulnerability to recessions and other economic shifts depends on the strength of the social safety net.

CHARITABLE AND FEDERAL FOOD ASSISTANCE

As high levels of food insecurity persist, the number of families turning to charitable assistance organizations remains at record levels. In 2013, more than 46 million people, representing nearly 15.5 million households, received assistance through the Feeding America network. The number of individuals served includes more than 12 million children, of whom approximately 3.5 million were five years of age or younger. Nearly two-thirds of these households (63.2 percent) plan to get food at meal or grocery programs on a regular basis to help with their monthly food budget (Hunger in America 2014).

While charitable assistance plays a critical role in helping families meet their food needs, the first line of defense against hunger is the safety net of federal nutrition programs. WIC supports pregnant, breastfeeding and postpartum women and their infants and children up to age five. According to the USDA, in federal fiscal year 2015, more than 8 million women, infants and children participated in WIC. The NSLP, SBP and Summer Food Service Program (SFSP) provide meals to low-income children in school and during school breaks. Over 100,000 schools operate NSLP, and during federal fiscal year 2015, 22 million low-income children received free or reduced-price meals through NSLP. SNAP provides electronic benefit cards to households to purchase groceries, and although it is not limited to children, 44 percent of all SNAP participants in federal fiscal year 2014 were children (approximately 20 million children) (Gray & Kochhar, 2015).

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

ELIGIBILITY FOR FEDERAL NUTRITION PROGRAMS

Eligibility for federal nutrition programs is based on income criteria. These criteria require that households have incomes at or below a specified multiple of the federal poverty guideline, which varies based on household size. As discussed previously in the "Food Insecurity and Income" section (page 22), individuals in most states are eligible for SNAP if they live in households with incomes less than 130 percent of the federal poverty guideline. For the programs targeted specifically to children (WIC, NSLP and SBP), eligibility for benefits is typically set higher at 185 percent of the poverty line.[15] As an example of applying these eligibility rules, the U.S. Health and Human Services poverty guideline for a family of four in the lower 48 states is a pre-tax income of $24,300. A family of this size would have to be earning less than $44,955 ($24,300 x 185%) in order to qualify for WIC, NSLP or SBP.

QUALIFICATION EXAMPLE

$24,300 PRE-TAX INCOME × 185% POVERTY LINE = $44,955 AMOUNT TO QUALIFY FOR WIC, NSLP, OR SBP

Ninety-five percent (N=2,982) of all counties in the U.S. have a majority of food-insecure children living in households with incomes at or below 185 percent of the federal poverty line. Among the high CFI counties (top 10 percent), on average, more than three-quarters (80 percent) of food-insecure children live in households with incomes that place them below 185 percent of the poverty line. Consequently, the overwhelming majority of food-insecure children in these counties are likely eligible to receive assistance from child nutrition programs. Understanding the income composition of the food-insecure population can help flag where outreach may be needed to maximize participation in these programs.

LIMITATIONS OF FEDERAL NUTRITION SAFETY NET

Despite the fact that a large number of food-insecure households are also low-income, it is important to note that food insecurity also exists in households with incomes substantially higher than the poverty line. There may be a number of reasons why these households struggle. As discussed in the Methodology Overview (see page 10), unemployment is a strong risk factor for food insecurity; however, other challenges such as medical expenses, living in a high-cost area and underemployment may also contribute to these households' struggles to meet their food needs. In the Feeding America research report *In Short Supply: American Families Struggle to Secure Everyday Essentials*, low-income families reported altering their food purchasing habits in order to afford non-food necessities such as soap, personal hygiene products and diapers (Santos et al., 2013).

In most counties in the U.S., there are food-insecure children living in households with incomes above 185 percent of the federal poverty level. In five percent (N=163) of counties, the majority of food-insecure children are likely ineligible for federal nutrition assistance because they live in households with incomes above 185 percent of the poverty line. Examples of this income composition among food-insecure children are found in diverse locations around the country. For example, in Borden County, Texas, approximately 27 percent of all children are food insecure and 73 percent of these children live in households with incomes above 185 percent of the poverty line. In King County, Washington, nearly half (47 percent) of the estimated 76,390 food-insecure children are living in households with incomes above 185 percent of the poverty level. Even very needy counties may be home to high CFI rates and concurrent high program ineligibility. Wilkinson County, Mississippi, has a CFI rate of 30 percent, a family median income of $ 32,738, less than half the national average (DeNavas-Walt & Proctor, 2015), and almost a third of its food-insecure children (31 percent) live in households whose incomes likely render them ineligible for the government food safety net.

[15] These rates can vary by state. SNAP gross income eligibility thresholds, for example, range from 130% to 200% of the poverty line.

IMPLICATIONS FOR POLICY & PRACTICE

Feeding America conducts this research annually to gain a clearer understanding of food insecurity at the local level. The findings demonstrate a profound need for both public and private food assistance among people in every part of the country. The data also demonstrate that locally, as well as nationally, federal nutrition programs are not currently reaching all food-insecure people.

The goals of the *Map the Meal Gap* project are focused on equipping communities, service providers and policymakers with additional analytical tools to help understand the dynamics of food insecurity at the local level so that they may use this information to better inform discussions about how to respond to the need. *Map the Meal Gap* data document the variation in food insecurity across communities for both the general population and for children. By categorizing the food-insecure population into income bands, the data also reinforce the critical role of both the public and private sector in addressing food insecurity in America.

Lack of access to a nutritious and adequate food supply has implications not only for the development of physical and mental disease, but also behaviors and social skills.

There are two key findings from the report. First, food insecurity exists in every county across the country. Second, locally, as well as nationally, not all food-insecure people qualify for federal nutrition assistance, reflecting both the important role of charitable hunger relief and the need to strengthen anti-hunger programs and policies. *Map the Meal Gap 2016* shows that millions of food-insecure people in counties across the U.S. earn incomes that render them ineligible for most federal food assistance programs. This suggests that federal nutrition programs, while targeted at our most vulnerable, do not serve all who are in need of food assistance. The charitable sector has stepped in to serve individuals in need who are not eligible for federal assistance, as well as families who participate in federal programs but whose benefits are inadequate. These findings are important for policymakers considering eligibility rules and benefit levels for federal programs, as well as support for charitable programs.

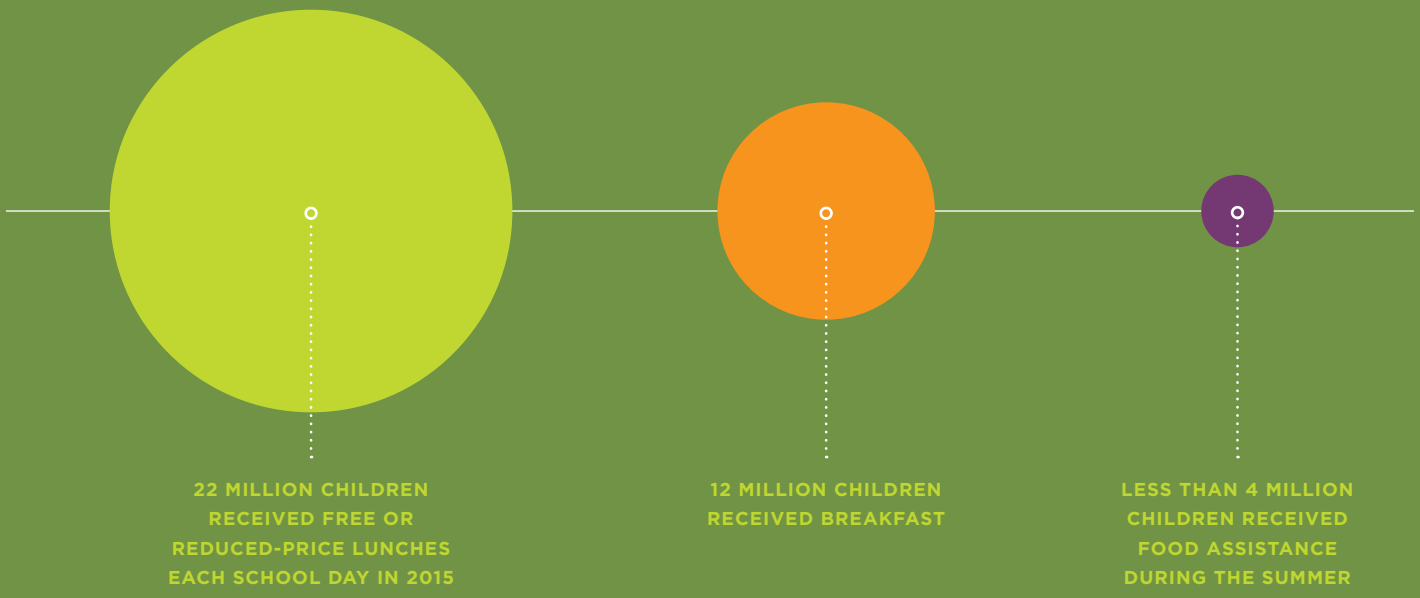
The consequences and costs of food insecurity for all ages make addressing the issue an economic and social imperative. Food insecurity can have wide-ranging detrimental consequences on the physical and mental health of adults, particularly among more vulnerable populations such as pregnant women and seniors. Lack of access to a nutritious and adequate food supply has implications not only for the development of physical and mental disease, but also behaviors and social skills. Food insecurity is associated with lower scores on mental and physical health exams (Stuff et al., 2004) and a range of chronic illnesses such as hypertension, hyperlipidemia and various cardiovascular risk factors (Seligman et al., 2009). Limited incomes and the exhaustion of food budgets commonly associated with food insecurity are likely to increase the risk for hypoglycemia, a potentially life-threatening complication of diabetes (Seligman, et al. 2014). The health impacts of food insecurity are more pronounced for older adults, new mothers and children. Food-insecure women may be at greater risk for major depression and other mental health issues (Heflin et al., 2005; Whitaker et al., 2006).

Although food insecurity has the potential to lead to negative outcomes for individuals of any age, it can be particularly devastating among children. Inadequate nutrition can permanently alter a children's brain architecture and stunt their intellectual capacity, affecting children's learning, social interaction and productivity. Several studies have demonstrated that food insecurity impacts cognitive development among young children and is linked to poor school performance in older children. (For a review see Gundersen et al., 2011.) Resources targeted at combating food insecurity are an important investment for both the individual and for society as a whole. The data presented in this report suggest several focus areas for policymakers and program administrators to more effectively address food insecurity.

The Supplemental Nutrition Assistance Program, SNAP, is the cornerstone of the federal nutrition safety net. This is because it is designed to provide immediate assistance to low-income Americans when they fall on hard times. The program is also able to respond to fluctuations in the economy and changes in need. Unfortunately, SNAP benefits are not adequate to meet the nutrition needs of many food-insecure households, and certain populations, such as seniors, face barriers to participating in the program. Restrictive work requirements impede the ability of some of the most vulnerable in our population from receiving SNAP benefits for the duration of their need. State governments can do more to ensure vulnerable populations have access to SNAP by simplifying applications for senior populations and ensuring appropriate training, job placement or volunteer slots for able-bodied adults who are unemployed and food insecure.

Other federal programs leverage the resources and structure of the charitable sector to meet the nutritional needs of struggling families. The Emergency Food Assistance Program (TEFAP), targets poor and vulnerable households to provide them with critical nutrition assistance to supplement their household food budgets. Additionally, the Community Supplemental Food Program (CSFP) is targeted specifically at low-income seniors. Other programs are targeted at children, like WIC and programs that feed children in school, daycare, afterschool and summer settings. There is even strong evidence that WIC and SNAP participation reduce household food insecurity (Metallinos-Katsaras et al., 2011; Mabli et al., 2013). While SNAP is not a child nutrition program per se, the program continues to serve as the first line of defense against child hunger. In 2014, 44 percent of SNAP participants were children (Gray & Kochar, 2015). Together, these programs weave a comprehensive nutritional safety net that reaches children where they live, learn and play.

Existing federal nutrition programs could do much more to address food insecurity simply by improving participation rates among those underserved. This can be done both by increasing the awareness of these supports and through policy changes. For example, only 42 percent of seniors that qualify for SNAP benefits are enrolled in the program. Similarly, compared to nearly 22 million children receiving free or reduced-price lunches each school day in 2015, only 12 million received breakfast and even fewer (less than 4 million) received food assistance during the summer (USDA, 2016).



Improved program access and innovative delivery models, along with the streamlining of program requirements for program providers and applications for individuals can help to improve participation rates. Policymakers should support alternative summer delivery models, such as delivering meals to low-income neighborhoods rather than requiring families to find transportation to a summer site or allowing families to pick up a week's worth of meals to eat at home rather than requiring children to travel to the site each day.

In rural areas, this gap is exacerbated by transportation barriers in accessing grocery stores or program sites and difficulties in outreach or recertification for federal nutrition programs. Consistent with existing research regarding access difficulties in rural areas, our findings reveal that both overall and child food insecurity is higher in nonmetropolitan counties. Feeding America food banks and other community organizations rely on support from a variety of sources, including individual and corporate giving, government commodities, and in-kind donations from the food industry to reach these and other high-need areas. Reducing barriers to donation can help divert excess food from the landfill to the tables of families in need. In addition to federal program interventions, legislators can also leverage tax policy to help strengthen the charitable sector.

The *Map the Meal Gap* studies are intended to shed light on the issue of food insecurity as a problem that exists in all communities across the United States. Though we reviewed this variation in light of income, poverty, unemployment and homeownership across geographies of varying population density and economic integration, we encourage others to examine how local-level food-insecurity data relates to other indicators, such as health data, housing cost pressures and other measures of economic status. It is our hope that food banks, partner agencies, policymakers, business leaders, community activists and concerned citizens will use these tools to strengthen the fight against hunger.

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