

REGIONAL HUNGER REPORT:

MISSOURI'S 4th CONGRESSIONAL DISTRICT

*Authors: Darren Chapman, Anadil Iftekhar, Meaghan Lee, Bill McKelvey, Maxwell Staab
October 9, 2020*

This report provides descriptive data related to food insecurity, food affordability, federal nutrition program participation, and health outcomes connected to dietary intake for Missouri's 4th Congressional District. It both complements, and builds upon, the 2019 Missouri Hunger Atlas, which assesses the extent of food insecurity in the state of Missouri at the county level and gauges how well public programs are doing to meet the needs of our fellow citizens who have difficulty acquiring sufficient amounts and qualities of food.

Food Insecurity

Food insecurity occurs when households are unable to obtain enough nutritionally adequate and safe foods, or are unable to acquire food in socially acceptable ways¹. In 2018, 14.1 % of Missouri's 4th Congressional District residents, or 107,470 individuals, were food insecure. This is slightly higher than the Missouri state average of 13.3%, and even higher than the nation's food insecurity rate of 11.5%².

Importantly, food insecurity has increased due to the various impacts of Covid-19. Feeding America estimates that rates of food insecurity in Missouri's 4th District will increase to 19.3% this year (2020), affecting 150,350 people. This is a 36.8% increase between 2018 and 2020, with 42,880 additional individuals facing food insecurity. The food insecurity rate in the state as a whole is projected to be 18.4% in 2020.

Figure 1. Percent Change in Food Insecurity 2018-2020

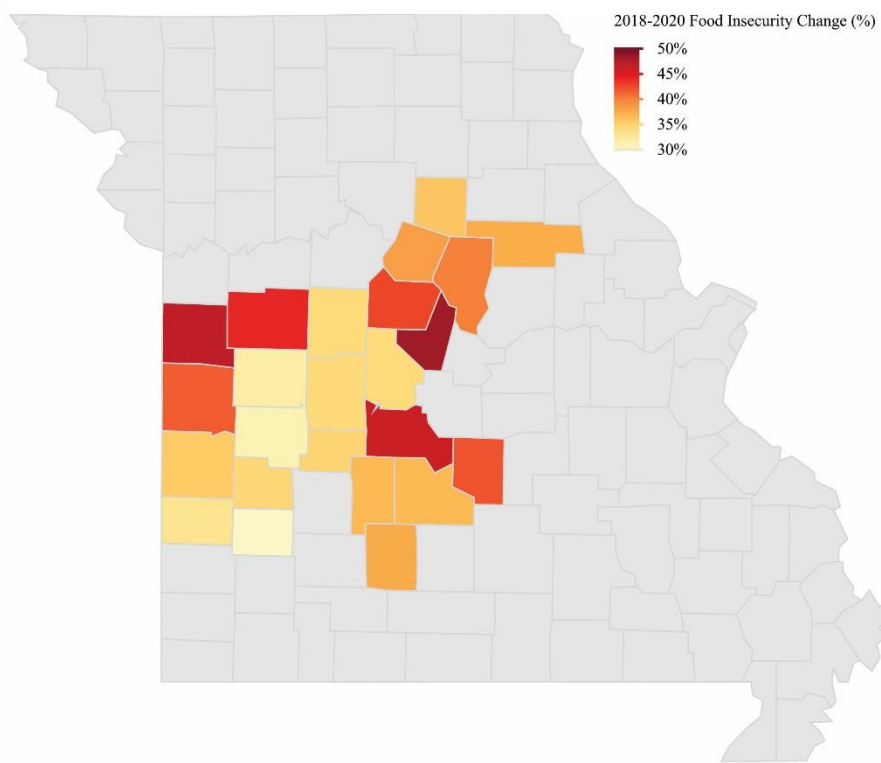


Figure 1 shows the degree to which food insecurity is projected to increase between 2018-2020 across the counties in Missouri’s 4th District. The increase of food insecurity in one-third of the counties is greater than 40%. Those counties include Moniteau, Cass, Camden, Johnson, Cooper, Pulaski, Bates, and Boone. For the district in 2020, rates of food insecurity range from 15.7% to 22.2%. This translates to increases between 30.3% to 48.6%.

Of the eight U.S. Congressional Districts in Missouri, the 4th District has the third lowest projected percent increase in food insecurity rates.

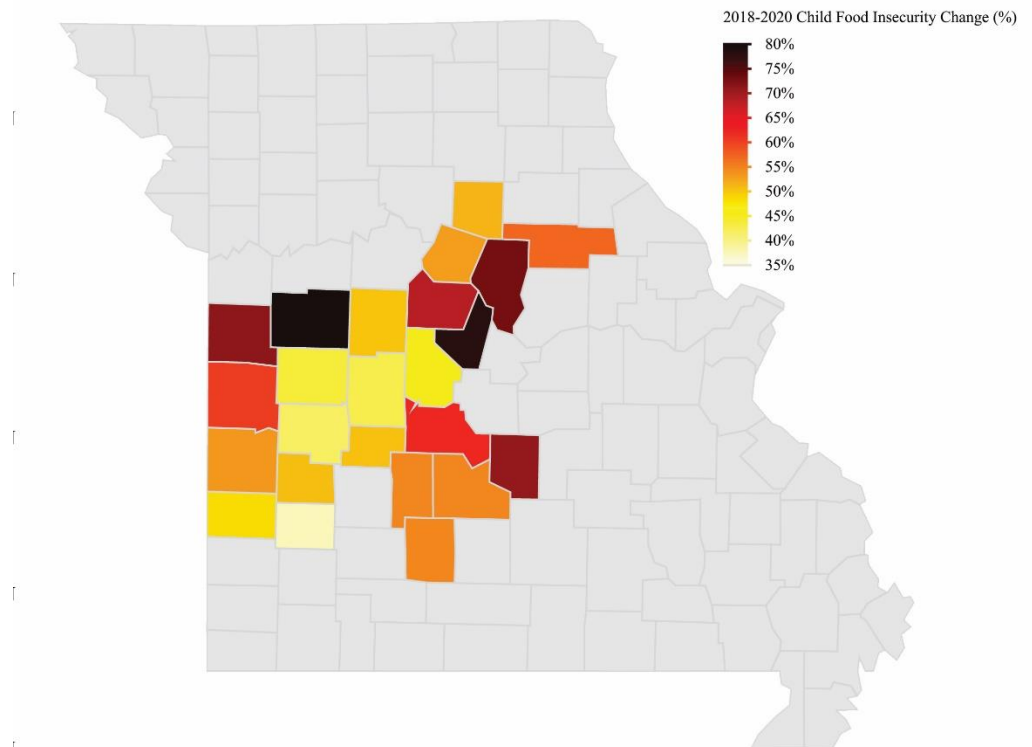
For more county level details and additional information, please refer to Appendix I.

Child Food Insecurity

In Missouri and across the country, families with children are more likely to face food insecurity than those without children. In the 4th District, 27,680 children (15.3%) lived in food insecure households in 2018. In 2020, an estimated 44,620 children (24.7%) will live in food insecure households. This equates to a 61.2% increase, or an additional 16,940 children facing food insecurity. These rates track closely with the state of Missouri – the child food insecurity rate for the state in 2018 was 15.2%. In 2020 it is expected to be 24.3%, and therefore show a similar rate of increase².

Figure 2 shows the degree to which child food insecurity is projected to increase between 2018-2020 across counties in Missouri’s 4th District. The percentage of increase in approximately one-fifth of counties is greater than 70%. Those counties include Johnson, Moniteau, Boone, Cass, and Pulaski. For the district, child food insecurity rates range from 20.1% to 34.2%, an increase of 37.9% to 80.0%. Notably, the percent change in child food

Figure 2. Percent Change in Child Food Insecurity 2018-2020



insecurity rates in the 4th District (61.2%) is nearly double the percent change in overall food insecurity rates (36.8%).

For more county level details and additional information, please refer to the Appendix II.

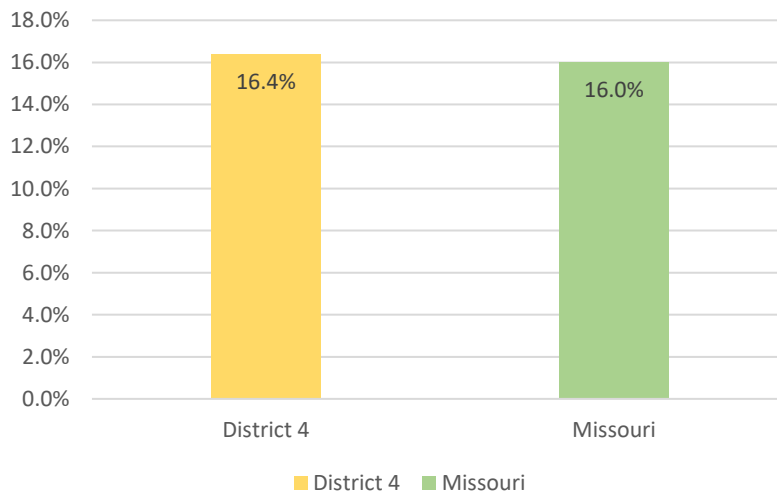
Food Affordability

Food insecurity is most commonly due to insufficient resources for food purchases. Low-income households may have to make difficult financial decisions about how to spend their money, at times choosing between healthcare, transportation, rent, utilities, and food. When food costs take up a larger share of available income, food choices are limited. As such, the examination of food affordability is critical to understanding the context of food access and social determinants of hunger.

Food affordability measures the percent of income required each week for households to meet average expenditures on food for a particular county, region, or state. This measure is calculated using average weekly median household income, average household size, and the average cost of meals³.

Figure 3 compares food affordability in the 4th District and Missouri in 2017 (the most recent Missouri Hunger Atlas data available). Overall, the rates are very similar. On average, 16.4% of a household's income is used for food in the 4th District compared to 16.0% for the state. Within the district, food affordability ranges from a low of 12.7% in Cass County (highest relative affordability) to a high of 22.5% in Dallas County (lowest relative affordability)⁴.

Figure 3. Food Affordability (2017)



Federal Nutrition Programs

Supplemental Nutrition Assistance Program (SNAP)

The federally funded Supplemental Nutrition Assistance Program provides cash benefits to help qualifying families supplement their food budget⁵. To be eligible for SNAP, a household's

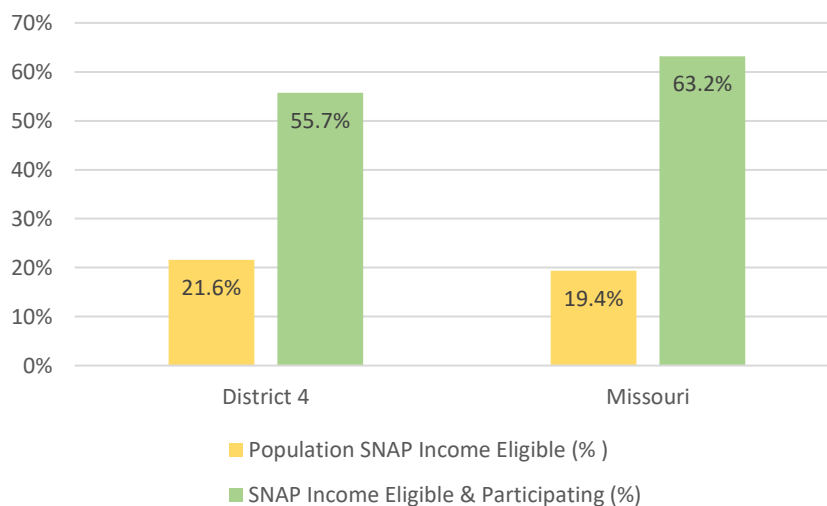
income must be less than or equal to 130% of the Federal Poverty Level (FPL), which for a family of three in 2017 would be around \$26,000 in annual income. Households must also hold valid citizenship status and meet other qualifications. They may be disqualified if household assets meet certain levels or are of certain types.

The Missouri Hunger Atlas takes a unique approach in analyzing SNAP and other federal nutrition programs. By using U.S. Census American Community Survey data, the atlas first estimates the percent of the population who are income eligible for a program. In the case of SNAP, those households with incomes less than 125% of FPL are considered income eligible. This standard, as opposed to 130% FPL, is used to compensate for other disqualifying criteria and avoid overestimation of eligibility.

To estimate the percent of the income eligible population participating in SNAP, we then divide the divide the number of actual program participants by the number of number of those who are income eligible.

The results, when looking at the most recent available data from 2017 in Figure 4 below, shows that the SNAP income eligible population in the 4th District (21.6%) is very close to the state average (19.4%). In the 4th District, this equates to 165,060 people. There is greater difference when comparing the population who are eligible for *and* participate in the program. Notably, only 55.7% of those who are eligible for the program, or 87,389 average monthly users, participate in SNAP in the 4th District, compared to 63.2% of the eligible population for the state of Missouri⁴.

Figure 4. SNAP Eligibility & Participation



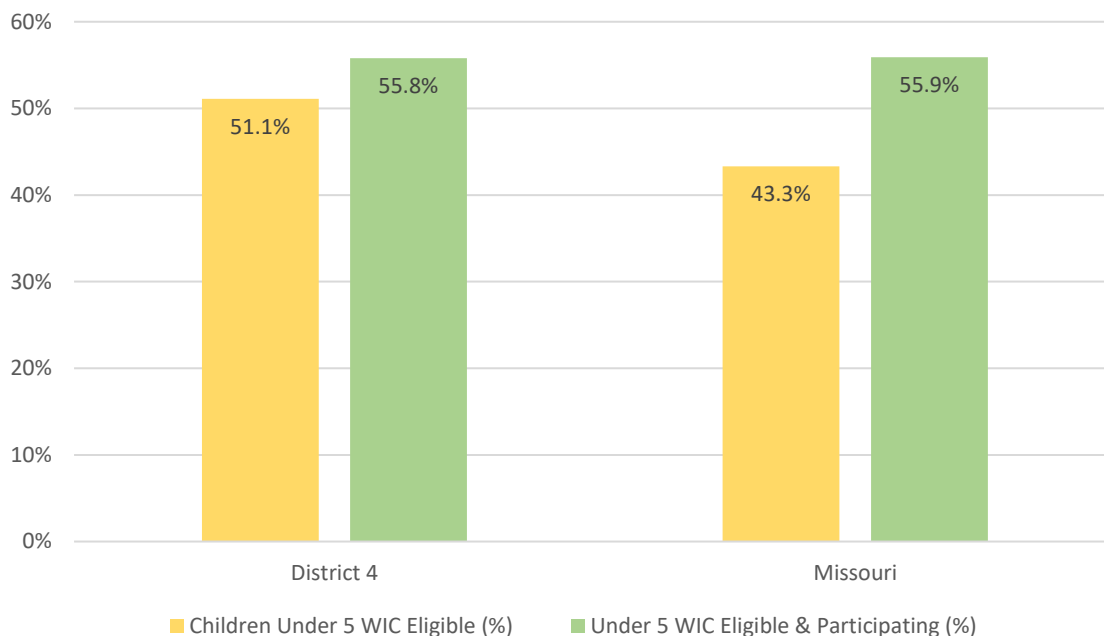
Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)

The WIC program enables low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, along with infants and children up to age five who are found to be at nutritional risk, to access supplemental foods, health care referrals, and nutrition education⁶.

Households may be eligible for WIC if their income is less than or equal to 185% of Federal Poverty Level and other qualifications are met, or if they face nutritional risks.

In the 4th District, 51.1% (22,203) of children under the age of 5 were income eligible to receive WIC benefits in 2017, compared to 43.3% of children under 5 in Missouri. On the participation side, we find that roughly equal percentages of income eligible children participate in WIC in the 4th District and Missouri (55.8% compared to 55.9%, respectively). On an average month in 2017, over 12,394 children participated in WIC in the 4th District⁴.

Figure 5. WIC Eligibility & Participation

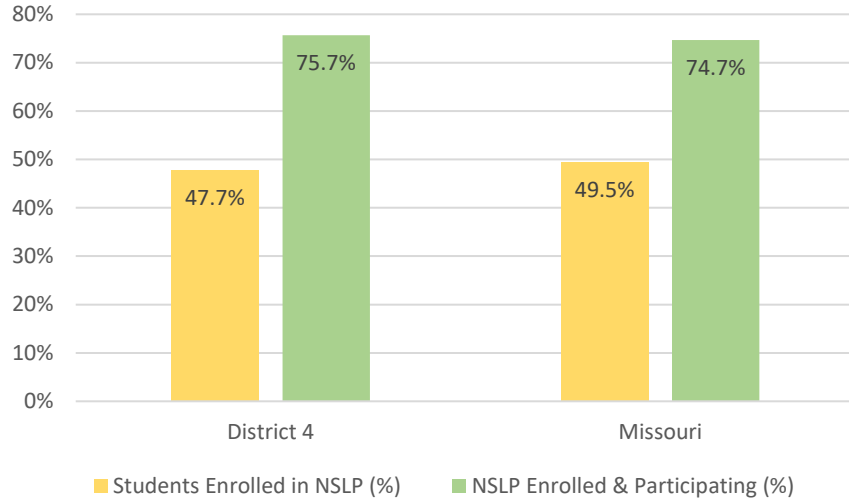


National School Lunch Program (NSLP)

The NSLP operates in public schools, nonprofit private schools, and residential child care institutions. This federally assisted program provides free and reduced-price lunches to children during the school day. To qualify for free or reduced-priced meals, children may be determined “categorically eligible” through participation in other federal programs such as SNAP or Head Start or based on their status as a migrant, homeless, runaway, or foster child. In addition, children in households with incomes below 130% of FPL qualify for free meals. Children in households with incomes between 130% and 185% of FPL qualify for reduced price meals⁷.

In the 4th District in the 2018-2019 school year, an estimated 56,815 or 47.7% of students were enrolled in NSLP (Figure 6). This rate of enrollment is slightly lower than the state average of 49.5%. In terms of participation in the 4th District, of those enrolled in the program, it is estimated that 75.7% or 43,009 students participated. This nearly mirrors the state participation rate of 74.7%. It should be noted that this participation measure is a proxy based on the actual number of free and reduced-price lunches served compared to the maximum (potential) number of free and reduced-price lunches that could be served to 100% of students enrolled in NSLP⁴.

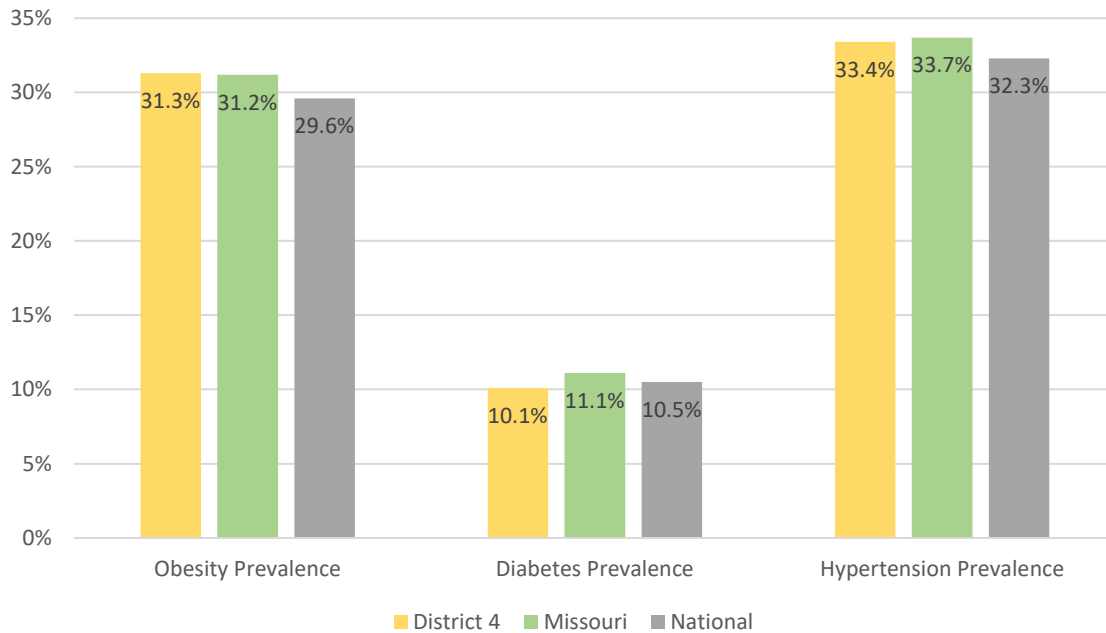
Figure 6. NSLP Enrollment and Participation



Health Outcomes

Food insecurity is associated with a variety of negative health outcomes⁸. Figure 7 shows data from 2016 comparing the 4th District with the state of Missouri and the United States with regard to obesity, diabetes, and hypertension. While rates are relatively consistent across these different localities, evidence suggests that for those who are food insecure, their prevalence can be greater⁹.

Figure 7. Health Outcomes



Conclusion

Food insecurity is a growing concern in Missouri's 4th Congressional District, the state of Missouri, and the U.S. Food insecurity is projected to increase due to the impacts of Covid-19, and with that, health outcomes will likely worsen. In the 4th District in particular, overall food insecurity rates are projected to increase by 36.8%. Rates of child food insecurity are expected to increase by 61.2%. Access to federal nutrition programs provides a safety net to some 4th District residents. However, as our data show, there is opportunity to ensure that more of those who are eligible for programs have the ability to participate in them.

References

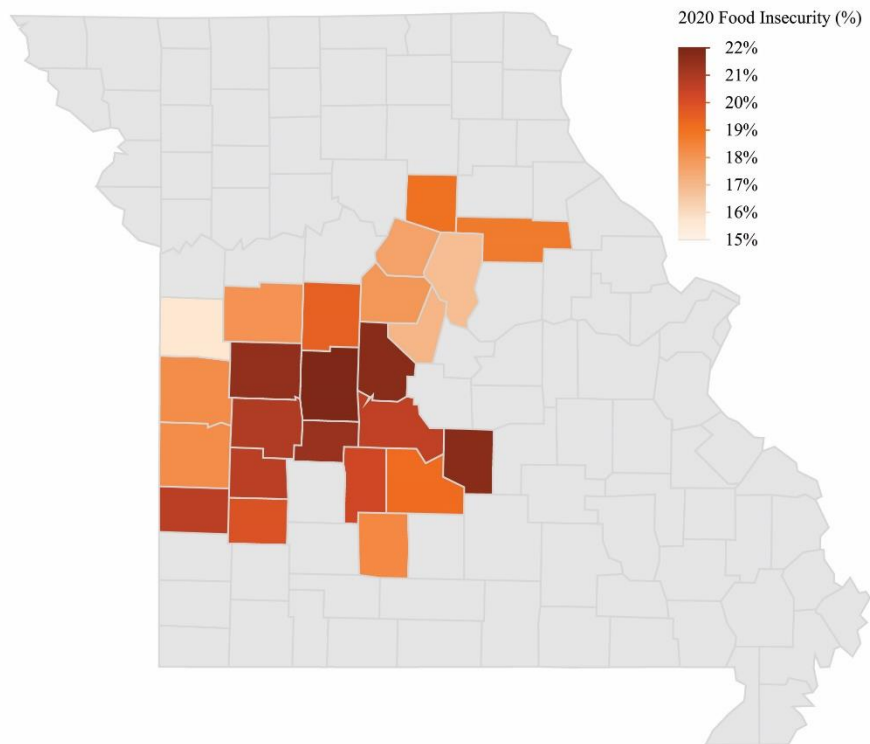
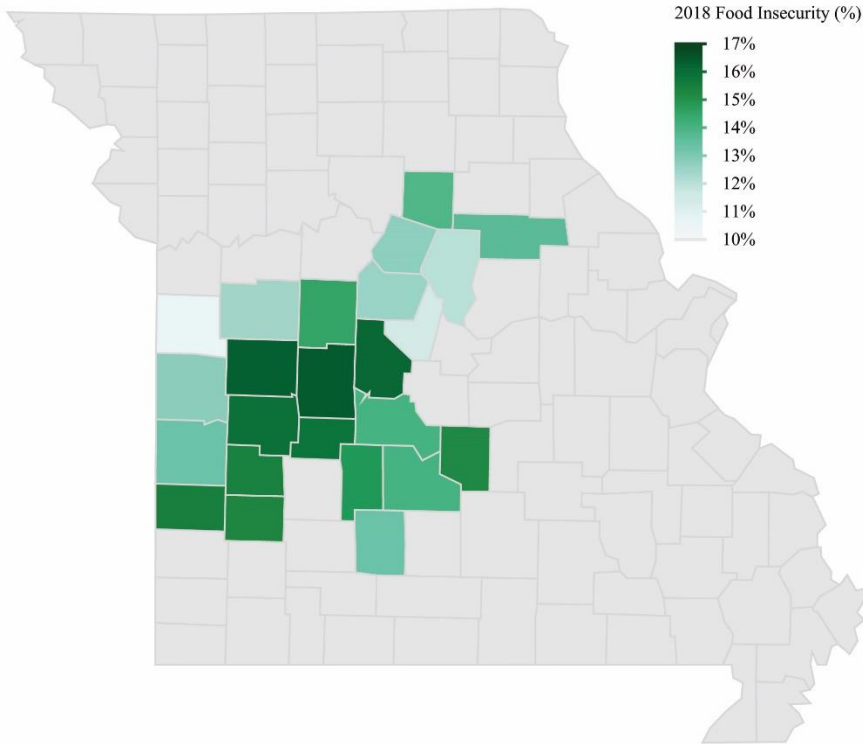
1. Anderson, S. A. (Ed.). (1990). Core indicators of nutritional state for difficult-to-sample populations. *The Journal of Nutrition*, 120 (suppl_11), 1555-1600.
2. Feeding America. (June 3, 2020) *The Impact of Coronavirus on Food Insecurity, Feeding America*. <https://www.feedingamericaaction.org/the-impact-of-coronavirus-on-food-insecurity/>.
3. Cafer, A. M., & Kaiser, M. L. (2016). An analysis of differences in predictors of food affordability between rural and urban counties. *Journal of Poverty*, 20(1), 34-55.
4. Bass, M., Carlos Chavez, F. L., Chapman, D., Freeman, K., Mangoni, G. N., McKelvey, B., Miller, E., & Rikoon, S. (2019). *Missouri Hunger Atlas 2019*. University of Missouri, Interdisciplinary Center for Food Security. <https://foodsecurity.missouri.edu/missouri-hunger-atlas/>.
5. U.S Department of Agriculture Food and Nutrition Service. (n.d.) *Supplemental Nutrition Assistance Program (SNAP)*. <https://www.fns.usda.gov/snap/supplemental-nutrition-assistance-program>.
6. U.S Department of Agriculture Food and Nutrition Service. (n.d.) *Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)*. <https://www.fns.usda.gov/wic>.
7. U.S Department of Agriculture Food and Nutrition Service. (n.d.) *National School Lunch Program*. <https://www.fns.usda.gov/nslp>.
8. Gundersen, C., & Ziliak, J.P. (2015). Food Insecurity and Health Outcomes. *Health Affairs*, Vol. 34, No 11. <https://www.healthaffairs.org/doi/full/10.1377/hlthaff.2015.0645>.
9. Cafer, A., Foulkes, M., Heflin, C., Hermsen, J., Raedeke, N., & Rikoon, S. (2013). *Coping with hunger in 2013: Food pantry clients and households in the service region of the Food Bank for Central and Northeast Missouri*. Columbia, MO; University of Missouri. <https://foodsecurity.missouri.edu/food-pantry-research/food-pantry-client-research/>.

Report Contact

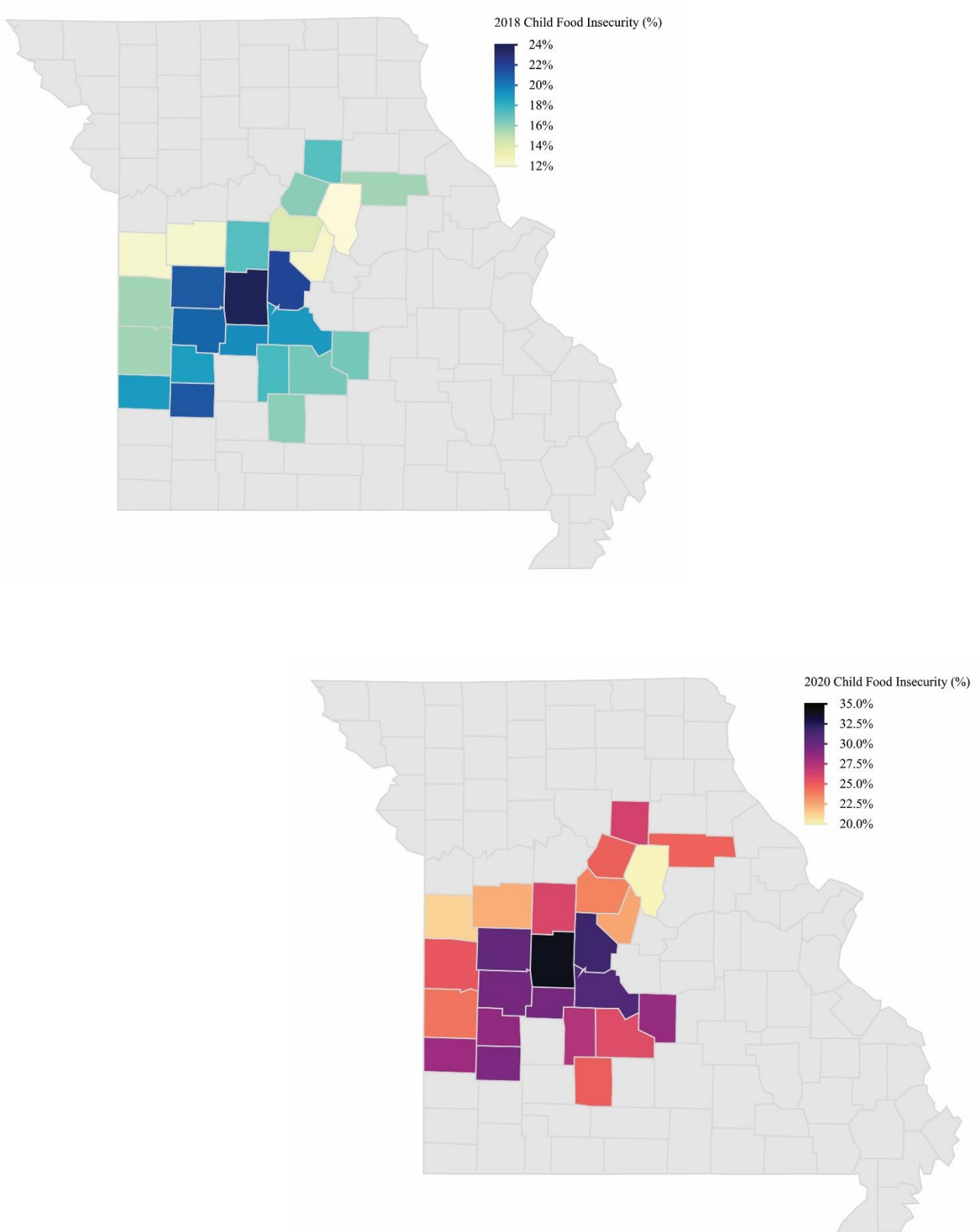
Bill McKelvey, M.S. – Project Coordinator (McKelveyWA@missouri.edu)

Mary Hendrickson, PhD. – Associate Professor (HendricksonM@missouri.edu)

Appendix I: 2018 and 2020 Overall Food Insecurity Rates for the 4th District



Appendix II: 2018 and 2020 Child Food Insecurity Rates for the 4th District



Appendix III: 2018 and 2020 Food Insecurity Rates by County in the 4th District

	Food Insecurity			Child Food Insecurity		
	2018	2020	% Change	2018	2020	% Change
<i>Audrain</i>	13.7%	18.8%	37.8%	15.8%	24.9%	57.6%
<i>Barton</i>	15.6%	20.8%	33.4%	19.1%	28.4%	48.7%
<i>Bates</i>	12.9%	18.3%	42.0%	15.8%	25.4%	60.8%
<i>Benton</i>	16.5%	22.2%	34.7%	23.9%	34.2%	43.1%
<i>Boone</i>	12.1%	16.9%	40.5%	11.6%	20.1%	73.3%
<i>Camden</i>	14.1%	20.7%	46.5%	19.2%	31.2%	62.5%
<i>Cass</i>	10.6%	15.7%	47.2%	12.4%	21.3%	71.8%
<i>Cedar</i>	15.5%	20.8%	34.9%	19.0%	28.7%	51.1%
<i>Cooper</i>	12.6%	18.0%	43.0%	14.1%	23.8%	68.8%
<i>Dade</i>	15.4%	20.0%	30.3%	21.4%	29.5%	37.9%
<i>Dallas</i>	14.9%	20.4%	37.1%	17.8%	27.6%	55.1%
<i>Henry</i>	16.4%	21.6%	32.1%	21.2%	30.5%	43.9%
<i>Hickory</i>	15.9%	21.5%	35.2%	19.7%	29.7%	50.8%
<i>Howard</i>	12.8%	17.7%	38.8%	16.3%	25.0%	53.4%
<i>Johnson</i>	12.5%	18.1%	44.5%	12.5%	22.5%	80.0%
<i>Laclede</i>	14.1%	19.3%	36.9%	16.7%	25.9%	55.1%
<i>Moniteau</i>	11.5%	17.1%	48.6%	12.7%	22.7%	78.7%
<i>Morgan</i>	16.2%	21.8%	34.5%	22.0%	32.0%	45.5%
<i>Pettis</i>	14.6%	19.6%	34.5%	17.4%	26.2%	50.6%
<i>Pulaski</i>	15.3%	21.8%	42.4%	16.7%	28.6%	71.3%
<i>Randolph</i>	14.0%	19.1%	36.2%	17.4%	26.4%	51.7%
<i>St. Clair</i>	16.0%	21.0%	31.3%	20.9%	29.7%	42.1%
<i>Vernon</i>	13.4%	18.3%	36.0%	15.8%	24.3%	53.8%
<i>Webster</i>	13.4%	18.4%	37.9%	16.2%	25.1%	54.9%
<i>District 4</i>	14.1%	19.3%	36.8%	15.3%	24.7%	61.2%
<i>Missouri</i>	13.3%	18.4%	38.8%	15.2%	24.3%	59.9%