



# Hunger, Poverty, and Health Disparities During COVID-19 and the Federal Nutrition Programs' Role in an Equitable Recovery



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# Introduction

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The health and economic crises brought on by the coronavirus 2019 (COVID-19) pandemic has made the federal nutrition programs more important than ever. An unacceptably high number of people in America do not have enough to eat, and it is likely that the economic recovery for families who struggle to put food on the table will take years.

Recovery will be particularly challenging for those groups that have suffered disproportionate harm from COVID-19. Inequities, also referred to as disparities, “adversely affect groups of people who have systematically experienced greater obstacles [...] based on their racial or ethnic group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion.”<sup>1</sup>

Unlike differences, inequities are the result of the unfair distribution of resources due to structural factors. Structural factors include governing processes and economic and social policies that affect wages and earnings, employment opportunities and working conditions, and access to affordable housing and quality education.<sup>2</sup> These structural factors lead to systemic injustices in food insecurity, poverty, and health.

The goals of this review are to examine the connections between hunger, poverty, health, and equity during COVID-19, and to discuss the role of the federal nutrition programs in the recovery from the pandemic. This white paper begins with the linkages between hunger, poverty, and health during COVID-19. It then details how COVID-19 has exacerbated disparities that predated the pandemic due to systemic injustices.

This paper follows with a review of new research on how the federal nutrition programs reduce hunger, poverty, and health, including initial findings on their efficacy during the pandemic. The paper then concludes with policy recommendations to leverage the federal nutrition programs for a robust and equitable recovery.

## Key Findings

**Increased hardship.** Due to COVID-19, the sudden increase in unemployment and financial hardship led to unacceptably high levels of food insecurity. From 2019 to 2020, there were 3 million more people living in households that reported food insecurity (lack of access at all times to enough food for an active, healthy life in the prior 12 months).<sup>3</sup> Financial hardship has made it more difficult to afford other essential needs, like medication and housing. COVID-19 was the third-leading cause of death in 2020 and also delayed medical care, which will have long-term impacts on well-being.

**COVID-19 amplified already unacceptable rates of hunger and has exacerbated disparities that differ according to population.** The economic and public health crises from COVID-19 have had disproportionate impacts in certain communities following preexisting disparities in hunger, poverty, and health. Understanding how the root causes of these disparities differ by community is critical when implementing policy solutions. For example, prior to COVID-19, Latinx communities experienced increased discrimination from immigration enforcement and the 2019 public charge rule ([blocked permanently in March 2021](#)), resulting in the distrust of public services. This has had important implications for program participation and access to vaccines during COVID-19.

**The federal nutrition programs have played a key role in reducing hardship during the pandemic.** The social safety net, including expansions to the federal nutrition programs, contributed to mitigating a spike in hunger during the pandemic. Research indicates that benefits from the Pandemic Electronic Benefit Transfer (P-EBT) program have reduced food insufficiency among households with children, that flexibilities in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) have been crucial in maintaining and increasing access to program benefits, and that the Supplemental Nutrition Assistance Program (SNAP) has been one of the most effective anti-poverty programs during the pandemic.

# Federal Nutrition Program Descriptions

## **Supplemental Nutrition Assistance Program<sup>4</sup> (SNAP)**

SNAP is the largest food program administered by the U.S. Department of Agriculture (USDA) and it serves as the nation's first defense against hunger. SNAP is an entitlement program and provides benefits to eligible applicants on Electronic Benefit Transfer (EBT) cards for purchasing food from authorized SNAP retailers. A household's benefits are determined based on the household's size and income.

## **Special Supplemental Nutrition Program for Women, Infants, and Children<sup>5</sup> (WIC)**

WIC provides eligible low-income pregnant women, new mothers, infants, and children up to 5 years old with supplemental nutritious foods, nutrition education, breastfeeding support, and referrals to health care. WIC is a discretionary program with a set budget. Participants are eligible, based on income, or automatically eligible if a family receives benefits from SNAP, Temporary Assistance for Needy Families, or Medicaid.

## **School Breakfast Program<sup>6</sup> (SBP) and National School Lunch Program<sup>7</sup> (NSLP)**

SBP and NSLP provide reimbursements for healthy breakfasts and lunches served to children each school day. Any child that attends a school offering school meals can participate, but meals are provided at no cost or at a reduced price to children based on their household income, and some high-needs schools are able to offer free school meals to all students.

## **Child and Adult Care Food Program<sup>8</sup> (CACFP)**

CACFP is a program that provides healthy meals and snacks to child care centers, family child care homes, afterschool programs, adult daycare, and homeless shelters. Eligibility is determined at the facility level so that all attending children receive meals and snacks.

## **Summer Food Service Program<sup>9</sup> (SFSP)**

SFSP provides free meals and snacks to children 18 and under when school is not in session. Sites are located in communities where at least half of the children are from families with incomes at or below 185 of the federal poverty level (FPL) or primarily serve children from families with low incomes. The Seamless Summer Option<sup>10</sup> (SSO) is an alternative program for schools to provide free meals and snacks in low-income areas. The meals served through SSO must follow the nutrition standards and guidelines for the federal National School Lunch Program.

## **Pandemic Electronic Benefit Transfer<sup>11</sup> (P-EBT)**

P-EBT provides benefits to help replace the free and reduced-price school meals that children lost access to when schools closed in response to the pandemic. Families receive money on a new or existing EBT card to help fill the meals gap. Young children whose households participate in SNAP and who have lost access to free or reduced-price school meals and/or child care meals due to school and child care facility closures or reduced in-person hours became eligible for benefits during fiscal year 2021.

## **Home-Delivered Meals Program and Congregate Nutrition Program**

The home-delivered meals and congregate nutrition programs provide adults ages 60 or older with meals via delivery to places of residence or group meals at participating sites. Older Americans Act funding is capped and is not intended to reach every eligible individual.

## **Food Distribution Program on Indian Reservations (FDPIR)**

FDPIR is a unique program that provides access to food to low-income American Indian and Alaska Native (AIAN) families who do not have easy access to grocery stores through the delivery of food boxes.

# Food Insecurity During COVID-19

Food insecurity is the primary measure of food hardship, which is associated with chronic disease and poor mental health.<sup>12</sup> Food insecurity is fundamentally due to insufficient resources to meet basic needs, making it a reliable indicator of economic hardship.<sup>13,14</sup>

Official estimates of food insecurity are released every September from the Census Current Population Survey Food Security Supplement (CPS-FSS). In 2020, 10.5 percent of households, representing 38 million people, reported being food insecure sometime during the year.<sup>15</sup>

To track hardship in real time during COVID-19, the Census has fielded the biweekly Household Pulse Survey (Pulse), which includes questions on “food insufficiency.”<sup>16</sup> In addition to Pulse, a variety of data sources have been used to assess pandemic food hardship.<sup>17</sup> Regardless of the source, studies have found that food hardship increased during COVID-19 and has been higher among people who have been systemically oppressed because of their race, ethnicity, or both; households with children; and families with at least one household member who has lost their job.<sup>18,19,20,21,22,23,24</sup>

This report uses data from three sources: 2019 CPS-FSS data for trends prior to COVID-19, and

2020 CPS-FSS data, as well as 2020–2021 Pulse data, for trends during COVID-19. “Hunger” will refer to the umbrella concept of food hardship, which can be measured as either food insecurity or food insufficiency.<sup>25</sup>

**Food insecurity:** “Households were, at times, unable to acquire adequate food for one or more household members because they lacked the money and other resources for food.” Food insecurity is further divided into low food security, primarily the reduced quality of food; and very low food security, the reduced quality and quantity of food.

**Food insufficiency:** “Sometimes” or “often” not having enough to eat. Because this implies disrupted eating patterns, food insufficiency is analogous to very low food security.

Although food insufficiency is a more severe condition than food insecurity, differences between the CPS-FSS and Pulse surveys<sup>26</sup> mean that food insecurity and food insufficiency data are not directly comparable.<sup>27,28</sup> More research is needed to understand the dynamics of food insecurity and other food hardship during the pandemic.<sup>29</sup> See **Appendix A** for more details about the differences between CPS-FSS and Pulse.

**Read more:** [ResearchWIRE Spring 2021 Issue](#).

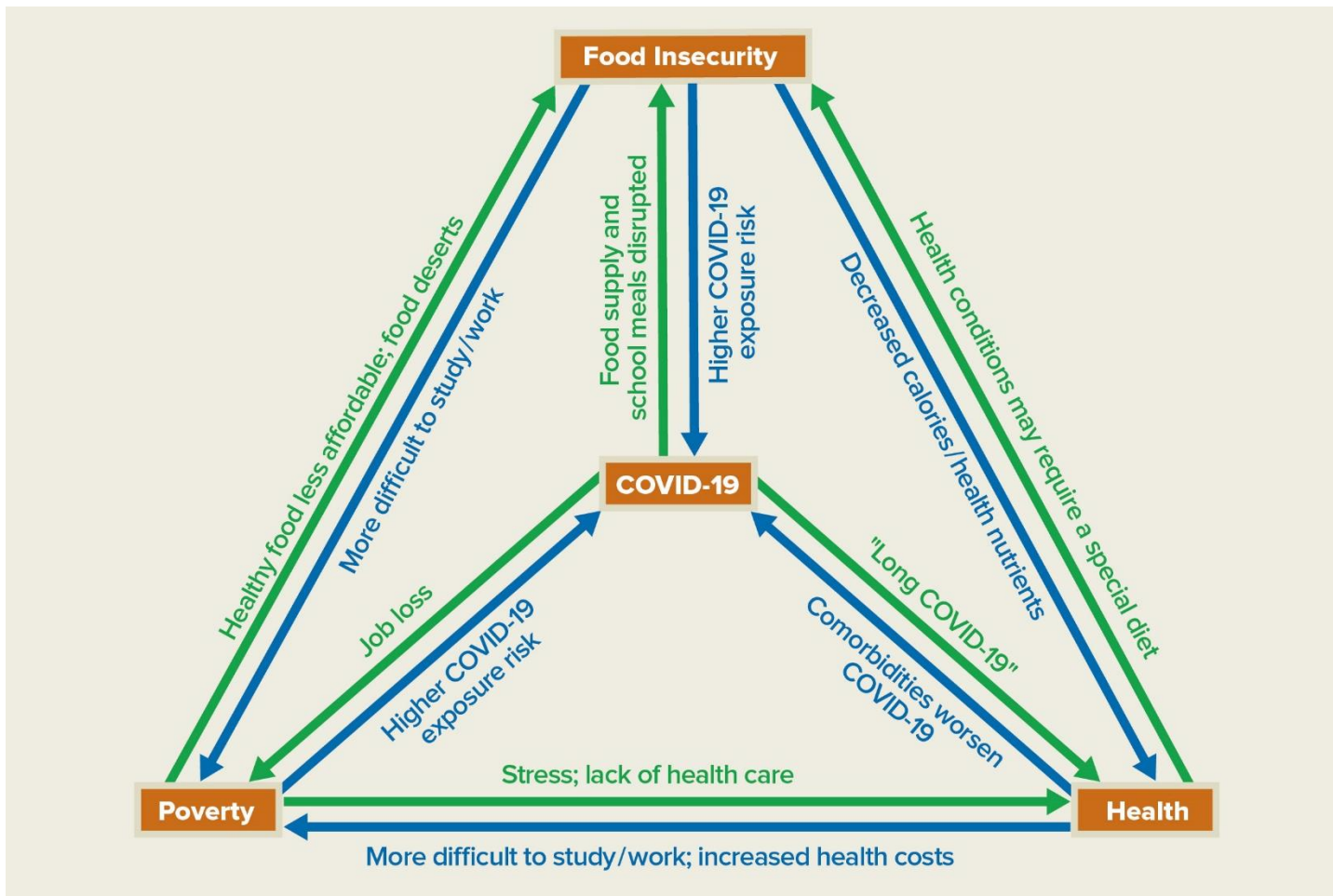
**Figure 1: Understanding Food Security Versus Food Sufficiency**



# Linkages Between Hunger, Poverty, and Health During COVID-19

Hunger is part of a larger feedback cycle between poor health outcomes and poverty. The COVID-19 pandemic has applied unique pressures to these relationships, while hunger, poor health outcomes, and poverty simultaneously increase the risk of COVID-19 transmission, infection, and morbidity.<sup>30,31</sup>

**Figure 2: Linkages Between Hunger, Poverty, and Health During COVID-19**

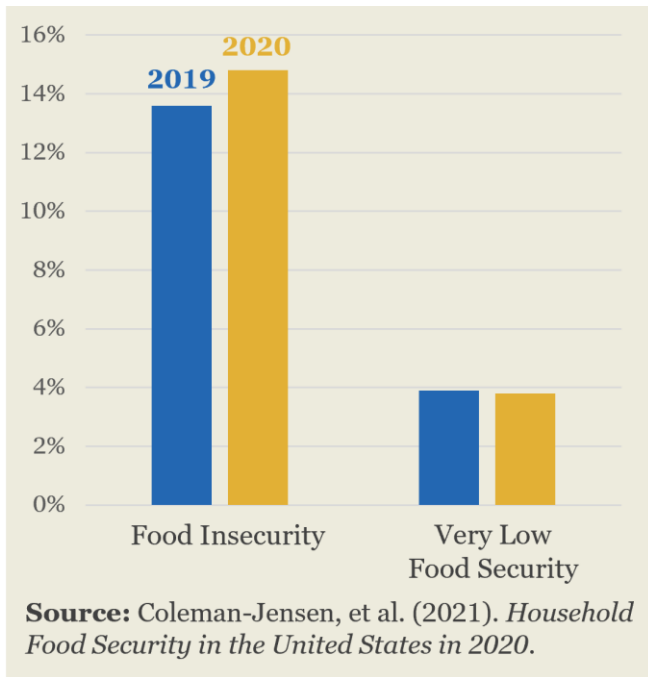


## COVID-19 Worsens Hunger, Poverty, and Health

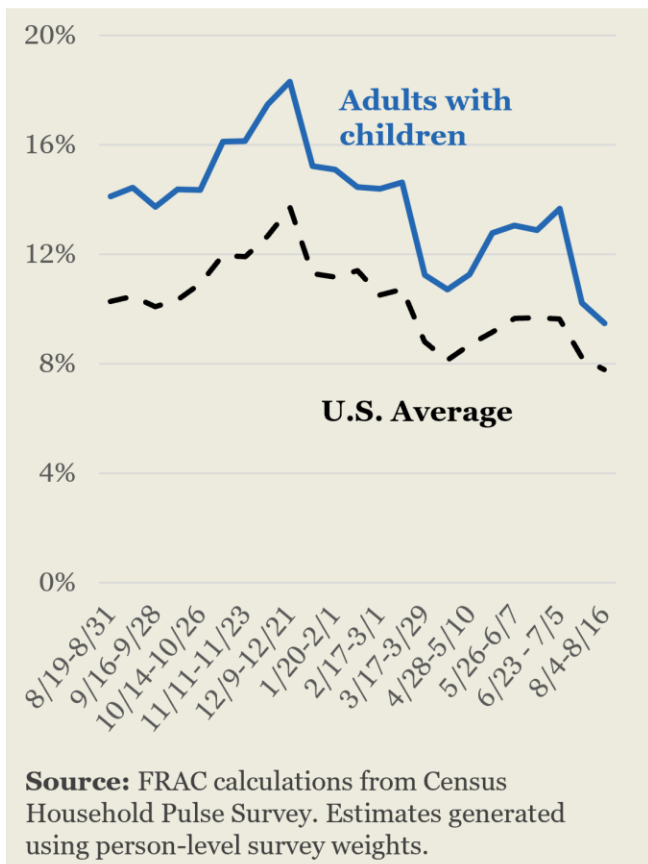
**Hunger has increased.** From 2019 to 2020, household food insecurity remained constant at 10.5 percent, but the percentage of individuals living in food-insecure households increased from 10.9 to 11.8 percent, or by 3 million people. Food insecurity also increased among households with children, from 13.6 percent in 2019 to 14.8 percent in 2020 (see Figure 3). In addition, racial and ethnic disparities in household food insecurity increased.<sup>32</sup>

Data from Pulse show significant variations in food insufficiency throughout the pandemic. Food insufficiency rose to a peak of 13.7 percent for all households in late December 2020 (18.3 percent for households with children) before dropping to 7.8 percent for all households (9.5 percent for households with children) in August 2021<sup>33</sup> (see Figure 4).

**Figure 3: Food Insecurity Among Households With Children (CPS-FSS)**



**Figure 4: Food Insufficiency Rates Among U.S. Households During COVID-19, August 2020–August 2021 (Pulse)**



There are several reasons for the high rates of food insecurity. Unemployment, underemployment, and housing instability all lead to greater food insecurity. Below is a list of some reasons that are directly related to impacting access to healthy food.

- **Higher prices:** Early in the pandemic, initial food hoarding and supply chain disruption increased food prices and made it especially difficult for older adults and low-income families to obtain food.<sup>34</sup> From March to April of 2020, the price of food at home increased by 1.5 percent, which was the largest monthly increase since 1974 and a stark contrast to the overall index for inflation which declined by 0.8 percent.<sup>35</sup> Food prices never came back down. In April 2021, food prices were 2.4 percent higher than during the April 2020 spike.<sup>36</sup>
- **Isolation:** Social distancing has made it more difficult for people to rely on their social networks, including family and community organizations, for food and support.<sup>37,38</sup>
- **School, afterschool, summer, and child care program closures:** Remote learning has resulted in the loss of normal access to meals through the School Breakfast Program (SBP), the National School Lunch Program (NSLP), and the Child and Adult Care Food Program (CACFP), increasing the financial burden for these families to provide food.<sup>39,40</sup> P-EBT has helped millions of families, but a permanent program with a predictable structure is needed to avoid these challenges in the future.

**Poverty would have increased without federal aid.** Monthly poverty rates<sup>41</sup> have fallen with the distribution of federal economic aid in response to the pandemic.<sup>42,43</sup> Poverty rates peaked at 17 percent in August 2020 before declining to 12 percent in July 2021.<sup>44</sup> (see Figure 5)

Federal aid, therefore, has been critical in mitigating the economic hardship during the pandemic; however, families have struggled during the pandemic. Parents have had to reduce hours or leave the workforce to provide care due to school and daycare closures.<sup>45</sup> Individuals hospitalized due to COVID-19 face medical expenses that can amount to thousands of dollars, even with health

insurance, and surviving family members of the deceased are burdened with medical bills.<sup>46</sup> A much larger percentage of home owners have entered loan forbearance (the highest was 8.6 percent in June 2020 compared to 0.3 percent in February 2020)<sup>47</sup> and a high percentage of renters previously had or currently have rental debt as of January 2021 (16 and 8 percent, respectively).<sup>48</sup>

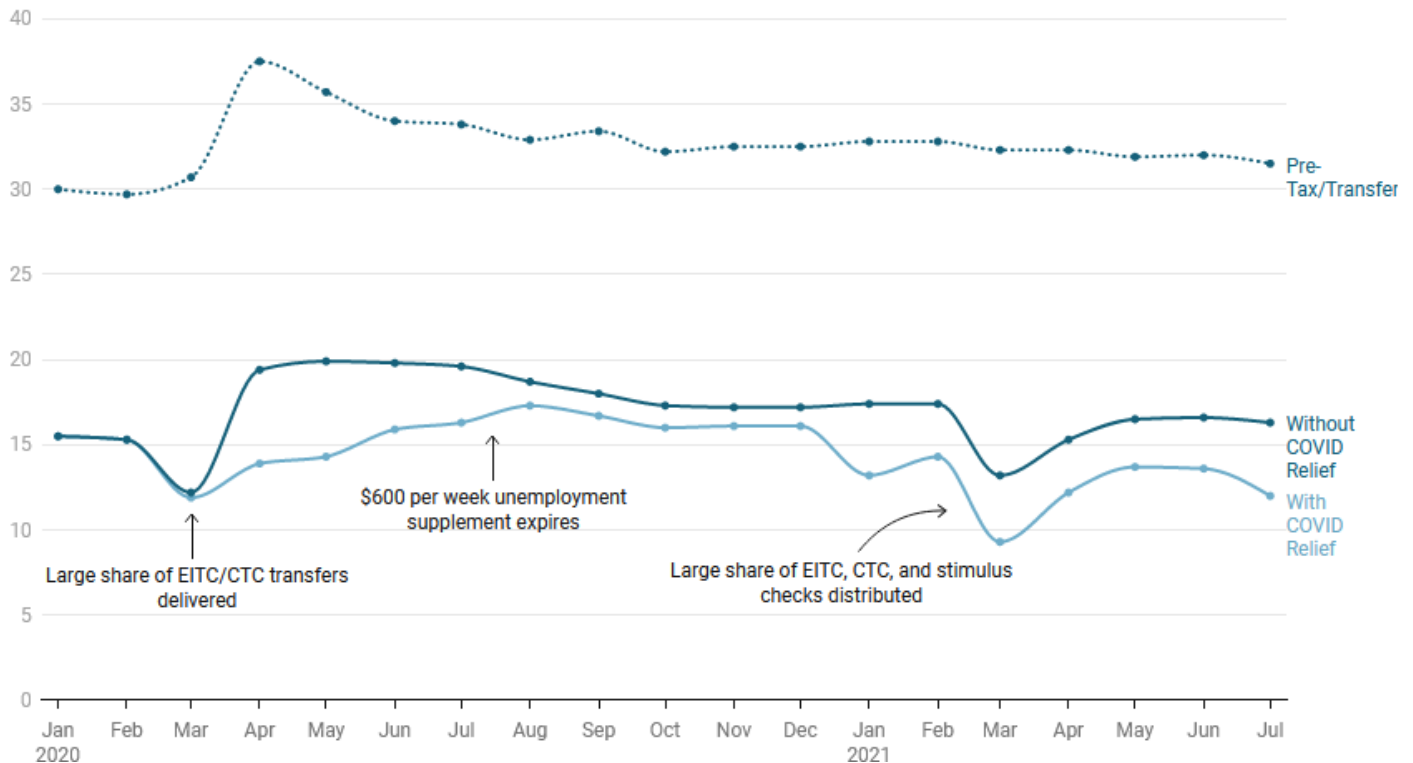
While the Census Pulse Survey does not track poverty, it does track financial hardship, defined as a household finding it somewhat or very difficult to pay for usual expenses. Financial hardship peaked in December 2020 at 37.5 percent of all households and almost half (45.4 percent) of households with children.<sup>49</sup> Providers, a mobile app serving about 5 million SNAP users,<sup>50</sup> has fielded surveys since March 2020 about hardship during the pandemic. As of June 2021, 73 percent of surveyed SNAP users reported owing on utilities or other bills, only 45 percent were able to pay rent on time, and 46 percent reported having less than \$25 on hand.<sup>51</sup>

*“Rent, utilities, and food. Can’t pick just one. Families are struggling in all categories. We catch up on one thing to fall behind in the other to then be in complete debt by the time you get back around to the first bill.”<sup>52</sup>*

**Poor health has increased.** COVID-19 was the third-leading cause of death in 2020.<sup>53</sup> For survivors, there are indications of persistent damage to cardiovascular, respiratory, neurological and psychological health, even among those patients with mild cases.<sup>54</sup> Economic and social conditions of the pandemic have also led to an increase in mental health challenges. Essential workers, unpaid caregivers, and parents have been more likely to report poor mental health.<sup>55,56</sup>

The loss of employment or a cut in benefits during the pandemic has also resulted in a loss of employer-sponsored health insurance.<sup>57,58,59</sup> The lack of health care has caused both individuals with

**Figure 5: Monthly Poverty Rate During COVID-19**



Source: Columbia Center on Poverty and Social Poverty<sup>60</sup>



COVID-19<sup>61</sup> and with unrelated medical conditions<sup>62</sup> to delay seeking care, leading to increased complications and costs. Preventive visits, including vaccinations for other diseases, have also declined, which worsens the management of current diseases as well as early diagnosis of disease onset.<sup>63,64,65,66</sup>

*“[The biggest challenges and concerns for me and my family right now are] the loss of second income, childcare, isolation, depression/anxiety. Feeling like I won’t be mentally stable enough to care for my child.”<sup>67</sup>*

## Hunger, Poverty, and Poor Health Increase COVID-19 Risks

**Hunger increases risk of exposure to COVID-19.** Individuals living in low-income households have not been able to shelter in place for a variety of reasons, including to access food, which then increases their risk of exposure to COVID-19. Participants using SNAP have been able to use their EBT cards for online shopping as states have expanded online pilot projects, although options were limited early in the pandemic.<sup>68</sup>

**Poverty increases risk of exposure to COVID-19.** Individuals who live in poverty are more likely to live in crowded or unstable housing and rely on public transportation, both of which are associated with elevated risk of exposure to COVID-19<sup>69,70</sup> and death.<sup>71</sup> In addition, low-wage work is less likely to be adaptable to working from home, which has resulted in either job loss or in increased exposure and risk through “essential jobs,”<sup>72</sup> particularly those jobs without paid leave.<sup>73</sup> One of the most effective tools in slowing the spread of COVID-19 has been decreased social interaction, yet communities with low-incomes were less able to use this tool and comply with shelter-in-place mandates in the early months of the pandemic.<sup>74</sup>

**Poor health increases susceptibility to COVID-19.** Both a weaker immune system and chronic diseases increase susceptibility to COVID-19 and its complications.<sup>75</sup> An estimated 45 percent of Americans are at risk from severe COVID-19 complications due to a preexisting chronic disease (ranging from 19 percent of adults ages 19–29 and 80 percent of adults over 80).<sup>76</sup> Diseases with the

highest risks include diabetes, hypertension, cardiovascular diseases, smoking, and chronic obstructive pulmonary disease.<sup>77</sup> The association between obesity and severe COVID-19-related illness is particularly strong among adults younger than 65.<sup>78</sup> These risk factors also impact immune system response to a vaccine,<sup>79</sup> which may reduce the effectiveness of the COVID-19 vaccine.<sup>80,81</sup>

## Linkages: Hunger, Poverty, and Health are Interrelated

**Hunger and health.** The relationship between food insecurity and physical and mental health is reciprocal. Food insecurity drives poor health outcomes in two ways. First, food insecurity is associated with poor diet and nutrient deficiencies,<sup>82,83,84,85</sup> and depression and anxiety,<sup>86,87,88</sup> which all lead to an impaired immune system.<sup>89,90</sup> Second, food insecurity, particularly chronic food insecurity, is associated with chronic diseases, including kidney disease, obesity, cardiovascular disease, and diabetes.<sup>91,92,93,94</sup> Poor health and disability, in turn, can make it more difficult for individuals to obtain healthy foods.<sup>95,96,97</sup>

Food insecurity is also associated with poor health and educational outcomes among children,<sup>98</sup> even when children are only marginally food insecure.<sup>99</sup> This may be due to the direct effects of food insecurity or due to other circumstances of living in food-insecure households. This means that any prolonged food insecurity among children during the COVID-19 pandemic and recovery will have implications over the life course for affected children.

**Hunger and poverty.** Food is a flexible expense and, as such, is often one of the first expenses to be cut when households are faced with financial hardship.<sup>100,101</sup> Food insecurity rates increase due to job loss<sup>102</sup> or an increase in expenses, for example, rent<sup>103</sup> or energy bills.<sup>104</sup> At the same time, food insecurity can lead to chronic disease, which can

make it difficult to maintain employment.<sup>105</sup> Food-insecure adults are more likely to be unable to maintain a reliable source of medical care, leading to a higher likelihood of hospitalization<sup>106</sup> and higher health care expenditures, placing a larger strain on household budgets.<sup>107,108</sup> Debt associated

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with medical bills is associated with an increased risk of household food insecurity.<sup>109</sup> During COVID-19, many households have been struggling with financial hardship.<sup>110</sup> A March 2021 survey found that 1 in 8 adults had cut back on food in order to pay for health care in the previous 12 months.<sup>111</sup>

Adults with low incomes report being forced to decide between food and other necessities:

*“... if I paid the medical bills we wouldn’t eat, and it’s basically a choice between going into horrific debts and having people look at you horribly and have your credit score tank because you can’t pay your medical bills or feed your child.”<sup>112</sup>*

During COVID-19, remote learning has exacerbated these decisions for families with children facing higher food costs:

*“I’ve had to stop taking blood pressure medication because I have to feed my kids who are now home schooling because of the pandemic.”<sup>113</sup>*

**Health and poverty.** Poverty has been one of the most consistent correlates of poor health. Lack of income and/or wealth often signifies the lack of the material resources needed for good health, like food

security, safe housing, and educational opportunities.<sup>114,115,116</sup> Low-income individuals are also more likely to be uninsured or underinsured.<sup>117</sup> When individuals require medical treatment, lack of income makes it more likely that individuals will underuse medication in order to pay bills and afford food,<sup>118,119</sup> making it more difficult to maintain control of a disease. Poor health, in turn, makes it more difficult to focus on education and/or maintain employment, creating the “health-poverty trap.”<sup>120,121</sup> For example, poor mental health and chronic disease are associated with unemployment.<sup>122</sup>

COVID-19 has caused people to make difficult decisions between keeping a job to maintain economic stability or sheltering in place to protect their families’ health.

*“It’s readily apparent that [going to work] is a risk, but, you know, I have to stick my neck out for my family to make sure we can pay the bills and keep everything cranking away.”<sup>123</sup>*

*“My husband [...] received a 50 percent pay cut ... I will more than likely need to get a job to supplement our income, but we can’t put our son in daycare due to him being high risk for serious complications from COVID-19.”<sup>124</sup>*

# COVID-19 Exacerbates Disparities

The economic and public health crises from COVID-19 have exacerbated disparities in food insecurity and other indicators of health and social stability that existed before the pandemic. For example, prior to COVID-19, food insecurity had been higher among households near or below the poverty line, households with children (particularly single-parent households or households with teenagers<sup>125</sup>), Black, Latinx, and Native households, and households either in large cities or in rural areas.<sup>126,127</sup>

Understanding the context of disparities prior to the pandemic will help identify how the federal nutrition programs fit into the broader range of interventions that are needed to prevent unnecessary hardship in the recovery from COVID-19 and promote long-term well-being.

## A. Race and Ethnicity

### Overview of COVID-19 disparities by race and ethnicity

Racial and ethnic disparities in COVID-19 cases and deaths have persisted over the course of the pandemic.<sup>128,129,130,131</sup> Using data through March 2, 2021, the Color of Coronavirus Project reported that the death rates per 100,000 people were 256 American Indian and Alaska Native (AIAN) people, 180 Black people, 177 Native Hawaiian and Pacific Islander (NHPI) people, 150 White people, 147 Latinx people, and 96 Asian people.<sup>132</sup>

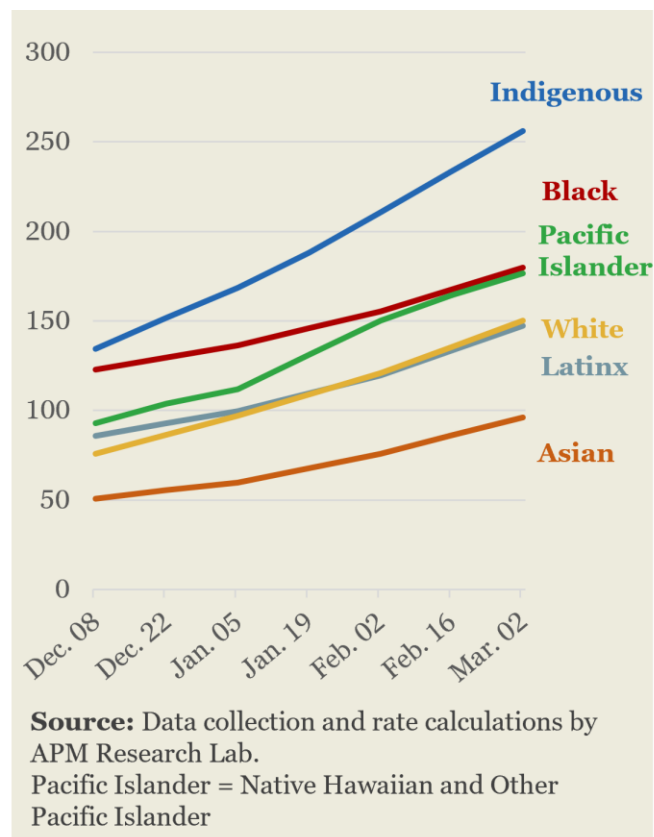
When these rates are adjusted for age, disparities in death rates become even more pronounced. COVID-19 has not been concentrated among older adults within Black and Latinx populations.<sup>133</sup> Age-adjustment corrects for the fact that the White population has a higher proportion of older individuals compared to other racial/ethnic groups.

If the age distribution of all racial/ethnic groups were the same, the death rates per 100,000 people would have been 401 AIAN people, 312 NHPI people, 287 Latinx people, 241 Black people, 121 White people and 117 Asian people in March 2021.<sup>134</sup> As a result of dying at younger ages, Black and Latinx communities have experienced more years of potential life lost due to COVID-19 than in

predominantly White communities,<sup>135</sup> even though there are 4.5 times as many White people as Black people and three times as many White people as Latinx people.<sup>136</sup>

While adults have been more likely to contract COVID-19, these racial disparities are also found among children, teenagers, and young adults. A Centers for Disease Control and Prevention (CDC) report,<sup>137</sup> using 2020 data from 15 states and Washington, D.C., found disparities in COVID-19 infection rates in youth by race and ethnicity.

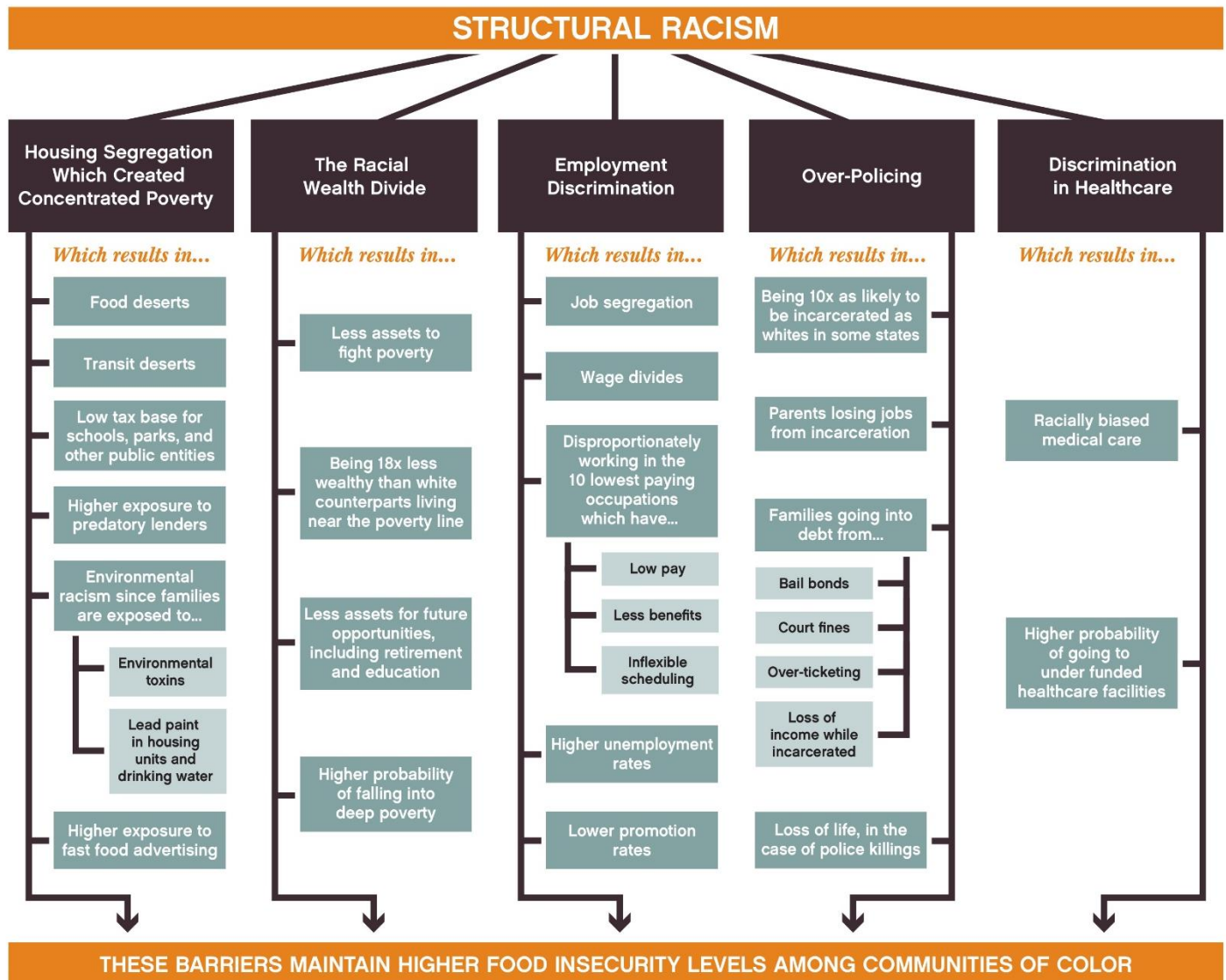
**Figure 6: U.S. COVID-19 Deaths per 100,000, by Race/Ethnicity, December 2020–March 2021**



### Systemic Racism

The same structural factors that lead to racial and ethnic disparities in COVID-19 health outcomes,<sup>138</sup> including COVID-19 vaccination rates,<sup>139,140</sup> are also related to disparities in food insecurity. The figure below is from a 2018 report by Bread for the World.<sup>141</sup>

**Figure 7: Barriers Disproportionately Faced by Communities Systemically Oppressed Based on their Race or Ethnicity**



## A.1. Black Communities

### Prior to COVID-19

**Hunger:** In 2019, 19.1 percent of Black households were food insecure (7.6 percent had very low food security), compared to 7.9 percent of White households (3.3 percent had very low food security).<sup>142</sup>

**Poverty:** In 2019, Black people experienced a poverty rate<sup>143</sup> of 18.8 percent, compared to 9.1 percent among White people<sup>144</sup> (the Supplemental Poverty Measure was 18.3 percent among Black people and 10.5 percent among White people<sup>145</sup>).

Even after accounting for education and experience, Black adults are paid lower wages<sup>146</sup> and are less likely to be employed<sup>147</sup> than White adults, especially during economic recessions.<sup>148</sup> Due to occupational segregation,<sup>149</sup> Black adults also are more likely to be essential workers<sup>150</sup> and less likely to be represented in higher-paying professional occupations.<sup>151</sup> In addition, the wealth gap means Black families have less financial stability to buffer against a loss of income. In 2019, a typical White family owned \$184,000, while a typical Black family owned only \$23,000.<sup>152</sup>

## Systemic Racism and Food Insecurity in Black Communities

Food insecurity is one of the many disparities that stem from racial injustice. Systemic racism has resulted in Black-White disparities in education, housing, economic stability, incarceration rates, and access to health care.<sup>153,154</sup> The effects of structural racism on food insecurity rates show up within each of these systems. For example, Black school-age students are more likely to rely on free or reduced-price school meals programs than White students.<sup>155</sup> Residential segregation and continued governmental and commercial disinvestment mean that majority-Black neighborhoods are less likely to have supermarkets and more likely to have fast-food stores.<sup>156</sup> Decades of discriminatory policies from government agencies and lending institutions have resulted in fewer Black farmers and the loss of Black-owned farmland.<sup>157</sup>

**Health:** Disparities in social determinants of health limit disease prevention and treatment among Black individuals,<sup>158</sup> resulting in higher rates of comorbidities associated with COVID-19 infection and mortality (e.g., diabetes, obesity, and high blood pressure) and lower access to health insurance.<sup>159,160,161</sup> In addition, unethical experimentation and medical mistreatment<sup>162</sup> have led to a health care system that has been “untrustworthy to [Black] Americans.”<sup>163</sup>

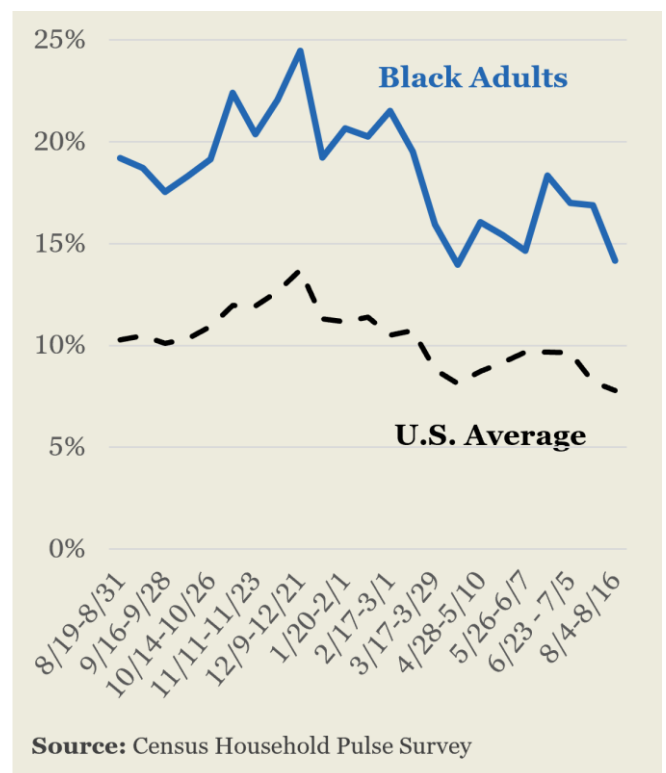
The cumulative effects of racism have resulted in persistent disparities in overall mortality. This loss of life has been even greater than the effects of COVID-19. Even after accounting for COVID-19 deaths, all-cause mortality among White individuals in the U.S. in 2020 was still lower than any all-cause mortality rate Black individuals had ever experienced prior to COVID-19 pandemic.<sup>164</sup>

*“At every level of income and education, there is still an effect of race [on health].” – Dr. Williams, Professor of Public Health at Harvard University<sup>165</sup>*

### During COVID-19

**Hunger:** According to the CPS-FSS, in 2020, 21.7 percent of Black households were food insecure (8 percent with very low food security), compared to 7.1 percent of White households (3 percent with very low food security).<sup>166</sup> This Black-White disparity increased by 3.5 percentage points from 2019 to 2020. In the Pulse data, Black adults have reported the highest rates of food insufficiency compared to other racial and ethnic groups throughout COVID-19, ranging from a high of 25 percent in December (compared to a national rate of 14 percent) to a low of 14 percent in April 2021 (compared to a national rate of 8 percent).<sup>167</sup>

**Figure 8: Disproportionately High Rates of Food Insufficiency Among Black Households During COVID-19**



**Poverty:** Disparities in poverty have been exacerbated during the pandemic, although government programs have helped mitigate them. In January 2020, the Black-White disparity in poverty was 12.6 percentage points, increasing to a high of 14 percentage points in August 2020, but decreasing to 8 percentage points by July 2021.<sup>168</sup> Despite this decrease, disparities are still large. As of August 2021, 44 percent of Black adults sometimes or often had trouble paying for usual household expenses compared to 21 percent of White adults.<sup>169</sup>

Job recovery has also been slower for Black adults. Despite a sharper increase in unemployment early in the pandemic, Black adults have been reemployed at lower rates.<sup>170</sup> By the end of 2020, the unemployment rate for Black people increased by 4.5 percentage points, while the unemployment rate for White people increased by 2.8 percentage points.<sup>171</sup> As of August 2021, the Black unemployment rate was 8.8 percent, 4.3 percentage points higher than the White unemployment rate.<sup>172</sup> However, unemployment rates do not capture the full disparity in joblessness. Black workers had to leave the workforce at much higher rates than White workers, removing them from being counted as unemployed even if they preferred to be working.<sup>173</sup>

**Health:** As of September 1, 2021, Black Americans represented 15 percent of all COVID-19 deaths, despite representing only 12.5 percent of the population.<sup>174</sup> After adjusting for age, Black Americans have been twice as likely to die of COVID-19 than White Americans.<sup>175</sup> At the state and county level, a higher proportion of Black residents has been associated with increased COVID-19 rates, an association that holds true even after adjusting for county-level characteristics, including age, poverty, comorbidities, and the duration of the pandemic.<sup>176,177,178,179</sup>

As of August 2021, only 40 percent of Black people were vaccinated in 40 of 42 states reporting data by race and ethnicity,<sup>180</sup> due to factors such as lack of access to a trusted health care provider, a lack of vaccination clinics in Black neighborhoods, disparities in internet access, and lack of flexibility in work hours.<sup>181,182</sup>

## A.2. Latinx Communities

### Prior to COVID-19

**Hunger:** In 2019, 15.6 percent of Latinx<sup>183</sup> households were food insecure (4.9 percent with very low food security), compared to 7.9 percent of White households (3.3 percent with very low food security).<sup>184</sup> Rates of food insecurity have varied within the Latinx community, with higher rates among Mexicans and Puerto Ricans compared to Cubans.<sup>185</sup>

In addition, Latinx immigrants are more likely to be food insecure than Latinx individuals born in the U.S.<sup>186</sup> Latinx households with mixed immigrant status participate in SNAP and other social safety net programs at lower rates than the national average.<sup>187,188</sup> In addition, fear during the Trump administration that accessing SNAP and other public benefits would categorize immigrants as a “public charge,” and thereby disqualify them from obtaining a green card, had a chilling effect on participation and undermined food security.<sup>189,190</sup> This 2019 rule was reversed in March 2021.<sup>191</sup>

**Poverty:** In 2019, the poverty rate among Latinx populations was 15.7 percent, compared to a national average of 10.5 percent and 9.1 percent among White populations<sup>192</sup> (the Supplemental Poverty Measure was 18.9 percent among Latinx populations and 10.5 percent among White populations<sup>193</sup>).

Occupational segregation has led to disproportionate representation of Latinx workers in essential jobs that cannot be done remotely<sup>194,195</sup> and a Latinx-White wage gap that has not narrowed since 2000.<sup>196</sup> Wealth inequality is also problematic; in 2019, a typical White family owned \$184,000, while a typical Latinx family owned only \$38,000.<sup>197</sup>

**Health:** Latinx communities have disproportionately high rates of COVID-19-related comorbidities, such as obesity, non-alcoholic fatty liver disease, and diabetes.<sup>198,199</sup> In 2018, 23 percent of employed Latinx workers did not have health insurance. This rate was even higher among Latinx workers in jobs requiring close contact, where 28 percent did not have insurance when compared to 10 percent of White workers in similar jobs.<sup>200</sup> Latinx workers who are undocumented make up 5 percent of the workforce and are not eligible for federal health insurance or SNAP.<sup>201</sup>

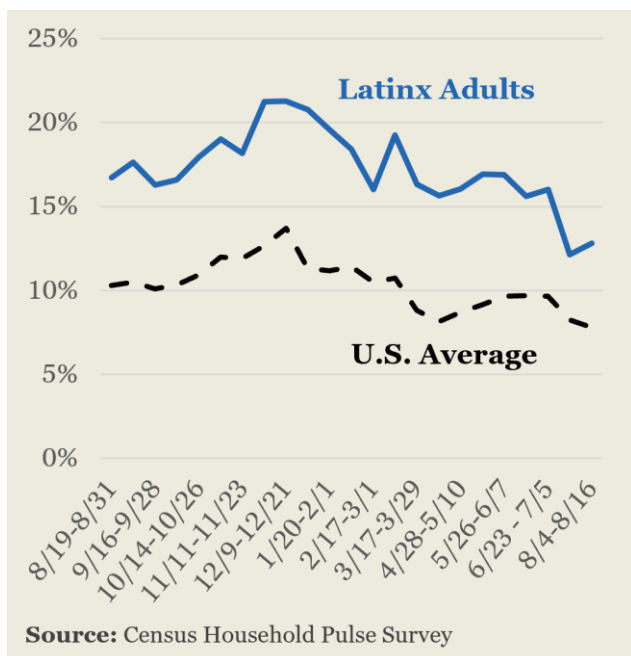
## Systemic Racism and Food Insecurity in Latinx Communities

The Latinx community in the U.S. is particularly impacted by the structural racism inherent in the immigration enforcement system.<sup>202</sup> Latinx immigrants make up 79 percent of the undocumented immigrant population in the U.S.<sup>203</sup> Latinx communities are targeted by Immigration and Customs Enforcement (ICE), whose activity has increased in recent years<sup>204</sup> and regularly, and incorrectly, detains U.S. citizens as well.<sup>205,206</sup> Deportations of parents result in economic disadvantage and trauma among family members who remain in the U.S.<sup>207,208, 209,210</sup> In addition, empowering local law enforcement to carry out federal immigration laws has been associated with an increase in food insecurity.<sup>211</sup> Fear of deportation, due to ICE or the police, reduces economic activity in communities and increases mistrust of health services and public agencies, which results in lower enrollment in social services, like SNAP, that could alleviate poverty and food insecurity.<sup>212,213</sup>

### During COVID-19

**Hunger:** According to the CPS-FSS, in 2020, 17.2 percent of Latinx households were food insecure (5 percent with very low food security), compared to 7.1 percent of White households (3 percent with very low food security).<sup>214</sup> This disparity increased by 2.4 percentage points from 2019 to 2020. In the Pulse data, food insufficiency ranged from a high of 21 percent in December (compared to a national rate of 14 percent) to a low of 11 percent in July 2021 (compared to a national rate of 8 percent).<sup>215</sup> This hardship has mental health consequences. In May 2020, Latinx adults were more likely to report poor mental health due to not having food or stable housing than other racial and ethnic groups.<sup>216</sup>

**Figure 9: Disproportionately High Rates of Food Insufficiency Among Latinx Households During COVID-19**



**Poverty:** In January 2020, the Latinx-White disparity in poverty was 12.5 percentage points.<sup>217</sup> This increased to a high of 15.2 percentage points in August 2020. The Latinx-White disparity remained high at 7.5 percentage points in July 2021. This may be due, in part, to having limited access to federal stimulus programs by immigration status through 2020. Similar hardship is reflected in the Pulse data; in August 2021, 39 percent of Latinx adults sometimes or often had trouble paying usual household expenses, compared to 21 percent of White adults.<sup>218</sup>

Latinx workers have been at higher risk of job loss during the pandemic due to disproportionate representation in hourly wage and gig jobs in industries, including the food, hospitality, and retail sectors. Between February and April 2020, Latinx employment fell by 18 percentage points, whereas White unemployment decreased by 12 percentage points.<sup>219</sup> By the end of 2020, the unemployment rate for Latinx workers increased by 4.7 percentage points (2.8 percentage points for White workers).<sup>220</sup> As of August 2021, Latinx unemployment was 6.4 percent, 1.9 percentage points higher than White unemployment.<sup>221</sup>

**Health:** As of September 2021, Latinx people represent 18.3 percent of all COVID-19 deaths.<sup>222</sup> After adjusting for age, Latinx people have been 2.4 times as likely to have died from COVID-19 as White people.<sup>223</sup> In addition, as of August 2021, 28 percent of Latinx adults lacked health insurance (11 percent nationwide)<sup>224</sup> and only 45 percent have been vaccinated.<sup>225</sup>

**Read more:** [Food Over Fear: Overcoming Barriers to Connect Latinx Immigrant Families to Federal Nutrition and Food Programs.](#)

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## A.3. American Indian and Alaska Native (AIAN) Communities

### Prior to COVID-19

**Hunger:** Few studies have focused on food insecurity in Native communities. One study aggregating data from the 2000–2010 CPS-FSS found that 25 percent of AIAN households were food insecure, twice as likely as White households.<sup>226</sup> It is important to note that experiences across Tribes differ widely. For example, one recent study in 2018 found that food insecurity among the Karuk, Yurok Hoopa, and Klamath Tribes was 92 percent.<sup>227</sup>

**Poverty:** The poverty rate<sup>228</sup> in 2019 among individuals who identified only as AIAN was 23 percent, higher than the poverty rate for any other racial or ethnic group.<sup>229</sup> In addition, AIAN individuals who live on Tribal land are more likely to live in severely crowded housing situations and less likely to have access to clean water, sewage disposal, and plumbing.<sup>230,231,232</sup> Lack of federal support contributes to these gaps in critical infrastructure — federal spending per person on AIAN U.S. citizens is only two-thirds of the spending on the average U.S. citizen.<sup>233</sup>

AIAN workers experience disparities in employment. In 2018, the unemployment rate was 11.4 percent among AIAN individuals living on or near Tribal lands and 6.6 percent among AIAN individuals not living in Tribal areas, compared to 3.9 percent for the U.S. population.<sup>234</sup> AIAN workers were also more likely to be working part time because they could not find full-time work and were more likely to be essential workers or in jobs that are not able to be done remotely.<sup>235,236</sup> As with

food insecurity, unemployment rates differ widely by region.

**Health:** According to the U.S. Commission on Civil Rights, AIAN people are 20–25 years behind the average American in health status, representing the largest disparity in unmet health care needs.<sup>237</sup> Compared to any other racial or ethnic group, Native communities have higher rates of being uninsured and of underlying health conditions (e.g., heart disease, diabetes, chronic lower respiratory diseases, and hypertension).<sup>238,239</sup>

Despite high need, access to health care is poor. The Indian Health Service, the federal agency that provides health care to AIAN people, has been chronically underfunded by the federal government,<sup>240</sup> resulting in extreme provider shortages and low access to care.<sup>241</sup> In addition, Native workers are less likely to have health insurance compared to White workers, particularly in jobs that require close proximity to others.<sup>242</sup>

### During COVID-19

**Hunger:** Although only 28 counties have a majority of AIAN people, 18 of those counties were projected to be in the top 10 percent of counties with the highest food insecurity rates of 2020.<sup>243</sup> However, few data on national trends in food insufficiency among AIAN populations during COVID-19 exist because AIAN data are not disaggregated in the Census Pulse data. There is evidence that COVID-19 has affected access to healthy foods. During shelter-in-place mandates, AIAN people residing on reservations shopped more frequently in local convenience stores than supermarkets, which have a broader array of healthy foods but are further away.<sup>244</sup>

**Systemic Racism and Food Insecurity in AIAN Communities** Disparities in food insecurity are a result of the structural racism originating with colonization and continuing to the present.<sup>245</sup> Historical traumas have impacted traditional foodways, or the connection between culture, community, and the production and consumption of food. These traumas include the loss of food sovereignty from the forced relocation of AIAN people from ancestral lands, forced cultural assimilation policies, disrupted land management and fractionation, Tribal termination and land privatization, and the substitution of Native culturally appropriate foods with commodity foods.<sup>246,247,248</sup> Barriers to obtaining Native traditional food include permits limiting access to hunting, discriminatory farm-lending practices, fishing or farming and degradation of the environment,<sup>249,250</sup> while barriers to buying healthy food include the lack of transportation and the higher cost of food in Tribal areas.<sup>251</sup> Access to preparing healthy food is limited in those areas lacking electricity or running water.



**Poverty:** COVID-19 exacerbated disparities in poverty and unemployment. Tribal governments often rely on income from casinos and other tourism to provide health and social services in their communities, and these revenues have dried up during the pandemic. The closure of these businesses to prevent the spread of COVID-19 has resulted in a direct loss of jobs from these businesses as well as the loss of Tribal government jobs and the ability to provide critical services.<sup>252,253</sup> At a national level, Native unemployment jumped to 14 percentage points higher than White unemployment in April 2020,<sup>254</sup> with large variations by location.

This has resulted in significant financial hardship. In one survey of 6,460 Native adults in July 2020, 45 percent of respondents reported that their household's financial situation worsened, and 36 percent reported having their work hours cut or having lost their job due to COVID-19. Among respondents with low incomes, these proportions jumped to 60 percent and 52 percent respectively.<sup>255</sup>

**Health:** As of March 2021, the age-adjusted COVID-19 mortality rate was higher for AIAN people than for any other racial or ethnic group at 265 deaths per 100,000 people, more than twice the rate among White people.<sup>256</sup> This reflects that AIAN people have contracted COVID-19 at *younger ages* than White people.<sup>257</sup> The loss of Tribal elders has also resulted in the devastating loss of cultural knowledge and language that are typically passed down through oral histories and traditions.<sup>258,259</sup>

*“It takes your breath away, the amount of knowledge they held, and connection to our past.” – Ira Taken Alive of the Standing Rock Sioux Tribe, whose parents, grandmother, and uncle died from COVID-19.<sup>260</sup>*

High rates of COVID-19 have been associated with the prevalence of economic underdevelopment and structural inequality in AIAN communities, like the proportion of homes lacking indoor plumbing,<sup>261,262,263</sup> as well as with environmental racism, like the legacy of uranium mining in Navajo Nation.<sup>264</sup> In addition, Tribes and Tribal Epidemiology Centers have not been given access to data from the CDC and local health agencies in a

timely manner, denying them critical information required for self-governance and the ability to respond to the spread of COVID-19 in their communities.<sup>265</sup> In spite of these obstacles, quick, proactive, and innovative Tribal responses to COVID-19 have prevented a larger spread of COVID-19 and have resulted in high vaccination rates within communities.<sup>266</sup>

**Read more:** [Hunger in Native America and Our Resilient Response](#).

## A.4. Native Hawaiian and Pacific Islander (NHPI) Communities

### Prior to COVID-19

**Hunger:** In the only nationally representative survey of the NHPI population conducted in 2014, 20.5 percent of NHPI adults reported being food insecure in the 30 days prior to the survey, compared to 7.7 percent of White adults.<sup>267</sup> Based on these results, the surveys' authors estimate that food insecurity in the prior 12 months (the timeline reported by the annual CPS) would be between 25–30 percent of NHPI adults.

**Poverty:** In 2019, the poverty rate among people who identified only as NHPI was 16.5 percent.<sup>268</sup> NHPI workers also are more likely to work in jobs with low wages, including as essential workers, including food preparation, maintenance, health care, and transportation and delivery.<sup>269</sup> NHPI are twice as likely to be front-line health care workers compared to other Asian American populations.<sup>270</sup>

In Hawai'i specifically, where about one-quarter of the population identifies as NHPI, 42 percent of households struggled to make ends meet due to the high cost of living,<sup>271</sup> and almost 40 percent of workers were employed in tourism-related sectors<sup>272</sup> prior to COVID-19.

**Health:** NHPI individuals have higher rates of chronic illnesses and lower rates of health care access compared to White individuals.<sup>273</sup> For example, heart disease is the leading cause of death among NHPI adults,<sup>274</sup> and 20 percent of NHPI adults have heart disease compared to 6.2 percent of adults overall.<sup>275</sup> NHPI people also have disproportionately high rates of diabetes and asthma.<sup>276</sup>

### Systemic Racism and Food Insecurity in NHPI Communities

The root causes of inequities in NHPI communities stems from European and American colonialism. Traditional foodways have been disrupted by the introduction of processed and canned foods, while contamination from military exercises have had environmental and health consequences.<sup>277</sup>

Furthermore, while Native Hawaiians have citizenship status, which affords them access to health care and federal programs, certain Pacific Islanders have special worker status but are denied access to most federal and state benefits (e.g., Palau, Federated States of Micronesia, Marshall Islands).<sup>278</sup>

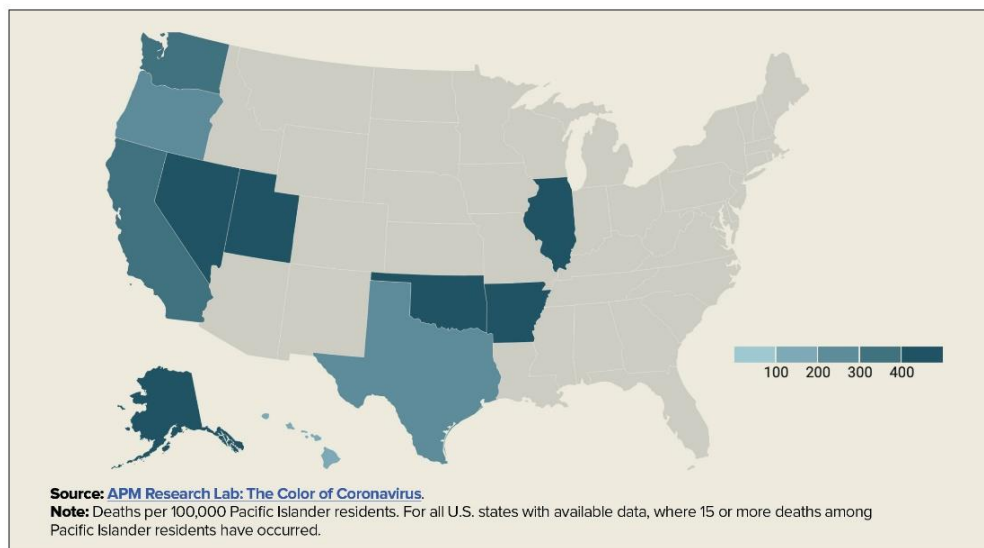
#### During COVID-19

**Hunger:** Similar to AIAN populations, few data exist for rates of food insecurity, as available data are not disaggregated in the Census Pulse data for NHPI populations. One July 2020 survey in Hawai'i found that food insecurity in the state was 30 percent for Native Hawaiians compared to the sample average of 23 percent.<sup>279</sup>

**Poverty:** In a June 2021 nationwide survey of Asian Americans, Native Hawaiians, and Pacific Islanders, 22 percent of respondents reported losing a job due to COVID-19 at some point in the pandemic.<sup>280</sup> The economic impact of COVID-19 has been particularly hard on Hawai'i and the Pacific Islands, which are dependent on tourism. The fall in gross domestic product as a result of reduced tourism and trade could cause extreme poverty in the Pacific Islands to increase by 40 percent.<sup>281</sup> In Hawai'i, the drop in tourism<sup>282</sup> has resulted in significant job loss.<sup>283</sup>

**Health:** Due to their isolation, the Pacific Islands have had relatively low rates of COVID-19 infection and death. However, limited evidence shows that NHPI people living in the continental U.S. suffer disproportionately high death rates from COVID-19. Disaggregated COVID-19 data for the NHPI population are only reported in 21 states for cases and 16 states for deaths. In most of these states, NHPI people have the highest or second-highest per capita case and death rates compared to other racial/ethnic groups.<sup>284,285</sup> For example, in California, Pacific Islanders are dying at a rate that is four times their population share.<sup>286</sup> However, rates are likely to be undercounted if individuals identifying with more than one race or ethnicity are not included in the NHPI count, as many NHPI individuals identify with more than one race or ethnicity.<sup>287,288</sup> In addition, NHPI people have noticed an increase in race- and ethnicity-based discrimination compared to before COVID-19, with 60 percent of Native Hawaiians and 59 percent of Pacific Islanders reporting discrimination.<sup>289</sup>

Figure 10: Map of COVID-19 Deaths Among Pacific Islanders Through March 2021



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## A.5. Asian American Communities

Compared to other racial and ethnic groups, Asian Americans have experienced lower rates of hardship during the pandemic. However, national rates mask differences by Asian ethnicity and by geography. For example, while Japanese and Filipino Americans have low poverty rates, Hmong, Khmer, Laotian, and Vietnamese Americans have higher poverty rates than White Americans.<sup>290</sup> While COVID-19 mortality rates on average have been lower for Asian Americans compared to White Americans, they have been higher in states such as Nevada, Utah, and Nebraska.<sup>291</sup>

Discrimination and xenophobia have also increased during the pandemic due to misinformation and fear mongering about the COVID-19 virus. This has led to a decrease in traffic to Asian American businesses<sup>292,293</sup> and an increase in hate crimes against Asian Americans, including murders and a mass shooting.<sup>294</sup> This violence may also lead to food insufficiency. Asian Americans who report sometimes or often not having enough to eat during COVID-19 have been more likely to cite fear of going out to buy food as the reason compared to White Americans.<sup>295</sup> Public efforts are needed to combat this xenophobia and prevent it from propagating additional hate crimes and impacting poverty, health, and well-being.<sup>296,297</sup>

### Read more:

- [High Rates of Food Insecurity Are Hiding Among Asian Pacific American Populations;](#)
- [Asian Americans Should Not be Targets for Hate Crime or Food Insecurity.](#)

## B. Women

### Prior to COVID-19

**Hunger:** Although there was no disparity in food insecurity rates between single women and men living alone in 2019, 28.7 percent of households with single mothers were food insecure compared to 15.4 percent of single-father households.<sup>298</sup> Rates were much higher for households living at or below 130 percent of the FPL, where 42.5 percent of single-mother households were food insecure

compared to 33.9 percent of single-father households.

**Poverty:** In 2019, poverty was higher among women, regardless of employment status.<sup>299</sup> The official poverty rate was 11.5 percent compared to 9.4 percent of men (the Supplemental Poverty Measure was 12.4 percent for women compared to 11.1 percent for men<sup>300</sup>). The disparity dramatically worsens for single parents with children under 18 — the poverty rate was 36.5 percent among single mothers compared to 16.3 percent among single fathers.<sup>301</sup>

Despite a narrowing of the gender wage gap due to increasing educational attainment and work experience, women still earn less than men in the same occupation, are more likely to work part time than men, and female-dominated occupations are more likely to be devalued. Furthermore, occupations with comparatively smaller wage gaps between men and women and between mothers and non-mothers tend to be lower paying jobs.<sup>302</sup> Moreover, pregnancy or child care responsibilities may lead a woman to reduce her work hours or drop out of the workforce, thereby increasing financial strain.<sup>303</sup>

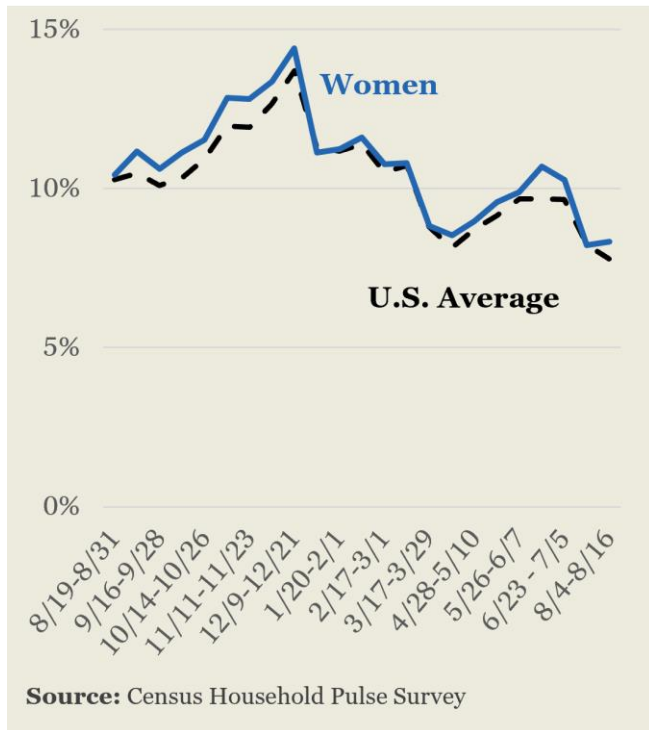
**Health:** Food insecurity and poverty have unique adverse health implications for women. Food insecurity has been consistently associated with overweight and obesity in women.<sup>304,305</sup> Food insecurity is a particular concern for pregnant women because nutrient demands are higher.<sup>306</sup> Food insecurity is associated with inadequate micronutrient intake among women of childbearing age.<sup>307</sup> It also is associated with higher gestational weight gain<sup>308</sup> and an increased risk of birth defects.<sup>309</sup> Furthermore, food insecurity is associated with depression and anxiety among mothers<sup>310</sup> and among all women.<sup>311</sup>

### During COVID-19

**Hunger:** According to the CPS-FSS, in 2020, 27.7 percent of single-mother households were food insecure (8.2 percent with very low food security), compared to 10.5 percent of households overall (3.9 percent with very low food security).<sup>312</sup> In the Pulse data, women have been slightly more likely to report food insufficiency.<sup>313</sup> For example, in December 2020, 14 percent of women reported food insufficiency compared to 13 percent of men,

and, in June 2021, 10 percent of women reported food insufficiency compared to 9 percent of men.<sup>314</sup>

**Figure 11: Disproportionately High Rates of Food Insufficiency Among Women During COVID-19**



**Poverty:** Women have been more likely to lose their job during COVID-19, be on unpaid leave, be employed with increased absences, and be forced to stop working compared to men.<sup>315,316</sup>

Unemployment has been higher for women compared to men,<sup>317</sup> which is the opposite of unemployment during the Great Recession when men were more likely to lose their job.

Furthermore, single parents were more likely to lose their job compared to single workers without children, married workers, or married workers with children, and 72 percent of single parents are female.<sup>318</sup>

There are two main reasons for this gender disparity during the COVID-19 recession. First, women are less likely than men to work in positions that can be done remotely.<sup>319</sup> Second, women are more likely to take on the role of caregiver for family members or for children who are attending school virtually.<sup>320,321</sup> This has added financial strain to families, as over 80 percent of women with young children who were forced to stop work or

reduce their work hours reported that they could not afford to do so.<sup>322</sup>

*“My job has laid me off and I can’t find another one. I need to work but it’s just not feasible while doing remote learning and lack of affordable childcare.”<sup>323</sup>*

In April 2020, the percentage of moms actively working was 21 percentage points lower than it was in April 2019, compared to 15 percentage points lower for fathers. While this gender disparity among parents disappeared by November 2020, there were still 1.6 million fewer mothers working in January 2021 compared to January 2020.<sup>324</sup> Even among working parents, employed mothers with children under 12 years old spent an average of 6.1 hours per weekday on work-related tasks and 8 hours on child care compared to 7.7 hours working and 5.2 hours on child care for employed fathers from May–December 2020.<sup>325</sup> These gender disparities will likely have long-term consequences for the career trajectories for women.

**Health:** The pandemic has had unique health consequences for women. Compared to men, women have been more likely to report skipping preventive health care visits and a recommended medical test or treatment.<sup>326</sup> Pregnant women are more likely to suffer severe complications from COVID-19 than non-pregnant women.<sup>327</sup> Women have reported wanting to delay pregnancy during the pandemic, yet one-third of women have reported delays in obtaining reproductive health care or accessing contraception, with disparities among Black, Latinx, LGBTQIA+, and low-income populations.<sup>328</sup> Intimate partner violence has also increased, straining shelters that have faced increased demand while having to adhere to social-distancing policies.<sup>329</sup>

In addition to physical health, the pressures women face because of gendered social roles have had a mental toll as well. COVID-19 has increased the stress of “caregiver burden,” which is associated with perceived lack of agency, financial stress, and social isolation.<sup>330</sup> Women have reported more severe stress than men during the pandemic,<sup>331</sup> particularly pregnant women.<sup>332</sup>

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## C. Age

### C.1 Older Adults (65 years and older)

#### Prior to COVID-19

**Hunger:** Prior to COVID-19, food insecurity rates among older adults were lower than the national average but were still high. In 2019, more than 2.9 million households experiencing food insecurity included an older adult, and 8.7 percent of older adults living alone struggled with food insecurity.<sup>333</sup>

Participation rates in SNAP are lower than average. In fiscal year 2018, 48 percent of adults 60 and older who were eligible for SNAP were enrolled, compared to 82 percent of all eligible individuals.<sup>334</sup> This is due, in part, to lack of knowledge around eligibility, stigma of using federal assistance programs,<sup>335</sup> and difficulties in the enrollment process.<sup>336,337</sup> Other federal nutrition programs for older adults, such as congregate meals, home-delivered meals, and the Commodity Supplemental Food Program, are not entitlement programs and do not reach all older adults who qualify for them.

**Poverty:** Many older adults also face a unique combination of cost constraints because they live on fixed incomes.<sup>338</sup> When poverty is recalculated as the Supplemental Poverty Measure to account for government assistance and cost of living (including medical costs), the poverty rate among adults over 65 increases. For example, in 2019, the official poverty rate for adults over 65 was 8.9 percent (compared to 10.5 percent overall) but the Supplemental Poverty Measure for that age group was 12.8 percent (compared to 11.7 percent overall).<sup>339</sup>

**Health:** In 2018, approximately 88 percent of adults 65 and older had at least one chronic health condition, while 64 percent had at least two chronic conditions.<sup>340</sup> Importantly, the high prevalence of hypertension, diabetes, cardiovascular disease, cerebrovascular disease, chronic kidney disease, and chronic respiratory disease in older adults put them at a higher risk of severe COVID-19.<sup>341,342,343</sup> Food insecurity complicates these health conditions. Among older adults using meal service programs, food insecurity has been associated with an increased likelihood of emergency department visits or inpatient stays.<sup>344</sup>

#### During COVID-19

**Hunger:** According to the CPS-FSS, in 2020, 6.9 percent of households with an older adult were food insecure (2.5 percent with very low food security).<sup>345</sup> In the Pulse data, the proportion of older adults reporting food insufficiency increased during the pandemic and peaked at 6 percent in December 2020.<sup>346</sup> As a demonstration of this increase in need, a national Meals on Wheels survey found that home-delivered meal providers were serving an average of 77 percent more meals and 47 percent more older adults in July 2020 compared to March 2020.<sup>347</sup>

**Poverty:** Many older adults have had lower access to the two largest stimulus programs used during the pandemic: expanded unemployment benefits and SNAP. Older adults who were retired and no longer working were not eligible for unemployment benefits. Because of the historic lack of participation in SNAP among older adults, many who are eligible for SNAP may have missed out on emergency allotments during the pandemic.<sup>348</sup> In addition, job loss has been high for older adults during COVID-19 because older adults have been less likely to telework and have had greater health concerns due to the pandemic.<sup>349</sup> In early January 2021, nearly 1 in 4 adults 65 and over sometimes or often had a difficult time paying for usual expenses.<sup>350</sup>

**Health:** Although adults 65 and older make up 17 percent of the population, they account for one-third of COVID-19 cases and half of hospitalizations.<sup>351</sup> By the end of July 2021, adults over 65 accounted for 79 percent of COVID-19-related deaths.<sup>352</sup> Older adults in congregated living facilities accounted for one-third of COVID-19 deaths in the first few months of the pandemic.<sup>353</sup>

In addition, older adults have confronted increased social isolation and ageism as a result of social distancing policies and conversations about rationing care.<sup>354</sup> Interviews with 45 leaders from agencies serving older adults in Washington state suggest that the “digital divide” has contributed to social isolation and also made it difficult for older adults to keep up with medical appointments, resulting in worsening health conditions.<sup>355</sup>

**Read more:** [Hunger is a Health Issue for Older Adults.](#)

## C.2 Young Adults (18–24 years old)

### Prior to COVID-19

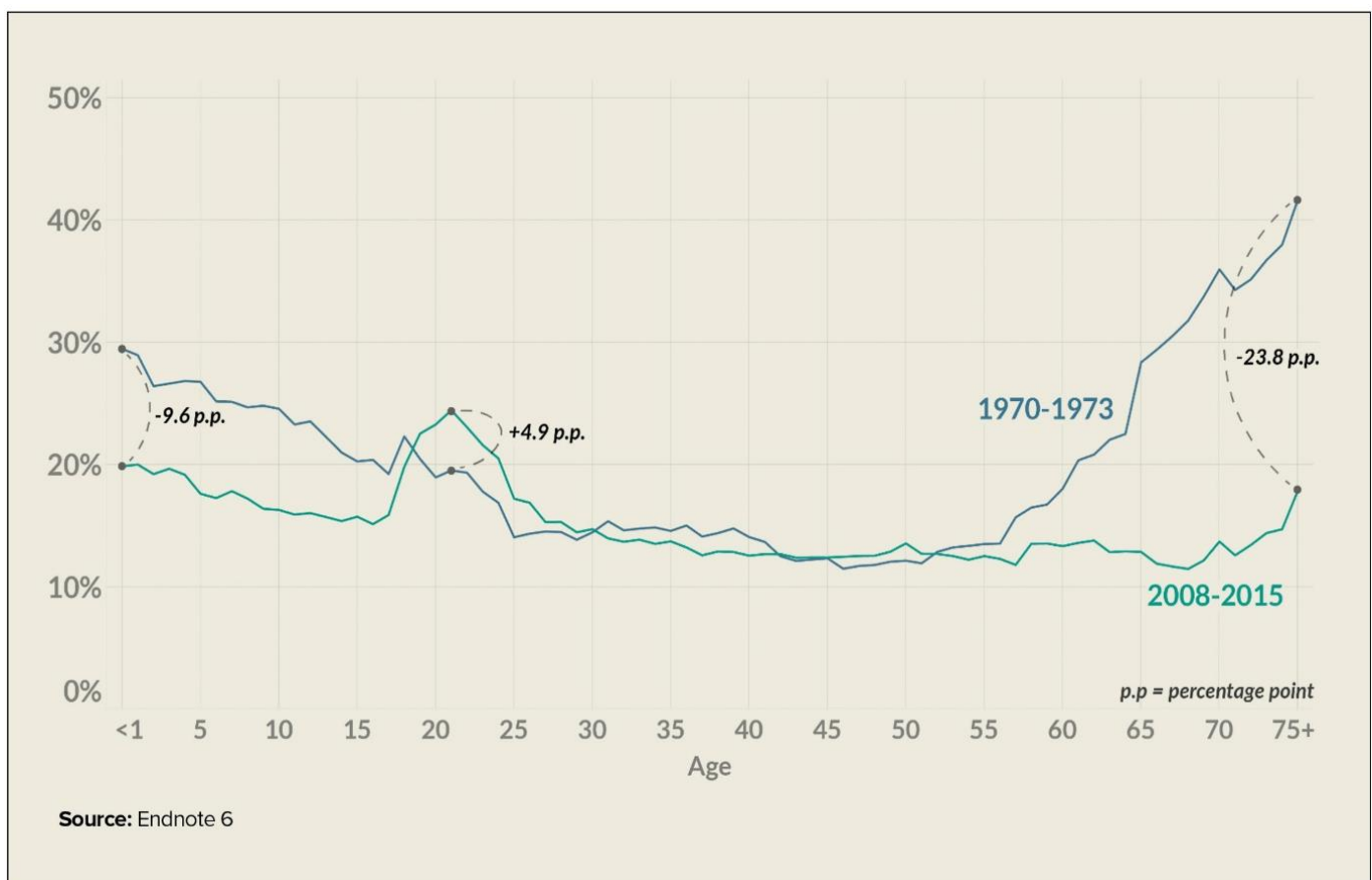
**Hunger:** While food insecurity rates for young adults overall were not significantly higher than the national average of 10.5 percent in 2019, data from the Hope Center indicate that rates of food insecurity among college students ranged from 42–56 percent at two-year institutions and from 33–42 percent at four-year institutions.<sup>356</sup> College students are not limited to 18–21-year-olds. The average age of college students is 26.4 years old, 22 percent of undergraduate students have at least one child, almost half of undergraduates are students who have been systemically oppressed for their race and/or ethnicity, and 56 percent are first-generation students.<sup>357</sup> Prior to COVID-19, the risk of food insecurity was higher among first-generation students and students of oppressed groups.<sup>358</sup>

Despite this, nearly half of students who were eligible for SNAP prior to COVID-19 did not receive benefits partially because of certain eligibility limitations on college students and challenges in navigating the enrollment process.<sup>359,360</sup>

**Poverty:** Adults ages 18–24 are not prioritized for social safety net programs, for example, the Earned Income Tax Credit. This lack of social safety net has contributed to a greater increase in poverty among young adults in recent decades compared to any other age group. For example, between 1970–1973 and 2008–2015, poverty decreased by 9.6 percentage points for infants and 23.8 percentage points for adults 75 and older. Meanwhile, poverty increased the most for 21-year-olds by 4.9 percentage points.<sup>361</sup>

**Health:** While young adults are generally healthy, those who experience food insecurity are more likely to have a chronic disease<sup>362</sup> and suffer from depression, anxiety, and/or suicidal ideation.<sup>363</sup>

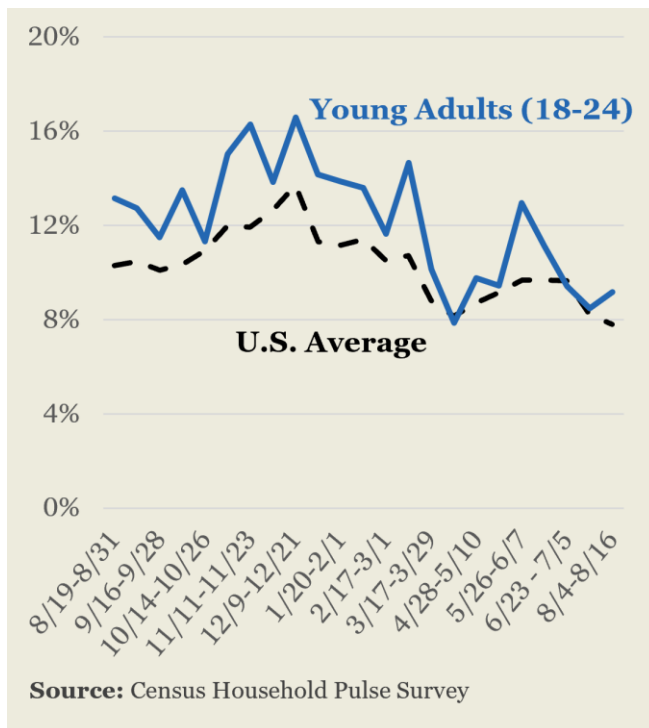
**Figure 12: The Percentage of Young Adults in Poverty Increased From 1970–1973 to 2008–2015**



## During COVID-19

**Hunger:** Food insufficiency rates throughout the pandemic have been higher for young adults (see Figure 12).<sup>364</sup> Moreover, rates of food insecurity have been high among college students, especially those who have experienced housing instability or a loss of income.<sup>365,366</sup> The extra requirements for college students to qualify for SNAP benefits were not eased temporarily until Congress enacted the Consolidated Appropriations Act, 2021, in December 2020.<sup>367,368</sup>

**Figure 13: Food Insufficiency Among Young Adults During COVID-19**



**Poverty:** COVID-19 has severely impacted employment and educational opportunities for this age group. For example, between February 2020 and April 2020, employment among adults ages 21–24 fell 23 percentage points compared to 13 percentage points for adults ages 35–44.<sup>369</sup>

Fewer young adults enrolled in college in fall 2020 and spring 2021 compared to the previous year. Community colleges, which serve primarily low-income students, have seen the steepest declines in enrollment (-19 percent in fall 2020 and -11 percent in spring 2021) compared to public four-year institutions (-11 percent in fall 2020 and -9 percent in spring 2021). By race/ethnicity, the student groups with the largest declines have been AIAN

students (-14 percent in spring 2021) and Black students (-8 percent).<sup>370</sup> Students who take time off are less likely to finish college, particularly students with low incomes, from rural areas, or students who are systemically oppressed because of their race and/or ethnicity.<sup>371</sup> College graduates have more employment opportunities and higher earnings, which translates to higher food security and better health outcomes throughout life.<sup>372</sup>

**Health:** Vaccination rates among young adults are low. Only 45 percent of adults ages 18–24 are fully vaccinated compared to 68 percent of adults ages 50–64.<sup>373</sup> While young adults have been spared from high COVID-19-related morbidity and mortality, the primary driver for COVID-19 hospitalization and death is now vaccination status,<sup>374</sup> putting young adults at increased risk.

## D. Households With Low Incomes

### Prior to COVID-19

**Hunger:** In 2019, 34.9 percent of households with an income below the FPL were food insecure compared with 5.1 percent of households with incomes equal to or above 185 percent of the FPL.<sup>375</sup> When poverty is measured considering local cost of living and the receipt of government assistance (i.e., using the Supplemental Poverty Measure), the association between food insecurity and income is even stronger.<sup>376</sup>

Low-income households are more vulnerable to the economic drivers of food insecurity, including negative income shocks, high food prices, and instability in housing.<sup>377</sup> In addition to low income, households with low wealth (e.g., owning a house, financial savings, or investments) are at higher risk of food insecurity because assets help to buffer against income shocks.<sup>378,379</sup>

**Poverty:** In 2019, the Official Poverty Measure was 10.5 percent while the Supplemental Poverty Measure was slightly higher at 11.7 percent.<sup>380</sup> By accounting for cost of living, taxes, and government assistance, the Supplemental Poverty Measure classifies more people as poor, particularly among adults in the following categories: ages 65 and older (poverty rate is +3.9 percentage points higher), White (+1.4), Asian American (+4.3), Latinx (+3.1), without a high school degree (+3.8) and with only a high school degree (+2.4).

**Health:** Chronic poverty is associated with an increased risk of disease and mortality. Poverty impacts health in multiple ways. On an individual level, the immediate effects of poverty may result in poor housing conditions, lack of access to healthy foods, and inadequate health care. In the long term, the stress of living in poverty can result in chronic inflammation and disease. At the community level, neighborhood poverty and income inequality are also associated with higher rates of poor health outcomes and mortality.<sup>381</sup>

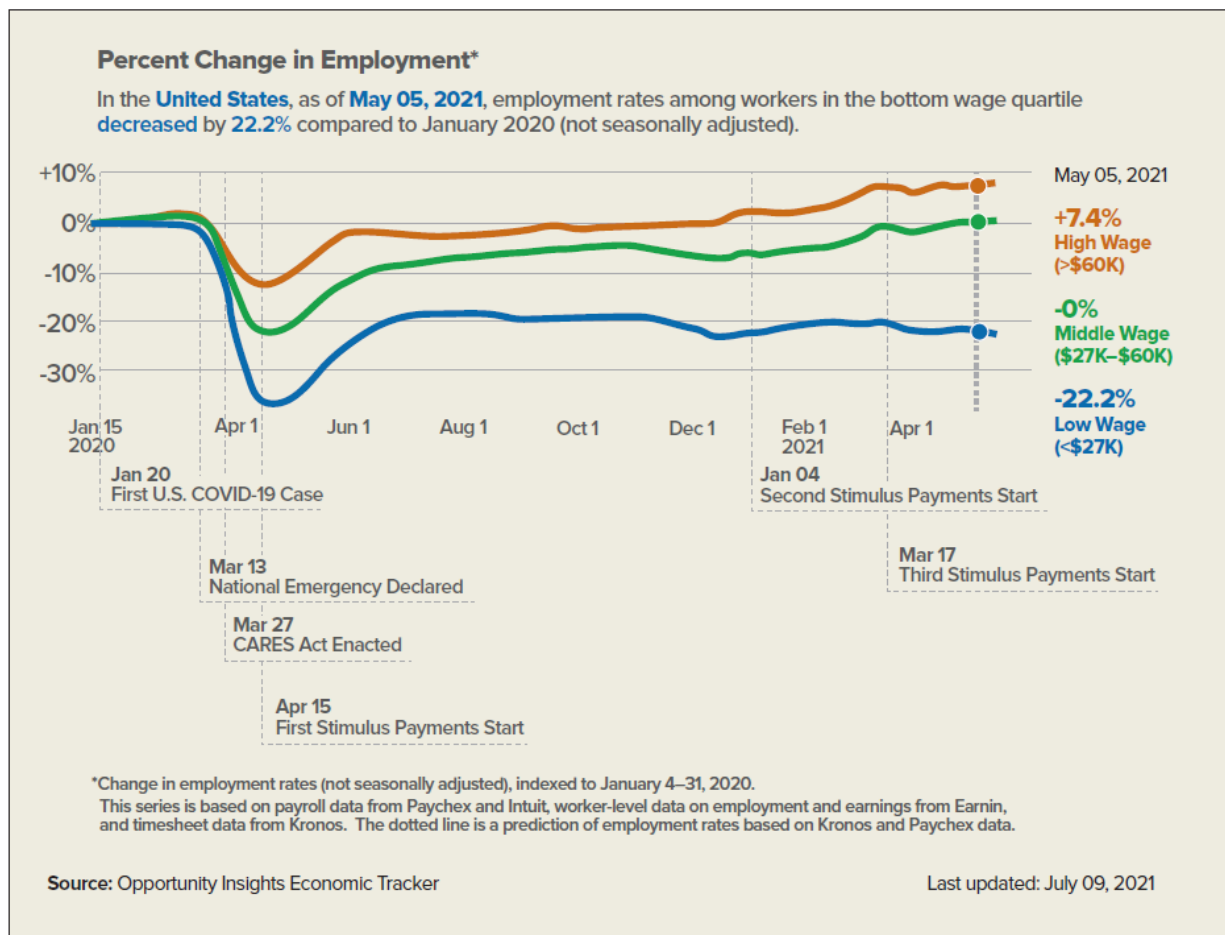
### During COVID-19

**Hunger:** According to the CPS-FSS, in 2020, 35.3 percent of households with an income below the FPL were food insecure compared with 4.9 percent of households with incomes equal to or above 185 percent of the FPL.<sup>382</sup> In the Pulse data, as of August 2021, 25 percent of households with an income less than \$25,000 experienced food insufficiency, compared to 2 percent of households with an income between \$75K–\$100K.<sup>383</sup>

**Poverty:** Throughout COVID-19, low-income people across the country have been more likely to have trouble paying bills, rent, and have had to rely on government food assistance and food charity.<sup>384</sup> As of August 2021, 57 percent of households earning less than \$25,000 a year found it sometimes or very difficult to pay usual expenses, compared to 27 percent of households overall.<sup>385</sup>

Workers with low wages were much more likely to lose their job early in the pandemic. From January to June 2020, the rate of job loss within the prior month rose from 1.3 percent to 10.3 percent, whereas the highest earners only saw a modest increase from 0.4 percent to 2.1 percent.<sup>386</sup> In addition, the recovery in job growth has been the lowest for workers with low wages (see Figure 13). As of June 2021, the employment rate was still 21 percent lower for workers with low wages (earning <\$27K per year) than in January 2020, while workers with high wages (earning >\$60K per year) have experienced a 10 percent increase in employment.<sup>387</sup>

**Figure 14: Households With Low Incomes Have Been Slower to Recover Jobs**





This trend has an important impact on families. Among households where both heads of household work, households earning the highest wages have mostly regained full employment (93 percent had dual employment in February 2021 compared to 96 percent in February 2020), while households earning the lowest wages have faced more challenges recovering employment (64 percent dual employment in February 2021 compared to 82 percent in February 2020).<sup>388</sup>

It is important to note that higher income is not as protective for Black and Latinx families as White families. For example, the RAPID-EC survey of families with children 0–5 years old has found that a larger proportion of Black and Latinx families who had been middle/upper income prior to the pandemic reported having difficulties paying for basic needs during the pandemic when compared to White families. Possible reasons include racial disparities in wealth exist between households earning similar incomes, limiting the access Black and Latinx families have to financial resources to mitigate sudden hardship, and Black and Latinx families are more likely to financially support extended families.<sup>389</sup>

**Health:** There is a lack of data on COVID-19 cases and deaths by household income. However, racial disparities in COVID-19 cases and deaths were found to be larger in counties with lower median incomes when compiling data from 10 major cities.<sup>390</sup> In addition, greater income inequality at the county level has been associated with higher rates of COVID-19 cases and deaths.<sup>391,392</sup>

There are many reasons to believe income would be correlated with COVID-19 cases. Essential workers are more likely to have low wages (see section G. Intersectionality and Essential Workers). In addition, stay-at-home orders also increase the time spent in unhealthy housing conditions for low-income individuals, which may increase the risk of COVID-19 exposure if houses are overcrowded. Increased time in the home following shelter-in-place orders can expose families to other health risks if there are environmental contaminants, including mold, pests, or extreme temperatures.<sup>393</sup>

## E. Households With Low Educational Attainment

### Prior to COVID-19

**Hunger:** In 2016, food insecurity rates were 27.4 percent among households with less than a high school degree, 16.2 percent among households with a high school education, 13.4 percent among households with some college and 4.2 percent among households with a college degree or higher.<sup>394</sup> Education level is associated with food security because it may serve as a proxy for material well-being or skills, e.g., financial management.<sup>395</sup>

**Poverty:** In 2019, poverty rates were 23.7 percent among individuals with less than a high school education compared to 3.9 percent of individuals with a college degree or higher.<sup>396</sup> Using the Supplemental Poverty Measure, this disparity slightly increases: 27.5 percent of individuals with less than a high school degree live in poverty compared to 5.7 percent of individuals with a college degree.<sup>397</sup>

**Health:** Individuals with lower education have poorer physical health, higher health care utilization, and are more likely to be uninsured.<sup>398,399</sup> Disparities in adult mortality by education level have been increasing over time because mortality rates have steadily decreased for adults with higher education but have stagnated for adults with lower education.<sup>400</sup>

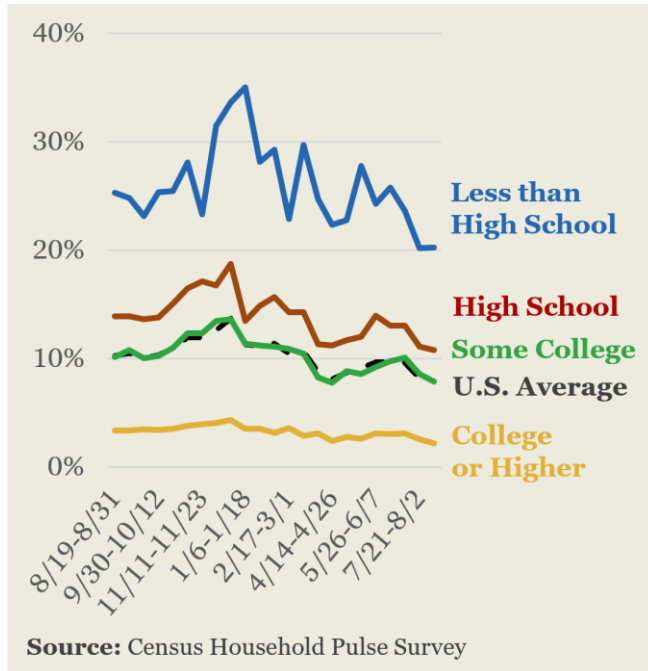
### During COVID-19

**Hunger:** In early January 2021, food insufficiency rates among individuals with less than a high school education peaked at 35 percent compared to 4 percent of individuals with a college degree.<sup>401</sup> While this disparity has declined, rates are still high (see Figure 15).

**Poverty:** As of August 2021, 44 percent of households with less than a high school degree found it sometimes or very difficult to pay usual expenses, compared to 27 percent of households overall and 15 percent of households with at least a college degree.<sup>402</sup> From February through April 2020, individuals with a high school degree or some college experienced a decrease of 15–16 percentage points in employment compared to a decrease of 9 percentage points among those with a

college degree or higher. Conversely, those with less than a high school degree also experienced a smaller 12-percentage point decrease in employment, likely because a larger share are essential workers. In comparison, college graduates are able to work from home, a difference which has important implications for risk of exposure to COVID-19 and wages.<sup>403</sup>

**Figure 15: Food Insecurity by Educational Attainment, August 2020–August 2021**



**Health:** Counties with a higher proportion of residents who have less than a high school education have been associated with higher rates of COVID-19 cases and deaths.<sup>404,405</sup> This may be in part due to the ability to safely work from home. From May 2020–April 2021, only 3.1 percent of people with less than a high school degree and 8.1 percent of people with a high school degree were able to telework, compared to 38.4 percent of college graduates and 51.6 percent of people with a graduate degree.<sup>406</sup>

## F. Rural Communities

### Prior to COVID-19

**Hunger:** In 2019, rural households were more likely to be food insecure than suburban households (12.1 percent compared to 10.3 percent, and among households with children, 16 percent compared to 13.3 percent).<sup>407</sup>

**Poverty:** Compared to urban areas, rural areas have fewer economic and educational opportunities, and the lack of social capital and social services limits aid in economic recovery.<sup>408</sup> Job growth after the Great Recession was slower in rural towns, and 90 percent of the counties experiencing persistent, long-term poverty are entirely rural counties.<sup>409</sup> In 2018, rural poverty was 16.1 percent compared with 12.6 percent for urban areas.<sup>410</sup>

**Health:** Compared to urban areas, rural areas are more likely to have inadequate access to health care services, fewer physicians per capita, more uninsured, and a population with higher rates of disability and comorbidities related to COVID-19, including older age, smoking, high blood pressure and obesity.<sup>411,412,413,414,415,416</sup> Individuals who live in “digital deserts” with limited access to telehealth are more likely to have higher incidences of chronic disease.<sup>417</sup>

In addition, 133 rural hospitals have closed over the past decade.<sup>418,419</sup> In 2019, 20 percent of rural hospitals were at risk of closing, and more than two-thirds of those were critical for their communities (meaning they have only an emergency department and there are no other hospitals within 35 miles).<sup>420</sup> Using data from hospital closures in California, the closure of rural hospitals was associated with an 8.7 percent increase in inpatient mortality in rural areas while no association was found with urban closures.<sup>421</sup> Mortality increased even further for patients who represented oppressed racial and/or ethnic groups and patients participating in Medicaid.

**Gender disparities in rural areas:** Rural women have reduced diversity in job opportunities and gains to education in wages are lower in rural areas compared to urban areas. Single women, with or without children, are more likely to be in poverty than single women in urban counties. Although rural households increasingly depend on a woman’s income due to a decline in rural men’s wages since the 1980’s, women typically get paid less than men because women more often work in the service sector, which usually pays lower wages. Rural families are more likely to experience poverty when women are the primary or only breadwinner.<sup>422</sup>

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**Racial disparities in rural areas:** Black, Latinx, and AIAN communities have higher rates of food insecurity, unemployment, and overall mortality rates than White communities in rural areas.<sup>423,424,425</sup> Racial disparities in rural areas often exceed disparities in urban areas. Black people living in rural areas have lower socioeconomic status than White people living in rural areas or Black people living in urban areas,<sup>426</sup> and Black and Latinx people living in rural areas have lower access to health care compared to White people living in rural areas or Black and Latinx people living in urban areas.<sup>427</sup> Lack of access to clean, potable water is more common in rural areas, particularly in Black, AIAN, and migrant communities.<sup>428</sup> Clean water is an important component of food security and the ability to maintain proper hygiene during COVID-19.

### **During COVID-19**

**Hunger:** According to the CPS-FSS, in 2020, rural households were more likely to be food insecure than suburban households (11.6 percent compared to 8.8 percent, respectively). This disparity is larger among households with children (16.1 percent reported food insecurity in rural areas compared to 12.4 percent in suburban areas).<sup>429</sup>

**Poverty:** Many rural jobs are essential positions, putting workers at risk. For example, in the agricultural sector, pressure on maintaining food production has made it difficult to follow public health recommendations for social distancing and taking sick leave.<sup>430</sup> However, rural areas have had lower unemployment rates compared to urban areas throughout the pandemic. For example, in April 2021, the unemployment rate was 4.9 percent in rural areas compared to 5.9 percent in urban areas.<sup>431</sup>

**Health:** The share of cases and deaths in rural areas exceeded cases and deaths in urban counties in early September of 2020.<sup>432,433</sup> This may have been due to the logistical difficulties in testing rural populations or the inability to engage communities to trust public health messaging about COVID-19.<sup>434</sup> In addition, rural areas are more vulnerable to severe illness from COVID-19 due to an older population and further distance to hospitals with intensive care units.<sup>435</sup>

In 2020, 16 rural hospitals closed<sup>436</sup> and margins for all hospitals were down 89 percent in August 2020 compared to 2019.<sup>437</sup> Funding from the CARES Act has been crucial in helping rural hospitals stay afloat.<sup>438</sup>

Racial disparities have been reflected in COVID-19 outcomes. From March 2020–July 2020, the average daily increase in COVID-19 mortality rates was higher in rural counties with the highest percentage of Black and Latinx populations compared to counties with high percentages of White populations.<sup>439</sup> In addition, the association of the percentage of a county’s population that is Black and the prevalence of COVID-19 is stronger in rural counties than in urban counties.<sup>440</sup> While most of rural America had low cases of COVID-19 early in the pandemic, rural counties where meatpacking is the primary occupation were an exception, where COVID-19 cases were 10 times as high as other rural counties in April 2020 and still 1.25 times as high in October 2020.<sup>441</sup>

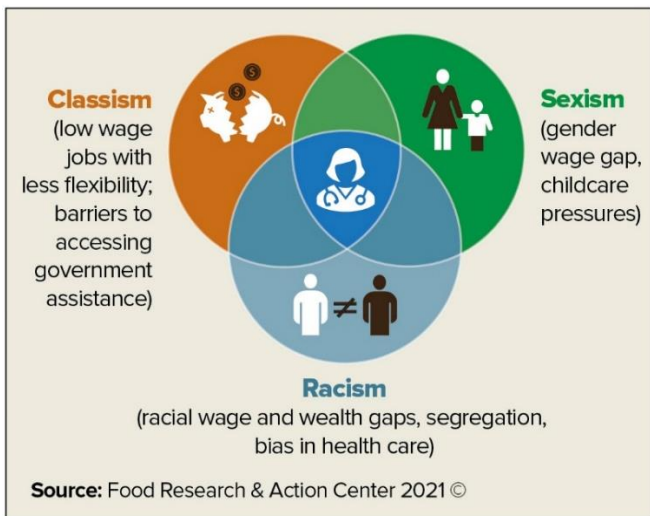
## **G. Intersectionality and Essential Workers**

A limitation of the disparities presented thus far is that individuals are not defined by a singular identity. It is important to consider how different identities carry overlapping risk factors for hunger, poverty, and health.<sup>442</sup> Intersectionality considers how interlocking systems of oppression result in unique challenges on more than one level for individuals with multiple identities that have been and continue to be discriminated against.<sup>443</sup> These systems of oppression operate through governing processes and economic and social policies that distribute resources (e.g., wages, working conditions, access to housing and food) unjustly by race, gender, social class, sexual identity, and more.<sup>444</sup>

COVID-19 has disproportionately impacted essential workers, an example of the intersection of racism, sexism and classism (see Figure 15).<sup>445,446</sup> Essential workers include those who work in transportation, health care, caregiving, public safety, public works, agriculture, and food.<sup>447</sup> The majority of essential workers have low wages, are unable to work remotely and social distance on the job, and are more likely to be women and Black, Latinx, or from AIAN populations.<sup>448,449,450</sup>

In 2018, the median income for essential workers who could not work remotely (27 percent of the workforce) had an average income of \$45,626 and a median income of \$33,000, a salary which was lower for Black, Latinx, and AIAN workers.<sup>451</sup> In addition to being more exposed to COVID-19 through their jobs, essential workers are more likely to rely on public transportation to get to work, further increasing exposure, and are more likely to live in multigenerational households, placing older adults in their household at increased risk.<sup>452</sup>

**Figure 16: Essential Workers are at the Intersection of Multiple Systems of Oppression**



Food insecurity among health care workers is high. Prior to COVID-19, nearly one-quarter of low-wage workers in nursing homes and residential care facilities reported being food insecure.<sup>453</sup> More data are needed to track food insecurity among other types of essential workers, but the data that do exist reflect their greater food hardship compared to nonessential workers.<sup>454</sup> Prior to COVID-19, 13.4 percent of essential workers reported using SNAP compared to 7.8 percent of nonessential workers. Disparities existed by race and/or ethnicity, where 23.3 percent, 23.5 percent, and 18.5 percent of Black, AIAN, and Latinx essential workers, respectively, used SNAP compared to 10.7 percent of White essential workers.<sup>455</sup> During COVID-19, essential workers have had more difficulty affording household expenses, such as credit card bills, utilities, and food, compared to nonessential workers.<sup>456</sup> This hardship is reflected in mental

health outcomes. Essential workers have been more likely to have anxiety or depression, increase or start substance use to cope with stress related to COVID-19, or seriously consider suicide compared to nonessential workers.<sup>457</sup>

## G.1. Health Care Workers

COVID-19 has had different effects across occupations, and while all jobs face increased exposure to COVID-19 and increased financial hardship, the impact of COVID-19 on health care workers (e.g., physicians, dentists, lab technicians, nursing care facilities), which included 16.5 million workers in 2019, is highlighted here.<sup>458</sup> The gender disparity in median income is larger in health care than almost any other industry.<sup>459</sup> Women make up 77 percent of health care workers and 83 percent of those making less than \$30,000 a year.<sup>460</sup> There are further disparities by race: while White and Asian American women are overrepresented among registered nurses, physicians, and surgeons, Black, Latina, and AIAN women are overrepresented among nursing aides, home care aides, and occupations with median wages less than \$15 an hour. Black, Latina, and Native health care workers are more likely to live in poverty, use SNAP, public housing support, and/or Medicaid, and lack health insurance than White and Asian American women.<sup>461</sup>

At the onset of the pandemic when nonemergency medical procedures were postponed, many health care workers lost jobs or benefits.<sup>462,463</sup> For example, nursing home staff working at multiple nursing homes, nurses, and support staff have had their benefits cut at hospitals even as they were asked to work overtime. In addition, jobs have not fully recovered in this sector, reflecting burnout from the stress and working conditions of the pandemic.<sup>464</sup> As of June 2021, the health care sector has added 1.1 million jobs since April 2020, but still employed 540,000 fewer people compared to February 2020.<sup>465</sup> While health care workers have had lower COVID-19 infection rates than the general population, infection rates have been higher for Black and Latinx health care workers compared to White health care staff.<sup>466</sup> One study in New York also found that essential workers were more likely to experience worse food access compared to nonessential workers during the pandemic.<sup>467</sup>

# The Federal Nutrition Programs Reduce Hunger and Poverty While Improving Health

The federal nutrition programs are important components of any short-term relief and long-term recovery plans for COVID-19. Prior to COVID-19, the programs were proven to reduce food insecurity, improve nutrition and health, decrease poverty for families, and provide economic stimulus for communities.<sup>468,469</sup>

This section includes new research highlighting the importance of the federal nutrition programs as well as early research that demonstrates how expansions to the programs have provided crucial support for families.

## A. Impact on Food Insecurity and Nutrition

**SNAP:** SNAP reduces food insecurity,<sup>470</sup> including by producing a 9–33 percent reduction in food insecurity among households with children.<sup>471</sup> Increases in SNAP benefits bolster positive impacts on food security.<sup>472</sup> For example, during the Great Recession, the 2009 American Recovery and Reinvestment Act (ARRA) expanded SNAP by increasing benefits by 13.6 percent (about \$80 a month for a family of four). Among SNAP households, the increase in benefits reduced food insecurity by 2.2 percentage points,<sup>473</sup> reduced very low food insecurity by 11 percentage points in areas with a high cost of living,<sup>474</sup> increased the amount of money spent on food,<sup>475</sup> and reduced the number of participants who ran out of benefits at the end of the month and had to eat less.<sup>476</sup>

Early research shows that SNAP has been an important tool in fighting hunger during COVID-19. One study found that SNAP emergency allotments, which have allowed households to access the maximum benefit level for their family size, were associated with lower rates of food insecurity early in the pandemic, especially among households with children.<sup>477</sup> Another study found that receiving SNAP benefits lessened the association between financial struggles and food insecurity that were a direct result of COVID-19.<sup>478</sup>

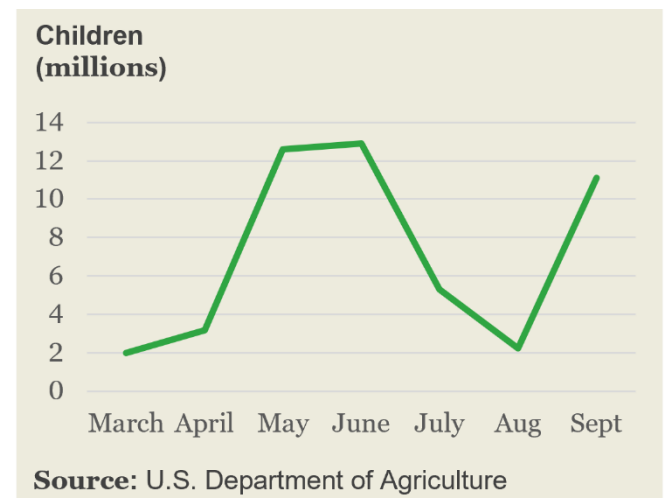
COVID-19 waivers and flexibilities in SNAP enrollment and recertification processes have also been identified by SNAP administrators<sup>479</sup> and community partners<sup>480</sup> as crucial tools in maintaining access to SNAP during the pandemic.

**Read more:** [Initiatives to Make SNAP Benefits More Adequate Significantly Improve Food Security, Nutrition, and Health.](#)

**P-EBT:** P-EBT has been crucial because the loss of school meals shifts the cost of those meals on to families, and families with low incomes face difficult cost constraints in increasing their food budget. It costs an estimated \$30 per child per week to provide a nutritious breakfast and lunch.<sup>481</sup>

The development and implementation of P-EBT was a massive undertaking that required data matching and coordination across SNAP, school meals, school districts, state agencies, and USDA. The program's innovation and adaptability allowed millions of families to access funds for the meals their children normally would have eaten at school.<sup>482</sup> P-EBT has reduced food insufficiency rates among children and adults in low-income households during COVID-19, especially during the first week after P-EBT benefits were received.<sup>483</sup>

**Figure 17: Monthly P-EBT Participation,<sup>484</sup> March 2020–September 2020**



*“[P-EBT] was an amazing addition to the options for families. It helped families that could not make school distribution times due to transportation issues or health issues especially when our bus service stopped because bus drivers don’t work in the summer.” -Kristin Hilleman, Director of Food & Nutrition Services, Capistrano Unified School District<sup>485</sup>*

Research on Summer EBT, after which P-EBT is modeled, also is relevant. When children eligible for free or reduced-price meals received Summer EBT, it reduced the prevalence of food insecurity by 20 percent, very low food insecurity by one-third, and improved diet quality by increasing the consumption of fruits, vegetables, whole grains, and dairy and by reducing added sugar.<sup>486,487</sup>

**Read more:** [Lessons from Early Implementation of Pandemic-EBT](#).

**WIC:** WIC reduces food insecurity among children by 20 percent.<sup>488</sup> WIC is associated with higher consumption of fruits and vegetables,<sup>489</sup> healthier grocery store purchases,<sup>490</sup> and overall healthier diets among low-income pregnant women<sup>491</sup> and children.<sup>492,493</sup> The longer that children participate, the healthier their diets are by the time they are 2 years old<sup>494,495</sup> and 4 years old.<sup>496</sup>

WIC also increases access to healthy foods for WIC and non-WIC customers because WIC-authorized stores must offer a variety of affordable, healthy foods and some food products have been reformulated to meet WIC’s standards, for example, the fortification of cereals with iron and of infant formula with healthy fatty acids.<sup>497</sup>

Despite the increased barriers faced by WIC participants in redeeming benefits during COVID-19,<sup>498</sup> a study in Tennessee found that participants felt the flexibilities during the pandemic were helpful in maintaining access, particularly waiving the requirement for in-person appointments.<sup>499</sup> This reflects national trends. Despite declines in births during COVID-19 and in WIC participation prior to the pandemic, WIC participation during the first year of the pandemic increased.<sup>500</sup>

**Read more:** [One Year of WIC During COVID-19: Waivers are Vital to Participation and Benefit Redemption](#).

**School meals and CACFP:** The school meals programs reduce the risk of food insecurity among low-income households with children and improve the dietary quality of children’s meals.<sup>501,502,503</sup> Research finds that the School Breakfast Program (SBP) reduces food insecurity among elementary school children by as much as 15 percentage points<sup>504</sup> and that the National School Lunch Program (NSLP) reduces food insecurity among all students by 6 percent,<sup>505</sup> including kindergartners entering grade school.<sup>506</sup> After the passage of the Healthy Hunger Free Kids Act in 2010, school meals have been shown to be healthier than the average food obtained from grocery stores, worksites, and restaurants.<sup>507</sup> In addition, CACFP is associated with a 4.2 percentage point reduction in food insecurity<sup>508</sup> and meals and snacks are healthier than food served at child care centers that are not participating in CACFP.<sup>509</sup>

**Read more:** [Hunger and Health – The Role of the Federal Child Nutrition Programs in Improving Health and Well-Being](#).

## B. Anti-Poverty Impact

**Individuals and families:** The federal nutrition programs help keep Americans out of poverty. In 2019, the estimated number of people who were kept out of poverty by federal nutrition program were as follows:

- SNAP: 2.5 million;<sup>510</sup>
- NSLP: 1.2 million; and
- WIC: 230,000.

Using data from 2013–2016, SBP kept 620,000 individuals out of poverty each year.<sup>511</sup>

During the Great Recession, SNAP had positive impacts,<sup>512</sup> was one of the most responsive programs to meet increased need,<sup>513,514</sup> and was an effective anti-poverty program<sup>515</sup> for lifting 3.9 million people out of poverty in 2011.<sup>516</sup> SNAP was also more likely than any other social safety net program to distribute resources to the households that were struggling the most to put food on the table and to reduce deep poverty (income below 50 percent of the FPL) by 16.6 percent.<sup>517,518</sup>

These same trends have been true during COVID-19. SNAP, including its expansions, is projected to lift 7.9 million people from poverty in 2021,

including 2.8 million children, which would make SNAP the second-most-effective antipoverty program during the pandemic.<sup>519</sup>

SNAP also has a long-term impact for decreasing poverty. Because SNAP has existed since 1961,<sup>520</sup> studies have been able to track the long-term benefits of exposure to food assistance during childhood. Participation in SNAP in early childhood (ages 0–5) has been associated with improved health, an increase in educational attainment, an increase in economic stability, including higher earnings and self-sufficiency among women, living in a neighborhood with lower poverty, and declines in the probability of being convicted of a crime or incarcerated.<sup>521,522</sup> (Figure 18)

Free and reduced-price school meals are also an important economic support for families because they effectively act as an income transfer by reducing the amount of food that families have to buy.<sup>523</sup>

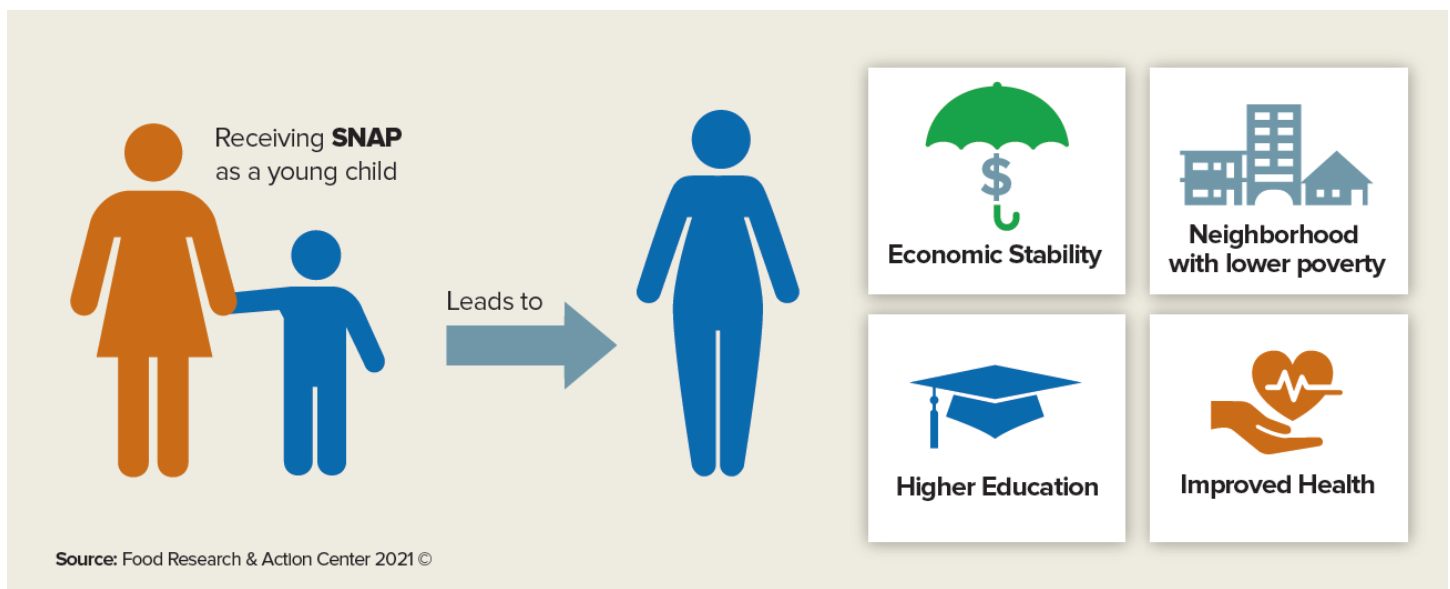
**Economic Activity:** SNAP increases the amount of money households spend on food more so than if they had been given the same amount of benefits in cash. Receiving SNAP benefits also frees up money to be redirected to other goods and services.<sup>524</sup> Increased spending by SNAP households has a domino effect: it increases income for farming and other business sectors involved in the production and distribution of products and services purchased by SNAP households, which then generates further

economic activity. Overall, every \$1 in SNAP during an economic downturn generates between \$1.50 and \$1.80 in economic activity (see Table 1 cited in the endnote).<sup>525</sup>

All of the federal nutrition programs have a positive impact on business and economic growth, and they support the economy in a variety of ways.

- **SNAP and P-EBT support food retail:** In 2018, 8 percent of all food at home was purchased using SNAP benefits.<sup>526</sup> This increased during COVID-19, when combined SNAP and P-EBT benefits accounted for 12 percent of food purchases from April 2020–September 2020.<sup>527</sup> Increases in SNAP participation are associated with local increases in the number of food stores, higher sales at those stores, more employees in food retail, and higher salaries for food retail workers.<sup>528,529,530</sup> In 2020, it is estimated that SNAP redemptions resulted in nearly 200,000 jobs in the grocery industry and 45,000 more jobs in other industries (e.g., agriculture, manufacturing, and transportation).<sup>531,532</sup>
- **WIC supports food retail:** Small-store owners report that the availability of a variety of WIC-approved foods attracts WIC and non-WIC customers and increases sales among WIC products and non-WIC products.<sup>533</sup>

**Figure 18: Receiving SNAP as a Child Improves Well-Being Decades Later**



- **SNAP, WIC, and P-EBT support farmers:** \$1 billion in SNAP benefits supports more agricultural jobs and an estimated \$32 million in additional income for agricultural industries.<sup>534</sup> WIC generates hundreds of millions in extra revenue for farmers, especially dairy, fruit, and vegetable farmers.<sup>535</sup> Farm-to-school programs increase income and jobs for farmers and the local economy.<sup>536</sup> During COVID-19, redemption of SNAP and P-EBT at farmers' markets increased compared to 2019, providing crucial support to small-scale farmers who did not qualify for Paycheck Protection Program loans or Coronavirus Food Assistance Program payments.<sup>537</sup>
- **SNAP provides jobs:** SNAP redemption rates at the county level have been associated with more jobs in those counties, and this association was stronger during the Great Recession.<sup>538</sup>
- **SNAP and WIC increase state revenues:** SNAP and WIC free up a household's other resources for purchases of non-food basics that may be subject to sales tax.<sup>539</sup> In 2020, it was estimated that SNAP redemptions generated more than \$1 billion in federal tax receipts and \$975 million in state and local tax receipts.<sup>540,541</sup>

## C. Impact on Health

Participation in WIC improves maternal health<sup>542</sup> and birth outcomes,<sup>543</sup> such as healthier weight-for-length among children 0–2 years old.<sup>544</sup> During the Great Recession, WIC's association with reducing low birthweight was even stronger compared to the prerecession period, and WIC also reduced Black-White disparities in birth weight.<sup>545</sup> School meals are associated with lower rates of overweight and obesity as well as improved mental health, including reductions in behavioral problems, anxiety, and depression.<sup>546</sup> SNAP is associated with improved health outcomes, including better glycemic control among people with type 2 diabetes and a reduced probability of being overweight or obese in children and adults.<sup>547</sup>

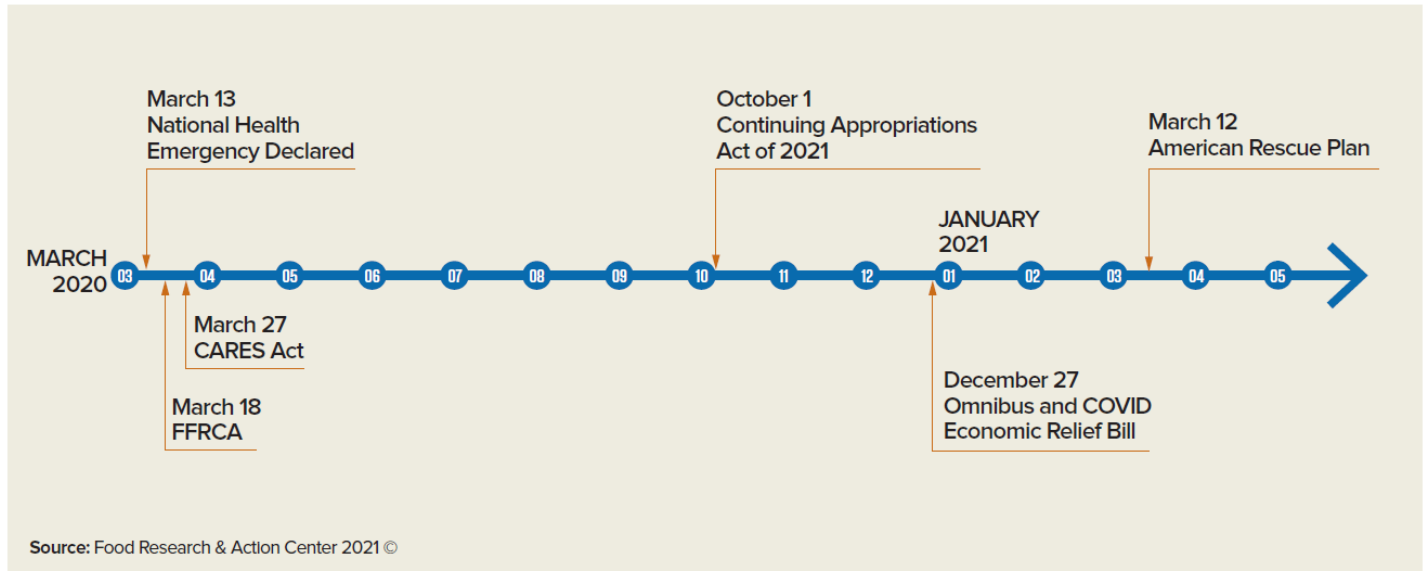
### Read more:

- [\*Hunger and Health – The Role of the Supplemental Nutrition Assistance Program \(SNAP\) in Improving Health and Well-Being;\*](#)
- [\*Hunger and Health – The Role of the Federal Child Nutrition Programs in Improving Health and Well-Being;\*](#)
- [\*School Meals are Essential for Student Health and Learning.\*](#)



# Participation in the Federal Nutrition Programs During the First Year of COVID-19 (March 2020–February 2021)

**Figure 19: Timeline of Legislation Impacting the Federal Nutrition Programs**



Across the country, governments and their nonprofit and private sector partners adapted the federal nutrition programs to meet increased need, while simultaneously adjusting their operations to align with public health guidance and to respond to changes in their ability to administer programs. Program participation during the first year of COVID-19 reflects the unprecedented levels of food and economic hardship during the pandemic. Several expansions were key in expanding access to the programs for vulnerable groups and increasing financial support for households.

**SNAP:** During the first year of COVID-19, an average of 41.7 million people received SNAP benefits (a 111 percent increase compared to March 2019–February 2020), with an average benefit of \$185 per person per month (a 153 percent increase). SNAP participation peaked in June 2020 at 43 million people.

**Read more:** [SNAP: A Critical Support During the First Year of the COVID-19 Pandemic.](#)

**WIC:** During the first year of COVID-19, a monthly average of 6.3 million women, infants, and children participated in WIC, and redeemed \$2.3 billion in food purchases. This represents an overall increase

in participation of 0.5 percent compared to March 2019–February 2020, which includes a decrease in the number of women and infants participating but a 5.1 percent increase in the number of children participating.

**Read more:** [One Year of WIC During COVID-19: Waivers are Vital to Participation and Benefit Redemption.](#)

**SBP and NSLP:** Each month during the first year of the pandemic, an average of 6.1 million children received a free or reduced-price school breakfast and an average of 8.4 million children received a free or reduced-price school lunch. Compared to March 2019–February 2020, 56 percent fewer breakfasts were served (92 million each month) and 69 percent fewer lunches were served (127 million each month).

To provide a comparison of only those months when children are in school: From August 2019–December 2019, a monthly average of 5.2 million children received a free or reduced-price school breakfast and an average of 7.4 million children received a free or reduced-price school lunch. Compared to August 2020–December 2020, 62

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percent fewer breakfasts were served (85 million a month) and 73 percent fewer lunches were served (121 million a month).

In sum, during COVID-19, millions of low-income students were not able to access school breakfast or lunch. However, this drop in participation was offset in part by the use of summer meals and P-EBT.

**Read more:** [School Meals: The Impact of the Pandemic on 54 Large School Districts](#).

**Summer meals:** Many schools switched to the summer meals program when emergency closures started in March 2020, inflating data in comparison with 2019. In July 2020, an average of 5.6 million students were served each day across 38,000 summer meals sites. A total of 189.1 million meals and snacks were served in July 2020, compared to 69.6 million meals and snacks in July 2019.

**P-EBT:** Average statistics for the first year of the pandemic are not available due to missing data. However, 12.7 million children participated in both May and June of 2020 and 11.1 million participated when school resumed in September 2020.

**Read more:**

- FRAC's resource page on [P-EBT](#);
- [P-EBT Implementation Documentation Project](#).

**CACFP:** During the first year of the pandemic, CACFP reimbursed an average of 129,000 child care homes and centers (an 18 percent decline compared to March 2019–February 2020), which served 3.8 million children each month (a 19 percent decline). CACFP also reimbursed an average of 2,100 adult care centers (a 26 percent decline), which served 92,000 adults each month (a 32 percent decline). In total, a monthly average of 118.9 million meals and snacks were served (a 31 percent decline). This drop in participation reflects the increased caregiver burden placed on families with young children and adult dependents as a result of child and adult care center closures.

**Read More:** [CACFP During COVID-19](#).

**Home-Delivered Meals and Congregate Nutrition Programs:** National data for 2020 are not yet available but the number of older adults receiving meals has increased, particularly home-delivered meals, due to social distancing necessitated by COVID-19. For example, by July 2020, Meals on Wheels local programs reported successfully scaling up to serve 47 percent more older adults than pre-pandemic, and had increased the number of meals by 77 percent, reaching more than 1 million new clients.

# Policy Recommendations for a Robust and Equitable COVID-19 Recovery

This report has examined inequities in hunger, poverty, and health among racial, ethnic, gender, and socioeconomic groups, and has demonstrated how these systemic injustices have interacted with the impacts of COVID-19. Policy in response to the pandemic must be a combination of short-term interventions that respond to immediate increases in hardship from the pandemic and longer-term efforts that equitably address systemic drivers of hunger, poverty, and poor health.

A wide range of policies are needed that address systemic drivers of hunger, which include low wages, underemployment or unemployment, discrimination, community disinvestment, segregation, incarceration, immigration status, limited transportation, unstable housing, and diminished educational opportunities.<sup>548</sup> Policies that can be enacted immediately include a permanent expansion of the Child Tax Credit,<sup>549</sup> a higher minimum wage, and affordable housing. Policy design and evaluation should ensure that policies do not unintentionally exacerbate disparities.

The federal nutrition programs promote short- and long-term economic stability, health, and well-being. Policy improvements should reflect core principles of eliminating stigma and improving accessibility to adequate, nutritious foods. This report concludes with specific policy recommendations directly related to increasing equitable access to the federal nutrition programs and increasing resources for participants. These interventions are warranted to respond to immediate needs for the remainder of the pandemic, ensure a robust and equitable economic recovery, and produce long-term reductions in hunger, poverty, and poor health.

In addition to these legislative proposals, a number of changes could be made within existing program rules to improve the equitable impact of the programs. For FRAC's recommendations to improve existing policies and practices, see [FRAC's comments](#) to USDA's request for information, "Identifying Barriers in USDA Programs and

Services; Advancing Racial Justice and Equity and Support for Underserved Communities at USDA."

## SNAP

SNAP plays a critical role in reducing hunger, undernutrition, and poverty, and improving child and adult health, employment, and other outcomes.<sup>550</sup> Basic SNAP benefits, temporary SNAP emergency allotments, and the temporary 15 percent SNAP benefit boosts have provided crucial resources for SNAP households during the pandemic.<sup>551</sup> USDA's August 2022 adjustment of the Thrifty Food Plan (TFP) also will strengthen SNAP during COVID-19 and beyond. Exclusive of the temporary COVID-19 benefit boosts, the revised TFP will permanently increase, per person and per month, SNAP benefits by \$36.24, effective October 1, 2021. This long overdue adjustment will help tens of millions of SNAP households better afford to put nutritious food on the table.<sup>552</sup>

However, more is needed to address food hardship during COVID-19 and help spur a robust and equitable economic recovery. The 15 percent boost in SNAP is set to sunset on September 30, 2021. Moreover, emergency allotments will expire when pandemic health declarations do, likely well ahead of a full economic recovery. Gaps in SNAP's eligibility criteria will exclude certain populations. To promote increasing food security and equity, below are examples of key actions.

- Extend for the duration of economic hardship the temporary boosts to SNAP benefits that were implemented during COVID-19. Such countercyclical benefit boosts should be triggered on and off by economic indicators instead of arbitrary dates.
- Substitute the Low Cost Food Plan for the TFP as the basis for SNAP benefits.
- Eliminate the cap on the SNAP shelter deduction.
- Increase the minimum monthly benefit.
- Make the Standard Medical Deduction more accessible for older adults and people with disabilities.<sup>553</sup>

- Improve access to SNAP,<sup>554</sup> including for unemployed and underemployed people,<sup>555</sup> college students,<sup>556</sup> formerly incarcerated individuals, non-U.S. citizens, residents of U.S. territories,<sup>557</sup> and low-income families working their way up the economic ladder.

## WIC

WIC improves participants' health, dietary intake, and birth and health outcomes; supports learning and development; and protects against obesity. Importantly, WIC has been proven to reduce racial disparities in poor infant health outcomes.<sup>558</sup> However, program barriers exist, e.g., language and culture; difficulty taking time off at work to apply and maintain eligibility in person at WIC clinics; transportation may be unavailable or unreliable, there may be long wait-times at clinics; and there can be difficulties with redeeming benefits.<sup>559</sup>

Crucial improvements, including the list of examples below, are needed to strengthen and expand access to the WIC program.

- Make permanent the flexibilities enacted during COVID-19 that allow for remote enrollment, services, and benefits issuance, and facilitating online ordering.
- Extend certification periods to two years for infants and postpartum women, and raise the age limit to 6 years old.
- Establish a WIC community partners outreach program, patterned after the successful SNAP outreach program, which would fund WIC state agencies to contract with non-WIC community partners to conduct WIC outreach.
- Increase infrastructure, technical assistance, and management information systems funding.
- Coordinate data-sharing between the health care system and WIC, particularly between Medicaid and WIC.
- The WIC food package should be updated to be consistent with the 2020–2025 Dietary Guidelines for Americans including increasing the value of fruit and vegetable benefits and investing significantly in the children's package.

## School Meals (SBP, NSLP)

School meals increase access to nutritious breakfasts and lunches for students whose families have low incomes, reducing disparities in food security and nutrition. However, some families may be above the income eligibility threshold but still are not able to afford meals that match the nutrition standards of SBP and NSLP. In addition, stigma for receiving reduced-price or free meals lowers participation. These factors perpetuate inequities by socioeconomic class.<sup>560</sup>

Healthy school meals should be available to all students at no charge. This increases participation so that more children can experience the benefits that are linked to school meals, eliminates unpaid school meals debt, and reduces administrative work for schools.<sup>561,562</sup> Schools have been able to provide meals to all children at no charge from spring 2020 through school year 2021–2022 through USDA waivers, and this should be maintained beyond the pandemic. In July 2021, California and Maine were the first states to pass statewide, bipartisan universal meal programs.<sup>563</sup> For more on efforts in other states, please visit FRAC's webpage on [Healthy School Meals for All](#).

The Community Eligibility Provision, a relatively new option created through the Healthy, Hunger-Free Kids Act of 2010, allows more than 30,000 high-poverty schools to offer breakfast and lunch at no charge to all students. This provision has highlighted the positive impact of offering meals to all children at no charge. Community eligibility allows schools with greater than a 40 percent Identified Student Percentage (ISP), or the percentage of students qualifying for free school meals, to offer breakfast and lunch free of charge to all students.

Community eligibility has dramatically moved the nation toward Healthy School Meals for All, with 1 in 3 schools that participate in SBP and NSLP using this option. Additional investments to support community eligibility, as well as allowing more children to be directly certified for free school meals, such as those receiving Medicaid, will allow more schools to adopt community eligibility and move the nation even closer to the goal of Healthy School Meals for All.

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## CACFP

CACFP provides funding to serve healthy meals and snacks in Head Start, child care centers, family child care homes, and afterschool programs. Many child care programs do not participate in CACFP because the benefits are inadequate, paperwork is burdensome, and the losses and penalties are too detrimental to child care programs that operate on razor-thin margins. The brunt of these barriers disproportionately impacts communities and providers with fewer resources, contributing to inequities in child care quality and nutrition.

Equity in CACFP can be achieved if systemic barriers that often give advantages to better-resourced programs are removed. The upcoming reauthorization of the child nutrition programs provides an opportunity to make much-needed improvements to increase CACFP access and strengthen CACFP's role in supporting good health and nutrition. Listed below are six important upgrades.

- (1) Give child care centers and homes the option of serving an additional meal (typically a snack or supper), as was previously allowed under CACFP. Many children are in care for more than eight hours per day as their parents work long hours to make ends meet, so they rely on child care providers to meet a majority of their nutrition needs.
- (2) Extend the COVID-19 waivers allowing child care homes to automatically receive the highest CACFP reimbursement rates.
- (3) Streamline access to CACFP by increasing direct certification and by allowing child care centers to participate based on community eligibility, rather than collecting income applications from families.
- (4) Make eligibility annual for proprietary child care centers.
- (5) Eliminate outdated enrollment forms and requirements.
- (6) Fix the serious deficiency process.

In addition, while emergency shelters can use CACFP to provide meals to children experiencing homelessness, a resident must be 18 or younger to receive a meal. Black and Latinx youth are more likely to experience homelessness into young adulthood, which means the age cutoff perpetuates disparities in food security by race and ethnicity. The COVID-19 expansion waiver that allows young adults up to 24 years old to be eligible to receive up to three healthy meals at homeless and youth-serving shelters should be made permanent.

## Out-of-School Time Programs

Afterschool and summer nutrition programs increase access to snacks and meals for school-age children whose families have low incomes. The pandemic has highlighted the importance of ensuring access to nutritious meals when schools are closed. These programs would be strengthened if the following actions were taken:

- establish a permanent and comprehensive EBT program that all states can operate and that provides benefits when schools are closed during the summer, on weekends, and school holidays;
- improve area eligibility requirements so that more communities are able to provide summer and afterschool meals;
- allow schools, local government agencies, and private nonprofit organizations to feed children year-round seamlessly through the federal nutrition programs; and
- allow all summer meal sites to serve a third meal.

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## Food Distribution Program on Indian Reservations (FDPIR)

FDPIR provides access to food to low-income Native families who do not have easy access to grocery stores. Over the years, nutritional standards in FDPIR boxes have increased and some traditional foods were incorporated beginning in 2015. However, apart from pilot programs, Tribal organizations are not able to purchase foods themselves nor source foods from local Native-owned farms. This lack of food sovereignty perpetuates disparities in food security and in the root causes of hunger, e.g., economic instability.<sup>564</sup>

FDPIR and the child nutrition programs should allow local procurement of foods to support Tribal food sovereignty. Participants should be allowed to use FDPIR and SNAP at the same time. Regardless of income level, all FDPIR recipients receive boxes, which are of roughly the same value, unlike SNAP, which calculates benefit amounts based on income level. Additionally, FDPIR boxes often do not contain a sufficient variety of ingredients to prepare a whole meal. Tribal governments do not currently have the authority to function as an autonomous “state government” to administer the federal nutrition programs, except for WIC. Tribal governments should have the right to administer all federal nutrition programs in the same way that state agencies can.

## Home-Delivered Meals and Congregate Nutrition Programs

Supplemental funding provided through federal COVID-19 legislation and program flexibilities enabled some providers to expand the reach of home-delivered meals and adapt congregate meal service models to promote social distancing. However, these programs will need ongoing resources and additional funding to be able to respond to the growing hunger among households with an older adult member. While there is no income test to participate in these nutrition programs, the Older Americans Act directs that services be targeted to those with the greatest economic and social needs, “with particular attention to low-income older individuals, including low-income older individuals representing racial and/or ethnic groups that have been systemically oppressed, older individuals with limited English proficiency, and older individuals residing in rural areas.”<sup>565</sup> Post-pandemic funding for these programs should be increased commensurate to the needs of older adults who are struggling to put food on the table.

### Read more:

- [\*FRAC’s Transition Recommendations to Address Hunger under the Biden-Harris Administration\*](#);
- [\*Budget & Appropriations Leave Behind\*](#);
- [\*Child Nutrition Reauthorization: Priorities to Improve and Strengthen Child Nutrition Programs\*](#).

## Conclusion

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COVID-19 resulted in an increase in hardship, including more individuals living in households with food insecurity, and increased racial and ethnic disparities in food insecurity. COVID-19 has applied unique pressures to the relationships between hunger, poverty, and poor health, while hunger, poverty, and health have simultaneously increased the risk of COVID-19 transmission, infection, and morbidity. It is critical to understand how disparities in COVID-19 outcomes reflect distinct and interlocking causes across different groups of people. Policies enacted to spur recovery must account for these unique root causes and center leadership from members of systemically

oppressed populations and communities. Tracking data about hunger, poverty, and health among these groups over the course of the pandemic is essential to ensure that recovery efforts are not ended too soon and leave them behind.

The nutrition programs are effective tools to address disparities in hunger, poverty, and health, and evidence from the pandemic indicates that they have been crucial resources in helping families keep food on the table. The federal nutrition programs are among our nation's most important, proven, and cost-effective public interventions, and further improvements can be made to support a more robust and equitable recovery.

# Appendix: Comparing the Census CPS-FSS and Pulse Surveys

	CPS-FSS	Pulse	Effect on Estimation of Food Hardship
<b>What is measured?</b>	Food insecurity	Food insufficiency	
<b>Questionnaire</b>	<ul style="list-style-type: none"> <li>The FSS is a series of 10 questions (18 if children are in the household).</li> <li>Households are food insecure if they respond affirmatively to 3+ questions and have very low food security if they respond affirmatively to 6+ questions (8+ with children).</li> </ul>	<ul style="list-style-type: none"> <li>Food insufficiency is a single question and is asked twice, once about the respondent's experience prior to COVID-19, and once about their current experience.</li> <li>Food insufficiency corresponds to selecting "Sometimes not enough to eat;" "Often not enough to eat."</li> </ul>	<ul style="list-style-type: none"> <li>The CPS-FSS is a more detailed picture of the severity and persistence of a household's food insecurity.</li> <li>Food insufficiency implies disrupted eating patterns and is therefore more similar to the more serious condition of very low food security rather than to food insecurity in general.<sup>566</sup></li> </ul>
<b>Who is measured?</b>	Households (Of the 50,000 sampled for the December CPS, about 34,000 respond to the FSS)	Individuals (60,000-100,000)	In both cases, a large sample size means that rates can be compared among specific groups of people (for example, by income, race, or geography).
<b>How is the survey conducted?</b>	Phone and in-person interviews, once a year in December	Online, every two weeks	The type of person who responds to a survey on the phone versus online might be different.
<b>Reference period for food insecurity</b>	Last 12 months and last 30 days	Last seven days and prior to COVID-19	A respondent is more likely to have been food insecure sometime over the past year compared to only the past week. <sup>567</sup>
<b>Method</b>	Households are screened using income and are asked survey questions in stages. Households reporting food security in early questions are not asked later questions.	There is no screening process. Every participant is asked the food insufficiency questions.	Research <sup>568,569</sup> finds that not including the screening process yields higher estimates of food insecurity.



# Endnotes

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- <sup>1</sup> Office of Disease Prevention and Health Promotion. (2020). Disparities. Available at: <https://www.healthypeople.gov/2020/about/foundation-health-measures/Disparities>. Accessed on August 5, 2021.
- <sup>2</sup> Odoms-Young, A. M. (2021). *Families, Food, and Parenting: Integrating Research, Practice, and Policy*. Chapter 1: “Structural and Social Adversity and Food Insecurity in Families with Young Children: A Qualitative Metasynthesis.” pp.3–37.
- <sup>3</sup> Coleman-Jensen, A., Rabbitt, M. P., Gregory, C., & Singh, A. (2021). Household Food Security in the United States in 2020. Economic Research Service, ERR-298. Washington, DC: U.S. Government Printing Office.
- <sup>4</sup> U.S. Department of Agriculture. (2021). Supplemental Nutrition Assistance Program (SNAP). Available at: <https://www.fns.usda.gov/snap/supplemental-nutrition-assistance-program>. Accessed on August 5, 2021.
- <sup>5</sup> U.S. Department of Agriculture. (2021). Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). Available at: <https://www.fns.usda.gov/wic>. Accessed on August 5, 2021.
- <sup>6</sup> U.S. Department of Agriculture. (2021). School Breakfast Program. Available at: <https://www.fns.usda.gov/sbp/school-breakfast-program>. Accessed on August 5, 2021.
- <sup>7</sup> U.S. Department of Agriculture. (2021). National School Lunch Program. Available at: <https://www.fns.usda.gov/nslp>. Accessed on August 5, 2021.
- <sup>8</sup> U.S. Department of Agriculture. (2021). Child and Adult Care Food Program. Available at: <https://www.fns.usda.gov/cacfp>. Accessed on August 5, 2021.
- <sup>9</sup> U.S. Department of Agriculture. (2021). Summer Food Service Program. Available at: <https://www.fns.usda.gov/sfsp/summer-food-service-program>. Accessed on August 5, 2021.
- <sup>10</sup> U.S. Department of Agriculture. (2021). Seamless Summer Option: Providing Multiple Meals at a Time During the Coronavirus Pandemic. Available at: <https://www.fns.usda.gov/tn/sso-providing-multiple-meals-during-coronavirus>. Accessed on August 5, 2021.
- <sup>11</sup> Food Research & Action Center. (2021). Pandemic EBT. Available at: <https://frac.org/pebt>. Accessed on August 5, 2021.
- <sup>12</sup> Hartline-Grafton, H. (2017). *Hunger and Health – The Impact of Poverty, Food Insecurity, and Poor Nutrition on Health and Well-Being*. Available at: <https://frac.org/research/resource-library/hunger-health-impact-poverty-food-insecurity-poor-nutrition-health-well>. Accessed on August 5, 2021.
- <sup>13</sup> Sethi, S. (2020). *Hunger and Food Insecurity Are Not the Same. Here’s Why That Matters—and What They Mean*. Available at: <https://thecounter.org/hunger-food-insecurity-covid-19-feeding-america/>. Accessed on August 5, 2021.
- <sup>14</sup> Bauer, L. (2020). *Hungry at Thanksgiving: A Fall 2020 Update on Food Insecurity in the U.S.* Available at: <https://www.brookings.edu/blog/up-front/2020/11/23/hungry-at-thanksgiving-a-fall-2020-update-on-food-insecurity-in-the-u-s/>. Accessed on August 5, 2021.
- <sup>15</sup> Coleman-Jensen, A., Rabbitt, M. P., Gregory, C., & Singh, A. (2021). Household Food Security in the United States in 2020. Economic Research Service, ERR-298. Washington, DC: U.S. Government Printing Office.
- <sup>16</sup> U.S. Census Bureau. (2021). Household Pulse Survey Data Tables. Available at: <https://www.census.gov/programs-surveys/household-pulse-survey/data.html>. Accessed on August 5, 2021.
- <sup>17</sup> Note: Other surveys conducted during COVID-19 that measure food insecurity or food insufficiency include the Survey of Mothers with Young Children (Brookings Institution), the Coronavirus Tracking Survey (Urban Institute), the COVID Tracking Project (NORC at the University of Chicago), the National Food Access and COVID Research Team (NFACT) surveys, and various other research studies (see [Ahn & Norwood 2020](#) or [Wolfson & Leung 2020](#)). For more detail on these studies and their findings, please see FRAC’s [Spring 2021 issue of the ResearchWIRE](#).
- <sup>18</sup> Bauer, L. (2020). *Hungry at Thanksgiving: A Fall 2020 Update on Food Insecurity in the U.S.* Available at: <https://www.brookings.edu/blog/up-front/2020/11/23/hungry-at-thanksgiving-a-fall-2020-update-on-food-insecurity-in-the-u-s/>. Accessed on August 5, 2021.
- <sup>19</sup> Bauer, L. (2020). The COVID-19 Crisis Has Already Left Too Many Children Hungry in America. Available at: <https://www.brookings.edu/blog/up-front/2020/05/06/the-covid-19-crisis-has-already-left-too-many-children-hungry-in-america/#cancel>. Accessed on August 5, 2021.
- <sup>20</sup> Waxman, E., Gupta, P., & Gonzalez, D. (2020). *Food Insecurity Edged Back up after COVID-19 Relief Expired*. Available at: <https://www.urban.org/research/publication/food-insecurity-edged-back-after-covid-19-relief-expired>. Accessed on August 18, 2021.
- <sup>21</sup> Waxman, E., Gupta, P., & Gonzalez, D. (2020). *Food Insecurity Edged Back up after COVID-19 Relief Expired*. Available at: <https://www.urban.org/research/publication/food-insecurity-edged-back-after-covid-19-relief-expired>. Accessed on August 18, 2021.
- <sup>22</sup> Ahn, S., & Norwood, F. B. (2020). Measuring Food Insecurity during the COVID-19 Pandemic of Spring 2020. *Applied Economic Perspectives and Policy*. 00(00):1–7.

- <sup>23</sup> Wolfson, J. A., & Leung, C. W. (2020). Food Insecurity During COVID-19: An Acute Crisis With Long-Term Health Implications. *American Journal of Public Health*. e1–3.
- <sup>24</sup> Harper, K., Acciai, F., Josephson, A., Ohri-Vachaspati, P., Belarmino, E. H., Niles, M., Robinson, J., Neff, R., et al. (2020). *Experiences of Households with New and Persistent Food Insecurity during the First Four Months of the COVID-19 Pandemic*. Available at: <http://jhir.library.jhu.edu/handle/1774.2/63252>. Accessed on August 5, 2021.
- <sup>25</sup> Note: Our use of “hunger” in this report differs from the conventional use of hunger, which describes the physical and emotional condition of not having enough to eat. In contrast, we use hunger as a broad term that can either be measured by food insecurity or food insufficiency. As such, our use of hunger reflects the economic condition of a household. We do this to ensure that we can make distinctions between food insecurity and food insufficiency data throughout our paper.
- <sup>26</sup> Note: Direct comparison between Phase I and subsequent phases of the Household Pulse Survey should also be made with caution. Questions were reordered, the sampling time frame was altered from one week to two weeks, and analysis by the Urban Institute indicates systematic differences in survey respondents, which may affect results. For more information, see the “About the Data” section of the Urban Institute’s COVID-19 Tracker. Available at: <https://www.urban.org/features/tracking-covid-19s-effects-race-and-ethnicity-questionnaire-two>.
- <sup>27</sup> Winship, S., & Rachidi, A. (2020). *Has Hunger Swelled?* Available at: <https://www.aei.org/research-products/report/has-hunger-swelled/>. Accessed on August 19, 2021.
- <sup>28</sup> Coleman-Jensen, A., Rabbitt, M., & Gregory, C. (2020). Food Security in the US: Measurement. Available at: <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/measurement/>. Accessed on August 5, 2021.
- <sup>29</sup> Coleman-Jensen, A., Rabbitt, M. P., Gregory, C., & Singh, A. (2021). Household Food Security in the United States in 2020. Economic Research Service, ERR-298. Washington, DC: U.S. Government Printing Office.
- <sup>30</sup> Carlson, C. J., & Mendenhall, E. (2019). Preparing for Emerging Infections Means Expecting New Syndemics. *The Lancet*. 394(10195):297.
- <sup>31</sup> Nagata, J. M., Seligman, H. K., & Weiser, S. D. (2021). Perspective: The Convergence of Coronavirus Disease 2019 (COVID-19) and Food Insecurity in the United States. *Advances in Nutrition*. 12(2):287–90.
- <sup>32</sup> Coleman-Jensen, A., Rabbitt, M. P., Gregory, C., & Singh, A. (2021). Household Food Security in the United States in 2020. Economic Research Service, ERR-298. Washington, DC: U.S. Government Printing Office.
- <sup>33</sup> U.S. Census Bureau. (2021). Household Pulse Survey Data Tables. Available at: <https://www.census.gov/programs-surveys/household-pulse-survey/data.html>. Accessed on August 5, 2021.
- <sup>34</sup> Kinsey, E. W., Kinsey, D., & Rundle, A. G. (2020). COVID-19 and Food Insecurity: An Uneven Patchwork of Responses. *Journal of Urban Health*. 97(3):332–35.
- <sup>35</sup> U.S. Bureau of Labor Statistics. (2020). Consumer Price Index News Release: April 2020. Available at: [https://www.bls.gov/news.release/archives/cpi\\_05122020.htm](https://www.bls.gov/news.release/archives/cpi_05122020.htm). Accessed on August 5, 2021.
- <sup>36</sup> U.S. Bureau of Labor Statistics. (2021). Consumer Price Index News Release: April 2021. Available at: [https://www.bls.gov/news.release/archives/cpi\\_05122021.htm](https://www.bls.gov/news.release/archives/cpi_05122021.htm). Accessed on: August 4, 2021.
- <sup>37</sup> Gauthier, G. R., Smith, J. A., García, C., Garcia, M. A., & Thomas, P. A. (2021). Exacerbating Inequalities: Social Networks, Racial/Ethnic Disparities, and the COVID-19 Pandemic in the United States. *The Journals of Gerontology, Series B, Psychological Sciences and Social Sciences*. 76(3):e88–92.
- <sup>38</sup> Leddy, A. M., Weiser, S. D., Palar, K., & Seligman, H. (2020). A Conceptual Model for Understanding the Rapid COVID-19–Related Increase in Food Insecurity and Its Impact on Health and Healthcare. *The American Journal of Clinical Nutrition*. 112(3):1162–69.
- <sup>39</sup> Dunn, C. G., Kenney, E., Fleischhacker, S. E., & Bleich, S. N. (2020). Feeding Low-Income Children during the Covid-19 Pandemic. *New England Journal of Medicine*. 382(18):e40.
- <sup>40</sup> Bauer, K. W., Chiriqui, J. F., Andreyeva, T., Kenney, E. L., Stage, V. C., Dev, D., Lessard, L., Cotwright, C. J., et al. (2021). A Safety Net Unraveling: Feeding Young Children During COVID-19. *American Journal of Public Health*. 111116–20.
- <sup>41</sup> Similar to food insecurity data, poverty data is only released once a year. Monthly statistics were generated by the [Center on Poverty and Social Policy at Columbia University](#). They use the Supplemental Poverty Measure (SPM) as their starting point, which improves upon the Official Poverty Measure (OPM) by setting the poverty threshold based on a more realistic basket of consumer goods, adjusting for the cost of living, adding social program benefits, and subtracting taxes, child support, and medical/work expenses.
- <sup>42</sup> Han, J., Meyer, B., & Sullivan, J. (2020). *Income and Poverty in the COVID-19 Pandemic*. Available at: <http://www.nber.org/papers/w27729.pdf>. Accessed on August 5, 2021.
- <sup>43</sup> Parolin, Z., Curran, M., Matsudaira, J., Waldfoegel, J., & Wimer, C. (2020). *Monthly Poverty Rates in the United States during the COVID-19 Pandemic*. Available at: <https://www.povertycenter.columbia.edu/s/COVID-Projecting-Poverty-Monthly-CPSP-2020.pdf>. Accessed on August 5, 2021.
- <sup>44</sup> Parolin, Z., & Curran, M. (2021). Monthly Poverty. Available at: <https://www.povertycenter.columbia.edu/forecasting-monthly-poverty-data>. Accessed on August 5, 2021.

- <sup>45</sup> Kochhar, R. (2020). *Fewer U.S. Mothers and Fathers Are Working Due to COVID-19, Many Are Working Less*. Available at: <https://www.pewresearch.org/fact-tank/2020/10/22/fewer-mothers-and-fathers-in-u-s-are-working-due-to-covid-19-downturn-those-at-work-have-cut-hours/>. Accessed on August 5, 2021.
- <sup>46</sup> Wapner, J. (2020). Covid-19: Medical Expenses Leave Many Americans Deep in Debt. *The BMJ*. 370.
- <sup>47</sup> Cooper, C., Mullins, M., & Weinstock, L. (2021). *COVID-19: Household Debt During the Pandemic*. Congressional Research Service, R46578. Washington DC: U.S. Government Printing Office.
- <sup>48</sup> Reed, D., Divringi, E., & Akana, T. (2021). *Renters' Experiences During COVID-19*. Available at: <https://www.philadelphiafed.org/community-development/housing-and-neighborhoods/renters-experiences-during-covid-19>. Accessed on August 9, 2021.
- <sup>49</sup> U.S. Census Bureau. (2021). Household Pulse Survey Data Tables. Available at: <https://www.census.gov/programs-surveys/household-pulse-survey/data.html>. Accessed on August 5, 2021.
- <sup>50</sup> Note: Propel is the new name for the Propel app formerly called Fresh EBT. For background on Propel, see <https://www.joinpropel.com/>
- <sup>51</sup> Propel, Inc. (2021). SNAP Households Survey: June Results. Available at: <https://www.joinpropel.com/june-2021-covid-pulse-survey>. Accessed on August 5, 2021.
- <sup>52</sup> Propel, Inc. (2021). "It's Mind-Boggling like Everyday I Wonder How I'm Going to Do It": A Year in the Lives of SNAP Households. Available at: <https://medium.com/@JoinPropel/its-mind-boggling-like-everyday-i-wonder-how-i-m-going-to-do-it-a-year-in-the-lives-of-snap-9d28f77b34c9>. Accessed on August 5, 2021.
- <sup>53</sup> Ahmad, F. B., Cisewski, J. A., Miniño, A., & Anderson, R. N. (2021). Provisional Mortality Data — United States, 2020. *MMWR. Morbidity and Mortality Weekly Report*. 70(14):519–22.
- <sup>54</sup> Datta, S. D., Talwar, A., & Lee, J. T. (2020). A Proposed Framework and Timeline of the Spectrum of Disease Due to SARS-CoV-2 Infection: Illness Beyond Acute Infection and Public Health Implications. *JAMA*. 324(33):2251–52.
- <sup>55</sup> Czeisler, M. É., Lane, R. I., Petrosky, E., Wiley, J. F., Christensen, A., Njai, R., Weaver, M. D., Robbins, R., et al. (2020). Mental Health, Substance Use, and Suicidal Ideation During the COVID-19 Pandemic - United States, June 24–30, 2020. *MMWR. Morbidity and Mortality Weekly Report*. 69(32):1049–57.
- <sup>56</sup> Czeisler, M. É., Rohan, E., Melillo, S., & Al, E. (2021). Mental Health Among Parents of Children Aged Less than 18 Years and Unpaid Caregivers of Adults During the COVID-19 Pandemic — United States, December 2020 and February–March 2021. *MMWR. Morbidity and Mortality Weekly Report*. 70(24):879–87.
- <sup>57</sup> Banthin, J., & Holahan, J. (2020). *Making Sense of Competing Estimates: The COVID-19 Recession's Effects on Health Insurance Coverage*. Available at: <https://www.urban.org/research/publication/making-sense-competing-estimates-covid-19-recessions-effects-health-insurance-coverage>. Accessed on August 5, 2021.
- <sup>58</sup> Bivens, J., & Zipperer, B. (2020). *Health Insurance and the COVID-19 Shock: What We Know so Far about Health Insurance Losses and What It Means for Policy*. Available at: <https://www.epi.org/publication/health-insurance-and-the-covid-19-shock/>. Accessed on August 5, 2021.
- <sup>59</sup> Abelson, R. (2020). *Some Workers Face Looming Cutoffs in Health Insurance*. Available at: <https://www.nytimes.com/2020/09/28/health/covid-19-health-insurance.html>. Accessed on August 5, 2021.
- <sup>60</sup> Parolin, Z., & Curran, M. (2021). Monthly Poverty. Available at: <https://www.povertycenter.columbia.edu/forecasting-monthly-poverty-data>. Accessed on August 5, 2021.
- <sup>61</sup> Huff, C. (2020). Covid-19: Americans Afraid to Seek Treatment Because of the Steep Cost of Their High Deductible Insurance Plans. *BMJ*. 371: m3860.
- <sup>62</sup> Anderson, K. E., McGinty, E. E., Presskreischer, R., & Barry, C. L. (2021). Reports of Forgone Medical Care Among US Adults During the Initial Phase of the COVID-19 Pandemic. *JAMA Network Open*. 4(1):e2034882.
- <sup>63</sup> Hong, K., Zhou, F., Tsai, Y., Jatlaoui, T. C., Acosta, A. M., Dooling, K. L., Kobayashi, M., & Lindley, M. C. (2021). Decline in Receipt of Vaccines by Medicare Beneficiaries During the COVID-19 Pandemic — United States, 2020. *MMWR. Morbidity and Mortality Weekly Report*. 70(7):245–49.
- <sup>64</sup> Martin, K., Kurowski, D., Given, P., Kennedy, K., & Clayton, E. (2021). *The Impact of COVID-19 on the Use of Preventive Health Care*. Available at: <https://healthcostinstitute.org/hcci-research/the-impact-of-covid-19-on-the-use-of-preventive-health-care>. Accessed on August 5, 2021.
- <sup>65</sup> Stewart, J. (2021). *New Analysis Reveals Alarming Drop in Vaccinations for Teens and Adults over the Past Year*. Available at: <https://www.statnews.com/sponsor/2021/03/23/new-analysis-reveals-alarming-drop-in-vaccinations-for-teens-and-adults-over-the-past-year/>. Accessed on August 5, 2021.
- <sup>66</sup> Murthy, B. P., Zell, E., Kirtland, K., Jones-Jack, N., Harris, L., Sprague, C., Schultz, J., Le, Q., et al. (2021). Impact of the COVID-19 Pandemic on Administration of Selected Routine Childhood and Adolescent Vaccinations—10 US Jurisdictions, March–September 2020. *Morbidity and Mortality Weekly Report*. 70(23):840.
- <sup>67</sup> Rapid Assessment of Pandemic Impact on Development – Early Childhood (RAPID-EC) Database of Open-ended responses, available upon request.

- <sup>68</sup> U.S. Department of Agriculture. (2020). USDA Expands Access to Online Shopping in SNAP, Invests in Future WIC Opportunities (Press Release). Available at: <https://www.fns.usda.gov/news-item/fns-001820>. Accessed on August 5, 2021.
- <sup>69</sup> Karimi, S. E., Ahmadi, S., & Azar, N. S. (2021). Inequities as a Social Determinant of Health: Responsibility in Paying Attention to the Poor and Vulnerable at Risk of COVID-19. *Journal of Public Health Research*. 10(1):1904.
- <sup>70</sup> Patel, J. A., Nielsen, F. B. H., Badiani, A. A., Assi, S., Unadkat, V. A., Patel, B., Ravindrane, R., & Wardle, H. (2020). Poverty, Inequality and COVID-19: The Forgotten Vulnerable. *Public Health*. 183110–11.
- <sup>71</sup> Chen, J. T., & Krieger, N. (2021). Revealing the Unequal Burden of COVID-19 by Income, Race/Ethnicity, and Household Crowding: US County versus Zip Code Analyses. *Journal of Public Health Management and Practice*. 27S46–56.
- <sup>72</sup> Dubay, L., Aarons, J., Brown, S., & Kenney, G. (2020). *How Risk of Exposure to the Coronavirus at Work Varies by Race and Ethnicity and How to Protect the Health and Well-Being of Workers and Their Families*. Available at: <https://www.urban.org/research/publication/how-risk-exposure-coronavirus-work-varies-race-and-ethnicity-and-how-protect-health-and-well-being-workers-and-their-families>. Accessed on August 5, 2021.
- <sup>73</sup> Baker, M. G., Peckham, T. K., & Seixas, N. S. (2020). Estimating the Burden of United States Workers Exposed to Infection or Disease: A Key Factor in Containing Risk of COVID-19 Infection. *PLOS ONE*. 15(4):e0232452.
- <sup>74</sup> Wright, A. L., Sonin, K., Driscoll, J., & Wilson, J. (2020). Poverty and Economic Dislocation Reduce Compliance with COVID-19 Shelter-in-Place Protocols. *Journal of Economic Behavior and Organization*. 180544–54.
- <sup>75</sup> Nagata, J. M., Seligman, H. K., & Weiser, S. D. (2021). Perspective: The Convergence of Coronavirus Disease 2019 (COVID-19) and Food Insecurity in the United States. *Advances in Nutrition*. 12(2):287–90.
- <sup>76</sup> Adams, M. L., Katz, D. L., & Grandpre, J. (2020). Population-Based Estimates of Chronic Conditions Affecting Risk for Complications from Coronavirus Disease, United States. *Emerging Infectious Diseases*. 26(8):1831–33.
- <sup>77</sup> Alcendor, D. J. (2020). Racial Disparities-Associated COVID-19 Mortality among Minority Populations in the US. *Journal of Clinical Medicine*. 9(8):2442.
- <sup>78</sup> Kompaniyets, L., Goodman, A. B., Belay, B., Freedman, D. S., Sucusky, M. S., Lange, S. J., Gundlapalli, A. V., Boehmer, T. K., et al. (2021). Body Mass Index and Risk for COVID-19–Related Hospitalization, Intensive Care Unit Admission, Invasive Mechanical Ventilation, and Death — United States, March–December 2020. *MMWR. Morbidity and Mortality Weekly Report*. 70(10):355–61.
- <sup>79</sup> Neidich, S. D., Green, W. D., Rebeles, J., Karlsson, E. A., Schultz-Cherry, S., Noah, T. L., Chakladar, S., Hudgens, M. G., et al. (2017). Increased Risk of Influenza among Vaccinated Adults Who Are Obese. *International Journal of Obesity*. 41(9):1324–30.
- <sup>80</sup> Watanabe, M., Balena, A., Tuccinardi, D., Tozzi, R., Risi, R., Masi, D., Caputi, A., Rossetti, R., et al. (2021). Central Obesity, Smoking Habit, and Hypertension Are Associated with Lower Antibody Titres in Response to COVID-19 mRNA Vaccine. *Diabetes/Metabolism Research and Reviews*. e3465.
- <sup>81</sup> Wilson, S. (2021). *Could Comorbidities & Medications Make Some People More Susceptible to Breakthrough COVID Infections?* Available at: <https://www.wlox.com/2021/08/05/could-comorbidities-medications-make-some-people-more-susceptible-breakthrough-covid-infections/>. Accessed on August 19, 2021.
- <sup>82</sup> Hanson, K. L., & Connor, L. M. (2014). Food Insecurity and Dietary Quality in US Adults and Children: A Systematic Review. *The American Journal of Clinical Nutrition*. 100(2):684–92.
- <sup>83</sup> Leung, C. W., Epel, E. S., Ritchie, L. D., Crawford, P. B., & Laraia, B. A. (2014). Food Insecurity Is Inversely Associated with Diet Quality of Lower-Income Adults. *Journal of the Academy of Nutrition and Dietetics*. 114(12):1943–1953.e2.
- <sup>84</sup> Leung, C. W., & Tester, J. M. (2019). The Association between Food Insecurity and Diet Quality Varies by Race/Ethnicity: An Analysis of National Health and Nutrition Examination Survey 2011–2014 Results. *Journal of the Academy of Nutrition and Dietetics*. 119(10):1676–86.
- <sup>85</sup> Morales, M. E., & Berkowitz, S. A. (2016). The Relationship Between Food Insecurity, Dietary Patterns, and Obesity. *Current Nutrition Reports*. 5(1):54–60.
- <sup>86</sup> Arenas, D. J., Thomas, A., Wang, J. C., & DeLisser, H. M. (2019). A Systematic Review and Meta-Analysis of Depression, Anxiety, and Sleep Disorders in US Adults with Food Insecurity. *Journal of General Internal Medicine*. 34(12):2874–82.
- <sup>87</sup> Maynard, M., Andrade, L., Packull-McCormick, S., Perlman, C., Leos-Toro, C., & Kirkpatrick, S. (2018). Food Insecurity and Mental Health among Females in High-Income Countries. *International Journal of Environmental Research and Public Health*. 15(7):1424.
- <sup>88</sup> McLaughlin, K. A., Green, J. G., Alegría, M., Jane Costello, E., Gruber, M. J., Sampson, N. A., & Kessler, R. C. (2012). Food Insecurity and Mental Disorders in a National Sample of U.S. Adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*. 51(12):1293–1303.
- <sup>89</sup> Blume, J., Douglas, S. D., & Evans, D. L. (2011). Immune Suppression and Immune Activation in Depression. *Brain, Behavior, and Immunity*. 25(2):221–29.

- <sup>90</sup> Maggini, S., Pierre, A., & Calder, P. (2018). Immune Function and Micronutrient Requirements Change over the Life Course. *Nutrients*. 10(10):1531.
- <sup>91</sup> Vazquez, J. Te, Feng, S. N., Orr, C. J., & Berkowitz, S. A. (2021). Food Insecurity and Cardiometabolic Conditions: A Review of Recent Research. *Current Nutrition Reports*.
- <sup>92</sup> Gregory, C. A., & Coleman-Jensen, A. (2017). *Food Insecurity, Chronic Disease, and Health Among Working-Age Adults*. Economic Research Service, ERR-235. Washington, DC: U.S. Government Printing Office.
- <sup>93</sup> Banerjee, S., Radak, T., Khubchandani, J., & Dunn, P. (2021). Food Insecurity and Mortality in American Adults: Results From the NHANES-Linked Mortality Study. *Health Promotion Practice*. 22(2):204–14.
- <sup>94</sup> Berkowitz, S. A., Karter, A. J., Corbie-Smith, G., Seligman, H. K., Ackroyd, S. A., Barnard, L. S., Atlas, S. J., & Wexler, D. J. (2018). Food Insecurity, Food “Deserts,” and Glycemic Control in Patients with Diabetes: A Longitudinal Analysis. *Diabetes Care*. 41(6):1188–95.
- <sup>95</sup> Fitzpatrick, K. M., & Willis, D. E. (2021). Homeless and Hungry: Food Insecurity in the Land of Plenty. *Food Security*. 133–12.
- <sup>96</sup> Seligman, H. K., & Berkowitz, S. A. (2019). Aligning Programs and Policies to Support Food Security and Public Health Goals in the United States. *Annual Review of Public Health*. 40319–37.
- <sup>97</sup> Himmelgreen, D., Romero-Daza, N., Heuer, J., Lucas, W., Salinas-Miranda, A. A., & Stoddard, T. (2020). Using Syndemic Theory to Understand Food Insecurity and Diet-Related Chronic Diseases. *Social Science and Medicine*. 113–24.
- <sup>98</sup> Seligman, H. K., & Berkowitz, S. A. (2019). Aligning Programs and Policies to Support Food Security and Public Health Goals in the United States. *Annual Review of Public Health*. 40319–37.
- <sup>99</sup> Cook, J. T., Black, M., Chilton, M., Cutts, D., Ettinger de Cuba, S., Heeren, T. C., Rose-Jacobs, R., Sandel, M., et al. (2013). Are Food Insecurity’s Health Impacts Underestimated in the U.S. Population? Marginal Food Security Also Predicts Adverse Health Outcomes in Young U.S. Children and Mothers. *Advances in Nutrition*. 4(1):51–61.
- <sup>100</sup> Heflin, C., London, A. S., & Scott, E. K. (2011). Mitigating Material Hardship: The Strategies Low-Income Families Employ to Reduce the Consequences of Poverty. *Sociological Inquiry*. 81(2):223–46.
- <sup>101</sup> Anderson, W., White, V. & Finney, A. (2012). Coping with Low Incomes and Cold Homes. *Energy Policy*. 49: 40–52.
- <sup>102</sup> Loopstra, R., & Tarasuk, V. (2013). Severity of Household Food Insecurity Is Sensitive to Change in Household Income and Employment Status among Low-Income Families. *The Journal of Nutrition*. 143(8):1316–23.
- <sup>103</sup> Fletcher, J. M., Andreyeva, T., & Busch, S. H. (2011). Assessing the Effect of Increasing Housing Costs on Food Insecurity. *SSRN Electronic Journal*. 15(2):79–93.
- <sup>104</sup> Anderson, W., White, V. & Finney, A. (2012). Coping with Low Incomes and Cold Homes. *Energy Policy*. 49: 40–52.
- <sup>105</sup> Himmelgreen, D., Romero-Daza, N., Heuer, J., Lucas, W., Salinas-Miranda, A. A., & Stoddard, T. (2020). Using Syndemic Theory to Understand Food Insecurity and Diet-Related Chronic Diseases. *Social Science and Medicine*. 113–24. *Social Science and Medicine*. 113–24.
- <sup>106</sup> Jia, J., Fung, V., Meigs, J. B., & Thorndike, A. N. (2021). Food Insecurity, Dietary Quality, and Health Care Utilization in Lower-Income Adults: A Cross-Sectional Study. *Journal of the Academy of Nutrition and Dietetics*, published online ahead of print.
- <sup>107</sup> Berkowitz, S. A., Basu, S., Meigs, J. B., & Seligman, H. K. (2018). Food Insecurity and Health Care Expenditures in the United States, 2011-2013. *Health Services Research*. 53(3):1600–1620.
- <sup>108</sup> Tarasuk, V., Cheng, J., Oliveira, C. De, Dachner, N., Gundersen, C., & Kurdyak, P. (2015). Association between Household Food Insecurity and Annual Health Care Costs. *CMAJ*. 187(14):E429–36.
- <sup>109</sup> Brewer, M. (2019). Household Debt and Children’s Risk of Food Insecurity. *Social Problems*. 67(3):565–84.
- <sup>110</sup> Center on Budget and Policy Priorities. (2020). *Tracking the COVID-19 Recession’s Effects on Food, Housing, and Employment Hardships*. Available at: <https://www.cbpp.org/research/poverty-and-inequality/tracking-the-covid-19-recessions-effects-on-food-housing-and>. Accessed on August 5, 2021.
- <sup>111</sup> Witters, D. (2021). *In U.S., An Estimated 46 Million Cannot Afford Needed Care*. Available at: <https://news.gallup.com/poll/342095/estimated-million-cannot-afford-needed-care.aspx>. Accessed on August 5, 2021.
- <sup>112</sup> Odoms-Young, A. M. (2021). *Families, Food, and Parenting: Integrating Research, Practice, and Policy*. Chapter 1: “Structural and Social Adversity and Food Insecurity in Families with Young Children: A Qualitative Metasynthesis.” pp.3–37.
- <sup>113</sup> Propel, Inc. (2021). *“It’s Mind-Boggling like Everyday I Wonder How I’m Going to Do It”: A Year in the Lives of SNAP Households*. Available at: <https://medium.com/@JoinPropel/its-mind-boggling-like-everyday-i-wonder-how-i-m-going-to-do-it-a-year-in-the-lives-of-snap-9d28f77b34c9>. Accessed on August 5, 2021.
- <sup>114</sup> Basu, S. (2019). *Urban Health*. Chapter 4: “Reducing Poverty, Improving Health.” pp.37–43.
- <sup>115</sup> Betson, D., & Warlick, J. (2017). *Methods in Social Epidemiology*. Chapter 4: “Measuring Poverty.” pp.69–90.

- <sup>116</sup> Kivimäki, M., Batty, G. D., Pentti, J., Shipley, M. J., Sipilä, P. N., Nyberg, S. T., Suominen, S. B., Oksanen, T., et al. (2020). Association between Socioeconomic Status and the Development of Mental and Physical Health Conditions in Adulthood: A Multi-Cohort Study. *The Lancet Public Health*. 5(3):e140–49.
- <sup>117</sup> Okoro, C. A., Zhao, G., Fox, J. B., Eke, P. I., Greenlund, K. J., & Town, M. (2017). Surveillance for Health Care Access and Health Services Use, Adults Aged 18–64 Years - Behavioral Risk Factor Surveillance System, United States, 2014. *MMWR Surveillance Summaries*. 66(7):1–42.
- <sup>118</sup> Berkowitz, S. A., Seligman, H. K., & Choudhry, N. K. (2014). Treat or Eat: Food Insecurity, Cost-Related Medication Underuse, and Unmet Needs. *American Journal of Medicine*. 127(4):303–310.e3.
- <sup>119</sup> Herman, D., Afulani, P., Coleman-Jensen, A., & Harrison, G. G. (2015). Food Insecurity and Cost-Related Medication Underuse among Nonelderly Adults in a Nationally Representative Sample. *American Journal of Public Health*. 105(10):e48–59.
- <sup>120</sup> Khullar, D., & Chokshi, D. (2018). *Health, Income, and Poverty: Where We Are and What Could Help*. Available at: <https://www.healthaffairs.org/doi/10.1377/hpb20180817.901935/full/>. Accessed on August 6, 2021.
- <sup>121</sup> Bor, J., Cohen, G. H., & Galea, S. (2017). Population Health in an Era of Rising Income Inequality: USA, 1980–2015. *The Lancet*. 389(10077):1475–90.
- <sup>122</sup> Rijn, R. M. Van, Robroek, S. J. W., Brouwer, S., & Burdorf, A. (2014). Influence of Poor Health on Exit from Paid Employment: A Systematic Review. *Occupational and Environmental Medicine*. 71(4):295–301.
- <sup>123</sup> Ng'andu, J. (2021). *Meeting Parents and Caregivers at Their Aspirations*. Available at: <https://www.rwjf.org/en/blog/2021/04/meeting-parents-and-caregivers-at-their-aspirations.html?rid=003E000000yaobnIAA&cid=2458446>. Accessed on August 5, 2021.
- <sup>124</sup> Rapid Assessment of Pandemic Impact on Development – Early Childhood (RAPID-EC) Database of Open-ended responses, available upon request.
- <sup>125</sup> Schanzenbach, D. W. (2019). Exploring Options to Improve the Supplemental Nutrition Assistance Program (SNAP). *The ANNALS of the American Academy of Political and Social Science*. 686(1):204–28.
- <sup>126</sup> Leddy, A. M., Weiser, S. D., Palar, K., & Seligman, H. (2020). A Conceptual Model for Understanding the Rapid COVID-19–Related Increase in Food Insecurity and Its Impact on Health and Healthcare. *The American Journal of Clinical Nutrition*. 112(3):1162–69.
- <sup>127</sup> Coleman-Jensen, A., Rabbitt, M. P., Gregory, C., & Singh, A. (2020). *Household Food Security in the United States in 2019*. Economic Research Service, ERR-275. Washington, DC: U.S. Government Printing Office.
- <sup>128</sup> Artiga, S., Corallo, B., & Pham, O. (2020). *Racial Disparities in COVID-19: Key Findings from Available Data and Analysis*. Available at: <https://www.kff.org/racial-equity-and-health-policy/issue-brief/racial-disparities-covid-19-key-findings-available-data-analysis/>. Accessed on August 6, 2021.
- <sup>129</sup> Bassett, M. T., Chen, J. T. & Krieger, N. (2020). The Unequal Toll of COVID-19 Mortality by Age in the United States: Quantifying Racial/Ethnic Disparities. *Harv Cent Popul Dev Stud Work Pap Ser*. 19(3).
- <sup>130</sup> Webb Hooper, M., Nápoles, A. M., & Pérez-Stable, E. J. (2020). COVID-19 and Racial/Ethnic Disparities. *JAMA*. 323(24):2466–67.
- <sup>131</sup> Wood, D. (2020). *Coronavirus Data By Race: Understanding The Disparities*. Available at: <https://www.npr.org/sections/health-shots/2020/09/23/914427907/as-pandemic-deaths-add-up-racial-disparities-persist-and-in-some-cases-worsen>. Accessed on August 5, 2021.
- <sup>132</sup> APM Research Lab. (2020). Color of Coronavirus: COVID-19 Deaths Analyzed by Race and Ethnicity. Available at: <https://www.apmresearchlab.org/covid/deaths-by-race>. Accessed on August 6, 2021.
- <sup>133</sup> Artiga, S., Corallo, B., & Pham, O. (2020). *Racial Disparities in COVID-19: Key Findings from Available Data and Analysis*. Available at: <https://www.kff.org/racial-equity-and-health-policy/issue-brief/racial-disparities-covid-19-key-findings-available-data-analysis/>. Accessed on August 6, 2021.
- <sup>134</sup> APM Research Lab. (2020). Color of Coronavirus: COVID-19 Deaths Analyzed by Race and Ethnicity. Available at: <https://www.apmresearchlab.org/covid/deaths-by-race>. Accessed on August 6, 2021.
- <sup>135</sup> Xu, J. J., Chen, J. T., Belin, T. R., Brookmeyer, R. S., Suchard, M. A., & Ramirez, C. M. (2021). Racial and Ethnic Disparities in Years of Potential Life Lost Attributable to COVID-19 in the United States: An Analysis of 45 States and the District of Columbia. *International Journal of Environmental Research and Public Health*. 18(6):2921.
- <sup>136</sup> Bassett, M. T., Chen, J. T. & Krieger, N. (2020). The Unequal Toll of COVID-19 Mortality by Age in the United States: Quantifying Racial/Ethnic Disparities. *Harv Cent Popul Dev Stud Work Pap Ser*. 19(3).
- <sup>137</sup> Dyke, M. E. Van, Mendoza, M. C. B., Li, W., Parker, E. M., Belay, B., Davis, E. M., Quint, J. J., Penman-Aguilar, A. et al. (2021). Racial and Ethnic Disparities in COVID-19 Incidence by Age, Sex, and Period Among Persons Aged <25 Years – 16 U.S. Jurisdictions, January 1–December 31, 2020. *MMWR. Morbidity and Mortality Weekly Report*. 70(11): 382–88.
- <sup>138</sup> Bailey, Z. D., Feldman, J. M., & Bassett, M. T. (2021). How Structural Racism Works – Racist Policies as a Root Cause of U.S. Racial Health Inequities. *New England Journal of Medicine*. 384(8):768–73.

- <sup>139</sup> Schoenfeld Walker, A., Singhvi, A., Holder, J., Gebeloff, R., & Avila, Y. (2021). *Pandemic's Racial Disparities Persist in Vaccine Rollout*. Available at: <https://www.nytimes.com/interactive/2021/03/05/us/vaccine-racial-disparities.html>. Accessed on August 6, 2021.
- <sup>140</sup> Ndugga, N., Hill, L., Artiga, S., & Parker, N. (2021). Latest Data on COVID-19 Vaccinations by Race/Ethnicity. Available at: <https://www.kff.org/coronavirus-covid-19/issue-brief/latest-data-on-covid-19-vaccinations-race-ethnicity/>. Accessed on August 4, 2021.
- <sup>141</sup> Gamblin, M., Brooks, C., & Abu Khalaf, N. B. (2018). *Applying Racial Equity to U.S. Federal Nutrition Assistance Programs: SNAP, WIC and Child Nutrition*. Available at: <https://www.bread.org/library/applying-racial-equity-lens-end-hunger>. Accessed on August 6, 2021.
- <sup>142</sup> Coleman-Jensen, A., Rabbitt, M. P., Gregory, C., & Singh, A. (2020). *Household Food Security in the United States in 2019*. Economic Research Service, ERR-275. Washington, DC: U.S. Government Printing Office.
- <sup>143</sup> Note on measuring poverty: For subpopulations, the Census recommends using poverty estimates from the American Community Survey (ACS) rather than official estimates from the Current Population Survey (CPS). The ACS has a larger sample size. However, we present estimates from the CPS when available (for Black, White, and Latinx communities) because 1) these estimates are directly comparable to the Supplemental Poverty Measure (SPM), while there is no SPM calculated using ACS data and 2) official estimates of food insecurity are derived from the CPS. As an exception, we will use the ACS for poverty estimates for AIAN and NHPI populations. For more, see: Farrigan, T. (2021). *Rural Poverty & Well-Being*. Available at: <https://www.ers.usda.gov/topics/rural-economy-population/rural-poverty-well-being/>. Accessed on: August 6, 2021.
- <sup>144</sup> U.S. Census Bureau. (2019). 2019 American Community Survey 1-Year Estimates: Poverty Status in the Past 12 Months, Table ID S1701. Available at: [https://data.census.gov/cedsci/table?t=Income and Poverty&y=2019&tid=ACSS1Y2019.S1701&hidePreview=false](https://data.census.gov/cedsci/table?t=Income+and+Poverty&y=2019&tid=ACSS1Y2019.S1701&hidePreview=false). Accessed on August 6, 2021.
- <sup>145</sup> Fox, L. (2020). *The Supplemental Poverty Measure: 2019 Current Population Reports*. Available at: <https://www2.census.gov>. Accessed on January 1, 2021.
- <sup>146</sup> Wilson, V., & Rodgers III, W. (2016). *Black-White Wage Gaps Expand with Rising Wage Inequality*. Available at: <https://www.epi.org/publication/black-white-wage-gaps-expand-with-rising-wage-inequality/>. Accessed on August 6, 2021.
- <sup>147</sup> Maness, S. B., Merrell, L., Thompson, E. L., Griner, S. B., Kline, N., & Wheldon, C. (2021). Social Determinants of Health and Health Disparities: COVID-19 Exposures and Mortality Among African American People in the United States. *Public Health Reports*. 136(1):18–22.
- <sup>148</sup> Chattopadhyay, S., & Bianchi, E. C. (2020). Does the Black/White Wage Gap Widen During Recessions? *Work and Occupations*. 48(3):247–84.
- <sup>149</sup> Matthews, M., & Wilcon, V. (2018). *Separate Is Still Unequal: How Patterns of Occupational Segregation Impact Pay for Black Women*. Available at: <https://www.epi.org/blog/separate-is-still-unequal-how-patterns-of-occupational-segregation-impact-pay-for-black-women/>. Accessed on August 6, 2021.
- <sup>150</sup> Gould, E., & Wilson, V. (2020). *Black Workers Face Two of the Most Lethal Preexisting Conditions for Coronavirus-Racism and Economic Inequality*. Available at: <https://www.epi.org/publication/black-workers-covid/>. Accessed on August 6, 2021.
- <sup>151</sup> Wilson, V., Miller, E., & Kassa, M. (2021). *Racial Representation in Professional Occupations*. Available at: <https://www.epi.org/publication/racial-representation-prof-occ/>. Accessed on August 6, 2021.
- <sup>152</sup> Hernández Kent, A. & Ricketts, L. (2020). *Has Wealth Inequality in America Changed over Time? Here Are Key Statistics*. Available at: <https://www.stlouisfed.org/open-vault/2020/december/has-wealth-inequality-changed-over-time-key-statistics>. Accessed on August 10, 2021.
- <sup>153</sup> Maness, S. B., Merrell, L., Thompson, E. L., Griner, S. B., Kline, N., & Wheldon, C. (2021). Social Determinants of Health and Health Disparities: COVID-19 Exposures and Mortality Among African American People in the United States. *Public Health Reports*. 136(1):18–22.
- <sup>154</sup> Sood, L., & Sood, V. (2021). Being African American and Rural: A Double Jeopardy from Covid-19. *Journal of Rural Health*. 37(1):217–21.
- <sup>155</sup> Kinsey, E. W., Hecht, A. A., Dunn, C. G., Levi, R., Read, M. A., Smith, C., Niesen, P., Seligman, H. K., et al. (2020). School Closures During COVID-19: Opportunities for Innovation in Meal Service. *American Journal of Public Health*. 110(11):1635–43.
- <sup>156</sup> Hicken, M.T., Burnside, L., Edwards, D.L. & Lee, H. (2019). *Racism: Science & Tools for the Public Health Professional*. Chapter 5: “Black–White Health Inequalities by Intentional Design: The Lasting Health Impact of Racial Residential Segregation.” pp.117-132.
- <sup>157</sup> Castro, A., & Willingham, Z. (2019). *Progressive Governance Can Turn the Tide for Black Farmers*. Available at: <https://www.americanprogress.org/issues/economy/reports/2019/04/03/467892/progressive-governance-can-turn-tide-black-farmers/>. Accessed on August 10, 2021.

- <sup>158</sup> Egede, L. E., & Walker, R. J. (2020). Structural Racism, Social Risk Factors, and Covid-19 — A Dangerous Convergence for Black Americans. *New England Journal of Medicine*. 383(12):e77.
- <sup>159</sup> Maness, S. B., Merrell, L., Thompson, E. L., Griner, S. B., Kline, N., & Wheldon, C. (2021). Social Determinants of Health and Health Disparities: COVID-19 Exposures and Mortality Among African American People in the United States. *Public Health Reports*. 136(1):18–22.
- <sup>160</sup> Sood, L., & Sood, V. (2021). Being African American and Rural: A Double Jeopardy from Covid-19. *Journal of Rural Health*. 37(1):217–21.
- <sup>161</sup> Poteat, T., Millett, G. A., Nelson, L. R. E. & Beyrer, C. (2020). Understanding COVID-19 Risks and Vulnerabilities among Black Communities in America: The Lethal Force of Syndemics. *Annals of Epidemiology*. 47: 1–3.
- <sup>162</sup> Egede, L. E., & Walker, R. J. (2020). Structural Racism, Social Risk Factors, and Covid-19 — A Dangerous Convergence for Black Americans. *New England Journal of Medicine*. 383(12):e77.
- <sup>163</sup> Johnson, A. & Keating, D. (2021). *Anatomy of a health conundrum: The racial gap in vaccinations*. Available at: <https://www.washingtonpost.com/health/2021/06/27/why-black-americans-arent-being-vaccinated/>. Accessed on August 10, 2021.
- <sup>164</sup> Wrigley-Field, E. (2020). US Racial Inequality May Be as Deadly as COVID-19. *Proceedings of the National Academy of Sciences of the United States of America*. 117(36):21854–56.
- <sup>165</sup> Anderson, V. (2021). *Racism Derails Black Men’s Health, Even as Education Levels Rise*. Available at: <https://khn.org/news/article/racism-derails-black-mens-health-even-as-education-levels-rise/>. Accessed on: August 4, 2021.
- <sup>166</sup> Coleman-Jensen, A., Rabbitt, M. P., Gregory, C., & Singh, A. (2020). *Household Food Security in the United States in 2019*. Economic Research Service, ERR-275. Washington, DC: U.S. Government Printing Office.
- <sup>167</sup> U.S. Census Bureau. (2021). Household Pulse Survey Data Tables. Available at: <https://www.census.gov/programs-surveys/household-pulse-survey/data.html>. Accessed on August 5, 2021.
- <sup>168</sup> Parolin, Z., Curran, M., Matsudaira, J., Waldfogel, J., & Wimer, C. (2020). *Monthly Poverty Rates in the United States during the COVID-19 Pandemic*. Available at: <https://www.povertycenter.columbia.edu/s/COVID-Projecting-Poverty-Monthly-CPSP-2020.pdf>. Accessed on August 5, 2021.
- <sup>169</sup> U.S. Census Bureau. (2021). Household Pulse Survey Data Tables. Available at: <https://www.census.gov/programs-surveys/household-pulse-survey/data.html>. Accessed on August 5, 2021.
- <sup>170</sup> Montenovo, L., Jiang, X., Rojas, F. L., Schmutte, I., Simon, K., Weinberg, B., & Wing, C. (2020). *Determinants of Disparities in Covid-19 Job Losses*. Available at: <https://www.nber.org/papers/w27132>. Accessed on August 6, 2021.
- <sup>171</sup> Smith, S. M., Edwards, R., & Duong, H. C. (2021). *Unemployment Rises in 2020, as the Country Battles the COVID-19 Pandemic*. Available at: <https://www.bls.gov/opub/mlr/2021/article/unemployment-rises-in-2020-as-the-country-battles-the-covid-19-pandemic.htm>. Accessed on August 10, 2021.
- <sup>172</sup> Bureau of Labor Statistics. *The Employment Situation - August 2021*. Available at: [https://www.bls.gov/news.release/archives/empsit\\_09032021.htm](https://www.bls.gov/news.release/archives/empsit_09032021.htm). Accessed on September 8, 2021.
- <sup>173</sup> Dam, D., Gaur, M., Karahan, F., Pilossoph, L., & Schrimmer, W. (2021). *Black and White Differences in the Labor Market Recovery from COVID-19*. Available at: <https://libertystreeteconomics.newyorkfed.org/2021/02/black-and-white-differences-in-the-labor-market-recovery-from-covid-19.html>. Accessed on August 6, 2021.
- <sup>174</sup> National Center for Health Statistics. Distribution of COVID-19 Deaths and Populations, by Jurisdiction, Age, and Race and Hispanic Origin Data Tables. Available at: <https://data.cdc.gov/NCHS/Distribution-of-COVID-19-Deaths-and-Populations-by/jwta-jxgb>. Accessed on September 8, 2021.
- <sup>175</sup> APM Research Lab. (2020). Color of Coronavirus: COVID-19 Deaths Analyzed by Race and Ethnicity. Available at: <https://www.apmresearchlab.org/covid/deaths-by-race>. Accessed on August 6, 2021.
- <sup>176</sup> Paul, R., Arif, A. A., Adeyemi, O., Ghosh, S., & Han, D. (2020). Progression of COVID-19 From Urban to Rural Areas in the United States: A Spatiotemporal Analysis of Prevalence Rates. *The Journal of Rural Health*. 36(4):591–601.
- <sup>177</sup> Anaele, B. I., Doran, C., & McIntire, R. (2021). Visualizing COVID-19 Mortality Rates and African-American Populations in the USA and Pennsylvania. *Journal of Racial and Ethnic Health Disparities*. 1.
- <sup>178</sup> Henning-Smith, C. E., Hernandez, A. M., Hardeman, R. R., Ramirez, M. R., & Kozhimannil, K. B. (2019). Rural Counties With Majority Black Or Indigenous Populations Suffer The Highest Rates Of Premature Death In The US. *Health Affairs (Project Hope)*. 38(12):2019–26.
- <sup>179</sup> Millett, G. A., Jones, A. T., Benkeser, D., Baral, S., Mercer, L., Beyrer, C., Honermann, B., Lankiewicz, E., et al. (2020). Assessing Differential Impacts of COVID-19 on Black Communities. *Annals of Epidemiology*. 47:37–44.
- <sup>180</sup> Ndugga, N., Hill, L., Artiga, S., & Parker, N. (2021). Latest Data on COVID-19 Vaccinations by Race/Ethnicity. Available at: <https://www.kff.org/coronavirus-covid-19/issue-brief/latest-data-on-covid-19-vaccinations-race-ethnicity/>. Accessed on September 8, 2021.



- <sup>181</sup> Johnson, A. & Keating, D. (2021). *Anatomy of a health conundrum: The racial gap in vaccinations*. Available at: <https://www.washingtonpost.com/health/2021/06/27/why-black-americans-arent-being-vaccinated/>. Accessed on August 10, 2021.
- <sup>182</sup> Samuels, A. (2021). *The Reason Black Americans Are Getting Vaccinated At A Much Slower Rate Is Not Because They're Reluctant*. Available at: <https://fivethirtyeight.com/features/why-fewer-black-americans-are-getting-the-covid-19-vaccine-no-its-not-hesitancy/>. Accessed on August 10, 2021.
- <sup>183</sup> Note that FRAC reports use the term “Latinx,” but the U.S. Department of Agriculture and the Census use the term Hispanic.
- <sup>184</sup> Coleman-Jensen, A., Rabbitt, M. P., Gregory, C., & Singh, A. (2020). *Household Food Security in the United States in 2019*. Economic Research Service, ERR-275. Washington, DC: U.S. Government Printing Office.
- <sup>185</sup> Rabbitt, M., Smith, M. D., & Coleman-Jensen, A. (2017). *Food Security Among Hispanic Adults in the United States, 2011-2014*. Economic Research Service, EIB-153. Washington, DC: U.S. Government Printing Office.
- <sup>186</sup> Norris, C., Berning, J., Cleary, R., & Pena, A. (2020). *Food Insecurity Among Immigrant Populations in the United States*. Available at: <https://www.proquest.com/docview/2454677224?pq-origsite=gscholar&fromopenview=true>. Accessed on August 6, 2021.
- <sup>187</sup> Acevedo-Garcia, D., Joshi, P. K., Ruskin, E., Walters, A. N., & Sofer, N. (2021). Restoring An Inclusionary Safety Net For Children In Immigrant Families: A Review Of Three Social Policies: Study Examines Impact of Safety Net Programs on Children in Immigrant Families. *Health Affairs*. 40(7):1099–1107.
- <sup>188</sup> Payán, D., Díaz Rios, K., Ramírez, S. & De Trinidad Young, E. (2021). Structural Barriers Influencing Food Insecurity, Malnutrition, and Health Among Latinas During and After COVID-19: Considerations and Recommendations. *Journal of the Academy of Nutrition and Dietetics*. 121(5): 837–43.
- <sup>189</sup> Food Research & Action Center. (2019). Brief of amici curiae National Housing Law Project, Food Research & Action Center, Center for Law & Social Policy, and other housing, nutrition, and health-focused groups in support of plaintiffs. Available at: <https://frac.org/wp-content/uploads/2019-Public-Charge-Amicus-Brief.pdf>. Accessed on August 6, 2021.
- <sup>190</sup> Pickren, E. (2021). The Food Research & Action Center Files Amicus Brief Opposing Public Charge Rule that Punishes Immigrants and Their Families and Increases Hunger (press release). Available at: <https://frac.org/news/the-food-research-action-center-files-amicus-brief-opposing-public-charge-rule-that-punishes-immigrants-and-their-families-and-increases-hunger>. Accessed on August 6, 2021.
- <sup>191</sup> Food Research & Action Center. (2021). Permanent Block of Public Charge Rule Key Step Forward to Ensuring Immigrants Can Access Critical Nutrition Programs (press release). <https://frac.org/news/permanentblockpublicchargemarch2021>. Accessed on August 19, 2021.
- <sup>192</sup> Macartney, S., Ghertner, R., Giannarelli, L., Wheaton, L., Morton, J., & Shantz, K. (2020). *Projections of Poverty and Program Eligibility during the COVID-19 Pandemic*. Available at: <https://aspe.hhs.gov/reports/projections-poverty-program-eligibility-during-covid-19-pandemic>. Accessed on August 5, 2021.
- <sup>193</sup> Fox, L. (2020). *The Supplemental Poverty Measure: 2019 Current Population Reports*. U.S. Census Bureau, P60-272. Washington DC: U.S. Government Printing Office.
- <sup>194</sup> Montenegro, L., Jiang, X., Rojas, F. L., Schmutte, I., Simon, K., Weinberg, B., & Wing, C. (2020). *Determinants of Disparities in Covid-19 Job Losses*. Available at: <https://www.nber.org/papers/w27132>. Accessed on August 6, 2021.
- <sup>195</sup> Dubay, L., Aarons, J., Brown, S., & Kenney, G. (2020). *How Risk of Exposure to the Coronavirus at Work Varies by Race and Ethnicity and How to Protect the Health and Well-Being of Workers and Their Families*. Available at: <https://www.urban.org/research/publication/how-risk-exposure-coronavirus-work-varies-race-and-ethnicity-and-how-protect-health-and-well-being-workers-and-their-families>. Accessed on August 5, 2021.
- <sup>196</sup> Mora, M. & Dávila, A. (2018). The Hispanic-White Wage Gap has Remained Wide and Relatively Steady. Available at: <https://www.epi.org/publication/the-hispanic-white-wage-gap-has-remained-wide-and-relatively-steady-examining-hispanic-white-gaps-in-wages-unemployment-labor-force-participation-and-education-by-gender-immigrant/>. Accessed on August 10, 2021.
- <sup>197</sup> Hernández Kent, A. & Ricketts, L. (2020). *Has Wealth Inequality in America Changed over Time? Here Are Key Statistics*. Available at: <https://www.stlouisfed.org/open-vault/2020/december/has-wealth-inequality-changed-over-time-key-statistics>. Accessed on August 10, 2021.
- <sup>198</sup> Velasco-Mondragon, E., Jimenez, A., Palladino-Davis, A. G., Davis, D., & Escamilla-Cejudo, J. A. (2016). Hispanic Health in the USA: A Scoping Review of the Literature. *Public Health Reviews*. 37(1):1–27.
- <sup>199</sup> Gray, D. M., Anyane-Yeboah, A., Balzora, S., Issaka, R. B., & May, F. P. (2020). COVID-19 and the Other Pandemic: Populations Made Vulnerable by Systemic Inequity. *Nature Reviews Gastroenterology and Hepatology*. 17(9):520–22.
- <sup>200</sup> Dubay, L., Aarons, J., Brown, S., & Kenney, G. (2020). *How Risk of Exposure to the Coronavirus at Work Varies by Race and Ethnicity and How to Protect the Health and Well-Being of Workers and Their Families*. Available at: <https://www.urban.org/research/publication/how-risk-exposure-coronavirus-work-varies-race-and-ethnicity-and-how-protect-health-and-well-being-workers-and-their-families>. Accessed on August 5, 2021.

- <sup>201</sup> Velasco-Mondragon, E., Jimenez, A., Palladino-Davis, A. G., Davis, D., & Escamilla-Cejudo, J. A. (2016). Hispanic Health in the USA: A Scoping Review of the Literature. *Public Health Reviews*. 37(1):1–27.
- <sup>202</sup> Hing, B. O. (2009). Institutional Racism, ICE Raids, and Immigration Reform. *University of San Francisco Law Review*. 44.
- <sup>203</sup> Rojas-Flores, L. (2017). *Latino U.S.-Citizen Children of Immigrants: A Generation at High Risk. Summary of Selected Young Scholars Program (YSP) Research*. Available at: <https://www.fcd-us.org/latino-us-citizen-children-immigrants-generation-high-risk/>. Accessed on August 6, 2021.
- <sup>204</sup> Rojas-Flores, L. (2017). *Latino U.S.-Citizen Children of Immigrants: A Generation at High Risk. Summary of Selected Young Scholars Program (YSP) Research*. Available at: <https://www.fcd-us.org/latino-us-citizen-children-immigrants-generation-high-risk/>. Accessed on August 6, 2021.
- <sup>205</sup> Bier, D. (2018). *U.S. Citizens Targeted by Immigration and Customs Enforcement in Texas*. Available at: <https://www.cato.org/publications/immigration-research-policy-brief/us-citizens-targeted-ice-us-citizens-targeted?share=linkedin&nb=1>. Accessed on August 6, 2021.
- <sup>206</sup> Stevens, J. (2011). U.S. Government Unlawfully Detaining and Deporting U.S. Citizens as Aliens. *Virginia Journal of Social Policy & the Law*. 18: 606.
- <sup>207</sup> Hing, B. O. (2009). Institutional Racism, ICE Raids, and Immigration Reform. *University of San Francisco Law Review*. 44.
- <sup>208</sup> Rojas-Flores, L. (2017). *Latino U.S.-Citizen Children of Immigrants: A Generation at High Risk. Summary of Selected Young Scholars Program (YSP) Research*. Available at: <https://www.fcd-us.org/latino-us-citizen-children-immigrants-generation-high-risk/>. Accessed on August 6, 2021.
- <sup>209</sup> Potochnick, S., Chen, J. H., & Perreira, K. (2017). Local-Level Immigration Enforcement and Food Insecurity Risk among Hispanic Immigrant Families with Children: National-Level Evidence. *Journal of Immigrant and Minority Health*. 19(5):1042–49.
- <sup>210</sup> Rhodes, S. D., Mann, L., Simán, F. M., Song, E., Alonzo, J., Downs, M., Lawlor, E., Martinez, O., et al. (2015). The Impact of Local Immigration Enforcement Policies on the Health of Immigrant Hispanics/Latinos in the United States. *American Journal of Public Health*. 105(2):329.
- <sup>211</sup> Potochnick, S., Chen, J. H., & Perreira, K. (2017). Local-Level Immigration Enforcement and Food Insecurity Risk among Hispanic Immigrant Families with Children: National-Level Evidence. *Journal of Immigrant and Minority Health*. 19(5):1042–49.
- <sup>212</sup> Potochnick, S., Chen, J. H., & Perreira, K. (2017). Local-Level Immigration Enforcement and Food Insecurity Risk among Hispanic Immigrant Families with Children: National-Level Evidence. *Journal of Immigrant and Minority Health*. 19(5):1042–49.
- <sup>213</sup> Rhodes, S. D., Mann, L., Simán, F. M., Song, E., Alonzo, J., Downs, M., Lawlor, E., Martinez, O., et al. (2015). The Impact of Local Immigration Enforcement Policies on the Health of Immigrant Hispanics/Latinos in the United States. *American Journal of Public Health*. 105(2):329.
- <sup>214</sup> Coleman-Jensen, A., Rabbitt, M. P., Gregory, C., & Singh, A. (2021). Household Food Security in the United States in 2020. Economic Research Service, ERR-298. Washington, DC: U.S. Government Printing Office.
- <sup>215</sup> U.S. Census Bureau. (2021). Household Pulse Survey Data Tables. Available at: <https://www.census.gov/programs-surveys/household-pulse-survey/data.html>. Accessed on September 5, 2021.
- <sup>216</sup> McKnight-Eily, L. R., Okoro, C. A., Strine, T. W., Verlenden, J., Hollis, N. D., Njai, R., Mitchell, E. W., Board, A., et al. (2021). Racial and Ethnic Disparities in the Prevalence of Stress and Worry, Mental Health Conditions, and Increased Substance Use Among Adults During the COVID-19 Pandemic — United States, April and May 2020. *MMWR. Morbidity and Mortality Weekly Report*. 70(5):162–66.
- <sup>217</sup> Parolin, Z., Curran, M., Matsudaira, J., Waldfogel, J., & Wimer, C. (2020). *Monthly Poverty Rates in the United States during the COVID-19 Pandemic*. Available at: <https://www.povertycenter.columbia.edu/s/COVID-Projecting-Poverty-Monthly-CPSP-2020.pdf>. Accessed on August 5, 2021.
- <sup>218</sup> U.S. Census Bureau. (2021). Household Pulse Survey Data Tables. Available at: <https://www.census.gov/programs-surveys/household-pulse-survey/data.html>. Accessed on September 5, 2021.
- <sup>219</sup> Montenovo, L., Jiang, X., Rojas, F. L., Schmutte, I., Simon, K., Weinberg, B., & Wing, C. (2020). *Determinants of Disparities in Covid-19 Job Losses*. Available at: <https://www.nber.org/papers/w27132>. Accessed on August 6, 2021.
- <sup>220</sup> Smith, S. M., Edwards, R., & Duong, H. C. (2021). *Unemployment Rises in 2020, as the Country Battles the COVID-19 Pandemic*. Available at: <https://www.bls.gov/opub/mlr/2021/article/unemployment-rises-in-2020-as-the-country-battles-the-covid-19-pandemic.htm>. Accessed on August 10, 2021.
- <sup>221</sup> Bureau of Labor Statistics. *The Employment Situation - August 2021*. Available at: [https://www.bls.gov/news.release/archives/empsit\\_09032021.htm](https://www.bls.gov/news.release/archives/empsit_09032021.htm). Accessed on September 8, 2021.

- <sup>222</sup> National Center for Health Statistics. Distribution of COVID-19 Deaths and Populations, by Jurisdiction, Age, and Race and Hispanic Origin Data Tables. Available at: <https://data.cdc.gov/NCHS/Distribution-of-COVID-19-Deaths-and-Populations-by/jwta-jxbg>. Accessed on September 8, 2021.
- <sup>223</sup> APM Research Lab. (2020). Color of Coronavirus: COVID-19 Deaths Analyzed by Race and Ethnicity. Available at: <https://www.apmresearchlab.org/covid/deaths-by-race>. Accessed on August 6, 2021.
- <sup>224</sup> U.S. Census Bureau. (2021). Household Pulse Survey Data Tables. Available at: <https://www.census.gov/programs-surveys/household-pulse-survey/data.html>. Accessed on September 5, 2021.
- <sup>225</sup> Ndugga, N., Hill, L., Artiga, S., & Parker, N. (2021). Latest Data on COVID-19 Vaccinations by Race/Ethnicity. Available at: <https://www.kff.org/coronavirus-covid-19/issue-brief/latest-data-on-covid-19-vaccinations-race-ethnicity/>. Accessed on September 7, 2021.
- <sup>226</sup> Jernigan, V. B. B., Huyser, K. R., Valdes, J., & Simonds, V. W. (2017). Food Insecurity Among American Indians and Alaska Natives: A National Profile Using the Current Population Survey–Food Security Supplement. *Journal of Hunger and Environmental Nutrition*. 12(1):1–10.
- <sup>227</sup> Sowerwine, J., Mucioki, M., Sarna-Wojcicki, D., & Hillman, L. (2019). Reframing Food Security by and for Native American Communities: A Case Study among Tribes in the Klamath River Basin of Oregon and California. *Food Security*. 11(3):579–607.
- <sup>228</sup> Note that poverty data for AIAN and NHPI populations comes from the American Community Survey, rather than the Current Population Survey. While both are administered by the Census Bureau, the CPS is used to estimate official poverty statistics. However, data is only reported for Whites, Blacks, Latinos, and Asians – all other races are pooled together due to small sample size. This policy contributes to invisibility of Native populations from the most specific official statistical construct. For comparison, according to the 2019 ACS, overall poverty was 12.3 percent (compared to 10.5 percent in the CPS) and poverty among Whites was 10.3 percent (compared to 9.1 percent in the CPS)
- <sup>229</sup> U.S. Census Bureau. (2019). 2019 American Community Survey 1-Year Estimates: Poverty Status in the Past 12 Months, Table ID S1701. Available at: [https://data.census.gov/cedsci/table?t=Income and Poverty&y=2019&tid=ACSS1Y2019.S1701&hidePreview=false](https://data.census.gov/cedsci/table?t=Income+and+Poverty&y=2019&tid=ACSS1Y2019.S1701&hidePreview=false). Accessed on August 6, 2021.
- <sup>230</sup> Artiga, S., & Orgera, K. (2020). COVID-19 Presents Significant Risks for American Indian and Alaska Native People. Available at: <https://www.kff.org/coronavirus-covid-19/issue-brief/covid-19-presents-significant-risks-for-american-indian-and-alaska-native-people/>. Accessed on August 13, 2020.
- <sup>231</sup> Hipp, J., Echo Hawk, C., & Pipestem, W. (2015). *Feeding Ourselves: Food Access, Health Disparities, and the Pathways to Healthy Native American Communities*. Available at: <https://nativeamericanagriculturefund.org/reports/>. Accessed on August 13, 2021.
- <sup>232</sup> Eichelberger, L., Dev, S., Howe, T., Barnes, D. L., Bortz, E., Briggs, B. R., Cochran, P., Dotson, A. D., et al. (2021). Implications of Inadequate Water and Sanitation Infrastructure for Community Spread of COVID-19 in Remote Alaskan Communities. *Science of the Total Environment*. 776:145842.
- <sup>233</sup> Henson, E., Hill, M., Jorgensen, M., & Kalt, J. (2021). *Recommendations for the Allocation and Administration of American Rescue Plan Act Funding for American Indian Tribal Governments*. Available at: <https://ash.harvard.edu/publications/recommendations-allocation-and-administration-american-rescue-plan-act-funding>. Accessed on August 13, 2021.
- <sup>234</sup> Allard, M. D., & Brundage, V. (2019). *Monthly Labor Review: American Indians and Alaska Natives in the U.S. Labor Force*. Available at: <https://www.bls.gov/opub/mlr/2019/article/american-indians-and-alaska-natives-in-the-u-s-labor-force.htm>. Accessed on August 13, 2021.
- <sup>235</sup> Allard, M. D., & Brundage, V. (2019). *Monthly Labor Review: American Indians and Alaska Natives in the U.S. Labor Force*. Available at: <https://www.bls.gov/opub/mlr/2019/article/american-indians-and-alaska-natives-in-the-u-s-labor-force.htm>. Accessed on August 13, 2021.
- <sup>236</sup> Dubay, L., Aarons, J., Brown, S., & Kenney, G. (2020). *How Risk of Exposure to the Coronavirus at Work Varies by Race and Ethnicity and How to Protect the Health and Well-Being of Workers and Their Families*. Available at: <https://www.urban.org/research/publication/how-risk-exposure-coronavirus-work-varies-race-and-ethnicity-and-how-protect-health-and-well-being-workers-and-their-families>. Accessed on August 5, 2021.
- <sup>237</sup> Hipp, J., Echo Hawk, C., & Pipestem, W. (2015). *Feeding Ourselves: Food Access, Health Disparities, and the Pathways to Healthy Native American Communities*. Available at: <https://nativeamericanagriculturefund.org/reports/>. Accessed on August 13, 2021.
- <sup>238</sup> Adamsen, C., Schroeder, S., LeMire, S., & Carter, P. (2018). Education, Income, and Employment and Prevalence of Chronic Disease among American Indian/Alaska Native Elders. *Preventing Chronic Disease*. 15(3):E37.
- <sup>239</sup> Artiga, S., & Orgera, K. (2020). COVID-19 Presents Significant Risks for American Indian and Alaska Native People. Available at: <https://www.kff.org/coronavirus-covid-19/issue-brief/covid-19-presents-significant-risks-for-american-indian-and-alaska-native-people/>. Accessed on August 13, 2020.

- <sup>240</sup> Tanana, H., & Hoss, A. (2021). *COVID-19 Policy Playbook: Legal Recommendations for a Safer, More Equitable Future*. Chapter 12: “Beyond the Pandemic: Historical Infrastructure, Funding, and Data Access Challenges in Indian Country.” pp.75–79.
- <sup>241</sup> Brodt, E., & Empey, A. (2021). American Indians and Alaska Natives in the COVID-19 Pandemic: The Grave Burden We Stand to Bear. *Health Equity*. 5(1):394–97.
- <sup>242</sup> Dubay, L., Aarons, J., Brown, S., & Kenney, G. (2020). *How Risk of Exposure to the Coronavirus at Work Varies by Race and Ethnicity and How to Protect the Health and Well-Being of Workers and Their Families*. Available at: <https://www.urban.org/research/publication/how-risk-exposure-coronavirus-work-varies-race-and-ethnicity-and-how-protect-health-and-well-being-workers-and-their-families>. Accessed on August 5, 2021.
- <sup>243</sup> Hake, M., Dewey, A., Engelhard, E., Strayer, M., TJ, H., Summerfelt, T., Laone-Smolle, C., Maeby, T., et al. (2020). *The Impact of the Coronavirus on Food Insecurity in 2020*. Available at: [https://www.feedingamerica.org/sites/default/files/2020-04/Brief\\_Impact\\_of\\_Covid\\_on\\_Food\\_Insecurity\\_4.22\\_%28002%29.pdf](https://www.feedingamerica.org/sites/default/files/2020-04/Brief_Impact_of_Covid_on_Food_Insecurity_4.22_%28002%29.pdf). Accessed on August 13, 2020.
- <sup>244</sup> Quintero, L., Simeonova, E., & Akee, R. (2021). Pandemic Protocols, Native Nutrition: Grocery Store Access from American Indian Reservations during COVID-19. *AEA Papers and Proceedings*. 111602–6.
- <sup>245</sup> Lewis, M. E., Volpert-Esmond, H. I., Deen, J. F., Modde, E., & Warne, D. (2021). Stress and Cardiometabolic Disease Risk for Indigenous Populations throughout the Lifespan. *International Journal of Environmental Research and Public Health*. 18(4):1821.
- <sup>246</sup> Blue Bird Jernigan, V., D’Amico, E. J., Duran, B., & Buchwald, D. (2020). Multilevel and Community-Level Interventions with Native Americans: Challenges and Opportunities. *Prevention Science*. 21(Suppl 1):65–73.
- <sup>247</sup> Gurney, R. M., Caniglia, B. S., Mix, T. L., & Baum, K. A. (2015). Native American Food Security and Traditional Foods: A Review of the Literature. *Sociology Compass*. 9(8):681–93.
- <sup>248</sup> Sowerwine, J., Sarna-Wojcicki, D., Mucioki, M., Hillman, L., Lake, F., & Friedman, E. (2019). Enhancing Food Sovereignty: A Five-Year Collaborative Tribal-University Research and Extension Project in California and Oregon. *Journal of Agriculture, Food Systems, and Community Development*. 1–24.
- <sup>249</sup> Sowerwine, A. J., Berkeley, U. C., Mucioki, M., Berkeley, U. C., Hillman, L., Tribe, K., & Berkeley, U. C. (2019). Restoring Access to Native Foods Can Reduce Tribal Food Insecurity : Research Findings.
- <sup>250</sup> Walch, A., Loring, P., Johnson, R., Tholl, M., & Bersamin, A. (2019). Traditional Food Practices, Attitudes, and Beliefs in Urban Alaska Native Women Receiving WIC Assistance. *Journal of Nutrition Education and Behavior*. 51(3):318–25.
- <sup>251</sup> Waxman, E. (2016). *Mapping Food Insecurity and Distress in American Indian and Alaska Native Communities*. Available at: <https://www.urban.org/urban-wire/mapping-food-insecurity-and-distress-american-indian-and-alaska-native-communities>. Accessed on August 13, 2020.
- <sup>252</sup> Mineo, L. (2020). *For Native Americans, COVID-19 Is ‘the Worst of Both Worlds at the Same Time.’* Available at: <https://news.harvard.edu/gazette/story/2020/05/the-impact-of-covid-19-on-native-american-communities/>. Accessed on August 13, 2021.
- <sup>253</sup> Henson, E., Hill, M., Jorgensen, M., & Kalt, J. (2021). *Recommendations for the Allocation and Administration of American Rescue Plan Act Funding for American Indian Tribal Governments*. Available at: <https://ash.harvard.edu/publications/recommendations-allocation-and-administration-american-rescue-plan-act-funding>. Accessed on August 13, 2021.
- <sup>254</sup> Fier, D., & Golding, C. (2020). *Native Employment during COVID-19: Hit Hard in April but Starting to Rebound?* Available at: <https://www.minneapolisfed.org/article/2020/native-employment-during-covid-19-hit-hard-in-april-but-starting-to-rebound>. Accessed on April 8, 2021.
- <sup>255</sup> Fryberg, S., Eason, A., Dai, D., Lopez, J., Yellowtail, J., Munoz-Salgado, A., & Ward-Griffin, E. (2020). *The Impact of COVID-19 on Indigenous People*. Available at: <http://indigenousfutures.illuminatives.org/>. Accessed on August 13, 2021.
- <sup>256</sup> Akee, R., & Reber, S. (2021). *American Indians and Alaska Natives Are Dying of COVID-19 at Shocking Rates*. Available at: <https://www.brookings.edu/research/american-indians-and-alaska-natives-are-dying-of-covid-19-at-shocking-rates/>. Accessed on August 13, 2021.
- <sup>257</sup> Hatcher, S. M., Agnew-Brune, C., Anderson, M., Zambrano, L. D., Rose, C. E., Jim, M. A., Baugher, A., Liu, G. S., et al. (2020). COVID-19 Among American Indian and Alaska Native Persons – 23 States, January 31–July 3, 2020. *MMWR. Morbidity and Mortality Weekly Report*. 69(34):1166–69.
- <sup>258</sup> Wernick, A. (2021). *COVID-19 deaths among tribal elders threaten cultural loss*. Available at: <https://www.pri.org/stories/2021-02-11/covid-19-deaths-among-tribal-elders-threaten-cultural-loss>. Accessed on August 19, 2021.
- <sup>259</sup> Healy, J. (2021). *Tribal Elders Are Dying from the Pandemic, Causing a Cultural Crisis for American Indians*. <https://www.nytimes.com/2021/01/12/us/tribal-elders-native-americans-coronavirus.html>. Accessed on August 11, 2021.
- <sup>260</sup> Healy, J. (2021). *Tribal Elders Are Dying from the Pandemic, Causing a Cultural Crisis for American Indians*. <https://www.nytimes.com/2021/01/12/us/tribal-elders-native-americans-coronavirus.html>. Accessed on August 11, 2021.

- <sup>261</sup> Rodriguez-Lonebear, D., Barceló, N. E., Akee, R., & Carroll, S. R. (2020). American Indian Reservations and COVID-19: Correlates of Early Infection Rates in the Pandemic. *Journal of Public Health Management and Practice*. 26(4):371–77.
- <sup>262</sup> Yellow Horse, A. J., Yang, T. C., & Huyser, K. R. (2021). Structural Inequalities Established the Architecture for COVID-19 Pandemic Among Native Americans in Arizona: A Geographically Weighted Regression Perspective. *Journal of Racial and Ethnic Health Disparities*. 1–11.
- <sup>263</sup> Yellow Horse, A. J., Deschine Parkhurst, N. A., & Huyser, K. R. (2020). COVID-19 in New Mexico Tribal Lands: Understanding the Role of Social Vulnerabilities and Historical Racisms. *Frontiers in Sociology*. 5610355.
- <sup>264</sup> Deschine Parkhurst, N., Huyser, K., & Yellow Horse, A. J. (2020). Historical Environmental Racism, Structural Inequalities, and Dik'os Ntsaaígí-19 (COVID-19) on Navajo Nation. *Journal of Indigenous Social Development*. 9(3):127–40.
- <sup>265</sup> Tanana, H., & Hoss, A. (2021). *COVID-19 Policy Playbook: Legal Recommendations for a Safer, More Equitable Future*. Chapter 12: “Beyond the Pandemic: Historical Infrastructure, Funding, and Data Access Challenges in Indian Country.” pp.75–79.
- <sup>266</sup> Florey, K. (2021). *The Tribal COVID-19 Response*. Available at: <https://www.theregreview.org/2021/03/17/florey-tribal-covid-19-response/>. Accessed on August 19, 2021.
- <sup>267</sup> Long, C. R., Rowland, B., McElfish, P. A., Ayers, B. L., & Narcisse, M. R. (2020). Food Security Status of Native Hawaiians and Pacific Islanders in the US: Analysis of a National Survey. *Journal of Nutrition Education and Behavior*. 52(8):788–95.
- <sup>268</sup> U.S. Census Bureau. (2019). 2019 American Community Survey 1-Year Estimates: Poverty Status in the Past 12 Months, Table ID S1701. Available at: <https://data.census.gov/cedsci/table?t=Income and Poverty&y=2019&tid=ACST1Y2019.S1701&hidePreview=false>. Accessed on August 6, 2021.
- <sup>269</sup> Kaholokula, J. K., Samoa, R. A., Miyamoto, R. E. S., Palafox, N., & Daniels, S. A. (2020). COVID-19 Special Column: COVID-19 Hits Native Hawaiian and Pacific Islander Communities the Hardest. *Hawai'i Journal of Health & Social Welfare*. 79(5):144–46.
- <sup>270</sup> Edlagan, C., & Koppam, R. (2020). *Disaggregated Data on Asian Americans, Native Hawaiians, and Pacific Islanders Is Crucial amid the Coronavirus Pandemic*. Available at: <https://equitablegrowth.org/disaggregated-data-on-asian-americans-native-hawaiians-and-pacific-islanders-is-crucial-amid-the-coronavirus-pandemic/>. Accessed on August 13, 2021.
- <sup>271</sup> Aloha United Way. (2020). *United for ALICE*. Available at: <https://www.auw.org/united-for-alice>. Accessed on August 13, 2021.
- <sup>272</sup> Liou, W. (2020). *COVID-19 and the Economically Vulnerable Populations in Hawaii*. Available at: <https://dbedt.hawaii.gov/economic/covid19/>. Accessed on August 14, 2021.
- <sup>273</sup> Kaholokula, J. K., Samoa, R. A., Miyamoto, R. E. S., Palafox, N., & Daniels, S. A. (2020). COVID-19 Special Column: COVID-19 Hits Native Hawaiian and Pacific Islander Communities the Hardest. *Hawai'i Journal of Health & Social Welfare*. 79(5):144–46.
- <sup>274</sup> Chang, R. C., Penaia, C., & Thomas, K. (2020). *Count Native Hawaiian And Pacific Islanders In COVID-19 Data—It's An OMB Mandate*. Available at: <https://www.healthaffairs.org/doi/10.1377/hblog20200825.671245/full/>. Accessed on August 14, 2021.
- <sup>275</sup> Wang, D., Gee, G. C., Bahiru, E., Yang, E. H., & Hsu, J. J. (2020). Asian-Americans and Pacific Islanders in COVID-19: Emerging Disparities Amid Discrimination. *Journal of General Internal Medicine*. 35(12):3685–88.
- <sup>276</sup> Chang, R. C., Penaia, C., & Thomas, K. (2020). *Count Native Hawaiian And Pacific Islanders In COVID-19 Data—It's An OMB Mandate*. Available at: <https://www.healthaffairs.org/doi/10.1377/hblog20200825.671245/full/>. Accessed on August 14, 2021.
- <sup>277</sup> Ramirez, R. (2020). *How Pacific Islanders Have Been Left to Fend for Themselves in the Pandemic*. Available at: <https://www.vox.com/2020/12/14/22168249/pacific-islanders-native-hawaiians-covid-19-pandemic>. Accessed on August 13, 2021.
- <sup>278</sup> Morey, B. N., Tulua, 'A., Tanjasiri, S. P., Subica, A.-D. M., Kaholokula, J. K., Penaia, C., Thomas, K., Chang, R. C., et al. (2020). Structural Racism and Its Effects on Native Hawaiians and Pacific Islanders in the United States: Issues of Health Equity, Census Undercounting, and Voter Disenfranchisement. *AAPI Nexus*. 17(1).
- <sup>279</sup> Pirkle, C., & Sentell, T. (2020). *One in Five Hawai'i Residents Indicate That They Do Not Have Enough Money for Food*. Available at: <http://manoa.hawaii.edu/publichealth/news/2020/08/26/one-in-five-hawaii-residents-indicate-that-they-do-not-have-enough-money-for-food>. Accessed on August 14, 2021.
- <sup>280</sup> Asian & Pacific Islander American Health Forum, COVID Collaborative, and Hart Research. (2021). *Nationwide Survey of AANHPI on COVID-19*. Available at: <https://www.apiahf.org/resource/nationwide-survey-of-aanhpi-on-covid-19/>. Accessed on August 14, 2021.

- <sup>281</sup> Shen, K. (2020). *The Economic Costs of the Pandemic for the Pacific Islands*. Available at: <https://www.csis.org/blogs/new-perspectives-asia/economic-costs-pandemic-pacific-islands>. Accessed on August 14, 2021.
- <sup>282</sup> Department of Business, Economic Development & Tourism. (2021). COVID-19 & Hawaii's Economy. Available at: <https://dbedt.hawaii.gov/economic/covid19/>. Accessed on August 14, 2021.
- <sup>283</sup> Yerton, S. (2021). *Dark Clouds Are Looming Over Hawaii Even As The Economy Appears To Be Improving*. Available at: <https://www.civilbeat.org/2021/04/dark-clouds-are-looming-over-hawaii-even-as-the-economy-appears-to-be-improving/>. Accessed on August 14, 2021.
- <sup>284</sup> Pacific Islander Center of Primary Care Excellence. (2021). Pacific Islander COVID-19 Response Team. Available at: <https://pi-copce.org/covid19response/>. Accessed on August 14, 2021.
- <sup>285</sup> Long, C. R., Rowland, B., McElfish, P. A., Ayers, B. L., & Narcisse, M. R. (2020). Food Security Status of Native Hawaiians and Pacific Islanders in the US: Analysis of a National Survey. *Journal of Nutrition Education and Behavior*. 52(8):788–95.
- <sup>286</sup> Wang, D., Gee, G. C., Bahiru, E., Yang, E. H., & Hsu, J. J. (2020). Asian-Americans and Pacific Islanders in COVID-19: Emerging Disparities Amid Discrimination. *Journal of General Internal Medicine*. 35(12):3685–88.
- <sup>287</sup> Morey, B. N., Tulua, 'A., Tanjasiri, S. P., Subica, A.-D. M., Kaholokula, J. K., Penaia, C., Thomas, K., Chang, R. C., et al. (2020). Structural Racism and Its Effects on Native Hawaiians and Pacific Islanders in the United States: Issues of Health Equity, Census Undercounting, and Voter Disenfranchisement. *AAPI Nexus*. 17(1).
- <sup>288</sup> Kaholokula, J. K., Samoa, R. A., Miyamoto, R. E. S., Palafox, N., & Daniels, S. A. (2020). COVID-19 Special Column: COVID-19 Hits Native Hawaiian and Pacific Islander Communities the Hardest. *Hawai'i Journal of Health & Social Welfare*. 79(5):144–46.
- <sup>289</sup> Asian & Pacific Islander American Health Forum, COVID Collaborative, and Hart Research. (2021). *Nationwide Survey of AANHPI on COVID-19*. Available at: <https://www.apiahf.org/resource/nationwide-survey-of-aanhpi-on-covid-19/>. Accessed on August 14, 2021.
- <sup>290</sup> Wang, D., Gee, G. C., Bahiru, E., Yang, E. H., & Hsu, J. J. (2020). Asian-Americans and Pacific Islanders in COVID-19: Emerging Disparities Amid Discrimination. *Journal of General Internal Medicine*. 35(12):3685–88.
- <sup>291</sup> Wang, D., Gee, G. C., Bahiru, E., Yang, E. H., & Hsu, J. J. (2020). Asian-Americans and Pacific Islanders in COVID-19: Emerging Disparities Amid Discrimination. *Journal of General Internal Medicine*. 35(12):3685–88.
- <sup>292</sup> Mar, D. & Ong, P. (2020). *COVID-19's Employment Disruptions to Asian Americans*. Available at: [www.aasc.ucla.edu/resources/policyreports/COVID19\\_Employment\\_CNK-AASC\\_072020.pdf](http://www.aasc.ucla.edu/resources/policyreports/COVID19_Employment_CNK-AASC_072020.pdf). Accessed on August 12, 2021.
- <sup>293</sup> Ramirez, M. (2021). *'Invisibilized': Asian Americans lead in long-term unemployment amid COVID-19 pandemic and hate attacks*. Available at: <https://www.usatoday.com/story/news/nation/2021/04/07/covid-19-asian-americans-joblessness-has lasted longer pandemic/4823285001/>. Accessed on August 12, 2021.
- <sup>294</sup> Ford, L., Arabandi, B., Lou, C., Wong, J., & Ong, A. (2021). *Advancing Equity for AAPI Communities*. Available at: [https://www.urban.org/research/publication/advancing-equity-aapi-communities/view/full\\_report](https://www.urban.org/research/publication/advancing-equity-aapi-communities/view/full_report). Accessed on August 12, 2021.
- <sup>295</sup> Pérez-Lopez, D. J. & Monte, L. M. (2021). *Asian Population More Likely to Report Fear of Going Out for Food as Reason They Did Not Have Enough to Eat During COVID*. Available at: <https://www.census.gov/library/stories/2021/08/asian-households-cite-fear-of-going-out-as-reason-for-food-insufficiency-during-pandemic.html>. Accessed on August 11, 2021.
- <sup>296</sup> Edlagan, C., & Koppam, R. (2020). *Disaggregated Data on Asian Americans, Native Hawaiians, and Pacific Islanders Is Crucial amid the Coronavirus Pandemic*. Available at: <https://equitablegrowth.org/disaggregated-data-on-asian-americans-native-hawaiians-and-pacific-islanders-is-crucial-amid-the-coronavirus-pandemic/>. Accessed on August 13, 2021.
- <sup>297</sup> Forbes, W. (2021). *Asian Americans Should Not Be Targets for Hate Crimes or Food Insecurity*. Available at: <https://frac.org/blog/asian-americans-should-not-be-targets-for-hate-crimes-or-food-insecurity>. Accessed on August 14, 2021.
- <sup>298</sup> Coleman-Jensen, A., Rabbitt, M. P., Gregory, C., & Singh, A. (2020). *Household Food Security in the United States in 2019*. Economic Research Service, ERR-275. Washington, DC: U.S. Government Printing Office.
- <sup>299</sup> U.S. Census Bureau. (2019). 2019 American Community Survey 1-Year Estimates: Poverty Status in the Past 12 Months, Table ID S1701. Available at: <https://data.census.gov/cedsci/table?t=Income and Poverty&y=2019&tid=ACST1Y2019.S1701&hidePreview=false>. Accessed on August 6, 2021.
- <sup>300</sup> Fox, L. (2020). *The Supplemental Poverty Measure: 2019 Current Population Reports*. U.S. Census Bureau, P60-272. Washington DC: U.S. Government Printing Office.
- <sup>301</sup> Semega, J., Kollar, M., Shrider, E., & Creamer, J. (2020). *Income and Poverty in the United States: 2019*. U.S. Census Bureau, P60-270. Washington DC: U.S. Government Printing Office.

- <sup>302</sup> Foster, T. B., Murray-Close, M., Landivar, L. C., & DeWolf, M. (2020). *An Evaluation of the Gender Wage Gap Using Linked Survey and Administrative Data*. Available at: <https://www.census.gov/library/working-papers/2020/adrm/CES-WP-20-34.html>. Accessed on August 14, 2021.
- <sup>303</sup> Laraia, B. A., Siega-Riz, A. M., & Gundersen, C. (2010). Household Food Insecurity Is Associated with Self-Reported Pregravid Weight Status, Gestational Weight Gain, and Pregnancy Complications. *Original Research Meets Learning Need Codes*. 110(5):692–701.
- <sup>304</sup> Hernandez, D. C., Reesor, L. M., & Murillo, R. (2017). Food Insecurity and Adult Overweight/Obesity: Gender and Race/Ethnic Disparities. *Appetite*. 117:373–78.
- <sup>305</sup> Ivers, L. C., & Cullen, K. A. (2011). Food Insecurity: Special Considerations for Women. *The American Journal of Clinical Nutrition*. 94(6):1740S-1744S.
- <sup>306</sup> Laraia, B. A., Siega-Riz, A. M., & Gundersen, C. (2010). Household Food Insecurity Is Associated with Self-Reported Pregravid Weight Status, Gestational Weight Gain, and Pregnancy Complications. *Original Research Meets Learning Need Codes*. 110(5):692–701.
- <sup>307</sup> Ivers, L. C., & Cullen, K. A. (2011). Food Insecurity: Special Considerations for Women. *The American Journal of Clinical Nutrition*. 94(6):1740S-1744S.
- <sup>308</sup> Laraia, B. A., Siega-Riz, A. M., & Gundersen, C. (2010). Household Food Insecurity Is Associated with Self-Reported Pregravid Weight Status, Gestational Weight Gain, and Pregnancy Complications. *Original Research Meets Learning Need Codes*. 110(5):692–701.
- <sup>309</sup> Carmichael, S. L., Yang, W., Herring, A., Abrams, B., & Shaw, G. M. (2007). Maternal Food Insecurity Is Associated with Increased Risk of Certain Birth Defects. *Journal of Nutrition*. 137(9):2087–92.
- <sup>310</sup> Ivers, L. C., & Cullen, K. A. (2011). Food Insecurity: Special Considerations for Women. *The American Journal of Clinical Nutrition*. 94(6):1740S-1744S.
- <sup>311</sup> Maynard, M., Andrade, L., Packull-McCormick, S., Perlman, C., Leos-Toro, C., & Kirkpatrick, S. (2018). Food Insecurity and Mental Health among Females in High-Income Countries. *International Journal of Environmental Research and Public Health*. 15(7):1424.
- <sup>312</sup> Coleman-Jensen, A., Rabbitt, M. P., Gregory, C., & Singh, A. (2021). Household Food Security in the United States in 2020. Economic Research Service, ERR-298. Washington, DC: U.S. Government Printing Office.
- <sup>313</sup> Schanzenbach, D. (2020). *Not Enough to Eat: COVID-19 Deepens America's Hunger Crisis*. Available at: [https://frac.org/wp-content/uploads/Not-Enough-to-Eat\\_Hunger-and-COVID.pdf](https://frac.org/wp-content/uploads/Not-Enough-to-Eat_Hunger-and-COVID.pdf). Accessed on August 14, 2021.
- <sup>314</sup> U.S. Census Bureau. (2021). Household Pulse Survey Data Tables. Available at: <https://www.census.gov/programs-surveys/household-pulse-survey/data.html>. Accessed on August 5, 2021.
- <sup>315</sup> Montenegro, L., Jiang, X., Rojas, F. L., Schmutte, I., Simon, K., Weinberg, B., & Wing, C. (2020). *Determinants of Disparities in Covid-19 Job Losses*. Available at: <https://www.nber.org/papers/w27132>. Accessed on August 6, 2021.
- <sup>316</sup> Alon, T., Doepke, M., Olmstead-Rumsey, J., & Tertilt, M. (2020). *The Impact of COVID-19 on Gender Equality*. Available at: <http://www.nber.org/papers/w26947>. Accessed on August 14, 2021.
- <sup>317</sup> Bureau of Labor Statistics. (2020). E-16. Unemployment Rates by Age, Sex, Race, and Hispanic or Latino Ethnicity. Available at: [https://www.bls.gov/web/empsit/cpsee\\_e16.htm](https://www.bls.gov/web/empsit/cpsee_e16.htm). Accessed on August 14, 2021.
- <sup>318</sup> Montenegro, L., Jiang, X., Rojas, F. L., Schmutte, I., Simon, K., Weinberg, B., & Wing, C. (2020). *Determinants of Disparities in Covid-19 Job Losses*. Available at: <https://www.nber.org/papers/w27132>. Accessed on August 6, 2021.
- <sup>319</sup> Alon, T., Doepke, M., Olmstead-Rumsey, J., & Tertilt, M. (2020). *The Impact of COVID-19 on Gender Equality*. Available at: <http://www.nber.org/papers/w26947>. Accessed on August 14, 2021.
- <sup>320</sup> Cohen, P. (2020). *Recession with a Difference: Women Face Special Burden*. Available at: <https://www.nytimes.com/2020/11/17/business/economy/women-jobs-economy-recession.html>. Accessed on August 14, 2021.
- <sup>321</sup> Gogoi, P. (2020). *Why Women Are Quitting Work: The Pandemic's Devastating Toll*. Available at: <https://www.npr.org/2020/10/28/928253674/stuck-at-home-moms-the-pandemics-devastating-toll-on-women>. Accessed on August 14, 2021.
- <sup>322</sup> RAPID-EC. (2021). *Mothers of Young Children Speak on Work During the Pandemic*. Available at: <https://www.uorapidresponse.com/mothers-of-young-children-speak-on-work-during-the-pandemic>. Accessed on August 14, 2021.
- <sup>323</sup> RAPID-EC. (2021). *Mothers of Young Children Speak on Work During the Pandemic*. Available at: <https://www.uorapidresponse.com/mothers-of-young-children-speak-on-work-during-the-pandemic>. Accessed on August 14, 2021.
- <sup>324</sup> Heggeness, M. L., Fields, J., Garcia Trejo, Y., & Schulzetenberg, A. (2021). *Tracking Job Losses for Mothers of School-Age Children During a Health Crisis*. Available at: <https://www.census.gov/library/stories/2021/03/moms-work-and-the-pandemic.html>. Accessed on August 14, 2021.

- <sup>325</sup> Bauer, L., Estep, S., & Yee, W. (2021). *Time Waited for No Mom in 2020*. Available at: [https://www.hamiltonproject.org/blog/mothers\\_time\\_use\\_update](https://www.hamiltonproject.org/blog/mothers_time_use_update). Accessed on August 19, 2021.
- <sup>326</sup> Frederiksen, B., Ranji, U., Salganicoff, A., & Long, M. (2021). *Women's Experiences with Health Care During the COVID-19 Pandemic: Findings from the KFF Women's Health Survey*. Available at: <https://www.kff.org/womens-health-policy/issue-brief/womens-experiences-with-health-care-during-the-covid-19-pandemic-findings-from-the-kff-womens-health-survey/>. Accessed on August 14, 2021.
- <sup>327</sup> Ellington, S., Strid, P., Tong, V. T., Woodworth, K., Galang, R. R., Zambrano, L. D., Nahabedian, J., Anderson, K., et al. (2020). Characteristics of Women of Reproductive Age with Laboratory-Confirmed SARS-CoV-2 Infection by Pregnancy Status – United States, January 22–June 7, 2020. *MMWR. Morbidity and Mortality Weekly Report*. 69(25):769–75.
- <sup>328</sup> Lindberg, L. D., VandeVusse, A., Mueller, J., & Kirstein, M. (2020). *Early Impacts of the COVID-19 Pandemic: Findings from the 2020 Guttmacher Survey of Reproductive Health Experiences*. Available at: <https://www.guttmacher.org/report/early-impacts-covid-19-pandemic-findings-2020-guttmacher-survey-reproductive-health>. Accessed on August 14, 2021.
- <sup>329</sup> Connor, J., Madhavan, S., Mokashi, M., Amanuel, H., Johnson, N. R., Pace, L. E., & Bartz, D. (2020). Health Risks and Outcomes That Disproportionately Affect Women during the Covid-19 Pandemic: A Review. *Social Science and Medicine*. 266:113364.
- <sup>330</sup> Connor, J., Madhavan, S., Mokashi, M., Amanuel, H., Johnson, N. R., Pace, L. E., & Bartz, D. (2020). Health Risks and Outcomes That Disproportionately Affect Women during the Covid-19 Pandemic: A Review. *Social Science and Medicine*. 266:113364.
- <sup>331</sup> Connor, J., Madhavan, S., Mokashi, M., Amanuel, H., Johnson, N. R., Pace, L. E., & Bartz, D. (2020). Health Risks and Outcomes That Disproportionately Affect Women during the Covid-19 Pandemic: A Review. *Social Science and Medicine*. 266:113364.
- <sup>332</sup> Broster, A. (2021). *Coronavirus Has Created A 'Mental Health Crisis' For Pregnant People, According To New Study*. Available at: <https://www.forbes.com/sites/alicebroster/2021/03/25/coronavirus-has-created-a-mental-health-crisis-for-pregnant-people-according-to-new-study/?sh=320e86334e28>. Accessed on August 14, 2021.
- <sup>333</sup> Coleman-Jensen, A., Rabbitt, M. P., Gregory, C., & Singh, A. (2020). *Household Food Security in the United States in 2019*. Economic Research Service, ERR-275. Washington, DC: U.S. Government Printing Office.
- <sup>334</sup> Food and Nutrition Service. Trends in SNAP Participation Rates: FY 2016-2018. Available at: <https://www.fns.usda.gov/snap/trends-participation-rates-fiy-2016-2018>. Accessed on August 14, 2021.
- <sup>335</sup> Fitzpatrick, K., Greenhalgh-Stanley, N., & Ploeg, M. Ver. (2016). The Impact of Food Deserts on Food Insufficiency and SNAP Participation among the Elderly. *American Journal of Agricultural Economics*. 98(1):19–40.
- <sup>336</sup> Finkelstein, A., & Notowidigdo, M. J. (2019). Take-Up and Targeting: Experimental Evidence from SNAP. *The Quarterly Journal of Economics*. 134(3):1505–56.
- <sup>337</sup> Food Research & Action Center and the AARP Foundation. (2014). *Combating Food Insecurity: Tools for Helping Older Adults Access SNAP*. Available at: <https://frac.org/research/resource-library/combating-food-insecurity-tools-helping-older-adults-access-snap-2>. Accessed on August 14, 2021.
- <sup>338</sup> Ziliak, J. P. (2021). Food Hardship during the Covid-19 Pandemic and Great Recession. *Applied Economic Perspectives and Policy*. 43(1):132–52.
- <sup>339</sup> Fox, L. (2020). *The Supplemental Poverty Measure: 2019 Current Population Reports*. U.S. Census Bureau, P60-272. Washington DC: U.S. Government Printing Office.
- <sup>340</sup> Boersma, P., Black, L. I., & Ward, B. W. (2020). Prevalence of Multiple Chronic Conditions Among US Adults, 2018. *Preventing Chronic Disease*. 17:200130.
- <sup>341</sup> Cohen, M. A., & Tavares, J. (2020). Who Are the Most At-Risk Older Adults in the COVID-19 Era? It's Not Just Those in Nursing Homes. *Journal of Aging & Social Policy*. 32(4–5):380–86.
- <sup>342</sup> Garnier-Crussard, A., Forestier, E., Gilbert, T., & Krolak-Salmon, P. (2020). Novel Coronavirus (COVID-19) Epidemic: What Are the Risks for Older Patients? *Journal of the American Geriatrics Society*. 68(5):939–40.
- <sup>343</sup> Shahid, Z., Kalayanamitra, R., McClafferty, B., Kepko, D., Ramgobin, D., Patel, R., Aggarwal, C. S., Vunnam, R., et al. (2020). COVID-19 and Older Adults: What We Know. *Journal of the American Geriatrics Society*. 68(5):926–29.
- <sup>344</sup> Spitzer, A. K.-L., Shenk, M. P. R., & Mabli, J. G. (2020). Food Insecurity Is Directly Associated with the Use of Health Services for Adverse Health Events among Older Adults. *The Journal of Nutrition*. 150(12):3152–60.
- <sup>345</sup> Coleman-Jensen, A., Rabbitt, M. P., Gregory, C., & Singh, A. (2021). *Household Food Security in the United States in 2020*. Economic Research Service, ERR-298. Washington, DC: U.S. Government Printing Office.
- <sup>346</sup> U.S. Census Bureau. (2021). Household Pulse Survey Data Tables. Available at: <https://www.census.gov/programs-surveys/household-pulse-survey/data.html>. Accessed on August 5, 2021.
- <sup>347</sup> Young, J. (2020). *New Survey Data: Meals on Wheels National Network Continues to Face Unprecedented Demand and Rising Costs Due to COVID-19*. Available at: <https://www.mealsonwheelsamerica.org/learn-more/national/press->



[room/news/2020/08/12/new-survey-data-meals-on-wheels-national-network-continues-to-face-unprecedented-demand-and-rising-costs-due-to-covid-19](#). Accessed on August 14, 2021.

<sup>348</sup> Ziliak, J. P. (2021). Food Hardship during the Covid-19 Pandemic and Great Recession. *Applied Economic Perspectives and Policy*. 43(1):132–52.

<sup>349</sup> Gould, E. (2021). Older workers were devastated by the pandemic downturn and continue to face adverse employment outcomes: EPI testimony for the Senate Special Committee on Aging. Available at: <https://www.epi.org/publication/older-workers-were-devastated-by-the-pandemic-downturn-and-continue-to-face-adverse-employment-outcomes-epi-testimony-for-the-senate-special-committee-on-aging/>. Accessed on July 8, 2021.

<sup>350</sup> U.S. Census Bureau. (2021). Household Pulse Survey Data Tables. Available at: <https://www.census.gov/programs-surveys/household-pulse-survey/data.html>. Accessed on August 5, 2021.

<sup>351</sup> Carr, D. (2021). COVID 19: Trends, Disparities, and Consequences for Older Adults. *The Journals of Gerontology: Series B*. 76(3):e65–67.

<sup>352</sup> National Center for Health Statistics. (2021). Provisional COVID-19 Death Counts by Age in Years, 2020–2021. Available at: <https://www.cdc.gov/nchs/covid19/covid-19-mortality-data-files.htm>. Accessed on August 14, 2021.

<sup>353</sup> Cohen, M. A., & Tavares, J. (2020). Who Are the Most At-Risk Older Adults in the COVID-19 Era? It's Not Just Those in Nursing Homes. *Journal of Aging & Social Policy*. 32(4–5):380–86.

<sup>354</sup> Previtali, F., Allen, L. D., & Varlamova, M. (2020). Not Only Virus Spread: The Diffusion of Ageism during the Outbreak of COVID-19. *Journal of Aging and Social Policy*. 32(4–5):506–14.

<sup>355</sup> Berridge, C., Parsey, C. M., Ramirez, M., Freitag, C., Johnson, I. M., & Allard, S. W. (2020). *Caring for Washington's Older Adults in the COVID-19 Pandemic*. Available at: <https://digital.lib.washington.edu/443/researchworks/handle/1773/46272>. Accessed on August 14, 2021.

<sup>356</sup> Baker-Smith, C., Coca, V., Goldrick-Rab, S., Looker, E., Richardson, B., & Williams, T. (2020). *#RealCollege 2020: Five Years of Evidence on Campus Basic Needs Insecurity*.

<sup>357</sup> Holden, L. (2021). *Reducing Food Insecurity Among College Students*. Available at: <https://frac.org/blog/reducing-food-insecurity-among-college-students>. Accessed on August 14, 2021.

<sup>358</sup> Laska, M. N., Fleischhacker, S., Petsoulis, C., Bruening, M., & Stebleton, M. J. (2020). Addressing College Food Insecurity: An Assessment of Federal Legislation Before and During Coronavirus Disease-2019. *Journal of Nutrition Education and Behavior*. 52(10):982–87.

<sup>359</sup> Larin, K., St Pierre, M., Boretti, N., Rider, J., & Yoder, S. (2018). *Food Insecurity: Better Information Could Help Eligible College Students Access Federal Food Assistance Benefits*. U.S. Government Accountability Office, GAO-19-95. Washington DC: U.S. Government Printing Office.

<sup>360</sup> Holden, L. (2021). “Reducing Food Insecurity Among College Students.” *Food Research & Action Center Chat*. Available at: <https://frac.org/blog/reducing-food-insecurity-among-college-students>. Accessed on July 29, 2021.

<sup>361</sup> Hawkins, J. (2019). *The Rise of Young Adult Poverty in the U.S.* Available at: <https://gspp.berkeley.edu/faculty-and-impact/news/recent-news/poverty-among-young-adults-is-on-the-rise>. Accessed on August 14, 2021.

<sup>362</sup> Nagata, J. M., Palar, K., Gooding, H. C., Garber, A. K., Bibbins-Domingo, K., & Weiser, S. D. (2019). Food Insecurity and Chronic Disease in US Young Adults: Findings from the National Longitudinal Study of Adolescent to Adult Health. *Journal of General Internal Medicine*. 34(12):2756–62.

<sup>363</sup> Nagata, J. M., Palar, K., Gooding, H. C., Garber, A. K., Whittle, H. J., Bibbins-Domingo, K., & Weiser, S. D. (2019). Food Insecurity Is Associated With Poorer Mental Health and Sleep Outcomes in Young Adults. *Journal of Adolescent Health*. 65(6):805–11.

<sup>364</sup> U.S. Census Bureau. (2021). Household Pulse Survey Data Tables. Available at: <https://www.census.gov/programs-surveys/household-pulse-survey/data.html>. Accessed on August 5, 2021.

<sup>365</sup> Owens, M. R., Brito-Silva, F., Kirkland, T., Moore, C. E., Davis, K. E., Patterson, M. A., Miketinas, D. C., & Tucker, W. J. (2020). Prevalence and Social Determinants of Food Insecurity among College Students during the COVID-19 Pandemic. *Nutrients*. 12(9):1–17.

<sup>366</sup> Soldavini, J., Andrew, H., & Berner, M. (2021). Characteristics Associated with Changes in Food Security Status among College Students during the COVID-19 Pandemic. *Translational Behavioral Medicine*. 11(2):295–304.

<sup>367</sup> Holden, L. (2021). *Reducing Food Insecurity Among College Students*. Available at: <https://frac.org/blog/reducing-food-insecurity-among-college-students>. Accessed on August 14, 2021.

<sup>368</sup> 116th Congress (2019–2020). (2020). H.R.133 - Consolidated Appropriations Act, 2021. Available at: <https://www.congress.gov/bill/116th-congress/house-bill/133/text>. Accessed on August 14, 2021.

<sup>369</sup> Montenovo, L., Jiang, X., Rojas, F. L., Schmutte, I., Simon, K., Weinberg, B., & Wing, C. (2020). *Determinants of Disparities in Covid-19 Job Losses*. Available at: <https://www.nber.org/papers/w27132>. Accessed on August 6, 2021.

<sup>370</sup> National Student Clearinghouse Research Center. (2020). *COVID-19: Stay Informed with the Latest Enrollment Information*. Available at: <https://nscresearchcenter.org/stay-informed/>. Accessed on August 14, 2021.

- <sup>371</sup> Cherney, E. (2020). *Work, Classes, Financial Aid — and Now COVID-19: Life as a Poor College Student Has Only Gotten Tougher during the Pandemic*. Available at: <https://www.chicagotribune.com/coronavirus/ct-covid-19-illinois-low-income-college-students-20201127-53zqvwncw5colb72ni3ylxgju-story.html>. Accessed on August 14, 2021.
- <sup>372</sup> Laska, M. N., Fleischhacker, S., Petsoulis, C., Bruening, M., & Stebleton, M. J. (2020). Addressing College Food Insecurity: An Assessment of Federal Legislation Before and During Coronavirus Disease-2019. *Journal of Nutrition Education and Behavior*. 52(10):982–87.
- <sup>373</sup> Centers for Disease Control and Prevention. (2021). COVID Data Tracker: Percent of People Receiving COVID-19 Vaccine by Age and Date Reported to CDC, United States. Available at: <https://covid.cdc.gov/covid-data-tracker/#vaccination-demographics-trends>. Accessed on August 12, 2021.
- <sup>374</sup> Citroner, G. (2021). *Young People Make Up Biggest Group of Newly Hospitalized COVID-19 Patients*. Available at: <https://www.healthline.com/health-news/young-people-make-up-biggest-group-of-newly-hospitalized-covid-19-patients>. Accessed on August 12, 2021.
- <sup>375</sup> Coleman-Jensen, A., Rabbitt, M. P., Gregory, C., & Singh, A. (2020). *Household Food Security in the United States in 2019*. Economic Research Service, ERR-275. Washington, DC: U.S. Government Printing Office.
- <sup>376</sup> Gundersen, C., & Ziliak, J. P. (2014). Childhood Food Insecurity in the U.S.: Trends, Causes, and Policy Options. *The Future of Children*. (Fall):1–19. *The Future of Children*. (Fall):1–19.
- <sup>377</sup> Norris, C., Berning, J., Cleary, R., & Pena, A. (2020). *Food Insecurity Among Immigrant Populations in the United States*. Available at: <https://www.proquest.com/docview/2454677224?pq-origsite=gscholar&fromopenview=true>. Accessed on August 6, 2021.
- <sup>378</sup> Moulton, S., Loibl, C., Haurin, D., & Edmunds, C. (2019). *Symposium on Housing Tenure and Financial Security*. Available at: <https://www.jchs.harvard.edu/research/symposia-special-projects/symposium-housing-tenure-and-financial-security>. Accessed on August 19, 2021.
- <sup>379</sup> Shobe, M. A., Narcisse, M. R., & Christy, K. (2018). Household Financial Capital and Food Security. *Journal of Poverty*. 22(1):1–22.
- <sup>380</sup> Fox, L. (2020). *The Supplemental Poverty Measure: 2019 Current Population Reports*. U.S. Census Bureau, P60-272. Washington DC: U.S. Government Printing Office.
- <sup>381</sup> Price, J. H., Khubchandani, J., & Webb, F. J. (2018). Poverty and Health Disparities: What Can Public Health Professionals Do? *Health Promotion Practice*. 19(2):170–74.
- <sup>382</sup> Coleman-Jensen, A., Rabbitt, M. P., Gregory, C., & Singh, A. (2021). Household Food Security in the United States in 2020. Economic Research Service, ERR-298. Washington, DC: U.S. Government Printing Office.
- <sup>383</sup> U.S. Census Bureau. (2021). Household Pulse Survey Data Tables. Available at: <https://www.census.gov/programs-surveys/household-pulse-survey/data.html>. Accessed on September 5, 2021.
- <sup>384</sup> Parker, K., Minkin, R., & Bennett, J. (2020). *Economic Fallout From COVID-19 Continues To Hit Lower-Income Americans the Hardest*. Available at: <https://www.pewsocialtrends.org/2020/09/24/economic-fallout-from-covid-19-continues-to-hit-lower-income-americans-the-hardest/>. Accessed on August 19, 2021.
- <sup>385</sup> U.S. Census Bureau. (2021). Household Pulse Survey Data Tables. Available at: <https://www.census.gov/programs-surveys/household-pulse-survey/data.html>. Accessed on September 5, 2021.
- <sup>386</sup> Birinci, S. & Amburgery, A. (2021). *How Job Separations Differed between the Great Recession and COVID-19 Recession*. Available at: <https://www.stlouisfed.org/on-the-economy/2021/june/job-separations-differed-between-recessions>. Accessed on July 28, 2021.
- <sup>387</sup> Opportunity Insights. (2021). Economic Tracker: Percent Change in Employment. Available at: <https://www.tracktherecovery.org/>. Accessed on September 8, 2021.
- <sup>388</sup> Birinci, S. (2021). *COVID-19's Effect on Dual-Earner Households*. Available at: <https://www.stlouisfed.org/on-the-economy/2021/may/covid19-effects-dual-earner-households>. Accessed on July 28, 2021.
- <sup>389</sup> Fisher, P., Lombardi, J., & Kendall-Taylor, N. (2021). *A Year in the Life of a Pandemic. What We've Learned Listening to Family Voices*. Available at: <https://medium.com/rapid-ec-project/a-year-in-the-life-of-a-pandemic-4c8324dda56b>. Accessed on August 19, 2021.
- <sup>390</sup> Adhikari, S., Pantaleo, N. P., Feldman, J. M., Ogedegbe, O., Thorpe, L., & Troxel, A. B. (2020). Assessment of Community-Level Disparities in Coronavirus Disease 2019 (COVID-19) Infections and Deaths in Large US Metropolitan Areas. *JAMA Network Open*. 3(7):e2016938.
- <sup>391</sup> Liao, T. F., & De Maio, F. (2021). Association of Social and Economic Inequality With Coronavirus Disease 2019 Incidence and Mortality Across US Counties. *JAMA Network Open*. 4(1):e2034578.
- <sup>392</sup> Yu, Q., Salvador, C. E., Melani, I., Berg, M. K., Neblett, E. W., & Kitayama, S. (2021). Racial Residential Segregation and Economic Disparity Jointly Exacerbate COVID-19 Fatality in Large American Cities. *Annals of the New York Academy of Sciences*, published online ahead of print.

- <sup>393</sup> DeLuca, S., Papageorge, N., & Kalish, E. (2020). The Unequal Cost of Social Distancing. Available at: <https://coronavirus.jhu.edu/from-our-experts/the-unequal-cost-of-social-distancing>. Accessed on August 19, 2021.
- <sup>394</sup> Tiehen, L., Vaughn, C., & Ziliak, J. P. (2019). *Food Insecurity in the PSID: A Comparison with the Levels, Trends, and Determinants in the CPS*. Available at: <https://ukcpr.org/research/psid/food-insecurity-psid-comparison-levels-trends-and-determinants-cps-1999-2017>. Accessed on August 19, 2021.
- <sup>395</sup> Gundersen, C., & Ziliak, J. P. (2014). Childhood Food Insecurity in the U.S.: Trends, Causes, and Policy Options. *The Future of Children*. (Fall):1–19. *The Future of Children*. (Fall):1–19.
- <sup>396</sup> Semega, J., Kollar, M., Shrider, E., & Creamer, J. (2020). *Income and Poverty in the United States: 2019*. U.S. Census Bureau, P60-270. Washington DC: U.S. Government Printing Office.
- <sup>397</sup> Fox, L. (2020). *The Supplemental Poverty Measure: 2019 Current Population Reports*. U.S. Census Bureau, P60-272. Washington DC: U.S. Government Printing Office.
- <sup>398</sup> Kaplan, R. M., Kirby, J., & Fang, Z. (2017). Educational Attainment and Health Outcomes: Data from the Medical Expenditures Panel Survey. *Health Psychology*. 36(6):598–608.
- <sup>399</sup> Zajacova, A., & Lawrence, E. M. (2018). The Relationship Between Education and Health: Reducing Disparities Through a Contextual Approach. *Annual Review of Public Health*. 39(1):273–89.
- <sup>400</sup> Montez, J. K., Zajacova, A., Hayward, M. D., Woolf, S. H., Chapman, D., & Beckfield, J. (2019). Educational Disparities in Adult Mortality Across U.S. States: How Do They Differ, and Have They Changed Since the Mid-1980s? *Demography*. 56(2):621–44.
- <sup>401</sup> U.S. Census Bureau. (2021). Household Pulse Survey Data Tables. Available at: <https://www.census.gov/programs-surveys/household-pulse-survey/data.html>. Accessed on August 5, 2021.
- <sup>402</sup> U.S. Census Bureau. (2021). Household Pulse Survey Data Tables. Available at: <https://www.census.gov/programs-surveys/household-pulse-survey/data.html>. Accessed on September 5, 2021.
- <sup>403</sup> Montenegro, L., Jiang, X., Rojas, F. L., Schmutte, I., Simon, K., Weinberg, B., & Wing, C. (2020). *Determinants of Disparities in Covid-19 Job Losses*. Available at: <https://www.nber.org/papers/w27132>. Accessed on August 6, 2021.
- <sup>404</sup> Khanijahani, A. (2021). Racial, Ethnic, and Socioeconomic Disparities in Confirmed COVID-19 Cases and Deaths in the United States: A County-Level Analysis as of November 2020. *Ethnicity & Health*. 26(1):22–35.
- <sup>405</sup> Figueroa, J. F., Wadhera, R. K., Mehtsun, W. T., Riley, K., Phelan, J., & Jha, A. K. (2021). Association of Race, Ethnicity, and Community-Level Factors with COVID-19 Cases and Deaths across U.S. Counties. *Healthcare*. 9(1):100495.
- <sup>406</sup> Gould, W. & Kandra, J. (2021). *Only one in five workers are working from home due to COVID: Black and Hispanic workers are less likely to be able to telework*. Available at: <https://www.epi.org/blog/only-one-in-five-workers-are-working-from-home-due-to-covid-black-and-hispanic-workers-are-less-likely-to-be-able-to-telework/>. Accessed on July 28, 2021.
- <sup>407</sup> Coleman-Jensen, A., Rabbitt, M. P., Gregory, C., & Singh, A. (2020). *Household Food Security in the United States in 2019*. Economic Research Service, ERR-275. Washington, DC: U.S. Government Printing Office.
- <sup>408</sup> Peters, D. J. (2020). Community Susceptibility and Resiliency to COVID-19 Across the Rural-Urban Continuum in the United States. *The Journal of Rural Health*. 36(3):446–56.
- <sup>409</sup> No Kid Hungry and Feeding America. (2020). *Child Hunger In Rural America*. Available at: [http://bestpractices.nokidhungry.org/sites/default/files/2020-02/Child\\_Hunger\\_in\\_Rural\\_America\\_Report.pdf](http://bestpractices.nokidhungry.org/sites/default/files/2020-02/Child_Hunger_in_Rural_America_Report.pdf). Accessed on August 19, 2021.
- <sup>410</sup> Farrigan, T. (2020). Rural Poverty & Well-Being. Available at: <https://www.ers.usda.gov/topics/rural-economy-population/rural-poverty-well-being/>. Accessed on August 19, 2021.
- <sup>411</sup> Johnson, K. M. (2020). *An Older Population Increases Estimated COVID-19 Death Rates in Rural America*. Available at: <https://scholars.unh.edu/carsey/399/>. Accessed on August 19, 2021.
- <sup>412</sup> Centers for Disease Control and Prevention. (2021). About Rural Health. Available at: <https://www.cdc.gov/ruralhealth/about.html>. Accessed on August 19, 2021.
- <sup>413</sup> Peters, D. J. (2020). Community Susceptibility and Resiliency to COVID-19 Across the Rural-Urban Continuum in the United States. *The Journal of Rural Health*. 36(3):446–56.
- <sup>414</sup> Chillag, K. L., & Lee, L. M. (2020). Synergistic Disparities and Public Health Mitigation of COVID-19 in the Rural United States. *Journal of Bioethical Inquiry*. 17649–56.
- <sup>415</sup> Monnat, S. *Why Coronavirus Could Hit Rural Areas Harder*. Available at: <https://lernercenter.syr.edu/2020/03/24/why-coronavirus-could-hit-rural-areas-harder/>. Accessed on August 19, 2021.
- <sup>416</sup> Henning-Smith, C., Tuttle, M., & Kozhimannil, K. B. (2020). Unequal Distribution of COVID-19 Risk Among Rural Residents by Race and Ethnicity. *The Journal of Rural Health*. jrh.12463.
- <sup>417</sup> Bauerly, B. C., McCord, R. F., Hulkower, R., & Pepin, D. (2019). Broadband Access as a Public Health Issue: The Role of Law in Expanding Broadband Access and Connecting Underserved Communities for Better Health Outcomes. *Journal of Law, Medicine and Ethics*. 47(2\_suppl):39–42.

- <sup>418</sup> The Cecil G. Sheps Center for Health Services Research. (2020). 181 Rural Hospital Closures: January 2005 – Present (138 since 2010). Available at: <https://www.shepscenter.unc.edu/programs-projects/rural-health/rural-hospital-closures/>. Accessed on August 19, 2021.
- <sup>419</sup> Barone, E. (2020). *Rural U.S. Hospitals Are On Life Support During COVID-19*. Available at: <https://time.com/5901656/coronavirus-hospital-closures/>. Accessed on August 19, 2021.
- <sup>420</sup> Mosley, D., & Debehnke, D. (2019). *Rural Hospital Sustainability: New Analysis Shows Worsening Situation for Rural Hospitals, Residents*. Available at: <https://www.ruralcenter.org/resource-library/rural-hospital-sustainability-new-data-show-worsening-situation-for-rural-hospitals>. Accessed on August 19, 2021.
- <sup>421</sup> Gujral, K., & Basu, A. (2019). *Impact of Rural and Urban Hospital Closures on Inpatient Mortality*. Available at: <https://www.nber.org/papers/w26182>. Accessed on August 19, 2021.
- <sup>422</sup> Tickamyer, A., Sherman, J., & Warlick, J. (2017). *Rural Poverty in the United States*. New York: Columbia University Press.
- <sup>423</sup> Henning-Smith, C. E., Hernandez, A. M., Hardeman, R. R., Ramirez, M. R., & Kozhimannil, K. B. (2019). Rural Counties With Majority Black Or Indigenous Populations Suffer The Highest Rates Of Premature Death In The US. *Health Affairs (Project Hope)*. 38(12):2019–26.
- <sup>424</sup> Henning-Smith, C., Tuttle, M., & Kozhimannil, K. B. (2020). Unequal Distribution of COVID-19 Risk Among Rural Residents by Race and Ethnicity. *The Journal of Rural Health*. jrh.12463.
- <sup>425</sup> Sood, L., & Sood, V. (2021). Being African American and Rural: A Double Jeopardy from Covid-19. *Journal of Rural Health*. 37(1):217–21.
- <sup>426</sup> Tickamyer, A., Sherman, J., & Warlick, J. (2017). *Rural Poverty in the United States*.
- <sup>427</sup> Caldwell, J. T., Ford, C. L., Wallace, S. P., Wang, M. C., & Takahashi, L. M. (2016). Intersection of Living in a Rural versus Urban Area and Race/Ethnicity in Explaining Access to Health Care in the United States. *American Journal of Public Health*. 106(8):1463–69.
- <sup>428</sup> Chillag, K. L., & Lee, L. M. (2020). Synergistic Disparities and Public Health Mitigation of COVID-19 in the Rural United States. *Journal of Bioethical Inquiry*. 17649–56.
- <sup>429</sup> Coleman-Jensen, A., Rabbitt, M. P., Gregory, C., & Singh, A. (2021). Household Food Security in the United States in 2020. Economic Research Service, ERR-298. Washington, DC: U.S. Government Printing Office.
- <sup>430</sup> Chillag, K. L., & Lee, L. M. (2020). Synergistic Disparities and Public Health Mitigation of COVID-19 in the Rural United States. *Journal of Bioethical Inquiry*. 17649–56.
- <sup>431</sup> Economic Research Service. (2021). The COVID-19 Pandemic and Rural America. Available at: <https://www.ers.usda.gov/covid-19/rural-america/>. Accessed on August 19, 2021.
- <sup>432</sup> Economic Research Service. (2021). The COVID-19 Pandemic and Rural America. Available at: <https://www.ers.usda.gov/covid-19/rural-america/>. Accessed on August 19, 2021.
- <sup>433</sup> Dobis, E. & McGranahan, D. (2021). *Rural Residents Appear to be More Vulnerable to Serious Infection or Feath from Coronavirus COVID-19*. Available at: <https://www.ers.usda.gov/amber-waves/2021/february/rural-residents-appear-to-be-more-vulnerable-to-serious-infection-or-death-from-coronavirus-covid-19/>. Accessed on August 12, 2021.
- <sup>434</sup> Chillag, K. L., & Lee, L. M. (2020). Synergistic Disparities and Public Health Mitigation of COVID-19 in the Rural United States. *Journal of Bioethical Inquiry*. 17649–56.
- <sup>435</sup> Cromartie, J., Dobis, E. A., Krumel Jr, T. P., McGranahan, D. & Pender, J. (2020). *Rural America at a Glance: 2020 Edition*. Economic Research Service, EIB-221. Washington, DC: U.S. Government Printing Office.
- <sup>436</sup> The Cecil G. Sheps Center for Health Services Research. (2020). 181 Rural Hospital Closures: January 2005 – Present (138 since 2010). Available at: <https://www.shepscenter.unc.edu/programs-projects/rural-health/rural-hospital-closures/>. Accessed on August 19, 2021.
- <sup>437</sup> Blake, J. (2021). *National Hospital Flash Report*. Available at: <https://www.kaufmanhall.com/consulting-services/national-hospital-flash-report>. Accessed on August 19, 2021.
- <sup>438</sup> Tribble, S. J. (2020). *Prognosis for Rural Hospitals Worsens With Pandemic*. Available at: <https://khn.org/news/rural-hospital-closures-worsen-with-pandemic/>. Accessed on August 19, 2021.
- <sup>439</sup> Cheng, K. J. G., Sun, Y., & Monnat, S. M. (2020). COVID-19 Death Rates Are Higher in Rural Counties With Larger Shares of Blacks and Hispanics. *The Journal of Rural Health*. 36(4):602–8.
- <sup>440</sup> Paul, R., Arif, A. A., Adeyemi, O., Ghosh, S., & Han, D. (2020). Progression of COVID-19 From Urban to Rural Areas in the United States: A Spatiotemporal Analysis of Prevalence Rates. *The Journal of Rural Health*. 36(4):591–601.
- <sup>441</sup> Cromartie, J., Dobis, E. A., Krumel Jr, T. P., McGranahan, D. et al. (2020). *Rural America at a Glance: 2020 Edition*. Economic Research Service, EIB-221. Washington, DC: U.S. Government Printing Office.
- <sup>442</sup> Kris-Etherton, P. M., Petersen, K. S., Velarde, G., Barnard, N. D., Miller, M., Ros, E., O’Keefe, J. H., Williams, K., et al. (2020). Barriers, Opportunities, and Challenges in Addressing Disparities in Diet-Related Cardiovascular Disease in the United States. *Journal of the American Heart Association*. 9(7):e014433.

- 443 Crenshaw, K. (1989). Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics. *University of Chicago Legal Forum*. 1989(1).
- 444 Odoms-Young, A. M. (2021). *Families, Food, and Parenting: Integrating Research, Practice, and Policy*. Chapter 1: “Structural and Social Adversity and Food Insecurity in Families with Young Children: A Qualitative Metasynthesis.” pp.3–37.
- 445 Bowleg, L. (2020). We’re Not All in This Together: On COVID-19, Intersectionality, and Structural Inequality. *American Journal of Public Health*. 110(7):917–18.
- 446 Roberts, J., Dickinson, K., & Elizabeth, K. (2020). Clinicians, Cooks, and Cashiers: Examining Health Equity and the COVID-19 Risks to Essential Workers. *Toxicology and Industrial Health*. 36(9):689–702.
- 447 Cybersecurity & Infrastructure Security Agency. (2020). Guidance on the Essential Critical Infrastructure Workforce. Available at: <https://www.cisa.gov/publication/guidance-essential-critical-infrastructure-workforce>. Accessed on August 19, 2021.
- 448 Rho, H. J., Brown, H., & Fremstad, S. (2020). *A Basic Demographic Profile of Workers in Frontline Industries*. Available at: <https://cepr.net/a-basic-demographic-profile-of-workers-in-frontline-industries/>. Accessed on August 19, 2021.
- 449 Robertson, C., & Gebeloff, R. (2020). *How Millions of Women Became the Most Essential Workers in America*. Available at: <https://www.nytimes.com/2020/04/18/us/coronavirus-women-essential-workers.html>. Accessed on August 19, 2021.
- 450 Dubay, L., Aarons, J., Brown, S., & Kenney, G. (2020). *How Risk of Exposure to the Coronavirus at Work Varies by Race and Ethnicity and How to Protect the Health and Well-Being of Workers and Their Families*. Available at: <https://www.urban.org/research/publication/how-risk-exposure-coronavirus-work-varies-race-and-ethnicity-and-how-protect-health-and-well-being-workers-and-their-families>. Accessed on August 5, 2021.
- 451 Dubay, L., Aarons, J., Brown, S., & Kenney, G. (2020). *How Risk of Exposure to the Coronavirus at Work Varies by Race and Ethnicity and How to Protect the Health and Well-Being of Workers and Their Families*. Available at: <https://www.urban.org/research/publication/how-risk-exposure-coronavirus-work-varies-race-and-ethnicity-and-how-protect-health-and-well-being-workers-and-their-families>. Accessed on August 5, 2021.
- 452 Dubay, L., Aarons, J., Brown, S., & Kenney, G. (2020). *How Risk of Exposure to the Coronavirus at Work Varies by Race and Ethnicity and How to Protect the Health and Well-Being of Workers and Their Families*. Available at: <https://www.urban.org/research/publication/how-risk-exposure-coronavirus-work-varies-race-and-ethnicity-and-how-protect-health-and-well-being-workers-and-their-families>. Accessed on August 5, 2021.
- 453 Srinivasan, M., Cen, X., Farrar, B., Pooler, J.A., & Fish, T. (2021). Food Insecurity Among Health Care Workers in the US. *Health Affairs*. 40(9):1449–1456.
- 454 Lewis, E., Colón-Ramos, U., Gittelsohn, J., & Clay, L. (2021). Food-Seeking Behaviors and Food Insecurity Risk During the Coronavirus Disease 2019 Pandemic. *Journal of Nutrition Education and Behavior*, published online ahead of print.
- 455 Haider, A. (2020). *Congress Must Strengthen SNAP To Support Essential Workers During the Coronavirus Crisis*. Available at: <https://www.americanprogress.org/issues/poverty/news/2020/06/11/486187/congress-must-strengthen-snap-support-essential-workers-coronavirus-crisis/>. Accessed on August 19, 2021.
- 456 Kearney, A., & Muñana, C. (2020). *Taking Stock of Essential Workers*. Available at: <https://www.kff.org/policy-watch/taking-stock-of-essential-workers/>. Accessed on August 19, 2021.
- 457 Kamal, R., Panchal, N., & Garfield, R. (2020). *Both Remote and On-Site Workers Are Grappling with Serious Mental Health Consequences of COVID-19*. Available at: <https://www.kff.org/policy-watch/both-remote-and-on-site-workers-are-grappling-with-serious-mental-health-consequences-of-covid-19/>. Accessed on August 19, 2021.
- 458 U.S. Bureau of Labor Statistics. (2021). Industries at a Glance: Health Care and Social Assistance: NAICS 62. Available at: <https://www.bls.gov/iag/tgs/iag62.htm>. Accessed on August 19, 2021.
- 459 Himmelstein, K. E. W., & Venkataramani, A. S. (2019). Economic Vulnerability among US Female Health Care Workers: Potential Impact of a \$15-per-Hour Minimum Wage. *American Journal of Public Health*. 109(2):198–205.
- 460 Robertson, C., & Gebeloff, R. (2020). *How Millions of Women Became the Most Essential Workers in America*. Available at: <https://www.nytimes.com/2020/04/18/us/coronavirus-women-essential-workers.html>. Accessed on August 19, 2021.
- 461 Himmelstein, K. E. W., & Venkataramani, A. S. (2019). Economic Vulnerability among US Female Health Care Workers: Potential Impact of a \$15-per-Hour Minimum Wage. *American Journal of Public Health*. 109(2):198–205.
- 462 Bebinger, M. (2020). *COVID-19 Hits Some Health Care Workers With Pay Cuts And Layoffs*. Available at: <https://www.npr.org/sections/health-shots/2020/04/02/826232423/covid-19-hits-some-health-care-workers-with-pay-cuts-and-layoffs>. Accessed on August 19, 2021.
- 463 Sainato, M. (2020). *US For-Profit Healthcare Sector Cuts Thousands of Jobs as Pandemic Rages*. Available at: <https://www.theguardian.com/us-news/2020/apr/14/healthcare-job-cuts-coronavirus-worker-layoffs>. Accessed on August 19, 2021.

- <sup>464</sup> Jacobs, A. (2021). 'Nursing Is in Crisis': Staff Shortages Put Patients at Risk. Available at: <https://www.nytimes.com/2021/08/21/health/covid-nursing-shortage-delta.html>. Accessed on September 5, 2021.
- <sup>465</sup> U.S. Bureau of Labor Statistics. (2020). Employment Situation Summary Table A. Household Data, Seasonally Adjusted. Available at: <https://www.bls.gov/news.release/empsit.a.htm>. Accessed on August 19, 2021.
- <sup>466</sup> Forrest, C. B., Xu, H., Thomas, L. E., Webb, L. E., Cohen, L. W., Carey, T. S., Chuang, C. H., Daraiseh, N. M., et al. (2021). Impact of the Early Phase of the COVID-19 Pandemic on US Healthcare Workers: Results from the HERO Registry. *Journal of General Internal Medicine*. 1–8. *Journal of General Internal Medicine*. 1–8.
- <sup>467</sup> Clay, L. A., & Rogus, S. (2021). Impact of Employment, Essential Work, and Risk Factors on Food Access during the COVID-19 Pandemic in New York State. *International Journal of Environmental Research and Public Health*. 18(4):1451.
- <sup>468</sup> Hartline-Grafton, H. (2017). *Hunger and Health - The Role of the Supplemental Nutrition Assistance Program (SNAP) in Improving Health and Well-Being*. Available at: <https://frac.org/research/resource-library/snap-public-health-role-supplemental-nutrition-assistance-program-improving-health-well-being-americans>. Accessed on August 5, 2021.
- <sup>469</sup> <https://frac.org/wp-content/uploads/hunger-health-role-federal-child-nutrition-programs-improving-health-well-being.pdf>
- <sup>470</sup> Schanzenbach, D. W. (2019). Exploring Options to Improve the Supplemental Nutrition Assistance Program (SNAP). *The Annals of the American Academy of Political and Social Science*. 686(1):204–28.
- <sup>471</sup> Gundersen, C., Kreider, B., & Pepper, J. V. (2017). Partial Identification Methods for Evaluating Food Assistance Programs: A Case Study of the Causal Impact of Snap on Food Insecurity. *American Journal of Agricultural Economics*. 99(4):875–93.
- <sup>472</sup> Hartline-Grafton, H. (2019). *Initiatives to Make SNAP Benefits More Adequate Significantly Improve Food Security, Nutrition, and Health*. Available at: <https://frac.org/research/resource-library/supplemental-nutrition-assistance-program-initiatives-to-make-snap-benefits-more-adequate-significantly-improve-food-security-nutrition-and-health>. Accessed on August 5, 2021.
- <sup>473</sup> Nord, M., & Prell, M. (2011). *Food Security Improved Following the 2009 ARRA Increase in SNAP Benefits*. Economic Research Service, ERR-116. Washington, DC: U.S. Government Printing Office.
- <sup>474</sup> Cheng, X. H., Jo, Y., & Kim, J. (2020). Heterogeneous Impact of Supplemental Nutrition Assistance Program Benefit Changes on Food Security by Local Prices. *American Journal of Preventive Medicine*. 58(3):e97–103.
- <sup>475</sup> Hartline-Grafton, H. (2019). *Initiatives to Make SNAP Benefits More Adequate Significantly Improve Food Security, Nutrition, and Health*. Available at: <https://frac.org/research/resource-library/supplemental-nutrition-assistance-program-initiatives-to-make-snap-benefits-more-adequate-significantly-improve-food-security-nutrition-and-health>. Accessed on August 5, 2021.
- <sup>476</sup> Hartline-Grafton, H. (2019). *Initiatives to Make SNAP Benefits More Adequate Significantly Improve Food Security, Nutrition, and Health*. Available at: <https://frac.org/research/resource-library/supplemental-nutrition-assistance-program-initiatives-to-make-snap-benefits-more-adequate-significantly-improve-food-security-nutrition-and-health>. Accessed on August 5, 2021.
- <sup>477</sup> Fang, D., Thomsen, M.R., Nayga, R.M. & Yang, W. (2021). Food insecurity during the COVID-19 pandemic: Evidence from a survey of low-income Americans. *Food Security*. 1-19.
- <sup>478</sup> Reimold, A.E., Grummon, A.H., Taillie, L.S., Brewer, N.T., Rimm, E.B. & Hall, M.G. (2021). Barriers and facilitators to achieving food security during the COVID-19 pandemic. *Preventive Medicine Reports*, p.101500.
- <sup>479</sup> Bresnahan, C., Ellison, C., Green, C., Headrick, G., Ji Yeun Lee, C., Lyons, M., Moran, A., & Tse, J. (2021). *SNAP Waivers and Adaptations During the COVID-19 Pandemic: A Survey of State Agency Perspectives in 2020*. Available at: <https://healthyeatingresearch.org/research/snap-waivers-and-adaptations-during-the-covid-19-pandemic-a-survey-of-state-agency-perspectives-in-2020/>. Accessed on August 19, 2021.
- <sup>480</sup> Hunger Free New Jersey. (2021). *Boosting SNAP: Eliminating Barriers to Participation*. Available at: <https://hungerfreenj.org/njsnapreport2021/>. Accessed on August 19, 2021.
- <sup>481</sup> Almada, L., & McCarthy, I. M. (2017). It's a Cruel Summer: Household Responses to Reductions in Government Nutrition Assistance. *Journal of Economic Behavior and Organization*. 14345–57.
- <sup>482</sup> Dean, S., FitzSimons, C., Neuberger, Z., Rosenbaum, D., & Melcher Philbin, E. (2020). *Lessons From Early Implementation of Pandemic-EBT*. Available at: <https://www.cbpp.org/research/food-assistance/lessons-from-early-implementation-of-pandemic-ebt>. Accessed on August 19, 2021.
- <sup>483</sup> Bauer, L., Pitts, A., Ruffini, K., & Schanzenbach, D. W. (2020). *The Effect of Pandemic EBT on Measures of Food Hardship*. Available at: <https://www.hamiltonproject.org/papers/the-effect-of-pandemic-ebt-on-measures-of-food-hardship>. Accessed on August 20, 2021.

- <sup>484</sup> Melcher Philbin, E. (2021). *A Look at Pandemic EBT's Impact so Far and How the Program Can Continue to Provide Critical Support to Families*. Available at: <https://frac.org/blog/a-look-at-pandemic-ebts-impact-so-far-and-how-the-program-can-continue-to-provide-critical-support-to-families>. Accessed on August 19, 2021.
- <sup>485</sup> Perez, R. (2021). *Pandemic-EBT in California: Lessons and Opportunities to End Childhood Hunger*. Available at: <https://www.hungercenter.org/publications/pandemic-ebt-in-california-lessons-and-opportunities-to-end-childhood-hunger/>. Accessed on August 19, 2021.
- <sup>486</sup> Schanzenbach, D. W. (2019). Exploring Options to Improve the Supplemental Nutrition Assistance Program (SNAP). *The ANNALS of the American Academy of Political and Social Science*. 686(1):204–28.
- <sup>487</sup> Collins, A., Briefel, R., Klerman, J. A., Wolf, A., Rowe, G., Logan, C., Enver, A., Fatima, S., et al. (2016). *Summer Electronic Benefit Transfer for Children (SEBTC) Demonstration: A Summary Report*. Food and Nutrition Service. Washington, DC: U.S. Government Printing Office.
- <sup>488</sup> Kreider, B., Pepper, J. V., Gundersen, C., & Jolliffe, D. (2012). Identifying the Effects of SNAP (Food Stamps) on Child Health Outcomes When Participation Is Endogenous and Misreported. *Journal of the American Statistical Association*. 107(499):958–75.
- <sup>489</sup> Zhang, Q., Alsuliman, M. A., Wright, M., Wang, Y., & Cheng, X. (2020). Fruit and Vegetable Purchases and Consumption among WIC Participants after the 2009 WIC Food Package Revision: A Systematic Review. *Advances in Nutrition*. 11(6):1646–62.
- <sup>490</sup> Fang, D., Thomsen, M., Nayga, R., & Novotny, A. (2018). *WIC Participation and Relative Quality of Household Food Purchases: Evidence from FoodAPS*. Available at: <http://www.nber.org/papers/w25291>. Accessed on August 20, 2021.
- <sup>491</sup> Hamad, R., Batra, A., Karasek, D., LeWinn, K. Z., Bush, N. R., Davis, R. L., & Tylavsky, F. A. (2019). The Impact of the Revised WIC Food Package on Maternal Nutrition During Pregnancy and Postpartum. *American Journal of Epidemiology*. 188(8):1493–1502.
- <sup>492</sup> Tester, J. M., Leung, C. W., & Crawford, P. B. (2016). Revised WIC Food Package and Children's Diet Quality. *Pediatrics*. 137(5).
- <sup>493</sup> Zimmer, M. C., & Vernarelli, J. A. (2020). Select Food Group Intake of US Children Aged 2 to 4 Years by WIC Participation Status and Income. *Journal of the Academy of Nutrition and Dietetics*. 120(12):2032–2038.e1.
- <sup>494</sup> Plank, K., Au, L., Weinfield, N., Borger, C., Whaley, S., Berman, D., & Ritchie, L. (2019). Duration of WIC Participation Is Associated with Higher Dietary Quality at 24 Months (P11-048-19). *Current Developments in Nutrition*. 3(Supplement 1).
- <sup>495</sup> Weinfield, N. S., Borger, C., Au, L. E., Whaley, S. E., Berman, D., & Ritchie, L. D. (2020). Longer Participation in WIC Is Associated with Better Diet Quality in 24-Month-Old Children. *Journal of the Academy of Nutrition and Dietetics*. 120(6):963–71.
- <sup>496</sup> Whaley, S. E., Borger, C., Au, L., & Ritchie, L. (2020). *Longer Participation in WIC Is Associated with Healthier Outcomes for Children at Age 4 Years (Abstract)*. Available at: <https://apha.confex.com/apha/2020/meetingapp.cgi/Paper/474121>. Accessed on August 20, 2021.
- <sup>497</sup> Oliveira, V., & Frazao, E. (2015). *The WIC Program: Background, Trends, and Economic Issues*. Economic Research Service, EIB-134. Washington, DC: U.S. Government Printing Office.
- <sup>498</sup> Grose, J. (2020). *Families Scramble to Find Baby Formula, Diapers and Wipes*. Available at: <https://www.nytimes.com/2020/03/30/parenting/coronavirus-baby-formula-shortages-wipes-diapers.html>. Accessed on August 20, 2021.
- <sup>499</sup> McElrone, M., Zimmer, M. C., & Anderson Steeves, E. T. (2021). A Qualitative Exploration of Predominantly White Non-Hispanic Tennessee WIC Participants' Food Retail and WIC Clinic Experiences During COVID-19. *Journal of the Academy of Nutrition and Dietetics*. 121(8):1454–62.
- <sup>500</sup> Food Research & Action Center. *One Year of WIC During COVID-19: Waivers are Vital to Participation and Benefit Redemption*. Available at: <https://frac.org/research/resource-library/one-year-of-wic-during-covid-19-waivers-are-vital-to-participation-and-benefit-redemption>. Accessed on August 20, 2021.
- <sup>501</sup> Ralston, K., Treen, K., Coleman-Jensen, A., & Guthrie, J. (2017). *Children's Food Security and USDA Child Nutrition Programs*. Economic Research Service, EIB-174. Washington, DC: U.S. Government Printing Office.
- <sup>502</sup> Frisvold, D., & Price, J. (2019). The Contribution of the School Environment to the Overall Food Environment Experienced by Children. *Southern Economic Journal*. 86(1):106–23.
- <sup>503</sup> Fletcher, J. M., & Frisvold, D. E. (2017). The Relationship between the School Breakfast Program and Food Insecurity. *Journal of Consumer Affairs*. 51(3):481–500.
- <sup>504</sup> Fletcher, J. M., & Frisvold, D. E. (2017). The Relationship between the School Breakfast Program and Food Insecurity. *Journal of Consumer Affairs*. 51(3):481–500.
- <sup>505</sup> Gundersen, C., Kreider, B., & Pepper, J. (2012). The Impact of the National School Lunch Program on Child Health: A Nonparametric Bounds Analysis. *Journal of Econometrics*. 166(1):79–91.

- <sup>506</sup> Arteaga, I., & Heflin, C. (2014). Participation in the National School Lunch Program and Food Security: An Analysis of Transitions into Kindergarten. *Children and Youth Services Review*. 47(P3):224–30.
- <sup>507</sup> Liu, J., Micha, R., Li, Y., & Mozaffarian, D. (2021). Trends in Food Sources and Diet Quality Among US Children and Adults, 2003-2018. *JAMA Network Open*. 4(4):e215262–e215262.
- <sup>508</sup> Heflin, C., Arteaga, I., & Gable, S. (2015). The Child and Adult Care Food Program and Food Insecurity. *Social Service Review*. 89(1):77–98.
- <sup>509</sup> Bauer, K. W., Chriqui, J. F., Andreyeva, T., Kenney, E. L., Stage, V. C., Dev, D., Lessard, L., Cotwright, C. J., et al. (2021). A Safety Net Unraveling: Feeding Young Children During COVID-19. *American Journal of Public Health*. 111116–20.
- <sup>510</sup> Note: the under-reporting of SNAP benefits in the CPS likely means these are conservative estimates of the anti-poverty effects of SNAP. See Warren, Fox, and Edwards (2020) below.
- <sup>511</sup> Warren, L., Fox, L., Edwards, A., & Census Bureau, U. S. (2020). *The Supplemental Poverty Measure in the Survey of Income and Program Participation*. U.S. Census Bureau, SEHSD Working Paper Number 2020-20. Washington DC: U.S. Government Printing Office.
- <sup>512</sup> Hartline-Grafton, H. (2019). *Initiatives to Make SNAP Benefits More Adequate Significantly Improve Food Security, Nutrition, and Health*. Available at: <https://frac.org/research/resource-library/supplemental-nutrition-assistance-program-initiatives-to-make-snap-benefits-more-adequate-significantly-improve-food-security-nutrition-and-health>. Accessed on August 5, 2021.
- <sup>513</sup> Moffitt, R. A. (2013). The Great Recession and the Social Safety Net. *Annals of the American Academy of Political and Social Science*. 650(1):143–66.
- <sup>514</sup> Bitler, M. P., Hoynes, H. W., & Iselin, J. R. (2020). Cyclicity of the U.S. Safety Net: Evidence from the 2000s and Implications for the COVID-19 Crisis. *National Tax Journal*. 73(3):759–80.
- <sup>515</sup> Meyer, B. D., & Wu, D. (2018). The Poverty Reduction of Social Security and Means-Tested Transfers. *ILR Review*. 71(5):1106–53.
- <sup>516</sup> Tiehen, L., Jolliffe, D., & Smeeding, T. (2015). *SNAP Matters: How food stamps affect health and wellbeing*. Chapter 2: “The Effect of SNAP on Poverty.” pp.49–73.
- <sup>517</sup> Tiehen, L., Jolliffe, D., & Smeeding, T. (2015). *SNAP Matters: How food stamps affect health and wellbeing*. Chapter 2: “The Effect of SNAP on Poverty.” pp.49–73.
- <sup>518</sup> Moffitt, R. A. (2013). The Great Recession and the Social Safety Net. *Annals of the American Academy of Political and Social Science*. 650(1):143–66.
- <sup>519</sup> Wheaton, L., Giannarelli, L., & Dehry, I. (2021). *2021 Poverty Projects: Assessing the Impact of Benefits and Stimulus Measures*. Available at: <https://www.urban.org/research/publication/2021-poverty-projections-assessing-impact-benefits-and-stimulus-measures>. Accessed on August 20, 2021.
- <sup>520</sup> Food and Nutrition Service. A Short History of SNAP. Available at: <https://www.fns.usda.gov/snap/short-history-snap#1961>. Accessed on August 20, 2021.
- <sup>521</sup> Bailey Hilary W Hoynes Maya Rossin-Slater Reed Walker, M. J., Bailey, M. J., Hoynes, H. W., Rossin-Slater, M., Walker, R., Walker Richard, R., & Goldman, R. (2020). *Is the Social Safety Net a Long-Term Investment? Large-Scale Evidence from the Food Stamps Program*. Available at: <https://www.nber.org/papers/w26942>. Accessed on August 20, 2021.
- <sup>522</sup> Bitler, M. P., & Seifoddini, A. (2019). Health Impacts of Food Assistance: Evidence from the United States. *Annual Review of Resource Economics*. 11(1):261–87.
- <sup>523</sup> Fletcher, J. M., & Frisvold, D. E. (2017). The Relationship between the School Breakfast Program and Food Insecurity. *Journal of Consumer Affairs*. 51(3):481–500.
- <sup>524</sup> Bitler, M. P., & Seifoddini, A. (2019). Health Impacts of Food Assistance: Evidence from the United States. *Annual Review of Resource Economics*. 11(1):261–87.
- <sup>525</sup> Canning, P., & Stacy, B. (2019). *The Supplemental Nutrition Assistance Program (SNAP) and the Economy: New Estimates of the SNAP Multiplier United States Department of Agriculture*. Economic Research Service, ERR-265. Washington, DC: U.S. Government Printing Office.
- <sup>526</sup> Bolen, E., & Wolkomir, E. (2020). *SNAP Boosts Retailers and Local Economies*. Available at: <https://www.cbpp.org/research/food-assistance/snap-boosts-retailers-and-local-economies>. Accessed on August 20, 2021.
- <sup>527</sup> Jones, J. (2021). *COVID-19 Working Paper: Supplemental Nutrition Assistance Program and Pandemic Electronic Benefit Transfer Redemptions during the Coronavirus Pandemic*. Economic Research Service, AP-089. Washington, DC: U.S. Government Printing Office.
- <sup>528</sup> Cleary, R., Bonanno, A., Chenarides, L., & Goetz, S. J. (2018). Store Profitability and Public Policies to Improve Food Access in Non-Metro U.S. Counties. *Food Policy*. 75158–70.



- <sup>529</sup> Bitler, M., Beatty, T., & Werf, C. Van Der. (2019). *Do Food Assistance Programs Affect Retailers?* Available at: <https://econpapers.repec.org/paper/agsaaea19/290906.htm>. Accessed on August 20, 2021.
- <sup>530</sup> Jones, J. (2019). *Food Retailer Response to the Supplemental Nutrition Assistance Program*. Available at: <https://econpapers.repec.org/paper/agsaaea19/290904.htm>. Accessed on August 20, 2021.
- <sup>531</sup> Guardia, L., & Vollinger, E. (2021). *SNAP Promotes Food Security, Jobs, and Dignity During COVID-19 and Beyond*. Available at: <https://frac.org/blog/snap-promotes-food-security-jobs-and-dignity-during-covid-19-and-beyond>. Accessed on August 20, 2021.
- <sup>532</sup> National Grocers Association. (2021). *New Study Highlights Independent Community Grocers' Pivotal Role in Growing the U.S. Economy*. Available at: <https://www.nationalgrocers.org/news/new-study-highlights-independent-community-grocers-pivotal-role-in-growing-the-u-s-economy/>. Accessed on August 20, 2021.
- <sup>533</sup> Oliveira, V., & Frazao, E. (2015). *The WIC Program: Background, Trends, and Economic Issues*. Economic Research Service, EIB-134. Washington, DC: U.S. Government Printing Office.
- <sup>534</sup> Canning, P., & Mentzer Morrison, R. (2019). *Quantifying the Impact of SNAP Benefits on the U.S. Economy and Jobs*. Economic Research Service, ERR-265. Washington, DC: U.S. Government Printing Office.
- <sup>535</sup> Oliveira, V., & Frazao, E. (2015). *The WIC Program: Background, Trends, and Economic Issues*. Economic Research Service, EIB-134. Washington, DC: U.S. Government Printing Office.
- <sup>536</sup> Becot, F., Kolodinsky, J. M., Roche, E., Zipparo, A., Berlin, L., Buckwalter, E., & McLaughlin, J. (2017). Do Farm-to-School Programs Create Local Economic Impacts? *Choices: The Magazine of Food, Farm & Resource Issues*. 32(1):1–8.
- <sup>537</sup> Reiley, L. (2020). *The Trump Administration Is Putting More Fresh Fruit and Vegetables in the Hands of Low-Income Americans*. Available at: <https://www.washingtonpost.com/business/2020/12/03/snap-pandemic-ebt-farmers-markets/>. Accessed on August 20, 2021.
- <sup>538</sup> Pender, J., Jo, Y., Todd, J. E., & Miller, C. (2019). *The Impacts of Supplemental Nutrition Assistance Program Redemptions on County-Level Employment*. Economic Research Service, ERR-263. Washington, DC: U.S. Government Printing Office.
- <sup>539</sup> California Legislative Analyst's Office. (2004). *Analysis of the 2004-05 Budget Bill: Food Stamps Program*. Available at: [https://lao.ca.gov/analysis\\_2004/health\\_ss/hss\\_20\\_foodstamps\\_anl04.htm](https://lao.ca.gov/analysis_2004/health_ss/hss_20_foodstamps_anl04.htm). Accessed on August 20, 2021.
- <sup>540</sup> Guardia, L., & Vollinger, E. (2021). *SNAP Promotes Food Security, Jobs, and Dignity During COVID-19 and Beyond*. Available at: <https://frac.org/blog/snap-promotes-food-security-jobs-and-dignity-during-covid-19-and-beyond>. Accessed on August 20, 2021.
- <sup>541</sup> National Grocers Association. (2021). *New Study Highlights Independent Community Grocers' Pivotal Role in Growing the U.S. Economy*. Available at: <https://www.nationalgrocers.org/news/new-study-highlights-independent-community-grocers-pivotal-role-in-growing-the-u-s-economy/>. Accessed on August 20, 2021.
- <sup>542</sup> Hamad, R., Collin, D. F., Baer, R. J., & Jelliffe-Pawlowski, L. L. (2019). Association of Revised WIC Food Package with Perinatal and Birth Outcomes: A Quasi-Experimental Study. *JAMA Pediatrics*. 173(9):845–52.
- <sup>543</sup> Hamad, R., Collin, D. F., Baer, R. J., & Jelliffe-Pawlowski, L. L. (2019). Association of Revised WIC Food Package with Perinatal and Birth Outcomes: A Quasi-Experimental Study. *JAMA Pediatrics*. 173(9):845–52.
- <sup>544</sup> Pan, L., Blanck, H. M., Galuska, D. A., Freedman, D. S., Lovellette, G., Park, S., & Petersen, R. (2021). Changes in High Weight-for-Length among Infants Enrolled in Special Supplemental Nutrition Program for Women, Infants, and Children during 2010–2018. *Childhood Obesity*, published online ahead of print.
- <sup>545</sup> Blakeney, E. L., Herting, J. R., Zierler, B. K., & Bekemeier, B. (2020). The Effect of Women, Infant, and Children (WIC) Services on Birth Weight before and during the 2007-2009 Great Recession in Washington State and Florida: A Pooled Cross-Sectional Time Series Analysis. *BMC Pregnancy and Childbirth*. 20(1):1–13.
- <sup>546</sup> Food Research & Action Center. (2021). *School Meals Are Essential for Student Health and Learning*. Available at: <https://frac.org/research/resource-library/school-meals-are-essential-for-student-health-and-learning>. Accessed on August 20, 2021.
- <sup>547</sup> Hartline-Grafton, H. (2017). *Hunger and Health - The Role of the Supplemental Nutrition Assistance Program (SNAP) in Improving Health and Well-Being*. Available at: <https://frac.org/research/resource-library/snap-public-health-role-supplemental-nutrition-assistance-program-improving-health-well-being-americans>. Accessed on August 5, 2021.
- <sup>548</sup> Odoms-Young, A. M. (2021). *Families, Food, and Parenting: Integrating Research, Practice, and Policy*. Chapter 1: “Structural and Social Adversity and Food Insecurity in Families with Young Children: A Qualitative Metasynthesis.” pp.3–37.
- <sup>549</sup> The Child Tax Credit alone would cut child poverty by 40 percent if permanently enacted and reduce disparities in child poverty by race and ethnicity. See the Center on Budget and Policy Priorities for more detail, available at: <https://www.cbpp.org/research/federal-tax/american-rescue-plan-act-includes-critical-expansions-of-child-tax-credit-and>.

- <sup>550</sup> Hartline-Grafton, H. (2017). *Hunger and Health - The Role of the Supplemental Nutrition Assistance Program (SNAP) in Improving Health and Well-Being*. Available at: <https://frac.org/research/resource-library/snap-public-health-role-supplemental-nutrition-assistance-program-improving-health-well-being-americans>. Accessed on August 5, 2021.
- <sup>551</sup> Food Research & Action Center. (2021). *SNAP: A Critical Support During the First Year of the COVID-19 Pandemic*. Available at: <https://frac.org/blog/snap-a-critical-support-during-the-first-year-of-the-covid-19-pandemic>. Accessed on August 20, 2021.
- <sup>552</sup> Food Research & Action Center. (2021). *FRAC Applauds Historic Increase in SNAP Benefits (press release)*. Available at: <https://frac.org/news/snapincreaseaugust2021>. Accessed on August 20, 2021.
- <sup>553</sup> Hartline-Grafton, H., & Vollinger, E. (2021). *Legislative Action to Improve SNAP Benefit Adequacy*. Available at: <https://frac.org/blog/legislative-action-to-improve-snap-benefit-adequacy>. Accessed on August 20, 2021.
- <sup>554</sup> Food Research & Action Center. (2021). *Food Research & Action Center's Transition Recommendations: "This is the Time to Heal in America," and It Begins With Addressing Hunger*. Available at: <https://frac.org/wp-content/uploads/FRAC-Transition-Recommendations-to-Address-Hunger-in-US-2020.pdf>. Accessed on August 20, 2021.
- <sup>555</sup> Vollinger, E., & Hartline-Grafton, H. (2021). *New Bill Would Permanently Eliminate Time Limits on SNAP Eligibility*. Available at: <https://frac.org/blog/new-bill-would-permanently-eliminate-time-limits-on-snap-eligibility>. Accessed on August 20, 2021.
- <sup>556</sup> Vollinger, E., & Hartline-Grafton, H. (2021). *Key Barrier to SNAP Access for College Students Would Be Removed Under New Bill*. Available at: <https://frac.org/blog/key-barrier-to-snap-access-for-college-students-would-be-removed-under-new-bill>. Accessed on August 20, 2021.
- <sup>557</sup> Hartline-Grafton, H., & Vollinger, E. (2021). *Legislative Action to Improve SNAP Benefit Adequacy*. Available at: <https://frac.org/blog/legislative-action-to-improve-snap-benefit-adequacy>. Accessed on August 20, 2021.
- <sup>558</sup> Testa, A., & Jackson, D. B. (2021). Race, Ethnicity, WIC Participation, and Infant Health Disparities in the United States. *Annals of Epidemiology*. 58: 22–28.
- <sup>559</sup> Food Research & Action Center. (2019). *Making WIC Work Better: Strategies to Reach More Women and Children and Strengthen Benefits Use*. Available at: <https://frac.org/research/resource-library/making-wic-work-better-strategies-to-reach-more-women-and-children-and-strengthen-benefits-use>. Accessed on August 20, 2021.
- <sup>560</sup> Lott, M., Miller, L., Arm, K., & Story, M. *Rapid Health Impact Assessment on USDA Proposed Changes to School Nutrition Standards*. Available at: <https://healthyeatingresearch.org/research/rapid-health-impact-assessment-on-usda-proposed-changes-to-school-nutrition-standards/>. Accessed on August 20, 2021.
- <sup>561</sup> Food Research & Action Center. (2021). *Top 10 Reasons to Support Free Healthy School Meals for All*. Available at: <https://frac.org/blog/top-10-reasons-to-support-free-healthy-school-meals-for-all>. Accessed on August 24, 2021.
- <sup>562</sup> Cohen J. F. W., Hecht A. A., McLoughlin G. M., Turner L., & Schwartz M. B. Universal School Meals and Associations with Student Participation, Attendance, Academic Performance, Diet Quality, Food Security, and Body Mass Index: A Systematic Review. *Nutrients*. 2021; 13(3):911.
- <sup>563</sup> Gecker, J. (2021). *California launches largest free school lunch program in US*. Available at: <https://apnews.com/article/business-health-government-and-politics-education-california-b959171f408b549eb46376998c02ac2c>. Accessed on August 24, 2021.
- <sup>564</sup> Mucioki, M., Sowerwine, J., & Sarna-Wojcicki, D. (2018). Thinking inside and Outside the Box: Local and National Considerations of the Food Distribution Program on Indian Reservations (FDPIR). *Journal of Rural Studies*. 5788–98.
- <sup>565</sup> 109<sup>th</sup> Congress. (2006). Section 203 of the Older Americans Act Amendments of 2006 (42 U.S.C. 3001). Available at: <https://www.govinfo.gov/content/pkg/PLAW-109publ365/html/PLAW-109publ365.htm>. Accessed on August 20, 2021.
- <sup>566</sup> Coleman-Jensen, A., Rabbitt, M. P., Gregory, C., & Singh, A. (2021). *Household Food Security in the United States in 2020*. Economic Research Service, ERR-298. Washington, DC: U.S. Government Printing Office.
- <sup>567</sup> Coleman-Jensen, A., Rabbitt, M., & Gregory, C. (2020). *Food Security in the US: Measurement*. Available at: <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/measurement/>. Accessed on August 5, 2021.
- <sup>568</sup> Ahn, S., & Norwood, F. B. (2020). Measuring Food Insecurity during the COVID-19 Pandemic of Spring 2020. *Applied Economic Perspectives and Policy*. 00(00):1–7.
- <sup>569</sup> Ahn, S., Smith, T. A., & Norwood, F. B. (2020). Can Internet Surveys Mimic Food Insecurity Rates Published by the US Government? *Applied Economic Perspectives and Policy*. 42(2):187–204.