
Research Brief 12

About the WAFOOD Surveys

The Washington State (WA) Food Security Survey (WAFOOD) first launched in the summer of 2020 as an effort to track impacts of the COVID-19 pandemic on the well-being and food needs of Washingtonians. A 2nd survey was fielded from December 2020 to January 2021, a 3rd from July to August 2021, and a 4th from December 2022 to January 2023. This research brief summarizes the 5,052 responses to the 4th survey (WAFOOD4) to provide insights on the ongoing recovery of Washingtonians as consequences of the COVID-19 pandemic, including price inflation, continue to unfold. The WAFOOD surveys intentionally oversample households with lower incomes and those using food assistance, to provide deeper insights on food insecurity throughout the state.

Key Findings

1. Among the WAFOOD4 sample, which oversampled households with lower incomes, food insecurity remained high with nearly half of households food insecure in the past month.

2. Food insecurity was higher in households of BIPOC respondents, households with children, households with low incomes, and renters.

3. Food assistance use was high across WA, with more than half of respondents using at least one type of food assistance in the past month.

4. Food price increases were felt by everyone, but households with food insecurity reported greater worry about price increases, as well as worse overall financial outlooks and more financial stress.

5. For food insecure households, groceries were reported as the most challenging bill to afford.

High Food Insecurity Persists

- In the overall sample, 49% of WAFOOD4 households experienced food insecurity in the past month (Figure 1).
- 23% of the overall sample experienced low food security, and 26% experienced very low food security.

More Food Insecurity in Households of BIPOC Respondents and Households With Children

- By age group, food insecurity was highest in 45-54-year-olds (33%) (Figure 2).
- By gender, food insecurity was highest in those identifying as transgender, non-binary, or other (33%).
Food insecurity was higher among respondents identifying as non-Hispanic Black (47%), Hispanic (34%), and another race/ethnicity (34%). “Another race/ethnicity” includes American Indian or Alaskan Native, Native Hawaiian or Other Pacific Islander, and self-described race/ethnicity identities. Food insecurity was higher in households with children (31%).

More Food Insecurity Among Renters and Respondents With Low Incomes

- Food insecurity was greater in those with some college education or less (62%) (Figure 3).
- Food insecurity was similar among respondents who were unemployed and employed. Food insecurity was highest in households with annual incomes <$15,000 (70%).
- Food insecurity was higher in consumer-facing and food-based service occupations (60%).
- Food insecurity was greater among respondents who rent or have other housing situations.
High Use of Food Assistance Across WA Counties

- Among WAFOOD4 households, 55% used any food assistance in the past month (Figure 5).
- Food assistance use ranged from 36-84% by county and was highest in Jefferson and Asotin counties.

![Figure 5. WAFOOD4 household use of any food assistance in the past month, by county](image)

Food Assistance Use Was More Prevalent Among BIPOC Respondents, Households With Children, and Large Households

- Food assistance use was higher among 25-34 and 35-44-year-olds; 2 in 3 reported receiving assistance in the past month (Figure 6).

![Figure 6. WAFOOD4 household use of any food assistance in the past month, by respondent demographic characteristics](image)

Strong Socioeconomic Gradients in Food Assistance Use

- Food assistance use was highest among respondents identifying as non-Hispanic Black, Hispanic, or another race/ethnicity.\(^2\)
- Of larger households and households with children, nearly 3 in 4 used food assistance.
- Food assistance use was higher in rural households.\(^6\)
SNAP and Food Banks Among Most Commonly Used Food Assistance Programs

- Over half of WAFOOD4 households (52%) received assistance through the Supplemental Nutrition Assistance Program (SNAP), followed by food banks/pantries (38%) (Figure 8).
- The next most frequently used food assistance programs were school meals (27%) and P-EBT (23%), which support households with children.

Food Assistance Use Higher Among Households With Food Insecurity

- SNAP was used by 53% of households with food insecurity and 50% of households with food security in this sample (Figure 9).
- Use of every food assistance program was greater among households with insecurity compared to food secure households.

Food Assistance Barriers Differed by Household Food Security and Respondent Demographics

- The leading barriers to using or applying for more food assistance were 1) respondents already using all that they were eligible for and 2) earning too much to qualify (Figure 10).
• Feeling it wasn’t worth it if they only qualified for a small amount, feeling that others needed the benefits more, and transportation barriers were also named as top barriers.
• Some of these responses varied by food security status or race/ethnicity.

Figure 10. WAFOOD4 barriers to food assistance use in the past month

Food From Hunger Relief Programs Rarely Lasted More Than A Week
• Among households who used food assistance in the past month, only 7-10% of households reported that food from food banks/pantries, mobile programs, or delivery programs lasted more than a week (Figure 11).
• This was similar across food banks/pantries, mobile programs, and delivery programs.

Figure 11. WAFOOD4 households: average amount of time food from assistance programs lasted

Familiarity and Perceived Healthfulness of Food Differed by Food Assistance Type
• Among households who used food banks or food pantries in the past month, 53% often perceived the food as familiar or good for their health and well-being (Figure 12).
• In contrast, among households who used mobile programs or delivery programs, the majority sometimes or never perceived the food as familiar or good for their health and well-being.

Households With Food Insecurity Also Experienced Lower Economic Wellbeing
• Only 3% of households experiencing food insecurity reported that their household was living comfortably, whereas 77% reported they were either not getting by or just barely getting by (Figure 13).
• In contrast, most households experiencing food security were either doing okay (40%) or living comfortably (38%).

Groceries, Housing, and Utilities Led as Expenses of Concern
• Among the whole sample, the top expenses of concern in the past month were: rent or mortgage (34%), utilities (32%), and groceries (31%) (Figure 14).
• Transportation (31%), and debt-related payments (29%) were also commonly identified expenses of concern.
• These concerns were all more pronounced among households experiencing food insecurity, for whom the leading expenses of concern were groceries (54% of households with food insecurity found it hard to afford this expense), housing (51%), and utilities (50%).

Figure 14. Bills or expenses that were hard to afford in the past month among WAFOOD4 households

Most Noticed Price Increases, but Households With Food Insecurity Had Greater Financial Stress

• Most households thought food prices had increased in the past month, and this was similar between food secure and food insecure households (Figure 15).
• Over half (58%) of households with food insecurity reported those price increases as being very stressful (Figure 16).

Figure 15. WAFOOD4 respondent experiences with food prices in the past month, by food security status

Food Insecure Households Changed Where and What They Ate to Cope With Price Increases

• Households with food insecurity were more likely to adopt coping strategies to deal with price increases, such as shopping at lower-priced stores or looking for sales (57%), purchasing less produce/meat (53%), and switching to generic brands (46%) (Figure 17).
• Food secure households also engaged in many of these coping strategies to deal with higher prices.

Figure 17. WAFOOD4 respondents’ coping strategies for food price increases, by food security status

Concern About Financial Futures was Common, but Nearly Universal Among Food Insecure Households

• 80% of WAFOOD4 respondents were concerned about food price increases in the next 6 months (Figure 18).
• This concern was nearly universal among households with food insecurity (93%).

Figure 18. WAFOOD4 households’ concern about food price increases in the next 6 months, by food security status
Respondents In Food Insecure Households Reported Poor Diet and Health

- Many respondents in households with food insecurity rated their general health and diets as poor/fair (43% for both) (Figure 19 and 20).
- Very few respondents in food insecure households rated their general health and diets as very good/excellent (16% and 17%).

![Health of WAFOOD4 respondents, by food security status](image1)

Figure 19: Health of WAFOOD4 respondents, by food security status

- Compared to Washington State overall, the WAFOOD4 sample had more 35-54-year-olds, women, college graduates, and households with annual incomes <$35,000 (Table 1).
- Compared to prior WAFOOD survey waves, the WAFOOD4 sample had a relatively high proportion of households with annual incomes <$35,000.

![Diet quality of WAFOOD4 respondents, by food security status](image2)

Figure 20: Diet quality of WAFOOD4 respondents, by food security status

Respondents in Food Insecure Households Experienced Greater Anxiety, Depression, Stress

- Respondents in food insecure households were more likely to feel anxious (58%) or depressed (51%) (Figure 21).
- Respondents in households with food insecurity were also more likely to feel stressed all or most of the time (58%) in the past month.

![Mental health of WAFOOD4 respondents, by food security status](image3)

Figure 21: Mental health of WAFOOD4 respondents, by food security status

WAFOOD4 State Coverage

- The WAFOOD4 survey included 5,052 unique respondents from all counties in WA State (Figure 22).
- Over half (54%) of survey responses were from King, Spokane, Pierce, Snohomish, Clark, and Kitsap counties.

![Number of WAFOOD4 responses by county](image4)

Figure 22. Number of WAFOOD4 responses by county

Table 1. WAFOOD4 survey sample demographics compared to Washington State

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>WAFOOD4</th>
<th>WA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 to 34</td>
<td>24%</td>
<td>31%</td>
</tr>
<tr>
<td>35 to 54</td>
<td>41%</td>
<td>33%</td>
</tr>
<tr>
<td>55 and older</td>
<td>34%</td>
<td>36%</td>
</tr>
<tr>
<td><strong>Gender identity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>77%</td>
<td>50%</td>
</tr>
<tr>
<td>Men</td>
<td>19%</td>
<td>50%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
<td>--</td>
</tr>
<tr>
<td><strong>Race/ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>70%</td>
<td>67%</td>
</tr>
<tr>
<td>Hispanic or Latinx</td>
<td>12%</td>
<td>13%</td>
</tr>
<tr>
<td>Asian</td>
<td>4%</td>
<td>9%</td>
</tr>
<tr>
<td>Other</td>
<td>10%</td>
<td>11%</td>
</tr>
<tr>
<td><strong>Bachelor’s degree or higher</strong></td>
<td>43%</td>
<td>37%</td>
</tr>
<tr>
<td><strong>Annual household income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than $15,000</td>
<td>18%</td>
<td>7%</td>
</tr>
<tr>
<td>$15,000 to less than $35,000</td>
<td>23%</td>
<td>13%</td>
</tr>
<tr>
<td>$35,000 to less than $75,000</td>
<td>30%</td>
<td>27%</td>
</tr>
<tr>
<td>$75,000 or more</td>
<td>24%</td>
<td>52%</td>
</tr>
</tbody>
</table>

Note: Other gender includes transgender, nonbinary, and self-described. Other race/ethnicity includes non-Hispanic Black, American Indian or Alaskan Native, Native Hawaiian or Other Pacific Islander, and self-described categories. Age category percentages for WA are based on author calculations using US Census Bureau data.

*US Census Bureau 2019 American Community Survey 1-year estimates.
Abbreviations
AI/AN = American Indian/Alaskan Native
BIPOC = Black, Indigenous, and people of color
CACFP = Child and Adult Care Food Program
NH = Non-Hispanic
NH/OPI = Native Hawai’ian/Other Pacific Islander
P-EBT = Pandemic Electronic Benefits Transfer
USDA = United States Department of Agriculture
WA = Washington State
WIC = Women, Infants, and Children

Technical Notes
a. In this brief, food security is always presented in aggregate and refers to high food security and marginal food security. Food insecurity, where presented in aggregate, is the sum of low food security and very low food security. The USDA food security scale categories, based on the USDA 18-item food security scale, are:
- High food security: no reported indications of food-access problems or limitations.
- Marginal food security: one or two reported indications—typically of anxiety over food sufficiency or shortage of food in the house. Little or no indication of changes in diets or food intake.
- Low food security: reports of reduced quality, variety, or desirability of diet. Little or no indication of reduced food intake.
- Very low food security: reports of multiple indications of disrupted eating patterns and reduced food intake.

b. “Other” gender includes self-described gender identities.

c. “Another race/ethnicity” includes American Indian or Alaskan Native, Native Hawai’ian or Other Pacific Islander, and self-described race/ethnicity identities.

d. Urban versus rural definitions were based on respondent ZIP codes and area population density using definitions developed by the USDA Economic Research Service.

e. “Not in labor force” includes homemakers, students, retirees, and respondents who are unable to work.

f. “Consumer-facing services” includes: 1) hospitality, hotels, real estate, and rental, 2) installation, repair, and construction, 3) personal care and services, 4) retail sales and related occupations, and 5) arts, design, entertainment, and sports. “Food-based services” includes: 1) farming agriculture, fishing, and livestock, 2) transportation and food delivery, 3) food sales (wholesale or retail), and 4) food preparation and services.

g. “Other” housing status includes respondents who own mobile homes but pay to rent land, and who live in a house paid for by family, friends, or an employer.

h. Counties with fewer than 30 survey responses (Ferry, Klickitat, Lincoln, San Juan, Skamania, Wahkiakum) were omitted to maintain respondent confidentiality and for statistical stability.

i. Proportion of low income households and food insecurity in prior WAFOOD waves:
- WAFOOD1 (ending July 2020): 30% of sample <$35,000, 30% food insecure
- WAFOOD2 (ending Jan 2021): 32% of sample <$35,000, 27% food insecure
- WAFOOD3 (ending Aug 2021): 41% of sample <$35,000, 45% food insecure

Acknowledgements
The WAFOOD team wishes to thank the WA Department of Agriculture for their generous support in funding WAFOOD4 and United Way King County for their support of survey translations. We also thank funders of prior waves, including University of Washington (UW) Population Health Initiative, the UW School of Public Health and Department of Environmental and Occupational Health (DEOHS), the WA Department of Agriculture, the Paul G. Allen Family Foundation, and other private philanthropy. We also thank the numerous community partners and stakeholders who helped shape this project. Among those are: WA Department of Health, WA Department of Agriculture, WA Anti-Hunger & Nutrition Coalition, WA SNAP-Ed, King County Local Food Initiative, Northwest Harvest, WA State University (WSU) Extension, United Way of WA, and numerous food banks, food pantries, charitable organizations, community organizations, county health departments, and local health jurisdictions. The Nutrition and Obesity Policy Research and Evaluation Network (NOPREN) and the ad-hoc COVID-19 Food Security Surveys subgroup shared valuable insights and surveys relevant to this project.

Further Information
For more information and prior waves of WAFOOD data:
- The WAFOOD project page  
  https://nutr.uw.edu/cphn/wafood/
- The Washington State Food Systems Assessment  
  https://nutr.uw.edu/cphn_project/washington-state-food-systems-assessment/

About the WAFOOD Team
The WAFOOD survey is a joint effort between the University of Washington (UW) and Washington State University (WSU). The WAFOOD4 team comprises Jennifer J. Otten, Food Systems Director and Associate Professor, Nutritional Sciences Program (NSP) and DEOHS at the UW School of Public Health (SPH); Marie L. Spiker Assistant Professor, NSP, Epidemiology, and DEOHS at UWSPH; Jane Dai, PhD Student, Health Systems and Population Health at UWSPH; Ashley S. Tseng, PhD Candidate, Epidemiology at UWSPH; James H. Buszkiewicz, Research Investigator, Epidemiology at University of Michigan SPH; Shawna Beese, Assistant Professor of Rural Health Promotion at WSU Health Sciences; Sarah M. Collier, Assistant Professor, NSP and DEOHS at UWSPH; Alan Ismach, Research Coordinator, DEOHS at UWSPH.

Contact Us: phisurvey@uw.edu

Suggested Citation

Funding note: this project was supported by funds awarded by the US Department of the Treasury. Points of view in this document are those of the author and do not necessarily represent the official position or policies of the US Department of the Treasury. Funds are administered by the America Rescue Plan Act, State and Local Fiscal Recovery Funds, Washington State Department of Agriculture.