

Alternative School Lunch Valuation in the 2022 Supplemental Poverty Measure

Em Shrider¹

SEHSD Working Paper #2023-20

September 12, 2023

Introduction

The Supplemental Poverty Measure (SPM) is released annually by the U.S. Census Bureau based on data from the Current Population Survey Annual Social and Economic Supplement (CPS ASEC). The SPM accounts for many sources of government assistance, including benefits provided by the National School Lunch Program (NSLP), which subsidizes lunches served in public and nonprofit private schools. When the NSLP is operating normally, all student lunches are either partially or fully subsidized. The value of this subsidy is included as a resource in the SPM, traditionally calculated using per-meal reimbursement rates for a 179-day school year.

The COVID-19 pandemic and associated response has changed school lunch provision. The SPM used alternative methods to value school lunch benefits for both 2020 and 2021 to account for those changes (Shrider 2021; Shrider 2022). Additional changes to the NSLP in 2022 necessitate another adjustment to the method.

This paper describes the NSLP and how school lunch provision changed in 2022. It then describes the updated method for calculating and assigning school lunch values in the 2022 SPM. The paper concludes with a discussion of the limitations of the new method.

NSLP and the COVID-19 Pandemic

The NSLP provides low-cost or no-cost meals to children at public and nonprofit private schools and residential childcare institutions. Participating schools receive cash and commodities for each reimbursable meal they serve.² Traditionally, children qualify for free or reduced price lunches if their family income is below 185 percent of the federal poverty level; if they participate in certain assistance programs, like the Supplemental Nutritional Assistance Program (SNAP); or if they are homeless, a runaway, a migrant, or a foster child.³

¹ The views expressed in this paper, including those related to statistical, methodological, technical, or operational issues, are solely those of the author and do not necessarily reflect the official positions or policies of the U.S. Census Bureau. The author accepts responsibility for all errors. Information on confidentiality protection, methodology, sampling and nonsampling error, and definitions within the Current Population Survey Annual Social and Economic Supplement (CPS ASEC) is available at <www.2.census.gov/programs-surveys/cps/techdocs/cpsmar23.pdf>.

² More details on the NSLP are available at: <<https://www.fns.usda.gov/nslp/nslp-fact-sheet>>.

³ If the child's family income is at or below 130 percent of the federal poverty level, they are eligible for free lunches. Those who fall between 130 and 185 percent of the federal poverty level are eligible for reduced price lunches.

The Families First Coronavirus Response Act of 2020 (FFCRA) (PL 116-127), passed by Congress and signed into law in March 2020, granted exceptions to many normal NSLP rules. One of these exceptions allowed schools to provide universal free lunches through the end of the 2021-2022 school year. The FFCRA also established the P-EBT program, which distributed the value of school meal benefits when schools were closed and during the summer to children receiving free or reduced price meals.⁴

In addition to these federal changes, six states extended universal free lunch through at least the 2022-2023 school year.⁵ Due to these federal and state-level changes, the traditional method would undervalue benefits for many children, particularly in states that extended universal free lunch. The updated method adjusts for this by accounting for both federal and state universal free lunch policies and P-EBT receipt.

School Lunch Value Calculations

Traditional Value Calculation

Traditionally, school lunch values are calculated by taking a calendar-year weighted average of the federal reimbursement rate and adding weighted average commodities and bonus commodities per lunch served.^{6,7} This results in a daily value that is then multiplied by 179 days to get the annual per child benefit value.⁸

⁴ P-EBT benefits were distributed to eligible children's individual or family SNAP cards. If the child or family did not have a SNAP card, the benefit would be distributed on a separate P-EBT card. In New York, all benefits were distributed on Common Benefit Identification Cards (CBIC). The P-EBT program was established by the FFCRA and was later amended and continued by the Continuing Appropriations Act 2021 and Other Extensions Act (PL 116-159), the Consolidated Appropriations Act, 2021 (PL 116-260), the American Rescue Plan Act of 2021 (PL 117-2), and the Consolidated Appropriations Act, 2023 (PL 1170328).

⁵ California and Maine permanently extended universal free lunch (California Department of Education, 2023; Feinberg, 2022). Connecticut, Massachusetts, and Vermont extended universal free lunch through the end of the 2022-2023 school year (Torres, 2023; Healey and Driscoll 2023; State of Vermont Agency of Education). Nevada temporarily extended universal free lunch through at least the end of the 2023-2024 school year (Golonka, 2022). Colorado, Michigan, Minnesota, and New Mexico will have universal free lunch beginning in the 2023-2024 school year but did not have it in 2022-2023 (Daley, 2022; Francis and Ainsworth, 2023; Minnesota Department of Education, 2023; Bryan, 2023). This list is current as of July 25, 2023, but could change as states pass their fiscal year 2024 budgets.

⁶ Lunch reimbursement rates are set for each school year. In 2022, the spring months were reimbursed at the 2021-22 rate, while the fall months were reimbursed at the 2022-23 rate. Because the CPS ASEC asks about the previous calendar year, it contains five months of one school year and 4 months of the next school year. The traditional method uses the weighted average of these two reimbursement rates as the yearly rate. Commodity values are also weighted to account for the different school years.

⁷ Participating schools receive commodities, which are USDA Foods distributed based on program participation. The amount of commodities schools receive is a regular part of the NSLP. Bonus commodities are extra USDA Foods that are distributed to schools when there is a surplus. The amount of bonus commodities varies over time.

⁸ Traditional school lunch valuation is still available on the public use CPS ASEC file at the family level as F_MV_SL, while the new valuation is available at the SPM unit level as SPM_SCHLUNCH.

Table 1. Spring 2021-2022 and Fall 2022-2023 School Lunch Values

	January – May 2022 (Spring)	September – December 2022 (Fall)
Paid	\$0.63 * 99 days = \$62	\$1.09 * 80 = \$87
Reduced	\$3.53 * 99 days = \$349	\$4.24 * 80 = \$339
Free	\$3.93 * 99 days = \$389	\$4.64 * 80 = \$371

Note: Details differ due to rounding.

Source: U.S. Census Bureau, 2023.

Different values are calculated for those who received free, reduced price, and paid lunches.⁹ Breakfast, snacks, and summer meals are not included in the calculation because the CPS ASEC does not ask about them, and without a direct question, it is difficult to assign receipt.¹⁰

School lunch values are assigned based on two questions in the CPS ASEC that ask 1) whether children usually eat a complete meal provided by the school and 2) whether they usually received free or reduced price meals. Those who indicate that they did not eat school lunches are assigned no value. Those who indicate that they ate lunch at school but did not receive a free or reduced-price lunch are assigned the paid value. Those who indicate they received a lunch at school and that they received a free or reduced price lunch are given the free rate if they are in a family with an income below 150% of the federal poverty line. The remainder are randomly divided equally between the free and reduced rates.

Using the traditional method for 2022 would have given a value of \$149 for children receiving paid lunches, \$688 for children receiving reduced price lunches, and \$759 for children receiving free lunches.

Updated Value Calculation

The updated method for 2022 accounts for the provision of nearly universal free lunch in the 2021-2022 school year and inter-state variation in universal free lunch provision in the 2022-2023 school year. It also accounts for P-EBT distribution using the household-level P-EBT receipt question that was added to ASEC in 2021. Unlike in previous pandemic years (Shrider 2021; Shrider 2022), the method for 2022 does not account for P-EBT during the school year and only adds a value for summer P-EBT. Because most schools were open in 2022, P-EBT benefits were distributed predominantly in the summer. Due to data and geographic limitations, it is impossible to determine who received P-EBT for the school year, so school-year P-EBT is excluded from the calculation. In 2022, the value of summer P-EBT was \$391.¹¹

School lunch values were calculated separately for January through May 2022 (spring) and September through December 2022 (fall) using a simplified version of the traditional method. The traditional

⁹ All school lunches for children are partially subsidized. “Paid” refers to the partially subsidized lunches that are purchased by children not eligible for free or further reduced price lunches.

¹⁰ Summer food provision is also difficult to value. The coverage for federal summer food programs is uneven, the frequency of food distribution varies by site, and there are no eligibility requirements for individual children because site eligibility is based on local poverty rates.

¹¹ Additional information on summer P-EBT can be found at <<https://www.fns.usda.gov/snap/pandemic-ebt-summer-2022-questions-answers>>.

method calculates a weighted value across the entire calendar year. The simplified method takes the USDA’s reimbursement rate for each type of lunch by school year (2021-2022 for spring and 2022-2023 for fall) and then adds the per-lunch value of commodities and bonus commodities. Those values, displayed in Table 1, are then multiplied by 99 days for spring and 80 days for fall to get total spring and fall values.¹²

The final assigned school lunch value depends on the respondent’s answers to the traditional school lunch questions, whether they live in a state that extended universal free lunch, and whether they indicated P-EBT and SNAP receipt. As in previous years (Shrider 2021; Shrider 2022), SNAP recipients are not assigned P-EBT values to avoid double-counting P-EBT benefits.¹³

Table 2 contains the school lunch values for paid, reduced price, and free lunches for both the traditional and updated methods. Under the updated method, there are five possible sets of school lunch values. The first two sets are for states that extended free school lunch through at least the end of the 2022-2023 school year. In these states, respondents who indicated that they received “paid” lunches are given the paid values for both spring and fall.¹⁴ If they indicated P-EBT receipt but not SNAP receipt, they also receive the P-EBT value. Anyone who indicated they received free or reduced price lunches is assigned the free value for the whole year, with P-EBT added when appropriate.

The second two sets are for “return to normal” states, or those that went back to regular NSLP provision in Fall 2022. In these states, everyone is assigned the free rate for spring, and then either the paid, reduced price, or free rate for fall, based on their survey responses and the traditional method for assigning free or reduced price values. P-EBT values are added for those who do not receive SNAP but indicated P-EBT receipt.

The final set is for those who indicated that they did not eat school lunches, but did receive P-EBT. If they did not receive SNAP, they were given the P-EBT value of \$391.

¹² The traditional method assumes that there are 179 days in a school year, with 5/9^{ths} of the year in the spring and 4/9^{ths} of the year in the fall. With rounding, this works out to 99 days in the spring and 80 days in the fall.

¹³ Because SNAP recipients received their P-EBT benefits on their SNAP cards, it is likely that many recipients did not distinguish between sources when reporting their SNAP benefits in the CPS ASEC. Adding P-EBT to their school lunch benefits would likely double-count P-EBT.

¹⁴ Not all schools participate in NSLP or the free lunch expansion, so paying for lunch is a valid response. In states that extended universal free school lunch through the fall, it is reasonable to trust the respondents who indicated they paid. It’s debatable whether the same is true for “return to normal” states. Because the CPS ASEC does not ask about spring and fall separately, we can’t capture changes in school lunch payment. While the question asks about whether children received free or reduced price lunches for “most” of the year, and while the spring is longer than the fall (in terms of school days), it’s unclear whether respondents actually answered based on spring or if recency bias led them to answer based on the fall. The responses provide no clues; in “return to normal” states, responses fall neatly between where they were in the pre-pandemic era, when the NSLP was operating normally, and in 2022, when school lunches were nearly universally free (comparison not shown). Given this uncertainty, it seemed like the best path for return to normal states was compromise—assign everyone free lunch for the spring but use the respondents’ answers for the fall. This decision could lead to some misassignment, but it’s impossible to determine how much.

Table 2. School Lunch Calculations for 2022

	Paid	Reduced	Free
Traditional Calculation	\$149	\$688	\$759
Extended Free Lunch States	Spring Paid Rate + Fall Paid Rate \$149	Spring Free Rate + Fall Free Rate \$759	
Extended Free Lunch States + P-EBT	Spring Paid Rate + Fall Paid Rate + P-EBT \$540	Spring Free Rate + Fall Free Rate + P-EBT \$1,150	
Return to Normal States	Spring Free Rate + Fall Paid Rate \$476	Spring Free Rate + Fall Reduced Rate \$728	Spring Free Rate + Fall Free Rate \$759
Return to Normal States + P-EBT	Spring Free Rate + Fall Paid Rate + P-EBT \$867	Spring Free Rate + Fall Reduced Rate + P-EBT \$1,119	Spring Free Rate + Fall Free Rate + P-EBT \$1,150
No Lunch + P-EBT	\$391		

Note: Details differ due to rounding. The states with extended free lunch in 2022 were California, Connecticut, Maine, Massachusetts, Nevada, and Vermont.

Source: U.S. Census Bureau, 2023.

Limitations

While the school lunch values calculated by the updated method are likely more accurate than the traditional method given the pandemic's effect on school lunch provision, there are limitations to the new approach. First, because the survey does not capture within-year changes in NSLP participation, it's possible that benefits were over- or under-estimated for people who switched between paid, reduced price, and free lunches during the year. While this is a limitation when NSLP is operating normally, it is likely more of an issue this year, given that the majority of states switched from universal free lunch in the spring to having paid and reduced price lunches again in the fall.

The other main limitation is in P-EBT assignment. School lunch is likely undervalued for anyone who received P-EBT during the school year, because P-EBT is reimbursed at a higher rate than free lunches. In addition, it is unclear how people reported their SNAP and P-EBT benefits. While it seems likely that respondents would not distinguish their P-EBT benefits from increased SNAP benefits, that is not a certainty. It is possible that respondents only reported SNAP benefits, in which case their overall food support values will be under-reported.

Conclusion

This new method was developed to account for changes to school lunch provisions due to the COVID-19 pandemic. Using the new method, school lunch inputs are higher for almost all assignment categories than they would have been using the traditional method. Given the expansion of free school lunch in many states, further updates to the method for valuing school lunches in the SPM could be necessary in the future.

References

- Bryan, Susan Montoya. 2023(March 27). "Food for thought: Free meals for all New Mexico students." AP News. <<https://apnews.com/article/new-mexico-universal-free-school-meals-97a945e645e8c1def3a7598b4bacd028>>.
- California Department of Education. 2023(March 3). "California Universal Meals." <<https://www.cde.ca.gov/ls/nu/sn/cauniversalmeals.asp>>.
- Daley, John. 2022(November 9). "Universal free lunch ballot measure passes easily in Colorado." NPR. <<https://www.npr.org/2022/11/09/1134832752/colorado-free-school-lunch-results-measure-midterms>>.
- Feinberg, Robbie. 2022(August 31). "Maine makes free school lunches permanent after federal funding ends." NPR. <<https://www.npr.org/2022/08/31/1120223479/maine-makes-free-school-lunches-permanent-after-federal-funding-ends>>.
- Francis, Erica, and Amber Ainsworth. 2023(June 29). "Free school breakfast & lunch, field trip funding, and more – What students get under new Michigan budget." Fox 2 Detroit. <<https://www.fox2detroit.com/news/free-school-breakfast-lunch-field-trip-funding-and-more-what-students-get-under-new-michigan-budget>>.
- Golonka, Sean. 2022(December 15). "Lawmakers OK another year of free school lunch using federal ARP money." The Nevada Independent. <<https://thenevadaindependent.com/article/lawmakers-ok-another-year-of-free-school-lunch-using-federal-arp-money>>.
- Healey, Maura, and Kim Driscoll. 2023(March 29). "Governor Healey Signs \$389 Million Supplemental Budget." Mass.gov press release. <<https://www.mass.gov/news/governor-healey-signs-389-million-supplemental-budget>>.
- Minnesota Department of Education. 2023(March 17). "Free School Meals for Kids Program." Minnesota Department of Education Press Release. <<https://education.mn.gov/MDE/dse/FNS/SNP/free/>>.
- Shrider, Em. 2021. "Alternative School Lunch Valuation in the CPS ASEC During COVID-19." U.S. Census Bureau. <<https://www.census.gov/content/dam/Census/library/working-papers/2021/demo/sehswp2021-20.pdf>>
- . 2022. "School Lunch and P-EBT Valuation in the 2021 Supplemental Poverty Measure." U.S. Census Bureau. <<https://www.census.gov/library/working-papers/2022/demo/SEHSD-wp2022-15.html>>.
- State of Vermont Agency of Education. n.d., "Free and Reduced Meals." <<https://education.vermont.gov/student-support/nutrition/school-meals/free-and-reduced->

meals#:~:text=On%20May%2031%2C%202022%2C%20Governor,state%20funding%20to%20do%20s
o.>.

Torres, Lesley Cosme. 2023(February 14). "CT governor signs legislation extending state's free school lunch program." Connecticut Public Radio. <<https://www.ctpublic.org/news/2023-02-14/ct-governor-signs-legislation-extending-states-free-school-lunch-program>>.