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ENSURING PROPER BENEFITS FOR STUDENTS IN SCHOOL MEAL PROGRAMS

Roline Milfort Rosen, PhD, PMP; Jeffrey Taylor, PhD; Kevin Baier, PhD; Laurie May, PhD

ABSTRACT

PURPOSE/OBJECTIVES

The purpose of this study was to examine and discuss common challenges associated with obtaining the correct school meal benefits level from the National School Lunch and School Breakfast program application process. The findings provide insights and policy recommendations for improving school meal processes and reducing the number of students receiving an incorrect benefit level.

METHODS

Nationally representative samples of schools and students were selected using a multistage stratified probability sampling design. Collected from the sample were: (1) a household survey to assess school meal benefit eligibility, (2) physical copies of household meal benefit applications, and (3) interviews of subsampled households and school food authority (SFA) directors about the application and certification process. Information was compared from the surveys, applications, and SFA student eligibility statuses for meal reimbursements to determine if students received the correct benefit level. Regression models were used to investigate associations with incorrect benefit level; and, inductive theory was used for analyzing the interviews.

RESULTS

Twenty percent (20%) of eligible households received incorrect school meal benefits. Issues with income reporting on applications and proper documentation most commonly caused incorrect benefits. The interviews revealed many households had difficulty understanding how to report income and household members. Higher-income households were significantly more likely to receive incorrect benefits, providing further evidence that incomplete income reporting on applications was a significant source of error. SFAs that accepted online applications via a vendor website had fewer administrative errors than other SFAs.

APPLICATION TO CHILD NUTRITION PROFESSIONALS

Child nutrition policymakers are seeking ways to improve the household application and increase information integration to reduce the burdens and costs of determining school meal benefits and the number of households receiving incorrect benefits. Online applications and applications that simplify the process of reporting income could significantly reduce errors.

KEYWORDS: School Meals, Benefits, NSLP, SBP, Challenges, Errors

INTRODUCTION

As part of school meals served through the National School Lunch Program (NSLP) and School Breakfast Program (SBP), students can apply to receive benefits for either free or reduced-price meals, or otherwise can purchase meals at the subsidized full price. However, a substantial portion of students receive an incorrect benefit level due to mistakes on the benefits application or mistakes in eligibility determination. With incorrect benefit levels, students' ability to obtain nutritious meals while at school may be adversely affected. Simmons et al. (2022), for example, found that school meals' dietary quality was about 1.5 times higher than that of the average diet of U.S. children. Students and their families face challenges to receiving the correct levels of school meal benefits, particularly related to completing their applications and providing documentation (see Ponza et al., 2007, and Moore et al., 2015, for example).

In recent years, Congress enacted changes to reduce the burden on households in obtaining school meal benefits. The Healthy, Hunger-Free Kids Act of 2010 (HHFKA) provided funding and targets for States and school districts to increase school meal benefit eligibility determinations based on participation in other government programs, such as the Supplemental Nutrition Assistance Program (SNAP): a process called direct certification. Students who are directly certified do not have to submit applications, thereby reducing the opportunities for application process errors. The HHFKA also included provisions that allow schools to participate in the Community Eligibility Provision (CEP), which allows schools with at least 40% of students directly certified for free meals to receive reimbursements based on the percentage of those students, rather than certify students individually. Despite these changes, challenges persist in receiving the correct meal benefits.

Few previous studies have examined the challenges associated with obtaining school meal benefits. However, there is recent research on factors influencing participation in school meal benefit programs generally: see Farris et al. (2016), Guinn et al. (2013), Spruance et al. (2018), and Tan et al. (2020). St. Pierre et al. (1990) found that among households that did not apply for school meal benefits, many were unaware of school meal benefits. Hulsey et al. (2004) found similarly that households eligible for school meal benefits that did not apply, most commonly did not apply because they were unaware they qualified for benefits. Ponza et al. (2007) found incorrect levels of meal benefits were received often because both household income and size were misreported on applications or there were incomplete applications. Moore et al. (2015) found that missing applications and documentation were more prevalent an issue than incomplete applications. Kwon et al. (2017) found that among those school nutrition program management staff who said income verification procedures for meal benefits were inadequate, the most common reason stated was issues with household income documentation.

Similar to Ponza et al. (2007) and Moore et al. (2015), common challenges students face to receiving the correct benefits are investigated here.[1] Going beyond past studies, the effects of

[1] This work is part of a larger study on receiving correct school meal benefits funded by the United States Department of Agriculture (USDA), Food and Nutrition Service (FNS). That larger study is the third study in the "Access, Participation, Eligibility, and Certification" (APEC) series of studies by FNS. This work focuses on one aspect of that larger study: receiving incorrect benefits due to either household reporting or SFA administrative errors among students attending non-CEP schools. See Milfort et al. (2021) and Lewis, Bereznitsky, & Milfort, (2021).

recent changes in the certification process were examined, including the increase in utilization of direct certification in the years since HHFKA, as well as the increased use of online applications. This paper adds to the literature on school meal benefits by investigating relationships between various household- and school-level characteristics, and receiving correct benefit levels using multivariate analyses. This approach allowed for simultaneous control of possible confounding factors on incorrect benefit levels. The research here provides insight into policy improvements for the NSLP and SBP that can enhance processes and reduce the number of students receiving incorrect school meal benefits.

METHODS

Sampling

To generate nationally representative results, a multistage stratified probability sampling design to select a nationally representative sample of schools and students was used. First, a representative sample of School Food Authorities (SFAs) was selected. SFAs were sampled using data maintained by the U.S. Department of Agriculture's (USDA's) Food and Nutrition Service (FNS). Next, stratified samples of schools within SFAs were selected. Given the differences in determining meal benefits between CEP and non-CEP schools, separate samples of CEP and non-CEP schools were selected. School data was collected from responding sampled SFAs and sampled schools. Random samples of students and their households within schools were then selected. Students and their households were sampled at three different times during the school year to eliminate potential seasonal biases and to represent applications from the entire school year.

Data Collection

Data was collected via in-person visits to SFAs and households between November 2017 and June 2018. To estimate mistakes made in the process of determining benefit eligibility, student meal benefit applications were also collected from the SFAs. Additionally, qualitative interviews via telephone were completed with a random subsample of 60 households to understand better the household application experiences. Through additional qualitative interviews, a convenience subsample of 42 SFA directors were interviewed via telephone to gather their perspectives about the application process. The study was approved by the Westat Institutional Review Board.

Instruments

A survey instrument was developed that collected detailed household income and size information, participation in government programs, demographic characteristics, and student enrollment information and participation in school meal programs. The instrument and the questions therein were based on similar instruments used in previous studies see St. Pierre et al. (1990), Cole et al. (2001), Hulsey et al. (2004), Ponza et al. (2007), and Moore et al. (2015). Some of the questions were constructed to mirror data collected on meal benefit applications. To test the survey instrument, nine parents of school-age children who had applied for meal benefits, with a mix of sociodemographic characteristics, were recruited. Cognitive testing approaches were used whereby interviewers administered the survey instrument along with scripted and unscripted probes. Themes and patterns within the interviews were identified and the instrument was revised accordingly.

The survey was administered in person or by phone, with households asked to provide income documentation to verify their responses. This methodology ensured that the household survey provided as accurate and complete an accounting of household size and income as possible. Copies of their physical meal benefit applications were also collected from the SFA office. These applications included information on student household income and size, government means-tested program participation, additional student information, and the school meal benefit level as determined by the SFA.

Separate interview guides were also developed for conducting in-depth interviews about the application process with small subsamples of households and SFA directors. Both of the interview guides were designed to provide context about how and why errors may have occurred, and highlight strategies and improvements to minimize errors. The household interview guide probed participants' experiences in completing applications. For example, participants were asked, "How easy or difficult was it to understand the directions [in the application]? What made them easy/difficult?" The SFA director interview guide included discussions of the relevant application approval process(es) as well as discussions on reporting and training. For example, when discussing the application approval process, SFA directors were asked "What type of edit checks do you implement [for the applications]?"

Three of the nine participants who tested the survey instrument agreed to participate in testing for the household interview guide. Three SFA directors from a list of contacts from a previous study were recruited to participate in testing the SFA director interview guide. These SFA directors were all knowledgeable about all SFA activities. To test both interview guides, in-depth feasibility interviews were used with the recruited participants. The full in-depth interview guide was administered, issues were observed and documented, and the interview guides were revised appropriately based on the findings from the feasibility interviews.

Data Analyses and Weighting

Household reporting error and administrative error were checked to determine if a student received the correct benefit level. Household reporting errors occurred when households made mistakes completing their applications. Administrative errors occurred when SFAs made mistakes when processing applications or maintaining documentation. For household reporting error, the benefit level based on the household application did not match the benefit level based on the household survey. For administrative error, the benefit level based on the application or direct certification documentation did not match the benefit level assigned by the SFA and school. The different reasons for these errors were also explored.

Weights were developed to produce nationally representative results and weighted data were used for all of the analyses presented in this paper. The weights accounted for the probabilities of selection at the three stages of sampling—SFAs, schools, and students/households—and compensated for differential rates of nonresponse at the various stages of sampling. A series of replicate weights for generating standard errors was also developed. Analyses and weighting were done using SAS (SAS version 9.4, SAS Institute Inc., Cary, NC, 2016) and STATA (STATA Statistical Software: Release 17, StataCorp LLC, College Station, TX, 2021).

Relationships between household and school characteristics and household reporting and administrative errors were measured using weighted logistic regression. Weighted ordinary least squares (OLS) regression was also used to measure associations between household application experiences and the percentage of households by SFA with a household reporting error; and, to measure associations between SFA policies and the percentage of households by SFA with an administrative error. All analyses examined errors that lead to both receiving meal benefits and not receiving meal benefits. For the analysis of the household interviews, inductive theory based on Glaser and Strauss' (1967) fundamentals of grounded theory was used.

RESULTS AND DISCUSSION

Household Reporting and Administrative Error Prevalence

Among student households at non-CEP schools, approximately 12% of households had a household reporting error and approximately 10% of households had an administrative error. Accounting for administrative errors that offset or reinforced household reporting errors, 20% of eligible households received incorrect benefit levels for their school meals. See Table 1 for the full results. Based on a weighted summation of the incorrect benefit amounts of households that received incorrect benefits, these errors generated approximately $1 billion in incorrect benefit payments, which is 8% of the approximately $13 billion in reimbursements for non-CEP school meals for the NSLP and SBP during school year 2017/2018 (based on the FNS National Data Bank). Overall, these results suggest that a non-trivial number of eligible households received incorrect benefit levels for school meals. Students receiving fewer benefits than they are eligible for may be obtaining fewer school meals, or the families may experience undue hardship in paying a higher rate for school meals.

Table 1. *Error Rates and the Primary Reasons for Error Among Households*

Error and reasons	**Percentage of households (SE) n = 3,541**	**Percentage of household reporting/ administrative error**
Household reporting error	12.00	-
	(0.87)	
Household reporting error less reinforcing and offsetting errors	10.83	-
	(0.79)	
Administrative error	10.01	-
	(0.73)	
Administrative error less reinforcing and offsetting errors	8.83	-
	(0.73)	
Reinforcing errors	0.38	-
	(0.12)	
Offsetting errors	0.80	-
	(0.17)	
Net errors[a]	20.04	-
	(0.85)	

Table 1. *Error Rates and the Primary Reasons for Error Among Households*

Primary reasons for household reporting error		
Differences in income only	6.43	53.58
	(0.57)	
Number of household members with income and number of types of income[b]	5.59	46.58
	(0.55)	
Differences in both household size and income	3.52	29.33
	(0.46)	
Differences in participation in Federal means-tested programs	2.06	17.17
	(0.33)	
Primary reasons for administrative error		
Missing application	0.91	9.09
	(0.31)	
Missing benefit documentation in SFA records	3.98	39.76
	(0.53)	
Multiple reasons	1.68	16.78
	(0.31)	
Other/unknown reason	1.56	15.58
	(0.31)	

Source: Authors' calculations from study data.
Note: All estimates are weighted. Unit of analysis is students. Standard errors are in parentheses. See Milfort et al. (2021) for additional information on errors.
[a] Net errors are calculated by adding household reporting and administrative errors less reinforcing and offsetting errors, and reinforcing errors. Households with offsetting errors ultimately are receiving the correct school meal benefits.
[b] A more detailed accounting of income types was collected from households than was collected in previous similar studies (Ponza et al., 2007, and Moore et al., 2015) by providing respondents with an income worksheet ahead of the in-person survey administration. It is possible that the more detailed approach to collecting income information identified more types of income that respondents did not report on the application.

For the 12% of households with a household reporting error, 83% of those households had an issue reporting income on their applications correctly. Of those, 47% had difficulties knowing which household members with income they were supposed to report and the types of income they were supposed to report on their applications. In the household interviews, much of the challenges and confusion centered on types of income and the household members to include on the application. When interviewers asked households how they would complete applications with special income types, many respondents wavered on how and whether they would include these types on their applications. Some interviewees even described difficulties understanding where to list different types of incomes, with one interviewee commenting "…It was confusing [laughter], the income section. It asked for the income twice. Like, it's asking for the child's income twice, or the family's income twice and it causes some confusion." An audit of errors in the NSLP and SBP by the USDA Office of the Inspector General (OIG) also found that income reporting issues lead to a substantial number of errors (USDA OIG, 2015).

For the 10% of households with an administrative error, no one reason explained the majority of errors. The most common reason was missing benefit documentation in SFA records, which accounted for 40% of those households that had an administrative error. The school districts did not have supporting documentation that these households were eligible for free school meals based on participation in another qualifying government program. Further, these households were not otherwise eligible for free school meals based on the information gathered from the household survey.

In the interviews with SFA directors, interviewees often said there were challenges matching students across other government benefit programs, such as data quality and timing issues. Some interviewees likened these issues of matching across programs to investigative work, with one saying "If the database is telling us there's students that they can't match, that's when my computer tech puts on her Sherlock Holmes hat and tries to find ways to match those children…" For more information on the methodologies and findings from the household and SFA director interviews, see Lewis, Bereznitsky, and Milfort (2021).

When comparing the study's findings to previous research, a lower household reporting error was found than estimated by Ponza et al. (2007) and Moore et al. (2015). Similar to Ponza et al. (2007) and Moore et al. (2015), the primary driver of household reporting errors was around issues reporting income on applications. However, the most common reason for administrative errors differed from that of Ponza et al. (2007) and Moore et al. (2015). Specifically, lack of documentation of participation in other Federal means-tested programs was a common source of administrative error in this study. In recent years, SFAs more often relied on matching students to other Federal means-tested programs to determine eligibility compared to previous years. While this may have contributed to fewer administrative errors overall, it increased the likelihood of administrative errors in the matching process simply because SFAs more often used this method. The stability of findings around income issues on applications suggests that there is room for policy improvement to reduce these issues for households and SFAs.

Household Reporting and Administrative Error Modeling

The effects of various household- and school-level characteristics on the likelihood of having an error among households completing the income portion of the household survey were also explored. Households that reported and provided documentation of participation in SNAP, Temporary Assistance to Needy Families (TANF), or the Food Distribution Program on Indian Reservations (FDPIR) did not complete the income portion of the survey because participation in these programs automatically conferred eligibility for free meals. The effects of these characteristics were examined using weighted logistic regression models, which allow for simultaneous control of possible confounding factors on errors. Few characteristics had a statistically significant effect on the likelihood of an error (see Table 2).

For both error models, households with incomes above 130% of the poverty line had greater likelihoods of having either error.[2] Relative to households with incomes less than or equal to 130% of the poverty line, households with incomes above that threshold were between 20 to 25 percentage points more likely to have either error.

[2] Households with incomes less than or equal to 130% of the poverty line are eligible for free school meals. Households with income greater than 130% and up to 185% of the poverty line are eligible for reduced-price school meals.

Table 2. *Effects of Selected Characteristics on the Likelihood of Errors Among Households*

Characteristic	% pt. Δ in likelihood of household reporting error n = 1,709	% pt. Δ in likelihood of administrative error n = 1,854
Student grade (base=pre-k or kindergarten)		
Grades 1 to 3	8.01	-
	(5.69)	
Grades 4 to 5	0.88	-
	(4.99)	
Grades 6 to 8	0.10	-
	(5.90)	
Grades 9 to 12	0.81	-
	(4.73)	
Parent's education (base=less than high school)		
High school diploma or GED	0.72	-
	(3.24)	
Some college or technical	0.77	-
	(4.39)	
College graduate	-5.39	-
	(5.64)	
English as a second language	-1.72	-
	(3.74)	
Perceived difficulty of application (base=neither easy nor difficult)		
Very easy or easy	8.85	-
	(5.34)	
Very difficult or difficult	11.21	-
	(7.04)	
Applied online (base=did not apply online)	0.20	-
	(3.11)	
School meal participation		
Participates in SBP	5.38	-
	(3.87)	
Total number of NSLP meals received	0.03	0.01
	(0.03)	(0.02)
Total number of SBP meals received	-0.07*	0.02
	(0.03)	(0.03)
Student participates in Medicaid	-1.56	3.32
	(2.71)	(3.13)
Age of youngest child in household (base=less than 5 years old)		
5 to 8 years old	3.13	0.79
	(3.22)	(2.92)
9 to 13 years old	5.82	4.95
	(3.80)	(3.21)
14 to 18 years old	4.73	2.84
	(5.35)	(3.98)

Table 2. *Effects of Selected Characteristics on the Likelihood of Errors Among Households*

Household size (base=1 to 3 people in the household)		
4 to 6 people in the household	5.15	-1.97
	(3.19)	(2.99)
7 to 9 people in the household	5.37	-4.72
	(4.77)	(4.67)
10 or more people in the household	6.42	1.82
	(10.38)	(8.74)
Income relative to poverty (base=less than or equal to 130%)		
131 to 185%	22.63*	20.17*
	(2.96)	(3.13)
Greater than 185%	25.12*	24.03*
	(3.74)	(3.39)

Source: Authors' calculations from study data.
Note: All estimates are weighted. Unit of analysis is students. Cell entries are marginal effects generated from weighted logistic regressions with standard errors in parentheses. The marginal effects represent the estimated percentage point change in the likelihood of an error due to the corresponding variable, holding all else constant. Only households that completed the income portion of the household survey are included in these models. Households skipped the income portion of the survey if they received SNAP, TANF, or FDPIR benefits. See Milfort et al. (2021) for additional information and full regression model results.
* Indicates significant difference ($p<0.05$).

Lower income households were less likely to misreport their income in a way that caused an error by virtue of having less income, while higher income households with incomes near benefit thresholds and/or small errors in income reporting may have triggered an error. These results also reinforce the findings from Table 1 and from the household interviews. Households with higher incomes likely had income from more household members and more sources. When controlling for other factors, higher income households still had significantly higher likelihoods for errors, suggesting that issues with reporting income were a common source of error for these households.

Households by SFA Modeling

The effects of household application experiences on the percentage of households within SFAs with a household reporting error and of various SFA policies on the percentage of households within SFAs with an administrative error were also examined. Weighted OLS regression models were used to measure the effects of these characteristics.

No household application experience characteristics had a statistically significant effect on the percentage of households within SFAs with a household reporting error. However, certain SFA policies had statistically significant negative associations with the percentage of households within SFAs with an administrative error. SFAs that accepted online applications via a vendor website typically had a 12 percentage point decrease in the share of households with administrative errors. SFAs that processed their paper applications in a single way (either electronically or manually only), relative to those that processed in multiple ways, or those that did not use paper applications at all, had on average an eight percentage point lower share of households with administrative errors. See Table 3 for the full results.

Table 3. *Effects of Selected Characteristics on the Change in the Percentage of Errors Among Households by SFA*

Characteristic	Δ in household % of household reporting error by SFA n = 144	Δ in household % of administrative error by SFA n = 138
Household application experience		
Percentage applied online	-0.03	-
	(0.05)	
Percentage received assistance with application	0.11	-
	(0.32)	
Percentage parents with less than high school education	0.16	-
	(0.12)	
Percentage who found the application difficult	0.66	-
	(0.36)	
Percentage English as a second language	-0.17	-
	(0.11)	
Verification results and methods		
Percentage verified applications, benefits changed	-4.82	-4.11
	(5.37)	(11.92)
Percentage applications did not respond during verification	3.54	1.92
	(7.39)	(8.59)
Used alternate random verification sample	-1.81	-10.84
	(4.11)	(7.80)
SFA accepts applications on website	-	0.98
		(2.89)
SFA accepts online applications via a vendor website	-	-12.32*
		(4.94)
Direct certification method: State-level matching	-	-2.11
		(4.73)
Direct certification method: District-level matching	-	0.77
		(6.87)
Direct certification method: Letter method	-	-3.62
		(6.87)
SFA uses Meals Plus software	-	6.71
		(18.28)
SFA uses Horizon software	-	5.81
		(5.26)
SFA uses other software to process applications	-	7.33
		(6.24)
Processing of paper applications (base=used a combination of manual and electronic methods or did use not use paper applications[a])		
SFA processes paper applications electronically only	-	-8.40*
		(2.55)

Table 3. *Effects of Selected Characteristics on the Change in the Percentage of Errors Among Households by SFA*

SFA processes paper applications manually only	-	-7.95* (3.73)
Constant	6.73 (3.75)	28.68* (7.94)
R-squared	0.35	0.35

Source: Authors' calculations from study data and FNS-742 Verification Data.
Note: All estimates are weighted. Unit of analysis is SFAs. The dependent variable is the percentage of households with errors by SFA. Cell entries are regression coefficients generated from weighted OLS regressions with standard errors in parentheses. See Milfort et al. (2021) for additional information on these models.
[a] The model does not include a separate category for those who did not process paper applications because only a small number of SFAs did not process paper applications (n=8); results from exploratory regressions revealed that including those who did not process paper applications as a separate category resulted in high collinearity.
* Indicates significant difference (p<0.05).

These findings suggest that greater flexibility in the application process, particularly in how SFAs collect applications, should likely decrease the number of households with incorrect benefits. Online applications should reduce random human mistakes, such as handwriting misinterpretations, while also providing a more convenient method to complete the application. In the interviews with SFA directors, interviewees largely heralded accepting online applications as a key strategy for reducing errors. Many discussed that certain features of online applications, such as automated review of application data, have nearly eliminated errors that arise from the listing of household members. One interviewee said, "Now that we have it online, they don't make mistakes… it won't let you finish it unless you sign it and everything. So the online system has just about eliminated errors." In parallel with online applications, using paper applications may be useful for households without regular internet access or otherwise prefer to complete a hardcopy application. Processing any paper applications with a single standardized method (e.g., manually or electronically) rather than using a combination of methods, may also decrease the number of households with incorrect benefits.

There are few (if any) previous studies that examined the effects of various characteristics on household reporting and administrative errors in multivariate regression models. The results and findings here from these models contribute to the literature and provide new insights for policy improvements around school meal benefits.

CONCLUSIONS AND APPLICATIONS

Summary of Study Findings

Overall, the study finds that about 20% of households at non-CEP schools receive an incorrect benefit level for school meals. These incorrect benefit levels amounted to approximately $1 billion in incorrect benefit payments, which is 8% of the approximately $13 billion in reimbursements for non-CEP school meals for the NSLP and SBP during school year 2017/2018 (as reported in the FNS National Data Bank). The percentage of households with an incorrect

benefit level has decreased since Ponza et al. (2007) and Moore et al. (2015) conducted similar studies. Among the two types of errors, household reporting errors most often occur from an issue in income reporting, and administrative errors most often occur when school districts lack household benefits documentation for participation in qualifying government programs.

When examining the effects of various household- and school-level characteristics on the likelihood of having a household reporting or administrative error, higher income households have significantly higher likelihoods for errors, because these households commonly fail to report their income correctly on the application. Finally, certain SFA policies, such as accepting online applications via a vendor website, are associated with decreases in the share of households within an SFA with administrative errors. This suggests that online applications help reduce errors in meal benefits received.

School Meal Benefit Applications

The findings on household reporting errors suggest two possible policy improvements: the applications should better define the types of income and whose household income to report, and should be shortened or simplified to reduce the burden and confusion. Among SFA director interviewees, several suggest that long and complex applications are difficult for households to follow. Given the findings around issues with income reporting and interview suggestions, one related policy improvement may also be to request applicants provide adjusted gross income from tax returns rather than independently gathering income information. Providing adjusted gross income may be simpler than current income reporting procedures and may increase the clarity around income reporting on the applications. Similarly, one area of future research is to assess the feasibility of using and integrating tax returns into the household application process for school meals.

Another policy improvement is for policymakers to provide more detailed instructions and more automated procedures to school districts for verifying household participation in qualifying government programs. Based on the finding that administrative errors were most often from school districts lacking documentation of household participation in qualifying government programs, this could reduce administrative errors. Generally, policy improvements that increase integration with social welfare program eligibility determinations (e.g., SNAP) should help reduce both household reporting and administrative errors as fewer households will need to complete applications and schools and SFAs will have fewer issues verifying relevant eligibility information.

The findings also suggest that SFAs should transition any online application acceptance to accepting online applications via third-party vendor websites, given the significant association with a decrease in administrative errors among SFAs with this policy. For SFAs that lack the resources to transition to using vendor websites for online application acceptance, one additional policy improvement could be to provide adequate funds and resources to SFAs to implement this policy. The findings also suggest that there should still be a paper application option given the significant association with a decrease in administrative errors among SFAs that process paper applications using a single method. Policymakers should continue to implement and pursue policies that provide sufficient resources to maintaining and processing paper applications where appropriate.

Expanding School Meal Access

In interviews with SFA directors, nearly one quarter of interviewees suggested to provide universal free meals to all students, which would completely eliminate any application process errors and any students receiving the incorrect level of school meal benefits. This policy suggestion would eliminate any burdens and costs on households that complete applications, and on schools and school districts to process and review applications. Universal free meals would also eliminate the burdens and costs on schools and school districts to verify directly certified students who do not submit applications but are eligible for free school meals based on their participation in qualifying government programs. Finally, this policy suggestion would also remove any issues of students not receiving meal benefits because they were unaware of the existence of benefits, as described in St. Pierre et al. (1990), Hulsey et al. (2004), and Hock et al. (2022), as benefits would be universal and available to all students at all times.

Future research into the effects of universal free meals for all students is suggested to fully understand the implications of this policy suggestion and to complement existing research on this policy suggestion (for example, Ruffini, 2021). This research could include understanding the increased demand for school meals; the net effect on school meal costs from reduced administrative costs and increased meal costs (from both more meals served and increased costs for existing meals served); and, other topics relevant for school nutrition operators and policymakers. Related to this policy suggestion, the HHFKA expanded schools' ability to use CEP to offer free meals, which has removed any error from the application process for these schools using CEP. Additional research into further expanding CEP (e.g., lowering the required threshold of low-income students) to reduce errors is also suggested. Taken together, the policy improvements suggested here should reduce the likelihood of errors and reduce the number of students receiving incorrect school meal benefits. The suggestions for future research will increase understanding of the school meal programs as well as increase understanding of additional policy improvements that could improve program operations and reduce the number of students receiving incorrect school meal benefits.

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BIOGRAPHY

Roline Milfort Rosen, PhD, PMP, is a former Senior Study Director at Westat. Jeffrey Taylor, PhD, and Kevin Baier, PhD, are Senior Study Directors at Westat. Laurie May, PhD, is a Vice President Associate Director at Westat. All researchers are based in Rockville, Maryland.