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Regional Office Review of Applications (RORA) for School Meals 2012

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Any opinions, findings, conclusions, and recommendations expressed in this report are those of the authors and do not necessarily reflect the views of the U.S. Department of Agriculture.

Executive Summary

This is the eighth in a series of annual reports to examine administrative errors incurred during the local educational agency's (LEA) approval process of household applications for free and reduced-price meals in the National School Lunch Program (NSLP). Until 2009, the Food and Nutrition Service (FNS) staff reviewed the applications to make assessment of administrative errors. Starting from 2010, Westat served as an independent reviewer to assess administrative errors in sampled applications.

This report examines administrative error estimates in student certification for free and reduced-price NSLP meals. Due to the unequal probability of selection of LEA and selection of an application, additional analyses were undertaken to assess the effect of applying sample weights on the error estimates. In addition, this year we analyzed pooled RORA data from 2005 to 2012 to explore determinants of administrative errors.

A total of 2,758 applications from school year (SY) 2011-12 were available for independent review and determination of administrative errors. In SY 2011-12, LEA determinations had administrative errors in 211 of these applications. This corresponds to an overall administrative error rate of 7.7 percent. This year's rate indicates a 3 percentage point decrease from administrative error rate of 10.7 percent in the previous school year and is more in line with results obtained in SY 2009-10. Of the 211 applications with administrative errors, only 79 applications resulted in incorrect eligibility determination for free or reduced-price meals.

Among all income-based applications, 97.2 percent of students were certified for the correct level of meal benefits based on information in the application files. Household size and income were accurately calculated for 98.3 and 96.3 percent of the applications, respectively.

Adjusting for sample weights indicate slight upward bias in the unweighted error estimates for determination of certification and benefit status. While unweighted estimates indicate 2.86 percent and 3.88 percent errors, "weighted as usual" estimates show a 2.86 percent and 3.51 percent and "revised weight" estimates indicate 2.76 percent and 3.44 percent error rates in determination of certification and benefit status, respectively.

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Background 1

The National School Lunch Program (NSLP) is a federally funded meal program operating in public and nonprofit private schools and residential child care institutions. There were 31.6 million children in over 100,000 public and non-profit private schools and residential child care institutions receiving meal benefits in SY 2011-12. About 21 million of these children received free or reduced-price lunch (FNS, 2012a). The Food and Nutrition Service (FNS) of the United States Department of Agriculture (USDA) administers the NSLP at the federal level. At the State level, State agencies, typically State departments of education operate the program through agreements with local educational agencies (LEA). Federal policy determines eligibility for meal benefits. Based on the federal regulation 7 CFR Part 210, the LEAs have the legal authority to operate the NSLP as well as to certify and verify student eligibility for free and reduced-price benefits under the NSLP.

The FNS is required to report annually on the extent of erroneous payments in its programs under the Improper Payments Information Act of 2002 (IPIA) along with a report on the actions taken or that will be taken to reduce erroneous payments. In the school meal application process, erroneous payments (both under- and over-payments) can occur mainly for two reasons; household misreporting and administrative errors. This report focuses on administrative errors incurred during eligibility determinations. FNS routinely collects data through the Regional Office Review of Applications (RORA) to track these types of errors. Previously, USDA has issued seven reports examining annual rates of administrative errors (Karakus, Roeser et al., 2012); this eighth report presents findings from an independent assessment of applications from the 2011-12 school year.

Assessment of Administrative Errors

In accordance with changes made to the Child Nutrition and WIC Reauthorization Act of 2004 and policy clarifications issued since 2001, FNS published a revised manual, the *Eligibility Manual for School Meals: Determining and Verifying Eligibility*, in 2008. The manual was revised in October 2011 and

August 2012 [1] and reflects changes made since 2008, as a result of final and interim regulations, and policy clarification. In addition, only those non-discretionary provisions addressed through policy memorandum from the *Healthy, Hunger-Free Kids Act of 2010* are reflected in this updated manual. The LEAs work with their State to identify and implement procedures and options applicable within their State.

There are three categories of eligibility for meal benefits: (1) household income, (2) categorical eligibility, and (3) direct certification. Under the "household income" category students may be eligible for free meals (those with a household income at or below 130 percent of the Federal poverty guidelines), or reduced-price meals (those with a household income between 131 and 185 percent of the Federal poverty guidelines). Households must submit an application to the LEA in order for the student(s) to receive free or reduced-price meal benefits under this category. The LEA staff review these household applications and make determinations of eligibility by comparing the self-reported household size and income information with the guidelines published by the FNS. During the eligibility determination process, administrative errors can occur in determining gross monthly income, household family size, or assignment of benefit level based on household size and income specific (or relevant) information. Per FNS guidelines (FNS, 2012b), approved but incomplete applications (e.g., missing adult signature, missing social security number, etc.) also constitute administrative errors. Inaccurate certifications may result in assignment of higher or lower amounts of benefits than students are entitled to receive. In some instances, administrative errors may not have any impact on the benefit decisions, and therefore do not translate into an error in benefit level.

"Categorical eligibility" refers to automatic eligibility for free meals with the submission of an application with an appropriate case number or documentation pertaining to one of the following status:

- A member of a household is determined by the administering agency as receiving assistance under the Supplemental Nutrition Assistance Program (SNAP), Food Distribution Programs on Indian Reservations (FDPIR), or Temporary Assistance for Needy Families (TANF);
- Enrollment in a Federally funded Head Start or Even Start program;
- A foster child; or

[1] http://www.fns.usda.gov/cnd/guidance/EliMan.pdf

- A homeless, runaway or a migrant child.

Households participating in Supplemental Nutrition Assistance Program (SNAP), Temporary Assistance for Needy Families (TANF), or the Food Distribution Program on Indian Reservations (FDPIR) may bypass the standard application process and can be "directly certified" for benefits. Direct certification involves matching SNAP, TANF, and FDPIR records against student enrollment lists, either at the State or LEA level. Parents or guardians of children identified through these matching systems are notified of their children's eligibility for free school meals. They need to take no action for their children to be certified. No application is necessary if eligibility is determined through the direct certification process. This matching may be manual or through a computerized system

Just because a household participates in SNAP, TANF or FDPIR doesn't necessarily mean that they will be directly certified. States are required to directly certify children from SNAP households for free school meals. States may also directly certify children from TANF and FDPIR households, but are not required to do so. Also, based on the algorithms used in the matching process and the timing of the direct certification information update, in rare occurrences, it is possible that some students will not be "directly certified" necessitating them to submit an application with their case number to indicate they are "categorically eligible".

Administrative Errors in Determining Household Income. Common administrative errors in determining gross monthly income may involve computation errors. Such errors include:

- Not converting multiple income sources to annual income;
- Incorrectly determining the frequency of receipt of household income, and/or
- Incorrect addition or multiplication.

Administrative Errors in Determining Household Size. In determining household size, common errors include:

- Not counting the student in the list of all household members; or
- Double counting the student as an adult when the application asks only for the list of adult members of the household.

Administrative Errors Due to Certification of Incomplete Applications. These involve:

- Missing signatures;
- Missing social security numbers; or
- Other missing information.

2 Research Questions

Data abstracted from the review of applications will enable FNS to answer the following questions about administrative errors made by LEAs:

- To what extent did LEAs make the correct meal price status determination during certification?
- What types of administrative errors were made? What was the prevalence of each type of administrative error?
- What percent of applications received the correct meal benefit status? What percent of applications received the incorrect meal benefits at each combination of error (free, reduced-price, paid)?
- Has the accuracy of LEA certification and benefit status determinations changed compared with previous years?

3 Data Review Methods

The FNS regional staff selected the free- and reduced-price meal applications for independent review, using a randomized sampling procedure. Photocopies of the selected applications were forwarded to Westat for an independent assessment of eligibility and document errors in household size, income, and eligibility determinations. This is the third year FNS has sought independent assessment – and to ensure consistency in review with previous studies, Westat reviewed 500 applications and submitted those found to be in error to FNS for verification of the Westat process, and then continued with the review of the remaining applications[2].

Sampling Design

FNS uses a stratified two-stage cluster sample design to select applications for review. The first stage selects a sample of districts using 28 strata defined by the seven FNS regions and four size categories within each region. This database includes more than 95 percent of all public and private schools participating in the NSLP. Two LEAs are selected from each stratum using probabilities proportional to size (PPS) methods with replacement (eight LEAs are selected from each of the seven FNS regions). The measure of size for each LEA is the number of students approved for free and reduced-price meals obtained from FNS's School Food Authority Verification Summary Report (FNS-742). This selection process is accomplished in the following steps:

1. Sort the LEAs in each region by the number of students approved for free/reduced-price meals, from the smallest to the largest;

2. In each region, calculate the cumulative number of students approved for free/reduced-price meals for the LEAs sorted in (1);

3. Determine the cutoff values to be ¼, ½, and ¾ of the total number of students approved for free/reduced-price meals in each region;

[2] This year, Westat also examined predictors of administrative errors. See Appendix A for further discussion.

4. Examine the cumulative frequencies in each region and use the cutoff values to divide the LEAs into four strata ("small", "medium", "large" and "very large" school districts); and

5. Randomly select 2 LEAs within each stratum, using probability proportionate to size sampling with replacement with the number of students approved for free/reduced-price meals as the measure of size.

In stage two, FNS regional staff is asked to select students who had applied for meal benefits from the administrative files of the 56 LEAs selected in the first stage using systematic (randomized) sampling. In each of the 56 selected LEAs, applications from about 50 students were selected for review. If a LEA was selected twice (sampling was done with replacement), applications from about 100 students were sampled, so that the sample size in each stratum remained about 100 in all cases. Both approved and denied applications were included in the sample; students directly certified or students in Provision 2 or 3 SFAs schools not in their base year were not included. **Appendix B** includes strata totals of the number of students certified for free and reduced-price meals and direct certifications in each stratum. **Appendix C** presents the number of school districts within each region by the four strata: "small", "medium", "large" and "very large" school districts.

Development of Sampling Weights

Sampling weights are required to produce substantially unbiased estimates from the administrative records data by compensating for the unequal probabilities of application selection. The initial component of the sampling weight, called the *base weight,* corrects for the unequal probabilities of selection and is typically the reciprocal of each unit's probability of selection into the sample. In mathematical notation, if 'n' LEAs are sampled with replacement, with probability p_i, on each draw then the base weight, denoted by w_i, is given by

$$wi = 1/npi.$$

This approach to weighting for sampling with replacement and with unequal probabilities has been widely recognized for some time (Hansen and Hurwitz, 1943; Cochran, 1977, pp. 250-255). In this application, n=2, and p_i for each LEA is the ratio of the number of students approved for free/reduced-price meals in the school LEA to the total number of such students in the stratum. Hypothetically, if all students approved for free and reduced-price meals in a sampled LEA were reviewed by Westat, then the LEA base weight could be applied to the student data as well. But in

the next stage, about 50 such students were selected from the LEA for review, thereby requiring another weighting component.

For multi-stage designs, the base weights must reflect the probabilities of selection or base weights at each stage. For instance, in the case of a two-stage design in which the base weight for the *i*-th LEA is $w_i = 1/(2\ p_i)$, and the *j*-th student is selected within a selected LEA with probability *pj(i)* at the second stage, then an appropriate weight for each student *j(i)* in the sample is given by

$$wij\ =\ wi/pj(i))$$

The estimates presented in this report are reported in three different ways:[3]

1. Consistent with the earlier reports prepared by FNS, using no weight adjustment. We note that unweighted estimates are biased since applications were not sampled with equal probabilities. Unweighted estimates describe only the characteristics of the sampled applications.

2. Applying a weight for each application using the same formula that FNS used in earlier years (i.e., LEA base weight/probability of student). The following formula was used to compute this sampling weight (*weight as usual*):

$$Weight\ as\ usual = \frac{Region\ size}{2\ X\ LEA\ size} \div \frac{50}{LEA\ size}$$

3. After discussions with FNS, we were informed that in the past, while directly certified students were excluded in the selection of students at the sample LEAs, the weighting used for the estimates assumed that the selected applications were randomly selected from all students approved for free and reduced-price meals including those directly certified. However, the weight formula discussed above does not take this information into account. Thus, we compute weights accounting for the exclusion of directly certified students in the LEA listing and prepare estimates using these revised weights (*revised weights*).

$$Revised\ weight = \frac{Region\ size}{2\ X\ LEA\ size} \div \frac{50}{(LEA\ size - LEA\ direct\ certification\ size)}$$

[3] For comparison purposes, we report estimates on all four types of errors among income based applications and the weight computation does not reflect the process of removing categorically eligibles. This would provide good estimates only if the distribution of the categorically eligibles did not affect weights. **Appendix D** presents the mean and standard errors estimates for certification and benefit issuance errors for all applications.

Data File

Under direction from FNS staff, an EXCEL spreadsheet was created with appropriate data fields (Table 1). Each application was input into the spreadsheet along with the reviewer comments.

Table 1. List of variables obtained during application review

Variable name	Variable description	Value labels
Distnum	LEA Number (Region, Strata, LEA)	
LEA	LEA Name	
State	State Abbreviation	
Student	Student Number within LEA (1-50)	
CBIS	Current Benefit Issuance Status	(1) Free (2) Reduced-price (3) Paid
Napps	Number of Benefit Applications on File	
Verify	Was the Student Application Selected for Income Document Verification?	(1) Yes (2) No
VerDoc	Was Documentation Provided for Verification Request?	(1) Yes (2) No
CatElig	Application Categorically Eligible?	(1) Yes (2) No (3) Foster Child
HHSize	Household Size as Determined by Reviewer	
HHIncome	Monthly Household Income as Determined by Reviewer	
SSN	Was Parent's Social Security Number provided on Application?	(1) Yes (2) Don't Have SSN (3) No
Signature	Was Adult Signature Provided on Application?	(1) Yes (2) No
SFAHHSize	Household Size as Determined by SFA[4]	
SFAHHInc	Monthly Household Income as Determined by SFA	
SFAElig	Eligibility Status as Determined by SFA	(1) Free (2) Reduced-price (3) Paid- Income too High (4) Paid-Incomplete Application
FNSElig	Eligibility Status as Determined by Reviewer	(1) Free (2) Reduced-price (3) Paid- Income too High (4) Paid-Incomplete Application
SFAVer	Eligibility Status by SFA after Verification	(1) Remain F (2) Remain RP (3) Change F to RP (4) Change F to P (5) Change RP to P (6) Change RP to F (7) Non Response to Verification Request
FNSVer	Eligibility Status by Reviewer after Verification	(1) Remain F (2) Remain RP (3) Change F to RP (4) Change F to P (5) Change RP to P (6) Change RP to F (7) Non Response to Verification Request
ProcErr	Was Processing Error Made in Certification Process?	(1) Yes (2) No

[4] SFA stands for "School Food Authority", the governing body administering one or more schools and has the legal authority to operate child nutrition programs approved by USDA to operate the Program. SFA and LEA terms are used interchangeably throughout this report.

Application Review Process

Data Abstraction. The first stage of data abstraction included data entry onto hard copy spreadsheets. Any inconsistencies or inquiries were discussed at internal weekly meetings and documented on problem sheets. Issues that were not resolved internally were submitted to FNS for final resolution. All inquiries, internal or from FNS, were recorded in a Data Decision Log and serve as an historical record for future data abstraction and analysis (**Appendix E**). The second stage of data entry was transferring the data from the hard copy spreadsheet to an electronic database.

Quality Control. A rigorous quality control effort was employed at each stage of data abstraction and entry. Hard copy data abstraction received 100 percent review from a separate abstractor with an additional review of a 10 percent sample performed by project management staff. Electronic data entry also received 100 percent review from alternate data entry staff and a 10 percent sample by project management staff. Each case that was categorically eligible or selected for verification also received 100 percent review from project management staff. Lastly, any application that was considered to be an anomaly or raised any questions was discussed thoroughly among all data abstraction staff and documented accordingly.

Eligibility Determinations

Following the definitions used in the previous FNS reviews, certification status was considered in error in the following situations:

1. If the LEA's certification determination is different than the independent certification determination.

2. For applications selected for verification (e.g., pay stub verification for reported income), if the SFA certification determination after verification was different than the independent certification determination after verification.

3. The computation of household size and income was not recorded on the application for some LEAs. However, regional FNS staff completed a cover page - including information on current benefit issuance status for each applicant selected for this study. For applications with no information on initial certification decision, certification status

was considered in error if LEA certification determination was different than the current benefit issuance status.[5]

In addition, benefit status was considered in error if the current benefit issuance status provided by the LEA was different than the independent certification determination or if the application was selected for verification and the CBIS was different than the eligibility status determined by the reviewer after verification.

Various types of administrative errors can be made by the LEAs in calculating household size and income. Common errors in calculation of household size include:

1. Not counting the student if the applicant inadvertently omitted the child's name in the list of all household members; and
2. Double-counting the student if the application called for a list of all adult household members and the student was included in the list as an adult[6].

Common errors in the calculation of gross monthly income include:

1. Incorrect determination of the frequency for receiving income (e.g., biweekly instead of monthly);
2. Not using a standard frequency (i.e., monthly) when there are multiple income sources with different frequency;
3. Incorrect addition or multiplication; and
4. There can be issues related to inconsistent treatment of income received from child support alimony payments and income from irregular employment (e.g., substitute teacher). While income from such sources should be most often correctly computed and included in the gross household income, there may be cases where such income may be inadvertently excluded from the household income computation.

[5] In some instances, the applications were scanned and the certification process was completed using computer software. In some cases the FNS Regional staff failed to collect the information from the data files, so we could only assume that the initial certification status matched the current benefit issuance status. To that end, SFAElig should equal CBIS.

[6] Some applications have a separate place for the listing of all adult members of the household. Sometimes households include the children in that list due to misunderstanding and this may cause the reviewer to double count the number of children.

Data Security

In agreement with the Federal Privacy Act and other regulations to protect individual data, hard copy applications were stored in a locked file cabinet secured with a lock bar. This file cabinet was located in a limited access field room controlled by a key pad door lock (with an alarm) and security cameras. All electronic data files were encrypted and password-protected; only staff working on the project had access to these files. All staff signed a confidentiality agreement, in compliance with Westat's *Electronic Data Storage, Transport, and Security Acceptable Use Policy and Guidelines and Electronic Mail and Internet Acceptable Use Policy and Guidelines* in addition to the required USDA confidentiality agreement.

Data Review Key Findings 4

A total of 2,766 household applications for free or reduced-price meal benefits from 2011/12 school year were selected for review. Of these 2,766 applications, 293 (10.6 percent) were categorically eligible applications and 2,460 (88.9 percent) were income-based applications. The remaining thirteen applications (0.5 percent) could not be located and only cover pages prepared by the regional office staff were submitted. However, LEAs must have documentation that the household of a student receiving benefits has submitted an application or that the student was directly certified for free meals. Of the thirteen missing applications, five had a current benefit issuance status for free meals. It was decided that an administrative error occurred for these five cases since they were receiving benefits and had no indication that an application was submitted. The remaining eight applications had no information about current benefit issuance status. We were not able to assess eligibility status for these eight applications and they were not included in the analysis.

Categorically eligible students are eligible for free meals. In order to process the application, a household must provide the name of the child, a SNAP, TANF, or the FDPIR case number, or indicate other categorically eligible designation (e.g., homeless, migrant, foster child) and a signature of an adult household member on the application. In order to process an income based application, a household must provide the number of children and adults in the house, names of the household members, household income, an adult signature and the last four digits of the social security number.

In the following section, we first present error estimates and then examine the effect of applying sample weights on the error estimates. The samples under examination include (1) categorically eligible applications (n=293), (2) income based applications (n=2,460), and (3) all approved/denied applications (sample 1+ sample 2+ five missing applications with a free benefit issuance (n=2,758)).

***On categorically eligible applications*, the prevalence of certification error during processing ranged from 0 percent to 1.7 percent.** All applications were considered categorically eligible if a number was provided in the space for SNAP, TANF, or FDPIR number. The accuracy of the SNAP, TANF, or FDPIR number listed on the application was not verified for this study.
Five of the 293 categorically eligible applications resulted in an eligibility determination of reduced-price or paid status rather than free status which indicates a certification error. Thus the certification

error rate was 1.7 percent (5/293). The remaining applications included the student name, case number and adult signature, and were processed correctly. All of the certification errors resulted from an LEA proceeding to make an income based assessment of an application when a SNAP, TANF, or FDPIR number was included on the application. If LEA staff determined that these students were not on a public subsidy program as indicated on the application, then all five administrative errors may be justified.

However, effective with the start of SY 2009-10 if one child in a household is directly certified or is determined categorically eligible through a SNAP, TANF, FDPIR case number for free school meals by application, then all children in that household are categorically eligible for free meals. LEA staff may not have been knowledgeable about the new policy and may have been incorrectly implementing an income based assessment for a student without a SNAP/TANF/FDPIR case number while there are other students on the application with such case numbers.

***On income-based applications*, LEAs made more errors in determining gross monthly income than in determining household size.** Among the 2,460 income based applications, 268 of them (10.9 percent) had no indication of what household size or income levels the LEA staff had used in making its eligibility determination. The majority of such applications did not have the information, most likely because the applications were scanned and computer software output was not clear as to what information LEA actually used to make the determination. Sometimes, the regional staff collecting the information failed to obtain the screen shots from the computer system indicating what information the LEA actually used to make the eligibility determination. It was also possible that the application lacked space for LEA staff to enter their computation of household size and income. Thus, the sample size for the household income and size error rates is 2,192.

In school year 2011-2012, household size and household income were accurately calculated for 98.3 and 96.3 percent of the applications, respectively. Table 2 details the accuracy of household income and household size from income-eligible applications. In terms of household size determination, there were almost an equal number of under-counts and over-counts of the correct household size, 0.8 percent and 0.9 percent respectively. In calculating household income, there were more under-counts than over-counts. While 2.5 percent of applications had gross income under-counted, only 1.2 percent of applications had income over-counted.

Table 2. Accuracy of LEA determination of household income and household size from income-eligible applications (unweighted data for SY 2004-05 to 2011-12)

	04/05 %	05/06 %	06/07 %	07/08 %	08/09 %	09/10 %	10/11 %	11/12 %
Household size								
Correct	97.9	97.1	96.5	98.1	97.8	98.0	97.2	98.3
Not correct	2.1	2.9	3.5	1.9	2.2	2.0	2.8	1.7
Under-count	0.9	1.9	2.1	0.8	1.1	1.0	1.4	0.8
Over-count	1.2	1.0	1.4	1.1	1.0	1.0	1.3	0.9
Number of applications	2,222	2,293	2,252	2,315	2,118	2,314	2,384	2,192
Household income								
Correct	91.9	92.1	94.0	90.1	96.2	96.3	95.7	96.3
Not correct	8.1	7.9	6.0	9.9	3.8	3.7	4.3	3.7
Under-count	4.4	3.5	3.5	7.6	2.4	2.3	3.0	2.5
Over-count	3.7	4.4	2.5	2.3	1.4	1.4	1.2	1.2
Number of applications	2,222	2,293	2,252	2,315	2,118	2,278	2,366	2,192

Note: Table presents unweighted percent of cases with information recorded on the application. Household size and household income are considered incorrect only if the household size and income recorded on the application by the LEA are not equal to the value calculated by the independent reviewer from the data provided on the application. Numbers may not exactly sum to total due to rounding.

LEA determinations had administrative errors in 7.7 percent of applications *approved or denied on the basis of an application*. This indicates a 3 percentage point decrease from the previous year's administrative error rate of 10.7 percent and more in line with results obtained in SY 2009-10. Among the 211 administrative errors, 79 applications resulted in incorrect eligibility determination (five in categorically eligible applications[7], five from missing applications, and 69 from income based applications). As seen on Table 3, there were 60 applications with more benefits and 19 applications with fewer benefits than were justified.

Several factors may explain the decrease in processing error rates in 2012. First, we believe, last year's processing error was higher than usual possibly because of the change in characteristics of the sample pool due to changes in the direct certification rates. Last year, as a result of economic downturn, one would expect that more households were being directly certified, reducing the pool of applicants from which to draw the sample. Among those who applied for benefits, it is very possible that a higher percentage of households have incomes close to the thresholds for free and reduced-price meals and perhaps the likelihood of making an administrative error that lead to greater

[7] These five applications had "reduced-price" or "paid" status instead of "free" status.

than expected processing errors. This year's rate is more consistent with the average values observed in the previous years. In addition, simplification of some requirements with the updated Eligibility Manual for School Meals in 2012 and increased use of computerized systems to determine eligibility may have contributed to the decrease in processing errors.

Administrative errors do not always result in incorrect eligibility determination. For example, a household size may be incorrectly assessed as four and the student may qualify for free meal. If the correct household size was three, this would indicate an administrative error, but if the student still qualifies for free meal, it does not affect the eligibility determination. Some applications were approved for meal benefits although the application was incomplete; this in an example of an incorrect eligibility determination.

Table 3. Administrative errors and incorrect certification determinations on the basis of an approved/denied application (n=2,758), (Unweighted data for SY 2011-12)

Administrative errors	N	Percent
All administrative errors	211	7.7
Administrative errors that resulted in incorrect certification determination	79	2.9
Higher benefits	60	2.2
Lower benefits	19	0.7

Note: Certification status is considered an administrative error if the LEA's certification determination (SFAElig) is different than independent certification determination (FNSElig). For those students selected for verification, certification status is considered an administrative error if the eligibility status determined by the LEA after verification (SFAVer) is different than the eligibility status determined by the independent reviewer after verification (FNSVer). Numbers may not exactly sum to total due to rounding.

The percentage of eligibility determinations in error was 2.8 percent for students approved or denied *on the basis of income based assessment.* As seen in Table 4, there were 69 applications (2.8 percent) with incorrect certification out of 2,460 income-based applications. Of these 69 applications with certification error, 54 applications (78 percent) were certified for more benefits, and 15 applications (22 percent), were certified for fewer benefits than justified based on the documentation available.

Table 4. Certification status determination for income-based applications (n=2,460), (Unweighted data for SY 2011-12)

Certification status determination	N	Percent
Correct determination	2,391	97.2
Incorrect determination	69	2.8
Higher benefits	54	2.2
Lower benefits	15	0.6

Note: Certification status is considered incorrect if the LEA's certification determination (SFAElig) is different than independent certification determination (FNSElig). For those students selected for verification certification status is considered in error if the eligibility status determined by the LEA after verification (SFAVer) is different than the eligibility status determined by the independent reviewer after verification (FNSVer).

Accuracy of benefit issuance status was a little lower compared to the accuracy of certification determination. As discussed earlier, benefit status was considered in error if the current benefit issuance status was different than the independent certification determination or the eligibility status determined by the independent reviewer after verification. Meal benefits issuance status was correct on about 96.1 percent of the applications approved or denied on the basis of income based assessment. As seen in Table 5, there were 95 students (3.9 percent) out of 2,460 income-based applications approved for the incorrect level of benefits. Of the 95 students with benefit determination error, 74 students (78 percent) were certified for a higher level of benefits, and 21 students (22 percent) were certified for a lower level of benefits than justified based on the documentation available.

Table 5. Benefit issuance status determination for income-based applications (n=2,460), (Unweighted data for SY 2011-12)

Benefit issuance determination	N	Percent
Correct determination	2,365	96.1
Incorrect determination	95	3.9
Higher benefits	74	3.0
Lower benefits	21	0.9

Note: Benefit status was considered in error if the current benefit issuance status provided by the LEA (CBIS) was different than the independent certification determination (FNSElig) or the eligibility status determined by the independent reviewer after verification (FNSVer) for those students selected for verification.

The percentage of applications incorrectly approved or denied for NSLP free or reduced-price meal benefits was lower than, but still comparable to, the previous years. The percentage of student households applying for meal benefits that were incorrectly certified due to administrative errors varied from 2.0 to 3.9 percent during the previous 7-year span. As seen in Table 6, in school year 2011/12 administrative error in certification status determination was at 2.9

percent. The percentage of over-certified was 2.1 percent and the percentage of under-certified was 0.8 percent.

Table 6. Comparison of certification and benefit status determinations for all applications approved or denied on the basis of an application, (Weighted data for SY 2004-05 to SY 2011-12)

	04/05 %	05/06 %	06/07 %	07/08 %	08/09 %	09/10 %	10/11 %	11/12 %
Certification status determination								
Correct determination	96.5	97.0	96.1	96.1	98.0	97.7	96.3	97.1
Incorrect determination	3.5	3.0	3.9	3.9	2.0	2.3	3.7	2.9
Higher benefits	2.9	2.5	3.0	3.2	1.3	1.5	2.8	2.1
Lower benefits	0.6	0.5	0.9	0.7	0.7	0.9	0.9	0.8
Benefit status determination								
Correct determination	95.7	96.2	95.8	95.4	97.0	97.0	95.5	96.5
Incorrect determination	4.3	3.8	4.2	4.6	3.0	3.0	4.6	3.5
Higher benefits	3.4	2.8	3.3	3.5	1.9	1.5	3.3	2.6
Lower benefits	0.9	1.0	0.9	1.1	1.1	1.5	1.2	0.9

Note: Certification status is considered in error if the LEA's certification determination (SFAElig) is different than independent certification determination (FNSElig). For those students selected for verification, certification status is considered in error if the eligibility status determined by the LEA after verification (SFAVer) is different than the eligibility status determined by the independent reviewer after verification (FNSVer). Benefit status was considered in error if the current benefit issuance status provided by the LEA (CBIS) was different than the independent certification determination (FNSElig) or the eligibility status determined by the independent reviewer after verification (FNSVer) for those students selected for verification. We use "Weights as usual" in weighting. Numbers may not exactly sum to total due to rounding.

The overall percentage of students with incorrect meal benefits issuance status was also lower than last year. The benefit status determination error varied from 3.0 to 4.6 percent during the previous 7-year span. In school year 2011-12, among the 2,758 applications, 3.5 percent had incorrect benefit status determination. The percent of students receiving higher benefits than they were entitled decreased to 2.6 percent from 3.3 percent in the previous year. The percentage of students receiving lower benefits due to benefit issuance error has decreased to 0.9 percent from 1.2 percent in the previous year. However, the t-test results indicate that there is no statistically significant change in certification and benefit errors between SY 2010-11 and SY 2011-12.

Adjusting for sample weights indicate a slight upward bias in the unweighted error estimates for determination of certification and benefit status. As seen in Table 7, unweighted estimates for certification and benefit status determination are higher than the weighted estimates. While unweighted estimates indicate 2.86 percent and 3.88 percent errors, "weighted as usual"

estimates show a 2.86 percent and 3.51 percent and "revised weight" estimates indicate 2.76 percent and 3.44 percent error rates in determination of certification and benefit status, respectively[8].

Table 7. Comparison of weighted and unweighted estimates: administrative errors in determination of certification and benefit status among all applications approved or denied on the basis of an application (n=2,758), SY 2011-12

	Incorrect determination		Fewer-Benefits		More-Benefits	
	N	Percent	N	Percent	N	Percent
Certification status determination						
Unweighted	79.00	2.86	19.00	0.69	60.00	2.18
Weighted as usual	78.85	2.86	20.98	0.76	57.87	2.10
Revised weights	76.11	2.76	21.06	0.76	55.04	2.00
Benefit status determination						
Unweighted	107.00	3.88	25.00	0.91	82.00	2.97
Weighted as usual	96.74	3.51	24.40	0.88	72.64	2.62
Revised weights	95.04	3.45	25.77	0.93	69.27	2.51

Note: Certification status is considered in error if the LEA's certification determination (SFAElig) is different than independent certification determination (FNSElig). For those students selected for verification certification status is considered in error if the eligibility status determined by the LEA after verification (SFAVer) is different than the eligibility status determined by the independent reviewer after verification (FNSVer). Benefit status was considered in error if the current benefit issuance status provided by the LEA (CBIS) was different than the independent certification determination (FNSElig) or the eligibility status determined by the independent reviewer after verification (FNSVer) for those students selected for verification.

[8] "Weighted as usual" refers to applying a weight for each application using the same formula that FNS used in earlier years (i.e., LEA base weight/probability of student). "Revised weights" refers to accounting for the exclusion of directly certified students in the LEA listing and prepare estimates using these revised weights (*revised weights*).

5 Conclusions

FNS implemented regional office reviews of household applications of students approved for free or reduced-price meal benefits through the National School Lunch Program (NSLP) between 2005 and 2009. Starting from 2010, Westat served as an independent reviewer to examine administrative errors incurred by the Local Educational Agencies in their approval process of applications for free and reduced-price meals.

A total of 2,758 applications from SY 2011-12 were available for independent assessment to determine administrative errors. In SY 2011-12, LEA determinations had administrative errors in 7.7 percent of these applications. This is a 3.0 percentage point decrease from 10.7 percent in the previous school year and is more in line with results obtained in SY 2009/10 (7.5 percent). Of the 211 applications with administrative errors, only 79 applications (or 2.9 percent of total applications reviewed) resulted in incorrect eligibility determination for free or reduced-price meals.

Among all income-based applications, 97.2 percent of students were certified for the correct level of meal benefits based on information in the application files. Household size and income were accurately calculated for 98.3 and 96.3 percent of the applications, respectively. Adjusting for sample weights indicate a slight upward bias in the unweighted error estimates for determination of certification and benefit status. Unweighted estimates for certification and benefit status determination are higher than the weighted estimates. While unweighted estimates indicate 2.86 percent and 3.88 percent errors, "weighted as usual" estimates show a 2.86 percent and 3.51 percent and "revised weight" estimates that take the number of students directly certified into consideration, indicate 2.76 percent and 3.44 percent error rates in determination of certification and benefit status, respectively.

Several factors may explain the decrease in processing error rates for RORA 2012. First, we believe, last year's processing error was higher than usual possibly because of the change in characteristics of the sample pool due to changes in the direct certification rates. This year's rate is more consistent with the average values observed in the previous years. In addition, simplification of some requirements with the updated Eligibility Manual for School Meals in 2012 and increased use of computerized systems to determine eligibility may have contributed to the decrease in processing errors.

6 Recommendations for Future Studies

This report presents findings of the eighth annual RORA review. Westat reviewed the applications selected by FNS, entered data, implemented quality control procedures, and conducted data analyses. We recommend that future RORA studies will benefit from the following two recommendations.

In some applications, it was very hard to make an assessment because of the unclear time lag or lack of notation when the LEA updates information after hard copy submission. While some of the paperwork issues may be due to electronic applications themselves, we noticed that there were discrepancies between what was written or typed on some applications and the LEA documentation provided as backup. For example, sometimes CBIS would be different or we wouldn't quite be sure how things changed from the screen shot that would be attached to the hard copy (when they were different). It is hard to make an assessment with no clear linking path as to why there were differences through a paper trail. We believe, better documentation including all relevant information must be provided for reviewing the application.

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Appendix A

Modeling Predictors of Administrative Errors

Modeling Predictors of Administrative Errors

In order to reduce administrative errors incurred by LEAs in their approval process of applications for free and reduced-price meals, FNS needs to identify characteristics of LEAs that are indicators of a high risk for administrative error. By pooling multiple years of RORA data, it is possible to examine LEA characteristics that predict high rates of administrative error. This would allow FNS to provide more tailored technical assistance to LEAs most at risk. In 2012, FNS added a task to the annual RORA review to develop statistical models to identify indicators of LEAs at high risk for administrative error.

An earlier study (Moore, Cole, & Potamites, 2012) sought to identify high risk indicators of administrative error. It found that the several variables predict high rates of administrative error, including: (1) larger districts; (2) districts with a higher percentage of students categorically eligible, (3) districts with a higher percentage of benefits reduced or terminated as a result of verification, and (4) districts with a higher percentage of families who did not respond to verification.

This task extends research on high risk indicators of administrative error in several ways. (1) By identifying predictors of different types of administrative error, including processing error, household income error, household size error, certification status error, and benefit issuance error. (2) By including two more years of RORA data (SY 2010-11 and SY 2011-12) in the analysis.[9] (3) By considering additional predictors of administrative error and regional variation and time trends in administrative error.

The sections below describe the data sources and variables, the procedures used to develop the statistical model, and the results.

Methods

Data Sources. We constructed an analysis file from four data sources for use in this task as described in Table A-1. RORA files from SY 2005-06 to SY 2011-12 were used to provide the key measures of administrative error that were used as the dependent variables in the statistical models. The other data files provided candidates for predictors of administrative error. The *School Food Authority Verification Summary Report* (FNS-742) provides counts of students certified for free and reduced-price meals among all LEAs participating in the NSLP.[10] The *Common Core of Data (CCD)*,

[9] Following the advice of FNS, we did not consider SY 2004-05 data in the analysis.

[10] The FNS-742 files provided did not contain the results of verification conducted by LEAs. Therefore, we were unable to consider the influence of verification results on administrative error.

collected by the National Center for Education Statistics (NCES), is a census of all public schools in the United States. The LEA School Universe Survey of the CCD provides data on LEA characteristics and administration, including descriptive data about students and staff. The School District Fiscal Data Survey of the CCD provides data on food service and food service salary expenditures. We used data from the FNS-742 and the CCD's LEA School Universe Survey and School District Fiscal Data Survey as predictors.

Table A-1. Data Sources for Modeling Administrative Error

Data Source	Measures	School Years
RORA	Administrative error: (1) processing error, (2) household size determination error, (3) household income determination error, (4) certification status error, (5) benefit issuance status error	SY 2005-06 SY 2006-07 SY 2007-08 SY 2008-09 SY 2009-10 SY 2010-11 SY 2011-12
FNS-742[a]	Enrollment; counts of free students not subject to verification; counts of students certified for free and reduced-price meals	SY 2005-06 SY 2006-07 SY 2007-08 SY 2008-09 SY 2009-10 SY 2010-11 SY 2011-12
CCD Public School Universe Survey[b]	District demographic and administrative characteristics	SY 2005-06 SY 2006-07 SY 2007-08 SY 2008-09 SY 2009-10 SY 2010-11
CCD School District Fiscal Survey[c]	Food service expenditures	FY 2006 FY 2007 FY 2008 FY 2009

[a] The FNS-742 includes both public and private schools.
[b] CCD Public School University Survey data for SY 2011-12 was not available at the time of this report. Data from SY 2010-11 was used in place of SY 2011-12 in the statistical models.
[c] CCD School District Fiscal Survey data for FY 2010 and 2011 was not available at the time of this report. Data from FY 2009 was used to correspond to SY 2009-10, SY 2010-11, and SY 2011-12 in the statistical models.

To construct the analysis file, administrative errors were calculated at the student level. RORA data from SY 2005-2006 to SY 2011-12 was then aggregated or "rolled up" to the LEA level for use in the statistical models. An administrative error rate was calculated for each LEA in each year. The administrative error rate represents the proportion of students with a processing error, household size determination error, etc. in the LEA in each year. (The administrative error variables are

described in more detail in the ***Variables*** section.) The unit of analysis was the LEA year (i.e., one observation for each LEA in each year). Since 56 LEAs were sampled in each of seven years, the analysis data set consisted of 392 observations (392 = 56 X 7). LEA characteristics were used to explain variation in administrative errors across LEAs.

Variables. The goal of the statistical models is to identify LEA characteristics that predict high rates of administrative error. The models summarize the relationships between LEA characteristics and five types of administrative errors:

- Errors made in the **processing of an application,**
- Administrative errors in determining **gross income**,
- Administrative errors in determining **household family size**,
- Certification errors **in eligibility determinations,**
- Administrative errors in **assignment of benefit level** based on the information in the application files.

Processing errors are administrative errors that occur during processing of an application that may or may not impact eligibility (e.g., missing signature). Household size and household income errors occur when household size and income recorded on the application by the LEA are not equal to the value calculated by the independent reviewer from the data provided on the application. Certification status is considered in error if the LEA's certification determination is different than independent certification determination or the eligibility status determined by the independent reviewer after verification for those students selected for verification. Benefit status was considered in error if the current benefit issuance status provided by the LEA was different than the independent certification determination or the eligibility status determined by the independent reviewer after verification for those students selected for verification.

We estimate separate statistical models for each of the five types of administrative errors. Household size and income errors are made when the household size or income on the application calculated by the LEA are not equal to the value calculated by the independent reviewer from the data provided on the application. Household size and income errors are calculated from income-eligible applications only. Certification status and benefit status are considered in error if the LEA's certification determination or benefit issuance status was different than the independent certification determination. Certification and benefit status are calculated among all applications approved or denied on the basis of an application.

The goal of the statistical models is to identify predictors of administrative errors. Variables were chosen for inclusion because of a hypothesized association between administrative error rates or because FNS wants to understand how a predictor may be related to error rates. Table A-2 provides a description of all of the variables included in the statistical models. The values for each of the predictors was updated in each year and measured in the same year as the administrative error rate.[11]

For each variable, we tested both linear and non-linear specifications of the effects of the variables. Linear effects were tested by including continuous variables; non-linear effects were testing by including dummy variables for categories of the measure. If non-linear effects were significant, we included that dummy variables rather than the continuous predictor in the final models.

Table A-2. Key Variables Used for Modeling Administrative Certification Error

Variable	Description	Data Source
% not subject to verification	Percentage of free eligible students not subject to verification (e.g., directly certified, homeless liaison list, income-eligible Head start, pre-K Even start, residential students in RCCIs, non-applicants approved by local official)	FNS-742
Enrollment	Total student enrollment; Variables for <1,000, 1,001-5,000, 5,001-10,000, and 10,001 or more	FNS-742
% free	Percentage of students who are certified for free meals based on income; Variables for <30%, 30-59%, and 60% or more	FNS-742

[11] There were two exceptions. First, data on race/ethnicity was only available in the SY 2010-11 CCD data. We used the SY 2010-11 data to impute data for previous years. Second, food service expenditures were not available beyond FY 2009. Data from FY 2009 was used to correspond to SY 2009-10, SY 2010-11, and SY 2011-12 in the statistical models.

In addition, CCD data from SY 2011-12 was not available at the time the analysis was conducted due to a lag in reporting. Rather than exclude RORA data from SY 2011-12 from the analysis, we used CCD data from SY 2010-11 to predict administrative error rates in SY 2011-12. We expect that most variables from the CCD will not change substantially for most districts between SY 2010-11 and SY 2011-12. To assess the tenability of this assumption, we examined change in variables from the CCD from SY 2009-10 to SY 2010-11. Not surprisingly, the variable locale exhibited the least change over time. We found that only 2.8 percent of LEAs reported a change in locale; 2.5 percent of LEAs reported greater than a 5 percentage point change, high or low, in the percentage of ELL students; 7.7 percent of LEAs reported greater than a $100 change in food service expenditures per student, high or low; and 17.6 percent of LEAs changed pupil teacher ratio category. Therefore, for most variables, the majority of SFAs have either no change or a small change over the one year period. The potential bias that would result from using SY 2010-11 in place of SY 2011-12 CCD data in the statistical models would be to attenuate the effects of these predictors on administrative error rates. In a sensitivity analysis, we reran all of the statistical models excluding SY 2011-12 data to determine whether additional predictors from the CCD data became statistically significant. Our general conclusions were unchanged and results are available from the authors upon request.

Table A-2. Key Variables Used for Modeling Administrative Certification Error (Con't.)

Variable	Description	Data Source
% reduced-price	Percentage of students who are certified for reduced meals; Variables for <5%, 5-9%, and 10% or more	FNS-742
% nonwhite[a]	Percentage of students who are black, Hispanic, or Asian; Dummy variables for <6%, 6-20%, 21-49%, and 50% or more	CCD
% ELL	Percentage of students who are English language learner (ELL)	CCD
Locale	Variables for urban, suburban, and rural	CCD
Student/teacher ratio	Number of students per FTE teacher; Dummy variables for <14, 14-18, 18-22, >22	CCD
Food service expenditures/student	Annual food service expenditures per student in $100s	CCD
Region	Variables for Mid-Atlantic, Midwest, Mountain Plains, Northeast, Southeast, Southwest, and Western regions	FNS-742
Year	Variables for SY 2005-06 to SY 2011-12	RORA

CCD Public School University Survey data for SY 2011-12 was not available at the time of this report. Data from SY 2010-11 was used in place of SY 2011-12 in the statistical models

[a] Data on race/ethnicity was available only for SY 2010-11. SY 2010-11 data was used for all school years.

We also examine the potential for interactions between predictors. While a large number of interactions are possible, we focused on interactions between enrollment and other predictors. Given that the results showed that enrollment is an important predictor of several different types of administrative error, it is reasonable to assume that the effects of other predictors might vary according to district size. For example, having a large percentage of lower income students (% certified for free meals) may matter more for administrative errors in small districts that have fewer procedures and less training in place to process applications.

Several of the predictors were missing for one or more SFAs owing to incomplete data on one or more of the data elements in the FNS-742 or CCD. While the number of SFAs with missing data on any one item is small, excluding SFAs with missing data on any item from the analysis would result in an unacceptable number of SFAs excluded from the analysis. To retain all of the SFAs in the analysis, missing data were imputed using the conditional mean for districts with non-missing data in

each year. A flag indicating that a predictor was imputed was included in the regression model (Allison, 2001).

Approach to Model Development. This study examined the predictors of each type of administrative error (processing error, household size error, household income error, certification error, and benefit error). The dependent variables are administrative error rates that range from 0 to 1. The administrative error rates are censored at 0 and 1 (i.e., they cannot take on values of less than 0 or greater than 1). Linear regression, which assumes the dependent variable is continuous, could predict administrate error rates less than 0 or greater than 1, and is therefore inappropriate. Moreover, linear regression assumes that the distribution of the dependent variable is normal (i.e., that most of the administrative error rates fall in the middle of the distribution), which is not the case for administrative error rates.

The data were analyzed using two-limit tobit models (Long, 1997). The tobit model is appropriate when the dependent variable is censored. The two-limit tobit model allows censoring at upper and lower points. The basic model can be written:

$$\begin{cases} y_{kj}^{*} = \beta' x_{kj} + e_{kj} \\ y_{kj} = 0 \; if \; y_{kj}^{*} \leq 0 \\ y_{kj} = 1 \; if \; y_{kj}^{*} \geq 1 \end{cases}$$

where y_{kj}^{*} is administrative error rate of type *k* in district *j* and β' is a vector of covariates that are hypothesized to predict the administrative error rate. The error term e_{kj} is assumed to be normally distributed. The dependent variable takes on a value of 0 if the underlying linear equation is less than 0 and 1 if the linear equation is greater than 1. The parameters from the tobit model are marginal effects and represent the change in the administrative error rate associated with a 1 unit change in the predictor variable, controlling for all other variables included in the model.

Results

Tables A-3 and A-4 show descriptive statistics for continuous and categorical variables, respectively, for all of the districts in the RORA sample. There is considerable variation in administrative error

rates across districts. The extent of processing errors ranges from 0 to 82 percent; household size errors range from 0 to 22 percent; household income errors range from 0 to 89 percent; certification errors range from 0 to 32 percent; and benefit errors range from 0 to 36 percent.

Large districts are overrepresented in the RORA sample, with a majority (51 percent) of districts having more than 10,000 students. About one-quarter (26 percent) of districts have 60 percent or more of students certified for free meals. The majority of RORA districts are located in urban (35%) or rural (30%) areas. The average food service expenditure per student is $420 but ranges from $0 to over $1000.[12]

Table A-3. Pooled Descriptive Statistics (Means and Standard Deviations) for Continuous Variables Used in Analysis

Variable	Number	Mean	Minimum - Maximum
Administrative Error			
Processing error	392	0.08	0-0.82
Household size error	392	0.02	0-0.22
Household income error	392	0.04	0-0.89
Certification error	392	0.04	0-0.32
Benefit error	392	0.04	0-0.36
% not subject to verification	382[a]	0.39	0.21-0.84
% ELL	309[a]	0.09	0-.71
Food service expenditures/student ($100s)[1]	342[a]	4.2	0-10.1

[1] One LEA reported $0 in food service expenditures.
[a] Number less than 392 due to missing data.

[12] One LEA reported $0 in food service expenditures.

Table A-4. Pooled Descriptive Statistics (Proportions) for Categorical Variables Used in Analysis

Variable	Number	Proportion
Enrollment		
< 1,000	52	0.13
1,001-5,000	76	0.14
5,001-10,000	56	0.19
> 10,000	200	0.51
Missing	8	0.02
% certified for free		
<30%	100	0.26
30%-59%	181	0.46
60% or more	103	0.26
Missing	8	0.02
% certified for reduced		
<5%	67	0.17
5-9%	226	0.58
10% or more	91	0.23
Missing	8	0.02
Minority enrollment		
<6%	39	0.10
6-20%	60	0.15
21-49%	73	0.19
50% or more	168	0.43
Missing	52	0.13
Student/teacher ratio		
<14	77	0.20
14-18	132	0.34
18-22	50	0.13
>22	99	0.25
Missing	34	0.09
Locale		
Urban	137	0.35
Suburban	111	0.28
Town	47	0.12
Rural	70	0.18
Missing	27	0.07
Region[a]		
Northeast	56	0.14
Mid-Atlantic	56	0.14

Table A-4. Pooled Descriptive Statistics (Proportions) for Categorical Variables Used in Analysis (Cont.)

Variable	Number	Proportion
Midwest	55	0.14
Mountain Plains	57	0.14
Southeast	56	0.14
Southwest	55	0.14
Western	56	0.14
School Year		
SY 2005-06	56	0.14
SY 2006-07	56	0.14
SY 2007-08	56	0.14
SY 2008-09	56	0.14
SY 2009-10	56	0.14
SY 2010-11	56	0.14
SY 2011-12	56	0.14

[a] The RORA sample for each year had 8 LEAs from each region, resulting in a total of 56 LEAs for each region after pooling the data. However, in SY 2009-10, there were 9 LEAs from the Mountain Plans region and 7 LEAs from the Midwest region, resulting in a total of 55 LEAs for the Midwest region and 57 LEAs for the Mountain Plains region in the pooled analysis file.

Table A-5 shows the results from the tobit models predicting each of the five administrative error rates. Coefficients with p-values less than .05 are considered to be statistically significant. The results for each type of administrative error are summarized below.

Processing Errors. Enrollment and region significantly predict processing error. Larger enrollments are associated with fewer processing errors. The largest districts make the fewest processing errors, as indicated by the significant coefficient for the dummy variable for enrollment greater than 10,000. The proportion of processing errors is .073 lower in districts with enrollment greater than 10,000 than in districts with enrollment less than 1,000. Districts with enrollment of 5,001 to 10,000 and 1,001 to 5,000 also make fewer processing errors than districts with less than 1,000. (There were no significant differences among districts with enrollment sizes greater than 1,000.) Districts with a moderate (5 to 9 percent) percentage of students certified for reduced-price meals make more processing errors than those with a low percentage (less than 5 percent) certified for reduced meals. Although districts with a high percentage (10 percent or more) also make more

processing errors, it is not statistically significant. LEAs in the Northeast have significantly higher processing error rates than all other regions.[13]

Household Size Errors. Only region significantly predict household size errors. Districts in the Northeast region made more household size errors than those in Mid-Atlantic, Mountain Plains, and Western regions.

Household Income Errors. The variables that significantly predict household income errors include enrollment, percent certified for free meals, locale, and region. The largest districts make fewer household income errors than the smallest districts. (There were no significant differences among districts with enrollment sizes greater than 1,000.) Districts with a moderate (30 to 59 percent) percentage of students certified for free meals make fewer household income errors than those with a low percentage (less than 30 percent) certified for free meals. Although districts with a high percentage (60 percent or more) also make fewer household income errors, it is not statistically significant. Districts in urban areas made more household income errors than those in the suburban areas. Districts in the Northeast region have significant higher household income error rates than those in the Mid-Atlantic, Mountain Plains, and Southwest regions.

Certification Errors. Several variables significantly predict certification error. These include enrollment, the percentage of students certified for free meals, minority enrollment, food service expenditures, and region. Larger enrollments are associated with fewer certification errors. (Districts with enrollments greater than 1,000 had comparable rates of certification errors) Districts with a larger percentage of students certified for free meals have higher rates of certification error. The dummy variable for 6 to 20 percent minority enrollment is positive and significant, indicating that these districts have higher rates of certification error than those with less than 6 percent minority enrollment. Districts with minority enrollment greater than 20 percent do not differ in terms of certification error from those with less than 6 percent minority enrollment. Higher expenditures on food services per student significantly predict lower certification error rates. All six region dummy variables are significant, indicating that districts in the Northeast have certification error rates that are higher than those in all other regions.

[13] Appendix F presents pairwise comparisons of the estimated marginal effects from the tobit models among all regions.

Benefit Errors. Larger enrollments, minority enrollment and higher food service expenditures predict fewer benefit issuance errors. The largest districts make fewer benefit errors than the smallest districts. (Districts with enrollments greater than 1,000 had comparable rates of benefit errors.) Districts with a moderate percentage of nonwhite students (6 to 20 percent) have a higher benefit error rate than those with a low percentage (less than 6 percent). Similarly, districts with a high percentage (50 percent or more) of nonwhite students also have a higher benefit error rate than those with a low percentage (less than 6 percent). Higher expenditures on food services per student significantly predict lower benefit error rates. Districts in the Northeast have benefit error rates that are higher than those in all other regions.

Interaction with District Size. Of all of the interaction terms tested, only one was significant. This was the interaction between enrollment size and food service expenditures per student. There was a negative and significant interaction between enrollment and food service expenditures per student for household size and benefit status errors. The larger the district, the less food service expenditures impacted household size and benefit error rates. In other words, food service expenditures matter less for these types of errors in larger than small districts. (Results not shown.)

Insignificant Variables. Contrary to our expectations, several variables did not significantly predict administrative error rates. We expected that districts with a higher percentage of students not subject to verification would make fewer administrative errors. It is possible that such districts may use fewer resources on verification and more on processing applications. However, the percentage of students who were not subject to verification was unrelated to all five types of administrative errors. In addition, the percentage of students who were ELL, student/teacher ratio, and locale were unrelated to administrative error rates in the models. The finding for ELL may stem from the fact that application forms are available in multiple languages in most districts.

Table A-5. Marginal Effects from Tobit Model of Administrative Certification Error Rate

Variable	(1) Processing Error	(2) Household Size	(3) Household Income	(4) Certification Error	(5) Benefit Error
% not subject to verification	0.026	0.029	0.035	0.015	0.014
Enrollment (v. <1,000)					
1,001-5,000	-0.054*	0.004	-0.031	-0.032*	-0.026*
5,001-10,000	-0.045*	0.006	-0.046	-0.033*	-0.028*
> 10,000	-0.073*	-0.005	-0.055*	-0.044*	-0.042*
% certified for free (v. <30%)					
30%-59%	-0.010	-0.003	-0.039*	0.020*	0.014
60% or more	-0.012	-0.010	-0.038	0.025*	0.010
% certified for reduced (v. <5%)					
5-9%	0.037*	0.007	0.044*	0.008	0.010
10% or more	0.030	0.013	0.041	0.005	0.008
% nonwhite (v. <6%)					
6-20%	0.018	-0.003	0.017	0.031*	0.030*
21-49%	0.010	0.018	0.036	0.005	0.006
50% or more	0.012	0.020	0.011	0.020	0.021*
% ELL	-0.051	-0.079	-0.165	-0.004	0.010
Student/teacher ratio (v. <14)					
14-18	0.006	-0.005	-0.026	0.003	0.003
18-22	0.010	-0.001	-0.025	0.000	0.001
>22	-0.004	-0.002	-0.009	-0.007	0.001
Food service expenditures/student	0.001	0.003	0.008	-0.007*	-0.007*
Locale (v. Urban)					
Suburb	-0.019	-0.010	-0.040*	-0.004	0.000
Town	-0.028	-0.008	-0.036	-0.011	-0.010
Rural	-0.001	-0.023	-0.001	-0.006	-0.003
Region (v. Northeast)					
Mid-Atlantic	-0.061*	-0.046*	-0.082*	-0.029*	-0.023*
Midwest	-0.054*	-0.018	-0.048	-0.037*	-0.027*
Mountain Plains	-0.072*	-0.037*	-0.076*	-0.040*	-0.023*
Southeast	-0.052*	-0.022	-0.027	-0.060*	-0.052*
Southwest	-0.068*	-0.018	-0.054*	-0.058*	-0.051*
Western	-0.061*	-0.055*	-0.046	-0.041*	-0.032*

* $p < .05$

All models also include dummy variables for school year to control for possible trends over time in administrative error rates. These dummy variables were generally not significant and are omitted from the table for ease of presentation. All models also include an indicator for missing data.

Categorical variable were entered into the models with one of the categories chosen as the reference category. The marginal effects represent the effect relative to the reference category. Reference categories are identified in parentheses for each categorical variable (e.g., <1,000 for enrollment).

The results from these statistical models suggest that several variables are good predictors of administrative error. Enrollment is a consistent predictor of administrative error—larger districts have lower levels of processing error, certification error, and benefit error. The largest districts (i.e., those with more than 10,000 students) have the lowest levels of administrative error. Food service expenditures per student also predict certification and benefit error—districts that spend more on food services per student make fewer errors. The results also revealed considerable variation in administrative error rates across regions. For all types of administrative error, districts in the Northeast generally had higher levels of administrative error than those in other regions.

However, the statistical models developed in this study can be further refined. Specifically, future research should consider additional variables not included in this study such as LEA verification results. In particular, there is a need to examine the role of verification results in the five types of administrative errors included in this study. Prior studies suggest that LEAs with high levels of changes in benefits due to verification as well as verification non-response predict high administrative error rates. Future work in this area may also consider examining receipt of Administrative Reviews and Training Grants (ART) or Direct Certification Grants by LEAs because the training and technology improvements that may have occurred under such grants would possibly be correlated with lower administrative error rates. The refined models could be applied to existing FNS-742 and CCD data to identify those LEAs with a high probability of administrative error to be targeted for policy intervention.

Appendix B

The Strata Totals of the Number Students approved for Free and Reduced-price Meals and Direct Certifications in Each Stratum

LEA number	LEA size	LEA direct certification size	Strata size
111	337	219	518,243
112	142	0	518,243
121	1623	1285	509,677
122	2753	1184	509,677
131	17744	1099	442,439
132	14905	753	442,439
141	194338	46107	603,401
142	194338	46107	603,401
211	414	114	505,842
212	679	306	505,842
221	1739	1166	503,183
222	1804	1050	503,183
231	4331	2920	507,303
232	12337	10539	507,303
241	17861	5881	508,784
242	40480	12348	508,784
311	2023	846	1,312,108
312	1383	712	1,312,108
321	10102	6465	1,310,298
322	3847	2561	1,310,298
331	27027	12295	1,277,123
332	20251	8625	1,277,123
341	219400	114031	1,358,847
342	89973	86557	1,358,847
411	313	166	925,322
412	159	84	925,322
421	1478	543	924,822
422	1202	230	924,822
431	4185	1643	921,069
432	4207	2212	921,069
441	322978	173163	931,312
442	24965	16916	931,312
511	250	88	1,055,719
512	424	154	1,055,719
521	5951	1052	1,050,101
522	3613	1184	1,050,101
531	24749	13273	1,044,036
532	23261	10914	1,044,036

LEA number	LEA size	LEA direct certification size	Strata size
541	36489	17853	1,081,449
542	50266	23532	1,081,449
611	505	244	421,388
612	225	62	421,388
621	998	216	420,423
622	793	454	420,423
631	6620	1816	415,846
632	5318	2733	415,846
641	18391	9693	429,749
642	11242	5214	429,749
711	137	67	1,286,707
712	504	309	1,286,707
721	7469	1859	1,283,338
722	10276	2460	1,283,338
731	11996	4247	1,271,933
732	15676	2709	1,271,933
741	67042	26612	1,312,366
742	34336	15683	1,312,366

Appendix C

The Number of School Districts Within Each Region by the Four Strata

The Number Of School Districts Within Each Region By The Four Strata[14]

Strata	FNS REGIONS							
	NERO	MARO	SERO	MWRO	SWRO	MPRO	WRO	TOTAL
1	2,071	1,632	1,152	4,232	2,133	2,693	2,079	15,992
2	211	234	215	716	214	300	199	2,089
3	19	71	61	225	62	76	81	595
4	3	16	17	29	21	22	21	129
Total	2,304	1,953	1,445	5,202	2,430	3,091	2,380	18,805

NERO: Northeast Regional Office
MARO: Mid-Atlantic Regional Office
SERO: Southeast Regional Office
MWRO: Midwest Regional Office
SWRO: Southwest Regional Office
MPRO: Mountain Plains Regional Office
WRO: Western Regional Office

[14] LEAs are divided into four strata ("small", "medium", "large" and "very large" school districts) based on the cumulative frequencies in each region.

Appendix D

Mean and Standard Errors Estimates for Certification and Benefit Issuance Errors for All Applications Approved or Denied on the Basis of an Application

Mean and Standard Errors Estimates for Certification and Benefit Issuance Errors for all applications approved or denied on the basis of an application

Unweighted statistics, n=2,758

Variable	Label	Mean	Standard Error
CERTERROR	Is there a certification error?	0.0286439	0.0031768
CERTMOREB	Certification error – receiving more benefits?	0.0217549	0.0027783
CERTLESSB	Certification error – receiving less benefits?	0.0068891	0.0015753
BENERROR	Is there a benefit issuance error?	0.0387962	0.0036778
BENMOREB	Benefit issuance error – receiving more benefits?	0.0297317	0.0032347
BENLESSB	Benefit issuance error – receiving less benefits?	0.0090645	0.0018050

Statistics using weights as usual, n=2,758

Variable	Label	Mean	Standard Error
CERTERROR	Is there a certification error?	0.0285892	0.0031738
CERTMOREB	Certification error – receiving more benefits?	0.0209816	0.0027296
CERTLESSB	Certification error – receiving less benefits?	0.0076077	0.0016548
BENERROR	Is there a benefit issuance error?	0.0350756	0.0035037
BENMOREB	Benefit issuance error – receiving more benefits?	0.0262274	0.0030436
BENLESSB	Benefit issuance error – receiving less benefits?	0.0088482	0.0017835

Statistics using adjusted weights, n=2,758

Variable	Label	Mean	Standard Error
CERTERROR	Is there a certification error?	0.0275948	0.0031197
CERTMOREB	Certification error – receiving more benefits?	0.0199583	0.0026636
CERTLESSB	Certification error – receiving less benefits?	0.0076366	0.0016579
BENERROR	Is there a benefit issuance error?	0.0344580	0.0034739
BENMOREB	Benefit issuance error – receiving more benefits?	0.0251158	0.0029801
BENLESSB	Benefit issuance error – receiving less benefits?	0.0093422	0.0018322

Appendix E

Data Management Decision Log

1 **HHIncome**	**TOPIC:** SFA used average income to calculate SFAHHInc	**PROBLEM:** The Applicant gave an income range of $1200 to $1500 and then an average of $1350. The SFA used the average to calculate SFAHHINC. Is this an appropriate method?	**RESOLUTION:** Yes, using the average income is appropriate.
	DATE INITIATED: 09/13/2011		
	DATE DECIDED: 9/14//2011		
	REFERENCE: Dist 121 ST 44		
	Decided by: Westat Team		

2 **HHIncome**	**TOPIC:** No income provided by Applicant	**PROBLEM:** No income was provided by the applicant. FNS reviewer noted on the coversheet that the paid status was a denial based on income. How was this determined?	**RESOLUTION:** The paid status is correct because the household didn't provide an income (and as a result is processed as an incomplete application and does not receive benefits). Pg.40 of the eligibility manual states: "households must report current income on a free and reduced-price application."
	DATE INITIATED: 09/13/2011		
	DATE DECIDED: 09/14/2011		
	REFERENCE: Dist 111 ST 42		
	DECIDED BY: Westat Team		

3 **SFAElig**	**TOPIC:** No place for SFA calculations and FNSElig & CBIS are different	**PROBLEM:** There is no space for SFA determinations on the application. As a result, we defer to the CBIS status on the cover sheet for a proxy SFAElig. CBIS = 1(free) but my calculation for FNSElig = 2 (reduced).	**RESOLUTION:** This is a processing error. Proc Err = 1. Note: "CBIS different than FNSElig" and SFAElig = 99 (which means that there is no space provided on the application form for SFA determinations.
	DATE INITIATED: 09/14/2011		
	DATE DECIDED 09/14/2011		
	REFERENCE: Dist 212 St 21		
	DECIDED BY: Westat Team		

4 **HHInc**	**TOPIC:** HHINC frequency in semesters	**PROBLEM:** It appears that the adult receives $2500.00 for a semester of teaching. The $1600.00 is for one semester of extra teaching. Should the SFA assume 2 semesters per year instead of 1? If so, then FNSElig = 3 not 2.	**RESOLUTION:** The $2500.00 refers to a one time amount based on the additional class taught during one semester. The SFA determination is correct. FNSElig = 2.
	DATE INITIATED: 09/13/2011		
	DATE DECIDED: 09/14/2011		
	REFERENCE: Dist 112 St 20		
	DECIDED BY: Westat Team		

5 **CatElig**	**TOPIC:** No CatElig, income , or SSN provided. Residential institution (School)	**PROBLEM:** Applicant wrote: child resides at a residential institution and gives a Medicaid number. There are no income amounts. Nor are there numbers provided for SNAP, TANF, FDPIR but the SFA marked that box and indicated "free" status. Would the application as written be deemed incomplete? FNSElig =4, ProcErr = 1?	**RESOLUTION:** Pg. 38 Eligibility Manual states that children in residential institutions are considered a "special situation" and a household of 1 with no income. FNSElig = 1 but ProcErr =1 (administrative error that doesn't lead to a benefit status change).
	DATE INITIATED: 09/13/11		
	DATE DECIDED: 09/14/2011		
	REFERENCE: Dist 121 ST 49		
	DECIDED BY: Westat Team		

6 **HHIncome**	**TOPIC:** HHINC Calculation formula for seasonal income.	**PROBLEM:** 1. Would we use $40/ week just during summer entry? (1/4 of the year …13 weeks).	**RESOLUTION:** 1. Yes, use 13 weeks for your calculation. Addendum per JE; weekly figures are inappropriate to calculate monthly figures. Income section is to be considered incomplete.
	DATE INITIATED: 09/13/2011		
	DATE DECIDED: 09/14/2011 ADDENDUM: 01/27/2012		
	REFERENCE: Dist 122 St 04		
	DECIDED BY: Westat Team John Endahl		

7 **CatElig**	**TOPIC:** CatElig with missing information	**PROBLEM:** SFA Reviewer notes that the child's name was not on either application. Even though the household is categorically eligible, should this be considered an error because the name was absent?	**RESOLUTION:** ProcErr = 1 but FNSElig =1. This is an administrative error that does not result in a benefit issuance status error.
	DATE INITIATED: 09/14/2011		
	DATE DECIDED: 09/14/2011		
	REFERENCE: Dist 122 St 48		
	DECIDED BY: Westat Team		

8 **HHIncome,** **HHSize &** **SFAElig**	**TOPIC:** Multiple variable differences between FNS and SFA	**PROBLEM:** SFAHHInc , SFAHHSize and SFAElig are all different from my calculations.	**RESOLUTION:** We agree with the income calculations of the SFA. Use $13,000.00 as an annual amount. Household Size is 6. ProcErr = 1 HHsize and SFAHHSize different.
	DATE INITIATED: 09/20/2011		
	DATE DECIDED: 09/21/2011		
	REFERENCE: Dist 232 St 33		
	DECIDED BY: Westat Team		

9 **Foster Child**	**TOPIC:** Foster Child Income	**PROBLEM:** The applicant did not check the Foster Child Box but did enter an amount in the personal use income box. The amount is the same as the parent's monthly Income. SFA made an income based status determination but did not include this amount.	**RESOLUTION:** Do not include this as a Foster child. There is no processing error. ProcErr = 2.
	DATE INITIATED: 09/21/2011 Meeting		
	DATE DECIDED: 09/21/2011		
	REFERENCE: Dist 241 St 41		
	DECIDED BY: Westat Team		

10 **Foster Child Income**	**TOPIC:** Application instructions and income in foster child section	PROBLEM: Instructions are: separate applications for each school, listing only students attending that school in Section 2. List all others in Section 4 (household) and do not include students in Section 2. No place for income of child in section 2. An income is listed in foster child section and not included in SFA income based calculations.	RESOLUTION: The applicant is not a foster child therefore, the income should be included. Refer to pg. 6 of the Eligibility Manual
	DATE INITIATED: 09/19/2011		
	DATE DECIDED: 09/21/2011		
	REFERENCE: Dist 142 St 05 and several others		
	DECIDED BY: Westat Team		

<table>
<tr><td>11

HHIncome</td><td>TOPIC:

Two applications with income changes</td><td rowspan="5">PROBLEM:

There are 2 applications: the latest application dated 10/19/10 reduced income from $1154.40 BW (on application signed 10/05/2010) to $954.00 BW. This change was entered into the computer on Oct 29, 2010. Without changing the eligibility, someone changed the income back to $1154.40 on 04/19/2011 without furnishing a new application. Should I change my income or leave the ProcErr =1 for HHIncome and SFAHHInc different?</td><td rowspan="5">RESOLUTION:

This is a ProcErr =1 that doesn't affect the eligibility status.</td></tr>
<tr><td></td><td>DATE INITIATED:
09/19/2011</td></tr>
<tr><td></td><td>DATE DECIDED:
09/21/2011</td></tr>
<tr><td></td><td>REFERENCE:
Dist 142 St 20</td></tr>
<tr><td></td><td>DECIDED BY:
Westat Team</td></tr>
</table>

12 **SFAHHSize,** **SFAHHInc,** **SFAElig &** **Signature**	**TOPIC:** SFA calculations Status missing. Signature is printed name of a student.	**PROBLEM:** 1. SFA left SFA section of the application blank. In addition, there is no income in the income section. 2. There is only one name in the household section and all the rest are in the student section. The signature is the printed name of one of the students.	**RESOLUTION:** 1. With no evidence of categorical eligibility, the income is not listed on this application so it should be considered incomplete. FNSElig = 4. 2. The signature needs to be of an adult household member. In special cases of an emancipated children how lives alone or as a member of a household with no adult members, an emancipated child must sign the application.
	DATE INITIATED: 09/19/2011		
	DATE DECIDED: 09/21/2011		
	REFERENCE: Dist 142 St 50		
	DECIDED BY: Westat Team John Endahl		

13 **Verification**	**TOPIC:** "Denial \ V =NR" notation on an application, no supporting documentation for verification selection **DATE INITIATED:** 09/15/2011 **DATE DECIDED:** 09/21/2011 ADDENDUM: 11/10/2011 **REFERENCE:** Dist 132 St 24 **DECIDED BY:** Westat Team John Endahl	**PROBLEM:** My calculations match SFA calculations and status as of 09/2/2010. Someone wrote "Denial\ V = NR and a denial date of 11/15. This application was not selected for verification per coversheet. How should I populate the variables, including ProcErr and notes? Addendum: The cover sheet states that the child's application was not selected for verification. Question number 8, "If this application was selected for verification…" was left blank. Is the note "Denied V=NR" sufficient evidence that a verification request occurred? For future applications, do notes such as this suffice?	**RESOLUTION:** This is an administrative error – no documentation of verification. FNSElig = 2, SFAElig = 3, ProcErr = 1, notes: No verification documentation. Addendum: Per JE: This application appears to have been selected for verification, regardless of what the cover sheet indicates….The Regional Office staffer may have not found any documentation in the file suggesting it was selected for verification. However, the Nov. date and denial because there was no response to the verification request seems logical…..I would have coded this FNSElig=2, SFAElig=2 if the original Sept. application indicated that the household should be RP, and then code SFAVer =7 and FNSVer=7 indicating that there was no response to verification. If SFAElig=2 and CBIS=3 there would be no processing error because SFAVer=7. Addendum: Per JE; I would prefer to review these on a case by case basis

<table>
<tr><td rowspan="5">14

FNSElig</td><td>TOPIC:

Spanish applications with Foster child box marked</td><td rowspan="5">PROBLEM:

First application dated 09/21/2010, second dated 04/02/2011 . The second and more recent application was used. This is one of several Spanish applications that have the Foster child box marked with no income listed. SFA continued with household and income based variables to calculate status.</td><td rowspan="5">RESOLUTION:

Mark as a foster child. ProcErr = 1 – administrative error that doesn't affect status.</td></tr>
<tr><td>DATE INITIATED:
09/15/2011</td></tr>
<tr><td>DATE DECIDED:
09/21/2011</td></tr>
<tr><td>REFERENCE:
Dist 132 St 32</td></tr>
<tr><td>DECIDED BY:
Westat Team</td></tr>
</table>

15 **HHIncome**	**TOPIC:** Applicant pre-calculates all divisions of income frequency, SFA uses for status. **DATE INITIATED:** 09/15/2011 **DATE DECIDED:** 09/21/2011 ADDENDUM: 01/27/2012 **REFERENCE:** Dist 132 St 14 **DECIDED BY:** Westat Team John Endahl	**PROBLEM:** Applicant has attempted to calculate all income frequencies starting with weekly and doubling amounts until the annual calculation. SFA used the erroneously calculated annual figure to calculate status. Using the lowest amount (weekly) I come up with a different monthly figure. In this case, is it correct to use the lowest amount (weekly) for FNS calculations?	**RESOLUTION:** Use weekly amount for FNS calculation. Addendum per JE; weekly figures are inappropriate to calculate monthly figures. Income section is to be considered incomplete.

16 **HHIncome &FNSElig**	**TOPIC:** No space in Part 2 Student list to enter child's income. **DATE INITIATED:** 09/15/2011 **DATE DECIDED:** 09/21/2011 **REFERENCE:** Dist 132 St 01 **DECIDED BY:** Westat Team	**PROBLEM:** (Applies to several applications) Application instructions for part 4, is not to list students from Part 2. Part 2 has no space for child's income and instructions to only include students attending the same school and make separate applications for other students. This application has only 1 student and there is an income of $60.00 in the Foster Child section. Computer sheet shows SFA making an income based status (including the $60). Should we assume the applicant had no other way of indicating the child's income and make an income based status or should we treat this as a "Foster Child" application?	**RESOLUTION:** Treat this as an income based application not a foster child application. It is correct to include the $60.

17 **Incomplete Application, Missing data**	**TOPIC:** Application Status VS CBIS **DATE INITIATED:** 09/21/2011 **DATE DECIDED:** 10/05/2011 **REFERENCE:** Dist 142 St 11 **DECIDED BY:** John Endahl Westat Team	**PROBLEM:** Several applications note"Scanned" on the cover sheet. The actual application(s) are incomplete because of missing income information (also without a TANF or a SNAP number) but the computer printout has income information. Do we consider the application incomplete because of missing income information or do we use the amount listed on the computer print out? Also there are no SSN numbers on the applications or an indication from the applicant that they don't have one. Should there be any ProcErr other than HHIncome and SFAHHInc different? Would we assume that the applicant doesn't have a SSN based on the change of 03/07/2011?	**RESOLUTION:** 1. Brooklyn application 11: Looking at the Student Tracking Record, it appears that the system classified this application as incomplete initially (10/20/2010) with the approval code correctly being DENIED, that the approval code was changed (03/07/2011) from DENIED to FREE, the household income went from none reported to $300 per week, and the adult SSN was changed to N/A (perhaps indicating that the district at that time was informed that the adult did not have a SSN. Yes, it is unclear what information was obtained from the household to change the eligibility status, *but it does appear that the correct eligibility decision was made at the start of the school year.* It may be a situation where they only scan the initial application and if a second application is provided, they only edit the specific variables that were changed in the system. **I would not consider this to be in error.** 2. AR: Populate the abstraction sheet with the data from the original application and the original data and status from the Tracking Records for the SFA variables. In this situation SFAElig AND FNSElig = 4. ProcErr = 2. NOTES: CBIS and FNSElig different. NO ProcErr per Email from JE. Addendum per JE; Use the latest info from the computer system as the information coded into the HHIncome and not SSN=2…In this case CBIS and FNSElig would not be different. Thus no processing error.

<table>
<tr>
<td>18

SSN missing on Income based status application</td>
<td>TOPIC:

Free Income based Status but no SSN

DATE INITIATED:
09/21/2011

DATE DECIDED:
10/05/2011

REFERENCE:
Dist 142 St 12

DECIDED BY:
John Endahl</td>
<td>PROBLEM:

The application for an income based status does not have the required SSN. The computer print-out will acknowledge this by marking “No SSN” but the SFA decision is ‘free”. This would generally be a processing error based on the missing SSN. We do not know why the SFA decided on the “free” status recognizing that the SSN is missing.</td>
<td>RESOLUTION:

1. Brooklyn application 12: Looking at the Student Tracking Record, it appears that the system classified this application as incomplete initially (10/20/2010) with the approval code correctly being DENIED and that it wasn’t until 04/07/2011 that the approval code was changed from DENIED to FREE, and the adult SSN was changed to N/A (perhaps indicating that the district at that time was informed that the adult did not have a SSN.

Yes, it is unclear what information was obtained from the household to change the eligibility status, <u>but it does appear that the correct eligibility decision was made at the start of the school year.</u>

I would not consider this to be in error.

2. AR: Populate the abstraction sheet with the data from the original application and the original data and status from the Tracking Records for the SFA variables.

In this situation SFAElig AND FNSElig = 4. ProcErr = 2.
NOTES: CBIS and FNSElig different. NO ProcErr per Email from JE.</td>
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<table>
<tr>
<td>19

SFAElig</td>
<td>TOPIC:

No SFA section but computer print out

DATE INITIATED:
09/22/2011

DATE DECIDED:
10/05/2011

REFERENCE:

Dist 331 and others

DECIDED BY:
John Endahl</td>
<td>PROBLEM:

We have some districts that do not have space for an SFA decision but they do provide a computer print out. Do we use the decision on the computer printout as SFAElig OR is the “status” variable what we should use as SFAElig? We have reviewed a Status = 4 (on the print out). Do you know what that stands for?</td>
<td>RESOLUTION:

Public Schools for Robeson County, applications 19, 12 and 6.
Yes, you should use the “Status” variable as the SFAElig. (DL 32).

For Robeson County, the status codes are: 1=Free directly certified; 2 = Free through application; 3 = Reduced-price; 4 = Denied.</td>
</tr>
</table>

20 **CatElig**	**TOPIC:** SSN in SNAP TANF Section of application. **DATE INITIATED:** 09/22/2011 **DATE DECIDED:** 10/05/2011 **REFERENCE:** Dist 322 **DECIDED BY:** John Endahl	**PROBLEM:** Historically, we have assumed that if there is a number in the location for TANF or SNAP case numbers that the number is legitimate (decision log 19). However, in this case, 45 of the 50 applications in this district have what seems to be SSN#s in this box. Please see Alabama 2, 3, 26, 28 for multiple variations of this scenario. Please advise.	**RESOLUTION:** I would agree that, for this school district, the numbers that appear in the SNAP/TANF case numbers do appear to be SSNs. Given, that in all instances, the household didn't skip section 4 and provided household income and that the district has processed these applications on the basis of household income, I would review these applications as if they were income-based applications, NOT categorically eligible applications.

21 **Homeless**	**TOPIC:** No SFA Information Marked Homeless	**PROBLEM:** This application is marked as Homeless. There is no SFA documentation presented by this district and we cannot verify how the SFA Reviewer Status was =1.	**RESOLUTION:** Use income based determination. Note: Homeless. Pg. 53 of the Eligibility Manual states that acceptable documentation that the children are homeless is obtained from the LEA homeless liaison or directors of homeless shelters where the children reside. Documentation to substantiate free meal eligibility must consist of the child's name or a list of names; effective date (s), and signature of the local educational liaison or the director of the homeless shelter.
	DATE INITIATED: 09/28/2011		
	DATE DECIDED: 10/05/2011		
	REFERENCE: Dist 212 St 42		
	DECIDED BY: Westat Team		

<table>
<tr>
<td>22

SSN redacted</td>
<td>TOPIC:
Redaction of SSN on applications: full or partial</td>
<td rowspan="5">PROBLEM:
The boxes or lines used for SSN are partially or fully redacted. Should we assume that the SSN is present on the application?</td>
<td rowspan="5">RESOLUTION:

Consider any type of redaction (full or partial) as a complete SSN. Please include a note for these applications that says: “SSN redacted”</td>
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<tr>
<td>DATE INITIATED:
10/05/2011</td>
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<tr>
<td>DATE DECIDED
10/05/2011</td>
</tr>
<tr>
<td>REFERENCE:
Dist 221 all
Dist 332 all</td>
</tr>
<tr>
<td>DECIDED BY:
Westat Team</td>
</tr>
</table>

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<tr>
<td>23

SSN</td>
<td>TOPIC:
Electronic applications Full and Partial SSN

DATE INITIATED:
09/26/2011

DATE DECIDED
10/05/2011

REFERENCE:
Dist 222
St 07, 08

DECIDED BY:
Westat Team</td>
<td>PROBLEM:

This district has some electronic applications. For Students 08 and 50 only have partial numbers present. For students 07, 15, 35 & 38 there is a full SSN present. At the meeting o f 09/29/2011 we only discussed the last four digit scenarios and assumed the program auto-redacted leaving only the last 4 digits. Since this district has examples of both, would we consider 08 as an incomplete application?</td>
<td>RESOLUTION:

There is no error; the last four digits of SSN are suffice. The Healthy, Hunger Free Kids Act (HHFKA) of 2010 requires applicants to provide only the last 4 digits of their SSN.</td>
</tr>
</table>

24 **Application**	**TOPIC:** Blank Applications **DATE INITIATED:** 9/26/2011 **DATE DECIDED:** 10/05/2011 **REFERENCE:** Dist 312 St 28,29,30 & 39 variation **DECIDED BY:** Westat Team	**PROBLEM:** CBIS = 1. Comment by SFA reviewer on coversheet "Nothing on Application. No explanation". Student name and number but the rest of the application is blank. Variation St 39 CBIS = 2 with the same note and the application is blank except Student name and number, ethnicity and SFA Status and signature in SFA section. Should we treat these as "No Application Submitted", or X's for all variables except the cover sheet , FNSElig and ProcErr?	**RESOLUTION:** X's for missing variables. NOTES: CBIS different that FNSElig. Application incomplete.

25 **CatElig**	**TOPIC:** Zeros in the middle of Case numbers. **DATE INITIATED:** 09/29/2011 **DATE DECIDED:** 10/05/2011 **REFERENCE:** Dist 412 St 20, 45, 25, 49 Variant St 4, 5, 21 **DECIDED BY:** Westat Team John Endahl	**PROBLEM:** Seven applications with 00 in the middle of the case numbers. SFA processed App s 20, 25, 45, 49 as Income based Status = 2 . SFA processed Apps 4 , 5, 21 as income based Status = 1. On App 20 SFA circled the 2 zeros then proceeded to make an income based status. Do we assume SFA knows #'s are incomplete?	**RESOLUTION:** All should be considered categorically eligible. ProcErr = 1. Per DL#19 decided by John Endahl: Assume that if there is number in the location for TANF or SNAP case numbers that the number is legitimate. As independent reviewers, we have no knowledge of what the format of a legitimate case number might look like for a specific locale. To that end, we assume that SFA has done due diligence and made sure that the number conforms to the format of a legitimate case number.

26 **Duplicated Applications**	**TOPIC:** Duplicate applications with differing SFA Status determinations **DATE INITIATED:** 09/29/2011 **DATE DECIDED:** 10/05/2011 11/10/2011 JE **REFERENCE:** Dist 412 St 34 **DECIDED BY:** Westat Team JE 11/10/2011	**PROBLEM:** SFA sent duplicate applications with entire HH information. On one application SFAElig based on Income and full HH. On the other application SFAElig based on Foster child and Foster Inc. Please review cover sheet note and advise which application to use. Additional Question: Foster child income of $1596.00 makes income based status = 2 for HHSize = 1.	**RESOLUTION:** Consider Foster Child. Decision remains free and no error. JE: I would have processed this based on household income, not that of a Foster child. Regardless of how it was processed, the district reached the correct decision in terms of eligibility (free). It is unclear why some of the information is typed while the name and address is hand-written. It appears that the district may have preloaded some information from somewhere. While it is OK to preload student names, school names, grade, etc., it is not OK to load income information. To that end, I would indicate that a processing error had occurred.

<table>
<tr>
<td>27

Expired Application</td>
<td>TOPIC:

Expired application

DATE INITIATED:
10/05/2011

DATE DECIDED:
10/05/2011

REFERENCE:
Dist 541 St 44

DECIDED BY:
Westat Team</td>
<td>PROBLEM:

Application shows students and adult signature and SSN. Computer print-out shows free then “Expired” notations.</td>
<td>RESOLUTION:

It looks as though the applicant didn’t provide the necessary income information. As a result, their application expired. FNSElig = 4 with a note “Incomplete application”</td>
</tr>
</table>

28 **SFAHHInc & SFAHHSize**	**TOPIC:** Electronically filled/ produced applications with no SFA section **DATE INITIATED:** 10/06/2011 **DATE DECIDED:** 10/06/2011 631 10/26/2011 741 **REFERENCE:** Dist 631 and 741 majority of applications **DECIDED BY:** Westat Team	**PROBLEM:** A copy of an electronically filled or produced application is supplied with no SFA section. SFA Status and possibly SFA name are in a line superimposed over the top of the application. We have no indication of how SFA calculated status unless we use the information from the application. We have an SFA Status so we can't use SFAElig= 99. Should we use the information from the application or just put X's for the missing SFAHHSize and SFAHHInc variables?	**RESOLUTION:** Assume SFA presented document as SFA information. Use data on application to fill in SFAHHInc, SFAElig and use Household count as SFAHHSize.

29 **FNS variables**	**TOPIC:** Multiple Online applications with missing or redacted information **DATE INITIATED:** 09/30/2011 **DATE DECIDED:** 10/19/2011 **REFERENCE:** Dist 342 St 28, 31, 36, 41 **DECIDED BY:** Westat Team	**PROBLEM:** 1. Some online applications show indications that names, incomes and frequencies have been covered over with correction tape or white out. This inhibits our ability to gather FNS variable information from the applications Do you think that this is a redaction of some sort by the SFA? 2. Some of these also have 2 applications, however they have not carried over names, income from the other application (i. e., a frequency correction for a child's income is all that is on the second application). In all cases the SFA computer activity printout shows the information needed to fill in FNS variables to allow FNS status determinations. Should we use both applications and the printout to populate the missing FSN variables?	**RESOLUTION:** 1. Yes, redaction must have occurred. 2. Use both information on the applications then printout to populate the variables.

30 **SFA Computer information**	**TOPIC:** Use of SFA Application Activity tracking list. **DATE INITIATED:** 10/06/2011 **DATE DECIDED:** 10/14/2011 **REFERENCE:** Several Districts **DECIDED BY:** Westat Team	**PROBLEM:** Along with screen shots of the SFA Data Base interface that has data that usually doesn't match the application, we sometimes receive an application activity tracking log. Using the data from the activity tracking log gives a more accurate set of SFA variables for calculations at the time of the application. This would make a different status finding from CBIS. May we use the activity log to make our comparisons for the time of application? Should we make it a ProcErr =1 Note: "SFAElig and FNSElig different that CBIS?	**RESOLUTION:** Yes, it is appropriate to use the earlier SFA variable data for the SFA Status calculations. There should be no ProcErr. ProcErr= 2 and note " SFAElig and FNSElig different that CBIS"

31	**TOPIC:** Income Frequency **DATE INITIATED:** 08/29/2012 **DATE DECIDED:** 10/17/2012 **REFERENCE:** Dist 231 app 12 **Decided by:** John Endahl	**PROBLEM:** No income frequency is noted by either the applicant or the SFA. The SFA denied certification on the grounds that the family makes too much. I am assuming they used a frequency more often than "Monthly". If they did use monthly, the certification should be reduced-price. On situations where no income frequency is provided, what would you like us to do?	**RESOLUTION:** For cases such as Wilkes-Barre where the household has failed to include income frequency, one can't make an eligibility determination....this should be viewed as an incomplete application. The district should have attempted to contact the household to determine what the income frequency should be.

32	TOPIC: SFA Income based certification VS Notation of later Direct Certification DATE INITIATED: 10/08/2012 DATE DECIDED: 10/17/2012 REFERENCE: Dist 411 Several Applications DECIDED BY: John Endahl	**PROBLEM:** District 411 has several applications where the SFA proceeded to use income calculations for their determination of status. We have only provided a few examples and can provide additional examples. The reviewer has placed comments on the cover sheet stating that student was later found to be eligible through direct certification. On the application someone has written Direct certification some with dates that are after the SFA made their determination and some without any date at all. We have no activity sheet to examine for a timeline. Should we continue as if the DC status was not in effect at time of application? IF you decide these are Direct Certification based on the cover sheet comments, how do you want us to treat the applications? Do they belong in the sample?	**RESOLUTION:** For Lena-Winslow CUSD #202 (District 411) I don't see a problem… The sample was supposed to include any student that had applied for meal benefits and was approved for free or reduced-price benefits or was denied benefits. It appears that these households submitted applications for benefits and subsequently were identified as directly certified. I would process the application as if the household was not directly certified at the time of certification and determine if eligibility determination was correct at the time of certification. However, when examining benefit issuance status, assume these households were eventually identified as directly certified and the thus should be receiving free meals (regardless of the date or non-date associated with the notation "Directly Certified").

Appendix F

Results from Pairwise Comparisons by Region from Tobit Models

Table F-1. Results from Pairwise Comparisons by Region from Tobit Models

Variable	Mid-Atlantic	Midwest	Mountain Plains	Northeast	Southeast	Southwest	Western
(1) Processing Error							
Mid-Atlantic		NS	NS	*	NS	NS	NS
Midwest			NS	*	NS	NS	NS
Mountain Plains				*	NS	NS	NS
Northeast					*	*	*
Southeast						NS	NS
Southwest							NS
Western							
(2) Household Size Error							
Mid-Atlantic		*	NS	*	NS	NS	NS
Midwest			NS	NS	NS	NS	*
Mountain Plains				*	NS	NS	NS
Northeast					NS	NS	*
Southeast						NS	*
Southwest							*
Western							
(3) Household Income Error							
Mid-Atlantic		NS	NS	*	*	NS	NS
Midwest			NS	NS	NS	NS	NS
Mountain Plains				*	*	NS	NS
Northeast					NS	*	NS
Southeast						NS	NS
Southwest							NS
Western							
(4) Certification Error							
Mid-Atlantic		NS	NS	*	*	*	NS
Midwest			NS	*	NS	NS	NS
Mountain Plains				*	NS	NS	NS
Northeast					*	*	*
Southeast						NS	NS
Southwest							NS
Western							

Table F-1. Results from Pairwise Comparisons by Region from Tobit Models (Con't)

Variable	Mid-Atlantic	Midwest	Mountain Plains	Northeast	Southeast	Southwest	Western
(5) Benefit Error							
Mid-Atlantic		NS	NS	*	*	*	NS
Midwest			NS	*	*	*	NS
Mountain Plains				*	*	*	NS
Northeast					*	*	*
Southeast						NS	NS
Southwest							NS
Western							

* p < .05; NS = non-significant