Evaluation of the National School Lunch Program Application/Verification Pilot Projects

Volume V: Analysis of Applications

Non-Discrimination Policy

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Authors:
From Mathematica Policy Research, Inc.
Lara Hulsey
Philip Gleason
James Ohls

Submitted to:
USDA, Food and Nutrition Service
Office of Analysis, Nutrition and Evaluation
Room 1014
3101 Park Center Drive
Alexandria, VA 22302

Project Officer:
Paul Strasberg

Submitted by:
Mathematica Policy Research, Inc.
P.O. Box 2393
Princeton, NJ 08543-2393
Telephone: (609) 799-3535
Facsimile: (609) 799-0005

Project Director:
John Burghardt

Principal Investigator:
Philip Gleason

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EXECUTIVE SUMMARY

Each year, the National School Lunch Program (NSLP) and School Breakfast Program (SBP) serve almost 4 billion free and reduced-price meals to children from low-income households. Recent concerns about the integrity of the process used to establish eligibility for these benefits prompted the U.S. Department of Agriculture (USDA) to sponsor the NSLP Application/Verification Pilot Projects and to contract for an evaluation of two types of pilot approaches: (1) Up-Front Documentation (UFD), and (2) Graduated Verification (GV). The evaluation is being conducted by Mathematica Policy Research, Inc. (MPR).

One of several reports on the evaluation, this report focuses on issues relating to applications for free or reduced-price meals. In particular, we present (1) an impact analysis of the effects of the pilot policies on the number of applications submitted, and (2) a descriptive analysis of the accuracy of eligibility status determinations made by the School Food Authorities (SFAs). The analyses address these main research questions:

- How did the UFD and GV pilot interventions affect the percentage of students who applied for free or reduced-price meal benefits? In households that were income-eligible for benefits but did not apply for them, what reasons did parents give for not applying?

- Were the SFAs' determinations of eligibility status consistent with those calculated using data that households supplied in interviews conducted for the evaluation? Are differences due to administrative errors (disagreement between SFAs' determinations and eligibility status calculated by MPR from the information provided on the application and associated documentation) or reporting differences (inconsistencies between information reported on surveys and that provided with the applications)? What are the specific reasons for these two types of discrepancies?

STUDY DESIGN AND METHODOLOGY

Districts using UFD required families to document their income or receipt of public assistance at the time they submitted their applications for free or reduced-price lunches. Districts then used this documentation to make eligibility determinations, but they did not verify any approved applications later in the school year.

Districts using GV allowed families to use the standard application process, which does not require income documentation, but changed key aspects of the usual verification process. After verifying a small sample of approved applications, these districts verified additional applications if 25 percent or more of the applications in the initial test resulted in benefit reduction or termination.

The study used a comparison design, selecting households in districts participating in the pilot programs and in nonparticipating districts with similar characteristics. The data used in this report were collected from two sources: (1) household surveys conducted for the evaluation between October 2002 and January 2003, and (2) abstractions of information households submitted to SFAs between July and October 2002 with their applications for free or reduced-price meals.

To measure the impacts of UFD and GV on the various application-related outcomes, we calculated the difference between the mean value of the outcome measure in pilot districts and the mean value in comparison districts, using regression methods to control for other differences between students in the districts. To investigate the accuracy of eligibility determinations, we compared three measures of meal price status: (1) the SFA's determination, (2) an MPR determination based on application data, and (3) an MPR determination based on survey data.

Two caveats should be kept in mind when interpreting differences between the data sources. First, although the survey was designed to collect household size and income information in a more thorough and consistent way than was possible using application forms, data from the survey may not accurately reflect circumstances during the period for which information was sought. Such reporting errors may be intentional or unintentional. Second, since in most cases the survey data were collected a few months later than the application data, some differences between data from these two sources may reflect changes in household circumstances over time rather than reporting error.

FINDINGS ON THE IMPACTS OF PILOT INTERVENTIONS ON APPLICATION RATES

The UFD pilot intervention resulted in a decrease in the probability that income-eligible households would apply for free or reduced-price meals. The UFD pilot was estimated to lead to a 7.4 percentage point decline in the percentage of students income-eligible for free or reduced-price meals who applied for benefits, all else equal. This estimate was statistically significant at the 0.05 level. The GV pilot led to a decline of 10.3 percentage points in the application rate among the same group; however, this estimate was not statistically significant at the 0.05 level. These effects, in turn, translated into impacts of roughly the same size on the probability that income-eligible students would become certified for benefits, which suggests that the primary reason eligible students did not become certified for free or reduced-price meals was that they did not complete an application.

Neither UFD nor GV significantly influenced the likelihood that students from households income-ineligible for free or reduced-price meals would apply for or become certified for benefits. Among students not income-eligible for free or reduced-price meals, UFD and GV each had only a 0.3 percentage point impact on the likelihood that students would apply for benefits, and these estimates were not statistically significant.

By far the most common reason that income-eligible households cited for failing to apply for free or reduced-price meals was that they did not know they were eligible for benefits. In UFD comparison districts, for example, two-thirds of income-eligible nonapplicants reported this

as their reason for not applying. The second most common situation was that some income-eligible nonapplicants believed (and reported on the survey) that they had applied even though there was no evidence in the administrative data of their having done so.

FINDINGS ON THE ACCURACY OF ELIGIBILITY DETERMINATIONS

For about 10 percent of noncategorically eligible households, the SFA's eligibility determination differed from the eligibility status MPR computed from the application information provided. The percentage of applications with administrative errors is smaller (about 8 percent), if categorically eligible households are included.

Errors in SFA determinations of eligibility from household application information were considerably more common in UFD pilot sites than in other districts. This reflected the fact that the most common type of administrative error by far—inaccuracy in computing total household income based on the information available—was considerably more prevalent in UFD sites than in their comparison districts or even in GV sites. The higher incidence of apparent administrative error in the UFD pilot sites probably is due to the fact that at those sites the calculations often had to be done directly from income source documents, which were more difficult to interpret than application forms.

Reporting differences between application and survey data were considerably more widespread than administrative error. For about 36 percent of households overall, the eligibility status computed from the application information differed from that computed from the survey data. Information reported on applications matched that reported on surveys somewhat more often in pilot sites (although the differences are not statistically significant).

The main source of overall inconsistencies appears to be household reporting rather than SFA administrative mistakes. When overall inconsistencies are assessed by comparing the SFA determination with eligibility as computed from survey data, about 90 percent of the differences between SFA certification decisions and survey-based eligibility determinations were a result of inconsistencies between information reported on the survey and information reported on the application. Only about 9 percent of differences resulted from administrative error in determining eligibility based on information submitted on the application.

UFD did not materially improve the accuracy of income-reporting. About 34 percent of applications in UFD districts contained a discrepancy due to income-reporting, compared to 36 percent of applications in UFD comparison districts. However, while UFD appears to have improved somewhat the accuracy of reporting on income sources that were acknowledged on the application form, it did not change the likelihood that a household would acknowledge either that a given person had income or that someone for whom income was reported had income from another source as well. Furthermore, discrepancies stemming from failure to report income of a person or source—the type of income-related difference least likely to be affected by the pilots—accounted for the largest share of income-related differences.

I. INTRODUCTION

The National School Lunch Program (NSLP) and School Breakfast Program (SBP) serve nearly 4 billion free and reduced-price meals annually to children certified as being from low-income households (U.S. Department of Agriculture 2004). In recent years, however, policymakers have raised concerns about the integrity of the process the programs use to establish eligibility for these benefits. In response, to test ways of improving the process for certifying students for free and reduced-price meals, the U.S. Department of Agriculture (USDA) asked school districts around the country to participate voluntarily in the National School Lunch Program Application/Verification Pilot Projects. USDA also commissioned an evaluation of two of the approaches tested: (1) Up-Front Documentation (UFD), and (2) Graduated Verification (GV).

This report presents (1) an impact analysis of the effects of the pilot policies on the number of applications for free and reduced-price meals submitted at the pilot sites, and (2) a descriptive analysis of the accuracy of meal price status determinations made by the School Food Authorities (SFAs) at the pilot and comparison sites. The impact analysis parallels the analysis of pilot program effects on other variables reported earlier (see below). The descriptive analysis is based on comparison of the SFA meal price status determinations with data made available in the application files and with data collected by Mathematica Policy Research, Inc. (MPR) through a survey of pilot and comparison site households.

We present the findings of the evaluation project in five reports. In addition to this report, four companion reports present findings on:

1. The impacts of UFD and GV on the *certification* of eligible and ineligible students for free or reduced-price benefits (Burghardt et al. 2004a)

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2. A description of the study methods and supplementary tabulations (Burghardt et al. 2004b)

3. The impacts of the demonstration on NSLP *participation*—whether certified (and noncertified) students actually received school lunches (Gleason et al. 2004)

4. An analysis of the operational aspects of the pilot projects, including the procedures used to implement the pilot policies and the costs associated with these procedures (Burghardt et al. 2004c)[1]

The rest of this chapter presents important background information for the study. It also discusses the key research questions addressed.

A. STUDY BACKGROUND

Several studies examining income levels of students certified for free or reduced-price meals have found that a nontrivial number of these students' families have income levels that make them ineligible for the level of benefits they are receiving (U.S. Department of Agriculture 1990 and 1997). To address this issue, several school districts began testing alternative ways of determining the income eligibility of students' families; the evaluation USDA commissioned focused on a subset of these districts. In particular, the evaluation included nine districts that tested UFD during the 2000-2001 through 2002-2003 school years and three districts that tested GV during these same years.[2]

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[1] In addition, under the same contract with the Food and Nutrition Service (FNS), MPR conducted a case study of verification outcomes in 21 larger metropolitan school districts that were not involved in the demonstrations in either the pilot or the comparison districts (Burghardt et al. 2004d).

[2] Two of the UFD districts operated the pilot in school years 2001-2002 and 2002-2003, and one of the GV districts operated the pilot in school years 2000-2001 and 2001-2002.

1. Demonstration Policies

Under UFD, districts required that all applicants for free or reduced-price meals provide documentation of their income or evidence they were receiving benefits under the Food Stamp Program (FSP), Temporary Assistance for Needy Families (TANF), or the Food Distribution Program on Indian Reservations (FDPIR).[3] If the application did not include documentation, it was considered incomplete, and a student could not receive benefits. After the district reviewed and made eligibility determination decisions about all complete applications, it was not required to perform the verification of income for the small sample of households called for in federal regulations. Students approved through direct certification in the UFD pilot districts were not subject to these requirements, which applied only to households that submitted an application.

Under GV, application procedures were strengthened and, in certain circumstances, the verification process was enhanced. First, households that applied for free or reduced-price meals, and whose benefits had been terminated or reduced in the prior year because of the district's verification procedures, were required to provide documentation of their incomes or of their categorical eligibility when they applied. Second, the district had to conduct the standard verification of 3 percent of approved households and the following additional verifications:

- If 25 percent or more of the originally verified applications (among the 3 percent sample) led to a termination or reduction of free or reduced-price meal benefits, the district was required to verify an additional 50 percent of remaining applications.

- If 25 percent or more of these second-round verifications resulted in terminations or reductions in benefits, the district was required to verify all remaining applications.

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[3] For additional details on the pilot projects and how their rules differed from standard district eligibility determination procedures, see Burghardt et al. (2004a).

B. RESEARCH QUESTIONS

This report focuses on aspects of the free/reduced-price meal applications that the pilot and comparison sites received and examines how the relevant SFAs processed them.

1. Impacts on Number of Applications

In Chapter II, we draw on the pilot/comparison site design to assess the impacts of the UFD and GV pilot projects on the number of applications that pilot districts received. Key questions are:

- What are the *impacts* of the pilot policies on the number of applications received at the pilot districts?

- How does this vary for households whose incomes make them eligible for free or reduced-price meals and for households whose incomes make them ineligible for such meals?

2. Descriptive Analysis of Application Accuracy

The data assembled for the evaluation not only support the impact analysis, they also provide a rich basis for examining key aspects of how SFAs process applications. Key issues include:

- How accurate are the SFA meal price status determinations?

- When errors are made, what kinds of mistakes are most common?

- Are certain types of cases more likely to have errors?

- Are there differences in the findings for pilot versus comparison sites?

We address each of these questions in this report, through descriptive analysis of the available data. As we examine these questions, the availability of multiple data sources both enriches and complicates our analysis. Figure I.1 illustrates this. Three indications of free and reduced-price meal status are available to us. First, there is the actual determination made by the SFA, illustrated by apex 1 of the triangle in the figure.

FIGURE I.1

MEAL PRICE STATUS FROM THREE SOURCES

2 Calculation by MPR based on application
(free, reduced-price, paid)

SFA decision
(free, reduced-price, paid) 1

3 Calculation by MPR based on study interview
(free, reduced-price, paid)
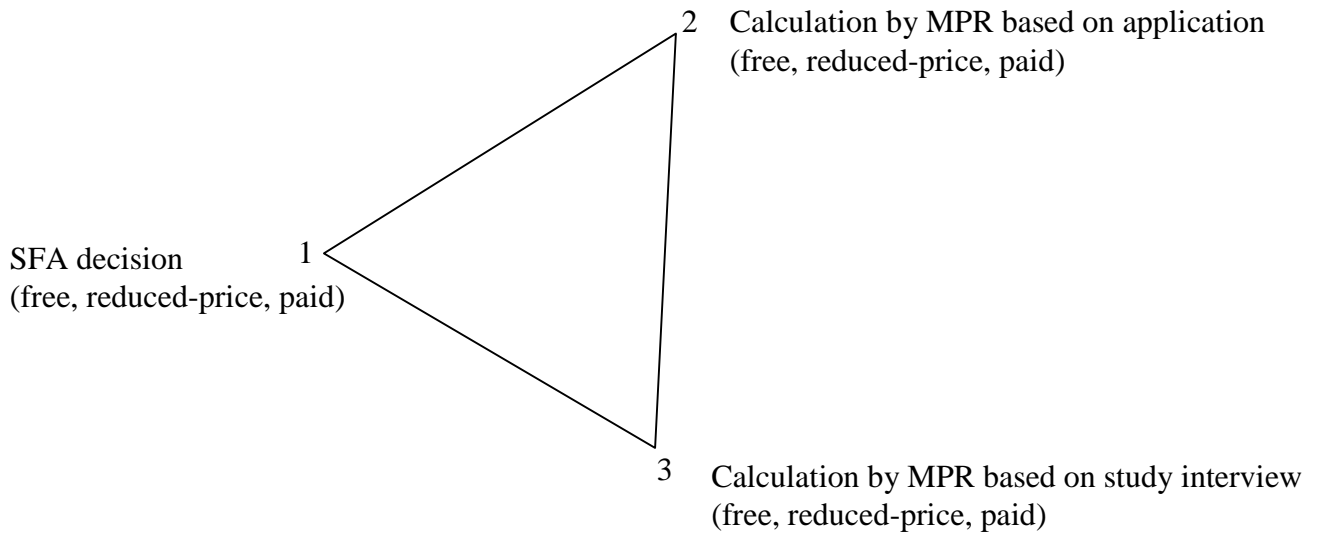
Second, as part of the data collection, we obtained and coded photocopies of the actual applications submitted by a sample of families at the study districts. Thus, we can calculate meal price status ourselves, using the same information available to the SFAs when they made their eligibility determinations. With the information submitted by the households, we can assess whether the SFAs processed the application information correctly. Essentially, this involves comparing apex 1 and apex 2 of the figure. In addition to the meal price category determinations, we compare the underlying data used by the SFAs and MPR to make the determinations. For example, is the monthly household income the SFA computed from the application materials equal to, higher than, or lower than the monthly household income MPR computed from the same materials or from the study interview?

Finally, our data collection protocols also involved conducting detailed interviews with samples of households about key factors (mainly, income and household size) that determine their eligibility for free or reduced-price meals. These interviews supplied a third set of relevant data and allowed us to compare both the SFA decision (apex 1) and the information the households submitted to the SFA (apex 2) to the detailed interview data (apex 3).

Each type of comparison provides a different and potentially useful perspective on issues related to meal price accuracy, and each is included in the analysis reported below.

C. OVERVIEW OF REPORT

Chapter II presents our analysis of the impacts of the pilots on submission of applications. We describe the pilot/comparison site methodology and report and discuss findings.

The rest of the report discusses aspects of accuracy in determining meal price status, as discussed above. Chapter III examines the consistency between the actual SFA meal price determinations and the information the households submitted in their applications—essentially, the comparison between apex 1 and apex 2 in Figure I.1. Chapter IV presents comparisons of

the application material the household submitted with the survey data (the comparison between apex 2 and apex 3). Chapter V examines the relationship between the interview data and the actual SFA meal price determinations (apex 3 versus apex 1).

II. IMPACTS OF THE PILOT INTERVENTIONS ON APPLICATIONS SUBMITTED

The analysis we report in this chapter complements Burghardt et al. (2004a), which described the findings of the evaluation on the impacts of the pilot interventions on the *certification* of students for free or reduced-price benefits. That report concluded that the impacts of UFD and GV on certification among students income-ineligible for benefits were not statistically significant. In other words, the evaluation found no evidence that the pilots prevented income-ineligible students from being approved for free or reduced-price meals. On the other hand, the pilots reduced certification among income-eligible students, which suggests that the pilots created barriers to certification among some students who did qualify for benefits based on their household's circumstances.

Burghardt et al. (2004a), however, did not examine the impacts of the pilots on whether students applied for benefits. In this chapter, we present estimates of the impacts of UFD and GV on this measure. Estimating impacts on application rates will help us learn more about how these interventions influenced (or did not influence) students' certification status. Among income-eligible students, for example, we will be able to determine the extent to which the pilots discouraged students from applying for benefits versus the extent to which students applied but had their applications rejected for some reason.

Specifically, this chapter addresses the following questions:

- How did UFD and GV affect the percentage of students who applied for free or reduced-price meal benefits? Did these effects differ for students who were income-eligible for free or reduced-price meals versus those who were not?

- How did UFD and GV affect the percentage of students who applied for free or reduced-price meal benefits but whose applications were not approved? Did these effects differ for income-eligible versus income-ineligible students?

- Among students who were income-eligible for benefits but did not apply, what reasons did their parents give for not applying for benefits? Did UFD and GV have any effect on the prevalence of these reasons for not applying?

A. DATA AND METHODS

The basic design used to estimate the impacts of UFD and GV on applying for free or reduced-price meal benefits is the same as that used to estimate the impacts of the pilots on certification for these benefits, as described in Burghardt et al. (2004a). This is a comparison group design, in which a comparison district was selected for each of the UFD and GV pilot districts on the basis of having similar characteristics and being judged as a good match by local officials. We interviewed the parents of samples of students selected from each pilot and comparison district and used both survey and administrative data to measure their characteristics and key outcomes, such as whether they applied for benefits, became certified for benefits, and participated in the NSLP. The difference between mean outcomes in pilot versus comparison districts, after controlling for other characteristics in a regression framework, was the estimate of the impact of UFD and GV on these outcomes.[1]

The student samples on which the analysis was based were selected at random from among all students in the pilot and comparison districts, except for those who had been *directly certified* to receive free meals on the basis of receipt of food stamps, TANF, or assistance from the FDPIR. Thus, the results presented in this report can be generalized to all non-directly certified

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[1] A drawback of a nonexperimental comparison group design such as this is that it was difficult to identify and successfully recruit comparison districts that were similar to pilot districts in all ways except the pilot intervention. However, we did develop a careful process for selecting comparison districts that we felt would meet this objective, and the resulting characteristics of students in comparison versus pilot districts were, for the most part, similar. Nonetheless, we could not identify or explicitly control for relevant *unobserved* differences between the two groups of districts. See Burghardt et al. (2004a) for a description of the comparison district selection process, as well as the observed characteristics of students in pilot versus comparison districts.

students in the evaluation districts. The reason for the exclusion of directly certified students was that the UFD and GV pilot interventions directly affected only those students who could have applied for free or reduced-price meals. Students who were directly certified automatically received free meals without having to complete an application. Thus, the analysis of the impact of UFD and GV on applications excludes directly certified students.

1. Measuring Student Applications

The primary data source for measuring whether students applied for free or reduced-price meals was administrative data collected from the pilot and comparison districts in the evaluation. We submitted a list of the students in our sample and asked the districts to supply information on applications, if any, from those households in the period to be covered in the analysis. The districts provided MPR a copy of each application and any accompanying materials, including documentation of income for UFD pilot sites, for each student in our sample.[2] Based on these data, we coded each household into one of the following categories:

- Applied and was certified for free meals or for reduced-price meals
- Applied and was denied
- Applied and was neither certified nor denied (in which case, the application is assumed to have been incomplete)
- Did not apply

We are most confident in the distinction between households that applied versus those that did not apply and in the distinction between households certified versus those not certified. We have

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[2] In one district, MPR survey staff traveled to the site to examine the documents and abstract the information onto our coding form.

somewhat less confidence in our determination of whether the application was incomplete versus denied, since this determination could be due to missing data.

In addition to the administrative data on applications, we collected survey data from parents on whether they applied for free or reduced-price meal benefits on behalf of their children. Because parents may not have recalled applying for these benefits, or they may have thought that they applied for free or reduced-price meals when they did not, we relied primarily on the administrative data on applications throughout most of the analysis.[3] However, we did use the survey data on applications in two ways in this report. First, we tested the sensitivity of our estimates of the impact of UFD and GV on applications to the use of survey versus administrative data. Second, we used information provided on the survey to examine possible reasons that some income-eligible households failed to apply for free or reduced-price meal benefits.

Ultimately, we used the administrative data to define the following outcome measures for the analysis:

- *Application Submitted—All Students:* Percentage of all non-directly certified students who submitted an application for free or reduced-price meals[4]

- *Certified for Free or Reduced-Price Meals—All Students:* Percentage of all non-directly certified students who both submitted an application and were certified to receive free or reduced-price meals

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[3] Among the parents in UFD and GV districts who did apply for benefits according to the administrative data, about 3 percent claimed that they had not applied and, in fact, provided a reason for not applying. Among those who did not apply for benefits according to the administrative data, about 15 to 20 percent reported in the survey that they had applied.

[4] In this report, we sometimes refer to applications as having been submitted by students and sometimes as having been submitted by households. These terms are used interchangeably and are not intended to indicate the mode of application submission; we did not collect data on whether the form was delivered to the district by the student or by some other household member.

- *Application Submitted and Not Approved—All Students:* Percentage of all non-directly certified students who submitted an application for free or reduced-price meals but were not certified for benefits

- *Application Denied—All Students:* Percentage of all non-directly certified students who submitted an application for free or reduced-price meals but whose application was denied

- *Application Incomplete—All Students:* Percentage of all non-directly certified students who submitted an initial application for free or reduced-price meals but whose application presumably was incomplete because it was neither approved nor denied

Each of the five outcome measures listed above was examined separately among students who are income-eligible for free or reduced-price meals—that is, with incomes of no more than 185 percent of the federal poverty level—and among students ineligible for free or reduced-price meals—that is, with incomes of more than 185 percent of the federal poverty level. In addition, responses to the study interview provided data on reasons for not applying for free or reduced-price meals among students who are income-eligible but not certified for benefits.

2. Approaches to Measuring Impacts

To measure the impacts of UFD and GV on the application-related outcomes, we calculated the difference between the mean value of the outcome measure in pilot districts and the mean value of the measure in comparison districts, controlling for other differences between the two types of districts. The general model we estimated, which was similar to the one described in Burghardt et al. (2004a), is shown here:

$$(1) \qquad y_i = c + X_i b + \sum_{j=2}^{K} d_j DP_{ij} + \sum_{k=1}^{K} a_k [DP_{ik} * P_i] + e_i \, ,$$

where: y_i = application-related outcome for student i

X_i = vector of characteristics of student i hypothesized to affect outcome y_i

DP_{ij} = binary indicator of whether student i attended the jth pilot-comparison district pair

P_i = binary indicator of whether student i attended a pilot district

e_i = random-error term

In this model, the outcome of interest (for example, measuring whether the student applied for free or reduced-price meals) is regressed on a set of student-level characteristics; a set of binary variables (called *district pair* variables), each of which represents a pilot district along with its matched comparison district; and a set of variables formed by interacting the district pair variables with a binary variable indicating whether the student's district was a pilot district. The coefficients to be estimated in the model include a constant term c, a vector b, d_2 through d_K, and a_1 through a_K (where K represents the number of pilot districts that implemented UFD or GV), while e_i is a random-error term representing unobserved factors that influenced the outcome of interest.

We estimated separate models to determine the impacts of UFD and GV. Since there are nine UFD pilot districts ($K = 9$), that model included eight binary district pair variables and nine district pair-pilot status interactions. There are three GV pilot districts ($K = 3$), so that model included two district pair variables and three district pair-pilot status interactions.

The general model shown above allowed for differential effects of each of the pilot interventions in each of the districts in which it was implemented. For UFD, for example, the model produced nine different estimates of the impact of the pilot on a given outcome (the coefficients on the district pair-pilot status interactions, or a_1 through a_K), each representing the estimated impact of the pilot in one of the districts in which it was implemented. To estimate the overall impact of UFD (or GV), we calculated the simple average of all the pilot district impact estimates. This manner of estimation gave equal weight to the effect of the pilot intervention in

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each site, regardless of the size of the district or the number of students included in the sample from the district.[5]

3. Limitations of the Design

Like all studies, this one is subject to several limitations that should be clearly understood. We note them here.

a. Comparison Group Design

We measured the impacts of the pilot projects on application-related outcomes by comparing the outcomes of families in the pilot districts with the outcomes of families in comparison districts. We took great care in identifying suitably matched comparison districts, and we controlled statistically for a range of personal and family characteristics that could influence the outcomes. As shown in Burghardt et al. (2004a), the comparison district matching process produced a set of comparison districts and a sample of families with characteristics similar to those of the pilot districts. However, while (in our judgment) these comparison districts provide a reasonable basis for measuring net impacts of the pilot interventions, an element of uncertainty, which we cannot quantify, remains about the quality of the benchmark.

b. Sample Size Limitation

As in most studies, constraints on resources limited the size of the samples it was possible to interview. For most outcomes, the study samples were large enough to give us confidence that if the pilot projects caused an impact of a policy-relevant magnitude—such as 20 to 30 percent of

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[5] In calculating the standard error of the overall impact estimate, we took into account the fact that not all sample observations contributed equally to the overall estimate. In calculating the overall impact estimate, those observations from districts with larger-than-average samples were given a bit less weight than observations from districts with small samples.

the mean outcome in comparison districts—our sample would provide a high likelihood of detecting it. For some measures, however, limits on sample sizes constrain our ability to detect important demonstration effects. With only three GV pilot districts, compared with nine UFD pilot districts, the overall sample sizes for the GV models tended to be smaller than for the UFD models. Thus, we had less statistical power for detecting impacts of GV than we did of UFD.

c. Issues of Generalizability

The small number of demonstration sites and the voluntary nature of the decision to participate in the pilot projects necessarily limit our ability to draw conclusions about what would happen if the policies tested were to be implemented in a larger set of districts or nationwide. Only nine districts included in the study implemented UFD, and only three implemented GV. Furthermore, these districts were part of a very small group nationwide that volunteered to test new procedures designed to improve the accuracy of the process for administering NSLP certification. Burghardt et al. (2004a) document how these districts, as a group, compare with the nation, as a whole, in some readily observable characteristics. However, one can only speculate on how these districts differed from others nationwide in unobservable characteristics likely to affect the outcomes of interest in the evaluation.

B. IMPACTS ON WHETHER HOUSEHOLDS APPLY FOR BENEFITS

1. Impacts of UFD

a. Preliminary Descriptive Analysis

To examine the results of the analysis of how UFD influenced application rates for free or reduced-price meals, we first present, in Table II.1, simple mean application and certification rates across the nine UFD pilot districts, as well as across the comparison districts. These results show the actual percentages of non-directly certified students in the two sets of districts that applied for and were approved for benefits, but we cannot infer an estimate of the impact of UFD

TABLE II.1

CERTIFICATION AND APPLICATION RATES IN UP-FRONT DOCUMENTATION PILOT AND
COMPARISON DISTRICTS, BY HOUSEHOLD ELIGIBILITY STATUS

	Application/Certification Rate[a]	
Student's Application/Eligibility Status	Pilot Districts	Comparison Districts
All Students		
Application submitted[b]	20.7	21.9
	(0.92)	(0.65)
Certified for free or reduced-price meals	17.2	20.3
	(0.80)	(0.71)
Application submitted and not approved	3.5	1.6
	(0.60)	(0.39)
Percentage of submitted applications that were approved[c]	83.1	92.7
Students Eligible for Free or Reduced-Price Meals (Income ≤185% FPL)		
Application submitted[b]	48.6	53.7
	(2.23)	(1.73)
Certified for free or reduced-price meals[d]	42.4	50.5
	(2.15)	(1.58)
Application submitted and not approved	6.1	3.2
	(1.35)	(1.10)
Percentage of submitted applications that were approved[c]	87.2	94.0
Students Not Eligible for Free or Reduced-Price Meals (Income >185% FPL)		
Application submitted[b]	5.2	5.1
	(0.65)	(0.42)
Certified for free or reduced-price meals[d]	3.8	4.0
	(0.49)	(0.47)
Application submitted and not approved	1.5	1.1
	(0.44)	(0.36)
Percentage of submitted applications that were approved[c]	73.1	78.4

Note: This table is intended to provide descriptive information on application/certification rates in UFD pilot and comparison districts only. Differences between application/certification rates in pilot and comparison districts should not be interpreted as estimates of the impact of UFD on NSLP these rates.   See Table II.2 for impact estimates.

Excludes directly certified students.

[a]Standard errors are in parentheses. These standard errors have been adjusted to account for the complex sampling design of the data set.

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Table II.1 *(continued)*

[b]The student was defined as having submitted an application if a copy of the application was found or if the student was approved for free or reduced-price meals even if no application was found.

[c]Calculated by dividing the certification rate by the application rate.

[d]As shown in Burghardt et al. (2004a), Tables IV.1 and IV.3.

FPL = federal poverty level.

on the basis of these simple descriptive figures. Table II.2 presents impact estimates based on the regression model presented in Section II.A, along with regression-adjusted mean application and certification rates in pilot and comparison districts.[6]

In the preliminary descriptive analysis presented in Table II.1, we focus on the comparison sites, since they reflect baseline conditions without the changes the pilot policies introduced. Among all non-directly certified students in UFD comparison districts, 21.9 percent submitted an application for free or reduced-price benefits in fall 2002 (Table II.1).[7] Most of these students— 20.3 percent of all non-directly certified students—were approved by the SFA to receive free or reduced-price benefits. Only 1.6 percent of students submitted an application that was not approved, which amounts to about 7 percent of those who did submit an application.[8]

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[6] The regression-adjusted rates show the mean percentage of students in pilot and comparison districts that would have applied for and been approved for benefits if the characteristics of students across the two sets of districts had been equalized.

[7] Data from the household survey indicate that the percentage of parents who reported submitting an application was higher than the percentage who submitted an application according to administrative data. In UFD comparison districts, for example, 59.2 percent of parents of non-directly certified students eligible for free or reduced-price meals reported submitting an application (an additional 0.8 percent did not report submitting one but must have done so, because their children were certified for benefits), while the administrative data indicated that 53.7 percent actually submitted an application. Among ineligible students, 6.8 percent either reported submitting an application or were certified, while the administrative data indicate that 5.1 percent actually submitted an application. Appendix Table A.1 summarizes these results.

[8] We explored two possible reasons that submitted applications would not have been approved. First, the district may have denied the application after concluding that the household was not eligible for benefits on the basis of either income or receipt of food stamps, TANF, or FDPIR. Second, the application may not have been complete, and the household may not ever have provided all the required information or documentation. In UFD comparison districts, the data (not shown) suggested that most (about 76 percent) of the nonapproved applications were incomplete, as opposed to having been denied. In UFD pilot districts, a larger proportion of nonapproved applications were denied, but a majority were still incomplete.

TABLE II.2

ESTIMATED IMPACT OF UP-FRONT DOCUMENTATION PILOT PROJECTS ON CERTIFICATION AND
APPLICATION RATES AMONG STUDENTS NOT DIRECTLY CERTIFIED

Student's Application/Eligibility Status	Regression-Adjusted Rate[a]		Impact[b]
	Pilot	Comparison	
All Students			
Application submitted[c]	20.7	22.0	−1.3
			(1.35)
Certified for free or reduced-price meals	17.4	20.1	−2.7*
			(1.31)
Application submitted and not approved	3.2	1.9	1.4
			(0.75)
Students Eligible for Free or Reduced-Price Meals (Income ≤185% FPL)			
Application submitted[c]	47.5	54.9	−7.4*
			(3.61)
Certified for free or reduced-price meals[d]	42.0	51.1	−9.1*
			(3.62)
Application submitted and not approved	5.4	3.7	1.7
			(2.34)
Students Not Eligible for Free or Reduced-Price Meals (Income>185% FPL)			
Application submitted[c]	5.4	5.1	0.3
			(0.94)
Certified for free or reduced-price meals[d]	3.9	3.9	0.0
			(0.85)
Application submitted and not approved	1.5	1.2	0.3
			(0.56)

Note: Excludes directly certified students.

[a]The regression-adjusted rate shows the estimated application/certification rate that would result under the assumption that students in both UFD pilot and comparison districts had the same distribution of observable characteristics. Thus, any remaining difference between the regression-adjusted rate in pilot-versus-comparison districts can be attributed to the impact of the pilot intervention.

[b]Standard errors are in parentheses. These standard errors have been adjusted to account for the complex sampling design of the data set.

[c]The student was defined as having submitted an application if a copy of the application was found or if the student was approved for free or reduced-price meals even if no application was found.

[d]As shown in Burghardt et al. (2004a), Tables IV.2 and IV.4.

FPL = federal poverty level.

*Significantly different from zero at the .05 level, two-tailed test.

Higher-income households were much less likely than lower-income households to apply for free or reduced price meal benefits. In particular, only 5.1 percent of students from households with incomes above 185 percent of the federal poverty level—and thus income-ineligible for free or reduced-price meals—applied for benefits, compared with more than half (53.7 percent) of those with incomes under 185 percent of poverty. Not surprisingly, a larger proportion of applicants who were income-eligible for benefits than those not eligible had their applications approved. Among the former group, 53.7 percent applied and 50.5 percent were approved—a 94 percent approval rate. Among those not income-eligible for free or reduced-price meals, 5.1 percent applied and 4.0 percent were approved—a 78 percent approval rate.

Among households with students in UFD pilot districts, a smaller proportion applied for free or reduced-price meals than in comparison districts. Similarly, a smaller proportion were approved and certified for free or reduced-price meals. In contrast, the percentage of students in pilot districts who submitted an application that was not approved was larger than in comparison districts. The pilot-comparison district differences arise primarily from among students income-eligible for free or reduced-price meals.[9] As noted, however, we do not consider these descriptive pilot-comparison differences as estimates of the impact of UFD, since the differences could have been due to the pilot intervention, to differences in the characteristics of students in the two sets of districts, or to differences in the districts themselves.

b. Impact Estimates

Table II.2 provides estimates of the impacts of UFD on applications. Overall, while UFD was estimated to lead to lower application rates among all non-directly certified students, this

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[9] See Appendix Table A.1 for details on pilot-comparison differences in the percentage of parents who reported submitting an application.

impact was small and not statistically significant. Among students income-eligible for free or reduced-price meals, UFD had a larger negative impact on the application rate. All else equal, the pilot was estimated to lead to a 7.4 percentage point decline in the rate of students income-eligible for free or reduced-price meals that applied for benefits. This estimate was statistically significant at the 0.05 level. UFD had an even larger impact on the proportion of those income-eligible students who applied and were approved for (that is, were certified for) free or reduced-price meals. Table II.2 shows that the pilot led to a statistically significant decline of 9.1 percentage points in the certification rate among this group, from 51.1 to 42.0 percent (with other factors held constant). Finally, the percentage of income-eligible students who submitted an application that was not approved was higher in pilot districts than in comparison districts, all else equal; but this difference was not statistically significant at the 0.05 level.

Burghardt et al. (2004a) concluded that the UFD pilots created barriers to free or reduced-price meal certification among some income-eligible students. That report, however, did not explore the reasons for these barriers. Using the application data available here, we can distinguish between two possible explanations for the estimated impacts of UFD on certification among students income-eligible for benefits. In particular, the impacts on certification may have arisen because UFD discouraged income-eligible students from submitting an application for benefits. Alternatively, the pilots could have led to a larger proportion of income-eligible applicants applying but not being approved for benefits. This failure of having their benefits approved could have been due to the applicants not completing the application process by submitting all the required documentation or having their completed applications denied by the district.

Evidence from Table II.2 suggests that the primary reason income-eligible students did not become certified for free or reduced-price meals was that their households did not complete

applications. The UFD pilot had a statistically significant 7.4 percentage point impact on the percentage of income-eligible students applying for benefits but only a 1.7 percentage point impact (that was not statistically significant) on the percentage that submitted applications but were not approved by the district.

Among students not income-eligible for free or reduced-price meals, UFD had little effect on either the likelihood that they would apply for benefits or that their applications would be approved. Among all income-ineligible students, the estimated impact of UFD on the application rate was 0.3 percentage points and not statistically significant. The estimated impact on the likelihood that an income-ineligible student would apply for benefits but not have the application approved was also 0.3 percentage points and not statistically significant. Consequently, the pilot was estimated to have no impact on the certification rate among students income-ineligible for free or reduced-price meals.

2. Impacts of GV

a. Preliminary Descriptive Analysis

In general, the GV districts had higher application rates than the UFD districts (34.2 percent, compared to 20.7 percent).[10] Among non-directly certified students in GV comparison districts, 39.0 percent submitted an application for free or reduced-price benefits in fall 2002 (Table II.3). Most of these students—36.1 percent of all non-directly certified students, or 93 percent of those

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[10] As discussed in Burghardt et al. (2004a), the GV districts had larger proportions of students from households with income levels below 185 percent of the FPL.

TABLE II.3

CERTIFICATION AND APPLICATION RATES IN GRADUATED VERIFICATION PILOT AND
COMPARISON DISTRICTS, BY HOUSEHOLD ELIGIBILITY STATUS

Student's Application/Eligibility Status	Application/Certification Rate[a]	
	Pilot Districts	Comparison Districts
All Students		
Application submitted[b]	34.2	39.0
	(1.80)	(1.79)
Certified for free or reduced-price meals	30.5	36.1
	(1.53)	(1.67)
Application submitted and not approved	3.1	2.9
	(0.98)	(0.84)
Percentage of submitted applications that were approved[c]	89.2	92.6
Students Eligible for Free or Reduced-Price Meals (Income ≤185% FPL)		
Application submitted[b]	61.5	75.4
	(3.36)	(3.26)
Certified for free or reduced-price meals[d]	60.0	72.1
	(3.33)	(2.98)
Application submitted and not approved	0.9	3.3
	(0.51)	(1.56)
Percentage of submitted applications that were approved[c]	97.6	95.6
Students Not Eligible for Free or Reduced-Price Meals (Income >185% FPL)		
Application submitted[b]	10.1	13.0
	(2.02)	(2.38)
Certified for free or reduced-price meals[d]	4.8	9.7
	(0.71)	(2.13)
Application submitted and not approved	5.2	3.3
	(1.92)	(1.19)
Percentage of submitted applications that were approved[c]	47.5	74.6

Note: This table is intended to provide descriptive information on application/certification rates in GV pilot and comparison districts only. Differences between application/certification rates in pilot and comparison districts should not be interpreted as estimates of the impact of GV on these rates.   See Table II.4 for impact estimates.

The percentage certified and the percentage submitted but not approved may not sum to the total percentage submitted, due to missing data. For several households known to have not been certified to receive free or reduced-price meals, data on whether the household submitted an application is missing.

Excludes directly-certified students.

Table II.3 *(continued)*

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[a]Standard errors are in parentheses. These standard errors have been adjusted to account for the complex sampling design of the data set.

[b]The student was defined as having submitted an application if a copy of the application was found or if the student was approved for free or reduced-price meals even if no application was found.

[c]Calculated by dividing the certification rate by the application rate.

[d]As shown in Burghardt et al. (2004a), Tables IV.9 and IV.11.

FPL = federal poverty level.

who submitted an application—were approved for benefits. As in UFD districts, the percentage of GV students who submitted an application that was not approved was small (2.9 percent).[11]

About three-fourths (75.4 percent) of non-directly certified students income-eligible for free or reduced-price meals submitted an application, and nearly all were approved for benefits (72.1 of 75.4 percentage points, or 96 percent). The application rate among students not income-eligible for benefits was much lower, but nontrivial—about one in eight (13.0 percent) income-ineligible students submitted an application. Among these income-ineligible applicants, 73 percent were approved for benefits (9.7 of 13.0 percentage points).

Among students in GV pilot districts, a smaller proportion of those non-directly certified applied for free or reduced-price meals than in comparison districts. Similarly, a smaller proportion were approved and certified. These differences held among both students who were income-eligible and those who were not income-eligible for free or reduced-price meals. Among income-eligible students, for example, 61.5 percent of those in pilot districts submitted applications, compared with 75.4 percent of those in comparison districts (Table II.3). Among income-ineligible students, the application rates were 10.1 percent in pilot districts and 13.0 percent in comparison districts.

One difference between income-eligible and ineligible students in GV pilot districts was the large disparity in the approval rates of eligible versus ineligible students. Among income-eligible students who submitted an application, nearly all (98 percent) were approved. Among

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[11] In GV comparison districts, among applications that were not approved, we found evidence that 57 percent were denied. This suggests that households never completed the remaining 43 percent of nonapproved applications. In GV pilot districts, we found evidence that more than three-fourths (78 percent) of the nonapproved applications were denied, with the rest presumably incomplete. See Appendix Table A.2 for additional details.

income-ineligible students, by contrast, fewer than half (48 percent) of those who applied for benefits were approved.

b. Impact Estimates

Once we controlled for student characteristics, GV was estimated to have led to a decline of 10.3 percentage points in the application rate among students income-eligible for free or reduced-price meals (Table II.4). Although this estimate is not statistically significant at the 0.05 level, it is relatively large. Along with fewer income-eligible students applying for benefits, GV also led to a decline (of 9.4 points) in the percentage approved for free or reduced-price meals (also not statistically significant at the 0.05 level). Finally, the percentage of income-eligible students who submitted an application that was not approved was lower in pilot districts than in comparison districts, all else equal (again this difference was not statistically significant at the 0.05 level).

As with UFD, Burghardt et al. (2004a) concluded that GV created barriers to free or reduced-price meal certification among some income-eligible students. The estimated impact, presented in Table II.4, of GV on application and certification rates among income-eligible students suggests that, essentially, the entire impact of GV on certification for free or reduced-price meals came about because GV discouraged income-eligible students from submitting an application for benefits. This conclusion is based on the fact that the negative effect of GV on the application rate (10.3 percentage points) is close in magnitude to the negative effect of the pilot on the certification rate (9.4 percentage points).

TABLE II.4

ESTIMATED IMPACT OF GRADUATED VERIFICATION PILOT PROJECTS ON CERTIFICATION AND
APPLICATION RATES AMONG STUDENTS NOT DIRECTLY CERTIFIED

Student's Application/Eligibility Status	Regression-Adjusted Rate[a]		Impact[b]
	Pilot	Comparison	
All Students			
Application submitted[c]	34.6	38.8	–4.2
			(3.02)
Certified for free or reduced-price meals	30.8	35.9	–5.2
			(2.73)
Application submitted and not approved	3.4	2.6	0.8
			(1.60)
Students Eligible for Free or Reduced-Price Meals (Income ≤185% FPL)			
Application submitted[c]	63.5	73.8	–10.3
			(5.31)
Certified for free or reduced-price meals[d]	61.6	71.0	–9.4
			(5.35)
Application submitted and not approved	1.3	3.0	–1.7
			(1.48)
Students Not Eligible for Free or Reduced-Price Meals (Income>185% FPL)			
Application submitted[c]	11.8	11.5	0.3
			(2.93)
Certified for free or reduced-price meals[d]	6.1	8.6	–2.5
			(1.75)
Application submitted and not approved	5.6	2.9	2.7
			(2.48)

Note: Excludes directly-certified students.

[a]The regression-adjusted rate shows the estimated application/certification rate that would result under the assumption that students in both GV pilot and comparison districts had the same distribution of observable characteristics. Thus, any remaining difference between the regression-adjusted rate in pilot versus comparison districts can be attributed to the impact of the pilot intervention.

[b]Standard errors are in parentheses. These standard errors have been adjusted to account for the complex sampling design of the data set.

[c]The student was defined as having submitted an application if a copy of the application was found or if the student was approved for free or reduced-price meals even if no application was found.

[d]As shown in Burghardt et al. (2004a), Tables IV.10 and IV.12.

FPL = federal poverty level.

  *Significantly different from zero at the .05 level, two-tailed test.
**Significantly different from zero at the .01 level, two-tailed test.

C. REASONS SOME INCOME-ELIGIBLE HOUSEHOLDS DO NOT APPLY FOR BENEFITS

In UFD and GV districts, a substantial percentage of students income-eligible for free or reduced-price meals did not apply for free or reduced-price benefits. Furthermore, the UFD and GV pilot interventions were both estimated to reduce the likelihood of applying. Since free or reduced-price meals potentially provide an important financial benefit to low-income households, these findings lead to two related questions. First, why do some income-eligible students not apply for benefits? Are they unaware of the existence of, or their eligibility for, these benefits? Is it that being certified for free or reduced-price meals is not actually an important benefit to them because they do not typically eat school meals? Or do the nonmonetary costs of applying for (or receiving) benefits exceed the monetary rewards? Second, what was it about the pilots that led larger proportions of income-eligible students not to apply for benefits?

To answer the first question, we examined data collected as part of the household survey on nonapplicants' reasons for not applying for benefits. We focused on students from households that were income-eligible for free or reduced-price meals but did not apply for certification and reported a reason for not applying.[12] We provided survey respondents with a variety of options as reasons for not applying and allowed them to select as many responses as were relevant.[13]

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[12] A small proportion of eligible households reported a reason for not applying for benefits even though administrative data suggested that they had applied. A somewhat larger group (15 to 20 percent) of eligible households reported that they applied for benefits even though the administrative data suggested that they had not applied. Among the circumstances that could have created this situation are the following: (1) the household submitted an incomplete application and the district never recorded it, (2) the district lost the application, (3) our staff failed to record the application that was present, or (4) the household respondent was mistaken about having applied for benefits.

[13] Few respondents—less than 10 percent of eligible nonapplicants—gave more than one reason for not applying.

Tables II.5 and II.6 show the reported reasons for not applying among income-eligible nonapplicants in UFD and GV districts, grouped into categories of related reasons.

As in the earlier descriptive analysis, we begin by examining the comparison site data. The most common reason income-eligible households reported for not applying for free or reduced- price meals was that they did not believe they were eligible for them. In UFD comparison districts, for example, two-thirds of income-eligible nonapplicants reported not applying for this reason (Table II.5). Only a handful of respondents—1.3 percent in UFD comparison districts—were not aware of the availability of free or reduced-price meals. The second most common reason was that the student did not eat school meals, so it did not make sense for the household to apply (15.3 percent in UFD comparison districts). A few income-eligible nonapplicant households reported that they did not want to receive government assistance (7.8 percent) or that they wanted to avoid the stigma associated with free or reduced-price meals (7.5 percent). However, in UFD comparison districts, few households said they did not apply either because of the hassle of the application process (4.8 percent) or for concerns about privacy (0.6 percent). No households cited a desire to avoid the verification process as a reason for not applying for benefits.

The distribution of reported reasons for not applying for benefits in GV comparison districts was similar to the distribution of reported reasons in UFD comparison districts. Again, two-thirds of income-eligible nonapplicants reported they did not know they were eligible for benefits (Table II.6). About 16.1 percent reported that their child did not eat school meals, and 8.6 percent reported privacy concerns.

TABLE II.5

REPORTED REASONS FOR NOT APPLYING FOR FREE/REDUCED-PRICE MEAL BENEFITS AMONG
INCOME-ELIGIBLE NONAPPLICANTS IN UP-FRONT DOCUMENTATION PILOT AND
COMPARISON DISTRICTS

	Percentage of Households Citing Reason	
	Pilot Districts	Comparison Districts
Reasons for Not Applying Among Non-Directly Certified Households That Did Not Apply[a]		
Costs of Applying for Benefits		
Wanted to avoid hassle of application process	7.5	4.8
	(3.61)	(2.29)
Did not want to reveal private information to school district officials	0.0	0.6
	(0.0)	(0.71)
Costs of Receiving Benefits		
Did not want to receive government assistance	6.7	7.8
	(3.08)	(2.78)
Wanted to avoid stigma associated with receiving free/reduced-price meals	7.3	7.5
	(3.16)	(2.82)
Benefit Not Worthwhile		
Child does not eat school meals	14.3	15.3
	(3.72)	(3.36)
Unaware of Eligibility/Benefits		
Did not think they were eligible	65.4	66.6
	(5.70)	(4.94)
Not aware of availability of free/reduced-price benefits	5.6	1.3
	(2.85)	(0.86)
Other Reasons for Not Applying		
Did not want to be selected for verification	0.0	0.0
	(0.0)	(0.0)
Other	4.2	7.0
	(1.94)	(2.70)
Sample Size	**97**	**104**

Note: Tabulations are weighted. Estimates are average of district levels.

[a]Column percentages may sum to greater than 100, because respondents could give more than one reason.

TABLE II.6

REPORTED REASONS FOR NOT APPLYING FOR FREE/REDUCED-PRICE MEAL BENEFITS AMONG
INCOME-ELIGIBLE NONAPPLICANTS IN GRADUATED VERIFICATION PILOT AND
COMPARISON DISTRICTS

	Percentage of Households Citing Reason	
	Pilot Districts	Comparison Districts
Reasons for Not Applying Among Non-Directly Certified Households That Did Not Apply[a]		
Costs of Applying for Benefits		
Wanted to avoid hassle of application process	2.6 (1.82)	0.0 (0.0)
Did not want to reveal private information to school district officials	2.4 (3.04)	8.6 (6.65)
Costs of Receiving Benefits		
Did not want to receive government assistance	8.2 (4.46)	6.3 (4.69)
Wanted to avoid stigma associated with receiving free/reduced-price meals	5.8 (3.70)	7.2 (5.08)
Benefit Not Worthwhile		
Child does not eat school meals	7.2 (3.82)	16.1 (7.30)
Unaware of Eligibility/Benefits		
Did not think they were eligible	78.7 (6.51)	67.2 (8.53)
Not aware of availability of free/reduced-price benefits	0.0 (0.0)	3.5 (4.10)
Other Reasons for Not Applying		
Did not want to be selected for verification	0.0 (0.0)	0.0 (0.0)
Other	3.7 (3.27)	9.6 (5.85)
Sample Size	**43**	**23**

Note: Tabulations are weighted. Estimates are average of district levels.

[a]Column percentages may sum to greater than 100, because respondents could give more than one reason.

Tables II.5 and II.6 also report reasons that income-eligible nonapplicants in UFD and GV pilot districts gave for not applying for free or reduced-price meals. The reported reasons in UFD pilot districts follow a pattern similar to those in UFD comparison districts. In GV pilot districts, income-eligible nonapplicants were a bit more likely than those in GV comparison districts to report that they did not think they were eligible for benefits. However, the pilot-comparison differences reported in these tables may be misleading as indicators of how UFD and GV affected the reasons for not applying for benefits, for two reasons. First, these differences have not been regression-adjusted for differences in the characteristics of students in the pilot and comparison districts. Second, and potentially more important, the samples on which Tables II.5 and II.6 are based were restricted to income-eligible students who did not apply for free or reduced-price meals. Since the earlier analysis in this chapter suggests that both pilots may have influenced households' decisions to apply for benefits, restricting the sample in this way in looking at the reported reasons for not applying may have the result of hiding pilot-comparison differences that exist among the full group of income-eligible households.

Thus, to estimate the impacts of UFD and GV on households' reasons for not applying for benefits, we examined the sample of all households with students income-eligible for free or reduced-price meals, using regression techniques similar to those used for the other impact estimates. For this sample, we looked for differences between pilot and comparison districts in the percentage of households who had particular reasons for not applying for free or reduced-price meals and who did not apply as a result. To complete the picture, we also looked for differences in the percentage of households who applied for benefits, as well as the percentage who did not apply but reported that they did apply. In other words, all income-eligible students' households were grouped into three categories: (1) applied for benefits, (2) did not apply for

benefits based on administrative data but reported applying in their responses to the survey, and (3) did not apply for benefits and reported a reason.[14]

We further decomposed this third group into the five different types of reasons given for not applying (shown in Tables II.5 and II.6) and prioritized those reasons (as described below) so that each student would fall into only one category in terms of the reported reason. Because we were most interested in the reasons for not applying that were potentially related to the pilot intervention, we gave the highest priority to the reasons related to the costs of the application process. In other words, nonapplicants from households below 185 percent of the FPL who reported either that they "wanted to avoid the hassle of the application process" or "did not want to reveal private information to school district officials" were coded as having not applied because of the "costs of applying for benefits." We ignored any additional reasons these respondents reported for not applying. If they did not report either of these reasons, however, we examined the reasons that were given the next highest priority; and, if they gave one of these second-highest-priority reasons, we ignored any additional reasons reported. Overall, we prioritized the reasons for not applying for free or reduced-price meals as follows:

1. *Costs of Applying for Benefits:* Wanted to avoid hassle of application process OR did not want to reveal private information to school district officials

2. *Costs of Receiving Benefits:* Did not want to receive government assistance OR wanted to avoid the stigma associated with receiving free or reduced-price meals

3. *Benefit Not Worthwhile:* Child does not eat school meals

4. *Unaware of Eligibility/Benefits:* Did not think they were eligible for benefits OR were not aware of availability of free or reduced-price meal benefits

5. *Other Reasons for Not Applying*

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[14] Households were categorized as having applied for benefits if a copy of their application was found or if they were approved for free or reduced-price meals even if no application was found.

Once we had categorized all households with incomes below 185 percent of the FPL in our sample into seven mutually exclusive categories: (1) having applied for free or reduced-price meals, (2) not having applied but reporting an application, or (3 through 7) not having applied for one of the five reasons listed above, we then estimated the impacts of UFD and GV on these outcomes. In doing so, we ran a separate regression for each of the seven categories, controlling for relevant household characteristics using the general regression model described in Section A. The resulting estimates of the impacts of the pilots on income-eligible students' application status/reasons for not applying are provided in Table II.7 for UFD and Table II.8 for GV. As shown in Table II.2, Table II.7 indicates that UFD had a significant negative impact on the percentage of income-eligible households who applied for free or reduced-price meals, lowering the application rate by 7.4 percentage points. However, the pilot did not significantly influence the prevalence of any of the potential reasons for not applying for benefits. All else equal, for example, the percentage of income-eligible households that did not apply because of the costs of applying for benefits or because they did not want to receive the benefits (that is, because of the costs of receiving the benefits) was low and not significantly different in pilot versus comparison districts. The percentage of households that did not apply because they were not aware of their eligibility for benefits (or of the benefits themselves) was a bit higher in UFD pilot districts than in comparison districts, but this difference was not statistically significant. Similarly, a larger percentage of income-eligible students in pilot districts than in comparison districts reported that they applied for benefits, even though the administrative data had not recorded an application. One possible explanation for this difference is that the pilot's requirements that applicants submit documentation of the information reported on their application could have resulted in a larger

TABLE II.7

ESTIMATED IMPACT OF UP-FRONT DOCUMENTATION ON APPLICATION STATUS AND REASONS
FOR NOT APPLYING FOR BENEFITS AMONG STUDENTS INCOME ELIGIBLE FOR FREE OR
REDUCED-PRICE MEALS

Application Status/Reason for Not Applying	Regression-Adjusted Rate[a]		Impact[b]
	Pilot	Comparison	
Applied for Free/Reduced-Price Meals[c]	47.5	54.9	−7.4*
			(3.61)
Reported Applying for Free/Reduced-Price Meals but No Application on File and Not Certified	10.2	7.0	3.2
			(2.94)
Reported Reason for Not Applying			
Costs of applying for Benefits	2.6	2.0	0.5
			(2.05)
Costs of receiving benefits	6.5	6.3	0.2
			(2.94)
Benefits not worthwhile	6.0	4.8	1.2
			(2.31)
Unaware of eligibility/benefits	26.1	22.5	3.6
			(4.61)
Other Reason for not applying	1.2	2.1	−0.9
			(1.13)

[a]The regression-adjusted rate shows the estimated rate that would result under the assumption that students in both UFD pilot and comparison districts had the same distribution of observable characteristics. Thus, any remaining difference between the regression-adjusted rate in pilot versus comparison districts can be attributed to the impact of the pilot intervention.

[b]Standard errors are in parentheses. These standard errors have been adjusted to account for the complex sampling design of the data set.

[c]The student was defined as having submitted an application if a copy of the application was found or if the student was approved for free or reduced-price meals even if no application was found.

*Significantly different from zero at the .05 level, two-tailed test.
**Significantly different from zero at the .01 level, two-tailed test.

TABLE II.8

ESTIMATED IMPACT OF GRADUATED VERIFICATION ON APPLICATION STATUS AND REASONS
FOR NOT APPLYING FOR BENEFITS AMONG STUDENTS INCOME ELIGIBLE FOR FREE OR
REDUCED-PRICE MEALS

Application Status/Reason for Not Applying	Regression-Adjusted Rate[a]		Impact[b]
	Pilot	Comparison	
Applied for Free/Reduced-Price Meals[c]	63.5	73.8	−10.3
			(5.31)
Reported Applying for Free/Reduced-Price Meals but No Application on File and Not Certified	11.6	6.6	5.1
			(3.90)
Reported Reason for Not Applying			
Costs of applying for benefits	1.2	1.9	−0.7
			(1.99)
Costs of receiving benefits	1.8	2.3	−0.5
			(2.01)
Benefits not worthwhile	1.8	2.2	−0.4
			(1.76)
Unaware of eligibility/benefits	19.2	11.7	7.6
			(4.05)
Other reason for not applying	0.8	1.6	−0.8
			(2.41)

[a]The regression-adjusted rate shows the estimated rate that would result under the assumption that students in both GV pilot and comparison districts had the same distribution of observable characteristics. Thus, any remaining difference between the regression-adjusted rate in pilot versus comparison districts can be attributed to the impact of the pilot intervention.

[b]Standard errors are in parentheses. These standard errors have been adjusted to account for the complex sampling design of the data set.

[c]The student was defined as having submitted an application if a copy of the application was found or if the student was approved for free or reduced-price meals even if no application was found.

*Significantly different from zero at the .05 level, two-tailed test.
**Significantly different from zero at the .01 level, two-tailed test.

number of incomplete applications in pilot districts.[15] However, the difference between pilot and comparison districts in the percentage of households with incomes below 185 percent of the FPL who did not apply (according to the administrative data) but reported having applied was not statistically significant.

GV also has a negative effect on the percentage of households below 185 percent of the FPL who submit applications, leading to a decline of 10.3 percentage points in the application rate (Table II.8). Although this estimate is not statistically significant at the 0.05 level, it is relatively large. Most of this impact can be attributed to those in pilot districts being more likely than those in comparison districts to be unaware that they are income-eligible for benefits. All else equal, income-eligible households in GV pilot districts are nearly twice as likely to be unaware of their eligibility and thus not to apply (19.2 versus 11.7 percent), a difference that is not statistically significant at the 0.05 level but that is significant at the 0.10 level. The other pilot-comparison district differences in the reported reasons for not applying were not statistically significant, although a larger proportion of those in pilot districts than in comparison districts (11.6 versus 6.6 percent) reported that they applied for benefits even though there was no evidence of an application for them in the administrative data.

These results suggest that GV causes some income-eligible households to believe that they are not eligible for free or reduced-price meals. It is not clear, however, how GV causes this phenomenon. One possibility is that some income-eligible households have gone through the verification process in past years and had their benefits terminated because their income was too

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[15] Although the administrative data included some information on applications that were submitted but neither approved nor clearly denied—presumably, incomplete applications—it is possible that not all such applications were systematically recorded. Alternatively, a household might have mistakenly reported having applied if it started the application process but never gathered all the documentation and submitted it to the district.

high, which gave them the impression that they would also be ineligible for benefits in future years. If their income had fallen below the eligibility threshold by the following year (or if they had become food stamp or TANF recipients), however, they would have been income-eligible (or categorically eligible) for free or reduced-price meal benefits. The available data do not allow us to test this hypothesis.

D. SUMMARY OF ESTIMATED IMPACTS ON APPLICATIONS

The findings of our analysis of the impacts of UFD and GV on applications for free or reduced-price meals are consistent with the estimated impacts of these pilot interventions on becoming certified for benefits as presented in Burghardt et al. (2004a). UFD led to a statistically significant decrease in the probability that income-eligible households would apply for such meals. This effect, in turn, appeared to translate into an impact of roughly the same size on the probability that income-eligible students would become certified—or approved—for benefits. A similar pattern exists in the GV districts, although the estimated impacts on applications and free and reduced-price approvals are not statistically significant at the .05 level. Neither the UFD nor GV pilot significantly influenced the likelihood that income-eligible households would submit an application that was not approved by the SFA.[16]

Among students from households that are not income-eligible for free or reduced-price meals, the conclusions are different. Neither UFD nor GV significantly influenced the likelihood that students from these income-ineligible households would (1) apply for free or reduced-price meal benefits, (2) become certified for benefits by the SFA, or (3) submit an application that was not approved by the SFA.

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[16] Some applications from income-eligible households were not approved because household circumstances did not meet the free or reduced-price eligibility criteria, while other applications were not approved because they were incomplete.

In UFD districts, there were no significant differences in the reported reasons for not applying for benefits. In GV districts, the pilot-comparison difference in the application rates of income-eligible households could be explained by the fact that people in pilot districts were significantly less likely to believe they were eligible for benefits. By far the most common reason nonapplicants who were income-eligible for free or reduced-price meal benefits, based on our household survey, gave for not applying was that they did not know they were eligible for benefits. The second most common reason cited by income-eligible non-applicants was that they believed that they had applied, even though we found no evidence in administrative data that they had.

III. ACCURACY OF SFA PROCESSING OF APPLICATIONS, AS SUBMITTED

The SFA is responsible for making eligibility determinations for each complete application submitted by a household with children in the district. For each completed application, the SFA must determine, on the basis of information provided by the households, whether the child should be approved for free meals, approved for reduced-price meals, or not be approved for either free or reduced-price meals (that is, denied). For the overall eligibility determination process to work correctly, SFA staff must accurately assess household size and monthly income, based on the household's application information. Then the SFA must translate these factors into a proper determination of eligibility (free, reduced-price, or denied). In terms of the conceptual paradigm presented in Chapter I (Figure I.1), this discussion could be framed as follows: it is important that the SFA's decision (apex 1 in the diagram) accurately reflect the information on the application (apex 2 in the diagram). *This involves correctly computing the households' size and income, as well as correctly applying the NSLP eligibility criteria to the household size and income information.*

This chapter examines the accuracy with which these SFA free and reduced-price meal eligibility determinations are made, given the material supplied by households.

A. RESEARCH OBJECTIVES

The key research questions we address are:

1. Did the SFAs accurately determine household size and gross monthly income with the information provided on applications and associated documentation? To the extent that administrative errors were made, what types were they?

2. Did the SFAs arrive at the correct meal price status with the information provided on the application and associated documentation? What types of mistakes were made?

3. How do the findings on Questions 1 and 2 differ by the pilot-versus-comparison-site procedures?

The two basic household factors that determine eligibility for free or reduced-price meal status (among households that submit applications and do not report a food stamp or TANF case number) are monthly income and household size. Therefore, the first question focuses on whether SFAs correctly calculate these amounts from the application forms that households fill out. Under regular program operations, the applications request that households list their household members individually and supply income information (source, amount, and frequency of receipt) for each person for the month most recently completed. Under typical school district procedures, including those of the comparison sites, income data usually are supplied as entries on a grid in the application document where, for each income source, two items are required: (1) gross amount, and (2) frequency of receipt. (Appendix Figure B.1 provides an example of a school lunch application.) At UFD pilot sites, applicant households were also required to provide, for each income source listed on the grid, documentation, such as pay stubs, which are used to document income amounts. (The relevant procedures are described in greater detail in Burghardt et al. 2004c.)

In all districts, once the available data are examined, SFA staff must (1) count household members, based on people listed on the application; and (2) convert income amounts to a uniform monthly time period, if necessary, and then add amounts across household members and sources. The first research question above addresses the issue of whether this is done accurately and, when it is not, what kinds of mistakes are made.

Once income and household size have been calculated, the next step in the eligibility determination process requires that the SFA compare these two variables to the guidelines for free and reduced-price meals to determine whether the student is eligible for free or reduced-

price status. In general, this involves either looking up the calculated household size-income combination manually in a hard-copy table or entering household size and monthly income onto an automated data file and then using a computer to make the determination through an automated "table look-up" procedure. (Appendix Figure B.3 provides an example of a table that can be used for this purpose.) The second research question examines the accuracy of this process.

As noted in the third research question above, we are also interested in whether the rate of administrative errors associated with processing the relevant data by the SFAs is different for one or both sets of pilot districts as compared to their comparison districts. Several factors are relevant here. Accuracy could have increased because (1) additional staff time might be devoted to application processing at the pilot site, and, other things constant, the addition of these increased resources could have increased accuracy; (2) the number of applications at the pilot sites could have fallen due to the demonstration, which would further increase the average amount of resources devoted to each application and thus increase accuracy; and (3) USDA provided additional training on processing applications to most of the pilot districts.[1] Another factor, one that could have had an effect on accuracy in either direction, is that the proportion of applications based on categorical eligibility, rather than on detailed income and household size calculations, could potentially have changed.

An important factor that could have led to *less* accuracy involves potential difficulties in calculating income directly from source documents, such as pay stubs, rather than from an NSLP

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[1] FNS held pilot implementation meetings in Alexandria, VA, Chicago, IL and Atlanta, GA in September 2000, at which representatives from each pilot SFA and their State Child Nutrition Agencies participated. An objective of these meetings was to provide technical information to attendees to enable them to implement pilot procedures in accordance with FNS intent.

application form. In particular—based on discussions with school officials during our process analysis interviews, as reported in Burghardt et al. (2004c)—we believe it quite possible that the required calculations for income and household size applications in pilot districts may be somewhat more difficult. If the required computations associated with UFD and GV are more complex, this would suggest that the rate of administrative error may increase unless pilot SFAs committed the resources necessary. Documents available to the SFA in the UFD application review process or in verification—typically in the form of pay stubs—may lack relevant information, such as the pay rate or the period over which the pay is calculated, and may be difficult to interpret with regard to such factors as net versus gross pay and the exact periods they cover. In contrast, the comparable data at SFAs operating under standard rules usually come as a formatted grid on the application (which is computationally much easier for SFA staff to carry out accurately).

Depending on the relative importance of these various factors, the accuracy of application processing could potentially have gone up or down. This highlights the need for caution in drawing inferences from the data and interpreting findings. Based on the process analysis conducted for the evaluation, however, the hypothesis we regarded most likely was that, at least at the UFD sites, accuracy would go down at the pilots due to the difficulties associated with processing source documents (Burghardt et al. 2004c).

To the extent that accuracy was found to be lower at the UFD pilots than at UFD comparison sites, it is possible that accuracy rates at the GV pilots would be found somewhere between the UFD pilots and the average of all UFD and GV comparison sites, in terms of the ease with which the available data supplied by households can be interpreted. In particular, the GV pilot model does not require up-front documentation in general, but it does require that such documentation be provided for households upon submission of an application if their benefits

were reduced or terminated in the verification process the previous year. Thus, some, but not all, of the income and household size GV applications are likely to have data in a form potentially harder to interpret than a simple grid.

Finally, we emphasize that the discussion in this chapter is *not* about the *overall* accuracy of school lunch certification. Assessing *overall* accuracy involves an assessment not only of SFA processing of data, but also of the accuracy of the *basic information, as submitted by the households*. Chapter IV addresses the accuracy of the information submitted, and Chapter V examines the broader issue of overall accuracy. Our focus in this chapter is limited to how accurately the SFAs processed the information that the household provided.

B. DATA AND METHODS

To examine these research questions, MPR collected school lunch application data from the SFAs at all the participating pilot and comparison sites. Details of this work varied somewhat, depending on logistics at the SFAs. However, in general, we obtained access to each SFA's hard-copy files where their free and reduced-price school lunch applications for July through October 2002 were stored. Then, using lists of our interview sample, project field staff located all the applications pertaining to students who had been selected into our samples. Staff then photocopied these applications and sent them to MPR's headquarters in New Jersey for coding. (A sample application form is included in Figure B.1 in Appendix B.)

Our staff in New Jersey then coded the information, in terms of the variables needed for the analysis, onto an abstraction sheet, following protocols designed by the project's survey director and under the project director's supervision. Variables coded included the SFA's determination of total gross monthly income, the SFA's determination of household size, and the certification status the student was assigned (free, reduced-price, denied [that is, full-price]). In addition, the coders entered onto a grid the names of all household members, as well as income information

from the application and from any verification documents present in the file for each household member's income sources and amounts. They also recorded information about the nature of any obvious errors that were observed. All this information was then entered into an electronic data file.

In the analysis, we computed household size and gross monthly income from the data file, based on the information in the person-by-person coding grid. We then determined whether there were apparent SFA errors by computing the difference between the *SFA's determination* of household size and gross monthly income and our determination of household size and gross monthly income variables. Finally, we assessed the implications of these errors for certification status by comparing the SFA's determination of meal price status to a determination based on our calculation of household size and income.

Below, we present tabulations of the incidence of SFA errors in computing monthly household income and in determining household size, both for the pilot districts and for their comparison sites. We also examine, in those cases where we found SFA computational errors in either monthly income or household size, the types of errors made. Since this analysis is not intended to be generalized beyond the study sample or to assess impacts, the tabulations are unweighted.

We excluded from most of the tabulations in this chapter cases certified on the basis of categorical eligibility, because households applying on the basis of a food stamp or TANF case number are not required to provide detailed household size and income information. Once the sample is disaggregated by type of site (UFD versus GV and pilot versus comparison), the sample sizes generally range from 200 to 400 observations per tabulation. These sample sizes are significantly lower than those available for the impact analysis (see Burghardt et al. 2004a), largely because the impact analysis includes many households that were included in the survey

but that had not submitted a free or reduced-price application. However, the sample discussed in this chapter includes some households (245 across all pilot and comparison districts) that did not respond to the survey but for whom we have application data.

C. ESTIMATED ERROR RATES IN DETERMINING GROSS MONTHLY HOUSEHOLD INCOME AND HOUSEHOLD SIZE

Next, we present estimates of the rates of error in school district SFA calculations at UFD pilot and comparison sites and similar analysis for the GV sites. We then examine in greater detail the types of errors that occur.

1. Overview

Table III.1 provides a summary of the rate at which errors in meal price certification status determinations were found at the pilot and comparison SFAs. Overall, for the UFD districts, error rates were substantially higher at the pilot sites than at the corresponding comparison sites. Furthermore, this was true both when errors were measured in terms of the SFA determinations as recorded on the application material and when errors were measured in terms of the SFA determinations as shown by their lists of student meal status used in operating the program.[2] For example, when errors were assessed vis-à-vis the eligibility determinations recorded on the application materials, the pilot sites were estimated to have errors in about 22 percent of the (non-categorically eligible cases) cases, compared to 9 percent at the comparison sites.

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[2] Because of differing patterns of missing data, the error rates based on SFA determinations as recorded on the applications are for a somewhat different sample than the error rates based on SFA determinations as shown by their lists of student meal status. However, in sensitivity tests we performed using a sample restricted to only those households for which both data items were nonmissing, the error rates were similar. Because we wanted to use as large a sample as possible, most of our analyses used the status recorded on the application as our measure of the meal price status determination made by the SFA.

TABLE III.1

SUMMARY OF SFA ADMINISTRATIVE ERROR RATES IN APPLICATION REVIEW

	Percent of Applications			
	UFD Pilot	UFD Comparison	GV Pilot	GV Comparison
Excluding Categorically Eligible Households				
Rate of Error in Meal Price Status, Based on Status Recorded on Application (n=1,104)	21.82	9.32	3.90	7.99
Rate of Error in Meal Price Status, Based on Status Recorded on District Lists of Students Approved for Free and Reduced-Price Meals as of October 2002 (n=998)	21.69	15.03	5.45	9.96
Including Categorically Eligible Households				
Rate of Error in Meal Price Status, Based on Status Recorded on Application (n=1,408)	15.69	7.76	2.85	6.61
Rate of Error in Meal Price Status, Based on Status Recorded on District Lists of Students Approved for Free and Reduced-Price Meals as of October 2002 (n=1,246)	18.50	13.50	4.40	8.59

Estimated rates of error in meal price certification status were somewhat smaller in the GV sites. In addition, GV pilot households had lower rates of error than GV comparison households.

Table III.1 also shows the rates of errors in meal price certification status of all households that applied, including those that were categorically eligible. The error rates for this group tend to be lower, since we found no errors in SFAs' determinations of the meal price status of households that receive TANF or food stamps. In the following sections, we examine details of the differences in error rates, focusing exclusively on non-categorically eligible households that applied based on household size and income information.

2. Rates of Mistakes in SFA Calculations

a. UFD Sites

A substantial number of errors were made by the SFAs in the UFD pilot sites in determining gross monthly income (Table III.2). For the UFD pilot SFA cases, 36 percent were found to have errors in the computed income amounts—that is, MPR's calculation of gross monthly income differed from the amount recorded by the SFA. About 40 percent had been recorded accurately; the remaining 24 percent lacked sufficient data for MPR to make a determination.[3]

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[3] In general, the households in the "missing" category were those where there was no indication in the available documents of what income levels or household sizes the SFAs had calculated. In particular, there were several districts where this information was systematically missing for all or most cases. Appendix Figure B.2 displays the coding form used in this work. The typical case that lacked sufficient data would be evidenced by the coder being unable to enter information into the "Total Household Size" and "Total Monthly Income" boxes at the top right of the form.

TABLE III.2

ACCURACY OF SFA INCOME AND HOUSEHOLD SIZE DETERMINATION IN
UP-FRONT DOCUMENTATION PILOT AND COMPARISON DISTRICTS
(Unweighted Percentage of Cases)

Group	Pilot	Comparison
SFA Income		
Correct	39.56	60.10
Not correct	36.14[a]	12.86
Missing	24.30	27.03
SFA Household Size		
Correct	69.78	72.44
Not correct	0.62	1.84
Missing	29.60	25.72
Number of Applications	**321**	**381**

Notes: Household income is considered correct if the total monthly income recorded on the application equals the monthly income calculated by MPR from data by source listed on the application or from documented sources for UFD pilots. Household size is considered correct if the total household size recorded on the form equals total household size calculated by MPR from the list of household members.

Excludes categorically eligible households.

[a]In 13 percent of cases (included in the 36 percent), the income data reported on the application form, but not the income data based on verification documents, matched the SFA income amount determination.

The SFAs' accuracy in determining income based on the information available to them was higher for the UFD comparison sites than for the UFD pilot sites. Income amounts had been calculated correctly in about 60 percent of comparison site households. Further, only 13 percent of the comparison cases clearly had errors, with the remaining 27 percent containing insufficient information for MPR to make a determination.

In general, we believe it to be much easier for an SFA to determine household size than gross monthly income. As expected, the SFA accuracy rates are considerably higher for household size than for gross monthly income. In 70 percent of the pilot observations and 72 percent of the comparison observations, the SFAs calculated household size correctly. For most other cases, there was insufficient information to make this determination, although the rates of clear error were very low (2 percent of cases in comparison districts and 0.6 percent of cases in pilot districts).

Appendix Table B.1 presents detailed data for the UFD sites on the rates of various combinations of mistakes observed in the types of information being calculated. The patterns shown there largely confirm the findings noted above. The two most common combinations of circumstances found for the UFD pilots are (1) income is incorrect, but household size is correct (30 percent); and (2) both income and household size are correct (27 percent).

Most of the missing data noted in this analysis are attributable to six districts where complete data were rarely found in the case files; Appendix Table B.2 presents tabulations that exclude these six districts. These tabulations further confirm the above results but with sharper resolution—more than 88 percent of the pilot and comparison samples consist of either entirely correct cases or cases where household size is correct and income is not.

b. GV Sites

In the GV pilot districts, the rate of income calculations being correct is 67 percent—considerably higher than the 40 percent rate noted for the UFD pilot districts (Table III.3). This probably reflects that in the GV pilots most of the SFAs' income calculations are done directly from applications rather than from source documentation (for example, pay stubs). Accuracy rates for the gross monthly income calculations are even higher (83 percent) at the GV comparison districts.

As in the UFD districts, most calculations of household size were made correctly in the GV districts, with errors observed in fewer than 5 percent of cases in either the pilot or the comparison sites. Appendix Table B.3 confirms that the basic observed patterns continue to be apparent when the data are examined in greater detail.[4]

3. Types of Error and Implications for Meal Price Status

The analysis so far has focused on the estimated rates of errors by SFAs in calculating household size and gross monthly income. However, not all errors necessarily have implications for meal price status. For example, a four-person household with very low income could be eligible for free meal status even if the household size is incorrectly assessed to be five (or even three) instead of four. In cases like this, the errors may be immaterial to the final eligibility determination. In this section, we define each application as being:

- *Correct.* Our assessment was the same as the SFA eligibility determination of free, reduced-price or denied (paid) matched.

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[4] Two Appendix B tables were used in the discussion of the UFD sites to provide supplemental findings. However, only one corresponding Appendix B table is included for the GV sites, because the GV sites did not have as significant a problem with missing data.

TABLE III.3

ACCURACY OF SFA INCOME AND HOUSEHOLD SIZE DETERMINATION IN
GRADUATED VERIFICATION PILOT AND COMPARISON DISTRICTS
(Unweighted Percentage of Cases)

Group	Pilot	Comparison
SFA Income		
Correct	66.80	82.77
Not correct	12.30	13.51
Missing	20.90	3.72
SFA Household Size		
Correct	79.51	92.57
Not correct	2.05	4.73
Missing	18.44	2.70
Number of Applications	**244**	**296**

Notes: Household income is considered correct if total monthly income recorded on the application equals monthly income calculated by MPR from data by source listed on the application. Household size is considered correct if total household size recorded on form equals total household size calculated by MPR from list of household members.

Excludes categorically eligible households.

- *Overcertified.* Our assessment was that the application provided by households indicated that a child was eligible for fewer benefits than the SFA eligibility determination (for example, we determined that the application should have been approved for reduced price but that the SFA approved it for free).

- *Undercertified.* Our assessment was that the application provided by households indicated that a child was eligible for more benefits than the SFA eligibility determination (for example, we determined that the application should have been approved for free or reduced-price meals and the SFA denied the application, or we determined that the application should have been approved for free meals but was approved by the SFA for reduced-price meals).

Chart III.1 summarizes these classifications.

a. UFD Sites

As Table III.4 shows, at the UFD sites, after eliminating cases with missing data and those submitted with a food stamp or TANF case number, 76 percent of the cases contain no SFA-made errors affecting meal price status.[5] Another 2 percent of the cases have multiple errors that affect meal price status but that are offsetting in terms of the final meal price status. Thus, in about 78 percent of cases, the final meal price status recorded in the application file is correct, based on the information available to the SFA. The comparable number for the UFD comparisons is higher—about 91 percent.

This discussion has focused on comparing meal price status based on the abstraction of the application material, with the status computed by the SFA *as recorded in the application material.* A different comparison of interest is the one between the meal price status calculated from the abstracted application material and the meal price status *recorded on the SFA's list of students eligible for various meal statuses*—this is the list that is used by the SFA to seek reimbursement for meals obtained by children. Although Table III.1 showed overall error rates

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[5] Appendix B provides additional detailed analyses of these data.

CHART III.1

CLASSIFICATION OF HOUSEHOLDS
(Cell Entries Show How Households Were Classified)

	Eligibility Status Based on Application Data		
	Free	Reduced-Price	Paid
Certification Status Assigned by SFA			
Free	Correct	Overcertified	Overcertified
Reduced Price	Undercertified	Correct	Overcertified
Paid	Undercertified	Undercertified	Correct

TABLE III.4

TYPES OF SFA ERRORS IN PROCESSING INFORMATION ON NSLP APPLICATIONS,
FOR UP-FRONT DOCUMENTATION PILOT AND COMPARISON DISTRICTS
(Unweighted Percentage of All Cases)

Group	All	Correct Decision	Overcertified	Undercertified
UFD Pilot Districts				
Cases with No Errors Affecting Meal Price Status	76.36	76.36	0.0	0.0
Cases Assigned Correct Meal Price Status with Offsetting Errors[a]	1.82	1.82	0.0	0.0
Cases with Incorrect Lookup	3.64	0.0	1.82	1.82
Cases with SFA Error in Determining Income or Household Size	12.27	0.0	9.09	3.18
Cases with Multiple Types of Errors[b]	0.91	0.0	0.45	0.45
Reason for Error Unknown[c]	5.00	0.0	2.27	2.73
Total	100.00	78.18	13.64	8.18
Number of Cases	220			
UFD Comparison Districts				
Cases with No Errors Affecting Meal Price Status	89.86	89.86	0.0	0.0
Cases Assigned Correct Meal Price Status with Offsetting Errors[a]	0.82	0.82	0.0	0.0
Cases with Incorrect Lookup	1.92	0.0	0.55	1.37
Cases with SFA Error in Determining Income or Household Size	4.66	0.0	3.29	1.37
Cases with Multiple Types of Errors[b]	0.27	0.0	0.27	0.0
Reason for Error Unknown[c]	2.47	0.0	1.10	1.37
Total	100.00	90.68	5.21	4.11
Number of Cases	365			

Notes:　To classify cases as "correctly certified," "overcertified," or "undercertified," we compared the meal-price status assigned by the SFA (as recorded on the application) to eligibility status as calculated by MPR from data on income and household membership provided on the application (or as provided in documentation for UFD pilot sites).

Excludes categorically eligible households.

[a]Cases with multiple errors that would affect meal price status but which are offsetting.

[b]Cases with both a look-up error and an error in income or household size that would affect meal price status.

[c]Cases with missing data that prevented determination of the reason for the error affecting meal price status.

for both these measures, Tables III.4 and III.5 focused exclusively on the former benchmark. The latter benchmark can be different if, for example, a mistake is made in transmitting information about the results of the meal price determination to central record keepers in the SFA or if a later change in meal price status is not reflected in the application material. Appendix Tables B.5 and B.6 provide comparisons based on this alternative benchmark. In general, the patterns noted continue to be apparent, but the rates of inaccurate meal price status are somewhat higher.

Table III.4 also provides information on the nature of the errors in cases where an error affected the results of eligibility determination. At the UFD pilot sites, of the 22 percent of cases that did contain errors in meal price status, 12 percentage points involved errors in determining either gross monthly income or household size. Another four percentage points involved mistakes in determining meal price eligibility status after the calculations for household size and income had already been made.

Errors in which the SFA assigned a higher level of benefits than the data supported were more likely at UFD pilots as errors in which the SFA assigned a lower level of benefit than appropriate (13.6 versus 8.2 percent). A similar pattern holds for the UFD comparison sites, although, as noted, the overall percentages in error numbers are lower (5.2 versus 4.1 percent were overcertified and undercertified, respectively).

b. Sites

Only about 4 percent of the GV pilot cases, excluding those submitted with a food stamp or TANF case number, contained an SFA error that affected meal price status (Table III.5).[6]

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[6] As for UFD sites, Appendix Table B.6 provides a comparison based on the alternative benchmark, derived from the meal price status computed by the SFA as recorded on its list, rather than as recorded in the application material.

TABLE III.5

TYPES OF SFA ERRORS IN PROCESSING INFORMATION ON NSLP APPLICATIONS,
FOR GRADUATED VERIFICATION PILOT AND COMPARISON DISTRICTS
(Unweighted Percentage of All Cases)

Group	All	Correct Decision	Overcertified	Undercertified
GV Pilot Districts				
Cases with No Errors Affecting Meal Price Status	93.07	93.07	0.0	0.0
Cases Assigned Correct Meal Price Status with Offsetting Errors[a]	3.03	3.03	0.0	0.0
Cases with Incorrect Lookup	2.16	0.0	1.73	0.43
Cases with SFA Error in Determining Income or Household Size	1.30	0.0	0.43	0.87
Cases with Multiple Types of Errors[b]	0.0	0.0	0.0	0.00
Reason for Error Unknown[c]	0.43	0.0	0.0	0.43
Total	100.00	96.10	2.16	1.73
Number of Cases	231			
GV Comparison Districts				
Cases with No Errors Affecting Meal Price Status	91.67	91.67	0.0	0.0
Cases Assigned Correct Meal Price Status with Offsetting Errors[a]	0.35	0.35	0.0	0.0
Cases with Incorrect Lookup	1.74	0.0	1.04	0.69
Cases with SFA Error in Determining Income or Household Size	5.90	0.0	4.51	1.39
Cases with Multiple Types of Errors[b]	0.0	0.0	0.0	0.0
Reason for Error Unknown[c]	0.35	0.0	0.0	0.35
Total	100.00	92.01	5.56	2.43
Number of Cases	288			

Notes: To classify cases as "correctly certified," "overcertified," or "undercertified," we compared the meal price status assigned by the SFA (as recorded on the application) to eligibility status as calculated by MPR from data on income and household membership provided on the application (or as provided in documentation for UFD pilot sites).

Excludes categorically eligible households.

[a]Cases with multiple errors that would affect meal price status but which are offsetting.

[b]Cases with both a look-up error and an error in income or household size that would affect meal price status.

[c]Cases with missing data that prevented determination of the reason for the error affecting meal price status.

Approximately 93 percent of these cases had no errors at all that affected meal status, while another 3 percent had offsetting errors. These lower rates at the GV pilot sites, compared to the UFD pilots, may reflect that applications submitted at GV pilot sites had relatively few documentation materials for SFAs to deal with during the review of applications.

Of the relatively small number of cases for which errors were found, the majority, 2 percent of all cases, involved an incorrect table look-up and about 1 percent of all cases involved an error in determining income or household size. Two percent of the cases at the GV pilot sites were overcertified, while another 2 percent were undercertified.

Error rates were higher at the GV comparison sites than at the GV pilot sites, with the most common type of error observed being problems in determining income or household size. As at the pilot sites, overcertification was more common than undercertification in GV comparison districts; in fact, more than twice as many households were overcertified (5.56 percent) than were undercertified (2.43 percent).

IV. CONSISTENCY OF APPLICATION AND INTERVIEW INFORMATION

The previous chapter focused on the accuracy with which study SFAs made eligibility determinations in accordance with the information households provided on their application forms. Another potentially important source of inaccuracy in the eligibility determination process is that some households may report information on the application form that does not accurately reflect the households' (1) gross monthly income in the month prior to submitting the application, or (2) number of household members. These inaccuracies may occur as a result of either inadvertent or intentional errors on the part of households. Such differences between actual circumstances and reported information arise when (1) the household initially submits incorrect or incomplete information, or (2) family circumstances change after the application has been submitted.[1] Data from the study survey on household membership and monthly income provide an independent estimate of each household's circumstances. In this chapter, we use the study survey data as a benchmark against which to gauge the accuracy of the information provided on the NSLP application form and associated documentation. In terms of the conceptualization illustrated by the diagram in Figure I.1, we are now focusing on differences between apex 2 and apex 3.

This analysis addresses two research questions:

1. In what percentage of cases does the meal price eligibility status calculated from the survey data agree with the eligibility status calculated from data provided by households with the application? Is overcertification or undercertification more common? How does agreement between survey- and application-based eligibility determinations differ in pilot versus comparison districts?

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[1] Examples of changes in circumstances include changes in household structure (such as the divorce of parents, the birth of a baby, or the exit of a dependent from the household) and changes in income (such as a household member gaining or losing a job or getting a raise).

2. Where survey data and application data lead to different meal price eligibility statuses, what specific elements of the calculation differ? To what extent are differences in eligibility determinations related to categorical eligibility, household size, number of people reporting any income, sources of income, income amounts, and so forth? How do these reasons for eligibility differences differ in pilot versus comparison districts?

To the extent that the UFD and GV pilot procedures worked according to their intended design, we would expect to find greater agreement between survey and application data in pilot sites than in comparison sites. In particular, since households in the UFD pilot districts were required to provide documentation of their income if they submitted an application, we would expect their eligibility status based on that application data to match that based on survey data better than in comparison sites, where documentation was not required. Similarly, application data submitted by households in GV pilot sites may be more likely to match survey data than in their comparison districts, if pilot households believe that the information they submit on their application is more likely to be put under the scrutiny of the verification process and thus take greater care with accuracy. The findings from our sample conform to these expectations. Meal price status based on the survey was more likely to match that based on information from the application in both UFD and GV pilot districts than in their respective comparison districts. However, the estimated differences are quite small.

The specific reasons for observed differences may also vary by pilot-comparison status. In particular, because households in UFD pilot sites were required to provide documentation of their income, we might expect to find fewer differences in the income reported on surveys and applications in those pilots than in their comparison districts. While our findings conform to the expected pattern, the differences in percentage of applications with a discrepancy due to income reporting is quite small.

A. DATA AND METHODS

This chapter relies on two data sources for the sample of households with which we conducted an interview and who submitted an application. These two sources are (1) information reported on applications (and documentation provided with the applications, for households in UFD pilot districts) submitted by households applying for free or reduced-price meals between July and October 2002; and (2) data MPR collected through interviews conducted between October 2002 and December 2002. The data collection methods used for the survey and application information are explained in greater detail in Chapters II and III of this report, respectively.

Each data source contains the information necessary to determine a household's eligibility for free or reduced-price meals. In particular, data were collected on household composition, income of household members in the most recently completed calendar month, and receipt of TANF and food stamps (which results in categorical eligibility). From these components, we determined the eligibility status of each household based on each data source, as follows:

- *Survey Data.* To determine eligibility status from survey data, we first checked for categorical eligibility, then looked at household size and income. We considered any household receiving TANF or food stamps to be automatically eligible for free meals. Otherwise, we (1) counted the number of people reported on the survey who appeared to be members of the household, and (2) aggregated income reported on the survey for these household members from all sources. We then compared that household size and total income information to the federal guidelines to determine whether the household was eligible for free or reduced-price meals or whether its application should be denied.

- *Application Data.* We followed a similar process in determining eligibility status based on the information submitted on the application. We first checked for categorical eligibility, then counted the number of household members listed on the application, aggregated all income reported on the application, and compared that household-level size and income information to the federal guidelines. However, since households in UFD pilot sites were required to submit documentation of income along with their applications, we calculated total gross monthly income amounts from the documentation material provided by households in these districts. In other

districts, where such documentation was not required, we used the frequency information associated with each source to determine a gross monthly amount.

To examine the accuracy of the information households submitted to the SFA on their applications for free or reduced-price meals, we compare it to the information they reported on the survey. First, we compare the eligibility category MPR computed based on survey data to the eligibility category MPR computed based on information (on household size, gross monthly income, and categorical eligibility) provided on the application. For better understanding of the reasons for differences between eligibility computed from survey and application information, we also compare the individual elements of information that were used to compute eligibility status from the two data sources. In particular, we examine differences in information reported on categorical eligibility, household size, sources of income, and income amounts. Because the analysis presented here relies on comparisons between the two data sources, this chapter focuses on those households where we have both data sources: the 1,246 households that both submitted an application for free or reduced-price meals and completed an MPR interview. To allow adequate sample sizes, we aggregated the tabulations across individual sites.

One additional methodological issue should be noted. The MPR survey took place some time after households filled out their applications for free and reduced-price meals. Often, two months or more had elapsed. Therefore, some portion of any discrepancies that are observed are probably attributable to changes in household circumstances after filling out the forms; this should be kept in mind in assessing the findings.

B. FINDINGS

Using the data and methods described above, this section presents findings from the study on three issues: (1) differences in meal price eligibility status computed from the survey data and application data; (2) reasons for these differences (that is, differences in component variables

when eligibility does not match); and (3) differences in component variables when eligibility does match.

1. Differences Between Computed Eligibility Based on Survey and Application Data

This section compares MPR's calculation of eligibility status based on the survey data with MPR's calculation based on the application data. The conventions used to classify households as to whether they were overcertified, undercertified, or correctly certified are summarized in Chart IV.1.

Table IV.1 summarizes these results for all applications in our sample, including those that were categorically eligible, separately for UFD and GV pilot and comparison sites. The eligibility status computed from the information provided (and documented, in UFD pilot sites) on the applications matched that computed from the survey data somewhat more often in pilot districts than in comparison districts. The survey-based eligibility determination agreed with the application-based eligibility determination in about 63 percent of applications in UFD pilot districts, compared to 60 percent in their comparison districts. This is not surprising, since the documentation requirements in UFD pilot sites were designed to increase the accuracy of the information reported at application. Contrary to expectations, however, households in UFD pilots were slightly more likely to be overcertified than were households in their comparison districts. In interpreting this result, however, it should be remembered that, besides affecting accuracy, the pilot may also have affected numbers of applications; thus, it is difficult to draw causal conclusions.

The survey-based eligibility determination agreed with application-based eligibility determination in 71 percent of GV pilot households, compared to 64 percent of their comparison households. Concern that the information applicants submitted was more likely to be checked

CHART IV.1

CLASSIFICATION OF HOUSEHOLDS
(Cell Entries Show How Households Were Classified)

	Eligibility Status Based on Survey Findings		
	Free	Reduced-Price	Paid
Eligibility Status Based on Application Data			
Free	Correct	Overcertified	Overcertified
Reduced Price	Undercertified	Correct	Overcertified
Paid	Undercertified	Undercertified	Correct

TABLE IV.1

MEAL PRICE STATUS BASED ON STUDY SURVEY COMPARED WITH MEAL PRICE STATUS
CALCULATED FROM DATA PROVIDED ON THE APPLICATION
(Unweighted Percentage of Cases)

	Up-Front Documentation		Graduated Verification	
	Pilot	Comparison	Pilot	Comparison
Status Calculated from Data Provided on the Application				
Correct decision	62.70	59.50	70.70	64.26
Overcertified	23.51	22.59	23.44	25.43
Undercertified	13.79	17.91	5.86	10.31
Number of Cases	**319**	**363**	**273**	**291**

Notes: Certification status is defined with respect to the survey data, as shown in Chart IV.1. For example, "overcertified" means that the survey data imply lower benefits than do the application data. Undercertified is defined analogously. "Correct" means the survey data and the application decision led to the same meal price decision.

Households that applied but did not complete their applications were considered as "paid" from the point of view of the application data.

Includes categorically eligible households.

during the verification process in GV pilot sites could have affected accuracy in those districts. Applicant households in comparison districts were both overcertified and undercertified more often than those in GV pilot sites. Overcertification was more than twice as common as undercertification in both GV pilot and GV comparison districts.

2.   Reasons for Differences in Meal Price Eligibility Status

This section examines the factors that account for the differences described between MPR's calculation of eligibility status based on the application data with that based on the survey data. Table IV.2 summarizes the specific reasons for the UFD districts.

Categorical Eligibility.   In a few households, eligibility from the two data sources disagreed as a result of differences in reported categorical eligibility—about 1.9 percent of UFD pilot households and 3.0 percent of UFD comparison households. These are households that both applied for free or reduced-price meals and completed a survey but had differing eligibility status because they reported receiving TANF or food stamps on one instrument but not on the other.

Number of Household Members.   About 9.7 percent of UFD pilot households that submitted applications had differences in eligibility due to discrepancies between the survey and application data in the number of household members. Of these, about two-thirds resulted in overcertification, while the other third resulted in undercertification. Many of the cases with differences in number of household members also had differences in household income (not directly shown in Table IV.2).

Household Income.   Most of the differences between MPR's calculation of eligibility status based on the application data and that based on the survey data were due to differences related to income. About 34 percent of the UFD pilot households reported different total income amounts

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TABLE IV.2

REASONS FOR DISAGREEMENT BETWEEN THE MEAL PRICE CATEGORY CALCULATED
BASED ON THE APPLICATION DATA AND THAT BASED ON THE SURVEY DATA,
IN UP-FRONT DOCUMENTATION PILOT AND COMPARISON DISTRICTS

	Total	Correct	Overcertified	Undercertified
UFD Pilot Districts				
Status Agrees	62.70	62.70	0	0
Status Differs Because:				
Categorical eligibility differs	1.88	0	0.63	1.25
Number of household members differs[a]	9.72	0	6.58	3.13
Total household income differs because:[a]				
One data source indicated zero income	0.63	0	0.00	0.63
Number of household members *with income* differs	14.73	0	12.85	1.88
Number of types of income sources differ[b]	4.38	0	2.50	1.88
Individual income amounts differ	6.58	0	1.88	4.70
Exact reason for income difference unknown, because of imprecise or missing information on type of income source	7.53	0	4.38	3.13
Status Differs but Reason Unknown Because of Missing Data	0.94	0	0.94	0.0
Total	**100.00**	**62.70**	**23.51**	**13.79**
UFD Comparison Districts				
Status Agrees	59.50	59.50	0	0
Status Differs Because:				
Categorical eligibility differs	3.03	0	1.65	1.38
Number of household members differs[a]	10.20	0	5.24	4.96
Total household income differs because:[a]				
One data source indicated zero income	0.28	0	0.28	0.0
Number of household members *with income* differs	13.50	0	9.37	4.13
Number of types of income sources differ[b]	5.24	0	3.03	2.21
Individual income amounts differ	10.47	0	4.68	5.79
Exact reason for income difference unknown, because of imprecise or missing information on the type of income source	6.61	0	2.76	3.85
Status Differs but Reason Unknown Because of Missing Data	0.55	0	0.55	0.0
Total	**100.00**	**59.50**	**22.59**	**17.91**

Note: Includes categorically eligible households.

[a]These categories overlap—both household size and household income differed in 9.09 percent of UFD pilot households and in 9.37 percent of UFD comparison households.

[b]Because the categories of types of income sources listed in the survey differed from those coded from the applications, there is some imprecision in these measures.

on the survey than they did on the application, such that a difference in eligibility resulted.[2]

(This includes both households with matching household sizes and households with discrepancies in household size.) These differences in total household income can be further decomposed, as shown in Table IV.2. The most common types of differences within this category include the following:

- A difference in the number of household members reported to be receiving income was the most common reason for discrepancies in the total household income amount (14.7 percent of all UFD pilot households). In the majority of these cases, the information submitted on the application resulted in an overcertification relative to the survey information. In other words, income was reported for fewer household members on the application than on the survey.

- The second most common reason for discrepancies in total household income was a difference in individual amounts reported, even though the number of people receiving income and the types of income sources were the same (6.6 percent of all UFD pilot cases). This was the single most common income-related reason for undercertification.

- Another common cause of differences in meal price status was a difference in the number of types of sources of income (4.4 percent of all UFD pilot cases). For example, on the application a household might have reported income only from a job, but on the survey reported income from child support as well.

When interpreting these differences, note that, as mentioned earlier, often two months or more had elapsed between the times when the two data sources were obtained.

As shown in Table IV.2, the UFD pilot sites have fewer discrepancies in individual income amounts (6.6 percent) than do their comparison sites (10.5 percent). This finding probably reflects the fact that income amounts are the component of eligibility determination directly affected by the documentation requirements. Substantially fewer households are overcertified for this reason in pilots than in comparison districts (1.9 compared to 4.7 percent). Differences

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[2] The 34 percent in the text is computed as the sum of the five items in Table IV.2 referring to differences in income.

in individual income amounts are more likely to result in undercertification than in overcertification in UFD pilot districts.

Another important perspective is that, as shown in Table IV.2, the types of differences that the UFD approach would be most likely to reduce are *not* the most common types of income differences that occur. In particular, the largest type of income-related discrepancy at these sites is failure to report household members with income (15 percent of all pilot UFD households and 14 percent of households in UFD comparison districts). This category of difference is not likely to be significantly affected by the UFD approach's focus on providing documentation of the *amounts* of income. On the other hand, the category of difference most likely to be affected by the pilot policies is that of discrepancies in individual income amounts. While the incidence of differences in this latter category is indeed lower for the pilot districts (6.6 percent of UFD pilot cases compared to 10.5 percent of UFD comparison cases), the size of the category itself is smaller. The third substantial category of income-related differences noted earlier—discrepancies in *sources* of income for known household members—is the smallest of the three categories; it also is probably less likely to be affected by the pilot policies.

Table IV.3 presents comparable data for the GV pilot and comparison sites. For the most part, the basic patterns shown remain the same. Issues of categorical eligibility cause a small number of discrepancies, while getting an accurate count of household members is a somewhat larger problem. The greatest cause of differences concerns the assessment of total income, particularly the number of household members reported to receive income, which was the cause of meal price category differences in 10.3 percent of GV pilot households and 13.1 percent of GV comparison households.

3. Differences Between Component Variables When Eligibility Status Matches

The preceding section focuses on differences in the component variables used to compute eligibility when the eligibility category from the survey and application data do not agree. However, even when the eligibility category from the two different data sources matches, the individual data elements used to compute eligibility may not. Table IV.4 shows the disagreements between these different component data elements.

Among the households whose eligibility statuses based on the application and survey data agreed, the majority still had differences between the two data sources in categorical eligibility, household size, or income that either offset each other or were too small to move the household across an eligibility threshold. For example, among the 63 percent of UFD pilot households whose application-based certification status matched their survey-based status, 47 percentage points were assigned this same status despite some type of difference in component variables.[3] The proportion is even larger in UFD comparison districts, where survey- and application-based status matched despite some difference in 52 percent of households. In GV pilot and comparison districts, 60 and 58 percent, respectively, of all households that had applied for free or reduced-price meals and completed the survey interview had the same status according to both data sources, but either had a difference in one of the component data elements used to determine eligibility that was of insufficient magnitude to change the meal price category, or had offsetting differences in multiple components.

The most common type of difference is that between the total household income amounts computed from the two data sources. This is the case in about 40 percent of households in UFD

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[3] The 47 percent in the text was computed as the sum of the four items in Table IV.4 referring to differences in component variables.

TABLE IV.3

REASONS FOR DISAGREEMENT BETWEEN THE MEAL PRICE CATEGORY CALCULATED
BASED ON THE APPLICATION DATA AND THAT BASED ON THE SURVEY DATA,
IN GRADUATED VERIFICATION PILOT AND COMPARISON DISTRICTS

	Total	Correct	Overcertified	Undercertified
GV Pilot Districts				
Status Agrees	70.70	70.70	0	0
Status Differs Because:				
Categorical eligibility differs	2.56	0	1.47	1.10
Number of household members differ[a]	6.96	0	6.23	0.73
Total household income differs because:[a]				
One data source indicated zero income	1.10	0	1.10	0.0
Number of household members *with income* differs	10.26	0	8.42	1.83
Number of types of income sources differ[b]	2.56	0	1.83	0.73
Individual income amounts differ	5.86	0	5.49	0.37
Exact reason for income difference unknown, because of imprecise or missing information on the type of income source	5.87	0	4.03	1.84
Status Differs but Reason Unknown Because of Missing Data	0.73	0	0.73	0.0
Total	**100.00**	**70.70**	**23.44**	**5.86**
GV Comparison Districts				
Status Agrees	64.26	64.26	0	0
Status Differs Because:				
Categorical eligibility differs	2.75	0	1.37	1.37
Number of household members differ[a]	9.27	0	6.18	3.09
Total household income differs because:[a]				
One data source indicated zero income	1.72	0	1.37	0.34
Number of household members *with income* differ	13.06	0	9.97	3.09
Number of types of income sources differ[b]	3.78	0	3.09	0.69
Individual income amounts differ	6.19	0	5.15	1.03
Exact reason for income difference unknown, because of imprecise or missing information on the type of income source	7.56	0	4.12	3.43
Status Differs but Reason Unknown Because of Missing Data	0.34	0	0.0	0.34
Total	**100.00**	**64.26**	**25.43**	**10.31**

Note: Includes categorically eligible households.

[a]These categories overlap—both household size and household income differed in 6.59 percent of GV pilot households and in 8.93 percent of GV comparison households.

[b]Because the categories of types of income sources listed in the survey differed from those coded from the applications, there is some imprecision in these measures.

TABLE IV.4

DISAGREEMENT BETWEEN COMPONENTS OF MEAL PRICE CATEGORY
CALCULATION BASED ON THE APPLICATION DATA AND THAT BASED
ON THE SURVEY DATA, WHEN OVERALL STATUS IS CORRECT
(Percentage of All Applicant Households)

	Pilot	Comparison
UFD Districts		
Overall Status Correct, with No Differences in Component Variables[a]	15.67	6.61
Overall Status Correct, but Small or Offsetting Differences in Component Variables:		
One source indicates categorical eligibility	5.02	7.99
Differences in household size only	2.19	0.83
Differences in household income only	33.55	33.61
Differences in household size and income	6.27	9.92
Overall Status Correct, but Some Component Variables Missing	0.00	0.55
Total	62.70	59.50
GV Districts		
Overall Status Correct, with No Differences in Component Variables[a]	10.62	5.84
Overall Status Correct, but Small or Offsetting Differences in Component Variables:		
One source indicates categorical eligibility	7.69	7.56
Differences in household size only	1.10	1.37
Differences in household income only	38.47	36.08
Differences in household size and income	12.45	13.06
Overall Status Correct, but Some Component Variables Missing	0.73	0.34
Total	70.70	64.26

Note: Includes categorically eligible households.

[a] Most cases with no differences in component variables were categorically eligible households, for which income and household size data were not needed to determine eligibility.

pilot districts and 44 percent of households in comparison sites.[4] About half of all households in the GV pilot and comparison sites had differences in household income between the survey and application data, despite agreement between the data sources concerning meal price eligibility status. Total household income may differ in these households for the same set of reasons that it differs in households whose meal price status differs—including differences in the number of households members reporting income, in the sources of income, or in individual income amounts—as discussed earlier in this chapter.

Table IV.5 shows the magnitudes of the income differences between survey and application data in households where the meal price eligibility category from the two data sources matched. These percentages are generally similar to those found by an earlier study of income verification in the NSLP, which found that 61.5 percent of households had an increase or decrease in income of more than $50 between the time of their application and verification (U.S. Department of Agriculture 1990).[5]

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[4] Some of these households also reported different numbers of household members on the survey than on the application.

[5] The sample and data collection methods differ somewhat, however. The 1990 report compared SFA records data on all households selected for verification, regardless of whether their status changed after verification, while Table IV.5 includes only those households whose status based on survey data matched that based on their application data.

TABLE IV.5

DIFFERENCES IN HOUSEHOLD INCOME COMPUTED BASED ON THE
APPLICATION DATA AND BASED ON THE SURVEY DATA,
WHEN OVERALL STATUS IS CORRECT
(Percentage of Applicant Households Whose
Status from the Two Data Sources Agrees)

	Pilot	Comparison
UFD Districts		
Difference in Gross Monthly Household Income:		
+$1,000 or more	6.50	4.17
+$500 to +$999	5.50	5.56
+$200 to +$499	6.00	9.72
+$100 to +$199	5.00	6.02
+$50 to +$99	2.00	4.17
+$1 to +$49	3.00	5.09
$0 [a]	36.50	25.93
$1 to –$49	5.00	2.78
–$50 to –$99	3.00	4.17
–$100 to –$199	6.50	6.02
–$200 to –$499	9.50	14.81
–$500 to –$999	7.00	9.26
–$1,000 or more	4.50	1.39
Total	100.00	100.00
GV Districts		
Difference in Gross Monthly Household Income:		
+$1,000 or more	7.25	4.81
+$500 to +$999	6.74	4.81
+$200 to +$499	11.40	11.23
+$100 to +$199	6.22	5.88
+$50 to +$99	2.07	3.74
+$1 to +$49	4.66	3.21
$0 [a]	26.94	22.99
–$1 to –$49	4.66	6.42
–$50 to –$99	2.59	1.60
–$100 to –$199	3.63	5.35
–$200 to –$499	12.44	13.37
–$500 to –$999	6.74	10.70
–$1,000 or more	3.63	5.35
Total	100.00	100.00

Notes: A positive difference indicates that the income reported on the survey exceeded that reported on the application. A negative difference indicates that the income reported on the application exceeded that reported on the survey.

Includes categorically eligible households.

[a]Most cases with no differences in gross monthly household income were categorically eligible households, for which income data were not needed to determine eligibility.

V. CONSISTENCY OF SFA DETERMINATIONS OF MEAL PRICE STATUS WITH SURVEY-BASED DETERMINATIONS

The previous two chapters address distinct types of discrepancies that can lead to differences between a household's SFA certification status and eligibility as determined through survey data. Here, we combine these two types of discrepancies to examine overall differences.

1. In what percentage of cases does the meal price eligibility status calculated from the survey agree with such status assigned by the SFA?[1] Among households that submit applications, is overcertification or undercertification more common? How does agreement between SFA certification and survey-based eligibility differ in pilot versus comparison districts?

2. To what extent are overall differences due to administrative error or to reporting discrepancies?

The overall comparisons of the SFA certification status with the survey-based eligibility determination discussed in this chapter measure the proportion of all submitted applications (whether approved or denied) that were certified correctly, overcertified, or undercertified, relative to the survey data.[2]

Because the analysis presented here relies on comparisons between the two data sources, this chapter focuses exclusively on the approximately 1,200 households that applied and for which (1) survey data were available, and (2) we could obtain a clear indication of SFA-determined certification status based on application information. This sample size differs from that used in earlier chapters, because the analysis in each chapter includes all households with nonmissing data for the two measures of meal price status being compared. Table V.1 shows the

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[1] In terms of the triangle shown in Figure I.1, this is the comparison of apex 1 and apex 3.

[2] This differs from certification accuracy as defined in Burghardt et al. (2004a) as the proportion of all *certified* students that were certified correctly.

TABLE V.1

HOUSEHOLDS INCLUDED IN CHAPTERS III, IV, AND V

	Number of Households
Households with Complete SFA, Application, and Survey Data (Included in Chapters III, IV, and V)	1,163
Households Missing Survey Data Necessary for MPR Computation of Meal Price Status (Included in Chapter III Only)	245
Households Missing SFA Decision Data (Included in Chapter IV Only)	83
Households Missing Application Data Necessary for MPR Computation of Meal Price Status (Included in Chapter V Only)	37
Total	**1,528**

patterns of missing data in the three key data items discussed in Chapters III through V and how the missing data affected the sample sizes in each of the three chapters.

A. SUMMARY OF DISAGREEMENT BETWEEN SFA DECISION AND SURVEY-BASED ELIGIBILITY

The administrative error and reporting differences discussed in Chapters III and IV result in differences between the certification status assigned by the SFA and the eligibility status computed by MPR based on the survey data. The conventions used to classify households as overcertified, undercertified, or correctly certified are summarized in Chart V.1. The differences in certification status are summarized in Table V.2, overall and separately by pilot and comparison status.

About 65 percent of UFD pilot households that applied reported information on the survey that was consistent with the certification status the SFA had assigned them (Table V.2). The comparable rate for the GV pilots is 71 percent. When the eligibility status from the two sources does not match, it is considerably more common for SFAs to have overcertified households (relative to their eligibility status computed from survey information) than to have undercertified them. This is illustrated by the UFD pilot sites where 24 percent of applicant households are classified as overcertified, compared to only about 11 percent undercertified. Similar patterns are seen for the other sets of SFAs.

Eligibility status based on survey data matched the certification status in a somewhat larger proportion of cases in pilot districts than in comparison districts. About 65 percent of households in UFD pilot sites reported survey information that matched their SFA-assigned status, compared to 62 percent of households in their comparison sites. The breakdown of differences in their direction differs in the UFD pilot and comparison districts. Although

CHART V.1

CLASSIFICATION OF HOUSEHOLDS
(Cell Entries Show How Households Were Classified)

	Eligibility Status Based on Survey Findings		
	Free	Reduced-Price	Paid
Certification Status Assigned by SFA			
Free	Correct	Overcertified	Overcertified
Reduced Price	Undercertified	Correct	Overcertified
Paid	Undercertified	Undercertified	Correct

TABLE V.2

SUMMARY TABLE OF DISAGREEMENT BETWEEN STATUS
BASED ON SFA DECISION COMPARED WITH
THAT COMPUTED FROM SURVEY DATA

| | Percentage of Households | | | |
| | Up-Front Documentation | | Graduated Verification | |
	Pilot	Comparison	Pilot	Comparison
Correct Decision	65.07	61.68	70.79	63.14
Net Overcertification	23.53	21.47	23.60	26.96
Net Undercertification	11.40	16.85	5.62	9.90
Number of Cases	**272**	**368**	**267**	**293**

Note: Includes categorically eligible households.

households included in Chapters III, IV, and V the overall pilot/comparison difference was a 3 percentage point higher rate of accurate determinations in UFD pilot districts, this difference stems from a slightly higher percentage of cases in pilot districts with net overcertification (23.5 percent minus 21.5 percent equals +2 percentage points) offset by a substantially lower percentage of cases with net undercertification (11.4 percent minus 16.9 percent equals –5.5 percentage points). In GV pilot sites, 71 percent of households matched, compared to 63 percent in their comparison sites. Among the GV pilot and comparison districts, pilot districts had both a lower percentage of cases with net overcertification and a lower percentage with net undercertification.

B. REASONS FOR DIFFERENCES

Table V.3 disaggregates the numbers from Table V.2 to show how much of the overall differences is caused by administrative error (that is, differences between the information submitted on households' applications and the eligibility determination made by the SFA) and how much stems from reporting differences (differences between income and household size reported on the application and on the survey).[3] Both overcertification and undercertification were due far more often to reporting differences than to administrative error, a pattern that holds true for both UFD and GV pilots and their comparison districts. Overall, about 90 percent of differences between SFA certification decisions and survey-based eligibility determinations are a result of inconsistencies between information reported on the survey and information reported on the application.[4] Only about 9 percent resulted from administrative error in determining

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[3] Appendix Table D.2 shows additional details of the reasons for overcertification and undercertification.

[4] See Table V.3. Calculated as 31.00 + 0.58 with reporting differences divided by 35.16 cases with *any* differences.

TABLE V.3

SOURCES OF AGREEMENT AND DISCREPANCIES BETWEEN STATUS BASED ON SFA DECISION
AND STATUS BASED ON SURVEY DATA

| | Percentage of Households | | | | |
| | | Up-Front Documentation | | Graduated Verification | |
	All	Pilot	Comp	Pilot	Comp
Correct					
SFA decision, MPR's computation of eligibility based on application data, and MPR's computation of eligibility based on survey data all match	58.83	52.57	55.71	68.16	60.07
Offsetting differences (both administrative error and reporting differences)	3.75	7.35	4.08	1.50	2.05
SFA decision and survey data match, but MPR's computation missing due to some missing application data	2.25	5.15	1.90	1.12	1.02
Over- or Under-certified[a]					
Over- or under-certified due to administrative error[b]	2.75	4.41	2.17	1.12	3.41
Over- or under-certified due to reporting discrepancies[c]	31.00	27.57	34.78	28.09	32.08
Over- or under-certified due to both administrative and reporting differences	0.58	0.37	0.82	0.00	1.02
Over- or under-certified for reason undetermined[d]	0.83	2.57	0.54	0.00	0.34
Number of Cases	**1,200**	**272**	**368**	**267**	**293**

Note: Includes categorically eligible households.

[a]Status assigned by SFA differs from status MPR calculated based on the survey.

[b]Status assigned by SFA differs from status MPR calculated based on the application (for reasons discussed in Chapter III).

[c]Status MPR calculated based on the survey data differs from status MPR calculated based on the application (for reasons discussed in Chapter IV).

[d]Because of missing data, eligibility based on the application could not be calculated.

eligibility based on information submitted on the application.[5] There is a small overlap in these numbers, since both reasons contributed to some differences; in addition, the reason for differences in a few cases could not be determined due to missing data.

Specific reasons for each type of difference are discussed in the two previous chapters— Chapter III (particularly in Tables III.2 through III.5) details the specific reasons for administrative error, and Chapter IV (especially in Tables IV.2 and IV.3) does the same for reporting differences. Although the samples in each chapter differ somewhat due to missing data, the findings are consistent.[6]

The differences between pilot and comparison districts noted in those earlier chapters carry through to the overall differences between pilots and comparisons presented here. Administrative errors tended to be more common in UFD pilots than in their comparisons, and less common in GV pilots relative to the GV comparison sites. Reporting differences were more common in comparison districts than in either the UFD or GV pilot sites. However, the pattern of overall differences is quite similar to reporting differences discussed in the previous chapter, because overall differences are due to reporting discrepancies more often than to administrative errors. For example, the higher rate of administrative error in UFD pilots than in their comparisons is more than offset by the lower rate of reporting differences, which results in the somewhat lower rate of overall differences in pilot districts.

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[5] Calculated as 2.75 + 0.58 divided by 35.16.

[6] For example Table III.1 shows an 8 percent rate of administrative error overall (including categorically eligible households), and Table V.3 shows that about 7 percent of cases had an administrative error (computed by summing the elements in the table involving administrative error), although not all of those resulted in an overall difference between SFA determination and survey-based eligibility status.

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APPENDIX A

SUPPLEMENTARY TABLES FOR CHAPTER II

TABLE A.1

CERTIFICATION AND APPLICATION RATES IN UP-FRONT DOCUMENTATION PILOT AND
COMPARISON SITES, BY HOUSEHOLD ELIGIBILITY FOR BENEFITS

	Students Not Eligible for Free or Reduced-Price Meals (Income > 185% FPL)		Students Eligible for Free or Reduced-Price Meals (Income < 185% FPL)	
	Pilot	Comparison	Pilot	Comparison
SFA-Administrative Data				
Application Submitted[a]	5.2	5.1	48.6	53.7
Certified for Free or Reduced-Price Meals	3.8	4.0	42.4	50.5
Application Submitted and Not Approved[b]	1.5	1.1	6.1	3.2
Application Denied[c]	1.3	0.4	1.1	0.2
Application Incomplete[d]	0.2	0.5	5.0	3.0
Pilot Evaluation Survey				
Application Submitted, Parent Self-Report, and Meal Price Status[e]	9.4	6.8	58.5	60.0
Application Submitted, Parent Self-Report[f]	9.1	6.0	57.8	59.2

Note: Tabulations are weighted and use same methods as Table IV.1 and Table IV.3 of Burghardt et a1. (2004a) Volume I. Figures represent average of district-level means.

[a]The student was defined as having submitted an application if a copy of the application was found or if the student was approved for free or reduced-price meals even if no application was found.

[b]Calculated as the simple difference between percentage who submitted an application and percentage certified free or reduced-price.

[c]Application was found and it contained a notation indicating free or reduced-price certification was denied.

[d]Application was found and it contained no notation indication free or reduced-price certification was denied and student's meal price status was paid.

[e]Parent reported filling out an application or, if student was approved for free or reduced-price meals, the parent was assumed to have completed an application.

[f]Parent reported filling out an application.

A.3

TABLE A.2

CERTIFICATION AND APPLICATION RATES IN GRADUATED VERIFICATION PILOT AND
COMPARISON SITES, BY HOUSEHOLD ELIGIBILITY FOR BENEFITS

	Students Not Eligible for Free or Reduced-Price Meals (Income > 185% FPL)		Students Eligible for Free or Reduced-Price Meals (Income < 185% FPL	
	Pilot	Comparison	Pilot	Comparison
SFA-Administrative Data				
Application Submitted[a]	10.1	13.0	61.8	75.4
Certified for Free or Reduced-Price Meals	4.8	9.7	60.4	72.2
Application Submitted and Not Approved[b]	5.2	3.3	0.9	3.3
Application Denied[c]	4.0	2.2	0.0	0.5
Application Incomplete[d]	1.3	1.1	1.4	3.2
Pilot Evaluation Survey				
Application Submitted, Parent Self-Report, and Meal Price Status[e]	14.0	16.3	72.5	83.0
Application Submitted, Parent Self-Report[f]	14.0	16.2	70.4	79.2
Sample Size				

Note: Tabulations are weighted and use same methods as Table IV.1 and Table IV.3 of Burghardt et al. (2004a) Volume I. Figures represent average of district-level means.

[a]The student was defined as having submitted an application if a copy of the application was found or if the student was approved for free or reduced-price meals even if no application was found.

[b]Calculated as the simple difference between percentage who submitted an application and percentage certified free or reduced-price.

[c]Application was found and it contained a notation indicating free or reduced-price certification was denied.

[d]Application was found and it contained no notation indication free or reduced-price certification was denied and student's meal price status was paid.

[e]Parent reported filling out an application or, if student was approved for free or reduced-price meals, the parent was assumed to have completed an application.

[f]Parent reported filling out an application.

A.4

APPENDIX B

SUPPLEMENTARY TABLES FOR CHAPTER III

TABLE B.1

ACCURACY OF SFA INCOME AND HOUSEHOLD SIZE DETERMINATION IN
UP-FRONT DOCUMENTATION PILOT AND COMPARISON DISTRICTS
(Unweighted Percentage of Cases)

Group	Pilot	Comparison
SFA income correct, SFA household size correct	26.79	57.74
SFA income correct, SFA household size not correct	0.0	1.31
SFA income correct, SFA household size missing	12.77	1.05
SFA income not correct, SFA household size correct	29.91	12.34
SFA income not correct, SFA household size not correct	0.62	0.26
SFA income not correct, SFA household size missing	5.61	0.26
SFA income missing, SFA household size correct	13.08	2.36
SFA income missing, SFA household size not correct	0.0	0.26
SFA income missing, SFA household size missing	11.21	24.41
Number of Applications	**321**	**381**

Notes: Household income is correct if total monthly income recorded on the application equals monthly income calculated by MPR from data by source listed on the application, or from documented sources for UFD pilots.

Household size is correct if total household size recorded on form equals total household size calculated by MPR from list of household members.

Excludes categorically eligible households.

TABLE B.2

ACCURACY OF SFA INCOME AND HOUSEHOLD SIZE DETERMINATION IN
UP-FRONT DOCUMENTATION PILOT AND COMPARISON DISTRICTS,
EXCLUDING SIX DISTRICTS WITH MORE THAN
90 PERCENT MISSING DATA
(Unweighted Percentage of Cases)

Group	Pilot	Comparison
SFA income correct, SFA household size correct	42.42	71.31
SFA income correct, SFA household size not correct	0.0	1.20
SFA income correct, SFA household size missing	0.0	1.59
SFA income not correct, SFA household size correct	45.96	18.33
SFA income not correct, SFA household size not correct	1.01	0.40
SFA income not correct, SFA household size missing	1.01	0.40
SFA income missing, SFA household size correct	5.05	2.39
SFA income missing, SFA household size not correct	0.0	0.0
SFA income missing, SFA household size missing	4.55	4.38
Number of Applications	**198**	**251**

Notes: Household income is correct if total monthly income recorded on the application equals monthly income calculated by MPR from data by source listed on the application, or from documented sources for UFD pilots.

Household size is correct if total household size recorded on form equals total household size calculated by MPR from list of household members.

Excludes categorically eligible households.

B.4

TABLE B.3

ACCURACY OF SFA INCOME AND HOUSEHOLD SIZE DETERMINATION IN
GRADUATED VERIFICATION PILOT AND COMPARISON DISTRICTS
(Unweighted Percentage of Cases)

Group	Pilot	Comparison
SFA income correct, SFA household size correct	65.16	79.05
SFA income correct, SFA household size not correct	1.64	3.38
SFA income correct, SFA household size missing	0.0	0.34
SFA income not correct, SFA household size correct	11.89	12.16
SFA income not correct, SFA household size not correct	0.41	1.35
SFA income not correct, SFA household size missing	0.0	0.0
SFA income missing, SFA household size correct	2.46	1.35
SFA income missing, SFA household size not correct	0.0	0.0
SFA income missing, SFA household size missing	18.44	2.36
Number of Applications	**244**	**296**

Notes: Household income is correct if total monthly income recorded on the application equals monthly income calculated by MPR from data by source listed on the application.

Household size is correct if total household size recorded on form equals total household size calculated by MPR from list of household members.

Excludes categorically eligible households.

TABLE B.4

COMPARING MEAL PRICE STATUS ASSIGNED BY THE SFA
WITH MEAL PRICE STATUS CALCULATED BY MPR
(Unweighted Percentage of Applications)

	Meal Price Status Assigned by SFA			
Eligibility Status Calculated by MPR	Free	Reduced-Price	Denied	Total
Eligibility Calculated from SFA Total = Free				
Eligibility calculated from application data = free	62.78	0.81	0.0	63.59
Eligibility calculated from application data = reduced-price	1.29	0.24	0.0	1.53
Eligibility calculated from application data = paid	0.73	0.08	0.0	0.81
Eligibility Calculated From SFA Total = Reduced-Price				
Eligibility calculated from application data = free	0.24	1.13	0.0	1.37
Eligibility calculated from application data = reduced-price	0.73	26.38	0.16	27.27
Eligibility calculated from application data = paid	0.08	1.70	0.0	1.78
Eligibility Calculated From SFA Total = Paid				
Eligibility calculated from application data = free	0.40	0.08	0.08	0.56
Eligibility calculated from application data = reduced-price	0.0	0.32	0.24	0.56
Eligibility calculated from application data = paid	0.0	0.32	2.18	2.50
Total	**6.26**	**31.07**	**2.66**	**100.00**
Sample Size				**1,236**

Notes: "Eligibility calculated from SFA total" uses total monthly income and household size as calculated by the SFA and recorded on the application to determine meal price status.

"Eligibility calculated from application data" uses data on individual sources of income to calculate total household income and counts number of people listed on application form to determine household size. For UFD pilot districts, this calculation uses documented income. For all other districts, it uses the amounts recorded on the application. Meal price status is then calculated from the MPR-calculated total income and the MPR-calculated household size.

Includes categorically eligible households.

TABLE B.5

TYPES OF SFA ERRORS IN PROCESSING INFORMATION ON NSLP APPLICATIONS, FOR UP-FRONT
DOCUMENTATION PILOT AND COMPARISON DISTRICTS, USING STATUS FROM
SFA LISTS RATHER THAN DECISION NOTED ON APPLICATION FORM
(Unweighted Percentage of all Cases)

Group	All	Correct Decision	Overcertified	Undercertified
UFD Pilot Districts				
Cases with No Errors Affecting Meal Price Status	79.62	79.62	0.0	0.0
Cases Assigned Correct Meal Price Status with Offsetting Errors[a]	1.88	1.88	0.0	0.0
Cases with Incorrect Lookup	5.02	0.0	1.25	3.76
Cases with SFA Error in Determining Income or Household Size	6.27	0.0	4.70	1.57
Cases with Multiple Types of Errors[b]	0.63	0.0	0.31	0.31
Reason for Error Unknown[c]	6.58	0.0	2.82	3.76
Total	100.00	81.50	9.09	9.40
Number of Cases	319			
UFD Comparison Districts				
Cases with No Errors Affecting Meal Price Status	85.67	85.67	0.0	0.0
Cases Assigned Correct Meal Price Status with Offsetting Errors[a]	0.83	0.83	0.0	0.0
Cases with Incorrect Lookup	5.51	0.0	1.10	4.41
Cases with SFA Error in Determining Income or Household Size	3.86	0.0	2.75	1.10
Cases with Multiple Types of Errors[b]	0.00	0.0	0.00	0.0
Reason for Error Unknown[c]	4.13	0.0	1.65	2.48
Total	100.00	86.50	5.51	7.99
Number of Cases	363			

Notes: To classify cases as "correctly certified," "overcertified," or "undercertified," we compared the meal price status assigned by the SFA (as recorded on the application) to eligibility status as calculated by MPR from data on income and household membership provided on the application (or as provided in documentation for UFD pilot sites).

Excludes categorically eligible households.

[a]Cases with multiple errors that would affect meal price status but that are offsetting.

[b]Cases with both a look-up error and an error in income or household size that would affect meal price status.

[c]Cases with missing data that prevented determination of the reason for the error affecting meal price status.

TABLE B.6

TYPES OF SFA ERRORS IN PROCESSING INFORMATION ON NSLP APPLICATIONS, FOR GRADUATED
VERIFICATION PILOT AND COMPARISON DISTRICTS, USING STATUS FROM SFA LISTS RATHER THAN
DECISION NOTED ON APPLICATION FORM
(Unweighted Percentage of all Cases)

Group	All	Correct Decision	Over-Certified	Under-Certified
GV Pilot Districts				
Cases with No Errors Affecting Meal Price Status	93.77	93.77	0.0	0.0
Cases Assigned Correct Meal Price Status with Offsetting Errors[a]	1.83	1.83	0.0	0.0
Cases with Incorrect Look-up	2.20	0.0	1.10	1.10
Cases With SFA Error in Determining Income or Household Size	1.10	0.0	0.37	0.73
Cases with Multiple Types of Errors[b]	0.0	0.0	0.0	0.0
Reason for Error Unknown[c]	1.10	0.0	0.37	0.73
Total	100.00	95.60	1.83	2.56
Number of Cases	273			
GV Comparison Districts				
Cases with No Errors Affecting Meal Price Status	90.72	90.72	0.0	0.0
Cases Assigned Correct Meal Price Status with Offsetting Errors[a]	0.69	0.69	0.0	0.0
Cases with Incorrect Look-up	3.44	0.0	2.06	1.37
Cases with SFA Error in Determining Income or Household Size	4.81	0.0	3.44	1.37
Cases with Multiple Types of Errors[b]	0.0	0.0	0.0	0.0
Reason for Error Unknown[c]	0.34	0.0	0.0	0.34
Total	100.00	91.41	5.50	3.09
Number of Cases	291			

Notes: To classify cases as "correctly certified," "over-certified," or "under-certified," we compared the meal price status assigned by the SFA (as recorded on the application) to eligibility status as calculated by MPR from data on income and household membership provided on the application (or as provided in documentation for UFD pilot sites).

Excludes categorically eligible households.

[a]Cases with multiple errors that would affect meal price status but which are offsetting.

[b]Cases with both a look-up error and an error in income or household size that would affect meal price status.

[c]Cases with missing data that prevented determination of the reason for the error affecting meal price status.

SAMPLE FREE AND REDUCED PRICE SCHOOL MEALS APPLICATION

Part 1. Children in School (Use a separate application for each foster child)

Names of all children in school (First, Middle Initial, Last)	School Name	Grade	Food Stamp or TANF case # (if any)

If you listed a Food Stamp/TANF case number for EACH child, skip to Part 4.

Part 2. Foster Child

If this application is for a child who is the legal responsibility of a welfare agency or court, list the amount of the child's personal use monthly income: $_____. Skip to Part 4.

Part 3. Total Household Income from Last Month—You must tell us how much and how often

1. Name (List **everyone** in household)	2. Last month's income and how often it was received *Example: $100/monthly $100/twice a month $100/every other week $100/weekly*				3. Check if NO income
	Earnings from work before deductions	Welfare, child support, alimony	Pensions, retirement, Social Security	Other	
(Example) Jane Smith	$200/weekly____	$150/weekly____	$100/monthly____	$_____/_____	❑
	$_____/_____	$_____/_____	$_____/_____	$_____/_____	❑
	$_____/_____	$_____/_____	$_____/_____	$_____/_____	❑
	$_____/_____	$_____/_____	$_____/_____	$_____/_____	❑
	$_____/_____	$_____/_____	$_____/_____	$_____/_____	❑
	$_____/_____	$_____/_____	$_____/_____	$_____/_____	❑
	$_____/_____	$_____/_____	$_____/_____	$_____/_____	❑

Part 4. Signature and Social Security Number (Adult must sign)

An adult household member must sign the application. If Part 3 is completed, the adult signing the form must also list his or her Social Security Number or mark the "I do not have a Social Security Number" box. (See Privacy Act Statement on the back of this page.)

I certify (promise) that all information on this application is true and that all income is reported. I understand that the school will get Federal funds based on the information I give. I understand that school officials may verify (check) the information. I understand that if I purposely give false information, my children may lose meal benefits, and I may be prosecuted.

Sign here: X_____

Social Security Number: __ __ __ - __ __ - __ __ __ __   ❑ I do not have a Social Security Number

Part 5. Children's racial and ethnic identities (optional)

Mark one or more racial identities:
❑ Asian ❑ Black or African American ❑ American Indian or Alaska Native ❑ Native Hawaiian or Other Pacific Islander ❑ White

Mark one ethnic identity:
❑ Hispanic or Latino   ❑ Not Hispanic or Latino

Don't fill out this part. This is for school use only.

Monthly Income Conversion: Weekly x 4.33, Every 2 Weeks x 2.15, Twice A Month x 2
Monthly Income: _____ Household size: ___ FS/TANF: ___ Date Withdrawn: _____
Eligibility: Free___ Reduced___ Denied___ Reason: _____
Temporary: Free___ Reduced___ Time Period: _____ (expires after __ days)
Determining Official's Signature: _____ Date: _____

Your children may qualify for free or reduced price meals if your household income falls within the limits on this chart.

FEDERAL INCOME CHART For School Year 2002-03			
Household size	Yearly	Monthly	Weekly
1	16391	1366	316
2	22089	1841	425
3	27787	2316	535
4	33485	2791	644
5	39183	3266	754
6	44881	3741	864
7	50579	4215	973
8	56277	4690	1083
Each additional person:	5698	475	110

Privacy Act Statement: This explains how we will use the information you give us.
The National School Lunch Act requires the information on this application. You do not have to give the information, but if you do not, we cannot approve your children for free or reduced price meals. The Social Security Number of the adult household member who signs the application is required unless you list Food Stamp or TANF case numbers for all children you are applying for, OR if you are applying for a foster child. You must check the "I do not have a Social Security Number" box if the adult household member signing the application does not have a Social Security Number. We WILL use your information to see if your children are eligible for free or reduced price meals, to run the program, and to enforce the rules of the program. We MAY share your eligibility information with education, health, and nutrition programs to help them evaluate, fund, or determine benefits for their programs, auditors for program reviews, and law enforcement officials to help them look into misuse of program rules.

Non-discrimination Statement: This explains what to do if you believe you have been treated unfairly. In accordance with Federal law and U.S. Department of Agriculture policy, this institution is prohibited from discriminating on the basis of race, color, national origin, sex, age, or disability. To file a complaint of discrimination, write to *USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue, SW, Washington DC 20250-9410* or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

Data Abstraction Form
National School Lunch Program (NSLP)- Data Abstract

A. STUDENT INFORMATION (Pre-filled)

FIRST NAME:	LAST NAME:	MPR ID:
SITE ID #:	GRADE:

IF NOT COMPLETING SECTION B, MARK REASON

NO INFO ON STUDENT ☐
INFORMATION NOT LEGIBLE ☐
ON LIST OF _____ ☐
(SPECIFY LIST)

B. HOUSEHOLD INFORMATION AND NSLP STATUS

1. Complete the information below using the NSLP application dated before 10/31/02 for 2002-2003 school year.

APPLICATION DATE: _____2002   DATE ANNOTATED BY DISTRICT : _____2002   NO INFO ☐

APP. LUNCH STATUS	BASIS FOR ELIGIBILITY	TOTAL HOUSEHOLD SIZE
FREE ☐	TANF ☐ FOSTER ☐	|____|____| NO INFO ☐
REDUCED ☐	FOOD STAMPS ☐ INCOME ☐	**TOTAL MONTHLY INCOME**
DENIED ☐		
NO INFO ☐	TANF/FOODSTAMPS ☐ NO INFO ☐	$|___,|___|___|___|.|___|___| NO INFO ☐

2. CHECK BOX IF COULD NOT COMPLETE SECTION B.2 BECAUSE APPLICATION WAS ILLEGIBLE ☐

SOURCE: CODES: SEE SIDE 2

PERIOD CODES: 1 WEEKLY   2 EVERY 2 WKS/ BIWEEKLY   3 MONTHLY   4 EVERY 2 MONTHS/BIMONTHLY   5 OTHER (SPECIFY)

A. HOUSEHOLD MEMBER	B. INC.? Y	N	C. SOURCE 1	D. AMOUNT	PER.	E. DOC.? Y	N	F. SOURCE 2	G. AMOUNT	PER.	H. DOC.? Y	N
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												

C. CIRCLE ALL OBSERVED ERRORS

1. Used incorrect household size in calculating eligibility
2. Used net income instead of gross
3. Used YTD income instead of current period
4. Assumed time period b/c not specified on document
5. No calculation shown/monthly income not recorded

6. All documentation missing
7. Some documentation missing
8. Other (Specify)_____
9. NO OBSERVED ERRORS

D. CASE SELECTED FOR VERIFICATION ___Y ___N   DOCUMENTS PROVIDED: __ Y ___N

OUTCOME OF VERIFICATION: ___FREE   ___REDUCED PRICE   ____PAID/ DENIED   ____NO INFO

Source/Type of Documentation	
1 Pay /Wages/Earnings statement/stub	6 Income tax return
2 Unemployment benefits	7 Profit/Loss Statement
3 Social Security benefits	8 Other (specify)
4 SSI benefits	9 NOT LEGIBLE
5 Child support	10 SOURCE UNKNOWN

DOCUMENTATION RECORDING FORM

HOUSEHOLD MEMBER	SOURCE/TYPE OF DOCUMENTATION	GROSS INCOME AMOUNT	NET INCOME AMOUNT	PERIOD COVERED		ONLY DATE OF ISSUE (NO INFO ON PER.)	NUMBER OF HOURS IN PAY PERIOD
				FROM	TO		
1		1					
		2					
		3					NOT APPLY ……. N/A
2		1					
		2					
		3					NOT APPLY ……. N/A
3		1					
		2					
		3					NOT APPLY ……. N/A
4		1					
		2					
		3					NOT APPLY ……. N/A
5		1					
		2					
		3					NOT APPLY ……. N/A
6		1					
		2					
		3					NOT APPLY ……. N/A
7		1					
		2					
		3					NOT APPLY ……. N/A
8		1					
		2					
		3					NOT APPLY ……. N/A
9		1					
		2					
		3					NOT APPLY ……. N/A

APPENDIX C

SUPPLEMENTARY TABLES FOR CHAPTER IV

TABLE C.1

MEAL PRICE STATUS BASED ON THE STUDY SURVEY COMPARED WITH MEAL PRICE
STATUS CALCULATED FROM DATA PROVIDED ON THE APPLICATION
(Unweighted Percentage of Cases)

| | Income Status Based on Survey | | | |
	Less than 130 of FPL[a]	131 to 185 of FPL	More than 185 of FPL	Total
UFD Pilot Districts				
Meal Price Status Calculated from Application Data				
Less than 130 of FPL	80.34	39.51	33.33	61.13
131 to 185 of FPL	11.80	49.38	38.33	26.33
More than 185 of FPL	7.87	11.11	28.33	12.54
Number of Cases	178	81	60	319
UFD Comparison Districts				
Meal Price Status Calculated from Application Data				
Less than 130 of FPL	72.48	34.44	27.27	56.20
131 to 185 of FPL	26.15	60.00	65.45	40.50
More than 185 of FPL	1.38	5.56	7.27	3.31
Number of Cases	218	90	55	363
GV Pilot Districts				
Meal Price Status Calculated from Application Data				
Less than 130 of FPL	91.07	52.05	34.38	73.99
131 to 185 of FPL	8.93	46.58	46.88	23.44
More than 185 of FPL	0.00	1.37	18.75	2.56
Number of Cases	168	73	32	273
GV Comparison Districts				
Meal Price Status Calculated from Application Data				
Less than 130 of FPL	82.74	48.10	31.82	65.64
131 to 185 of FPL	16.07	50.63	50.00	30.58
More than 185 of FPL	1.19	1.27	18.18	3.78
Number of Cases	168	79	44	291

[a]The lowest income category (less than 130 percent of FPL) includes families categorically eligible for free meals (based on receipt of TANF or food stamps), regardless of their actual income.

FPL = federal poverty level.

APPENDIX D

SUPPLEMENTARY TABLES FOR CHAPTER V

TABLE D.1

MEAL STATUS BASED ON STUDY SURVEY COMPARED
WITH MEAL PRICE STATUS ASSIGNED BY THE SFA
(Unweighted Percentage of Cases)

	Income Status Based on Survey			
	Less than 130 of FPL[a]	131 to 185 of FPL	More than 185 of FPL	Total
UFD Pilot Districts				
Meal Price Status Assigned by SFA[b]				
Free	81.94	35.94	37.74	62.50
Reduced-Price	16.13	59.38	39.62	30.88
Paid	1.94	4.69	22.64	6.62
Number of Cases	155	64	53	272
UFD Comparison Districts				
Meal Price Status Assigned by SFA[b]				
Free	73.01	31.03	27.27	56.25
Reduced-Price	26.11	67.82	67.27	42.12
Paid	0.88	1.15	5.45	1.63
Number of Cases	226	87	55	368
GV Pilot Districts				
Meal Price Status Assigned by SFA[b]				
Free	90.80	52.05	32.26	73.41
Reduced-Price	9.20	47.95	48.39	24.34
Paid	0.00	0.00	19.35	2.25
Number of Cases	163	73	31	267
GV Comparison Districts				
Meal Price Status Assigned by SFA[b]				
Free	84.02	50.63	37.78	67.92
Reduced-Price	15.98	46.84	48.89	29.35
Paid	0.00	2.53	13.33	2.73
Number of Cases	169	79	45	293

[a]The lowest income category (less than 130 percent of FPL) includes families categorically eligible for free meals (based on receipt of TANF or food stamps), regardless of their actual income.

[b]As noted on application form.

FPL = federal poverty level.

TABLE D.2

DETAILS OF REASONS FOR DISAGREEMENT BETWEEN STATUS BASED ON
SFA DECISION AND SURVEY DATA

| | Percentage of Households | | | | |
| | | Up-Front Documentation | | Graduated Verification | |
	All	Pilot	Comparison	Pilot	Comparison
Status (from SFA, MPR's Application-based Computation, and MPR's Survey-based Computation) Always Agrees	58.83	52.57	55.71	68.16	60.07
Status Calculated Based on the Survey Agrees with Status Assigned by SFA, due to Offsetting Differences:					
Administrative overcertification and reporting undercertification	2.50	4.78	2.45	0.75	2.05
Administrative undercertification and reporting overcertification	1.25	2.57	1.63	0.75	0.00
But agreement with application data unknown[d]	2.25	5.15	1.90	1.12	1.02
Net Overcertification,[a] due to:					
Administrative error[b]	1.33	2.21	0.82	0.75	1.71
Reporting differences[c]	21.33	19.12	19.84	22.85	23.89
Both administrative error and reporting differences	0.50	0.37	0.54	0.00	1.02
Reason unknown	0.58	1.84	0.27	0.00	0.34
Net Undercertification,[a] due to:					
Administrative error[b]	1.42	2.21	1.36	0.37	1.71
Reporting differences[c]	9.67	8.46	14.95	5.24	8.19
Both administrative error and reporting differences	0.08	0.00	0.27	0.00	0.00
Reason unknown	0.25	0.74	0.27	0.00	0.00
Number of Cases	**1,200**	**272**	**368**	**267**	**293**

Note: Includes categorically eligible households.

[a]Status assigned by SFA differs from status MPR calculated based on the survey.

[b]Status assigned by SFA differs from status MPR calculated based on the application (for reasons discussed in Chapter III).

[c]Status MPR calculated based on the survey data differs from status MPR calculated based on the application (for reasons discussed in Chapter IV).

[d]Because of missing data, eligibility based on the application could not be calculated.

D.4

APPENDIX E

**HOUSEHOLD CHARACTERISTICS ASSOCIATED WITH DIFFERENCES BETWEEN
SFA DECISION AND SURVEY-BASED ELIGIBILITY STATUS**

APPENDIX E

**HOUSEHOLD CHARACTERISTICS RELATED TO DISCREPANCIES BETWEEN
SFA DECISION AND SURVEY-BASED ELIGIBILITY**

As described above, there are substantial differences between apparent eligibility for free and reduced-price meals, as estimated based on data from the MPR household survey, and eligibility as determined by the SFA and recorded on the application material. It is of considerable interest to examine how the incidence of discrepancies is related to our data collection process, household characteristics, or other factors, since this potentially can shed light on the reasons for the observed data discrepancies. In addition, to the extent that the discrepancies reflect mistakes in the SFA status determination, this examination can provide an "error-prone profile" analysis that may be useful in helping districts determine which data collection processes and which cases to target for particular attention during application processing.

To examine these issues, we have cross-tabulated discrepancies in the meal price eligibility assessments with data about the information collection process, household characteristics, and selected related variables. A substantial number of cross-tabulations were performed separately for pilot and comparison groups associated with each type of intervention. The results are summarized in Table E.1, which shows which variables were found to be significantly related to certification status differences. Complete results are reported in Tables E.2 through E.5.

A number of household characteristics were found to be significantly related to the probability of the interview data being consistent with the SFA's meal price status determination. In particular, significant relationships were found between data consistency and employment and income (Table E.1). In both UFD and GV pilot sites and their comparison districts, interview data and SFA status determination were significantly more likely to agree in households with

TABLE E.1

RELATIONSHIP OF SELECTED HOUSEHOLDCHARACTERISTICS TO
DIFFERENCES BETWEEN THE SURVEY-BASED ESTIMATE OF MEAL PRICE ELIGIBILITY
AND THE SFA'S ASSIGNED MEAL PRICE STATUS
("Yes" Indicates a Significant Relationship at the .05 Level)

Tabulation Variable	UFD		GV	
	Pilot	Comparison	Pilot	Comparison
Whether Survey Respondent Used Documents in Reporting Income Amounts	Yes[b]	No	No	No
Days Between Application Date and Interview Date	No	No	No	No
Reported Change in Income, August to Interview Date	No	No	No	Yes[b]
Household Size				
Number of household members	No	No	No	No
Number of children	No	No	No	No
Household Structure	Yes[c]	Yes[c]	No	No
Survey Respondent's Educational Attainment	No	No	No	Yes
Employment Status of Household Members				
Survey respondent is employed	Yes[a]	Yes[a]	No	Yes[a]
Number of employed adults in household	Yes[a]	Yes[a]	Yes[a]	Yes[a]
Household Income	Yes[a]	Yes[a]	Yes[a]	Yes[a]
Percentage Receiving Public Assistance				
Food stamp	Yes[b]	Yes[b]	Yes[b]	Yes[b]
TANF	No	No	Yes[b]	Yes[b]
Other	No	No	Yes[b]	Yes[b]
Percentage Residing in Public Housing or Receiving Housing Subsidy	No	No	Yes	Yes[b]
Percentage Who Own Their Home	No	No	No	Yes[a]
Vehicle Ownership				
Percentage who own a vehicle	Yes[a]	Yes[a]	No	No
Number of vehicles owned by all household members	No	Yes[a]	No	No
Household Mobility				
Number of times respondent has moved during past two years	No	No	No	No
Has moved and changed school districts during past two years	No	No	No	Yes[b]

E.4

Tabulation Variable	UFD		GV	
	Pilot	Comparison	Pilot	Comparison
Race/Ethnicity	No	No	Yes[d]	No
English Primary Language Spoken at Home	No	No	No	No
Grade Level of Child	No	No	No	No
Pre-Pilot Free or Reduced-Price Certification Status	No	No	No	No
Number of Cases	**272**	**368**	**267**	**293**

Note: Includes categorically eligible households.

[a] Characteristic has a significant positive relationship with certification differences. For example, households with higher incomes were more likely to have errors in certification status.

[b] Characteristic has a significant negative relationship with certification differences. For example, households that used documents for all income sources were less likely to have differences in certification status.

[c] Two-parent households were more likely to have differences in certification status.

[d] Households of Native American and Asian students were more likely to have differences in certification status than were households of other races.

lower incomes and in households with fewer employed adults (for more detail, see Appendix Tables E.2 through E.5). This finding may reflect the fact that more affluent households and those with more employed members likely have more sources of earnings, which could make computation more difficult.

Some household characteristics were significantly related to differences between SFA determination and interview-based eligibility in only some types of districts. For example, household structure and car ownership were significant in UFD pilots and their comparison districts but not in GV pilot and comparison sites. While food stamp receipt was significantly related to data consistency in both UFD and GV districts, receipt of various other types of public assistance (including TANF) was significant only in GV pilot and comparison sites. Some other characteristics—such as household size, sample child's grade level, prepilot certification status, and the amount of time that elapsed between the application to the SFA and the MPR interview—have no significant relationship with consistency between the two data sources.

HOUSEHOLD CHARACTERISTICS POTENTIALLY AFFECTING CERTIFICATION ACCURACY IN UP-FRONT
DOCUMENTATION PILOT SITES

Household Characteristic	Percentage of Group with Benefit Correct[a]	Percentage of Group Overcertified[b]	Percentage of Group Undercertified[c]
Whether Survey Respondent Used Documents in Reporting Income Amounts			
Used no sources	62.71	23.73	13.56
Used for all sources	73.55	15.70	10.74
Used for some sources	60.42	37.50	2.08
		Chi-square = 12.50	p = .0140*
Days Between Application Date and Interview Date			
<60	60.71	39.29	0.00
60-90	67.39	20.65	11.96
90-120	71.43	16.33	12.24
>120	63.64	36.36	0.00
		Chi-square = 10.2	p = .1165
Reported Change in Income August to Interview Date			
Income increased	59.38	28.13	12.50
Income decreased	68.63	23.53	7.84
Income stayed the same	64.89	22.87	12.23
		Chi-square = 1.29	p = .8629
Household Size			
Number of household members			
2 or fewer	76.67	13.13	10.00
3	71.43	19.05	9.52
4	70.13	19.48	10.39
5	51.52	31.82	16.67
6 or more	63.16	28.07	8.77
		Chi-square = 9.93	p = .2701
Number of children in household (mean)			
1	66.67	20.83	12.50
2	68.75	22.50	8.75
3	60.47	24.42	15.12
4 or more	65.52	25.86	8.62
		Chi-square = 2.79	p = .8342
Household Structure (Percentages)			
Two-parent household	55.19	31.17	13.64
Single-parent household	77.68	13.39	8.93
Other household structure	83.33	16.67	0.00
		Chi-square = 16.14	p = .0028**
Survey Respondent's Educational Attainment (Percentages)			
Lacks a high school diploma	66.67	30.56	2.78
High school diploma only	68.09	20.57	11.35
Some postsecondary education but lacks a college degree	57.14	27.27	15.58
College degree or more	70.59	17.65	11.76
		Chi-square = 6.54	p = .3658

Household Characteristic	Percentage of Group with Benefit Correct[a]	Percentage of Group Overcertified[b]	Percentage of Group Undercertified[c]
Employment Status of Household Members			
Survey respondent is employed (Percentage)	64.29	27.92	7.79
		Chi-square = 6.29	p = .0431*
Number of employed adults in household			
0	84.85	4.55	10.61
1	63.64	23.08	13.29
2	49.09	45.45	5.45
3 or more	37.50	37.50	25.00
		Chi-square = 32.61	p ≤ .0001**
Household Income (Percentages)			
Less than 130 percent of FPL[d]	81.94	0.00	18.06
131 to 185 percent of FPL	59.38	35.94	4.69
186 to 400 percent of FPL	22.22	77.78	0.00
More than 400 percent of FPL	25.00	75.00	0.00
		Chi-square = 142.33	p ≤ .0001**
Percentage Receiving Public Assistance			
Percentage receiving food stamp benefits	96.97	0.00	3.03
		Ch-square = 39.48	p ≤ .0001**
Percentage receiving TANF	91.67	0.00	8.33
		Chi-square = 4.42	p = .1096
Percentage receiving other benefits	79.49	15.38	5.13
		Chi-square = 3.58	p = .1666
Percentage Residing in Public Housing or Receiving Housing Subsidy	84.62	15.38	0.00
		Chi-square = 5.88	p = .0528
Percentage Who Own Their Home	61.87	26.62	11.51
		Chi-square = 1.60	p = .4483
Vehicle Ownership (Percentage)	59.59	27.46	12.95
		Chi-square = 8.85	p = .0120*
Number of Vehicles Owned by All Household Members			
0	78.48	13.92	7.59
1	61.54	25.96	12.50
2 or more	57.30	29.21	13.48
		Chi-square = 9.24	p = .0553
Household Mobility			
Number of times respondent has moved during past two years			
0	63.55	24.14	12.32
1	68.89	22.22	8.89
2 or more	69.57	21.74	8.70
		Chi-square = 0.88	p = .9270
Has moved and changed school districts during past two years (Percentage)	76.92	15.38	7.69
		Chi-square = 2.87	p = .2378
Race/Ethnicity (Percentages)			
White, Non-Hispanic	67.48	22.33	10.19
Black, Non-Hispanic	65.63	18.75	15.63
Hispanic	61.54	23.08	15.38

Household Characteristic	Percentage of Group with Benefit Correct[a]	Percentage of Group Overcertified[b]	Percentage of Group Undercertified[c]
Native American	0.00	0.00	0.00
Asian, Pacific Islander	0.00	100.00	0.00
Other	50.00	33.33	16.67
Mixed Race	41.67	41.67	16.67
		Chi-square = 8.44	p = .5857
English Primary Language Spoken at Home (Percentage)	65.40	22.81	11.79
		Chi-square = 2.92	p = .2321
Grade Level of Child (Percentages)			
Grade 9 to 12	61.73	25.93	12.35
Grade 6 to 8	68.00	25.33	6.67
Grade 3 to 5	64.71	20.59	14.71
Grade 1 to 2	62.16	27.03	10.81
Kindergarten or Pre k	100.00	0.00	0.00
		Chi-square = 6.46	p = .5958
Pre-Pilot Free or Reduced-Price Certification Status (Percentage)	65.33	24.00	10.67
		Chi-square = 0.47	p = .7909

Note   Table entries are unweighted percentages of all students whose family submitted an application for free or reduced-price meals. Sample includes pilot and comparison districts for UFD and GV pilots. The Chi-square tests the null hypothesis that the distribution of outcomes (benefit correct, overcertified, undercertified) is the same for each level of the group defined in the row header. Figures in parenthesis are the percentage of sample in each group.

[a]"Benefit correct" means the survey data indicate the student is eligible to receive the level of meal price benefits shown as approved for on the student's application.

[b]"Overcertified" means the survey data indicate a student is eligible to receive a lower level of meal price benefits than shown as approved for on the student's application or no benefit.

[c]"Undercertified" means the survey data indicate the student is eligible to receive a higher level of benefits than shown as approved for on the student's application.

[d]The lowest income category (less than 130 percent of FPL) includes families categorically eligible for free meals (based on receipt of TANF or food stamps), regardless of their actual income.

FPL = federal poverty level.

  *Significantly different from zero at the .05 level, two-tailed test
 **Significantly different from zero at the .01 level, two-tailed test.

TABLE E.3

HOUSEHOLD CHARACTERISTICS POTENTIALLY AFFECTING CERTIFICATION ACCURACY IN UP-FRONT
DOCUMENTATION COMPARISON SITES

Household Characteristic	Percentage of Group with Benefit Correct[a]	Percentage of Group Overcertified[b]	Percentage of Group Undercertified[c]
Whether Survey Respondent Used Documents in Reporting Income Amounts			
Used no sources	62.73	15.45	21.82
Used for all sources	60.00	24.00	16.00
Used for some sources	62.71	27.12	10.17
	Chi-square = 6.47	p = .1668	
Days Between Application Date and Interview Date			
<60	75.00	0.00	25.00
60-90	52.83	26.42	20.75
90-120	62.16	24.32	13.51
>120	46.67	33.33	20.00
	Chi-square = 6.27	p = .3937	
Reported Change in Income August to Interview Date			
Income increased	62.50	31.25	6.25
Income decreased	61.76	22.06	16.18
Income stayed the same	61.89	19.26	18.85
	Chi-square = 6.55	p = .1617	
Household Size			
Number of household members			
2 or fewer	57.14	28.57	14.29
3	70.42	18.31	11.27
4	64.89	18.09	17.02
5	55.43	23.91	20.65
6 or more	59.04	22.89	18.07
	Chi-square = 5.92	p = .6565	
Number of children in household (mean)			
1	62.75	19.61	17.65
2	59.84	25.98	14.17
3	63.96	18.02	18.02
4 or more	60.76	20.25	18.99
	Chi-square = 3.01	p = .8081	
Household Structure (Percentages)			
Two-parent household	52.91	25.24	21.84
Single-parent household	73.86	16.34	9.80
Other household structure	62.50	25.00	12.50
	Chi-square = 17.25	p = .0017**	
Survey Respondent's Educational Attainment (Percentages)			
Lacks a high school diploma	68.18	15.15	16.67
High school diploma only	61.41	19.57	19.02
Some postsecondary education but lacks a college degree	61.46	26.04	12.50
College degree or more	44.44	44.44	11.11
	Chi-square = 10.09	p = .1208	

E.10

Household Characteristic	Percentage of Group with Benefit Correct[a]	Percentage of Group Overcertified[b]	Percentage of Group Undercertified[c]
Employment Status of Household Members			
Survey respondent is employed (percentage)	59.03	26.43	14.54
		Chi-square = 9.35	p = .0093**
Number of employed adults in household			
0	87.76	2.04	10.20
1	62.13	18.30	19.57
2	46.58	39.73	13.70
3 or more	40.00	60.00	0.00
		Chi-square = 41.22	p ≤ .0001**
Household Income (Percentages)			
Less than 130 percent of FPL[d]	73.01	0.00	26.99
131 to 185 percent of FPL	67.82	31.03	1.15
186 to 400 percent of FPL	5.77	94.23	0.00
More than 400 percent of FPL	0.00	100.00	0.00
		Chi-square = 258.32	p ≤ .0001**
Percentage Receiving Public Assistance			
Percentage receiving food stamp benefits	94.12	0.00	5.88
		Chi-square = 38.08	p ≤ .0001**
Percentage receiving TANF	85.71	0.00	14.29
		Chi-square = 4.54	p = .1031
Percentage receiving other benefits	74.00	16.00	10.00
		Chi-square = 4.09	p = .1295
Percentage Residing in Public Housing or Receiving Housing Subsidy	78.13	12.50	9.38
		Chi-square = 4.06	p = .1315
Percentage Who Own Their Home	56.11	23.89	20.00
		Chi-square = 5.06	p = .0799
Vehicle Ownership (Percentage)	57.71	24.37	17.92
		Chi-square = 8.29	p = .0519*
Number of Vehicles Owned by All Household Members			
0	74.16	12.36	13.48
1	63.97	19.12	16.91
2 or more	52.11	29.58	18.31
		Chi-square = 13.35	p = .0097**
Household Mobility			
Number of times respondent has moved during past two years			
0	59.34	23.08	17.58
1	63.46	17.31	19.23
2 or more	74.42	16.28	9.30
		Chi-square = 4.40	p = .3541
Has moved and changed school districts during past two years (percentage)	67.35	22.45	10.20
		Chi-square = 1.80	p = .4066

Household Characteristic	Percentage of Group with Benefit Correct[a]	Percentage of Group Overcertified[b]	Percentage of Group Undercertified[c]
Race/Ethnicity (Percentages)			
White, Non-Hispanic	64.10	20.51	15.38
Black, Non-Hispanic	57.50	25.00	17.50
Hispanic	66.67	19.05	14.29
Native American	0.00	50.00	50.00
Asian, Pacific Islander	25.00	75.00	0.00
Other	30.00	30.00	40.00
Mixed Race	62.50	12.50	25.00
		Chi-square = 17.88	p = .1194
English Primary Language Spoken at Home (Percentage)	62.07	20.98	16.95
		Chi-square = 1.44	p = .4869
Grade Level of Child (Percentages)			
Grade 9 to 12	55.88	26.47	17.65
Grade 6 to 8	67.00	18.00	15.00
Grade 3 to 5	61.70	22.34	15.96
Grade 1 to 2	60.61	19.70	19.70
Kindergarten or Pre-K	83.33	0.00	16.67
		Chi-square = 5.25	p = .7301
Prepilot Free or Reduced-Price Certification Status (Percentage)	61.80	23.60	14.61
		Chi-square = 1.29	p = .5256

Note   Table entries are unweighted percentages of all students whose family submitted an application for free or reduced-price meals. Sample includes pilot and comparison districts for UFD and GV pilots. The Chi-square tests the null hypothesis that the distribution of outcomes (benefit correct, overcertified, undercertified) is the same for each level of the group defined in the row header. Figures in parenthesis are the percentage of sample in each group.

[a]"Benefit correct" means the survey data indicate the student is eligible to receive the level of meal price benefits shown as approved for on the student's application.

[b]"Overcertified" means the survey data indicate a student is eligible to receive a lower level of meal price benefits than shown as approved for on the student's application or no benefit.

[c]"Undercertified" means the survey data indicate the student is eligible to receive a higher level of benefits than shown as approved for on the student's application.

[d]The lowest income category (less than 130 percent of FPL) includes families categorically eligible for free meals (based on receipt of TANF or food stamps), regardless of their actual income.

FPL = federal poverty level.

 *Significantly different from zero at the .05 level, two-tailed test
**Significantly different from zero at the .01 level, two-tailed test.

TABLE E.4

HOUSEHOLD CHARACTERISTICS POTENTIALLY AFFECTING CERTIFICATION ACCURACY IN
GRADUATED VERIFICATION PILOT SITES

Household Characteristics	Percentage of Group with Benefit Correct[a]	Percentage of Group Overcertified[b]	Percentage of Group Undercertified[c]
Whether Survey Respondent Used Documents in Reporting Income Amounts			
Used no sources (29.85)	69.12	23.53	7.35
Used for all sources (49.37)	79.81	15.38	4.81
Used for some sources (20.78)	63.64	34.55	1.82
		Chi-square = 9.31	p = .0537
Days Between Application Date and Interview Date			
<60 (13.99)	60.47	32.56	6.98
60-90 (44.53)	73.68	23.16	3.16
90-120 (33.21)	75.00	16.07	8.93
>120 (8.23)	87.50	12.50	0.00
		Chi-square = 7.24	p = .2991
Reported Change in Income August to Interview Date			
Income increased (12.09)	71.88	21.88	6.25
Income decreased (19.78)	75.00	19.64	5.36
Income stayed the same (68.13)	69.14	25.14	5.71
		Chi-square = 0.83	p = .9344
Household Size			
Number of household members			
2 or fewer	76.19	19.05	4.76
3	71.70	18.87	9.43
4	69.57	27.54	2.90
5	70.18	24.56	5.26
6 or more	70.15	23.88	5.97
		Chi-square = 3.62	p = .8900
Number of children in household (mean)			
1	70.45	25.00	4.55
2	71.26	21.84	6.90
3	70.83	25.00	4.17
4 or more	70.31	23.44	6.25
		Chi-square = .8756	p = .9899
Household Structure (Percentages)			
Two-parent household	64.47	28.95	6.58
Single-parent household	78.30	17.92	3.77
Other household structure	88.89	0.00	11.11
		Chi-square = 8.91	p = .0635
Survey Respondent's Educational Attainment (Percentages)			
Lacks a high school diploma	75.00	14.71	10.29
High school diploma only	70.11	25.29	4.60
Some postsecondary education but lacks a college degree	67.39	28.26	4.35
College degree or more	77.78	22.22	0.00
		Chi-square = 7.77	p = .2555

E.13

Household Characteristics	Percentage of Group with Benefit Correct[a]	Percentage of Group Overcertified[b]	Percentage of Group Undercertified[c]
Employment Status of Household Members			
Survey respondent is employed (percentage)	67.88	26.67	5.45
		Chi-square = 2.26	p = .3226
Number of employed adults in household			
0	87.50	7.14	5.36
1	74.24	20.45	5.30
2	52.17	40.58	7.25
3 or more	60.00	40.00	0.00
		Chi-square = 23.44	p = .0007**
Household Income (Percentages)			
Less than 130 percent of FPL[d]	90.80	0.00	9.20
131 to 185 percent of FPL	47.95	52.05	0.00
186 to 400 percent of FPL	18.52	81.48	0.00
More than 400 percent of FPL	25.00	75.00	0.00
		Chi-square = 142.12	p ≤ .0001**
Percentage Receiving Public Assistance			
Percentage receiving food stamp benefits	96.00	0.00	4.00
		Chi-square = 34.46	p ≤ .0001**
Percentage receiving TANF	96.67	0.00	3.33
		Chi-square = 11.49	p = .0032**
Percentage receiving other benefits	79.55	11.36	9.09
		Chi-square = 6.16	p = .0461*
Percentage Residing in Public Housing or Receiving Housing Subsidy	91.49	8.51	0.00
		Chi-square = 12.04	p = .0024**
Percentage Who Own Their Home	65.18	27.68	7.14
		Chi-square = 3.02	p = .2210
Vehicle Ownership (Percentage)	66.67	26.55	6.78
		Chi-square = 4.47	p = .1071
Number of Vehicles Owned by All Household Members			
0	78.89	17.78	3.33
1	70.30	23.76	5.94
2 or more	61.33	30.67	8.00
		Chi-square = 6.26	p = .1803
Household Mobility			
Number of times respondent has moved during past two years			
0	69.28	24.70	6.02
1	71.01	23.19	5.80
2 or more	78.13	18.75	3.13
		Chi-square = 1.11	p = .8922
Has moved and changed school districts during past two years (percentage)	69.39	22.45	8.16
		Chi-square = 0.72	p = .6972

Household Characteristics	Percentage of Group with Benefit Correct[a]	Percentage of Group Overcertified[b]	Percentage of Group Undercertified[c]
Race/Ethnicity (Percentages)			
White, Non-Hispanic	70.43	25.22	4.35
Black, Non-Hispanic	71.67	25.00	3.33
Hispanic	72.41	18.97	8.62
Native American	33.33	66.67	0.00
Asian, Pacific Islander	50.00	50.00	0.00
Other	0.00	0.00	100.00
Mixed Race	76.92	15.38	7.69
		Chi-square = 24.28	p = .0187**
English Primary Language Spoken at Home (Percentage)	71.18	23.58	5.24
		Chi-square = 0.44	p = .8009
Grade Level of Child (Percentages)			
Grade 9 to 12	68.75	25.00	6.25
Grade 6 to 8	64.18	28.36	7.46
Grade 3 to 5	72.41	24.14	3.45
Grade 1 to 2	70.83	20.83	8.33
Kindergarten or Pre-K	94.12	5.88	0.00
		Chi-square = 7.65	p = .4688
Prepilot Free or Reduced-Price Certification Status (Percentage)	70.07	25.55	4.38
		Chi-square = 2.15	p = .3410

Note: Table entries are unweighted percentages of all students whose family submitted an application for free or reduced-price meals. Sample includes pilot and comparison districts for UFD and GV pilots. The Chi-square tests the null hypothesis that the distribution of outcomes (benefit correct, overcertified, undercertified) is the same for each level of the group defined in the row header. Figures in parenthesis are the percentage of sample in each group.

[a]"Benefit correct" means the survey data indicate the student is eligible to receive the level of meal price benefits shown as approved for on the student's application.

[b]"Overcertified" means the survey data indicate a student is eligible to receive a lower level of meal price benefits than shown as approved for on the student's application or no benefit.

[c]"Undercertified" means the survey data indicate the student is eligible to receive a higher level of benefits than shown as approved for on the student's application.

[d]The lowest income category (less than 130 percent of FPL) includes families categorically eligible for free meals (based on receipt of TANF or food stamps), regardless of their actual income.

FPL = federal poverty level.

*Significantly different from zero at the .05 level, two-tailed test
**Significantly different from zero at the .01 level, two-tailed test.

TABLE E.5

HOUSEHOLD CHARACTERISTICS POTENTIALLY AFFECTING CERTIFICATION ACCURACY IN
GRADUATED VERIFICATION COMPARISON SITES

Household Characteristic	Percentage of Group with Benefit Correct[a]	Percentage of Group Overcertified[b]	Percentage of Group Undercertified[c]
Whether Survey Respondent Used Documents in Reporting Income Amounts			
Used no sources (29.85)	57.97	31.88	10.14
Used for all sources (49.37)	68.70	22.90	8.40
Used for some sources (20.78)	58.82	31.37	9.80
	Chi-square = 3.02	p = .5548	
Days Between Application Date and Interview Date			
<60 (13.99)	74.19	19.35	6.45
60-90 (44.53)	64.55	23.64	11.82
90-120 (33.21)	59.76	30.49	9.76
>120 (8.23)	0.00	100.00	0.00
	Chi-square = 5.72	p = .4552	
Reported Change in Income August to Interview Date			
Income increased (12.09)	67.74	22.58	9.68
Income decreased (19.78)	49.15	30.51	20.34
Income stayed the same (68.13)	66.83	26.63	6.54
	Chi-square = 11.81	p = .0188*	
Household Size			
Number of household members			
2 or fewer	60.00	32.00	8.00
3	61.36	34.09	4.55
4	66.67	24.69	8.64
5	61.11	25.00	13.89
6 or more	63.38	25.35	11.27
	Chi-square = 4.45	p = .8148	
Number of children in household (mean)			
1	60.98	34.15	4.88
2	64.44	24.44	11.11
3	62.89	28.87	8.25
4 or more	63.08	23.08	13.85
	Chi-square = 4.01	p = .6747	
Household Structure (Percentages)			
Two-parent household	59.75	30.19	10.06
Single-parent household	67.21	22.13	10.66
Other household structure	63.64	36.36	0.00
	Chi-square = 3.79	p = .4347	
Survey Respondent's Educational Attainment (Percentages)			
Lacks a high school diploma	78.00	14.00	8.00
High school diploma only	64.60	23.01	12.39
Some postsecondary education but lacks a college degree	53.98	36.28	9.73
College degree or more	78.57	21.43	0.00
	Chi-square = 13.72	p = .0330*	

E.16

Household Characteristic	Percentage of Group with Benefit Correct[a]	Percentage of Group Overcertified[b]	Percentage of Group Undercertified[c]
Employment Status of Household Members			
Survey respondent is employed (percentage)	55.25	33.70	11.05
	Chi-square = 13.28	p = .0013**	
Number of employed adults in household			
0	86.21	5.17	8.62
1	61.25	28.13	10.63
2	49.28	40.58	10.14
3 or more	50.00	50.00	0.00
	Chi-square = 24.24	p = .0005**	
Household Income (Percentages)			
Less than 130 percent of FPL[d]	84.02	0.00	15.98
131 to 185 percent of FPL	46.84	50.63	2.53
186 to 400 percent of FPL	13.95	86.05	0.00
More than 400 percent of FPL	0.00	100.00	0.00
	Chi-square = 169.45	p ≤ .0001**	
Percentage Receiving Public Assistance			
Percentage receiving food stamp benefits	94.74	0.00	5.26
	Chi-square = 31.81	p ≤ .0001**	
Percentage receiving TANF	100.00	0.00	0.00
	Chi-square = 17.36	p = .0002**	
Percentage receiving other benefits	80.49	17.07	2.44
	Chi-square = 6.68	p = .0354*	
Percentage Residing in Public Housing or Receiving Housing Subsidy	85.29	11.76	2.94
	Chi-square = 8.25	p = .0162*	
Percentage Who Own Their Home	53.80	36.08	10.13
	Chi-square = 15.32	p = .0005**	
Vehicle Ownership (Percentage)	60.09	29.82	10.09
	Chi-square = 3.86	p = .1452	
Number of Vehicles Owned by All Household Members			
0	72.00	18.67	9.33
1	66.13	24.19	9.68
2 or more	52.13	37.23	10.64
	Chi-square = 8.94	p = .0626	
Household Mobility			
Number of times respondent has moved during past two years			
0	61.14	29.38	9.48
1	70.00	22.00	8.00
2 or more	65.63	18.75	15.63
	Chi-square = 3.53	p = .4728	
Has moved and changed school districts during past two years (percentage)	76.00	12.00	12.00
	Chi-square = 6.85	p = .0325*	

Household Characteristic	Percentage of Group with Benefit Correct[a]	Percentage of Group Overcertified[b]	Percentage of Group Undercertified[c]
Race/Ethnicity (Percentages)			
White, Non-Hispanic	58.02	29.63	12.35
Black, Non-Hispanic	66.25	26.25	7.50
Hispanic	77.78	14.81	7.41
Native American	100.00	0.00	0.00
Asian, Pacific Islander	0.00	0.00	0.00
Other	40.00	60.00	0.00
Mixed Race	73.33	20.00	6.67
	Chi-square = 10.59	p = .3902	
English Primary Language Spoken at Home (Percentage)	61.30	29.12	9.58
	Chi-square = 5.64	p = .0595	
Grade Level of Child (Percentages)			
Grade 9 to 12	60.78	29.41	9.80
Grade 6 to 8	58.54	28.05	13.41
Grade 3 to 5	64.04	24.72	11.24
Grade 1 to 2	75.00	20.42	4.55
Kindergarten or Pre-K	56.00	40.00	4.00
	Chi-square = 7.39	p = .4950	
Prepilot Free or Reduced-Price Certification Status (Percentage)	64.90	23.18	11.92
	Chi-square = 2.51	p = .2848	

Note   Table entries are unweighted percentages of all students whose family submitted an application for free or reduced-price meals. Sample includes pilot and comparison districts for UFD and GV pilots. The Chi-square tests the null hypothesis that the distribution of outcomes (benefit correct, overcertified, undercertified) is the same for each level of the group defined in the row header. Figures in parenthesis are the percentage of sample in each group.

[a]"Benefit correct" means the survey data indicate the student is eligible to receive the level of meal price benefits shown as approved for on the student's application.

[b]"Overcertified" means the survey data indicate a student is eligible to receive a lower level of meal price benefits than shown as approved for on the student's application or no benefit.

[c]"Undercertified" means the survey data indicate the student is eligible to receive a higher level of benefits than shown as approved for on the student's application.

[d]The lowest income category (less than 130 percent of FPL) includes families categorically eligible for free meals (based on receipt of TANF or food stamps), regardless of their actual income.

FPL = federal poverty level.

*Significantly different from zero at the .05 level, two-tailed test
**Significantly different from zero at the .01 level, two-tailed test.