

Chapter 2 Study Design

This chapter addresses the study design for the evaluation of EBT customer service waivers on recipients. First, it describes the design and relevant characteristics of the four States participating in the study. A key element of the study design is the identification of vulnerable food stamp recipients. Next, the chapter describes the three main data sources used for the evaluation, including a telephone survey of 1,632 new food stamp recipients across the four States. It then examines the representativeness of the survey sample and, finally, describes the construction of the sample weights.

Research Design

The research mode for the study of EBT customer service waivers is a treatment-comparison design, relying primarily on cross-sectional data. Study results are based on findings from four States: two that have implemented customer service waivers and two that have not.

Selection of Study States

FNS has granted EBT customer service waivers to 36 States and the District of Columbia. As shown in table 13, these States have requested and received various combinations of the three waivers being examined in this study. Five combinations of waivers exist. FNS has granted all three waivers to 22 States, and 5 States were granted different combinations of two waivers each. The final 10 States have been granted only one waiver each.

Table 13—Combinations of customer service waivers

1. PIN selection, hands-on training, and extended time for card replacement

Alaska	Alabama	Arizona	Arkansas	Colorado
Delaware	Florida	Georgia	Hawaii	Idaho
Kentucky	Michigan	Minnesota	Mississippi	Missouri
New Hampshire	North Carolina	Tennessee	Texas	Vermont
Washington	Wisconsin			

2. PIN selection and hands-on training

Massachusetts	New York	Oregon	Rhode Island	
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3. Hands-on training and extended time for card replacement

California

4. Hands-on training only

Connecticut	Iowa	Maine	Virginia	
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5. Extended time for card replacement only

District of Columbia	Indiana	North Dakota	South Dakota	South Carolina
Wyoming				

With limited research funds for the study, FNS and ERS decided that the study would not try to disentangle the effects of individual waivers by including States with different combinations of waivers. Furthermore, it was decided that the study needed to include one or more States that had not implemented any of the three EBT customer service waivers. In this way, the combined impacts of the three waivers would be measured by comparing outcomes in States with waivers to outcomes in those without waivers.

The study recruited two States, Alabama and Minnesota, from among those that had implemented all three waivers. Louisiana and Pennsylvania were recruited as comparison States, representing States that have not implemented any of the waivers. Alabama participates in EBT as a member of the Southern Alliance of States (SAS), formed to jointly design and implement an EBT system for member States. The successful EBT bidder for the SAS EBT system was Citibank EBT Services (Citibank), but another major EBT vendor, Deluxe Data Systems (now eFunds Corporation), was a subcontractor to Citibank. Indeed, eFunds Corporation serves as the EBT processor for Alabama. eFunds is also the EBT vendor in Louisiana and Minnesota. Citibank processes all EBT transactions in Pennsylvania.

Table 14 displays information about the four participating States. In terms of food stamp caseload, Pennsylvania was the largest, with over 350,000 cases in November 1999; Minnesota was the smallest, with about 83,000 cases. Minnesota is also the most recent State of the four to achieve statewide implementation of its EBT system. The Minnesota system was fully implemented by October 1998—about 1 year prior to the selection of food stamp recipients into the study’s sample frame. Pennsylvania completed its statewide implementation 1 month earlier, in September 1998.

Table 14—Characteristics of participating States

Characteristics	Waiver States		Nonwaiver States	
	Alabama	Minnesota	Louisiana	Pennsylvania
Food stamp caseload, Nov. 1999 (number)	157,958	83,174	194,910	356,534
Average monthly FSP benefit (dollars)	185	165	195	159
Date EBT system fully implemented	Nov. 1997	Oct. 1998	Dec. 1997	Sept. 1998
EBT processor	eFunds ¹	eFunds	eFunds	Citibank
	<i>Percent of total caseload</i>			
Subject to waivers	100.0	71.3 ²	0	0
Enrolling that month (Nov. 1999)	2.6	1.8	3.6	2.8
Elderly	18.6	9.1	17.1	17.8
Disabled	28.5	11.4	32.6	32.2
Vulnerable	42.8	18.0	37.1	41.3

¹Formerly Deluxe Data Systems.

²EBT customer service waivers are not implemented in areas that had high mail loss prior to the implementation of EBT. See text for further details.

Minnesota is somewhat unusual among waiver States in that a portion of its food stamp caseload is not subject to the customer service waivers examined in this study. Table 14 shows that only 71.3 percent of the Minnesota caseload is subject to the waivers. Prior to the implementation of

its EBT system, Minnesota used mail delivery for most of its food stamp coupons. In areas with historically high levels of mail loss of coupons, however, recipients were required to go to their local food stamp office each month to pick up their coupons. When the State implemented EBT, it decided not to implement customer service waivers in these high-mail-loss areas. At least 28.7 percent of the total Minnesota food stamp caseload lives in such areas; we estimate, however, that only 23.4 percent of new entrants are from these areas.⁶

Minnesota also allows food stamp applicants needing immediate assistance (“expedited service”) to pick up their EBT cards at the local office on the day of application, at which time they select their own PIN rather than having one assigned. The information on the State’s administrative files did not indicate which recipients received expedited service; based on survey results, however, we estimate that 45.8 percent of recipients not living in high-mail-loss areas picked up their EBT cards at the local office. Thus, Minnesota can be considered a “mixed” State with regard to implementation of customer service waivers: a substantial portion of its caseload is not necessarily subject to the waivers.

Vulnerable Food Stamp Recipients

A major goal of the study was to determine whether the impacts of the EBT customer service waivers are different for “vulnerable” food stamp recipients than for the remainder of the food stamp caseload. Vulnerable recipients are defined as those who are either elderly (age 60 or greater) or disabled. From table 14, we see that, in three of the four study States, about 17 to 19 percent of the food stamp caseload is elderly. The food stamp caseload in Minnesota is younger—only about 9 percent is elderly.

Food stamp eligibility files include a variable indicating whether the food stamp recipient is disabled. The Minnesota State files identify a smaller percentage of recipients as disabled than the other three States, about 11 percent compared with 28 to 33 percent. Consequently, only 18 percent of the Minnesota cases are classified as vulnerable (elderly or disabled), whereas from 37 to about 43 percent of food stamp recipients in Alabama, Louisiana, and Pennsylvania are vulnerable.

As described in the next section, the study used data from State food stamp eligibility files to identify and oversample vulnerable food stamp recipients. During the survey, respondents were asked whether they had a disability that made it hard for them to “get around town, go shopping, or use the EBT card.” The correlation between the survey and State measures of disability was rather low ($r = 0.335$), and the study decided to use respondents’ own assessment of disability when looking at outcome measures among vulnerable food stamp recipients. Appendix A provides a detailed discussion of the identification of disabled food stamp recipients.

⁶The actual figure for the total caseload is probably higher than 28.7 percent. Some high-loss areas are defined at the nine-digit ZIP code level. The administrative files provided by Minnesota included only five-digit ZIP codes, so we could not determine the precise percentage of food stamp recipients not subject to the waivers. In developing the sample frame for the Survey of New EBT Users, however, we used street address information from the administrative files to determine in which nine-digit ZIP codes recipients lived, and we then used this information to exclude recipients living in high-mail-loss areas from the sample frame. From this exercise we calculated that, in November 1999, 23.4 percent of new food stamp recipients lived in high-mail-loss areas.

Data Sources

This section describes the four sources of data used to examine the impacts of the EBT customer service waivers: interviews with State officials, the Survey of New EBT Users, EBT transaction data, and EBT summary statistics.

Interviews with State Officials

Project staff conducted telephone interviews with the EBT coordinators in all four States and with program officials in the regional offices to learn about State policies regarding card issuance, EBT training, and other EBT operating issues. These interviews occurred at the end of 1998 and the beginning of 1999. In addition to the interviews, we collected copies of EBT training materials and other documents describing EBT operations.

The interviews covered the following main topics:

- FSP and EBT characteristics of the State (for example, number of FSP recipients, EBT processor, and programs served by the EBT system)
- Policies and procedures for initial card issuance and PIN designation
- Procedures for EBT training and information covered during training
- Policies and procedures for card replacement
- Policies and procedures for PIN changes

Survey of New EBT Users

The primary data source for this exploratory study is "The Survey of New EBT users," that is, of new food stamp recipients who began using their EBT cards in November 1999. The survey focused on new EBT card users because, as discussed in chapter 1, we hypothesized that any impacts of the PIN selection and hands-on training waivers would be most evident among recipients just learning to use an EBT system. Impacts of the third waiver, regarding card replacement, would be restricted to a second group of recipients, those who had reported an EBT card as lost, stolen, or damaged. The study decided to focus its resources on a survey of new food stamp recipients rather than trying to survey two distinct groups.

Description of Survey Instrument

A copy of the survey instrument is included as Appendix B to this report. The instrument contains seven modules:

- A. Introduction
- B. Replacement cards

- C. Training
- D. PIN use
- E. Other system use
- F. Respondent characteristics
- G. Recipient characteristics

Module A (Introduction) checked sampled recipients' eligibility for the survey by confirming that they received their first EBT card no earlier than October 1999 and that they were not part of a group-living arrangement where the EBT card was used to pay for meals. The module also ascertained whether sampled recipients did their own shopping with the EBT card. If not, information about the "alternative shopper" was collected so that most remaining modules of the survey instrument could be addressed to that person.

For those survey respondents (either recipients or their alternative shoppers) who said they were using a replacement EBT card at the time of interview, module B (Replacement Cards) of the survey asked them how many replacement cards they had received since they first started using the EBT system, how and when they received their current replacement cards, and how much time and out-of-pocket expenses were incurred in obtaining their current cards.

Module C (Training) focused on how respondents learned to use the EBT system. Survey questions addressed which modes of training (written materials, videos, training equipment) were used, what information was covered during training, and whether respondents had any remaining questions about use of the EBT card after training. The module also asked about respondents' time and out-of-pocket expenses associated with EBT training.

Module D (PIN Use) asked respondents about possible problems with their personal identification numbers (PINs) when they were using or trying to use the EBT system. The module included a series of questions about steps the respondents might have taken to help remember their PINs. Respondents were also asked a series of questions about their knowledge and use of procedures for requesting new PINs.

Module E (Other System Use) addressed other features of EBT use that might be affected by the PIN selection or hands-on training waivers, especially the latter. Respondents were asked how often they used the EBT cards at food stores; whether they had ever needed help in using their cards; what procedure(s) they used, if any, to check EBT balances; whom they would contact to get help with an EBT problem; and whether their EBT cards had ever been used without their permission. Most important, this module also asked about satisfaction with the EBT card, after collecting information about possible problems with PIN or system use. Asking this question just after questions identifying problems with system use provides a strong test of respondents' satisfaction with their State's EBT system.

Finally, modules F and G collected demographic and other information about, respectively, the respondent (if an alternate shopper was interviewed) and the food stamp recipient. The main survey question about disability was included in these sections, although module A also collected information about disability if that was the reason a recipient used an alternative shopper.

Sample Frame

The sample frame for the Survey of New EBT Users was designed to include all food stamp recipients in the four study States who were new to the program in November 1999. Initially, the study sought to identify new recipients by comparing October and November extracts of the States' food stamp eligibility files; individuals present as active food stamp recipients on the November file but not the October file would represent "new" recipients in each State. Unfortunately, this strategy did not work. Each State file included a variable indicating the "start date" of food stamp receipt, and the October files included recipients with November start dates. The study therefore uses the start-date variable as an indicator of recipients entering the FSP in November 1999.

The start-date variable, however, has its own problems for identifying new entrants. Prior recipients who left the FSP and then returned in November 1999 appear on the files as having a November 1999 start date. That is, the date of reentry overwrites the previous start date. The study compensated for this problem in two ways. First, as described in the next section, the survey instrument contained several screener questions designed to ensure that only recipients with no prior EBT experience were interviewed. This was done, by necessity, only after the sample frame had been developed. Second, in developing the sample frame, the file of "new entrants" was merged against a test file of the State eligibility file obtained in the summer of 1999. Any recipient who was on the summer file was removed from the file of new entrants. This procedure was carried out for Alabama, Louisiana, and Pennsylvania, but it could not be done for Minnesota because the State was unable to provide a test file prior to the November extract.

One objective of the study has been to determine whether the waivers have greater impacts on vulnerable than nonvulnerable food stamp recipients. To help ensure that a sufficient number of vulnerable recipients would be interviewed, each State's sample frame of new entrants was divided into vulnerable and nonvulnerable strata, with vulnerable recipients identified as individuals who were either elderly (age 60 or greater) or disabled, according to information contained on the State eligibility files. The sample frame for the Survey of New EBT Users thus has eight strata: vulnerable and nonvulnerable food stamp recipients in each of the four study States.

Sample Disposition

The Survey of New EBT Users was a telephone survey with a target of 175 completed interviews per stratum, or 1,400 completed interviews across all eight strata defined by State and vulnerability status. For each stratum, the total number of cases in the identified sample universe can be divided into the following five groups:

- A. Completed interviews
- B. Interview attempted, but not completed
- C. Telephone number available, but sample never released to phone center
- D. Case sampled, but no phone number available
- E. Case never sampled from universe

Table 15 shows the size of the group for each stratum. The exhibit uses “V” and “N-V” to indicate vulnerable and nonvulnerable strata, respectively.

Table 15—Distribution of available sample, by stratum

Group	Alabama (n=4,176)		Minnesota (n=1,528)		Louisiana (n=7,082)		Pennsylvania (n=10,004)		Total (n=22,790)
	V	N-V	V	N-V	V	N-V	V	N-V	
	Number								
A	260	285	45	292	197	190	184	179	1,632
B	461	794	119	808	391	511	313	381	3,778
C	0	0	0	0	223	0	852	530	1,605
D	306	513	24	125	133	132	116	77	1,426
E	0	1,557	0	115	0	5,305	0	7,372	14,349
Total	1,027	3,149	188	1,340	944	6,138	1,465	8,539	22,790

V = Strata of vulnerable recipients.

N-V = Strata of nonvulnerable recipients.

As shown in the “group A” row of table 15, the survey exceeded its target of 175 completed interviews per stratum in all strata except that of vulnerable recipients in Minnesota. The available sample in that stratum was exhausted with only 45 completed interviews. To achieve enough completed interviews with vulnerable recipients in a waiver State, we interviewed a larger number of them in Alabama, the other State to implement EBT customer service waivers. Across the two States, we interviewed 305 vulnerable recipients, or 87.1 percent of the target of 350 completed interviews across the two strata. In each of the remaining strata, we exceeded our target of 175 completed interviews. Overall, 1,632 new food stamp recipients were interviewed.

Table 16 shows the disposition of the group B sample—that is, cases that were sampled and had a telephone number, but for which an interview could not be completed. Overall, 14.4 percent of these recipients were found to be ineligible for the survey. When contacted by telephone, most of them said either that they had used an EBT card prior to October 1999 or that they been in a group living arrangement and therefore did not use the EBT card for shopping.⁷

Table 16—Reasons for interviews attempted but not completed, by stratum

Group	Alabama (n=1,255)		Minnesota (n=927)		Louisiana (n=902)		Pennsylvania (n=694)		Total (n=3,778)
	V	N-V	V	N-V	V	N-V	V	N-V	
	Percent								
Ineligible	17.1	13.4	19.3	10.4	18.7	13.5	17.3	14.4	14.4
No valid phone	52.7	59.9	47.1	61.0	49.4	56.4	46.0	54.9	55.6
Refusal	5.0	1.3	5.9	2.6	7.4	3.5	7.3	6.3	4.1
Other	25.2	25.4	27.7	26.0	24.5	26.6	29.4	24.4	25.9
Response rate	40.5	29.3	31.9	28.7	38.3	30.1	41.5	35.4	33.5

V = Strata of vulnerable recipients.

N-V = Strata of nonvulnerable recipients.

⁷Table C-2 in Appendix C provides greater detail on reasons for survey ineligibility.

Instances of outright refusal to be interviewed were relatively rare. Refusals represented 4.1 percent of all attempted but uncompleted interviews, with vulnerable recipients more likely to refuse (6.4 percent) than nonvulnerable (2.9 percent). As a percentage of all attempted interviews (including completed interviews), the overall refusal rate was 2.9 percent (4.2 percent for vulnerable and 2.1 percent for nonvulnerable recipients).

By far the largest group of recipients without a completed interview were those whose telephone numbers turned out to be invalid. Phone numbers were listed in the State eligibility files, and the study also used recipient name and address information to try to find phone numbers from commercial look-up services. Despite these efforts, 55.6 percent of the group B sample (or 38.8 percent of all attempted interviews) could not be interviewed because telephone numbers were not valid. Nearly all of these instances involved either a wrong number or a nonresidential number; in either case, the individual who was called did not know the sampled person. Nonvulnerable recipients were somewhat more likely in each State to have a nonvalid phone number than vulnerable recipients.

With high rates of invalid phone numbers, response rates for the Survey of New EBT Users were low, as is evident in the last row of table 16. Response rates are defined as the number of completed interviews (group A) divided by the number of all attempted interviews (groups A plus B), with ineligible survey respondents subtracted from the denominator. Response rates varied from a low of 28.7 percent among nonvulnerable recipients in Minnesota to a high of 41.5 percent among vulnerable recipients in Pennsylvania. The overall response rate was 33.5 percent.

Designation of Survey Respondent

The sample of 1,632 new EBT users includes 29 recipients who either did not shop with their EBT cards or said that they used the cards less than once a month for shopping.⁸ In these 29 instances the people who usually went shopping with the EBT cards (the “alternative shoppers”) answered questions in modules B through F of the survey instrument. Twenty-seven of the 29 alternative shoppers were the recipients’ designated food stamp-authorized representatives.

Timing of Interviews

A systematic pattern exists with regard to when interviews in each State were conducted. On average, and relative to when survey respondents received their initial EBT card, interviews in the two waiver States were completed later than those in the two nonwaiver States. An average of 4.5 months elapsed between card issuance date and interview date in the waiver States, versus an average of 3.1 months in the nonwaiver States.

⁸The survey first asked whether the respondent was the person in the household who usually did the grocery shopping with the EBT card. Those respondents who said “yes” were not screened for how often they used the card each month, because they were in the best position to answer questions about card use. As discussed in chapter 5, from 8.1 to 9.7 percent of respondents (depending on State) said they shopped with the EBT card less than once per month.

This systematic variation, which occurred due to delays in receiving and processing sample frame information, raises an initial concern about the validity of many comparisons made later in the report of outcomes between the waiver and nonwaiver States. For instance, the survey asked new entrants whether problems remembering their PINs ever prevented them from using their EBT cards. As will be discussed in chapter 4, the survey data show that new entrants in the waiver States were significantly more likely to report such problems than new entrants in the nonwaiver States. Does this difference reflect greater problems with PINs in the waiver States or simply more time and opportunity to experience a problem?

A detailed analysis indicates that the difference between waiver and nonwaiver States in the elapsed time between EBT card issuance and survey interviews does not affect the study's outcome measures. We regressed all of the outcome measures against a set of covariates that included elapsed time. The estimated coefficient on the elapsed time variable was never close to being statistically significant.⁹ Thus, we conclude that the differences in elapsed time do not affect the study's findings.

EBT Transaction Data

The third data source for the evaluation of EBT customer service waivers is data from EBT system transaction logs. All EBT systems maintain a log of all transactions processed by the system. These logs contain information about the card user (such as card number and account number), on where the card is being used (merchant or ATM identification number, terminal number, cashier identification number), which program is being accessed (food stamps, TANF, Social Security), the type of transaction (issuance, purchase, withdrawal, refund, balance inquiry), the transaction amount, and the disposition of the transaction (rejected or approved). If rejected, the log includes a code indicating the reason. The logs also include information about the account's balance.

As part of its oversight of the FSP, FNS has implemented a procedure whereby all EBT vendors submit copies of their system EBT logs to FNS each month. The submitted files, which contain only FSP-related transactions, are State-specific. The monthly files are added to the FNS "ALERT" database,¹⁰ which supports the agency's efforts to identify suspicious food stamp activity.

On EBT transaction logs, reasons for rejection include "invalid PIN entry" and "insufficient funds." Both of these occurrences may indicate recipient difficulty in learning to use the EBT system. The study therefore requested and received from FNS copies of the ALERT data files for the four study States for the months of November and December 1999.¹¹ These **transaction-based** files were sorted by account number, date, and time to generate, for each account showing any FSP activity during the 2 months, a chronological history of the food stamp activity.

⁹In addition to the elapsed-time variable, the covariates in the regression models included variables indicating whether the recipient was elderly, was disabled, or was a male; whether the recipient shopped less frequently than once a month; whether the recipient received cash assistance benefits as well as food stamps; whether the recipient had ever used a bank card to get cash, whether the recipient said he or she had received in-person EBT training; and whether he or she had learned about EBT through written materials.

¹⁰"ALERT" stands for the FNS Anti-Fraud Locator of EBT Retailer Transactions subsystem.

¹¹The study originally requested EBT transaction data from the four participating States. These data, however, include only approved transactions, allowing no analysis of transactions with invalid PINs or insufficient funds.

Information from the individual transaction records was then summarized in an **account-based** file. For the analyses discussed later in this report, the most important information in the file is:

- The total number of FSP transaction records for the account
- The total number of approved purchase transactions
- The total number of transactions rejected for invalid PIN entry
- The fraction of transactions rejected for invalid PIN entry
- The total number of transactions rejected for insufficient funds
- The fraction of transactions rejected for insufficient funds
- The highest number of transactions rejected for invalid PIN entry on any single day

Although FNS has specified to EBT vendors the information to be included in the State ALERT files, several differences were noted when the EBT transaction logs were reviewed. The Pennsylvania files, supplied by Citibank, included records rejected for invalid PIN entry and for insufficient funds. In contrast, the files for the remaining three States, supplied by eFunds, did not include any records for transactions rejected for an invalid PIN. For each of these three States, however, the eFunds EBT system generates monthly summary reports of the number of rejected transactions, by reason, for each account. Copies of these reports were obtained from eFunds, and information on rejected transactions was added to the account-based summary EBT analysis file. Because the supplemental data received from eFunds do not indicate on what day a transaction was rejected, the last variable listed above (highest number of invalid PIN entries on any single day) could not be defined for Alabama, Louisiana, and Minnesota. In addition, the supplemental data do not distinguish between food stamp transactions rejected for invalid PINs and cash program transactions rejected for the same reason, so the summary file contains data that are somewhat inconsistent among States. That is, the counts of invalid PIN entries in Alabama, Louisiana, and Minnesota include rejected cash program transactions, whereas the counts of invalid PIN entries in Pennsylvania pertain only to FSP transactions.

EBT Summary Statistics

Each EBT system in the country generates a number of monthly reports summarizing system activity. These reports are available to State officials and EBT vendor staff who wish to monitor particular aspects of system operations. Some of the reports provide only aggregate data, such as total number of active accounts, total number of transactions (often broken out by type or by program), and total program benefits issued and redeemed by EBT card users. Other reports provide more detail, such as the report mentioned above that provides account-by-account information on the number of rejected transactions, by reason.

There is considerable similarity among States in the types of EBT system activity that are summarized in monthly reports, but there are differences as well. For instance, the monthly reports for the three States using eFunds as an EBT vendor provide information on the number of denied transactions by reason. The Pennsylvania summary reports provide counts of the total number of denied transactions, but the information is not broken out by reason for denial. In addition, what appears to be similar information in reports from different States may in fact be different. This is frequently so with respect to the “base” for a given number in the reports. Sometimes the base is all food stamp cases or transactions, whereas in other instances it is all

EBT users or transactions (including individuals receiving cash benefits but not food stamp benefits). For these reasons, one has to be cautious about comparing summary statistics from two States. For the most part, however, statistics from one month in a given State can be validly compared to statistics from other months in the same State. For this reason the study requested copies of monthly EBT system reports from each of the four study States. The primary purpose for collecting these data was to determine whether the period from which the sample frame of new EBT users was drawn and immediately thereafter (November 1999 through March 2000) was representative of system operations.¹² As will be shown in later chapters, operations in the four study States were relatively stable during the sampling and survey periods; we have no reason to suspect that survey responses were affected by any major problems with the EBT systems.

Sample Representativeness for the Survey of New EBT Users

With an overall survey response rate of 33.5 percent and a large number of sampled cases with no phone numbers available (group D), a natural question is whether the sample of recipients for whom interviews were completed is representative of all new food stamp recipients in the four study States. Because information about all recipients in the sample frame is available from the State administrative files, the question of sample representativeness can be looked at closely. Appendix C presents stratum-level detail on the representativeness of the sample of 1,632 food stamp recipients. That detailed analysis reveals the following patterns:

- In all eight strata, women are overrepresented when comparing “completes” to the population universe.¹³ The differences between the percentage of females in completes and the population universe are statistically different from zero in four of the strata.
- White recipients are overrepresented (and minorities underrepresented) in the samples of completes in Pennsylvania and Minnesota, but not in Louisiana or Alabama.
- In the two States in which TANF receipt was indicated on the State administrative files (Louisiana and Pennsylvania), there were no statistical differences between completes and the population universe in the percentage of food stamp recipients also receiving TANF.
- Recipients with completed interviews usually were a little older than the average age within the population universe. The differences were statistically different from zero in four of the eight strata.
- In the two States in which the number of dependents was indicated on the State administrative files (Louisiana and Alabama), only one of the four strata showed a statistically significant difference (at the 0.10 level) between completes and the population universe in the average number of dependents.

¹²For instance, if the monthly data showed a large increase in invalid PIN entries at the end of 1999 or in early 2000, the increase might indicate a temporary but systematic problem with the EBT system’s software. The study would then not want to attribute cross-State differences in problems with invalid PINs solely to whether the States had waivers for PIN assignment.

¹³“Completes” refers to all cases in group A (completed interviews); the population universe of new entrants is the union of groups A through E.

- Information on the recipient’s marital status was available from three States: Pennsylvania, Minnesota, and Louisiana. In Minnesota and Pennsylvania, married recipients were somewhat overrepresented in the samples of completes.
- In four of eight strata (nonvulnerable recipients in Minnesota, Pennsylvania, Alabama, and vulnerable recipients in Minnesota), recipients with completed interviews had higher average income than the population universe.
- Among vulnerable recipients in all four States, elderly recipients are overrepresented and disabled recipients are underrepresented, compared to the population universe. The differences are statistically significant in Alabama.

The most pervasive patterns observed are the overrepresentation of females and elderly recipients and the underrepresentation of disabled recipients. As described below, we adjusted the sample weights to account for these differences.

Construction of Sample Weights

In the Survey of New EBT Users, each person who completed an interview has a (final) sample weight. These weights combine the following factors: the probability that the person was selected into the sample for the survey (within one of the eight strata, which separated vulnerable and nonvulnerable recipients in the four participating States); an adjustment for nonresponse (interviews that were attempted but not completed); and a further adjustment (poststratification) that took into account gender, age, and disability status and that brought totals of sample weights into agreement with the corresponding total numbers of cases in the identified sample universe.

Base Sampling Weight

Each case in the initial sample released to the phone center received a base sampling weight, equal to the reciprocal of the case’s probability of selection. For simple random sampling (within each stratum), the probability of selection is the ratio of the sample size to the size of the universe. Thus, the base sampling weight equals

$$\frac{\text{size of universe}}{\text{size of sample}}$$

In each of the four vulnerable strata the sample consisted of the entire universe, so the base sampling weight is 1.0. For the nonvulnerable strata the size of the universe varied considerably among the four States (see table 15). The resulting base weights are (to two decimal places) 1.98 in Alabama, 1.09 in Minnesota, 7.37 in Louisiana, and 7.32 in Pennsylvania.

Nonresponse Adjustments

The customary adjustment for nonresponse classifies the sample (within each stratum) into a set of cells. Then, within each cell, it redistributes the base sampling weight of the nonrespondents among the respondents, so that the total of the adjusted weight for the respondents equals the total of the base weight (for respondents and nonrespondents) in the cell. For this survey it was possible to simplify the calculation of the weights by combining the nonresponse adjustment with the poststratification to universe totals (which we describe next).

Poststratification

Because the number of persons in the universe is known for a set of cells that together make up each of the eight strata, it is straightforward to adjust the sampling weight of each person who completed an interview so that, within each cell, the total of the adjusted weights equals the number of persons in the universe. For the variables that define those cells, this strategy removes the differences between the weighted sample and the universe. In the process it also compensates for nonresponse.

As mentioned above (and discussed in detail in appendix C), women are overrepresented among the “completes” in all eight strata. Thus, it was important for the adjustment to take gender into account. In addition, it was useful to classify vulnerable recipients in more detail as elderly (but not disabled), disabled (but not elderly), or elderly and disabled. We refer to these three substrata of a vulnerable stratum as E, D, and ED, respectively. Combining these three categories and the nonvulnerable stratum with gender yields a total of $4 \times 2 = 8$ cells in each State. In principle, within each cell we would multiply the base sampling weight of each “complete” by the appropriate adjustment factor, so that the total adjusted weight of the “completes” equals the number of persons in the universe.

In practice, some cells may have only a few “completes,” or none at all. For example, in Minnesota the ED substratum contained only three “completes” (of both genders), so we combined ED with E in Minnesota. Requiring that each cell contain at least 10 “completes” (a reasonable minimum, used in other surveys) led to some further combining, which reduced the total number of cells from 32 to 25: 6 in Alabama, 5 in Minnesota, 7 in Louisiana, and 7 in Pennsylvania. The adjusted weights range from 2.35 to 74.70.

When combining aggregate survey responses of two or more States, we do not rely on the adjusted sample weights, because doing so would give greater weight to the States with larger food stamp caseloads. Instead, each State receives equal weight when multiple-State averages are presented.