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U.S. DEPARTMENT OF AGRICULTURE

Benefit Redemption Patterns in the Supplemental Nutrition Assistance Program in Fiscal Year 2022

Final Report

May 2025

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Benefit Redemption Patterns in the Supplemental Nutrition Assistance Program in Fiscal Year 2022

Final report

May 2025

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Executive Summary

A. Introduction

1. Background

As the cornerstone of the nation's nutrition safety net, the Supplemental Nutrition Assistance Program (SNAP) provides monthly benefits to households with low incomes to reduce food insecurity and improve health and well-being. To help SNAP participants maintain their food purchasing power, policymakers and the U.S. Department of Agriculture (USDA) Food and Nutrition Service (FNS) periodically realign benefits to account for inflation and support households through unexpected and unpredictable hardships. Recently, many households have received additional benefit allotments in response to the COVID-19 public health emergency, and most households received an increase in their SNAP benefit beyond the annual cost-of-living adjustment due to the reevaluation of the Thrifty Food Plan (TFP).

Such changes to benefit levels provide unique opportunities to add to FNS's understanding of how participants redeem benefits. FNS has periodically funded studies of SNAP participants' benefit redemption patterns, including the average number and dollar amount of transactions made with SNAP benefits in a month, the types and number of retailers at which participants redeem their benefits, and the number of days or weeks that elapse before participants redeem most of their monthly benefit (such as Cole and Lee 2005 and Castner and Henke 2011). This study of fiscal year (FY) 2022 benefit redemption patterns provides an opportunity to examine redemption patterns in a year when nearly all participants received a higher benefit than in previous years. In addition, households could redeem benefits online, an option that was not available in FY 2017, which was the focus of the most recent study of benefit redemption patterns (Castner et al. 2020).

2. Changes to the SNAP environment

In the FY 2022 study period, SNAP households saw one or more increases in their benefit issuance because of the following factors:

- **Emergency allotments (EA).** In response to the COVID-19 pandemic, from April 2020 through February 2023, States had the option to provide households with an additional allotment that would bring their total monthly issuance up to at least the maximum benefit allowable for their household size (see box below). Thirty-six States (including the District of Columbia, Guam, and the Virgin Islands as States), issued EA to all households throughout FY 2022, 9 States offered EA for part of the year, and 8 States did not offer EA during FY 2022 (Figure ES.1).
- **Pandemic electronic benefit transfer (P-EBT).** Beginning in 2020 and continuing into FY 2023, States had the option to provide additional benefits via EBT cards to households with (1) school-age children who were eligible for free or reduced-price lunches and/or (2) children under age 6 who were in covered childcare facilities and receiving SNAP. The purpose of P-EBT was to compensate households for children's missed meals when schools or childcare centers closed or reduced their open hours because of the COVID-19 pandemic. Households with school-age children could be eligible for P-EBT even if they did not participate in SNAP.

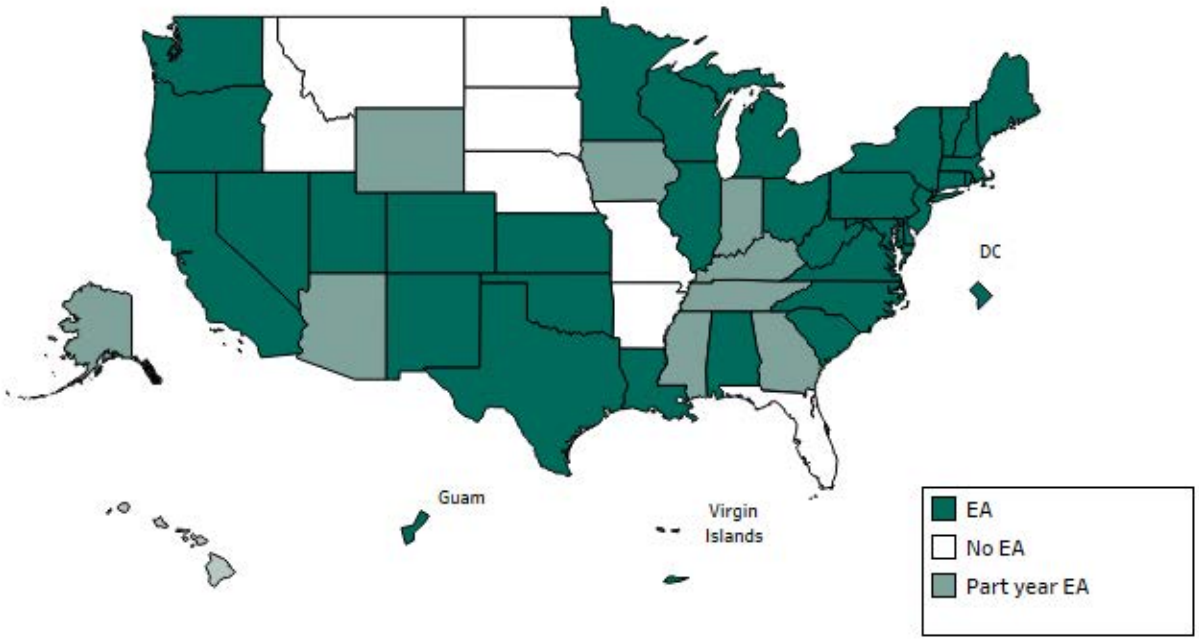
Standard benefits combined with EA provide households with the maximum benefit

During FY 2022, EA brought each household's benefit up to the maximum for its household size. If the additional benefit would have been less than $95, the household received a $95 EA benefit. For example, a single-person household receiving a regular benefit of $20 received an EA benefit of $230 ($250 minus $20); a two-person household receiving a regular benefit of $400 received an EA benefit of $95—$59 to bring them to the maximum benefit and an additional $36 to reach the $95 minimum. For the 48 contiguous States, the maximum benefit amounts are shown in the table. See https://www.fns.usda.gov/snap/fy-2022-cost-living-adjustments for the higher maximum benefit levels for Alaska, Hawaii, Guam, and the Virgin Islands.

Household size	Maximum benefit
1	$250
2	$459
3	$658
4	$835
5	$992
6	$1,190
7	$1,316
8	$1,504
Each additional	+$188

- **TFP adjustment.** The cost of the TFP market basket provides the basis for the annual adjustments to the maximum SNAP benefit amounts. In 2021, a TFP reevaluation adjusted upward the cost of the TFP market basket by 21 percent . Accordingly, maximum benefits increased in FY 2022. For a household of four in the 48 contiguous States, for example, the monthly maximum benefit increased from $680 to $835. Although EA was offered only in some States and P-EBT benefits were only available to some households with children, the TFP increase in the maximum allotment amount applied across all participant benefit levels in all States.

Figure ES.1. States issuing EA benefits in FY 2022



EA=emergency allotments.

In addition, as the COVID-19 pandemic progressed, FNS accepted many State applications for online purchasing, allowing SNAP participants to use their benefits to make food purchases online. By the end of FY 2022, 49 States and the District of Columbia had implemented online purchasing at authorized retailers using SNAP benefits.

B. Data files and overview of methodology

The study team used data sources and methods that were consistent with previous studies, where feasible, to allow for as much comparability across the study periods as possible.

1. Datafiles

The analysis files relied primarily on three sets of data:

- **Anti-Fraud Locator using EBT Retailer Transactions (ALERT).** The ALERT data include EBT transaction records for each participating household. Each transaction record contains the SNAP household's State of residence, household account number, and EBT card number; retailer identifier and retailer State; date and time of transaction; transaction type and amount; and household EBT account balance.
- **Store Tracking and Redemption System (STARS).** The STARS extract provided to the study team by FNS contains information about each retailer authorized to redeem SNAP benefits during FY 2022. Each record in the extract contains a store identification number, location, and store type.
- **SNAP Quality Control (SNAP QC).** The FY 2022 SNAP QC database contains detailed demographic, economic, and SNAP eligibility information for a nationally representative sample of 41,391 SNAP households. The raw datafile is generated from monthly reviews of SNAP cases conducted by State SNAP agencies as part of their QC reviews. The study team primarily used the edited version of the file FNS provided, which includes a monthly and fiscal year weight and a variety of constructed economic and demographic variables.

2. Analysis files

After performing several types of data cleaning and editing, as described in Appendix F, we constructed four sets of analysis files.

a. ALERT calendar month file

The ALERT calendar month file is used to produce descriptive statistics of monthly numbers of transactions by State and store type, average and total transaction amounts by State and store type, and out-of-State redemptions. This file uses the store category information from STARS in addition to the transaction information from the ALERT data. In most States, the calendar month does not align with the issuance month because an issuance does not always occur at the first of the month. However, the calendar month remains a reasonable time unit for calculating average monthly statistics at the State and national level. As described in the box below, the calendar month file includes all households and all transactions, even those made by non-SNAP households that receive P-EBT benefits on an EBT card.

b. ALERT benefit exhaustion file

To examine how quickly SNAP participants redeem their benefits after issuance, we constructed a benefit exhaustion file that separates transactions and benefit issuances for each household into issuance periods for analysis. The periods begin with an issuance and end the day before their next issuance. In previous studies, when households received one standard benefit issuance in a month, this led to issuance periods that were one month in length but did not necessarily align with a calendar month. In FY 2022, households could receive an EA issuance on a different date than their standard issuance, creating the potential for multiple shorter benefit exhaustion periods within one month. P-EBT issuances could also add an additional issuance period. However, we excluded months with P-EBT issuances from most analyses.

To remain as consistent as possible with analyses from previous studies, we continue to examine how quickly benefits are exhausted based on the amount of the benefit issued at the beginning of the month or period. In addition, recognizing that households who receive a relatively large benefit shortly before receiving another benefit are likely to carry over more of the issuance than they would if the time between issuances was larger, we also provide a set of tables that examine benefit exhaustion based on the balance available at the beginning of the month. For example, if a household received a $100 issuance, the primary exhaustion measure examines the percentage of the $100 the household redeemed at measured points (days 7, 14, 21, and the end of the month), ignoring any benefits carried over from previous months. With the addition of EA and P-EBT benefits, the household may also have received an issuance of $200 one week earlier. The new set of tables examines the percentage of the balance carried over (what remains after the $200 issuance) plus the new issuance (the $100).

Calendar month file versus benefit exhaustion file

- The calendar month file includes all households receiving benefits on an EBT card and all redemption transactions.
- The benefit exhaustion file excludes transactions made on cards that only have P-EBT issuances. These are households that are not SNAP participants and participating households that receive P-EBT on a separate P-EBT-only card. We refer to these as P-EBT-only households.
- In addition, unless noted otherwise, the benefit exhaustion file excludes issuance periods in which a household received a P-EBT issuance or an issuance that the study team could not classify as a standard or EA issuance.

The ALERT data do not identify the date a household receives a benefit issuance. When a household's issuance dates could not be directly determined from the State schedule and household identifier, such as when a State issued benefits based on a participant's last name, we inferred the issuance date from the transactions. These algorithms are computationally intensive, so we created the benefit exhaustion file using random samples of SNAP households each month for each State. We sampled up to 20,000 households per month per State (or up to 240,000 households per State), resulting in a file of over 6 million households. We used the full year of data for all sampled households and reweighted the random samples to reflect the actual distribution of households, transactions, and benefits for each State. We also used the exhaustion analysis file to identify inactive households—those that were still receiving SNAP issuances but showed no transaction activity.

c. Matched ALERT-QC data analysis file

To study benefit redemption patterns by household characteristics, we linked the ALERT analysis files to the edited SNAP QC data. We used the matched ALERT-QC analysis file to analyze redemption activity over the three-month period centered on the SNAP QC sample month (the month in which the QC data measured the characteristics for a given household). Therefore, the transaction data in this file was at most one month removed from the SNAP QC review and included over 37,000 households.

3. Analysis of redemption patterns

Using these analysis files, we conducted several types of analyses that are analogous to those reported in the previous studies of benefit redemption patterns, such as the average number of transactions conducted by households each month, the average amount of the transactions, the types of stores at which households redeemed benefits, and how quickly in the month they redeemed benefits (benefit exhaustion). In addition, we conducted two types of analyses new to the current study year.

a. Analyzing the influence of benefit changes since FY 2017

Using the calendar month and exhaustion files, we produced a set of descriptive measures to understand how changes in benefit redemption may have been related to the three types of benefit increases (TFP, EA, and P-EBT). For some analyses we made comparisons of the primary benefit redemption measures for FY 2022 with FY 2017, and for others, we examined differences within FY 2022. The primary measures analyzed included the average monthly transaction amounts, the number of monthly transactions, and the benefit exhaustion measures.

- **Changes related to the TFP reevaluation.** To isolate the changes associated with the TFP reevaluation, though still affected by P-EBT, we identified two groups of households in FY 2022: (1) households in the eight States with no EA at any point in FY 2022 and (2) households in eight States that ended EA in FY 2022, limited to the subset of months in which their States did not have EA.[1] We then compared the primary measures for FY 2022 with those from FY 2017.
- **Changes related to EA:** To examine changes in benefit redemption patterns between households who received EA and those that did not, we made comparisons of the primary transaction measures (1) between States that issued EA in FY and those who did not and (2) within households for months while EA was issued and months after EA ended.
- **Changes related to P-EBT.** We also examined differences in redemption patterns for households in months in which they received P-EBT compared to months they did not. We limited this analysis to States in which we were confident in our ability to identify P-EBT issuances, as described in Appendix F.

b. Online benefit redemption analysis

In this first analysis of online benefit redemption, we sought to describe the rate at which households redeemed benefits online. We then further examined redemption patterns among SNAP participants who redeemed a significant portion of benefits online, specifically those who redeemed at least 50 percent of

[1] Nine States stopped issuing EA in FY 2022. We do not include Alaska in the comparison because it had only one month without EA in FY 2022.

benefits through online retailers. For this group, we conducted both descriptive and multivariate analyses to identify the household characteristics associated with those who redeem a significant portion of benefits online.

C. Key Findings

1. Patterns of transactions and store use

The ALERT data show that households averaged 10.9 transactions per month and redeemed $39 per transaction (Table ES.1) in FY 2022. This was an increase in both the number of transactions and average transaction amount compared to FY 2017, when households averaged 9.4 transactions per month and $32 per transaction (adjusted for inflation). These increases are expected given the increase from the TFP adjustment received by all households, EA benefits for households in most States, and P-EBT for some households. When we limit the comparison to States that did not issue EA in FY 2022, so limiting the change to the TFP increase and P-EBT, we find households averaged fewer transactions than in FY 2017 (8.0 versus 8.7 transactions, respectively) with a higher average transaction amount ($39 versus $35, respectively).

Table ES.1. Average number of monthly transactions and amounts: FYs 2017 and 2022, across all States and States with no EA

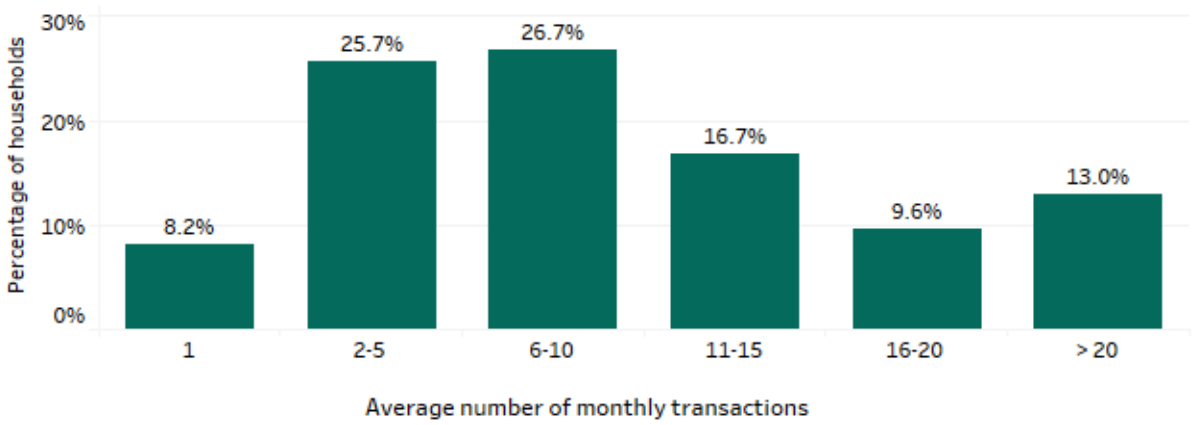
	Average Number of Transactions per Household		Average Transaction Amount	
Type of State	FY 2017	FY 2022	FY 2017	FY 2022
All States	9.4	10.9	$32.20	$39.08
States with no EA	8.7	8.0	$34.58	$39.00

Sources: Castner et al. (2020), FY 2017. Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

Note: Dollar values for FY 2017 converted to FY 2022 dollars using food at home Consumer Price Index values. FY 2022 tabulations include transactions made with P-EBT issuances.

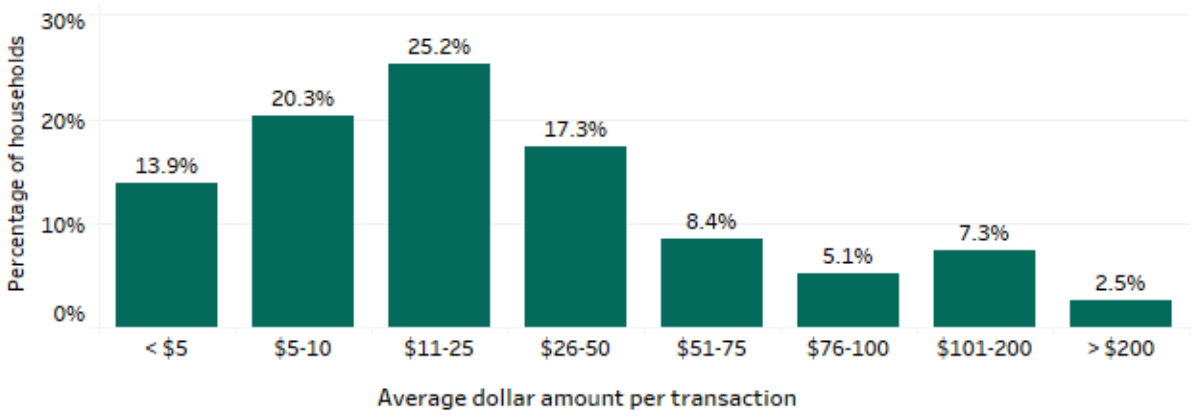
Around a quarter of households averaged two to five transactions each month, another quarter of households averaged six to ten transactions, and 13 percent of households averaged over 20 transactions (Figure ES.2). While households redeemed an average of $39 per transaction, over half of households averaged less than $25 per transaction, seven percent averaged between $100 and $200, and nearly three percent averaged over $200 (Figure ES.3).

Figure ES.2. Distribution of households by average number of transactions per month



Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

Figure ES.3. Distribution of households by average dollar amount per transaction



Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

2. Benefit redemption by day of the month

During FY 2022, the average SNAP household redeemed 56 percent of its issued benefit by day 7 and 79 percent by day 14 (Table ES.2). Households redeemed an additional 10 percent of their issued benefits by day 21 (redeeming 90 percent) and ultimately redeemed 94 percent by the end of the issuance month.[2] As a percentage of their cumulative benefit balance at the start of the issuance period, households, on average, redeemed 47 percent by day 7 and 67 percent by day 14. By the end of the month, households had redeemed 86 percent of their starting balance. Two-fifths (40 percent) of participating households reached a balance of less than $1 by the end of the month; about 9 percent had done so by day 7.

[2] Apparent discrepancies in calculations are due to rounding.

Table ES.2. Cumulative percentage of benefits redeemed by day of the month

Cumulative Percentage Type	Day 7	Day 14[a]	Day 21[b]	End of Month[c]
Cumulative percentage of issued benefits redeemed	56.3	79.5	89.6	94.4
Cumulative percentage of balance redeemed	47.3	67.2	78.3	86.0
Cumulative percentage of households with balance less than $1	9.3	19.7	29.9	40.2

Source: Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

Note: Analysis excludes periods with a P-EBT issuance. The percentage of issued benefits redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. The percentage of balance redeemed reflects the balance available at the beginning of the issuance period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022.

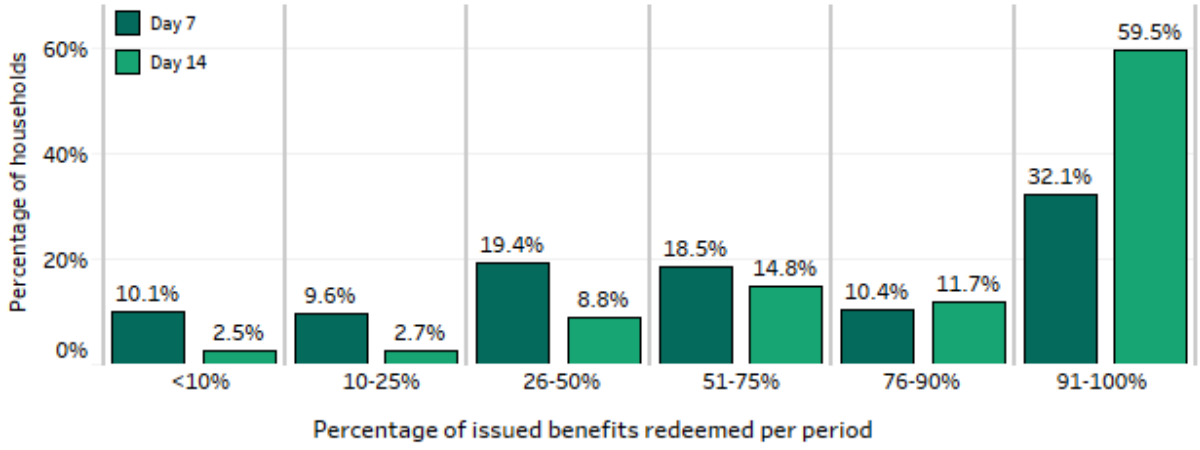
[a] Day 14 percentage includes only households with issuance periods of at least 14 days.

[b] Day 21 percentage includes only households with issuance periods of at least 21 days.

[c] End of month percentage includes only households with issuance periods of at least 28 days.

As we see in Figure ES.4, by day 7 of the issuance period 61 percent of households had redeemed more than 50 percent of their issued benefit (sum of 18.5, 10.4, and 32.1), with nearly one third of households (32 percent) redeeming 91 percent or more. By day 14, 86 percent of households had redeemed more than half of their issued benefit (sum of 14.8, 11.7, 59.5), and 60 percent of households had redeemed more than 90 percent. Figure ES.5 shows that 47 percent of households had redeemed more than half of their cumulative balance within the first 7 days (sum of 18.1, 10.1, and 19.1) and 71 percent had redeemed this much within the first 14 days (sum of 17.6, 13.7, and 39.8).

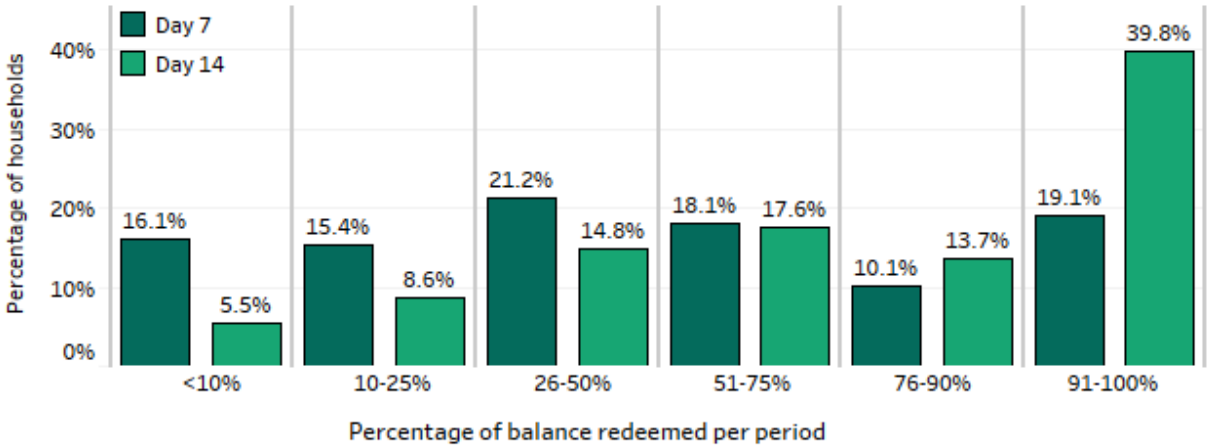
Figure ES.4. Percentage of households by benefits redeemed by days 7 and 14



Source: Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

Note: Analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from SNAP EBT redemption patterns observed over the period from September 2021 to October 2022. Day 14 percentage includes only households with issuance periods of at least 14 days.

Figure ES.5. Percentage of households by balance redeemed by days 7 and 14



Source: Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

Note: Analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022. Day 14 percentage includes only households with issuance periods of at least 14 days.

Overall, the proportion of standard and EA benefits redeemed at each measured point in time was tied to the issuance amount for the benefit period (Table ES.3). On average, households issued $200 or less in the issuance period redeemed 65 to 80 percent of benefits by day 7; households issued more than $200 redeemed 49 to 58 percent of their benefit by day 7. This trend continues throughout the issuance period, with those receiving a smaller issuance redeeming a larger percentage of their benefit by the end of each period. By the end of the month, households, on average, redeemed more than 90 percent of their benefit, regardless of issuance group.

Table ES.3. Percentage of benefits redeemed by each measured point in time

Issuance Amount	Day 7	Day 14[a]	Day 21[b]	End of Month[c]
< $25	79.5	91.8	94.4	97.6
$26-50	73.8	88.1	92.0	95.7
$51-100	77.1	93.2	96.3	96.5
$101-200	65.5	85.7	92.6	95.6
$201-300	56.4	78.3	87.8	93.3
$301-350	50.9	73.8	86.0	93.9
$351-400	57.5	81.4	90.5	92.9
$401-450	53.9	78.0	87.6	91.5
$451-500	51.5	75.2	86.8	93.4
> $500	48.8	73.0	86.2	93.9

Source: Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

Note: Analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard

and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022.

[a] Day 14 percentage includes only households with issuance periods of at least 14 days.

[b] Day 21 percentage includes only households with issuance periods of at least 21 days.

[c] End of month percentage includes only households with issuance periods of at least 28 days.

3. Unspent issuance and carryover

As we saw in Table ES.2, households redeemed, on average, 94 percent of their benefits during the month. The remaining 6 percent of benefits are carried over to the next month. For households in all States, the amount carried over from one period to the next may reflect unspent amounts from P-EBT issuances in the previous period(s). We removed from these analyses any periods that included a P-EBT issuance, but the P-EBT issuance may have occurred late in the removed period or be so substantial that the household did not redeem it before their next standard or EA issuance.

With some exceptions, the amount carried over into the next period increased in relation to the size of the issuance; the same was true for a household's ending balance (Table ES.4). On average, households did not spend $39 of their issuance each period and had an account balance of $198 at the end of the period. Households with an issuance for the benefit period under $26 carried over less than $1, while those receiving an issuance of more than $500 had $109 of that issuance left unspent at the end of the period. The average cumulative balance carried over at the end of the issuance period ranged from $120 for households receiving a $26-$50 issuance for the period to $341 for those receiving a $500 or more issuance.

Table ES.4. Value of unspent period's issuance and account balance at the end of the issuance period

Issuance Amount	Average Unspent Issuance[a] ($)	Average End-of-Period Balance[b] ($)
All households	38.95	197.67
Households by monthly issuance amount		
< $26	0.76	154.44
$26–50	2.34	119.71
$51–100	5.51	152.13
$101–150	11.33	145.99
$151–200	22.21	151.18
$201–$250	36.38	156.00
$251–300	29.10	185.17
$301–350	35.20	154.57
$351–400	55.72	255.75
$401–450	75.37	292.32
$451–500	67.01	230.45
> $500	108.55	341.15

Source: Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

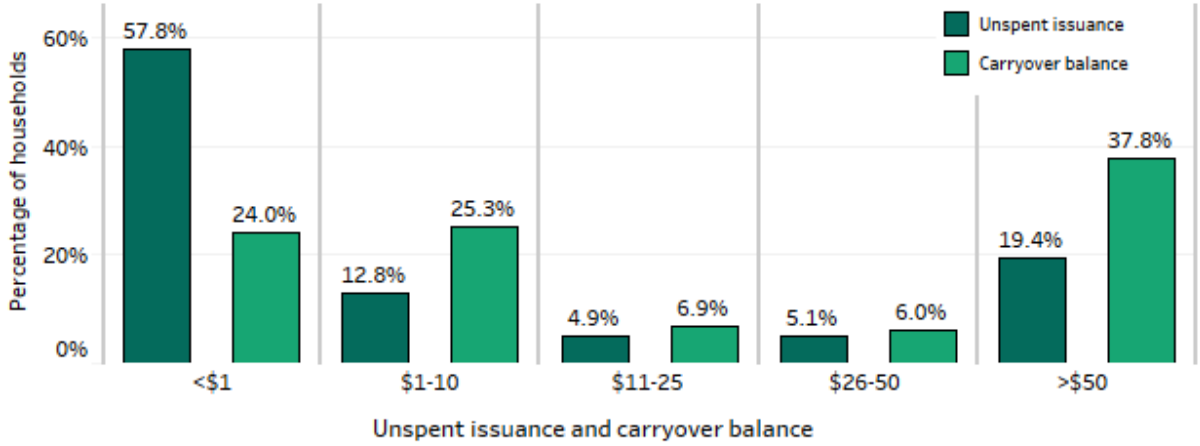
Note: Analysis excludes periods with a P-EBT issuance. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022.

[a]Unspent issuance is the amount of issuance unredeemed each issuance period, taken as the maximum of zero and (issuance minus redemption). This measure ignores unspent issuance from prior issuance periods.

[b]The ending balance is the EBT account balance at the time of the next issuance. This measure reflects the long-run accumulation of unspent issuance from all prior issuance periods.

Although, on average, households carried over a cumulative ending balance of nearly $200 from one period to the next, the majority of households did not leave more than $25 of the current period's issuance unspent or have a cumulative account balance greater than $25 at the end of the period. Figure ES.6 shows that more than 75 percent of all households had $25 or less unspent from their issuance for the period (sum of 57.8, 12.8, and 4.9), and 56 percent had carried over an account balance at the end of the period of no more than $25 (sum of 24.0, 25.3, and 6.9). The large average balances households may have carried over from P-EBT issuances and from short issuance periods that began with large issuances contributed to some very high carryover amounts. For example, a household may have received a $50 standard issuance just a week after receiving a $200 EA issuance. Their issuance period for the $200 would be six days. If the household redeemed $100 in those six days, but did not redeem benefits again until after the $50 issuance, it would be identified as leaving $100 of the $200 unspent in that six-day period, even though they likely would redeem much of that $100 during the next issuance period. These large amounts pulled the average end-of-period balances, even for households with small issuances, well over $100. Additional analysis indicated the national average of the State medians of the carryover balances was $17.80 (Appendix B, Table B.21a).

Figure ES.6. Percentage of households by amount of unspent issuance and carryover balance



Source: Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

Note: Unspent issuance is the amount of issuance unredeemed each issuance period, taken as the maximum of zero and (issuance minus redemption). This measure ignores unspent issuance from prior issuance periods. Analysis excludes periods with a P-EBT issuance. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022.

4. Prevalence of transaction inactivity

During FY 2022, the percentage of all households identified as having received an issuance in a month but not making a transaction in that month was 5 percent (Table ES.5). Among inactive households, the majority were inactive for only 1 month of 12: about 0.5 percent of all households had 2 or more months of inactivity, either consecutively or at different points in FY 2022.

Table ES.5. Prevalence of inactivity during FY 2022

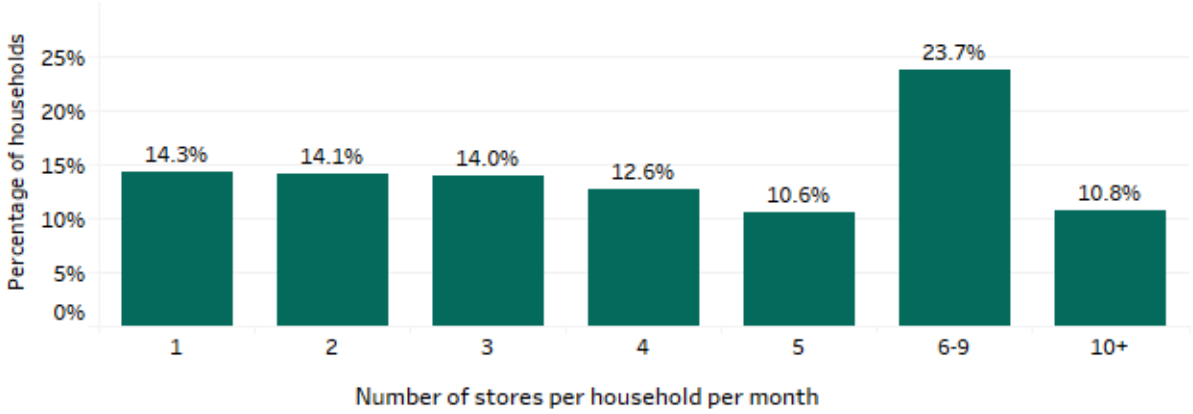
Inactivity Status	Percentage of Households
Percentage of households ever inactive	5.2
Percentage of households with consecutive months of inactivity	0.3
Percentage of households by number of months of inactivity	
0	94.8
1	4.7
2	0.4
More than 2	0.1

Source: Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

5. Transactions by store type

Households typically redeemed benefits at five different stores per month (Figure ES.7). Around 24 percent of households accessed six to nine unique stores per month, and 11 percent accessed more than 10 stores.

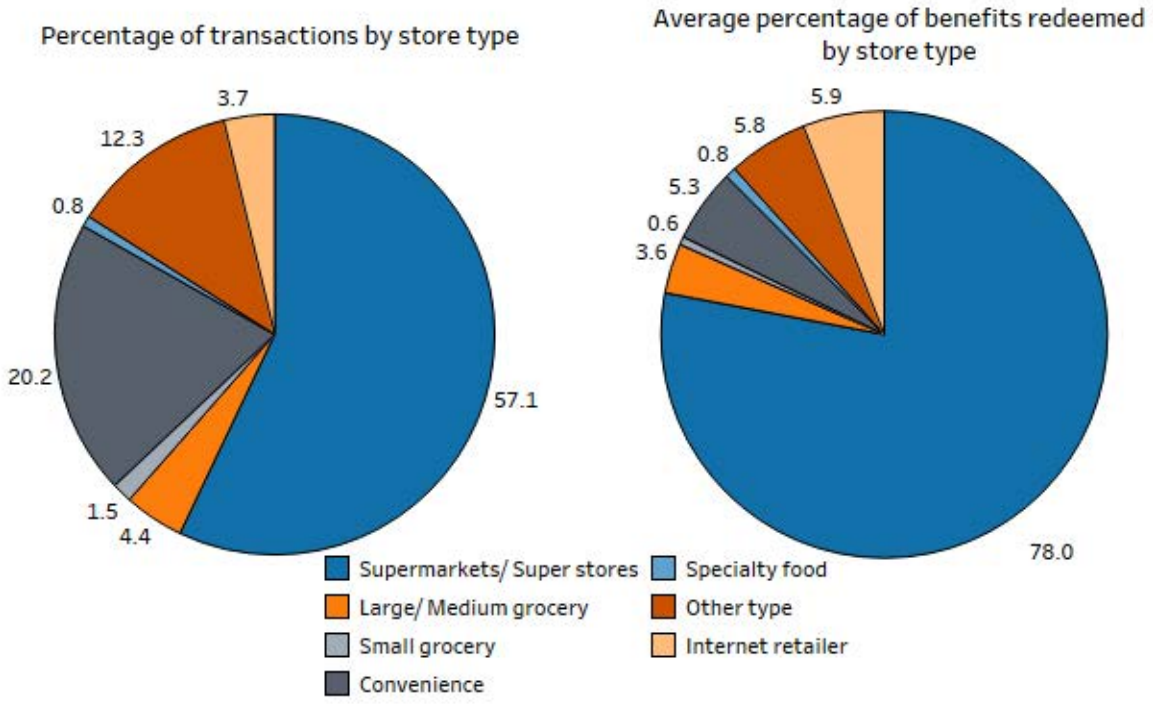
Figure ES.7. Average number of stores accessed by households per month



Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

As found in prior studies, supermarkets/super stores accounted for the highest number of transactions across all States and the largest percentage of benefits redeemed. Nationally, 57 percent of transactions occurred at supermarkets/super stores, followed by 20 percent at convenience stores (Figure ES.8). As a percentage of total benefit dollars, households redeemed 78 percent at supermarkets/super stores.

Figure ES.8. Percentage of transactions and benefits redeemed by store type



Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

Across store types, the largest average transaction amounts were made at internet retailers at $63, followed by supermarkets/super stores at $53 (Figure ES.9). Convenience stores had the smallest average transaction amounts ($10).

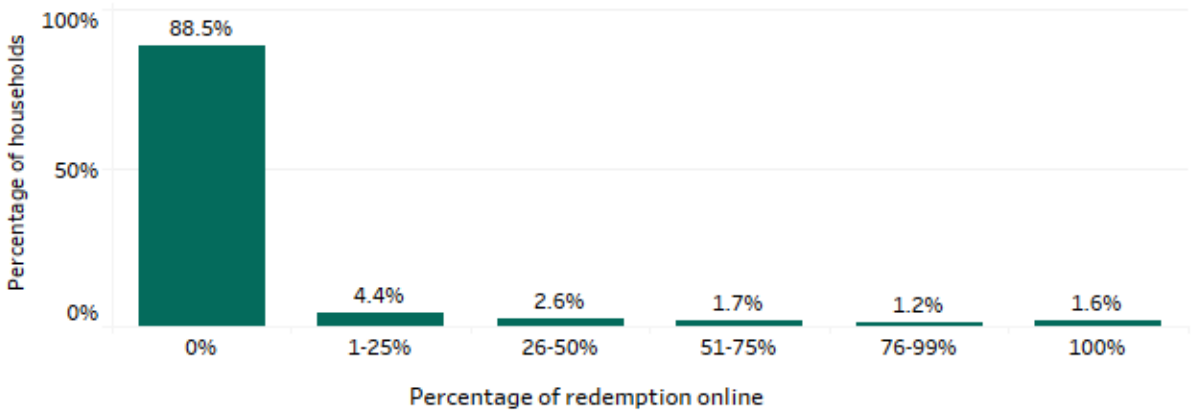
Figure ES.9. Average transaction amounts by store type

Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

6. Redemption at internet retailers

Internet retailers include both online-only grocery options and online retail options offered by brick-and-mortar stores that are separately authorized to accept SNAP benefits online. Further exploration of redemption at internet retailers showed that in an average month during FY 2022, 89 percent of households did not redeem any benefits online (Figure ES.10). About 4 percent of households redeemed up to a quarter of their total monthly SNAP EBT redemption online, 3 percent redeemed between a quarter and half of their monthly redemptions online, and about 5 percent redeemed over half of their monthly redemptions online.

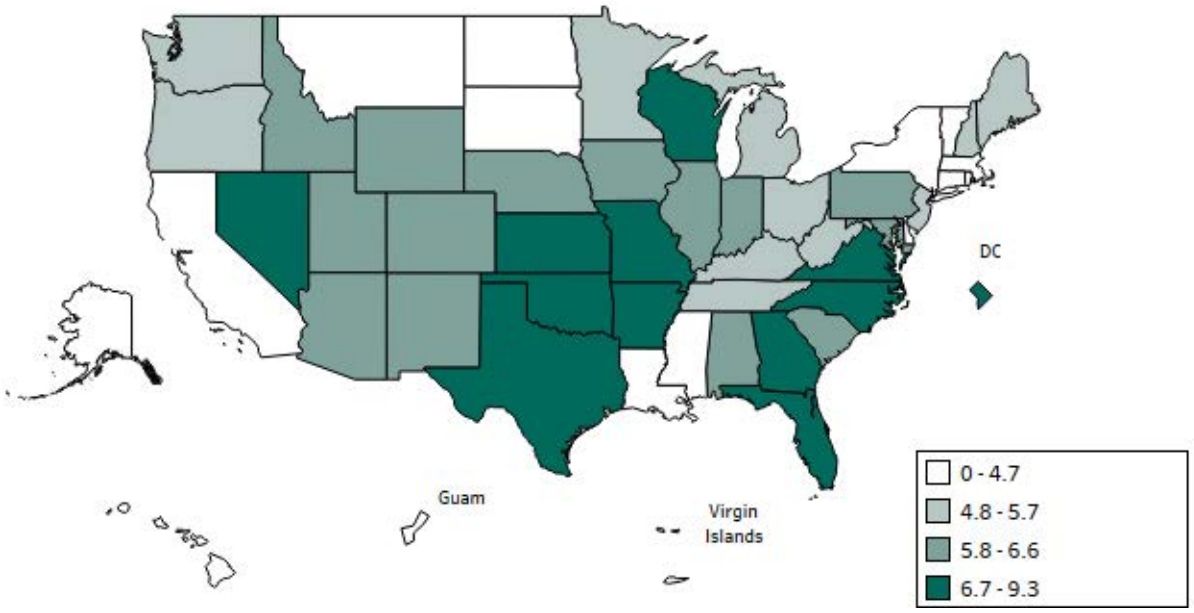
Figure ES.10. Distribution of households by percentage of redemption online



Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

Internet retailers accounted for an average of nearly 4 percent of transactions among SNAP households (Figure ES.8). However, because participants redeemed a larger average purchase amount at internet retailers than at any other store type (an average of $63 per transaction; Figure ES.9), transactions at internet retailers accounted for an average of 6 percent of all benefits redeemed in FY 2022. Texas (9 percent), the District of Columbia (9 percent), Georgia (8 percent), and Oklahoma (8 percent) were among the States with households that redeemed the highest percentage of their benefits online (Figure ES.11).

Figure ES.11. Percentage of redemptions at internet retailers



Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

From FY 2017 to FY 2022, SNAP households shifted their share of transactions toward online purchasing and away from all categories of brick-and-mortar stores (Table ES.6). The largest reductions were at small grocery, convenience stores, and large/medium grocery stores (approximately 1 percentage point decrease in the share of transactions at each type). In contrast, the biggest shift in the dollar amount of benefits redeemed at brick-and-mortar stores came from supermarkets/super stores. SNAP households reduced the share of dollars redeemed at supermarkets/super stores by 4 percentage points (82 percent versus 78 percent), shifting dollars redeemed toward internet retailers. Because supermarkets/super stores are also most likely to have an online option, some of these online shopping transactions were likely still being redeemed at the online retail equivalent of the same supermarkets/super store chains.

Table ES.6. Percentage of transactions and benefits redeemed by store type across FY 2017 and FY 2022

Store type	Percentage of Transactions by Store Type		Percentage of Benefits Redeemed by Store Type	
	FY 2017	FY 2022	FY 2017	FY 2022
Supermarkets/super stores	57.4	57.1	82.1	78.0
Large/medium grocery	5.1	4.4	4.1	3.6
Small grocery	2.6	1.5	1.2	0.6
Convenience	21.2	20.2	5.5	5.3
Specialty food	1.2	0.8	1.1	0.8
Internet retailer	n.a.	3.7	n.a.	5.9
Other type	12.5	12.3	5.9	5.8

Source: Castner et al. (2020), FY 2017. Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

Note: FNS classifies stores into 25 types, which were collapsed into the 7 categories shown in the table. Specialty food stores include bakeries and bread stores, fruit and vegetable markets, meat and poultry markets, and seafood markets. Other stores include groceries in combination with other stores, delivery routes, farmers markets, nonprofit food buying cooperatives, wholesalers, and others.

n.a. = not applicable.

7. Redemption patterns for subgroups

Redemption patterns in FY 2022 varied most widely across household characteristics that affect a household's benefit amount. For example, households with four or more people averaged 20.9 transactions per month and redeemed $62 per transaction, compared to 9.3 transactions per month and $48 per transaction for one-person households (Table ES.7).

Table ES.7. Redemption patterns by household size

Household size	Average number of transactions	Average EBT transaction amount
1 (n=21,927)	9.3	$48.05
2 (n=5,842)	12.5*	$53.39*
3 (n=4,035)	16.5*	$57.38*
4+ (n=5,374)	20.9*	$61.76*

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average monthly statistics over the three months centered on the QC sample month.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Households with children, that tend to be larger than other households shopped more often and redeemed more per transaction than households without children (Table ES.8). The average number of transactions for households with children (17.0) was almost twice as high compared to that of households without children (9.6). Households with children redeemed $58 per transaction, compared to $49 for households without children.

Table ES.8. Redemption patterns by presence of children

Household composition	Average Number of Transactions	Average EBT Transaction Amount
Households with children (n=13,077)	17.0	$57.87
Households without children (n=24,101)	9.6*	$48.56*

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average monthly statistics over the three months centered on the QC sample month.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Households with children, on average, also redeemed their benefits earlier in the issuance period than households without children (Table ES.9). By day 7, 6 percent of households with children had redeemed less than 10 percent of benefits while about twice as many households without children had redeemed this low percentage). However, about a third of both groups redeemed more than 90 percent of their benefits by day 7 and about two thirds of each group redeemed more than 90 percent at day 14.

Table ES.9. Benefits redeemed by Days 7 and 14 by presence of children

	Percentage of Households Redeeming Benefits by			
	Day 7		Day 14[a]	
Percentage of benefits redeemed	With children	Without children	With children	Without children
<10%	5.7	11.4*	1.1	2.4*
10-25%	8.2	9.3*	1.4	2.4*
26-50%	19.7	18.1*	5.9	7.8*
51-75%	20.5	17.0*	13.0	12.1*
76-90%	10.5	9.6*	10.6	9.2*
>90%	35.3	34.6	68.0	66.1*

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average statistics over the three months centered on the QC sample month.

Note: Analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022

[a]Day 14 percentage includes only households with issuance periods of at least 14 days.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table rows, relative to the first column in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Households with employment earnings had more transactions and compared to households without earnings but redeemed their benefits at similar rates. As seen in Table ES.10, households with earnings averaged 15 transactions per month at $53 per transaction while households without earnings averaged 11 transactions per month at $51 per transaction. At each of the measured times, though, each group had redeemed a similar percentage of their benefits, reaching an average of 61 percent by day 7 (Table ES.11).

Table ES.10. Redemption patterns by employment status

Employment Status	Average Number of Transactions	Average EBT Transaction Amount
Households with earnings (n=9,597)	15.3	$53.35
Households without earnings (n=27,581)	11.2*	$51.36*

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average monthly statistics over the three months centered on the QC sample month.

Note: Households with earnings had an average household size of 2.9 people and average monthly benefit of $583; households without earnings had an average household size of 1.6 people and average monthly benefit of $394.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Table ES.11. Benefits redeemed by day of the month by presence of earnings

Earnings Status	Day 7	Day 14[a]	Day 21[b]	End of Month[c]
Cumulative percentage of benefits redeemed				
Households with earnings (n=9,597)	60.8	83.8	93.8	99.0
Households without earnings (n=27,581)	61.0	83.5	93.5	99.0

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average statistics over the three months centered on the QC sample month.

Note: Analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022. Because these measures are from a sample of approximately 37,000 SNAP households in the SNAP QC data, the statistics shown in this section may differ from the national and State-level estimates taken from a sample of approximately 6.6 million households. In addition, by selecting a three-month window around the QC interview month when some States issue EA for only part of the year may lessen the national representativeness of the QC findings. Our focus in this section is how the subgroup estimates are different from each other, rather than the overall magnitude of the findings.

[a] Day 14 percentage includes only households with issuance periods of at least 14 days.

[b] Day 21 percentage includes only households with issuance periods of at least 21 days.

[c] End of month percentage includes only households with issuance periods of at least 28 days.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

8. Characteristics of households who redeemed a significant portion of benefits online

In this first exploration of online SNAP benefit redemption, we conducted a regression analysis to identify characteristics of households who redeemed at least 50 percent of their benefits online. Holding other characteristics constant, race and ethnicity, household type, and FNS region had the largest statistically significant associations with the likelihood of a household redeeming a significant portion of their benefits online. Specifically, the following factors were associated with a higher likelihood of redeeming a significant portion of benefits online:

- Households with 4 or more members, compared to single-person households (2 percentage point difference)
- Households headed by a White, non-Hispanic person, compared to those headed by a Hispanic, Asian, or Native American person (between 2 and 11 percentage point difference)

- Households residing in the Southwest, Southeast, and Mountain Plains Regions, compared to those in the Midwest Region (between 1 and 2 percentage point difference)
- Households residing in a metropolitan area, compared to those in a nonmetro, noncore county (2 percentage point difference)

After accounting for differences between households in a broad set of characteristics, such as with the presence of earnings and number of people in the household, SNAP units with children only (no adults) and those with elderly members or members with a disability were less likely than households with no children to redeem a significant portion of their benefits online. Based on descriptive averages, households with children were more likely than those without children to redeem a significant portion of their benefits online (Appendix A, Table A.9b). However, this relationship was not statistically significant after holding other household characteristics, such as household size, constant.

Households with earnings were less likely than those without earnings to redeem a significant portion of their benefits online, after accounting for other characteristics including household composition, region, and race and ethnicity. There was no statistically significant association between a household's total monthly SNAP benefit (including any EA they may have been eligible for) and their likelihood of redeeming a significant portion of their benefits online.

9. Influence of Benefit Changes Since FY 2017

Average benefits were higher in FY 2022, relative to the previous study of benefit redemption from FY 2017. We sought to tease out how each of the factors increasing benefits may have affected benefit redemption patterns by isolating the benefit increases to the extent possible.

a. TFP increase

With the increase to the TFP, paired with P-EBT issuances for some households with children, households had higher average transaction amounts in FY 2022 than in FY 2017 but made about 1 fewer transaction each month. The TFP increase showed little association with the rate at which households redeemed their benefits. We attempted to isolate the TFP and P-EBT increase from the EA increase by comparisons with FY 2017 only for States that did not have EA for all or part of FY 2022. We compared the FY 2022 and FY 2017 values for the eight States without EA at any point in FY 2022 and the eight States without EA for part of that year. We found that in States without EA, the average number of transactions dropped from 8.7 in FY 2017 to 8.0 in FY 2022, the average transaction amount (in FY 2022 dollars) increased from about $35 to $39 (Table ES.12), and total redemption increased from $288 to $311. In States without EA in some months, the average number of transactions dropped from 9.6 in FY 2017 to 8.8 in the months with no EA in FY 2022. At the same time, the average transaction amount increased from just over $33 to just over $38, and total redemption increased from $311 to nearly $337. Households in State without EA redeemed about 58 percent of their benefits by day 7 and 96 percent by the end of the month in both FY 2017 and FY 2022 (Table ES.13). Households in States that had no EA for part of the year redeemed about 64 percent of their benefits by day 7 in those months without EA in FY 2022 compared to 60 percent in FY 2017, a difference which could be due to seasonality because we are comparing averages across all of FY 2017 with the last five to nine months of FY 2022. By the end of the month, households in both years had, on average, redeemed 96 percent of their benefits.

Table ES.12. Average Number of Monthly Transactions and Amounts: FYs 2017 and 2022, across States with no EA and States ending EA

Type of State	Average Number of Transactions per Household		Average Transaction Amount		Monthly Household Total Redemption Amount	
	FY 2017	FY 2022	FY 2017	FY 2022	FY 2017	FY 2022
Non-EA States (n=8)	8.7	8.0	$34.58	$39.00	$288.40	$311.49
States ending EA, in months without EA (for FY 2022) (n=8)	9.6	8.8	$33.07	$38.05	$311.06	$336.73

Sources: Castner et al. (2020), FY 2017. Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

Note: Dollar values for FY 2017 converted to FY 2022 dollars using food at home Consumer Price Index values. FY 2022 tabulations include transactions made with P-EBT issuances.

Table ES.13. Average percentage of benefit issuance redeemed by days since issuance: FYs 2017 and 2022, across States with no EA and States ending EA

Type of State	Cumulative Percentage of Benefit Issuance Redeemed by Days Since Issuance							
	FY 2017				FY 2022			
	Day 7	Day 14[a]	Day 21[b]	End of Month[c]	Day 7	Day 14[a]	Day 21[b]	End of Month[c]
Non-EA States (n=8)	57.8	78.1	89.4	96.0	58.2	79.2	89.7	96.0
States ending EA, in months without EA (for FY 2022) (n=8)	60.0	79.8	90.4	96.4	63.9	83.3	91.8	96.0

Sources: Castner et al. (2020), FY 2017. Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

Note: There are no calendar month-specific measures from the FY 2017 study that allow for a direct comparison within the same calendar months from FY 2017 to FY 2022. Households in States that ended EA in FY 2022 have varying months with no EA and may carry higher balances in the months immediately after EA ended in their State. The FY 2022 analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022. A household's issuance period begins on the day they received a benefit issuance and ends on the day before they received their next issuance. Households receiving standard and EA benefits in separate issuances have issuance periods of less than one month that vary in length. See Table B.32 for the distribution of household issuance periods by length.

[a] Day 14 percentage includes only households with issuance periods of at least 14 days.

[b] Day 21 percentage includes only households with issuance periods of at least 21 days.

[c] End of month percentage includes only households with issuance periods of at least 28 days.

b. Presence of EA

With EA, paired with P-EBT issuances for some households with children, households conducted about 3 more transactions each month than those without EA, though the average transaction amount was about the same for both groups (11.3 versus 8.0; Table ES.14). When averaging across issuance periods of all lengths, we found households with EA also redeemed their benefits at a slower rate than those without EA. Within the first week following their benefit issuance, households with EA redeemed about 56 percent of that issuance period's benefit; they redeemed 94 percent of benefits by the end of the month (Table ES.15). Households without EA redeemed 58 percent in the first 7 days and 96 percent by the end of the month.

Table ES.14. Transactions and amounts for States with and without EA in FY 2022

Measure	States with EA (36 States)	States with no EA (8 States)
Average number of transactions per household	11.3	8.0
Average transaction amount	$39.04	$39.00
Monthly household total redemption amount	$438.51	$311.49

Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Benefit exhaustion statistics are based on a random sample of approximately 20,000 households per State and month.

Note: Table excludes States that ended EA during FY 2022. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022. A household's issuance period begins on the day they received a benefit issuance and ends on the day before they received their next issuance. Households receiving standard and EA benefits in separate issuances have issuance periods of less than one month that vary in length. See Table B.32 for the distribution of household issuance periods by length.

Note: Includes transactions made with P-EBT issuances.

Table ES.15. Benefit exhaustion patterns for States with and without EA in FY 2022

Measure	States with EA (36 States)	States with no EA (8 States)
Cumulative percentage of monthly benefit redeemed by:		
Day 7	55.9	58.2
Day 14[a]	79.5	79.2
Day 21[b]	89.5	89.7
End of month[c]	93.8	96.0

Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Benefit exhaustion statistics are based on a random sample of approximately 20,000 households per State and month.

Note: Table excludes States that ended EA during FY 2022. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022. A household's issuance period begins on the day they received a benefit issuance and ends on the day before they received their next issuance. Households receiving standard and EA benefits in separate issuances have issuance periods of less than one month that vary in length. See Table B.32 for the distribution of household issuance periods by length.

[a] Day 14 percentage includes only households with issuance periods of at least 14 days.

[b] Day 21 percentage includes only households with issuance periods of at least 21 days.

[c] End of month percentage includes only households with issuance periods of at least 28 days.

c. Presence of P-EBT

In periods with P-EBT issuances, households made more transactions but were also likely to leave more benefits unredeemed than in periods without P-EBT. They used those benefits in subsequent months. Because P-EBT issuances can be relatively large, such as $391 for each child in the household, we see that households averaged a higher number of transactions in periods with P-EBT than without (15.9 versus 11.1, respectively), although the average transaction amount difference was less than $1 (Table ES.16). Households continued to redeem carried-over P-EBT benefits in the months without P-EBT, which we can see because while one-fifth of households redeemed all of their account balance in months with P-EBT, that rose to more than one third (37 percent) for those same households in months without P-EBT (Table ES.17).

Table ES.16. Average number of transactions and amounts, for P-EBT issuance periods versus non-P-EBT issuance periods, FY 2022

Average Number of Transactions per Household		Average Transaction Amount	
Periods with P-EBT	Periods with no P-EBT	Periods with P-EBT	Periods with no P-EBT
15.9	11.1	$58.70	$58.07

Source: Mathematica tabulations of ALERT data, FY 2022. Average monthly statistics based on a random sample of approximately 20,000 households per State and month.

Note: Universe includes only households that have at least one P-EBT issuance. . A period with P-EBT is an issuance period that began with a standard or EA issuance that also has a P-EBT issuance before the next standard or EA issuance.

Table ES.17. Changes across periods with and without P-EBT in the percentage of account balance carried over to the next issuance period, FY 2022

Distribution of Households by Percentage of Account Balance Carried Over from One Period to the Next (Percentage of Households)									
Periods with P-EBT					Periods with no P-EBT				
Zero	1-25%	26-50%	51-75%	76-100%	Zero	1-25%	26-50%	51-75%	76-100%
20.5	35.0	21.7	16.0	6.8	37.2	34.7	11.5	9.5	7.1

Source: Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

Note: For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022. A household's issuance period begins on the day they received a benefit issuance and ends on the day before they received their next issuance. Households receiving standard and EA benefits in separate issuances have issuance periods of less than one month that vary in length. A period with P-EBT is an issuance period that began with a standard or EA issuance that also has a P-EBT issuance before the next standard or EA issuance. See Table B.32 for the distribution of household issuance periods by length. Universe includes only households that have at least one P-EBT issuance.

I. Introduction

A. Background

As the cornerstone of the nation's nutrition safety net, the Supplemental Nutrition Assistance Program (SNAP) provides monthly benefits to households with low incomes to reduce food insecurity and improve health and well-being. To help SNAP participants maintain their food purchasing power, policymakers and the U.S. Department of Agriculture (USDA) Food and Nutrition Service (FNS) periodically realign benefits to account for inflation and support households through unexpected and unpredictable hardships. For example, FNS annually adjusts the maximum benefit amounts to reflect higher food prices and replaces household benefits in cases of personal emergencies, such as house fires, and natural disasters, such as hurricanes. Policymakers have also increased benefit amounts in response to economic shocks, such as the Great Recession in 2008 and 2009, during which the maximum benefit was increased 13.6 percent. From 2020 to 2023, many households received additional benefit allotments in response to the COVID-19 public health emergency. Additionally, at the start of FY 2022, benefits increased due to a reevaluation of the Thrifty Food Plan (TFP).

FNS periodically funds studies of SNAP participants' benefit redemption patterns, including the average number and dollar amount of transactions made with SNAP benefits in a month, the types of retailers at which participants redeem their benefits, and the number of days or weeks that elapse before participants redeem most of their monthly benefit. Conducting the study immediately following a substantial increase in benefit amounts or benefit distribution provides a unique opportunity to examine how participants' redemption patterns change in response to the benefit increase. For example, Castner and Henke (2011) explored the changes in redemption patterns that resulted from the mid-year increase during the 2008–2009 Great Recession, finding evidence that redemption patterns differed as household benefits increased. On average, households with higher monthly benefits made more transactions with their benefits, redeemed benefits at more retailers, and had higher end-of-month balances than those with lower monthly benefits.

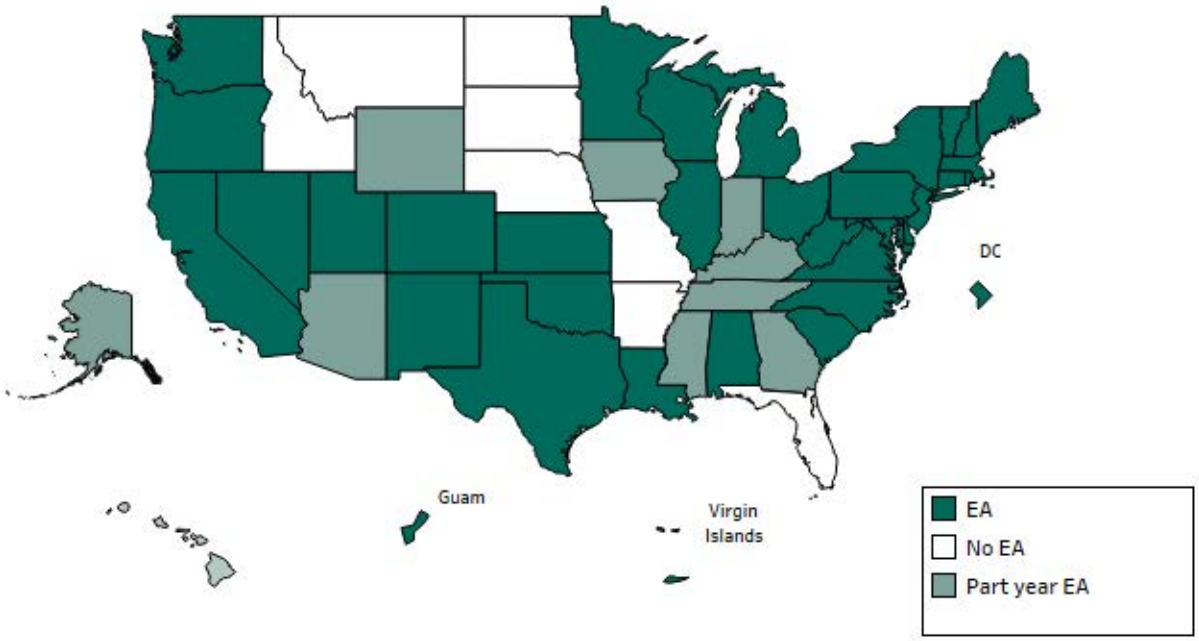
This study of fiscal year (FY) 2022 benefit redemption patterns provides an opportunity to examine redemption patterns in a year when nearly all participants received a higher benefit than in previous years. In addition, households could redeem benefits online, an option that was not available in FY 2017, which was the focus of the most recent study of benefit redemption patterns (Castner et al. 2020).

B. Changes to the SNAP environment

In the FY 2022 study period, SNAP households saw one or more increases in their benefit issuance because of the following factors:

- **Emergency allotments (EA).** In response to the COVID-19 pandemic, from April 2020 through February 2023, States had the option to provide households with an additional allotment that would bring their total monthly issuance up to at least the maximum benefit allowable for their household size (see box below). Thirty-six States (including the District of Columbia, Guam, and the Virgin Islands as States), issued EA to all households throughout FY 2022, 9 States offered EA for part of the year, and 8 States did not offer EA during FY 2022 (Figure I.1).

Figure I.1. States issuing EA benefits in FY 2022



EA=emergency allotments.

- **Pandemic electronic benefit transfer (P-EBT).** Beginning in 2020 and continuing into FY 2023, States had the option to provide additional benefits via EBT cards to households with (1) school-age children who were eligible for free or reduced-price lunches and/or (2) children under age 6 who were in covered childcare facilities and receiving SNAP. The purpose of P-EBT was to compensate households for children's missed meals when schools or childcare centers closed or reduced hours due to the COVID-19 pandemic. Households with school-age children could be eligible for P-EBT even if they did not participate in SNAP.

Standard benefits combined with EA provide households with the maximum benefit

During FY 2022, EA brought each household's benefit up to the maximum for its household size. If the additional benefit would have been less than $95, the household received a $95 EA. For example, a single-person household receiving a regular benefit of $20 received an EA benefit of $230 ($250 minus $20); a two-person household receiving a regular benefit of $400 received an EA benefit of $95—$59 to bring them to the maximum benefit and an additional $36 to reach the $95 minimum. For the 48 contiguous States, the maximum benefit amounts are shown in the table.

See https://www.fns.usda.gov/snap/fy-2022-cost-living-adjustments for the higher maximum benefit amounts for Alaska, Hawaii, Guam, and the Virgin Islands.

Household size	Maximum benefit
1	$250
2	$459
3	$658
4	$835
5	$992
6	$1,190
7	$1,316
8	$1,504
Each additional	+$188

Though P-EBT benefits were issued infrequently, the benefit amounts could be substantial, with standardized summer issuances for FY 2022 set to $391 per child.[3] Early qualitative research related to households' use of P-EBT benefits indicates that recipients used the food dollars to purchase more food in bulk and visit more stores, and the additional benefits reduced the need to ration benefits during the month (Barnes et al. 2023; Fern et al. 2023).

- **TFP adjustment.** The cost of the TFP market basket provides the basis for the annual adjustments to the maximum SNAP benefit amounts. In 2021, a TFP reevaluation, the first since its conception in 1975, reassessed the cost of the TFP market basket upwards by 21 percent relative to the TFP at that time. Accordingly, maximum benefits increased in FY 2022. For a household of four in the 48 contiguous States, for example, the monthly maximum benefit increased from $680 to $835.

  Although EA was offered only in some States and P-EBT benefits were only available to some households with children, the TFP increase in the maximum allotment amount applied across all participant benefit levels in all States. The average per-person benefit increased to $230.34 in FY 2022, from $216.19 in FY 2021 and $125.47 in FY 2017, the period studied in the most recent examination of SNAP redemption patterns (FNS 2024a).

Additional factors that may have affected benefit redemption patterns in FY 2022 include:

- **Online redemption.** The Food Industry Association found that in 2020, among all shoppers in the United States, almost half had purchased groceries online, a rate double that of 2019 (Markenson 2020). As the COVID-19 pandemic progressed, FNS accepted many State applications for online purchasing, allowing SNAP participants to use their benefits to make food purchases online. By FY 2022, 49 States and the District of Columbia had implemented online purchasing using SNAP benefits to facilitate grocery pickup or delivery.[4,5] This technology is especially well suited for households with children, to reduce time spent in the store; participants with compromised immune systems, who need to limit their exposure to the public; and those with limited access to a vehicle, who can schedule their grocery pickup or have the groceries delivered to their home.
- **Stolen benefits.** Increased use of technology for delivering benefits creates new opportunities for fraudulent use of benefits. By FY 2022, the incidences of stolen benefits, whether through skimmers at point-of-sale machines, card cloning, phishing activities, or similar methods, had grown so substantial that Congress passed a law in December 2022 to protect and replace stolen benefits (Public Law 118-83). While the replacement of benefits under this law did not occur within FY 2022, the redemption patterns identified in this study will include any redemption from these stolen benefits. Although each

[3] States could set their own level of school meal reimbursement or use a USDA-determined standard benefit that relieved them of the burden of calculating their own benefit based on State-specific school district calendars. The standardized daily rate for the 48-contiguous States $7.10 per day in school year 2021-2022 and $391 for summer 2022.

[4] Alaska, the only State not offering online SNAP redemption in FY 2022 implemented it in June 2023. At the time of this publication, neither Guam nor the Virgin Islands offered online benefit redemption.

[5] SNAP benefits can be used to order and purchase eligible food items online through authorized retailers but cannot be used to cover additional fees that may be associated with online purchases (such as delivery fees or other associated charges).

individual household victimized by the fraud was substantially affected, the impact on this study's results is likely to be negligible.

C. Data files and overview of methodology

The study team used data sources and methods that were consistent with previous studies, where feasible, to allow for as much comparability across the study periods as possible. The data and methods are briefly described here; additional details appear in Appendix F.

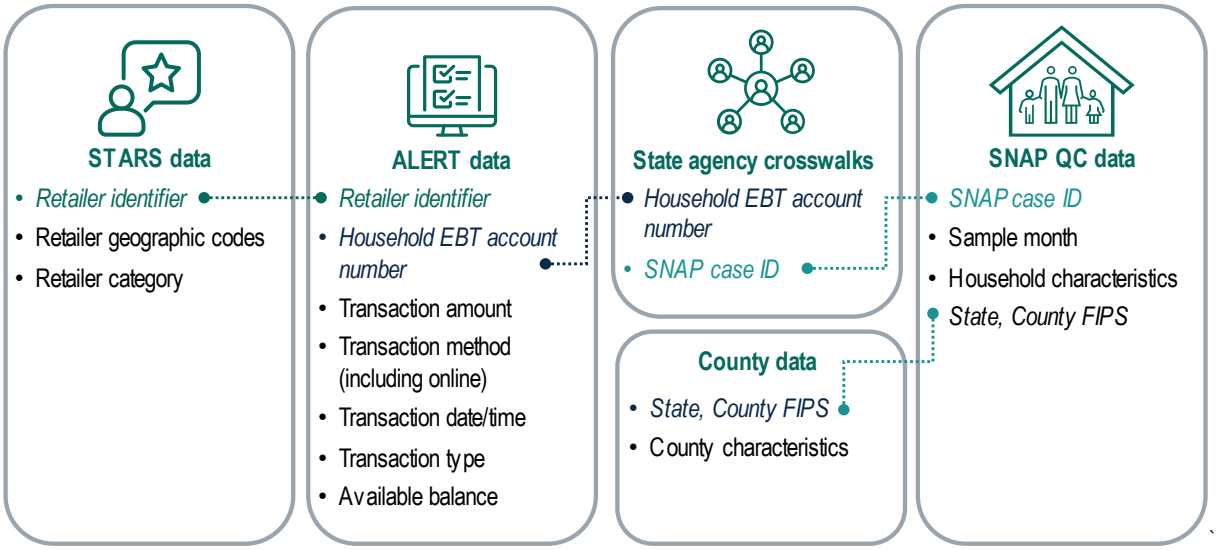
1. Datafiles

The analysis files relied primarily on three sets of data:

1. Anti-Fraud Locator using EBT Retailer Transactions (ALERT)
2. Store Tracking and Redemption System (STARS)
3. SNAP Quality Control (SNAP QC)

We combined these primary data sets with additional data including county characteristics and State issuance schedules. Figure I.2 summarizes the types of information available in each file, as well as the variable used for linking.

Figure I.2. Contents and linkages among transaction, retailer, administrative, and secondary data



a. ALERT

The ALERT data include EBT transaction records for each participating household. Each transaction record contains the SNAP household's State of residence, household account number, and EBT card number; retailer identifier and retailer State; date and time of transaction; transaction type and amount; and household EBT account balance. The study team obtained data for September 2021 through May 2023, with the focus of the analysis on October 2021 through September 2022.

b. STARS

The STARS extract provided to the study team contains information about each retailer authorized to redeem SNAP benefits during the period September 2021 through October 2022**.** Each record in the extract contains a store identification number, location, and store type. Store types are further categorized for the purposes of this study (Table I.1).

Table I.1. Store classifications

Study classification	FNS store type in STARS
Supermarket/super store	Supermarket, super store
Large/medium grocery store	Large grocery store, medium grocery store
Small grocery store	Small grocery store
Convenience	Convenience store
Specialty food	Bakery, fruit and vegetable market, meat and poultry market, seafood market
Internet retailer	Internet retailer
Other	Stores classified as combination grocery/other, communal dining facility, delivery route, direct marketing farmer, drug and/or alcohol treatment program, farmers market, food buying cooperative, group living arrangement, homeless meal provider, meal delivery service, military commissary, private for-profit restaurant, private for-profit senior citizen's center residential building, and shelter for battered women and children

c. SNAP QC data and State crosswalks

The FY 2022 SNAP QC database contains detailed demographic, economic, and SNAP eligibility information for a nationally representative sample of 41,391 SNAP households. The raw datafile is generated from monthly reviews of SNAP cases conducted by State SNAP agencies as part of their QC reviews. The study team primarily used the edited version of the file FNS provided, which includes a monthly and fiscal year weight and a variety of constructed economic and demographic variables.

To match SNAP QC households with their ALERT records, we used the raw, nonpublic SNAP QC file to obtain each household's SNAP case number. For 25 States, the SNAP case number was the same as the ALERT household account number, and SNAP QC households were matched directly with ALERT records. We asked the remaining States to provide a crosswalk file allowing a link of the SNAP QC household with ALERT records. We received crosswalks for all 28 States.

d. Other data

We gathered additional data for use in analysis from the following sources:

- **Poverty data by county.** We collected data on county-level poverty rates and population density based on U.S. Census Bureau estimates and compiled by the USDA's Economic Research Service.
- **State issuance schedules**. FNS provides details of State SNAP benefit issuance schedules online, as well as State plans for EA and P-EBT. We compiled State issuance schedules for all three issuance types using publicly available information. For each State, Table I.2 presents the standard issuance dates, determinants of a household's standard issuance date, and a description of the EA issuance distribution for the State. In Table I.3, we summarize State P-EBT issuance schedules.

Table I.2. Standard and EA benefit issuance schedules for States, territories, and the District of Columbia

State	Standard issuance				Emergency allotment		
	Determinant	Date(s) of issuance	Assigned or imputed distribution date in ALERT files	Assigned or imputed distribution date in ALERT-QC files	Months in FY 2022	Distribution description	Assign or impute distribution date
Alabama	Last 2 digits of case number	4–23	Assigned	Assigned	All	Not staggered[a]	Assigned
Alaska	Distribution not staggered	1	Assigned	Assigned	Through August 2022	Over several weeks	Imputed
Arizona	First letter of last name	1–13	Imputed	Imputed	Through April 2022	With standard issuance (with exceptions[b])	Assigned to align with standard distribution
Arkansas	Last digit of Social Security number	4, 5, 8, 9, 10, 11, 12, 13	Imputed	Imputed	None	N/A	N/A
California	Last digit of case number	1–10	Imputed	Assigned	All	One or two days per month[c]	Assigned
Colorado	Last digit of case number	1–10	Assigned	Assigned	All	Over 5 consecutive days	Imputed
Connecticut	First letter of last name	1–3	Imputed	Imputed	All	Multiple Fridays	Imputed
Delaware	First letter of last name	2–23	Imputed	Imputed	All	Not staggered	Assigned
District of Columbia	First letter of last name	1–10	Imputed	Imputed	All	With standard issuance	Assigned to align with standard distribution
Florida	8th and 9th digit of 10-digit case number, read backwards	1–28	Assigned	Assigned	None	N/A	N/A
Georgia	Last digit of case number	5–23 odd days	Assigned	Assigned	Through May 2022	Over 4 days	Assigned
Guam	Last digit of Social Security number	1–10	Imputed	Imputed	All	Not staggered	Assigned
Hawaii	First letter of last name	3, 5	Imputed	Imputed	All	Not staggered[a]	Assigned
Idaho	Last digit of birth year	1–10	Imputed	Imputed	None	N/A	N/A

State	Standard issuance				Emergency allotment		
	Determinant	Date(s) of issuance	Assigned or imputed distribution date in ALERT files	Assigned or imputed distribution date in ALERT-QC files	Months in FY 2022	Distribution description	Assign or impute distribution date
Illinois	Case type and number	1,2,3,4,5,6,7,8,9,10,13,17,20	Imputed	Imputed	All	Same order as standard distribution	Assigned
Indiana	First letter of last name	5,7,9,11,13,15,17, 19,21,23	Imputed	Imputed	Through May 2022	With standard issuance	Assigned to align with standard distribution
Iowa	First letter of last name	1–10	Imputed	Imputed	Through March 2022	With standard issuance	Assigned to align with standard distribution
Kansas	First letter of last name	1–10	Imputed	Imputed	All	Same order as standard distribution	Imputed
Kentucky	Last digit of case number	1,3,5,7,9,11,13,15, 17,19	Imputed	Imputed	Through April 2022	With standard issuance	Assigned to align with standard distribution
Louisiana	Last digit of Social Security number	5,7,9,11,13,15,17, 19,21,23 [d]	Imputed	Imputed	All	Not staggered (with exceptions) [f]	Assigned
Maine	Last digit of recipient's birth date	10–14	Imputed	Imputed	All	Not staggered	Assigned
Maryland	First three letters of last name	4–23	Imputed	Imputed	All	With standard issuance	Assigned to align with standard distribution
Massachusetts	Last digit of Social Security number	1, 2, 4, 5, 7, 8, 10, 11, 13, 14	Imputed	Imputed	All	Not staggered[a]	Assigned
Michigan	Last digit of case number	3,5,7,9,11,13,15,17,19,21	Imputed	Imputed	All	Same order as standard distribution[c]	Imputed
Minnesota	Last digit of case number	4–13	Assigned	Assigned	All	Over 15 days	Imputed

State	Standard issuance				Emergency allotment		
	Determinant	Date(s) of issuance	Assigned or imputed distribution date in ALERT files	Assigned or imputed distribution date in ALERT-QC files	Months in FY 2022	Distribution description	Assign or impute distribution date
Mississippi	Last 2 digits of case number	4–21	Assigned	Assigned	Through December 2021	Not staggered	Assigned
Missouri	Client's birth month and last name	Impute	Imputed	Imputed	None	N/A	N/A
Montana	Last digit of case number	2–6	Assigned	Assigned	None	N/A	N/A
Nebraska	Last digit of Social Security number	1–5	Imputed	Imputed	None	N/A	N/A
Nevada	Last digit of birth year	1–10	Imputed	Imputed	All	Not staggered[c]	Assigned
New Hampshire	Not staggered	5	Assigned	Assigned	All	Over three to four days[a]	Imputed
New Jersey	7th digit of case number	1–5 (Warren County assigns all benefits on the 1st)	Assigned	Assigned	All	With standard issuance	Assigned to align with standard distribution
New Mexico	Last 2 digits of Social Security number	1–20	Imputed	Imputed	All	Over the month	Imputed
New York	Last digit of case number	1–9 (upstate); dates vary monthly (NYC)	Imputed[e]	Imputed[e]	All	Over 10 days	Imputed
North Carolina	Last digit of Social Security number	3,5,7,9,11,13,15,17,19,21	Imputed	Imputed	All	Over 10 days	Imputed
North Dakota	Distribution not staggered	1	Assigned	Assigned	None	N/A	N/A
Ohio	Last digit of case number	2,4,6,8,10,12,14,16,18,20	Imputed	Imputed	All	Not staggered	Assigned
Oklahoma	Last digit of case number	1,5,10	Imputed	Assigned	All	Over 6 days (with exceptions) [g]	Imputed

State	Standard issuance				Emergency allotment		
	Determinant	Date(s) of issuance	Assigned or imputed distribution date in ALERT files	Assigned or imputed distribution date in ALERT-QC files	Months in FY 2022	Distribution description	Assign or impute distribution date
Oregon	Last digit of Social Security number	1–9	Imputed	Imputed	All	Over 3 days	Imputed
Pennsylvania	Last digit of case number	First 10 business days of the month; dates vary by month and county	Imputed	Imputed	All	Over 10 days	Imputed
Rhode Island	Distribution not staggered	1	Assigned	Assigned	All	Not staggered	Assigned
South Carolina	Last digit of case number; certification date	1–10 (if approved before September 2012); 11,2,13,4,15,6,17, 8,19,10 (if approved after September 2012)	Imputed	Assigned	All	With standard issuance	Assigned to align with standard distribution
South Dakota	Distribution not staggered	10	Assigned	Assigned	None	N/A	N/A
Tennessee	Last 2 digits of Social Security number	1–20	Imputed	Imputed	Through December 21	With standard issuance	Assigned to align with standard distribution
Texas	Last digit of case number; certification date	1, 3, 5, 6, 7, 9, 11, 12, 13, 15 or 16–28	Imputed	Imputed	All	Staggered randomly	Imputed
Utah	First letter of last name	5, 11, 15	Imputed	Imputed	All	Not staggered	Assigned
Vermont	Distribution not staggered	1	Assigned	Assigned	All	Not staggered[a]	Assigned
Virgin Islands	Distribution not staggered	1	Assigned	Assigned	All	Not staggered	Assigned

State	Standard issuance				Emergency allotment		
	Determinant	Date(s) of issuance	Assigned or imputed distribution date in ALERT files	Assigned or imputed distribution date in ALERT-QC files	Months in FY 2022	Distribution description	Assign or impute distribution date
Virginia	Last digit of case number	1,4,7	Imputed	Assigned	All	Not staggered	Assigned
Washington	Date of application	1–20	Imputed	Imputed	All	With standard issuance (with exceptions) [h]	Assigned to align with standard distribution
West Virginia	First letter of last name	1–9	Imputed	Imputed	All	Not staggered	Assigned
Wisconsin	8th digit of Social Security number	2, 3, 5, 6, 8, 9, 11, 12, 14, 15	Imputed	Imputed	All	Not staggered	Assigned
Wyoming	First letter of last name	1–4	Imputed	Imputed	Through April 2022	Day after standard issuance	Assigned to align with standard distribution

Sources: Food and Nutrition Service. "SNAP COVID-19 Emergency Allotments Guidance." 2023. https://www.fns.usda.gov/snap/covid-19-emergency-allotments-guidance; "SNAP Monthly Issuance Schedule for All States and Territories." 2022. https://www.fns.usda.gov/snap/monthly-issuance-schedule-all-states-and-territories .

Notes: "Not staggered" indicates that benefits are issued to all SNAP households in a State on the same date. As discussed in Sections B and C, for a subset of States listed as having "imputed" EA dates, EA distribution schedules are inconsistent enough that imputation does not work reliably. We will discuss alternative approaches with FNS as described in Section C.

[a]Distribution could occur in next month.

[b]SNAP households with a last name beginning between A and H had an EA issuance date that varied by month and did not necessarily align with their standard issuance date in that month

[c]Distribution was in the month following eligibility.

[d]For households with a member who is age 60 or older or has a disability, benefits are issued between the 1st and the 4th of the month.

[e]To determine which schedule applied to each household, we identified the county of residence as the county where most transactions occurred in a month. For counties outside of New York City, we imputed issuance dates between the first and ninth day of the month; for the remaining New York counties, we assigned issuance months according to the city's monthly rotating schedule.

[f]Ongoing participants received EA on the same day each month; new participants received EA on a rolling basis staggered across three days.

[g]Supplements to bring each household to the $95 minimum were disbursed from the 15th to the last day of each month.

[h]Beginning in November 2021, households with a standard issuance date of the 1st of the month received EA on the 2nd.

Table I.3. State P-EBT schedule summary

State	Card issuance for SNAP participants (SNAP EBT card, separate P-EBT card, combination)	State uses standard issuance amounts or own calculation[a]
Alabama	SNAP	Standard and own calculations
Alaska	Separate	Standard
Arizona	SNAP	Standard for summer; own calculations for school year
Arkansas	Combination	Standard
California	Separate	Standard and own calculations
Colorado	Combination	Standard for summer; own calculations for school year
Connecticut	SNAP	Standard and own calculations
Delaware	SNAP	Standard for summer; own calculations for school year
District of Columbia	SNAP	Standard for summer; own calculations for school year
Florida	SNAP	Standard
Georgia	SNAP	Standard and own calculations
Guam	SNAP	Standard
Hawaii	Separate	Standard
Idaho	Separate	Standard
Illinois	SNAP	Standard for summer; own calculations for school year
Indiana	SNAP	Standard
Iowa	SNAP	Standard for summer; own calculations for school year
Kansas	SNAP	Standard
Kentucky	SNAP	Standard and own calculations
Louisiana	Combination	Standard and own calculations
Maine	SNAP	Standard and own calculations
Maryland	Separate	Standard and own calculations
Massachusetts	SNAP	Standard for summer; own calculations for school year
Michigan	SNAP	Standard for summer; own calculations for school year
Minnesota	SNAP	Standard and own calculations
Mississippi	Separate	Standard and own calculations
Missouri	Combination	Standard for summer; own calculations for school year
Montana	SNAP	Standard for summer; own calculations for school year
Nebraska	Combination	Standard for summer; own calculations for school year
Nevada	SNAP	Standard
New Hampshire	SNAP	Standard for summer; own calculations for school year
New Jersey	SNAP	Standard and own calculations
New Mexico	Separate	Standard
New York	SNAP	Standard for summer; own calculations for school year
North Carolina	SNAP	Standard
North Dakota	SNAP	Standard; own calculations for additional summer supplement
Ohio	SNAP	Standard and own calculations

State	Card issuance for SNAP participants (SNAP EBT card, separate P-EBT card, combination)	State uses standard issuance amounts or own calculation[a]
Oklahoma	SNAP	Standard
Oregon	SNAP	Standard for summer; own calculations for school year
Pennsylvania	SNAP	Standard and own calculations
Rhode Island	SNAP	Standard for summer; own calculations for school year
South Carolina	Separate	Standard for summer; own calculations for school year
South Dakota	SNAP	Standard for summer; own calculations for school year
Tennessee	SNAP	Standard for summer; own calculations for school year
Texas	SNAP	Standard
Utah	SNAP	Standard
Vermont	SNAP	Standard for summer; own calculations for school year
Virgin Islands	SNAP	Standard
Virginia	SNAP	Standard for summer; own calculations for school year
Washington	Separate	Standard for summer; own calculations for school year
West Virginia	Separate	Standard for summer; own calculations for school year
Wisconsin	SNAP	Standard for summer; own calculations for school year
Wyoming	SNAP	Standard for summer; own calculations for school year

Sources: Food and Nutrition Service. "State Guidance on Pandemic EBT." 2023. https://www.fns.usda.gov/snap/state-guidance-coronavirus-pandemic-ebt-pebt. Additional information was collected from State websites.

[a]For example, some States used different calculations for students who were fully remote or those in a combination of in-person/remote situations than for students who attended school in person. Other States provided set amounts for students in individual schools or school districts based on ranges of missed days (such as 5-10 days, 11-15 days, and so on), and others issued one standard amount for fall months and one for spring months.

2. Analysis files

After performing several types of data cleaning and editing, as described in Appendix F, we constructed four sets of analysis files.

a. ALERT calendar month file

The ALERT calendar month file is used to produce descriptive statistics of monthly numbers of transactions by State and store type, average and total transaction amounts by State and store type, and out-of-State redemptions. This file uses STARS information in addition to the ALERT data. In most States, the calendar month does not align with the issuance month, but the calendar month remains a reasonable time unit for calculating average monthly statistics at the State and national level.

b. ALERT benefit exhaustion file

To examine how quickly participants redeem their benefits after issuance, we constructed a benefit exhaustion file that separates transactions and benefit issuances for each household into issuance periods for analysis. The periods begin with an issuance and end the day before their next issuance. In previous studies, when households received one standard benefit issuance in a month, this led to issuance periods that were one month in length but did not necessarily align with a calendar month. In FY 2022, households could receive an EA issuance on a different date than their standard issuance, creating the

potential for multiple shorter benefit exhaustion periods within one month. P-EBT issuances could also add an additional issuance period. However, we excluded months with P-EBT issuances from most analyses.[6]

Because the ALERT data do not record when a benefit was issued, we attempted to assign issuance dates based on information collected from State issuance schedules or inferred from transaction data patterns. If assigning issuance dates was not possible, such as when a State issued benefits based on a participant's last name or birthdate—information not available in the data, we imputed them using procedures described in detail in Appendix F. Table I.2 identifies whether we were able to assign issuance dates for standard benefits and EA for each State or whether we needed to infer a date from the data. In some States we could not accurately identify a pattern in the EA issuances. This happened when a State issued the benefits using a manual process or did not follow a predictable schedule. In these States, we assigned the issuance date to be the date we observed the issuance. See Appendix F for more information about the States in this category and the implications of this approach for analysis.

Calendar month file versus benefit exhaustion file

- The calendar month file includes all SNAP households receiving benefits on an EBT card and all redemption transactions.
- The benefit exhaustion file excludes transactions made on cards that only have P-EBT issuances. These are households that are not SNAP participants and participating households that receive P-EBT on a separate P-EBT-only card. We refer to these as P-EBT-only households.
- In addition, unless noted otherwise, the benefit exhaustion file excludes issuance periods in which a household received a P-EBT issuance or an issuance that the study team could not classify as a standard or EA issuance.

Once we assigned or imputed issuance dates for each household in each month, we created the issuance periods for analysis. Households in States not issuing EA and households in States that issued EA with or very near to the date of their standard issuance had issuance periods that were one month in length, like previous studies. With some exceptions, as described in detail in Appendix F, households in States with separate EA and standard issuances had two benefit issuance periods, with one from the day of the standard issuance to the day before the EA issuance and the other from the day of the EA issuance to the day before the next standard issuance. It is important to note that these issuance periods were likely not of equal length nor with equal benefit issuance amounts. For example, households could receive a relatively small standard benefit followed by a relatively large EA benefit a week later, leading to a one-week analysis period for the small benefit and a three-week analysis period for the large benefit. Alternatively, they could receive a relatively large standard benefit followed by a relatively small EA benefit a week later, leading to a one-week analysis period for the large benefit and a three-week analysis period for the small benefit. In addition, State EA issuance schedules varied across months, so analysis periods for households changed from month to month.

[6] For comparisons of redemption for months with and without P-EBT (Appendix Tables D.9 through D.12), we did not create a new issuance period, but added the P-EBT amount into the available balance for the period.

To remain as consistent as possible with analyses from previous studies, we continue to examine how quickly benefits are exhausted based on the amount of the benefit issued at the beginning of the month or period (Appendix Tables B.16 – B.22, for example). In addition, recognizing that households who receive a relatively large benefit shortly before receiving another benefit are likely to carry over more of the issuance than they would if the time between issuances was larger, we also provide a set of tables that examine benefit exhaustion based on the balance available at the beginning of the month (Appendix C).

Because the imputation algorithm described above is computationally intensive, we created the benefit exhaustion files using random samples of SNAP households each month for each State. We sampled up to 20,000 households per month per State (or up to 240,000 households per State), resulting in a file of 6,624,196 households.[7] We used the full year of data for all sampled households and reweighted the random samples to reflect the actual distribution of households, transactions, and benefits for each State.

We used the exhaustion analysis file to identify households that were still receiving SNAP issuances but showed no transaction activity. Inactive households are those with transactions that show a benefit issuance in one month (for example, Month 0), have no transactions for one or more months (for example, Months 1 and 2), then have a month with both transactions and a benefit issuance that is sufficient to equal the missing months' benefit issuances plus the current month issuance. For example, if a household in a non-EA State received $100 as an issuance in January, had no transactions again until April, and its April issuance appeared to be $300, we would identify this as a household that received $100 in February, March, and April but was inactive in February and March.

3. Matched ALERT-QC data analysis file

To study benefit redemption patterns by household characteristics, we linked the ALERT analysis file to the edited SNAP QC data. We used the matched ALERT-QC analysis file to analyze redemption activity over the three-month period centered on the SNAP QC sample month (the month in which the QC data measured the characteristics for a given household). Therefore, the transaction data in this file was at most one month removed from the SNAP QC review and included 37,178 households.

We used this file to calculate descriptive statistics of monthly transactions by household characteristics, including household composition, race, employment status, Temporary Assistance for Needy Families (TANF) receipt, and SNAP benefit amounts. This file also enabled us to describe the characteristics of households with varying online benefit redemption patterns.

We used the same methods to clean the ALERT-QC matched file as we did for the ALERT calendar month and benefit exhaustion files, with one exception. For the ALERT-QC benefit exhaustion file, we were able to assign the standard issuance date to households in more States because the case number included in the QC data aligned with the SNAP case number used for issuance date assignment (see Table I.2).

[7] Prior to sampling, we excluded households with a zero-balance and those with a balance of $9,999.99 or higher. In addition, we did not sample any household with a transaction that was missing STARS data (a negligible share of all ALERT households).

4. Analyzing the influence of benefit changes since FY 2017

Using the calendar month and exhaustion files, we produced a set of descriptive measures to understand how changes in benefit redemption may have been related to the three types of benefit increases (TFP, EA, and P-EBT). As described below, for some analyses we make comparisons of the primary benefit redemption measures for FY 2022 with FY 2017, and for others, we examine differences within FY 2022. The primary measures include the average monthly transaction amounts, the number of monthly transactions, and the benefit exhaustion measures.

Changes related to the TFP reevaluation. To isolate the changes associated with the TFP reevaluation in the absence of EA (though still affected by P-EBT), we compared results from FY 2017 with those in FY 2022 only for States that did not have EA in FY 2022. We identified two groups of households in FY 2022: (1) households in the eight States with no EA at any point in FY 2022 and (2) households in eight States that ended EA in FY 2022, limited to the subset of months in which their States did not have EA.[8] We then compared the following:

1. Among households in States with no EA in FY 2022, differences in the averages of the primary transaction measures compared to the average values across these States in FY 2017, both combined across all identified States and State by State.
2. Among households in States that ended EA during FY 2022, differences in the averages of the primary transaction measures in the months after EA ended compared to the average values for these States in FY 2017.

Although these comparisons allow us to describe changes in benefit redemption patterns before and after the TFP reevaluation, changes over time in the primary benefit redemption measures may have occurred for reasons other than the TFP reevaluation. For example, changes in economic conditions or the retail food environment between FY 2017 and FY 2022 could also affect changes in benefit redemption patterns over time.

Changes related to EA: To examine changes in benefit redemption patterns between households who received EA and those that did not, we made two comparisons:

1. Differences in the averages of the primary transaction measures between States that issued EA in FY 2022 and those that did not.
2. Among households in States that ended EA in FY 2022, differences in the averages of the primary transaction measures within households for months while EA was issued and months after EA ended.

Although these comparisons shed light on changes that may be related to EA, they may also reflect other factors. Comparisons made across States with and without EA may reflect differences in redemption patterns that are due to EA as well as those due to differences across States in policies, household characteristics, or other contexts that influence redemption patterns. Similarly, comparisons made across calendar months with and without EA may also reflect seasonality in benefit redemptions.

[8] Nine States stopped issuing EA in FY 2022. We do not include Alaska in the comparison because it had only one month without EA in FY 2022.

Changes related to P-EBT. We also examined differences in redemption patterns for households in months in which they received P-EBT compared to months they did not. We limited this analysis to States in which we were confident in our ability to identify P-EBT issuances, as described in Appendix F. Because these analyses compare redemption patterns across different calendar months, these differences may reflect seasonality in addition to the effects of P-EBT on redemption patterns.

5. Online redemption analysis

In this first exploratory analysis of online benefit redemption, we sought to address the following research objectives using information about internet retailers available in the ALERT data:

- Descriptive analysis of households' online redemption patterns to show the distribution of households across online redemption use rates in an average month
- Descriptive analysis of households' benefit redemption patterns among households who redeem a significant portion of benefits online
- Descriptive analysis presenting summary statistics of economic, demographic, and geographic characteristics for households who redeem a significant portion of their benefits online
- Regression analysis of the household characteristics associated with redeeming a significant portion of benefits online.

We identified online purchases in the ALERT data using the retailer identifier associated with each transaction; brick and mortar retailers accepting online SNAP purchases must have separate internet retailer number. We used the internet retailer store type category from STARS to identify online transactions for analysis. For analyses of households who redeemed a significant portion of their benefits online, we focused on months (or issuance periods) in which a household spent at least 50 percent of their monthly SNAP redemptions at an internet retailer, examining redemption in the ALERT-QC matched file from the three months centered around the household's QC interview. Households are identified as redeeming a significant portion online if their online spending was at least 50 percent of their redemption in one or more of the three months.

To analyze the household characteristics that are associated with redeeming a significant portion of benefits online, we estimated the following logistic regression model using the ALERT-QC matched analysis file:

$$Pr(Significant\ online\ redemption_h) = \frac{e^{(\sum_{k=1}^{K}\beta_K X_{kh})}}{1+e^{(\sum_{k=1}^{K}\beta_K X_{kh})}}$$

Where $Pr(Significant\ online\ redemption_h)$ represents the probability that a household h redeemed a significant portion of their benefits online, and h represents a set of K household characteristics (including indicators for household composition, household size, receipt of TANF, average SNAP benefit amount, certification period length, TANF receipt, and FNS region). For the estimation of this regression, we defined the dependent variable as an indicator equal to 1 if a household spent at least 50 percent of their monthly redemptions at an internet retailer during at least one of the three months centered on the SNAP QC sample month, and 0 otherwise.

For each household characteristic we calculated the average marginal effect as a function of the logit coefficient estimates for each household characteristic (β_k). The average marginal effect of each household characteristic provides the difference in the probability that a household with that characteristic redeemed a significant portion of their benefits online, relative to households without that characteristic, holding all other covariates constant.

D. Organization of the report

This report identifies patterns of SNAP redemption by categories of redemption measures. Chapter 2 presents patterns related to the number of transactions, average dollar amounts, and the store types at which the transactions took place. Chapter 3 identifies benefit redemption by day of the month, after factoring in the issuance schedules for each State. Chapter 4 examines patterns of households not using their benefits for at least 1 month in FY 2022. In each of these three chapters, we examine patterns by national and State averages and household characteristics, and through State-by-State comparisons. Chapter 5 explores the use of online benefit redemption. Chapter 6 presents analyses of the relationship between redemption patterns and each type of benefit increase. The tables comparable to Castner et al. (2020), Castner and Henke (2011), and Cole and Lee (2005) appear in Appendix A (patterns by household characteristic) and Appendix B (patterns by State). Appendix C tables display several of the redemption measures as a share of the total account balance, as opposed to the period's issuance amount. Appendix D provides the tables examining the influence of each of the benefit increases, either relative to FY 2017 or within FY 2022. Appendix E provides supplemental State and Territory information used in the analysis. Appendix F provides a detailed description of the methods.

II. Patterns of Transactions and Store Use

In this chapter, we describe how households participating in SNAP redeemed their benefits in FY 2022, such as how often they redeemed benefits, how much they redeemed per transaction, and the types of stores at which they shopped. It also examines how these patterns differ for households based on their characteristics or State.

Our analysis of overall redemption patterns includes households receiving any issuance type, including standard benefits, EA, or those only receiving P-EBT. Analysis of differences in redemption patterns across subgroups, which are based on the SNAP QC data, do not include households receiving only P-EBT because they are not present in the SNAP QC data. Because the minimum benefit amount with EA in FY 2022 was $250, descriptions about low monthly benefit or redemption amounts in this chapter primarily represent households living in the 17 States with no EA for all or part of the year.

Key findings include:

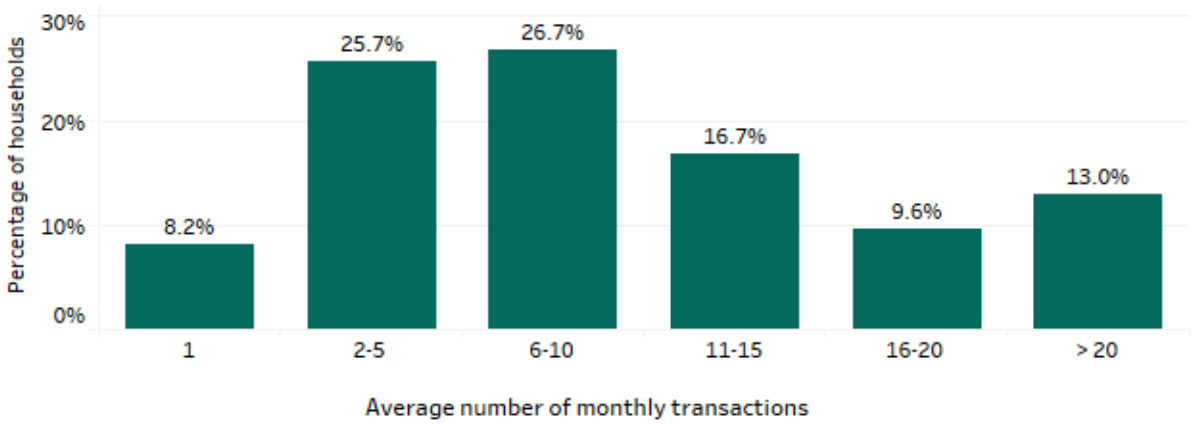
- Nationally, households averaged 10.9 transactions per month and $39 per transaction. On average, households made 2.6 transactions per $100 redeemed.
- Households with higher benefits had more transactions per month and higher transaction amounts.
- Households typically redeemed benefits at 5 different stores per month.
- Most transactions occurred at supermarkets/super stores, followed by convenience stores.
- Households redeemed 78 percent of their total monthly benefit redemption at supermarkets/super stores.

A. Average transactions and dollars

1. Household redemption during FY 2022

Households typically redeemed their benefits over many transactions each month. On average, households made 10.9 transactions per month (Appendix B, Table B.1), but redemption patterns varied widely across households. Around a quarter of households averaged two to five transactions, another quarter of households averaged six to ten transactions, and 13 percent of households averaged over 20 transactions (Figure II.1).

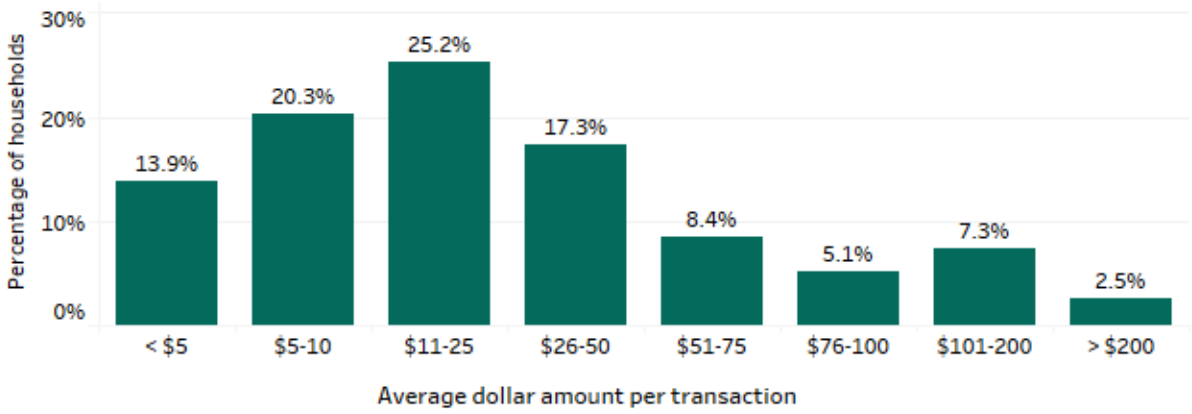
Figure II.1. Distribution of households by average number of transactions per month



Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

Households redeemed an average of $39 per transaction (Appendix B, Table B.2). Over half of households averaged less than $25 per transaction, seven percent averaged between $100 and $200, and nearly three percent averaged over $200 (Figure II.2).

Figure II.2. Distribution of households by average dollar amounts per transaction



Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

Most households redeemed more than $200 each month on average (Table II.1). About 5 percent of households redeemed less than $26 each month, while 20 percent of households redeemed between $200 to $300 each month. Both the average number of transactions per household and the average transaction amount increased with the total amount of benefits redeemed. Households that redeemed less than $26 per month averaged 1.4 transactions and $9 per transaction, while households that redeemed over $500 per month averaged 17.9 transactions and $48 per transaction. Overall, households made around 2.6 transactions per $100 in benefits redeemed (Appendix B, Table B.1).

Table II.1. Average monthly redemption amount and distribution of households by redemption amount

Redemption Measure	Average Value	Households Grouped by Total Monthly Redemption											
		<$26	$26-50	$51-100	$101-150	$151-200	$201-$250	$251-300	$301-350	$351-400	$401-450	$451-500	>$500
Average total monthly redemption (percentage of households)	$422.67	4.6	2.9	4.9	5.0	5.8	10.2	10.1	12.0	6.8	4.6	4.9	28.2
Average number of EBT purchase transactions per month	10.9	1.4	2.2	3.2	4.6	6.0	7.8	9.1	11.0	11.1	11.8	12.3	17.9
Average EBT purchase amount ($)	$39.08	8.77	17.51	23.60	27.59	29.50	30.15	30.20	30.58	34.28	36.44	38.68	47.97

Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

2. Differences across subgroups

Redemption patterns varied most widely across household characteristics that affect a household's benefit amount. For example, households with more people were eligible to receive higher benefits and, in turn, had higher transaction amounts and transactions per month. In FY 2022, households with four or more people redeemed around $1,027 in benefits every month, compared to $289 for one-person households (Table II.2). Accordingly, households with four or more people averaged 20.9 transactions per month and $62 per transaction, compared to 9.3 transactions per month and $48 per transaction for one-person households.

Table II.2. Spending patterns by household size

Household Size	Average Number of Transactions	Average EBT Transaction Amount ($)	Monthly Household Redemption[a] ($)
1 (n=21,927)	9.3	48.05	288.56
2 (n=5,842)	12.5*	53.39*	496.19*
3 (n=4,035)	16.5*	57.38*	723.68*
4+[b] (n=5,374)	20.9*	61.76*	1027.28*

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average monthly statistics over the three months centered on the QC sample month.

[a] Household monthly redemption is defined as the total amount of EBT purchase transactions in the calendar month. This can be greater or less than the total amount of benefits received in that month.

[b] Households of size 4 or more are grouped together to remain consistent with earlier studies in this series.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Households with children had higher monthly household redemption amounts, shopped more often, and redeemed more per transaction compared to households without children (Table II.3). The average number of transactions for households with children (17.0) was almost twice as high compared to that of

households without children (9.6). Households with children redeemed $58 per transaction, compared to $49 for households without children. Conversely, households with elderly people had the lowest monthly household redemption amounts and number of transactions per month. Households without elderly people, non-elderly people with a disability, or children had the lowest average transaction amounts ($45).

Table II.3. Spending patterns by household composition

Household Composition	Average Number of Transactions	Average EBT Transaction Amount ($)	Monthly Household Redemption[a] ($)
With and without children			
Households with children (n=13,077)	17.0	57.87	772.84
Households without children (n=24,101)	9.6*	48.56*	308.18*
Types of households with children			
Single-adult households (n=7,691)	16.3	56.66	724.11
Multiple-adult households (n=4,687)	19.0*	59.87*	890.81*
Children only (n=699)	12.7*	58.17	593.75*
All households, by type			
With an elderly person (n=10,796)	8.7	50.76	302.76
With a non-elderly person with a disability (n=7,978)	11.4*	51.03	422.54*
With a child, without a person who was elderly or had a disability (n=10,661)	16.9*	58.37*	776.42*
Other households (n=7,743)	11.5*	45.10*	341.88*

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average monthly statistics over the three months centered on the QC sample month.

[a] Household monthly redemption is defined as the total amount of EBT purchase transactions in the calendar month. This can be greater or less than the total amount of benefits received in that month.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Households with earnings and households receiving TANF had more transactions, higher transaction amounts, and higher monthly household redemption amounts compared to households without earnings and households not receiving TANF, respectively (Table II.4). Spending patterns also varied by whether households had long certification periods. The certification period for SNAP households represents the length of time before a household must recertify their eligibility for benefits. Typically, the certification period assigned at the household's first approval is tied to the expected instability of its income. Households with certification periods over 12 months frequently include elderly individuals on fixed incomes, while households with shorter certification periods tend to include households with regular earnings. Households with certification periods over 12 months averaged 9.7 transactions per month, lower than households with certification periods between 7 to 12 months (13.3) and households with certification periods of six months or fewer (13.8).

Table II.4. Spending patterns by employment status, TANF receipt, certification period, and benefit size

Household Characteristic	Average Number of Transactions	Average EBT Transaction Amount ($)	Monthly Household Redemption[a] ($)
Employment Status			
Households with earnings (n=9,597)	15.3	53.35	642.42
Households without earnings (n=27,581)	11.2*	51.36*	414.94*
Receipt of TANF			
Yes (n=943)	16.9	54.52	722.42
No (n=36,235)	12.1*	51.80	466.47*
Months in certification period			
≤ 6 months (n=7,757)	13.8	53.51	570.62
7-12 months (n=19,025)	13.3*	51.65*	521.44*
>12 months (n=10,361)	9.7*	51.27*	339.09*
SNAP benefit[b]			
Minimum benefit (n=668)	3.6	25.49	88.32
Maximum benefit (n=31,122)	12.8*	52.56*	495.45*

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average monthly statistics over the three months centered on the QC sample month.

[a] Household monthly redemption is defined as the total amount of EBT purchase transactions in the calendar month. This can be greater or less than the total amount of benefits received in that month.

[b] Measures the standard SNAP benefit and EA (if applicable) that the household was certified to receive based on their QC review. This does not include additional P-EBT issuance amounts that households may have been able to redeem on their EBT cards.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Note: Households with earnings had an average household size of 2.9 people and average monthly benefit of $583; households without earnings had an average household size of 1.6 people and average monthly benefit of $394.

Households eligible for the minimum SNAP benefit ($20 for one- and two-person households in FY 2022 for the contiguous United States) averaged 3.6 transactions per month and $25 per transaction, while households eligible for the maximum benefit or higher averaged 12.8 transactions per month and $53 per transaction (Table II.4). Due to EA allotments, households residing in all States that offered EA during the QC sample month were eligible for the maximum benefit (or up to $95 more than the SNAP benefit maximum). Households' average monthly redemption amounts were higher than the SNAP and EA benefit they were eligible for, likely due to the receipt of P-EBT allotments by some households, which were not reported in the SNAP QC data, or benefits carried over from previous months of receiving EA.

Spending patterns did not vary widely with the race of household head (Table II.5). Across race and ethnicity categories, households made between 11 to 15 transactions per month and averaged between $46 to $55 per transaction. Households headed by Native American participants had the highest number of monthly transactions (14.4), while households headed by White participants had the lowest (11.5). Households headed by Native American participants had the lowest average transaction amount ($46),

while households headed by Asian participants had the highest ($55), although for the latter, the difference from the average for households headed by White participants was not statistically significant.

Table II.5. Spending patterns by race and ethnicity of household head

Race and Ethnicity of Household Head	Average Number of Transactions	Average EBT Transaction Amount ($)	Monthly Household Redemption[a] ($)
White, non-Hispanic (n=17,507)	11.5	53.92	446.80
Black, non-Hispanic (n=8,408)	13.3*	47.01*	481.96*
Hispanic (n=3,075)	11.8	53.10	476.41*
Asian, non-Hispanic (n=1,129)	11.9	54.60	471.01
Native American, non-Hispanic (n=855)	14.4*	46.27*	524.84*
Other[b] (n=6,204)	12.6*	53.20	516.55*

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average monthly statistics over the three months centered on the QC sample month.

[a] Household monthly redemption is defined as the total amount of EBT purchase transactions in the calendar month. This can be greater or less than the total amount of benefits received in that month.

[b] Includes non-Hispanic individuals with multiple reported races (two percent of all household heads) and individuals of unknown race (15 percent of all household heads).

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Spending patterns also did not vary widely with a household's geographic location (Table II.6). Households in the Mountain Plains Region had the lowest average transaction amount ($49), number of transactions (11.1), and monthly household redemption amount ($417). Five States in the Mountain Plains Region did not receive EA allotments, which may have contributed to these lower redemption patterns (Figure I.1). Households in the Northeast Region had the highest average transaction amount ($57), while households in the Southwest Region had the highest number of transactions per month (13.4), although the difference was not statistically significant. Households living in counties with persistent poverty (counties with a poverty rate of over 20 percent over an approximately 30-year period) had a slightly higher number of transactions (13.9) and lower average transaction amounts ($46) compared to households living in counties without persistent poverty (12.1 transactions and $52 per transaction).

Table II.6. Spending patterns by geographic location

Geographic Location	Average Number of Transactions	Average EBT Transaction Amount ($)	Monthly Household Redemption[a] ($)
Region[b]			
Northeast (n=4,966)	12.9	56.66	475.25
Mid-Atlantic (n=3,674)	12.0*	54.68	478.27
Midwest (n=7,396)	10.9*	50.15*	431.09*
Southeast (n=5,752)	13.0	51.17*	494.88
Southwest (n=5,665)	13.4	51.59*	541.92*
Mountain Plains (n=5,058)	11.1*	48.54*	416.82*
West (n=4,667)	12.4	50.60*	461.80

Geographic Location	Average Number of Transactions	Average EBT Transaction Amount ($)	Monthly Household Redemption[a] ($)
Metro/ Nonmetro areas[c,d]			
Metropolitan (n=24,051)	12.3	52.01	474.62
Nonmetro, micropolitan (n=5,634)	12.5	50.27	477.80
Nonmetro, noncore (n=3,930)	12.3	50.00*	475.10
County with persistent poverty[c]			
Yes (n=3,461)	13.9	46.48	482.12
No (n=30,154)	12.1*	52.31*	474.15

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average monthly statistics over the three months centered on the QC sample month.

[a] Household monthly redemption is defined as the total amount of EBT purchase transactions in the calendar month. This can be greater or less than the total amount of benefits received in that month.

[b] Regions are defined using FNS region as of FY2022.

[c] Excludes households in Nebraska, Rhode Island, Utah, and the Virgin Islands due to a high share of cases with unknown locality.

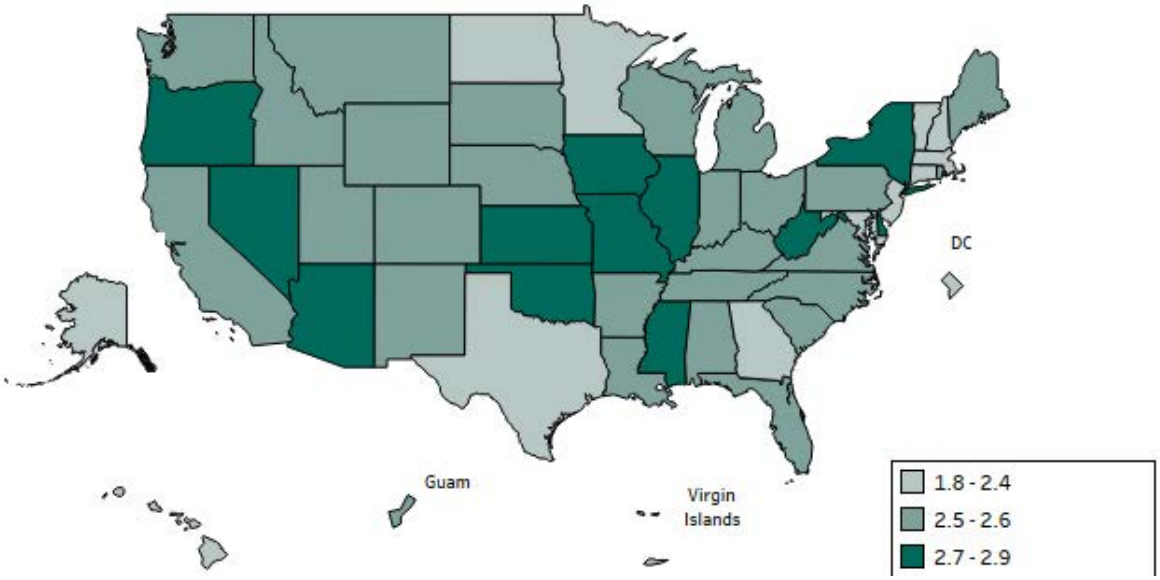
[d] A metropolitan statistical area has at least one urbanized area with a population of 50,000 or more and includes adjacent territory with a high degree of social and economic integration with the core, as measured by commuting ties. A micropolitan statistical area has at least 1 urban cluster of at least 10,000 but less than 50,000 in population and includes adjacent territory with a high degree of social and economic integration with the core, as measured by commuting ties. All other areas are noncore statistical areas.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

3. Differences across States

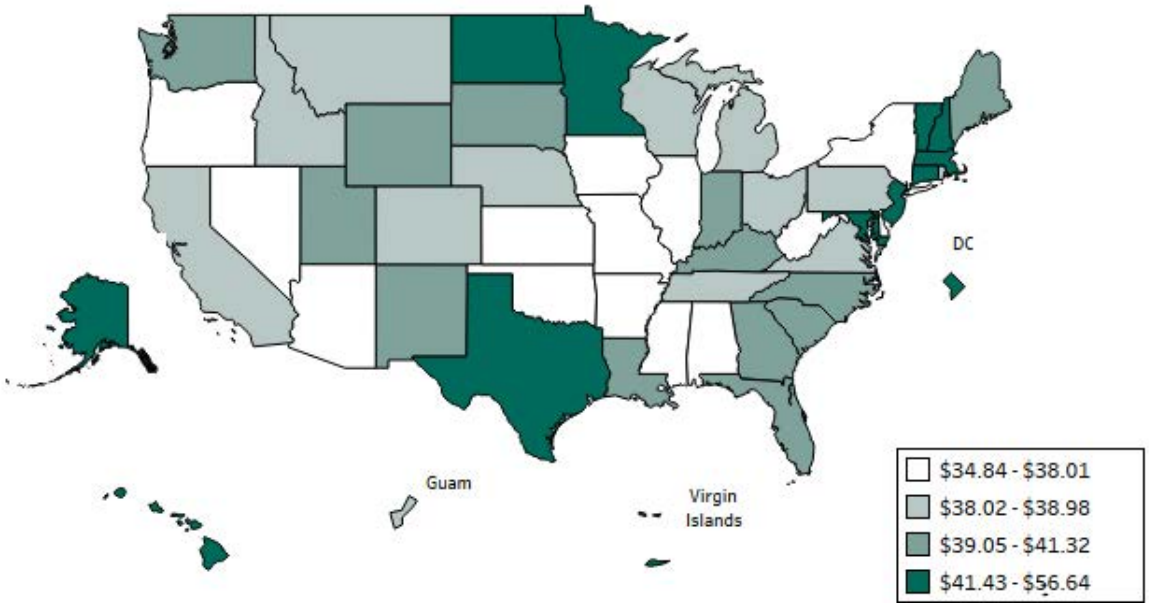
Mapping the averages for States by quartile of each measure provides a picture of the variation across States in parts of the country that cross the regional boundaries. Idaho households averaged the fewest number of transactions per month at 7.5, while Guam households averaged the highest at 17.6 (Appendix B, Table B.1). Differences across States in households' total monthly redemption amounts were less pronounced: across States, households averaged from 1.8 to 2.9 transactions for every $100 in benefits redeemed (Appendix B, Table B.1). Average transaction amounts were lowest in New York at $35, and largest in Alaska at $57 (Appendix B, Table B.2). States with the highest monthly number of transactions per $100 in benefits redeemed also had the lowest monthly transaction amounts, as can be seen by comparing the shaded regions between Figures II.3 and II.4.

Figure II.3. Average monthly number of transactions per $100 in benefits redeemed



Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

Figure II.4. Average monthly transaction amount



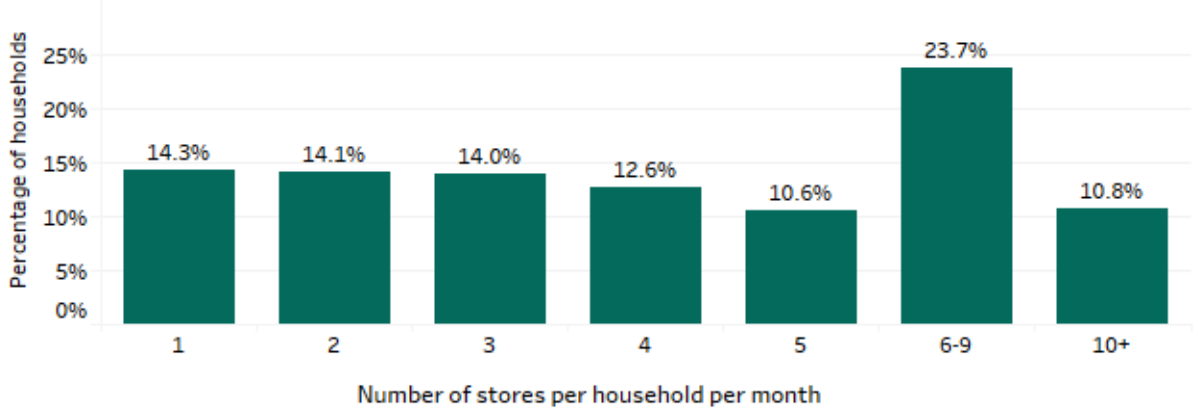
Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

B. Transactions by store type

1. Household redemption during FY 2022

Households typically redeemed benefits at five different stores per month (Appendix B, Table B.7). Around 24 percent of households accessed six to nine unique stores per month, and 11 percent accessed more than 10 stores (Figure II.5).

Figure II.5. Average number of stores accessed by households per month



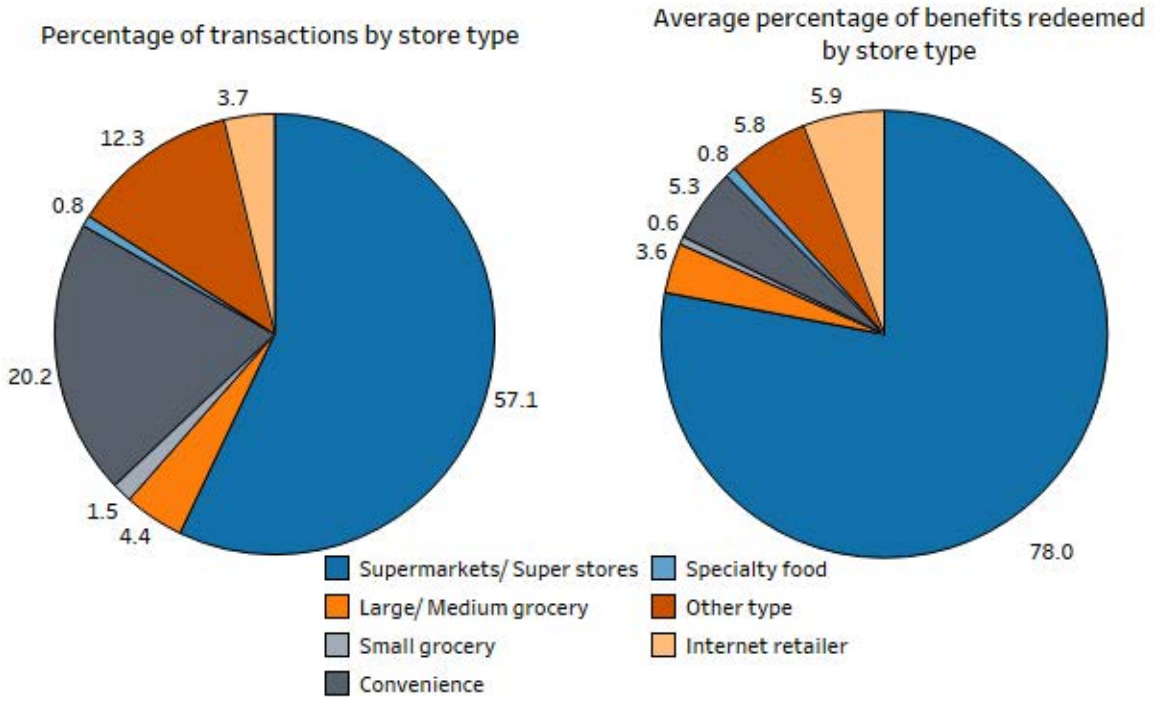
Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

As found in prior studies, supermarkets/super stores accounted for the highest number of transactions across all States. Nationally, 57 percent of transactions occurred at supermarkets/super stores, followed by 20 percent at convenience stores (Figure II.6). Thirty-two percent of households shopped exclusively at supermarkets/super stores, and only 6 percent of households never shopped at a supermarket (Appendix B, Table B.8). Households rarely shopped exclusively at other store types; for example, only 2 percent of households shopped exclusively at internet retailers, the second highest rate after supermarkets/super stores.[9]

On average, households redeemed 78 percent of their total monthly benefit redemption at supermarkets/super stores (Figure II.6). Households with the lowest total redemption (less than $26) redeemed a smaller than average percentage of their benefits at supermarkets/super stores (65 percent), but households redeemed most of their benefits at supermarkets/super stores regardless of their monthly redemption amount (Appendix B, Table B.13).

[9] Internet retailers include both online-only grocery options and online retail options offered by brick-and-mortar stores that are separately authorized to accept SNAP benefits online.

Figure II.6. Percentage of transactions and benefits redeemed by store type



Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

Across store types, the largest average transaction amounts were made at internet retailers at $63, followed by supermarkets/super stores at $53 (Figure II.7). Convenience stores had the smallest average transaction amounts ($10).

Figure II.7. Average transaction amounts by store type

Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

2. Differences across subgroups

Larger households accessed more stores every month than households with fewer members (Table II.7). On average, one-person households accessed 4.4 stores per month, compared to two-person households accessing 5.8 stores, three-person households accessing 7.0 stores, and households with four or more people accessing 8.2 stores. While one-person households were just as likely to redeem benefits at one or two stores as at three or four stores, most households with three or more people accessed six or more stores per month.

Table II.7. Number of stores accessed per household per month by household size

Household Size	Average Monthly Number of Stores per Household	Number of Stores per Household per Month (Percentage of Households)						
		One	Two	Three	Four	Five	Six to nine	Ten or more
1 (n=21,927)	4.4	12.9	16.7	17.0	14.8	11.2	21.1	6.3
2 (n=5,842)	5.8*	4.7*	9.3*	12.4*	14.1	14.6*	32.7*	12.1*
3 (n=4,035)	7.0*	2.1*	5.5*	9.0*	11.4*	11.8	38.0*	22.2*
4+ (n=5,374)	8.2*	1.7*	3.1*	6.6*	8.4*	9.9*	38.5*	31.7*

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average monthly statistics over the three months centered on the QC sample month.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Households with children accessed an average of 7.2 stores per month, compared to 4.5 stores for households without children (Table II.8). Households with elderly people accessed the fewest number of stores per month.

On average, households made over half of their transactions at supermarkets/super stores regardless of household characteristic. Households with elderly members made 70 percent of their transactions at supermarkets/super stores, compared to 52 percent for households with no children, elderly members, or members with a disability (Table II.9). Households with elderly members only redeemed 9 percent of their transactions at convenience stores, compared to 20 to 27 percent for various household types that do not contain elderly members.

Table II.8. Number of stores accessed per household per month by household composition

Household composition		Number of Stores per Household per Month (Percentage of Households)						
	Average monthly number of stores per household	One	Two	Three	Four	Five	Six to nine	Ten or more
With and without children								
Households with children (n=13,077)	7.2	2.5	5.6	8.8	10.9	12.1	36.9	23.3
Households without children (n=24,101)	4.5*	12.3*	16.1*	16.7*	14.9*	11.4	22.0*	6.6*
Types of households with children								
Single-adult households (n=7,691)	7.2	2.6	5.7	8.6	10.7	12.0	36.9	23.5

Household composition	Average monthly number of stores per household	Number of Stores per Household per Month (Percentage of Households)						
		One	Two	Three	Four	Five	Six to nine	Ten or more
Multiple-adult households (n=4,687)	7.5*	2.0	4.6*	8.3	10.7	12.0	37.1	25.3
Children only (n=699)	5.9*	3.6	10.0*	12.5*	13.5*	13.3	35.5	11.6*
All households, by type								
With an elderly person (n=10,796)	4.1	14.4	18.4	17.4	15.3	11.3	19.1	4.1
With a non-elderly person with a disability (n=7,978)	5.1*	10.8*	13.8*	14.6*	14.1	11.5	23.8*	11.4*
With a child, without a person who was elderly or had a disability (n=10,661)	7.2*	2.4*	5.5*	8.8*	10.8*	11.9	37.4*	23.1*
Other households (n=7,743)	5.4*	7.7*	11.8*	15.2*	13.8*	12.1	28.3*	11.1*

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average monthly statistics over the three months centered on the QC sample month.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Table II.9. Percentage of transactions at store types by household composition

Household composition	Distribution of EBT Purchase Transactions (Percentage of Transactions)						
	Super markets/ super stores	Large/ medium grocery	Small grocery	Con-venience	Specialty food	Internet retailer	Other type
With and without children							
Households with children (n=13,077)	56.5	4.6	1.6	19.9	0.8	4.6	12.1
Households without children (n=24,101)	60.0*	4.1	1.5	18.2*	0.9	2.7*	12.6
Types of households with children							
Single-adult households (n=7,691)	55.3	3.0	1.6	22.0	0.7	5.0	12.5
Multiple-adult households (n=4,687)	57.4*	5.9*	1.6	17.8*	1.0*	4.2	12.0
Children only (n=699)	62.0*	11.0*›	2.7›	12.8*	0.8	2.5*	8.3*
All households, by type							
With an elderly person (n=10,796)	69.5	5.1	1.2	9.0	1.1	2.1	12.0
With a non-elderly person with a disability (n=7,978)	54.7*	3.8*	1.7	21.2*	0.8*	3.9*	13.9*
With a child, without a person who was elderly or had a disability (10,661)	57.0*	4.7	1.6	19.6*	0.8*	4.6*	11.7
Other households (n=7,743)	51.6*	3.3*	1.7	27.2*	0.7*	2.8*	12.7

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average monthly statistics over the three months centered on the QC sample month.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Households headed by non-Hispanic White participants accessed the fewest number of stores, and households headed by non-Hispanic Black participants accessed the greatest number of stores (Table II.10). Households headed by non-Hispanic White participants accessed only one or two stores at twice the rate compared to households headed by non-Hispanic Black participants.

Table II.10. Number of stores accessed per household per month by race and ethnicity of household head

Race and ethnicity of household head	Average monthly number of stores per household	Number of Stores per Household per Month (Percentage of Households)						
		One	Two	Three	Four	Five	Six to nine	Ten or more
White, non-Hispanic (n=17,507)	4.7	12.1	15.4	16.0	13.9	11.3	22.7	8.6
Black, non-Hispanic (n=8,408)	6.3*	5.6*	8.6*	11.3*	12.4*	11.4	32.6*	18.1*
Hispanic (n=3,075)	5.5*	7.6*	12.2*	13.6*	13.5	12.5	28.9*	11.8*
Asian, non-Hispanic (n=1,129)	5.8*	5.8*	11.3*	12.3*	14.0	11.9	31.0*	13.6*
Native American, non-Hispanic (n=855)	5.9*	6.3*	13.0	13.9	11.6	11.2	28.5*	15.6*
Other[a] (n=6,204)	5.6*	7.7*	11.3*	13.5*	14.0	12.2	27.8*	13.5*

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average monthly statistics over the three months centered on the QC sample month.

[a] Includes non-Hispanic individuals with multiple reported races (two percent of all household heads) and individuals of unknown race (15 percent of all household heads).

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Households headed by non-Hispanic Asian participants shopped at large and medium grocery stores and specialty food stores at higher rates than other households (Table II.11). The distribution of households shopping at convenience stores varied widely by the race and ethnicity of the household head, ranging from 6 percent of non-Hispanic Asian participants to 25 percent for non-Hispanic Native American participants.

Table II.11. Distribution of transactions by store type and race and ethnicity of household head

Race and ethnicity of household head	Distribution of EBT Purchase Transactions (Percentage of Transactions)						
	Super markets/ super stores	Large/ medium grocery	Small grocery	Con-venience	Specialty food	Internet retailer	Other type
White, non-Hispanic (n=17,507)	58.3	3.3	0.8	19.7	0.6	3.8	13.5
Black, non-Hispanic (n=8,408)	53.3*	3.7	2.3*	23.2*	1.1*	3.6	12.9
Hispanic (n=3,075)	63.1*	7.2*	3.2*	14.1*	0.7	2.8*	8.9*
Asian, non-Hispanic (n=1,129)	62.7	12.3*	1.4*	6.2*	3.1*	1.3*	12.9

Race and ethnicity of household head	Distribution of EBT Purchase Transactions (Percentage of Transactions)						
	Super markets/ super stores	Large/ medium grocery	Small grocery	Con-venience	Specialty food	Internet retailer	Other type
Native American, non-Hispanic (n=855)	54.5	3.5›	0.7	24.6*	0.3*	2.2*	14.2
Other[a] (n=6,204)	61.6*	3.9	0.9	17.2*	0.6	4.3	11.5*

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average monthly statistics over the three months centered on the QC sample month.

[a] Includes non-Hispanic individuals with multiple reported races (two percent of all household heads) and individuals of unknown race (15 percent of all household heads).

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Households eligible for higher SNAP benefits accessed more stores than those eligible for a lower monthly benefit. Most households eligible for the minimum benefit accessed two or fewer stores, while most households eligible for the maximum benefit accessed over five stores on average (Table II.12). Households eligible for the minimum benefit shopped at supermarkets/super stores at a higher rate and convenience stores at a lower rate compared to households eligible for the maximum benefit (Table II.13).

Table II.12. Number of stores accessed per household per month by size of benefit

SNAP benefit[a]	Average monthly number of stores per household	Number of Stores per Household per Month (Percentage of Households)						
		One	Two	Three	Four	Five	Six to nine	Ten or more
Minimum benefit (n=668)	2.2	53.6	18.9	11.7	6.1	3.7	3.7	2.2
Maximum benefit (n=31,122)	5.6*	7.2*	11.5*	13.7	13.5*	12.0*	28.7*	13.4*

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average monthly statistics over the three months centered on the QC sample month.

[a] Measures the standard SNAP benefit and EA (if applicable) that the household was certified to receive based on their QC review. This does not include additional P-EBT issuance amounts that households may have been able to redeem on their EBT cards.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Table II.13. Percentage of transactions at store types by size of benefit

SNAP benefit	Distribution of EBT Purchase Transactions (Percentage of Transactions)						
	Super markets/ super stores	Large/ medium grocery	Small grocery	Con-venience	Specialty food	Internet retailer	Other type
Minimum benefit (n=668)	70.1	3.2	0.1	10.4	0.6	3.3	12.3
Maximum benefit (n=31,122)	57.9*	4.4	1.6*	19.3*	0.9	3.5	12.3

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average monthly statistics over the three months centered on the QC sample month.

[a] Measures the standard SNAP benefit and EA (if applicable) that the household was certified to receive based on their QC review. This does not include additional P-EBT issuance amounts that households may have been able to redeem on their EBT cards.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Households with earnings and households receiving TANF accessed slightly more stores compared to those without earnings and not receiving TANF, respectively (Table II.14). Households with certification periods over 12 months accessed fewer stores than those with certification periods of less than 12 months.

Table II.14. Number of stores accessed per household per month by presence of earnings, receipt of TANF, and certification period

Household characteristic	Average monthly number of stores per household	Number of Stores per Household per Month (Percentage of Households)						
		One	Two	Three	Four	Five	Six to nine	Ten or more
Employment Status								
Households with earnings (n=9,597)	6.5	4.5	8.4	10.8	11.7	12.4	33.5	18.7
Households without earnings (n=27,581)	5.1*	10.3*	13.7*	15.0*	14.1*	11.4*	25.2*	10.4*
Receipt of TANF								
Yes (n=943)	7.3	3.1	5.4	10.1	9.9	11.2	33.9	26.5
No (n=36,235)	5.4*	8.9*	12.5*	14.0*	13.6*	11.7	27.1*	12.2*
Months in certification period								
≤ 6 months (n=7,757)	6.1	6.5	9.8	12.4	12.8	11.4	30.5	16.7
7-12 months (n=19,025)	5.8*	7.6*	10.8*	12.5	12.8	11.6	29.8	14.8*
>12 months (n=10,361)	4.5*	12.1*	16.3*	17.0*	14.9*	11.9	21.5*	6.4*

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average monthly statistics over the three months centered on the QC sample month.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Households in the Mountain Plains Region averaged the fewest number of stores accessed per month while households in the Midwest and Mountains Plains Regions had the highest rates of accessing only one store per month (Table II.15). Households in nonmetro areas accessed fewer stores compared to households in metropolitan areas.

Table II.15. Number of stores accessed per household per month by geographic location

Geographic Location	Average Monthly Number of Stores per Household	Number of Stores per Household per Month (Percentage of Households)						
		One	Two	Three	Four	Five	Six to nine	Ten or more
Region[a]								
Northeast (n=4966)	5.3	9.0	12.1	14.2	14.0	11.6	28.3	10.6
Mid-Atlantic (n=3,674)	5.2	8.0	13.2	14.9	14.6	12.1	26.3	10.9
Midwest (n=7,396)	5.1	11.4*	13.8*	14.2	13.5	11.0	25.1*	11.0
Southeast (n=5,752)	5.8*	7.5	11.6	12.9	13.3	11.2	28.9	14.7*
Southwest (n=5,655)	5.8*	7.9	10.2*	13.1	13.9	11.9	28.1	14.9*
Mountain Plains (n=5,058)	4.8*	13.1*	16.0*	15.9	12.5	10.7	22.3*	9.5
West (n=4,667)	5.7*	6.9*	11.7	13.7	12.3	12.7	29.0	13.7*
Metro/ Nonmetro areas[b,c]								
Metropolitan (n=24,051)	5.6	8.4	11.9	13.5	13.2	11.6	28.0	13.5
Nonmetro, micropolitan (n=5,634)	4.9*	9.9*	13.6*	15.5*	14.4*	12.0	25.7*	8.9*
Nonmetro, noncore (n=3,930)	4.7*	10.9*	15.1*	16.3*	14.5	12.0	23.7*	7.5*
County with persistent poverty[b]								
Yes (n=3,461)	5.8	7.2	10.1	12.9	13.3	11.5	30.2	14.8
No (n=30,154)	5.4*	8.8*	12.5*	13.9	13.4	11.7	27.2*	12.4*

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average monthly statistics over the three months centered on the QC sample month.

[a] Regions are defined using FNS region as of FY 2022.

[b] Excludes households in Nebraska, Rhode Island, Utah, and the Virgin Islands due to a high share of cases with unknown locality.

[c] A metropolitan statistical area has at least one urbanized area with a population of 50,000 or more and includes adjacent territory with a high degree of social and economic integration with the core, as measured by commuting ties. A micropolitan statistical area has at least 1 urban cluster of at least 10,000 but less than 50,000 in population and includes adjacent territory with a high degree of social and economic integration with the core, as measured by commuting ties. All other areas are noncore statistical areas.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Households in the Northeast and Mid-Atlantic Regions shopped at small grocery stores at a higher rate than households in other regions (Table II.16). Households in counties with persistent poverty shopped at large, medium, and small grocery stores and at specialty stores more often than households in counties without persistent poverty.

Table II.16. Percentage of transactions at store types by geographic location

Geographic Location	Distribution of EBT Purchase Transactions (Percentage of Transactions)						
	Super markets / Super stores	Large/ medium grocery	Small grocery	Con-venience	Specialty food	Internet retailer	Other type
Region[a]							
Northeast (n=4,966)	55.4	7.6	5.1	18.0	1.7	2.9	9.3
Mid-Atlantic (n=3,674)	56.3	4.6*	3.0*	20.2	1.1*	3.6	11.3*
Midwest (n=7,396)	60.9*	2.8*	0.4*	16.8	0.6*	3.9*	14.6*
Southeast (n=5,752)	53.8	4.2*	1.3*	24.1*	0.7*	3.3	12.5*
Southwest (n=5,655)	58.6*	3.3*	0.5*	18.6	0.5*	4.7*	13.9*
Mountain Plains (n=5,058)	58.9*	3.8*	0.5*	21.4*	0.4*	3.8	11.0*
West (n=4,667)	62.5*	4.7*	0.8*	16.6	1.0*	3.0	11.4*
Metro/ Nonmetro areas[b,c]							
Metropolitan (n=24,051)	58.9	4.5	1.7	18.8	1.0	3.7	11.4
Nonmetro, micropolitan (n=5,634)	54.9*	3.0*	0.6*	21.3*	0.4*	3.7	16.1*
Nonmetro, noncore (n=3,930)	54.9*	3.8*	0.6*	18.3	0.3*	2.8*	19.2*
County with persistent poverty[b]							
Yes (n=3,461)	51.4	6.6	5.4	19.3	2.0	2.8	12.5
No (n=30,154)	59.2*	4.0*	1.0*	19.0	0.7*	3.7*	12.3

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average monthly statistics over the three months centered on the QC sample month.

[a] Regions are defined using FNS region as of FY2022.

[b] Excludes households in Nebraska, Rhode Island, Utah, and the Virgin Islands due to a high share of cases with unknown locality.

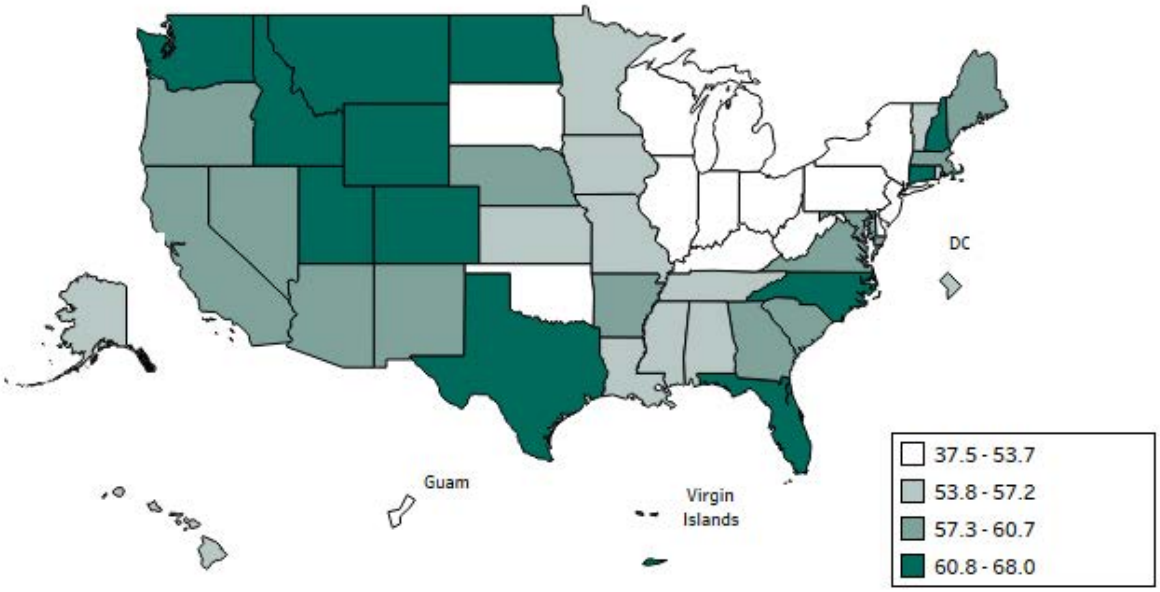
[c] A metropolitan statistical area has at least one urbanized area with a population of 50,000 or more and includes adjacent territory with a high degree of social and economic integration with the core, as measured by commuting ties. A micropolitan statistical area has at least 1 urban cluster of at least 10,000 but less than 50,000 in population and includes adjacent territory with a high degree of social and economic integration with the core, as measured by commuting ties. All other areas are noncore statistical areas.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

3. Differences across States

Households in almost every State made most of their transactions at supermarkets/super stores (Figure II.8). Only households in Guam, Oklahoma, West Virginia, and Delaware made less than 50 percent of their transactions at supermarkets/super stores. Because Guam had a disproportionately high ratio of large or medium grocery stores compared to other authorized retailers (Appendix E, Table E.1), households in Guam also had a high rate of transactions at large or medium grocery stores at 37 percent, compared to between 1 to 10 percent in other States.

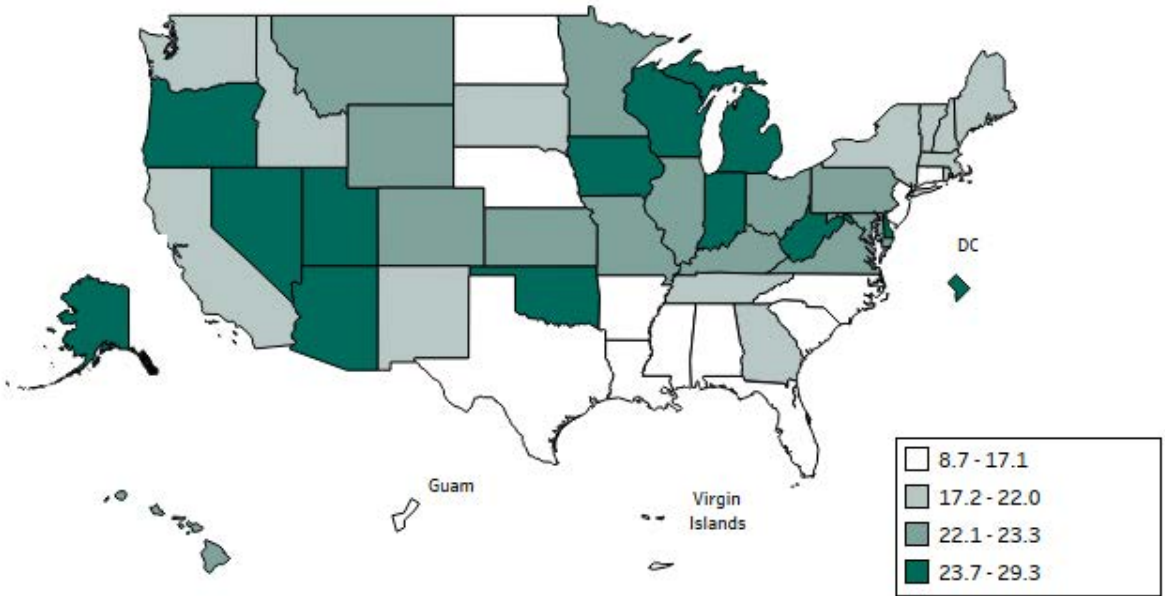
Figure II.8. Percentage of transactions at supermarkets/super stores



Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

Convenience stores were the second most common store type at which households shopped. Households in Oklahoma, Delaware, Wisconsin, and Iowa shopped at convenience stores at the highest rate at around 28 percent (Figure II.9). Only households in Guam did not shop at convenience stores at a higher rate compared to other non-supermarket store types, which may be because a much smaller percentage of authorized retailers in Guam are convenience stores (30 percent, compared to the national average at 46 percent) (Appendix E, Table E.1).

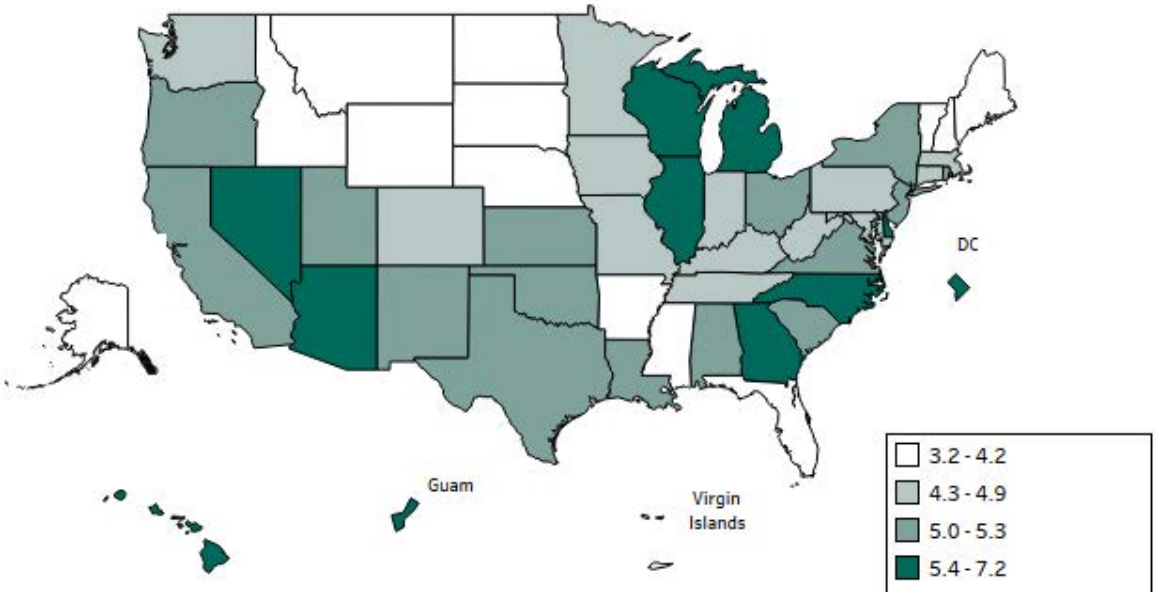
Figure II.9. Percentage of transactions at convenience stores



Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

States also varied in terms of the average number of stores where households redeemed their benefits (Figure II.10). North Dakota had the lowest average number of stores frequented at 3.2, and Guam had the highest at 7.2.

Figure II.10. Average number of stores accessed by households per month



Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

III. Benefit Exhaustion

The maximum SNAP benefit is intended to be sufficient to cover a household's monthly food purchases; households not receiving the maximum benefit are expected to supplement their food purchases with their own funds. However, households may not have sufficient resources to meet their nutritional needs towards the end of the month; in a study of the association between diet quality and the SNAP benefit cycle, Whiteman et al. (2018) found that when households near the end of their SNAP monthly benefit cycle, their diet quality drops. In FY 2022, because of EA, all households in 36 States received at least the maximum benefit for each month of the year, and in 9 States, all households received the maximum at least some months during the year. This is an important year, then, in which to examine benefit exhaustion patterns, including how quickly after issuance households redeem their benefits, what percentage of the benefits they redeem by the end of each month, and how much households leave unspent at the end of the month. In this chapter we examine these benefit exhaustion measures, and, in Chapter VI, we compare them with previous study years.

We used the ALERT benefit exhaustion file to measure benefit exhaustion and benefit carryover into the next issuance period, starting from the day the household received its issuance to the day before the next issuance was distributed. As noted in Chapter I and described in detail in Appendix F, the issuance periods examined in this study can range from several days to a month. In the eight States that did not offer EA to households, the issuance period remains at one month, and these results are expected to be comparable to those in previous studies. As noted in Chapter 1, however, even in these States, maximum benefit levels rose by 21 percent because of the changes to the Thrifty Food Plan. Households in States that issued EA at the same or nearly the same time as their standard issuances also had issuance periods of one month.[10] Households in States that issued benefits separately likely had two issuance periods, with the first starting on the identified standard issuance date and the second starting on the identified EA issuance date.[11] Appendix B, Table B.32 shows the distribution of household issuance periods by State and length.

The study team measured benefit exhaustion as the cumulative proportion of a household's issuance redemption at four points during the issuance period: day 7 (first week), day 14 (second week), day 21 (third week), and the end of the month. The day 7 redemption statistic includes all issuance periods, even those that were not at least seven days long. The day 14, 21, and end of month redemption statistic includes only issuance periods that were at least 14, 21, and 28 days long, respectively. In this chapter, we present the proportion of benefits redeemed at each of the four points and the distribution of households by the percentage redeemed by days 7 and 14. We also present the proportion of households that reached an account balance of less than $1 by each of the four points.

[10] At times, EA issuances in States that typically issued benefits together were observed on different dates. When the observed EA issuance in these States was more than seven days from the standard issuance date, we split the month into two analysis periods, with the first starting on the identified standard issuance date and the second on the observed EA issuance date. When the separate issuances in these States were observed within seven days of each other, we combined the issuances, and the analysis period remained at one month.

[11] If the standard and EA issuance dates for a household were within three days of each other, we combined them into one spending period.

Along with measuring the proportion of a household's *issuance* redeemed at these four points, we added a comparable set of analyses that measure the proportion of the cumulative *starting balance* that a household redeemed. We sometimes have short issuance periods over which to examine a household's redemption of a relatively large benefit amount (see the example household below). It is likely that these households will carry over a substantial portion of their EA into the next issuance period.

In addition, the study team examined benefit carryover using two measures that are closely related: the amount of a household's issuance left **unspent** and the household's **account balance** at the end of the issuance period. The *amount unspent ignores dollars carried over from previous issuance periods* and the *account balance reflects the long-run accumulation of unspent issuance dollars*. The averages for both measures overall are presented along with the averages broken out by households' total redemption in the issuance period.

Stylized example of a household's redemption pattern under three EA distribution schedule scenarios

Consider a household of size 3, qualifying for a $500 standard benefit to be issued on March 1 and an EA of $158. Suppose the household also carries over a $20 balance from their February issuance. The $20 carried over is not included in the denominator for tables related to issuance nor in the unspent issuance calculation. However, it is included in the denominator for tables related to the available balance and the carry-over calculation.

In each example below, the household redeems $150 on March 1, 7, 14, and 21.

a. In a State that issued EA with standard issuances:

The household's issuance period is one month long. The household's issuance for March is $658, which is available to redeem over the entire month.

This household redeemed the following percentage of its benefit issuance or balance at the identified points:

Exhaustion Measure	Day 7	Day 14	Day 21	End of Month
Percentage of issuance redeemed	45.6% (=300/658)	68.4% (=450/658)	91.2% (=600/658)	91.2% (=600/658)
Percentage of balance redeemed	44.2% (=300/678)	66.4% (=450/678)	88.5% (=600/678)	88.5% (=600/678)

At the end of the issuance period, the household has $58 in unspent issuance; $78 is carried over to April 1.

b. In a State that issued EA 8 days after the standard issuance:

The household has two issuance periods. The first is 7 days, from March 1 to March 7. During this period, the household has a $500 issuance and $150 transactions on March 1 and March 7. It has $20 carried over from February. The household carries over $220 to the second issuance period.

The second issuance period is 24 days, from March 8 to March 31. During this period, the household has a $158 issuance and $150 transactions on March 14 (day 7 of the issuance period) and March 21 (day 14 of the issuance period. The household carries over $78 to the next issuance period.

This household redeemed the following percentage of its benefit issuance or balance at the identified points:

Exhaustion Measure	Day 7	Day 14	Day 21	End of Month
Issuance period 1 (March 1 to 7)				
Percentage of issuance redeemed	60.0% (=300/500)	n.a.	n.a.	n.a.
Percentage of balance redeemed	57.7% (=300/520)	n.a.	n.a.	n.a.
Issuance period 2 (March 8 to 31)				
Percentage of issuance redeemed	94.9% (=150/158)	189.9% (=300/158)	189.9% (=300/158)	n.a.
Percentage of balance redeemed	39.7% (=150/378)	79.4% (=300/378)	79.4% (=300/378)	n.a.

n.a. = not applicable

After issuance period 1, the household has $200 in unspent issuance; $220 is carried over to the next issuance period.

After issuance period 2, the household has $0 in unspent issuance; $78 is carried over to April 1.

c. In a State that issued EA 20 days after the standard issuance:

The household has two issuance periods. The first is 20 days, from March 1 to March 20. During this period, the household has a $500 issuance and $150 transactions on March 1, 7, and 14. It has $20 carried over from February as part of its available balance. The household carries over $70 to the second issuance period.

The second issuance period is 11 days, from March 21 to March 31, the household has a $158 issuance and a $150 transaction on March 21 (day 1 of the issuance period). It has $70 carried over from the first issuance period as part of its available balance. The household carries over $78 to the next issuance period.

This household redeemed the following percentage of its benefit issuance or balance at the identified points:

Exhaustion Measure	Day 7	Day 14	Day 21	End of Month
Issuance period 1 (March 1 to 20)				
Percentage of issuance redeemed	60.0% (=300/500)	90.0% (=450/500)	n.a.	n.a.
Percentage of balance redeemed	57.7% (=300/520)	86.5% (=450/520)	n.a.	n.a.
Issuance period 2 (March 21 to 30)				
Percentage of issuance redeemed	94.9% (=150/158)	n.a.	n.a.	n.a.
Percentage of balance redeemed	65.7% (=150/228)	n.a.	n.a.	n.a.

n.a. = not applicable

After issuance period 1, the household has $50 in unspent issuance; $70 is carried over to the next issuance period.

After issuance period 2, the household has $8 in unspent issuance; $78 is carried over to April 1.

From the scenarios above (see box), we see that even though households in different States can have the same pattern of redemption in a calendar month, the timing of their standard and EA distributions affects their measures of exhaustion, unspent issuance, and carryover from one issuance period to the next. The day 7 percentage of issuance redeemed ranges from 46 to 95 percent, and the day 7 balance redemption

ranges from 28 to 57 percent. The amount carried over at the end of the second issuance period for scenarios (b) and (c), though, remains equal to the amount carried over at the end of the month in scenario (a). Because State EA distribution schedules vary across calendar months, a household with the same monthly redemption pattern may have exhaustion findings fit scenario (a) in one month, scenario (b) in another month, and scenario (c) in a third month. Furthermore, given different standard issuance schedules within States, some households in a State may align with one scenario in one month while other households in the State may align with a different scenario in that month.

The analysis in this chapter excludes P-EBT transactions. Specifically, the analysis excludes transactions from non-SNAP households receiving P-EBT, P-EBT transactions of SNAP households receiving P-EBT benefits on a separate P-EBT card and all transactions in issuance periods in which a household received a P-EBT benefit. Because P-EBT benefits can be relatively large (for example, $375 per child for households in the contiguous States for summer 2021), redemption in the periods following P-EBT issuances may reflect benefits carried over from those issuance periods.

The key findings follow:

- By day 7 after issuance, households had redeemed 56 percent of their benefit issuance on average; by day 14, they had redeemed 79 percent. Taken as a percentage of their starting balance, households had redeemed 47 percent of their balance by day 7 on average and 67 percent by day 14.
- Households with higher benefits redeemed their benefits at a slower rate than those with lower benefits.
- On average, households did not spend $39 of their benefit issuance; 75 percent of households left $25 or less unspent.
- When including amounts carried over from previous issuance periods, households had an average account balance of $198 at the end of the month; 56 percent had an account balance of $25 or less.

Section A presents measures of redemption by the four points in the issuance period for households overall and by their benefit issuance. The discussion compares the rates of redemption overall, by characteristics of households, and across States. Section B identifies the amount of issuance a household left unspent by the end of the issuance period and the amounts carried over, overall, by characteristics of households, and across individual States.

A. Benefit redemption by day of the month

Most households redeem most of their benefits by the end of the month. This section explores how much has been redeemed at points during a household's issuance period.

1. Benefit redemption during FY 2022

In an average month during FY 2022, the average SNAP household redeemed 56 percent of its issued benefit by day 7 and 79 percent by day 14 (Table III.1). Households redeemed an additional 10 percent of their issued benefits by day 21 (redeeming 90 percent) and ultimately redeemed 94 percent by the end of

the issuance month.[12] As a percentage of their cumulative benefit balance at the start of the issuance period, households, on average, redeemed 47 percent by day 7 and 67 percent by day 14. By the end of the month, households had redeemed 86 percent of their starting balance. Nearly two-fifths (40 percent) of participating households reached a balance of less than $1 by the end of the month; about 9 percent had done so by day 7, 20 percent by day 14, and 30 percent by day 21.

Table III.1. Cumulative percentage of benefits redeemed by day of the month

Cumulative Percentage	Day 7	Day 14[a]	Day 21[b]	End of Month[c]
Cumulative percentage of issued benefits redeemed	56.3	79.5	89.6	94.4
Cumulative percentage of balance redeemed	47.3	67.2	78.3	86.0
Cumulative percentage of households with balance less than $1	9.3	19.7	29.9	40.2

Source: Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

Note: Analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022.

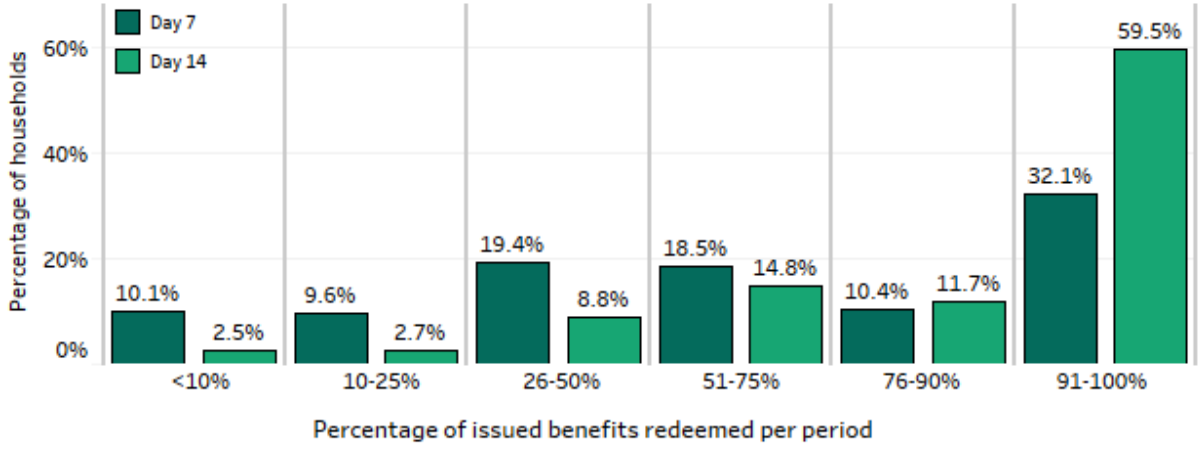
[a] Day 14 percentage includes only households with issuance periods of at least 14 days.

[b] Day 21 percentage includes only households with issuance periods of at least 21 days.

[c] End of month percentage includes only households with issuance periods of at least 28 days.

As we see in Figure III.1, by day 7 of the issuance period 61 percent of households had redeemed more than 50 percent of their issued benefit (sum of 18.5, 10.4, and 32.1), with nearly one third of households (32 percent) redeeming 91 percent or more. By day 14, 86 percent of households had redeemed more than half of their issued benefit, and 60 percent of households had redeemed more than 90 percent. Figure III.2 shows that 47 percent of households had redeemed at least 50 percent of their cumulative balance within the first 7 days and 71 percent had redeemed this much within the first 14 days.

Figure III.1. Percentage of households by benefits redeemed by days 7 and 14

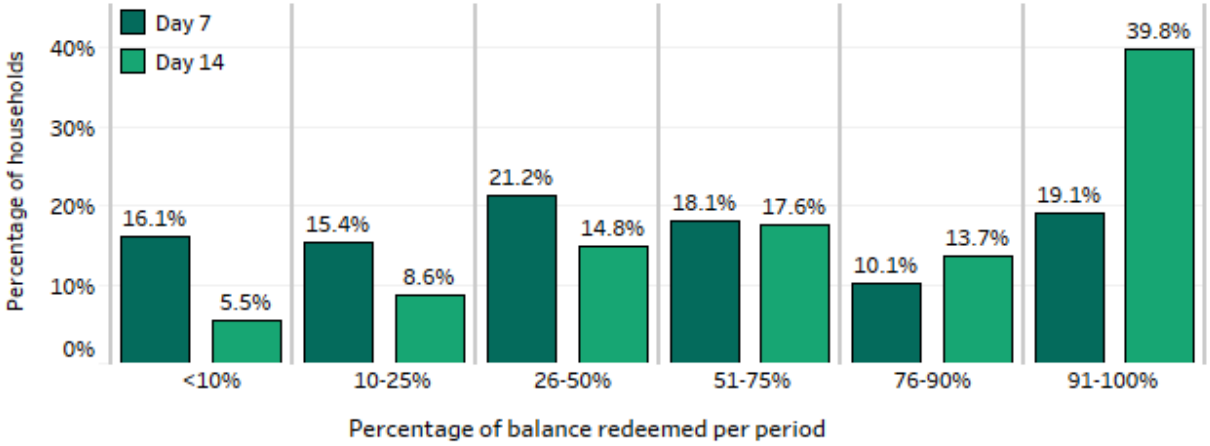


Source: Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

[12] Apparent discrepancies in calculations are due to rounding.

Note: Analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022. Day 14 percentage includes only households with issuance periods of at least 14 days.

Figure III.2. Percentage of households by balance redeemed by days 7 and 14



Source: Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

Note: Analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022. Day 14 percentage includes only households with issuance periods of at least 14 days.

Overall, the proportion of benefits redeemed at each measured point in time was tied to the issuance amount for the benefit period (Table III.2). On average, households issued $200 or less in the issuance period redeemed 65 to 80 percent of benefits by day 7; households issued more than $200 redeemed 49 to 58 percent of their benefit by day 7. This trend continues throughout the issuance period, with those receiving a smaller issuance redeeming a larger percentage of their benefit by the end of each period. By the end of the month, households, on average, redeemed more than 90 percent of their benefit, regardless of issuance group.

Table III.2. Percentage of benefits redeemed by each measured point in time

Issuance Amount	Day 7	Day 14[a]	Day 21[b]	End of Month[c]
< $25	79.5	91.8	94.4	97.6
$26-50	73.8	88.1	92.0	95.7
$51-100	77.1	93.2	96.3	96.5
$101-200	65.5	85.7	92.6	95.6
$201-300	56.4	78.3	87.8	93.3
$301-350	50.9	73.8	86.0	93.9
$351-400	57.5	81.4	90.5	92.9
$401-450	53.9	78.0	87.6	91.5
$451-500	51.5	75.2	86.8	93.4
> $500	48.8	73.0	86.2	93.9

Source: Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

Note: Analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022.

[a] Day 14 percentage includes only households with issuance periods of at least 14 days.

[b] Day 21 percentage includes only households with issuance periods of at least 21 days.

[c] End of month percentage includes only households with issuance periods of at least 28 days.

2. Differences across subgroups

Results by subgroup include households both with and without EA. In EA States, household benefit levels vary only by household size and are not influenced by characteristics such as household type, the presence of earnings or other income, or deductible expenses. Results that may have been statistically significantly different in past studies because of characteristics that affected household benefit levels across households of the same size may not be significantly different in FY 2022, or the magnitude of the differences may be smaller than in previous studies. Because these measures are from a sample of approximately 37,000 SNAP households in the SNAP QC data, the statistics shown in this section may differ from the national and State-level estimates taken from a sample of approximately 6.6 million households. In addition, by selecting a three-month window around the QC interview month when some States issue EA for only part of the year may lessen the national representativeness of the QC findings. Our focus in this section is how the subgroup estimates are different from each other, rather than the overall magnitude of the findings.

As with the national averages presented above, we examined results related to benefits redeemed by day of the month relative to both the benefit issued at the beginning of the issuance period and the cumulative balance at the beginning of the issuance period. Below we present the analyses relative to the issued benefit. The results relative to the cumulative balance are provided in Appendix C, Tables C.1 to C.3. The findings are similar in significance, though the magnitude of the results shown in the appendix are smaller. We discuss any notable differences in the text below.

In FY 2022, by day 7, more households without children redeemed 25 percent or less of their benefits than households with children (21 percent and 14 percent, respectively; Table III.3). This trend carried through to day 14, with 5 percent of households without children redeeming 25 percent or less of their benefits compared to 2 percent of households with children. A similar percentage of households with and without children, though, redeemed more than 90 percent of benefits by the end of each period (35 percent for each group at day 7; 66 percent for households without children and 68 percent for households with children at day 14).

Table III.3. Benefits redeemed by Days 7 and 14 by presence of children

Percentage of Benefits Redeemed	Percentage of Households Redeeming Benefits by			
	Day 7		Day 14[a]	
	With children	Without children	With children	Without children
<10%	5.7	11.4*	1.1	2.4*
10-25%	8.2	9.3*	1.4	2.4*
26-50%	19.7	18.1*	5.9	7.8*
51-75%	20.5	17.0*	13.0	12.1*
76-90%	10.5	9.6*	10.6	9.2*
>90%	35.3	34.6	68.0	66.1*

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average statistics over the three months centered on the QC sample month.

Note: Analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022

[a] Day 14 percentage includes only households with issuance periods of at least 14 days.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table rows, relative to the first column in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

About 45 percent of households both with children and without children reached an account balance of less than $1 by the end of the month (Table III.4). More households without children reached this balance at earlier points in the month than households with children. By day 7, 10 percent of households without children had reached such a balance in their account, compared with 7 percent of households with children. By day 14, 21 percent of households without children had reached an account balance of less than $1, while 18 percent of households with children had reached this balance.

Table III.4. Percentage of households with and without children reaching balance of less than $1 by days in the issuance period

Household Type	Day 7	Day 14[a]	Day 21[b]	End of Month[c]
With children (n=13,077)	7.0	18.0	28.6	45.4
Without children (n=24,101)	10.2*	20.7*	30.6*	45.0

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average statistics over the three months centered on the QC sample month.

Note: Analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022.

[a] Day 14 percentage includes only households with issuance periods of at least 14 days.

[b] Day 21 percentage includes only households with issuance periods of at least 21 days.

[c] End of month percentage includes only households with issuance periods of at least 28 days.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table rows, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Considering other types of household compositions, those with an elderly member redeemed their benefit at a slower rate than other types of households. By day 7, households with an elderly member redeemed an average of 55 percent of their issuance, while all other types of households redeemed more than 60 percent (Table III.5). By day 14, households with an elderly member redeemed about 80 percent of their benefit, while all other types of households redeemed 84 percent or more. Table III.6 shows that households with an elderly member more often redeemed 50 percent or less of their benefit by day 7 compared to other household types (summing the first three rows shows that 43 percent of households with an elderly person redeemed 50 percent or less of their benefit by day 7, while 35 percent or less of other households had done so). By day 14, households with an elderly member were also less likely than other household types to redeem more than 90 percent of their benefits (62 percent of households with an elderly person versus 67 to 71 percent for other household types).

Table III.5. Percentage of benefits redeemed by days since issuance by household type

Household Type	Day 7	Day 14[a]	Day 21[b]	End of Month[c]
With an elderly person (n=10,796)	55.4	79.9	91.5	98.5
With a non-elderly person with a disability (n=7,978)	64.8*	85.9*	94.7*	99.3*
With a child, without a person who was elderly or had a disability (n=10,661)	61.6*	84.3*	94.1*	99.2*
Other households (n=7,743)	62.1*	84.2*	93.6*	98.8

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average statistics over the three months centered on the QC sample month.

Note: Analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022.

[a] Day 14 percentage includes only households with issuance periods of at least 14 days.

[b] Day 21 percentage includes only households with issuance periods of at least 21 days.

[c] End of month percentage includes only households with issuance periods of at least 28 days.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Table III.6. Percentage of households redeeming benefits by days 7 and 14 by household type

Percentage of Benefits Redeemed	Percentage of Households							
	Day 7				Day 14[a]			
	With an elderly person	With a non-elderly person with a disability	With a child, without a person who was elderly or had a disability	Other households	With an elderly person	With a non-elderly person with a disability	With a child, without a person who was elderly or had a disability	Other households
50% or less								
<10%	12.7	8.9*	5.9*	9.8*	2.3	2.1	1.1*	2.3
10-25%	10.9	7.5*	8.2*	8.4*	3.0	1.6*	1.4*	2.0*
26-50%	19.7	16.5*	20.2	16.9*	9.4	5.8*	6.1*	6.5*
More than 50%								
51-75%	17.2	17.1	20.7*	17.3	13.8	10.7*	13.3	10.7*
76-90%	8.8	11.0*	10.1*	10.4*	9.8	8.7*	10.8	8.8*
>90%	30.8	39.0*	34.8*	37.1*	61.6	71.0*	67.4*	69.7*

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average statistics over the three months centered on the QC sample month.

Note: Analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022.

[a] Day 14 percentage includes only households with issuance periods of at least 14 days.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table rows, relative to the first column in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Households in counties with persistent poverty redeemed slightly more of their benefit at any measured point during the first 21 days after issuance than those in other counties. Households in counties with persistent poverty redeemed 65 percent of their benefit in the first 7 days of the issuance period, compared with 61 percent in other counties (Table III.7). By day 14 after the issuance, households in counties with persistent poverty had redeemed 86 percent of their benefit on average, whereas households in other counties had redeemed 83 percent. On average, both types of households had redeemed at least 99 percent of their benefit by the end of the month. Among households in counties with persistent poverty, 23 percent had an account balance below $1 by day 14 after receiving their issuance. In other counties, 19 percent reached a balance below $1 by 14 days after issuance. However, there was no significant difference in the proportion of households that reached this balance after 21 days or at the end of the month; 45 percent or more of households had less than $1 in their account the day before receiving their next issuance, regardless of poverty in their county.

Table III.7. Benefits redeemed by day of the month by county poverty status

Measure	Day 7	Day 14[a]	Day 21[b]	End of Month[c]
Cumulative percentage of benefits redeemed				
Household in county with persistent poverty (n=3,461)	64.5	85.9	95.4	99.3
Household in county without persistent poverty (n=30,154)	60.6*	83.5*	93.4*	99.0*
Cumulative percentage of households with balance less than $1				
Household in county with persistent poverty (n=3,461)	11.2	22.5	31.5	47.6
Household in county without persistent poverty (n=30,154)	8.8*	19.4*	29.8	44.9

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average statistics over the three months centered on the QC sample month.

Note: Analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022

Note: Excludes households in Nebraska, Rhode Island, Utah, and the Virgin Islands due to a high share of cases with unknown locality.

[a] Day 14 percentage includes only households with issuance periods of at least 14 days.

[b] Day 21 percentage includes only households with issuance periods of at least 21 days.

[c] End of month percentage includes only households with issuance periods of at least 28 days.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Households with and without earnings redeemed their benefit at similar rates throughout the issuance periods. Seven days after issuance, households with and without earnings had redeemed 61 percent of their benefit (Table III.8). This increased to 84 percent by day 14, and 99 percent by the end of the month. However, more households without earnings reached a benefit balance of less than $1 by days 7, 14, and 21, compared to households with earnings. For example, 20 percent of households without earnings reached a balance of $1 by day 14, compared to 18 percent of households with earnings. Households without earnings were also slightly more likely than households with earnings to redeem more than 90 percent of their benefits by day 7 (35 vs. 34 percent; Appendix A, Table A.17).

Table III.8. Benefits redeemed by day of the month by presence of earnings

Measure	Day 7	Day 14[a]	Day 21[b]	End of Month[c]
Cumulative percentage of benefits redeemed				
Households with earnings (n=9,597)	60.8	83.8	93.8	99.0
Households without earnings (n=27,581)	61.0	83.5	93.5	99.0
Cumulative percentage of households with balance less than $1				
Households with earnings (n=9,597)	7.0	17.6	27.5	45.7
Households without earnings (n=27,581)	9.8*	20.5*	30.7*	44.9

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average statistics over the three months centered on the QC sample month.

Note: Analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022

[a] Day 14 percentage includes only households with issuance periods of at least 14 days.

[b] Day 21 percentage includes only households with issuance periods of at least 21 days.

[c] End of month percentage includes only households with issuance periods of at least 28 days.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Households receiving TANF redeemed their SNAP benefit at a faster rate than did those not receiving TANF—at every measured point, households with TANF benefits had redeemed a larger percentage of their SNAP benefit than those not receiving TANF (Table III.9). Table III.10 shows households receiving TANF were more likely to redeem almost all of their benefit during the first two weeks after the issuance than households not receiving TANF. By days 7 and 14, respectively, 38 and 73 percent of households with TANF had redeemed more than 90 percent of their benefits compared to 35 and 67 percent of households without TANF.

Table III.9. Benefits redeemed by day of the month by presence of TANF

TANF Benefit Receipt	Day 7	Day 14[a]	Day 21[b]	End of Month[c]
Yes (n=943)	64.3	86.4	95.1	99.5
No (n=36,235)	60.8*	83.5*	93.5*	99.0*

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average statistics over the three months centered on the QC sample month.

Note: Analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022

[a] Day 14 percentage includes only households with issuance periods of at least 14 days.

[b] Day 21 percentage includes only households with issuance periods of at least 21 days.

[c] End of month percentage includes only households with issuance periods of at least 28 days.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Table III.10. Households redeeming benefits by days 7 and 14 by receipt of TANF

Percentage of Benefits Redeemed	Percentage of Households Redeeming Benefits by			
	Day 7		Day 14[a]	
	With TANF	Without TANF	With TANF	Without TANF
<10%	7.5	9.4	1.2	1.9*
10-25%	7.0	9.0*	1.1	2.1*
26-50%	16.3	18.7*	5.0	7.2*
51-75%	18.8	18.2	10.4	12.5
76-90%	12.1	9.9*	9.6	9.7
>90%	38.4	34.7*	72.8	66.6*

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average statistics over the three months centered on the QC sample month.

Note: Analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022.

[a] Day 14 percentage includes only households with issuance periods of at least 14 days.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Although on average, households in all regions redeemed 99 percent of their benefit issuance by the end of the month, the rates during the month varied for households in some regions (Table III.11). Households in the Mid-Atlantic and West Regions redeemed a smaller percentage of their benefits than households in the Northeast Region at each measured point in the issuance period. Households in the Midwest and Mountain Plains Regions redeemed a smaller percentage than households in the Northeast Region by Days 14, 21, and the end of the month. This is particularly notable for the Mountain Plains Region, because five of the eight States not issuing EA during FY 2022 were in the Mountain Plains Region (Missouri, Montana, Nebraska, North Dakota, and South Dakota);[13] average benefit levels for households in these no-EA States were lower than in States issuing EA.

Table III.11. Households redeeming benefits by days 7 and 14 by region and metropolitan status

Geographic Area	Day 7	Day 14[a]	Day 21[b]	End of Month[c]
Region[d]				
Northeast (n=4,966)	61.7	85.2	96.0	99.4
Mid-Atlantic (n=3,674)	57.3*	80.1*	92.2*	98.8*
Midwest (n=7,396)	61.8	83.2*	92.7*	98.7*
Southeast (n=5,752)	63.5	86.4	95.0*	99.2
Southwest (n=5,655)	62.8	84.5	93.9*	99.3
Mountain Plains (n=5,058)	61.8	82.9*	92.6*	98.9*
West (n=4,667)	57.5*	82.5*	92.8*	98.9*

[13] Arkansas (Southwest Region), Florida (Southeast Region), and Idaho (West Region) also did not issue EA in FY 2022.

Geographic Area	Day 7	Day 14[a]	Day 21[b]	End of Month[c]
Metro/nonmetro areas[e]				
Metropolitan (n=24,051)	60.8	83.7	93.7	99.1
Nonmetro, micropolitan (n=5,634)	62.9*	84.1	93.1	98.6
Nonmetro, noncore (n=3,930)	61.6	83.2	92.9	99.0

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average statistics over the three months centered on the QC sample month.

Note: Analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022.

[a] Day 14 percentage includes only households with issuance periods of at least 14 days.

[b] Day 21 percentage includes only households with issuance periods of at least 21 days.

[c] End of month percentage includes only households with issuance periods of at least 28 days.

[d] Regions are defined using FNS region as of FY 2022.

[e] A metropolitan statistical area has at least one urbanized area with a population of 50,000 or more and includes adjacent territory with a high degree of social and economic integration with the core, as measured by commuting ties. A micropolitan statistical area has at least 1 urban cluster of at least 10,000 but less than 50,000 in population and includes adjacent territory with a high degree of social and economic integration with the core, as measured by commuting ties. All other areas are noncore statistical areas.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

In contrast, when examining the benefits redeemed as a percentage of the balance available at the beginning of the issuance period, households in the Northeast Region redeemed a larger percentage of their balance by day 21 and the end of the month (89 and 98 percent, respectively) than households in any other region (Appendix C, Table C.1). Households in the Midwest, Southwest, and Mountain Plains Regions redeemed a larger percentage of their balance by day 7 (43 to 45 percent for these regions) than households in the Northeast Region (38 percent) but a smaller percentage (94 to 95 percent) by the end of the month (compared to 98 percent for the Northeast).

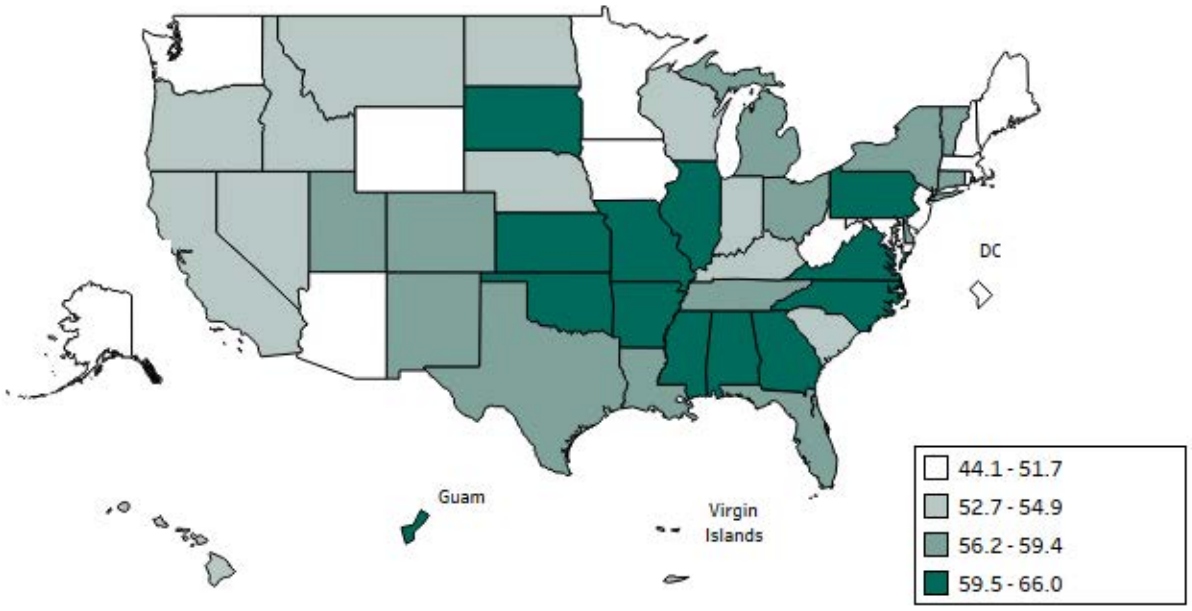
Relative to households in metropolitan areas, households in nonmetro micropolitan areas redeemed benefits more quickly by day 7; differences at all other measured points in time were not statistically significant.

3. Differences across States

As illustrated in Figure III.3, the percentage of benefits redeemed by day 7 ranged across States from 44 (New Jersey) to 66 (Arkansas). As our example at the beginning of the chapter illustrates, though, households in different States could have the same redemption pattern in a month yet have different levels of exhaustion and unspent issuance because of their EA distribution schedule. For an easier cross-State comparison, if we focus only on households in States that typically issued full monthly benefits on one day in the month (whether with EA or without), we see households in States with no EA typically redeemed a larger percentage of their benefit by day 7 than those in States issuing EA (Table III.12; the States with the five highest values of the percentage redeemed at each measured point are shaded in light tan and those with the five lowest values are shaded in dark tan). This is not surprising given that the

average benefit for the month is smaller in the no-EA States than in the EA States once P-EBT benefits have been removed.

Figure III.3. Percentage of benefits redeemed by day 7



Source: Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

Note: Analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022. Arkansas, Florida, Idaho, Missouri, Montana, Nebraska, North Dakota, and South Dakota did not issue EA in FY 2022; Arizona, Georgia, Indiana, Iowa, Kentucky, Mississippi, Tennessee, and Wyoming issued EA for at least some months in FY 2022. All other States issued EA in all months of FY 2022.

Table III.12. Percentage of benefits redeemed by day for States typically issuing benefits one time per month

State	Day 7	Day 14[a]	Day 21[b]	End of Month[c]
No EA States				
Arkansas	66.0[†]	84.6[†]	93.1[†]	96.9[†]
Florida[d]	57.0[†]	78.4[†]	89.3[†]	96.1[†]
Idaho	54.8	76.3	88.2	94.7
Missouri	62.6[†]	82.0[†]	91.1[†]	95.8[†]
Montana	54.9	76.8	88.5	95.2
Nebraska	53.7	75.8	88.0	95.2
North Dakota	52.8	74.7	86.8	94.8
South Dakota	59.6[†]	80.8[†]	91.0[†]	95.6[†]
EA States				
Arizona	50.6[‡]	73.6	87.1	94.8
District of Columbia	51.3	73.6	86.4	93.8[‡]

State	Day 7	Day 14[a]	Day 21[b]	End of Month[c]
Indiana	53.4	74.8	87.1	94.6
Iowa	48.6[‡]	70.9[‡]	84.6[‡]	93.1[‡]
Kentucky	54.5	75.8	88.0	95.2
Maryland[e]	51.2	73.1[‡]	85.6[‡]	93.2[‡]
New Jersey	44.1[‡]	67.9[‡]	83.0[‡]	93.9
South Carolina	52.7	75.0	87.4	94.6
Tennessee	59.4[†]	79.5[†]	89.8[†]	95.7[†]
Washington	46.1[‡]	69.7[‡]	84.1[‡]	93.4[‡]
Wyoming	47.4[‡]	70.1[‡]	83.9[‡]	93.1[‡]

Source: Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

Note: Analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022.

[a] Day 14 percentage includes only households with issuance periods of at least 14 days.

[b] Day 21 percentage includes only households with issuance periods of at least 21 days.

[c] End of month percentage includes only households with issuance periods of at least 28 days.

[d] Excludes transactions in September 2022 because many households received an early standard issuance in that month due to Hurricane Idalia.

[e] Excludes transactions in October 2021 because many households received an early EA distribution in that month; EA was typically distributed with the household's standard benefit issuance.

[†] Light tan shading indicates States with the highest percentage of benefits redeemed by day indicated in the column heading.

[‡] Dark tan shading indicates States with the lowest percentage of benefits redeemed by day indicated in the column heading.

Households in most States with the lowest numbers of stores per square mile redeemed their benefits at a slower rate than the national average (Table III.13). Except for South Dakota, households in States with the fewest stores per square mile typically redeemed between 49 and 55 percent of their benefit by day 7 and between 70 and 77 percent by day 14, all less than the national average of 56 and 79 percent by days 7 and 14, respectively. We did not find a comparable pattern of higher-than-average rate of benefit exhaustion, however, in States with the most stores per square mile.

Table III.13. Percentage of benefits redeemed by States with highest and lowest density of authorized retailers

State	Day 7	Day 14[a]	Day 21[b]	End of Month[c]
All households	56.3	79.5	89.3	93.5
Store density				
Lowest ratio of stores per square mile				
Alaska	49.4	72.4	84.5	92.5
Wyoming	47.4	70.1	83.9	93.1
Montana	54.9	76.8	88.5	95.2
North Dakota	52.8	74.7	86.8	94.8
South Dakota	59.6	80.8	91.0	95.6

State	Day 7	Day 14[a]	Day 21[b]	End of Month[c]
Highest ratio of stores per square mile				
District of Columbia	51.3	73.6	86.4	93.8
Guam	65.7	88.0	95.9	98.0
Rhode Island	44.8	69.7	85.1	95.0
New Jersey	44.1	67.9	83.0	93.9
Massachusetts	51.7	75.5	88.7	94.4

Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

Note: Analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022.

[a] Day 14 percentage includes only households with issuance periods of at least 14 days.

[b] Day 21 percentage includes only households with issuance periods of at least 21 days.

[c] End of month percentage includes only households with issuance periods of at least 28 days.

B. Unspent issuance and carryover

As shown in Table III.1, households redeemed, on average, 94 percent of their benefits during the month. The remaining 6 percent of benefits on average are carried over to the next month. This section explores the amount of a given month's benefits not spent at the end of the month and the cumulative amount carried over from month to month. As illustrated in the example at the beginning of the chapter, households in States that issue EA benefits separately from their standard issuances may have a longer issuance period tied to their smaller benefit issuance amount.

For households in all States, the amount carried over from one period to the next may reflect unspent amounts from P-EBT issuances in the previous period(s). We removed from these analyses any periods that included a P-EBT issuance, but the P-EBT issuance may have occurred late in the removed period or be so substantial that the household did not redeem it before their next standard or EA issuance.

1. Unspent issuance and carryover during FY 2022

In FY 2022, with some exceptions, the amount carried over into the next period increased in relation to the size of the issuance; the same was true for a household's ending balance (Table III.14). On average, households did not spend $39 of their issuance and had an account balance of $198 at the end of the period. Households with an issuance for the benefit period under $26 carried over less than $1, while those receiving an issuance of more than $500 had $109 of that issuance left unspent at the end of the period. The average cumulative balance carried over at the end of the issuance period ranged from $120 for households receiving a $51-$100 issuance for the period to $341 for those receiving a $500 or more issuance.

Table III.14. Value of unspent issuance and account balance at the end of the period

Issuance Amount	Average Unspent Issuance [a] ($)	Average End-of-Period Balance [b] ($)
All households	38.95	197.67
Households by monthly issuance amount		
< $26	0.76	154.44
$26–50	2.34	119.71
$51–100	5.51	152.13
$101–150	11.33	145.99
$151–200	22.21	151.18
$201–$250	36.38	156.00
$251–300	29.10	185.17
$301–350	35.20	154.57
$351–400	55.72	255.75
$401–450	75.37	292.32
$451–500	67.01	230.45
> $500	108.55	341.15

Source: Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

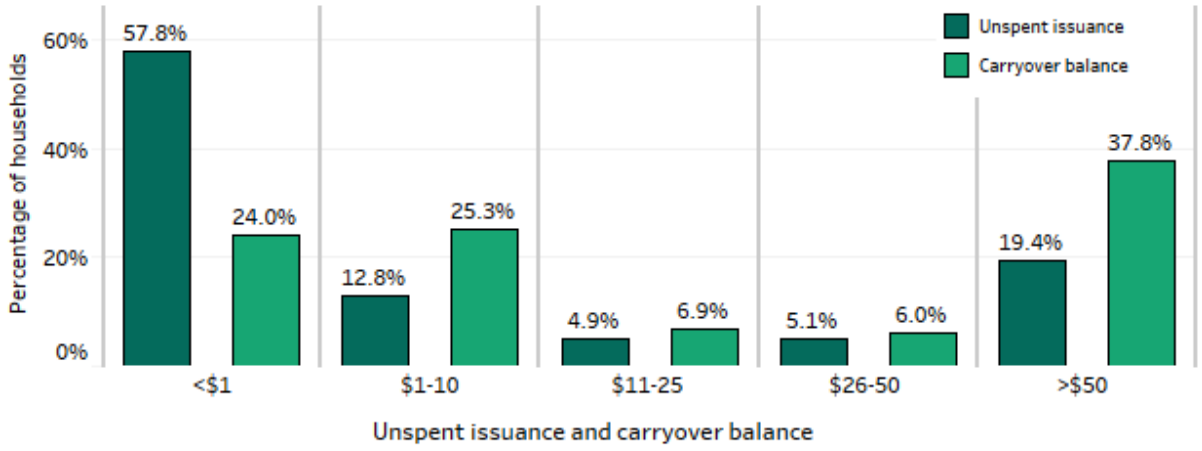
Note: Analysis excludes periods with a P-EBT issuance. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022.

[a] Unspent issuance is the amount of issuance unredeemed each issuance period, taken as the maximum of zero and (issuance minus redemption). This measure ignores unspent issuance from prior issuance periods.

[b] The ending balance is the EBT account balance at the time of the next issuance. This measure reflects the long-run accumulation of unspent issuance from all prior issuance periods.

Although, on average, households carried over nearly $200 from one period to the next, the majority of households did not have more than $25 unspent or have an account balance greater than $25 at the end of the period. Figure III.4 shows that more than 75 percent of all households had $25 or less unspent from their issuance for the period (sum of 57.8, 12.8, and 4.9), and 56 percent had carried over an account balance at the end of the period of no more than $25 (sum of 24.0, 25.3, and 6.9). The large average balances households may have carried over from P-EBT issuances and from short issuance periods that began with large issuances led to some very high carryover amounts. These large amounts pulled the average end-of-period balances well over $100, even for households with small issuances. Additional analysis indicated the national average of the State medians of the carryover balances was $17.80 (Appendix B, Table B.21a).

Figure III.4. Percentage of households by amount of unspent issuance and carryover balance



Source: Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

Note: Unspent issuance is the amount of issuance unredeemed each issuance period, taken as the maximum of zero and (issuance minus redemption). This measure ignores unspent issuance from prior issuance periods. Analysis excludes periods with a P-EBT issuance. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022.

2. Differences across subgroups

Table III.15 shows households with children left more of their issuance unspent than households without children ($53 compared with $25) and had larger account balances at the end of the month ($247 compared with $144).

Table III.15. Unspent issuance and end-of-period balance by household type

Household composition	Average Unspent Issuance[a] ($)	Average End-of-Period Balance[b] ($)
With and without children		
With children (n=13,077)	53.25	247.39
Without children (n=24,101)	25.47*	143.63*
All households, by type		
With an elderly person (n=10,796)	28.45	195.51
With a non-elderly person with a disability (n=7,978)	26.56	135.17*
With a child, without a person who was elderly or had a disability (n=10,661)	54.53*	253.38*
Other households (n=7,743)	26.29	94.98*
Household size		
1 (n=21,927)	23.73	134.09
2 (n=5,842)	37.67*	171.26*
3 (n=4,035)	51.80*	232.51*
4+ (n=5,374)	68.11*	345.52*

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average statistics over the three months centered on the QC sample month.

Note: Analysis excludes periods with a P-EBT issuance. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022.

[a] Unspent issuance is the amount of issuance unredeemed each issuance period, taken as the maximum of zero and (issuance minus redemption). This measure ignores unspent issuance from prior issuance periods.

[b] The end-of-period balance is the EBT account balance at the time of the next issuance. This measure reflects the long-run accumulation of unspent issuance from all prior issuance periods.

* Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

Households with a non-elderly member with a disability had a statistically similar unspent issuance amount but a smaller end-of-period balance than households with an elderly member. In contrast, households with a child and without an elderly member or member with a disability had larger unspent issuances and end-of-period balances than households with an elderly member (Table III.16). Households with an elderly member had an average of $28 in unspent issuance, while households with a non-elderly member with a disability had an average of $27 unspent. Households with a child and without an elderly member or a member with a disability had an average of $55 unspent.

Larger households had larger amounts that were unspent and larger account balances at the end of the period relative to one-person households. An average household of one person had $24 from its issuance unspent and had an end-of-period account balance of $134 (Table III.16). The largest households (those of four or more individuals) left $68 unspent and had an end-of-period account balance of $346.

3. Differences across states

The average value of unspent benefits for States ranged from $7 (Arkansas) to $123 (Alaska), with a national average of $39 (Appendix B, Table B.19). Average monthly ending account balances across States ranged from $43 (Arkansas) to $431 (Hawaii), in comparison to $198 for the nation (Figure III.4). Except for Hawaii, the Virgin Islands, and Wisconsin, fewer than half of households in each State left $50 or less unspent from one issuance period to the next. Relatively large balances for households in some issuance periods led to high average carry over balances. An examination of the median values (Appendix B, Table B.21a) showed carryover balances that ranged from under $1 (Florida) to $80 (Hawaii). Some of the differences by State may be due to differences in maximum benefits, which are larger for households in Alaska, Hawaii, Guam, and the Virgin Islands than they are in the 48 contiguous States.

As noted earlier, households in States that typically issued EA benefits on a schedule that differed from their standard benefit distribution schedule could have a short period of observation tied to a large benefit amount, leading to a higher probability of carrying over large amounts. Table III.16 includes only the States that typically issued benefits once each month, either because the State did not issue EA (shaded) or typically issued EA on the same day or within a few days of the standard distribution. Among this group, we find the State average end-of-period balances to be smaller than the national average. In addition, households in most States that did not issue EA benefits had average carryover amounts that were smaller than EA State averages. The exceptions were Montana and South Dakota, both of which had averages higher than Tennessee's average.[14]

[14] Tennessee issued EA benefits for the first three months of FY 2022.

Table III.16. Average end-of-period balance for States that typically issued benefits to each household once per month

State	Average End-of-Period Balance[a] ($)
Total U.S.	**197.67**
Arkansas[†]	42.55
Missouri[†]	57.88
Florida[†]	60.66
Idaho[†]	61.28
Nebraska[†]	84.99
North Dakota[†]	88.39
Tennessee	89.00
Montana[†]	91.15
South Dakota[†]	103.81
Washington	124.22
South Carolina	127.84
Kentucky	131.85
Indiana	136.03
Arizona	146.29
Wyoming	146.66
Maryland	164.46
District of Columbia	170.87
Iowa	174.37
New Jersey	249.82

Source: Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

Note: Analysis excludes periods with a P-EBT issuance. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022. The "Total U.S." row averages the end-of-period balance across all States, combining households with short issuance periods with those with month-long issuance periods.

[a] The end-of-period balance is the EBT account balance at the time of the next issuance. This measure reflects the long-run accumulation of unspent issuance from all prior issuance periods.

[†] Shaded States did not offer EA in FY 2022.

IV. Inactivity

The study team identified inactive households—those that had no purchase transactions in a month in which they received an issuance—and explored how often this occurred and how long the inactive period lasted. In this chapter we explore the prevalence of inactivity and how it varies by subgroup and State.

ALERT does not contain data on benefit issuances in the absence of a redemption, so the study team used the ALERT exhaustion analysis file to impute issuances made in months without redemptions. We limited the analysis to households that were observed over a period of at least three months, which is long enough that a household could be observed with an issuance, (possibly) as inactive for one month, and with another issuance. We first identified months when individual households did not make any transactions. If the transactions for a later month indicated a benefit issuance that appeared approximately twice as large (or larger) than the benefit before the break in participation or the subsequent month for that household, the team coded the household as inactive during the month without redemptions. If the benefit was three times the benefit amount received prior to or after the break and the household had at least 2 months without redemptions, the team identified the household as missing 2 months; if it was four times as large, the household was identified as missing 3 months, and so on.

The findings in this chapter are tied to a household's total monthly issuance rather than the issuance received in an issuance period. For households receiving EA issuances at a separate point in the month, the EA and standard issuances were combined before calculating inactivity for the month. P-EBT benefits are excluded from household's issuances prior to identifying inactivity.

The key findings follow:

- During the year, 5 percent of households had at least 1 month when they received an issuance but did not make a purchase transaction.
- The rate of inactivity was tied largely to the size of a household's SNAP benefit: about 30 percent of households with monthly issuances less than or equal to $25 were inactive at some point during the year.

This chapter presents the patterns of inactivity nationally and comparisons across household characteristics and States.

A. Prevalence of transaction inactivity during FY 2022

During FY 2022, the percentage of all households identified as having received an issuance in a month but not making a transaction in that month was 5 percent (Table IV.1). Among inactive households, the majority were inactive for only 1 month of 12: about 0.5 percent had 2 or more months of inactivity.

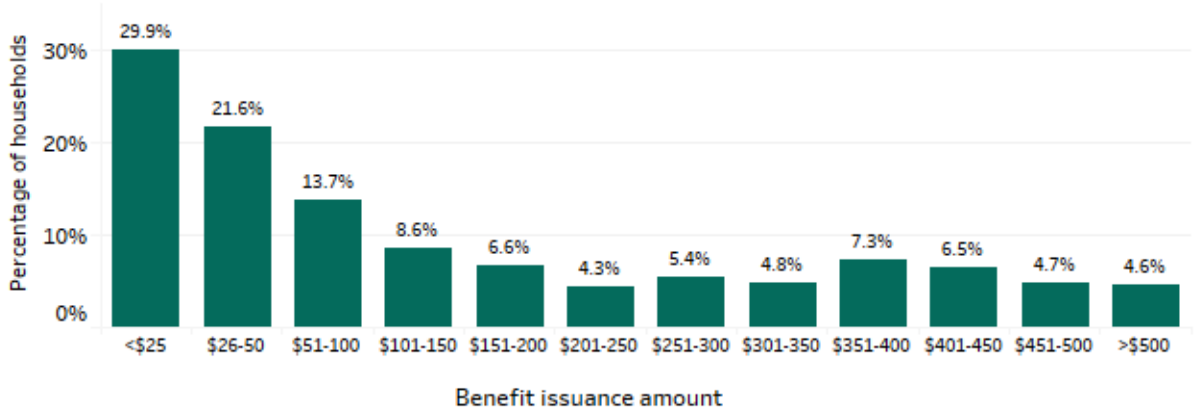
Table IV.1. Prevalence of inactivity during FY 2022

Inactivity Status	Percentage of Households
Percentage of households ever inactive	5.2
Percentage of households with consecutive months of inactivity	0.3
Percentage of households by number of months of inactivity	
0	94.8
1	4.7
2	0.4
More than 2	0.1

Source: Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

Households with smaller issuances were more likely to be inactive during the year. About 30 percent of households with an average monthly issuance less than $25 were inactive at some point during the year, and 22 percent of households with an average monthly issuance between $26 and $50 were ever inactive (Figure IV.1). [15] The rate of inactivity for those receiving a monthly benefit of $100 or more was 9 percent or lower.

Figure IV.1. Percentage of households ever inactive, by benefit issuance amount, FY 2022



Source: Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

Note: Issuance amount categories are the combined standard and EA issuance for the benefit month, rather than the issuance amount associated with an individual issuance period.

[15] Participating households in States with EA for the full year typically have an average monthly issuance that is at least $250 (the maximum benefit for a household of size 1) so these States are not represented in the five columns to the left of the "$201 to $250" column (36 States). Households in States ending EA (9 States) in FY 2022 may have small enough issuances in non-EA months that their average issuance is under $25, or they may only be participating in non-EA months, thus these States are included in the five left columns, though not to the same extent as households in States with no EA (8 States). See Appendix B, Table B.23 for State findings.

B. Differences across subgroups

Although inactivity levels vary by benefit issuance amount, they vary little by other household characteristics in FY 2022 (see Appendix A, Table A.24). This is likely due to households of the same size in States with EA having similar benefit amounts, regardless of factors such as income or deductible expenses. Notable variations in inactivity across characteristics are noted here.

As seen in Table IV.2, households with short certification periods (up to 6 months) had higher levels of inactivity than households with certification periods of 7-12 months or more than 12 months. This could happen if households with short certification periods have lower benefits, which is tied to higher rates of inactivity

Table IV.2. Prevalence of inactivity by months in certification period and region

Household Characteristic	Percentage of Households Ever Inactive	Percentage of Households with Consecutive Months of Inactivity	Percentage of Households by Number of Months of Inactivity		
			0 months	1 month	More than 1 month
Months in certification period					
≤ 6 months (n=7,757)	6.4	0.3	93.6	5.9	0.5
7-12 months (n=19,025)	4.5*	0.2	95.5*	4.1*	0.4
>12 months (n=10,361)	4.9*	0.2	95.1*	4.4*	0.5
Region[a]					
Northeast (n=4,966)	4.7	0.4	95.3	4.1	0.6
Mid-Atlantic (n=3,674)	3.8	0.2	96.2	3.4	0.4
Midwest (n=7,396)	5.5	0.3	94.5	5.0	0.5
Southeast (n=5,752)	3.9	0.1	96.1	3.6	0.3
Southwest (n=5,655)	7.4*	0.4	92.6*	6.8*	0.5
Mountain Plains (n=5,058)	5.6	0.4	94.4	4.8	0.8
West (n=4,667)	4.2	0.2	95.8	3.8	0.4

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average statistics over the three months centered on the QC sample month.

[a] Regions are defined using FNS region as of FY2022.

* Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

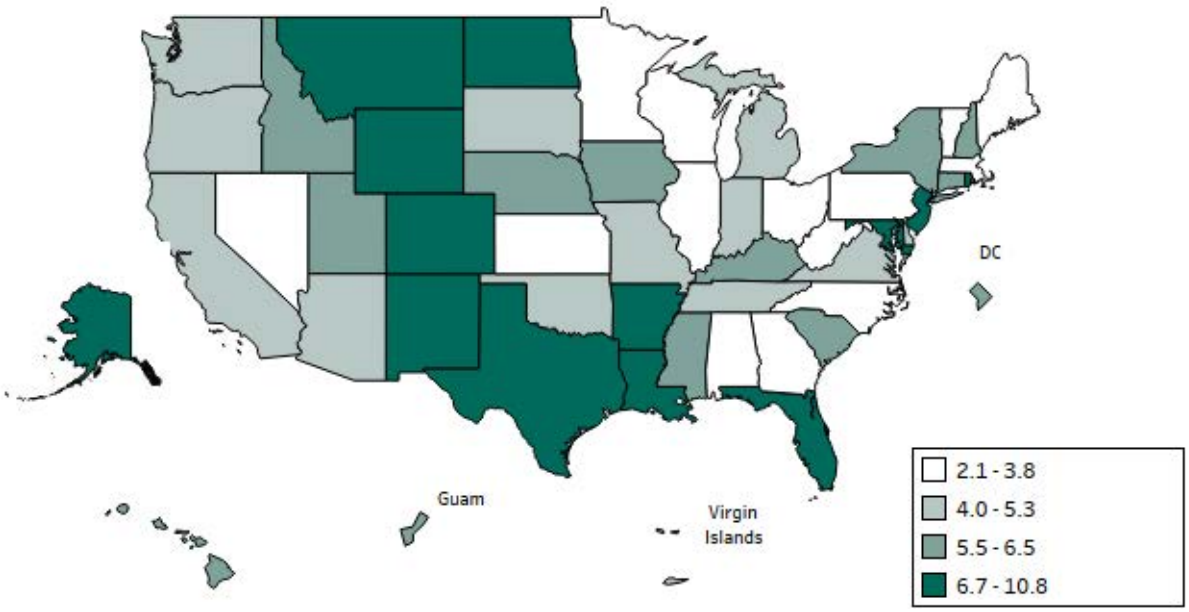
Households in the Southwest Region had a higher average level of inactivity compared to households in the Northeast Region (Table IV.2). All other regions had levels of inactivity that were statistically similar to the Northeast Region.

C. Differences across states

The rate of inactivity by State ranged from 2 percent (Massachusetts) to 11 percent (Montana) of households (Figure IV.2). We saw in Figure IV.1 that households with lower benefits were more likely to have a period of inactivity than those with higher benefits, so we might expect that States without EA would have higher levels of inactivity than those with EA. This was true for four of the eight States without

EA: Arkansas, Florida, Montana, and North Dakota are in the quartile with the highest levels of inactivity (Figure IV.2). The other States without EA have levels of inactivity that are closer to the national average of 5.2 percent.

Figure IV.2. Percentage of households ever inactive in FY 2022



Source: Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

V. Online Benefit Redemption

FNS began piloting online purchasing among a select group of authorized retailers in a small number of States in FY 2019. Recognizing the pandemic-related barriers to food access experienced by SNAP households during the COVID-19 pandemic, FNS expanded access to online SNAP purchasing during 2020, with 47 States implementing online purchasing in SNAP in that year. By the end of FY 2022, SNAP participants in all States and territories except Alaska, Guam, and the U.S. Virgin Islands were able to redeem SNAP benefits online at authorized internet retailers. Internet retailers include both online-only grocery options and online retail options offered by brick-and-mortar stores that are separately authorized to accept SNAP benefits online.

In this chapter, we present results describing online SNAP benefit redemption patterns. We first present a descriptive analysis of redemptions at internet retailers, describing the share of transactions and redemptions spent online as well as how this varied across States and household characteristics. Next, we focus on households who redeemed a significant portion of their benefits online, defined as those who spent at least 50 percent of their monthly SNAP redemption at an internet retailer in the month of analysis. We present results from an analysis of the household characteristics that are most likely to predict redeeming a significant portion of benefits online and provide descriptive statistics on redemption patterns for these households.

Key findings include:

- In an average month, 89 percent of SNAP households did not redeem any SNAP benefits online. The rate of online benefit redemption varied substantially across States and by household characteristics.
- Online purchasing shifted SNAP households' share of transactions away from all categories of brick-and-mortar stores from FY 2017 to FY 2022; however, the biggest decrease in the dollar amount of benefits redeemed came from supermarkets/super stores. Some of this shift may have been from in-person shopping at stores to the stores' online counterpart.
- The strongest predictors of the likelihood of a household redeeming a significant portion of their benefits online were race and ethnicity, household size, and FNS region. Larger households and those headed by a person who was non-Hispanic White were most likely to redeem at least 50 percent of their benefits online.
- Compared to the average SNAP household, households with high online redemptions spent more dollars per transaction and redeemed a larger percentage of their benefit during the first week after issuance. However, both sets of households redeemed a similar share of their benefit issuance by the end of the month.

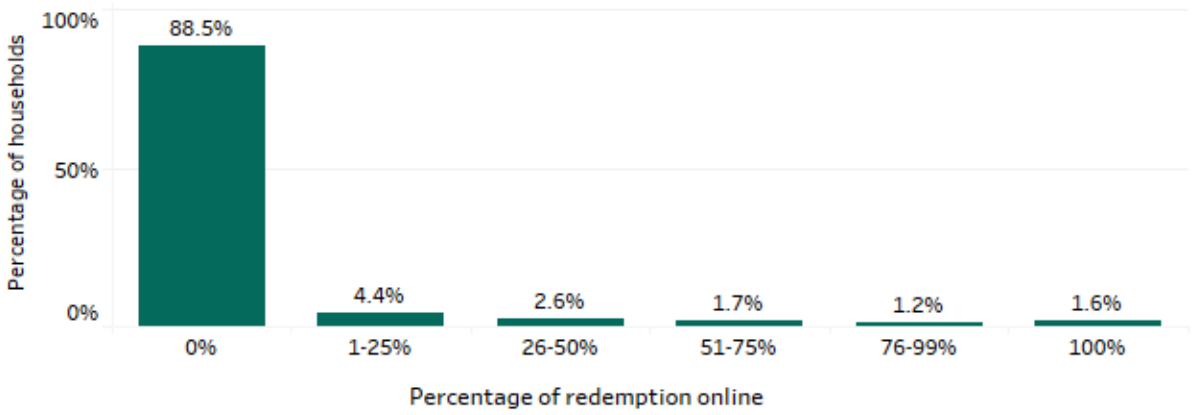
A. Patterns of redemption at internet retailers

1. Percentage of transactions and dollars redeemed at internet retailers

In an average month during FY 2022, 89 percent of households did not redeem any benefits online (Figure V.1). About 4 percent of households redeemed up to a quarter of their total monthly SNAP redemption online, 3 percent redeemed between a quarter and half of their monthly redemptions online,

and about 5 percent redeemed over half of their monthly redemptions online. This pattern varied across States, with about 19 percent of households in Texas having any online SNAP benefit redemption in an average month, compared to about 3 percent in Montana (Appendix B, Table B.9a). This pattern can be explained in part by differences across States in the timing of online purchasing implementation, with Montana implementing online purchasing during FY 2022 (in April 2022).

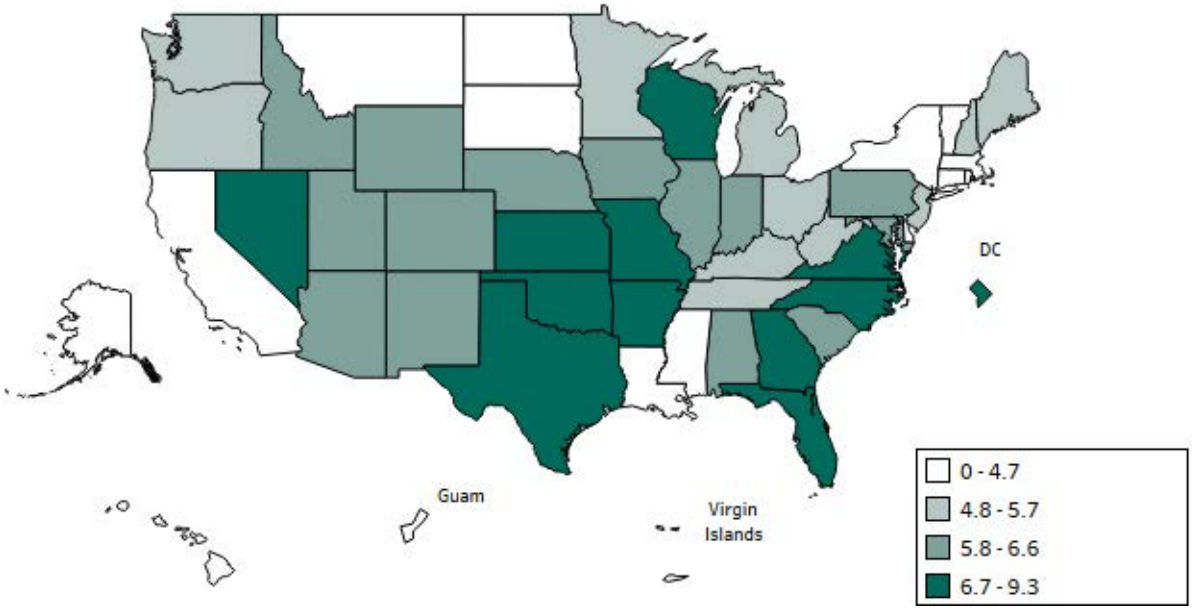
Figure V.1. Distribution of households by percentage of redemption online



Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

As discussed in Chapter II, on average, SNAP households redeemed most of their benefits at supermarkets/super stores (57 percent of transactions), followed by convenience stores (20 percent of transactions). Internet retailers accounted for an average of 4 percent of transactions among SNAP households. However, participants redeemed a larger average purchase amount at internet retailers than at any other store type (an average of $63 per transaction), and transactions at internet retailers accounted for an average of 6 percent of benefits redeemed (Figure II.6). Households in Texas, the District of Columbia, Georgia, and Oklahoma redeemed the highest percentage of their benefits online (Figure V.2).

Figure V.2. Percentage of redemption at internet retailers



Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

A comparison of these patterns between FY 2022 and FY 2017, a period in which SNAP households did not have the option to redeem benefits online, can shed light on whether households who shopped at internet retailers were using online shopping as a substitute for a specific store type used in the past. From FY 2017 to FY 2022, SNAP households shifted their share of transactions toward online purchasing and away from all categories of brick-and-mortar stores (Table V.1). The largest reductions were at small grocery, convenience stores, and large/medium grocery stores (approximately 1 percentage point decrease in the share of transactions at each type).

In contrast, the biggest shift in the dollar amount of benefits redeemed at brick-and-mortar stores came from supermarkets/super stores. SNAP households reduced the share of dollars redeemed at supermarkets/super stores by 4 percentage points (82 percent versus 78 percent), shifting dollars redeemed toward internet retailers. Because supermarkets/super stores are also most likely to have an online option, some of these online shopping transactions were likely still being redeemed at the online retail equivalent of the same supermarkets/super store chains.

Table V.1. Percentage of transactions and benefits redeemed by store type across FY 2017 and FY 2022

Store type	Percentage of transactions by store type (%)		Percentage of benefits redeemed by store type (%)	
	FY 2017	FY 2022	FY 2017	FY 2022
Supermarkets/super stores	57.4	57.1	82.1	78.0
Large/medium grocery	5.1	4.4	4.1	3.6
Small grocery	2.6	1.5	1.2	0.6
Convenience	21.2	20.2	5.5	5.3
Specialty food	1.2	0.8	1.1	0.8
Internet retailer	n.a.	3.7	n.a.	5.9
Other type	12.5	12.3	5.9	5.8

Source: Castner et al. (2020), FY 2017. Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

Note: FNS classifies stores into 25 types, which were collapsed into the 7 categories shown in the table. Specialty food stores include bakeries and bread stores, fruit and vegetable markets, meat and poultry markets, and seafood markets. Other stores include groceries in combination with other stores, delivery routes, farmers markets, nonprofit food buying cooperatives, wholesalers, and others.

n.a. = not applicable.

2. Differences across subgroups

The prevalence of online benefit redemption varied based on household characteristics. About 20 percent of households with children and about 23 percent of households with four or more members redeemed any benefits online, compared to 8 percent of households without children and 8 percent of single-person households (Table V.2). Households headed by African American participants were most likely to have any online redemption in an average month (14 percent), while households headed by Asian participants were least likely to have any online redemption (4 percent; Appendix A, Table A.9a).

Table V.2. Percentage of monthly benefits redeemed online, by household composition

Household composition	Percentage of benefits redeemed online (percentage of households)					
	Zero	1-25%	26-50%	51-75%	76-99%	100%
All households	87.8	5.2	2.9	1.8	1.2	1.0
Household type						
With and without children						
Households with children (n=13,077)	80.2	10.1	4.9	2.6	1.6	0.6
Households without children (n=24,101)	92.1*	2.5*	1.8*	1.3*	1.1*	1.2*
Types of households with children						
Single-adult households (n=7,691)	78.9	10.5	5.1	2.9	1.8	0.9
Multiple-adult households (n=4,687)	79.9	10.7	5.0	2.5	1.5	0.3*
Children only (n=699)	92.3*	3.8*	2.0*	0.8*	0.7*›	0.3*

Household composition	Percentage of benefits redeemed online (percentage of households)					
	Zero	1-25%	26-50%	51-75%	76-99%	100%
All households, by type						
With an elderly person (n=10,796)	94.5	1.7	1.4	0.8	0.7	0.9
With a non-elderly person with a disability (n=7,978)	87.4*	4.9*	2.8*	1.7*	1.5*	1.7*
With a child, without a person who was elderly or had a disability (n=10,661)	80.0*	10.2*	4.9*	2.7*	1.6*	0.6*
Other households (n=7.743)	89.6*	3.4*	2.5*	2.0*	1.2*	1.2
Household size						
1 (n=17,507)	92.1	2.4	1.8	1.3	1.1	1.3
2 (n=5,842)	86.9*	5.9*	3.2*	1.9*	1.2	0.7*
3 (n=4,035)	80.0*	9.3*	5.4*	2.7*	2.0*	0.5*
4+ (n=5,374)	77.0*	12.9*	5.2*	2.9*	1.4	0.6*

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022. Household-level EBT statistics are calculated as average monthly statistics over the three months centered on the QC sample month.

*Denotes statistically significant difference in means and proportions (.05 level). Comparisons are made within table columns, relative to the first row in each subgroup category. We used a Bonferroni adjustment to adjust for multiple comparisons for household subgroups with more than two categories.

B. Characteristics of households who redeemed a significant portion of benefits online

Relative to all SNAP households, those who redeemed at least 50 percent of their monthly benefit online in at least one month were more likely to have children (45 versus 36 percent), more likely to have a non-elderly member with a disability (22 versus 19 percent), and less likely to have an elderly member (17 versus 31 percent; Appendix A, Table A.9b). Households who redeemed a significant portion of benefits online were more likely than all SNAP households to be headed by a White, non-Hispanic person (42 versus 39 percent) and less likely to be headed by a Hispanic (11 versus 14 percent) or Asian person (1 versus 4 percent). SNAP households who redeem a significant portion of their benefits online were more likely to be in the Southwest Region than the average SNAP household (18 versus 14 percent).

Regression results generally support these descriptive statistics. Holding other characteristics constant, race and ethnicity, household size, and FNS region had the largest statistically significant associations with the likelihood of a household redeeming a significant portion of their benefits online (Table V.3). The following factors were associated with a higher likelihood of redeeming a significant portion of benefits online:

- Households with 4 or more members, compared to single-person households (2 percentage point difference)
- Households headed by a White, non-Hispanic person, compared to those headed by a Hispanic, Asian, or Native American person (between 2 and 11 percentage point difference)

- Households residing in the Southwest, Southeast, and Mountain Plains Regions, compared to those in the Midwest Region (between 1 and 2 percentage point difference)
- Households residing in a metropolitan area, compared to those in a nonmetro, noncore county (2 percentage point difference)

Holding household characteristics constant, SNAP units with children only and those with elderly members or members with a disability were less likely than households with no children to redeem a significant portion of their benefits online. Based on descriptive averages, households with children were more likely than those without children to redeem a significant portion of their benefits online (Appendix A, Table A.9b). However, this relationship was not statistically significant after holding other household characteristics, such as household size, constant.

Households with earnings were less likely than those without earnings to redeem a significant portion of their benefits online, after accounting for other characteristics including household composition, region, and race and ethnicity. There was no statistically significant association between a household's total monthly SNAP benefit (including any EA they may have been eligible for) and their likelihood of redeeming a significant portion of their benefits online.

Table V.3. Characteristics associated with redeeming a significant portion of benefits online

Covariate	***Dependent variable:*** **Household Redeemed a Significant Portion of their Benefits Online**	
	Average marginal effect	**Standard error**
Household type		
No children (reference category)		
Single adult with children	1.0	1.0
Multiple adults with children	0.1	1.1
Children only	-3.4**	1.3
Presence of elderly people or people with a disability	-2.1***	0.6
Household size		
1 (reference category)		
2	0.2	0.8
3	1.6	1.2
4+	1.9*	1.1
Race of Household Head		
White (reference category)		
African American	-0.6	0.5
Hispanic	-2.2***	0.7
Asian	-10.8***	2.1
Native American	-4.0**	1.6
Other	-0.6	0.6
Households with earnings	-1.9***	0.5
Receipt of TANF	-0.1	1.2
Average SNAP benefit amount (in $100 increments)[a]	-0.1	0.2

Covariate	*Dependent variable:* Household Redeemed a Significant Portion of their Benefits Online	
	Average marginal effect	Standard error
Months in certification period		
≤ 6 months (reference category)		
7-12 months	-0.7	0.5
>12 months	-1.3*	0.7
Region		
Midwest (reference category)		
Northeast	1.0	0.7
Mid-Atlantic	0.4	0.6
Southeast	1.1**	0.5
Southwest	2.4***	0.7
Mountain Plains	1.4**	0.6
West	0.6	0.7
Metro/ Nonmetro areas		
Metropolitan (reference category)		
Nonmetro, micropolitan	-0.2	0.5
Nonmetro, noncore	-1.6***	0.6
County with persistent poverty	-0.8	0.7
Dependent variable mean	6.3	
Pseudo R-squared	0.02	
Sample size (households)	39,692	

Source: Mathematica tabulations of SNAP Quality Control data and ALERT data, FY 2022.

Note: The dependent variable mean is the average percentage of households that redeemed a significant portion of their benefits online, defined as having spent at least 50 percent of their monthly redemptions at internet retailers in any of the three months centered around the household's QC interview month. Tabulations include 49 States and the District of Columbia. Alaska, Guam, and the Virgin Islands did not have an online redemption option in FY 2022.

[a] Measures the standard SNAP benefit that the household was certified to receive based on their QC review, as well as the EA amount they were eligible for if residing in a State that offered EA during their QC review month. This does not include additional P-EBT issuance amounts that households may have been able to redeem on their EBT cards.

*/**/*** Significantly different from zero at the .10/.05/.01 level, two-tailed test.

C. Redemption patterns among households who redeemed a significant portion of benefits online

Redemption patterns differed between the average SNAP household and those who redeemed a significant portion of their benefits online in a month. SNAP households who redeemed at least 50 percent of their monthly benefit online in any month met this threshold for an average of 3 months in FY 2022.

1. Transactions

Households who redeemed at least 50 percent of their benefit dollars online averaged 8.5 transactions per month across all SNAP purchases, compared to 10.9 transactions per month among all SNAP households (Table V.4). Their average purchase amount per transaction was $52, notably larger than the $39 average

transaction amount across all households. Households redeeming at least 50 percent of their benefit dollars online made an average of 60 percent of their transactions at internet retailers, with 21 percent redeemed at brick-and-mortar supermarkets/super stores (Table V.5). On average, these households redeemed 77 percent of their total monthly benefit at internet retailers, and 18 percent at supermarkets/super stores (Appendix B, Table B.4a).

Table V.4. Average number of monthly transactions and amounts among households who redeemed a significant portion of benefits online compared to all households

Household Type	Average Number of Transactions	Average Transaction Amount ($)
Households who redeemed a significant portion of benefits online	8.5	52.27
All households	10.9	39.08

Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

Note: Statistics for households who redeemed a significant portion of benefits online were calculated for months in which a household spent least 50 percent of their total monthly redemptions at internet retailers.

Table V.5. Distribution of purchase transactions by store type among households who redeemed a significant portion of benefits online compared to all households

Household type	Distribution of EBT Purchase Transactions						
	Super-markets/ super stores	Large/ medium grocery	Small grocery	Con-venience	Specialty food	Internet retailer	Other type
Households who redeemed a significant portion of benefits online	21.2	1.0	0.5	10.4	0.3	60.0	6.5
All households	57.1	4.4	1.5	20.2	0.8	3.7	12.3

Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

Note: Statistics for households who redeemed a significant portion of benefits online were calculated for months in which a household spent least 50 percent of their total monthly redemptions at internet retailers.

2. Benefit exhaustion and unspent issuance

Households who redeemed at least 50 percent of their benefits online redeemed a larger percentage of their benefit during the first week than the average SNAP household (60 versus 56 percent; Table V.6). However, both sets of households redeemed a similar share of their issuance by the end of the month (94 percent). About 23 percent of households who redeemed a significant portion of benefits online had an unspent issuance larger than $50 at the end of their issuance period, compared to 19 percent among all SNAP households.

Table V.6. Benefit exhaustion patterns among households who redeemed a significant portion of benefits online

Measure	Households Who Redeemed a Significant Portion of Benefits Online[a]	All Households[b]
Cumulative percentage of monthly benefit redeemed by:		
Day 7	59.5	56.3
Day 14[c]	80.0	79.5
Day 21[d]	88.9	89.6
End of Month[e]	94.0	94.4
Distribution of households by amount of unspent issuance (percentage of households):		
<$1	54.3	57.8
$1-10	12.7	12.8
$11-25	5.3	4.9
$26-50	5.2	5.1
>$50	22.6	19.4

Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Benefit exhaustion statistics are based on a random sample of approximately 20,000 households per State and month.

Note: Analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. Unspent issuance is the amount of issuance unredeemed each issuance period, taken as the maximum of zero and (issuance minus redemption). This measure ignores unspent issuance from prior issuance periods. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022. A household's issuance period begins on the day they received a benefit issuance and ends on the day before they received their next issuance. Households receiving standard and EA benefits in separate issuances have issuance periods of less than one month that vary in length. See Appendix B, Table B.32 for the distribution of household issuance periods by length.

[a] Households that spent least 50 percent of their redemptions at internet retailers during an issuance period.

[b] National average includes households in all States, including Alaska, Guam, and Virgin Islands, which did not offer online purchasing for SNAP during FY 2022 and are not included in the first column.

[c] Day 14 percentage includes only households with issuance periods of at least 14 days.

[d] Day 21 percentage includes only households with issuance periods of at least 21 days.

[e] End of month percentage includes only households with issuance periods of at least 28 days.

VI. Influence of Benefit Changes Since FY 2017

In FY 2022, SNAP households on average made 10.9 transactions per month and spent about $39 per transaction (Table VI.1). Relative to FY 2017, these are both higher: in FY 2017, households averaged 9.4 transactions per month and spent $32.20 per transaction, after adjusting for inflation. The higher averages reflect the increase in benefits because of the TFP adjustments, P-EBT redemption, and the increase in monthly benefits in States with EA.

Table VI.1. Average number of monthly transactions and amounts: FYs 2017 and 2022, across all States

Average Number of Transactions per Household		Average Transaction Amount	
FY 2017	FY 2022	FY 2017	FY 2022
9.4	10.9	$32.20	$39.08

Sources: Castner et al. (2020), FY 2017. Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

Note: Dollar values for FY 2017 converted to FY 2022 dollars using food at home Consumer Price Index values. FY 2022 tabulations include transactions made with P-EBT issuances.

The rate of exhaustion in the first two weeks after issuance was marginally higher in FY 2022 than in FY 2017 (Table VI.2). However, households redeemed more of their benefit by the end of the month in FY 2017 than in FY 2022. Households redeemed 79 percent by day 14 in FY 2022 compared to 78 percent in FY 2017. By the end of the month, households in FY 2022 redeemed 94 percent of their benefit while those in FY 2017 redeemed 96 percent.

Table VI.2 Cumulative percentage of benefits redeemed by day of the month: FYs 2017 and 2022, across all States

Cumulative Percentage of Issued Benefits Redeemed	Day 7	Day 14[a]	Day 21[b]	End of Month[c]
FY 2017	56.7	77.6	89.1	95.9
FY 2022	56.3	79.5	89.6	94.4

Sources: Castner et al. (2020), FY 2017. Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

Note: The percentage of benefits issued redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022. A household's issuance period begins on the day they received a benefit issuance and ends on the day before they received their next issuance. Households receiving standard and EA benefits in separate issuances have issuance periods of less than one month that vary in length. See Table B.32 for the distribution of household issuance periods by length.

[a] Day 14 percentage includes only households with issuance periods of at least 14 days.

[b] Day 21 percentage includes only households with issuance periods of at least 21 days.

[c] End of month percentage includes only households with issuance periods of at least 28 days.

On average, the amount of the unspent monthly issuance carried over by households into the next month and the average monthly ending balance increased substantially from FY 2017 to FY 2022 (Table VI.3). In FY 2017, the average household did not spend $11 of its monthly issuance, while in FY 2022 the average

household did not spend $39 of the issuance. Similarly, a household, on average, had an end-of-month balance of $25 in FY 2017, which increased to $198 in FY 2022.[16]

Table VI.3. Value of unspent issuance and account balance at the end of the period: FYs 2017 and 2022, across all States

Year	Average Unspent Issuance [a]	Average End-of-Period Balance [b]
FY 2017	$10.72	$25.01
FY 2022	$38.95	$197.67

Source: Castner et al. (2020), FY 2017. Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

Note: Analysis excludes periods with a P-EBT issuance. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022.

[a] Unspent issuance is the amount of issuance unredeemed each issuance period, taken as the maximum of zero and (issuance minus redemption). This measure ignores unspent issuance from prior issuance periods.

[b] The ending balance is the EBT account balance at the time of the next issuance. This measure reflects the long-run accumulation of unspent issuance from all prior issuance periods.

Given the multiple factors influencing benefit levels and redemption patterns and the differences since FY 2017, in this chapter we attempt to tease out how each of the benefit level changes may have affected redemption patterns between the two years. We include the following types of comparisons:

- Changes related to the TFP re-evaluation
  - Between FY 2017 and FY 2022, limited to States without EA
  - Between FY 2017 and FY 2022, limited to States with EA for only part of the year and limited to FY 2022 months with no EA[17]
- Changes related to EA
  - Within FY 2022, between States with EA and States without EA
  - Within FY 2022 and within States with EA for part of the year, between months with and without EA
- Changes related to P-EBT
  - Within FY 2022, between analysis periods with and without P-EBT

[16] As noted in Chapter III, fewer than half of households in each State in FY 2022 left $50 or less unspent from one issuance period to the next. Relatively large balances for households in some issuance periods led to high average carry over balances. An examination of the median values (Appendix B, Table B.21a) showed carryover balances that ranged from under $1 (Florida) to $80 (Hawaii).

[17] The eight States included in these analyses had at least four months in FY 2022 with no EA: Arizona (five months), Georgia (four months), Indiana (four months), Iowa (six months), Kentucky (six months), Mississippi (nine months), Tennessee (nine months), Wyoming (five months). Alaska had one month with no EA and was excluded from these analyses.

The key findings follow:

- Households increased their monthly redemption after the TFP increase (paired with the introduction of P-EBT issuances for some households with children) compared to before. On average, though, households had about 1 fewer transaction per month and redeemed about $4-5 more with every transaction than in FY 2017.
- Households redeemed their benefits at similar rates before and after the TFP increase.
- Households in States with EA benefits (paired with P-EBT issuances for some households with children) conducted about 3 additional transactions each month compared to those in States without EA. However, the average transaction amount was about the same for both groups.
- Households with EA benefits redeemed their benefits at a slower rate than those without EA and left a larger percentage unspent at the end of the month.
- Households' preferences for store types were similar with and without EA, though the average transactions at supermarkets/super stores and internet retailers were higher for households with EA than for those without EA.
- After EA ended, many households redeemed benefits they had accumulated over the months with EA; households had smaller amounts carried over into the next month in months without EA than they had in the months with EA.
- In periods with P-EBT issuances, households were likely to leave more benefits unredeemed than in periods without P-EBT, but they used those benefits in subsequent months.

Section A presents the analysis attempting to isolate the changes in benefit redemption related to the TFP increase. Section B focuses on the EA increase, and Section C on P-EBT issuances.

A. Benefit redemption changes related to the TFP increase

To examine changes in redemption patterns tied to the 21 percent TFP increase, we focus on households in States that were not influenced by other types of benefit increases. We limit our analysis to the sixteen States with no EA in at least some months of FY 2022, though for some households in some months, the changes in the numbers and amounts of transactions also include redemption of P-EBT issuances.

1. Transactions

With the increase to the TFP and with P-EBT issuances, across the eight States without EA at any point in FY 2022 and the eight States without EA for part of the year, households averaged about one fewer transaction per month than in FY 2017, but the average transaction amount was higher. This led to a higher average total redemption amount. In States without EA, the average number of transactions dropped from 8.7 in FY 2017 to 8.0 in FY 2022, the average transaction amount (in FY 2022 dollars) increased from about $35 to $39, and total redemption increased from $288 to $311 (Table VI.4). In States without EA in some months, the average number of transactions dropped from 9.6 in FY 2017 to 8.8 in the months with no EA in FY 2022. At the same time, the average transaction amount increased from just over $33 to just over $38, and total redemption increased from $311 to nearly $337. In comparison, in States with EA in all of FY 2022, households averaged nearly 2 more transactions per month in FY 2022 than in

FY 2017 (11.3 transactions in FY 2022 versus 9.4 in FY 2017). The average transaction amount in States with EA increased from $33 in FY 2017 to $39 in FY 2022.

Table VI.4. Average number of monthly transactions and amounts: FYs 2017 and 2022, by State EA status

Type of State	Average Number of Transactions per Household		Average Transaction Amount		Monthly Household Total Redemption Amount	
	FY 2017	FY 2022	FY 2017	FY 2022	FY 2017	FY 2022
Non-EA States (n=8)	8.7	8.0	$34.58	$39.00	$288.40	$311.49
States ending EA, in months without EA (for FY 2022) (n=8)	9.6	8.8	$33.07	$38.05	$311.06	$336.73
States with EA in all months in FY 2022 (n=36)	9.4	11.3	$32.70	$39.00	$301.53	$438.10

Sources: Castner et al. (2020), FY 2017. Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

Note: Dollar values for FY 2017 converted to FY 2022 dollars using food at home Consumer Price Index values. FY 2022 tabulations include transactions made with P-EBT issuances. Alaska is not included in the table because of difficulties in identifying EA issuances (see Appendix F for more details).

Examining each of the sixteen States individually, we see that households in most States followed the same pattern, with a lower average number of transactions, higher average transaction amounts, and higher average monthly redemption. Exceptions include South Dakota, Arizona, Iowa, and Wyoming: households in those States had the same or more transactions in FY 2022 than in FY 2017 (Table VI.5). Households in Arkansas, Idaho, and Mississippi averaged a lower total redemption amount in FY 2022 than in FY 2017. Only Wyoming exhibited a lower average transaction amount in FY 2022. Combined with the slightly higher number of transactions in FY 2022, though, it still led to a total redemption that was slightly higher than in FY 2017.

Table VI.5. Average number of monthly transactions and amounts: FYs 2017 and 2022, for States with no EA and States ending EA

State	Average Number of Transactions per Household		Average Transaction Amount ($)		Monthly Household Total Redemption Amount ($)	
	FY 2017	FY 2022	FY 2017	FY 2022	FY 2017	FY 2022
Non-EA States						
Arkansas	8.9	7.8	33.68	37.90	298.51	296.07
Florida	8.4	7.7	33.17	39.66	279.39	306.29
Idaho	9.0	7.5	34.31	38.02	308.34	283.01
Missouri	9.8	9.3	31.83	36.44	309.86	339.87
Montana	8.8	8.4	34.74	38.89	305.23	325.95
Nebraska	8.8	8.3	34.72	38.07	304.23	315.02
North Dakota	7.8	7.7	39.25	42.05	306.23	324.11
South Dakota	9.6	9.7	34.90	39.96	333.05	391.04

State	Average Number of Transactions per Household		Average Transaction Amount ($)		Monthly Household Total Redemption Amount ($)	
	FY 2017	FY 2022	FY 2017	FY 2022	FY 2017	FY 2022
States ending EA, in months without EA (for FY 2022)						
Arizona	10.7	10.7	29.46	35.39	313.90	378.32
Georgia	9.8	9.1	34.01	39.99	331.31	364.09
Indiana	9.5	8.4	33.02	38.87	313.99	325.95
Iowa	8.8	8.9	31.19	34.07	274.92	303.47
Kentucky	9.1	8.1	33.06	38.54	299.18	310.45
Mississippi	9.0	8.0	33.28	36.95	300.19	294.61
Tennessee	9.2	8.2	32.74	38.58	301.44	315.49
Wyoming	8.6	8.7	37.76	37.21	324.24	324.56

Sources: Castner et al. (2020), FY 2017. Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics.

Note: Dollar values for FY 2017 converted to FY 2022 dollars using food at home Consumer Price Index values. FY 2022 tabulations include transactions made with P-EBT issuances. Alaska is not included in the table because of difficulties in identifying EA issuances (see Appendix F for more details).

2. Benefit exhaustion

In the examination of how quickly SNAP participants redeem their benefits, we were able to remove months in which households received a P-EBT issuance, although redemption of large P-EBT benefits could carry over into subsequent months. The percentage of benefits redeemed at each of four points in time, days 7, 14, 21, and the end of the month, were similar across the two years for households in States with no EA; households redeemed about 58 percent of their benefit by day 7 and 96 percent by the end of the month (Table VI.6). We see more variation for households in States with EA for part of the year, with households redeeming a larger share of their benefits early in the month (60 percent of their benefit by day 7 in FY 2017 and 64 percent in FY 2022) but reaching 96 percent by the end of the month in both years. The faster rate of redemption early in the month could reflect seasonal changes because we are comparing all of FY 2017 with the last four to nine months of FY 2022.[18] In comparison, households in States with EA for all of FY 2022 redeemed their benefits at a slower rate in FY 2022 than in FY 2017 at days 7, 14, and the end of the month, redeeming 96 percent of their benefit in FY 2017 and 94 percent in FY 2022.

[18] In FY 2022, the highest average transaction amounts were in November, December, January, and February; the highest average numbers of transactions were in December, May, June, July, and August (Appendix B, Tables B.26 and B.27). In FY 2017, the highest average transaction amounts were in December, January, and February; the highest numbers of transactions were in October, May, July, and September (Castner et al. 2020). As a result, comparisons of a full year (FY 2017) with partial year (FY 2022) may have a seasonal bias.

Table VI.6. Average percentage of benefit issuance redeemed by days since issuance: FYs 2017 and 2022, by State EA status

Type of State	Cumulative Percentage of Benefit Issuance Redeemed by Days Since Issuance							
	FY 2017				FY 2022			
	Day 7	Day 14[a]	Day 21[b]	End of month[c]	Day 7	Day 14[a]	Day 21[b]	End of month[c]
Non-EA States (n=8)	57.8	78.1	89.4	96.0	58.2	79.2	89.7	96.0
States ending EA, in months without EA (for FY 2022) (n=8)	60.0	79.8	90.4	96.4	63.9	83.3	91.8	96.0
States with EA in all months in FY 2022 (n=36)	57.0	78.0	86.5	96.2	55.9	79.6	89.6	93.8

Sources: Castner et al. (2020), FY 2017. Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

Note: There are no calendar month-specific measures from the FY 2017 study that allow for a direct comparison within the same calendar months from FY 2017 to FY 2022. Households in States that ended EA in FY 2022 have varying months with no EA and may carry higher balances in the months immediately after EA ended in their State. The FY 2022 analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022. A household's issuance period begins on the day they received a benefit issuance and ends on the day before they received their next issuance. Households receiving standard and EA benefits in separate issuances have issuance periods of less than one month that vary in length. See Table B.32 for the distribution of household issuance periods by length. Alaska is not included in the table because of difficulties in identifying EA issuances (see Appendix F for more details).

[a] Day 14 percentage includes only households with issuance periods of at least 14 days.

[b] Day 21 percentage includes only households with issuance periods of at least 21 days.

[c] End of month percentage includes only households with issuance periods of at least 28 days.

Individual States saw more variation than all States combined in how quickly households redeemed benefits. Households in South Dakota, for example, redeemed benefits at slower average rates at the beginning of the month in FY 2022 (60 percent) than in FY 2017 (63 percent), and households in Georgia redeemed benefits faster (67 percent in FY 2022 versus 61 percent in FY 2017, Table VI.7). By the end of the month, though, households in all States redeemed a similar percentage of benefits between the two years, with all State differences within about 1 percentage point between the two years.

Table VI.7. Average percentage of benefit issuance redeemed by days since issuance: FYs 2017 And 2022, across States with no EA and States ending EA

State	Cumulative Percentage of Benefit Issuance Redeemed by Days Since Issuance							
	FY 2017				FY 2022			
	Day 7	Day 14[a]	Day 21[b]	End of month[c]	Day 7	Day 14[a]	Day 21[b]	End of month[c]
Non-EA States								
Arkansas	64.6	83.3	92.8	97.5	66.0	84.6	93.1	96.9
Florida	55.3	75.7	86.8	94.9	57.0	78.4	89.3	96.1
Idaho	54.2	75.7	88.4	95.9	54.8	76.3	88.2	94.7
Missouri	62.4	81.2	91.0	96.4	62.6	82.0	91.1	95.8

State	Cumulative Percentage of Benefit Issuance Redeemed by Days Since Issuance							
	FY 2017				FY 2022			
	Day 7	Day 14[a]	Day 21[b]	End of month[c]	Day 7	Day 14[a]	Day 21[b]	End of month[c]
Montana	55.5	76.6	88.6	95.7	54.9	76.8	88.5	95.2
Nebraska	54.1	75.8	88.5	96.2	53.7	75.8	88.0	95.2
North Dakota	54.0	75.0	87.3	95.4	52.8	74.7	86.8	94.8
South Dakota	62.6	81.9	91.5	96.3	59.6	80.8	91.0	95.6
States ending EA, in months without EA (for FY 2022)[d]								
Arizona	55.6	77.3	89.6	96.5	59.2	80.4	90.9	96.1
Georgia	61.3	80.8	91.0	96.5	66.5	85.1	92.5	96.0
Indiana	60.1	79.8	90.3	96.1	62.5	82.4	90.9	94.9
Iowa	56.1	77.1	89.1	95.9	58.4	79.5	90.1	95.5
Kentucky	62.4	81.4	91.2	96.7	63.7	83.2	92.3	96.5
Mississippi	69.5	86.1	93.5	97.5	69.5	86.6	93.5	96.8
Tennessee	63.2	81.8	91.4	96.7	64.2	83.3	92.0	96.3
Wyoming	51.9	73.8	86.9	95.5	54.5	76.2	87.5	94.6

Sources: Castner et al. (2020), FY 2017. Mathematica tabulations of ALERT and STARS data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

Note: FY 2022 analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022. A household's issuance period begins on the day they received a benefit issuance and ends on the day before they received their next issuance. Households receiving standard and EA benefits in separate issuances have issuance periods of less than one month that vary in length. See Table B.32 for the distribution of household issuance periods by length.

[a] Day 14 percentage includes only households with issuance periods of at least 14 days.

[b] Day 21 percentage includes only households with issuance periods of at least 21 days.

[c] End of month percentage includes only households with issuance periods of at least 28 days.

[d] Does not include Alaska with one month in FY 2022 with no EA

3. Unspent issuance

In months with no P-EBT issuances and in States with no EA for at least part of the year, the patterns of unspent issuance – the amount of the month's issuance that was not redeemed during the benefit month – were similar for FY 2022 compared to full year FY 2017 averages. Most households (86 percent in each year for States with no EA and 87 percent in States with no EA for part of the year) left $10 or less in benefits unspent at the end of the benefit month (Table VI.8). In FY 2022, households were more likely to leave less than $1 in benefits unspent than in FY 2017, on average. In both years, 5 to 6 percent of households left more than $50 of the month's benefits unspent. Patterns for the 16 individual States were consistent with the overall pattern. The largest change in the percentage of households leaving $50 or more unspent at the end of the month was in Indiana, a State without EA for four months, which saw an increase from 6 percent in FY 2017 to 9 percent in FY 2022 (Appendix D, Table D.3a).

Table VI.8. Percentage of households by distribution of unspent issuance: FYs 2017 and 2022, by State EA status

Type of State	Dollar Amount of Unspent Issuance (Percentage of Households)									
	FY 2017					FY 2022				
	<$1	$1-10	$11-25	$26-50	>$50	<$1	$1-10	$11-25	$26-50	>$50
Non-EA States (n=8)	62.0	23.6	5.3	3.6	5.5	66.2	19.6	5.0	3.4	5.8
States ending EA, in months without EA (for FY 2022) (n=8)	62.8	24.4	4.7	3.1	5.0	65.2	21.5	4.2	2.8	6.3
States with EA in all months in FY 2022 (n=36)	62.9	23.3	5.1	3.4	5.3	56.3	11.2	5.0	5.4	22.2

Sources: Castner et al. (2020), FY 2017. Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month.

Note: Unspent issuance is the amount of issuance unredeemed each issuance period, taken as the maximum of zero and (issuance minus redemption). This measure ignores unspent issuance from prior issuance periods. Analysis excludes periods with a P-EBT issuance. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022. A household's issuance period begins on the day they received a benefit issuance and ends on the day before they received their next issuance. Households receiving standard and EA benefits in separate issuances have issuance periods of less than one month that vary in length. See Table B.32 for the distribution of household issuance periods by length. Alaska is not included in the table because of difficulties in identifying EA issuances (see Appendix F for more details).

B. Benefit redemption changes related to EA

As noted previously, EA brought each household's monthly benefit up to the maximum for their household size, or up to $95 more if the household already received a benefit at or near the maximum. In this section, we compare the redemption patterns for States that did not have EA at any point in FY 2022 with States that had EA for the full year. Because we are comparing benefit redemption patterns for households in different States, differences in redemptions between States with and without EA may also reflect differences in household characteristics, food environments, or other State-specific contexts.

1. Transactions in States with and without EA

With the additional EA benefits, households redeemed about the same amount of benefits per transaction as households without EA ($39), but they conducted more transactions each month (Table VI.9). Households with EA averaged 11.3 transactions each month compared to 8.0 for households without EA. This led to much higher monthly redemption amounts for households with EA ($439) than for households without EA ($311).

Table VI.9. Transactions and amounts for States with and without EA in FY 2022

Measure	States with EA	States with no EA
Average number of transactions per household	11.3	8.0
Average transaction amount	$39.04	$39.00
Monthly household total redemption amount	$438.51	$311.49

Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Benefit exhaustion statistics are based on a random sample of approximately 20,000 households per State and month.

Note: Table excludes States that ended EA during FY 2022. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022. A household's issuance period begins on the day they received a benefit issuance and ends on the day before they received their next issuance. Households receiving standard and EA benefits in separate issuances have issuance periods of less than one month that vary in length. See Table B.32 for the distribution of household issuance periods by length. Number of States by category: States with EA (n=36); States with no EA (n=8).

Includes transactions made with P-EBT issuances.

2. Benefit exhaustion and unspent issuance in States with and without EA

Households with EA redeemed a smaller percentage of their benefit during the first week and by the end of the month than households without EA, leaving a larger amount of their issuance unspent by the end of the period. Within the first week following their benefit issuance, households with EA redeemed about 56 percent of that issuance period's benefit; they redeemed 94 percent of benefits by the end of the month (Table VI.10). Households without EA redeemed 58 percent in the first 7 days and 96 percent by the end of the month.

Table VI.10. Benefit exhaustion patterns for States with and without EA in FY 2022

Measure	States with EA	States with no EA
Cumulative percentage of monthly benefit redeemed by:		
Day 7	55.9	58.2
Day 14[a]	79.5	79.2
Day 21[b]	89.5	89.7
End of month[c]	93.8	96.0
Average unspent issuance ($)	$44.57	$10.67
Average end-of-period balance ($)	$221.68	$61.39
Distribution of households by amount of unspent issuance (percentage of households):		
<$1	56.3	66.2
$1-10	11.2	19.6
$11-25	5.0	5.0
$26-50	5.4	3.4
>$50	22.2	5.8

Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Benefit exhaustion statistics are based on a random sample of approximately 20,000 households per State and month.

Note: Table excludes States that ended EA during FY 2022. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022. A household's issuance period begins on the day they received a benefit issuance and ends on the day before they received their next issuance. Households receiving standard and EA benefits in separate issuances have issuance periods of less than one month that vary in length. See Table B.32 for the distribution of household issuance periods by length. Number of States by category: States with EA (n=36); States with no EA (n=8).

[a] Day 14 percentage includes only households with issuance periods of at least 14 days.

[b] Day 21 percentage includes only households with issuance periods of at least 21 days.

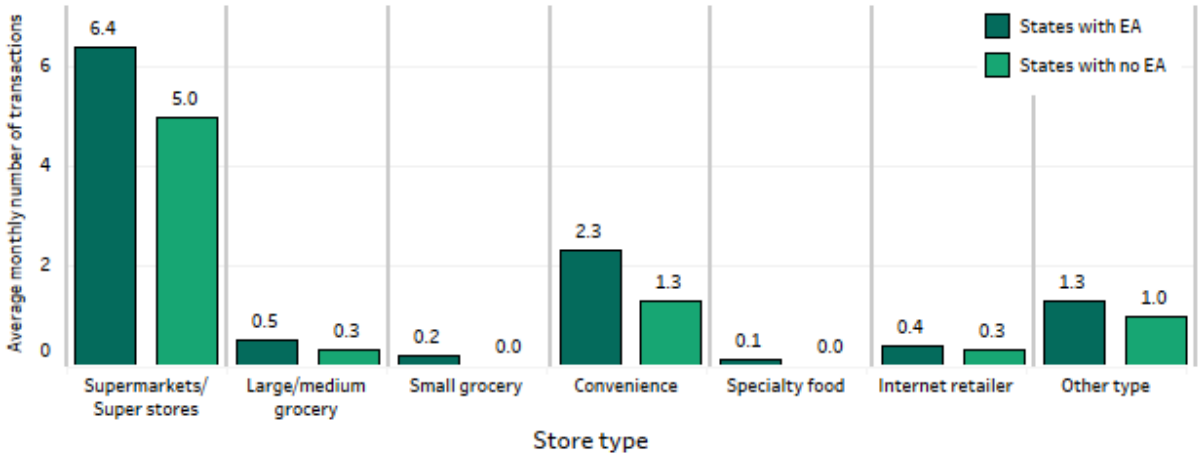
[c] End of month percentage includes only households with issuance periods of at least 28 days.

At the end of the issuance period (which may be shorter than a month for some households), households with EA left a larger amount of benefits unspent than households without EA.[19] Those with EA left about $45 of the issuance unspent while households without EA left about $11 unspent (Table VI.10). The accumulated end-of-period unspent issuance averaged nearly $222 for households with EA compared to $61 for households without EA. Although the average end-of-period balance was high for households with EA, more than half (56 percent) of households had less than $1 remaining on their EBT card at the end of the analysis period.[20]

3. Store types in States with and without EA

The additional EA benefits did not substantially change households' preferences for store types. As noted above, households with EA averaged more than three additional transactions each month than households without EA. As seen in Figure VI.1, more than one of those additional transactions, on average, were at supermarkets/super stores and one more transaction was made at convenience stores. The other transactions were distributed across the store types.

Figure VI.1. Average monthly number of transactions by store type, for States with and without EA



Source: Mathematica tabulations of ALERT and STARS data, FY 2022.

Note: Number of States by category: States with EA (n=36); States with no EA (n=8)

Households with EA redeemed more benefits per transaction than households without EA at the store types that may more easily lend themselves to large and/or bulk purchases, such as supermarkets/super stores and internet retailers. Specifically, households with EA redeemed about $53 per transaction at supermarkets/super stores and $63 per transaction at internet retailers; households without EA averaged about $3 less at each of these two store types (Figure VI.2). Households without EA averaged higher

[19] See the scenarios on pp. 38 for a discussion on how issuance periods affect benefit exhaustion measures.

[20] Additional analysis of median values indicated that high averages in some periods, such as those following an issuance period with a P-EBT issuance, led to high average balances, even when households had low ending balances in most months. See Appendix B, Table B.21a for the median end-of-period balances.

transaction amounts at large/medium grocery stores, small grocery stores, and specialty food stores than households with EA.

Figure VI.2. Average transaction amount by store type, for States with and without EA

Source: Mathematica tabulations of ALERT and STARS data, FY 2022.

Note: Number of States by category: States with EA (n=36); States with no EA (n=8)

In the above paragraphs, we focused on States that either had EA for either all months of FY 2022 or no months of FY 2022. We can also explore the relationship between EA and redemption patterns by focusing on the eight States that stopped EA during FY 2022, and comparing patterns in months with EA and months without EA. The number of months the States did not have EA varied from four to nine (See Appendix D, Table D.2a for a list of the eight States and the number of months each State did not have EA.)

4. Transactions in States that ended EA in FY 2022

The results of this comparison are mostly consistent with the findings for households in States with and without EA: households made more transactions when they received an EA issuance than when they did not, and their total monthly redemption in the EA months was higher than in the months with EA than without (Table VI.11). Unlike the findings above, though, households' per-transaction average in EA months was higher than in non-EA months ($40 vs $38, respectively). This finding could be due to seasonality: all State averages include November and December in the months with EA, which are two of the four months with the highest average transaction amounts (Appendix Table B.27) . For the individual States, the patterns generally aligned with the eight-State average. Georgia had the highest drop in total redemption from months with EA to months without EA , from $528 to $364 per month, and Arizona had the smallest drop, from $463 to $378 (Appendix D, Table D.5). Unlike the other States, Mississippi's average transaction amount rose from months with EA to months without EA, from $36 to $37.

Table VI.11. Changes across months with and without EA in average number of monthly transactions and amounts, for States ending EA, FY 2022

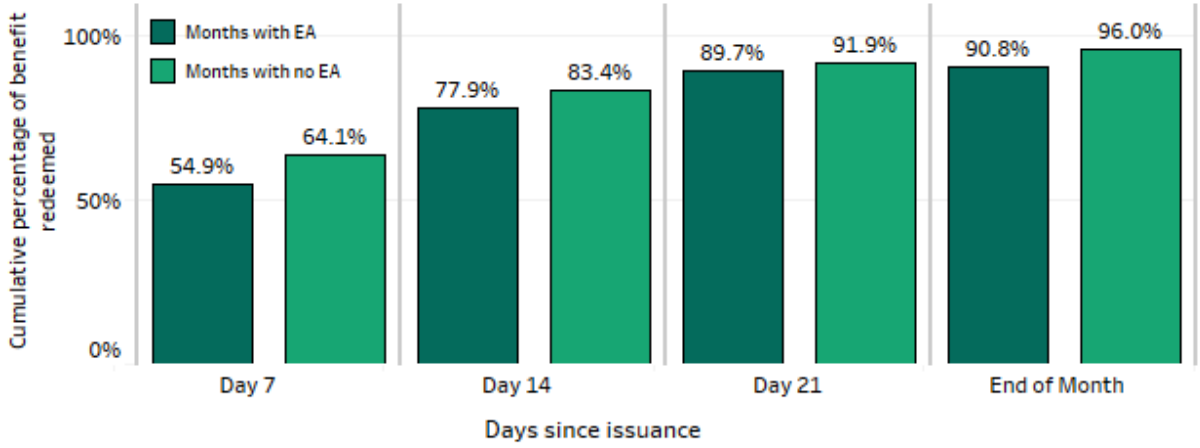
Average Number of Transactions per Household		Average Transaction Amount		Monthly Household Total Redemption Amount	
Months with EA	Months with no EA	Months with EA	Months with no EA	Months with EA	Months with no EA
11.5	8.8	$40.24	$38.05	$458.46	$336.73

Source: Mathematica tabulations of ALERT and STARS data, FY 2022. Average monthly statistics for the 8 States that ended EA in FY 2022.

5. Benefit exhaustion and carryover in States that ended EA in FY 2022

With lower benefit amounts available to households in the months without EA, households redeemed their available benefits faster and redeemed more by the end of the month. As shown in Figure VI.3, households redeemed slightly more than half (55 percent) of their available benefits in the first 7 days after issuance in months with EA and nearly two thirds (64 percent) in months without EA. The percentage point difference at each period decreased over the first 21 days of the month but showed a difference of 5 percentage points by the end of the month, with households redeeming 91 percent of benefits in months with EA and 96 percent in months without EA. Each of the eight States followed a similar pattern, reaching a higher percentage of redemption at each measured point in the months with no EA than in the months with EA (Appendix D, Table D.6).

Figure VI.3. Changes across months with and without EA in the percentage of benefit issuance redeemed by days since issuance, for States ending EA, FY 2022



Source: Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month for the 8 States that ended EA in FY 2022

Note: Analysis excludes periods with a P-EBT issuance. The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022. A household's issuance period begins on the day they received a benefit issuance and ends on the day before they received their next issuance. Households receiving standard and EA benefits in separate issuances have issuance periods of less than one month that vary in length. See Table B.32 for the distribution of household issuance periods by length. Day 14 percentage includes only households with issuance periods of at least 14 days; day 21 percentage includes only households with issuance periods of at least 21 days; end of month percentage includes only households with issuance periods of at least 28 days.

Along with redeeming a larger percentage of their benefit issued in the months without EA, many households spent down some or all of the balance they carried over from months with EA. Households in these States had, on average, about 6 months in FY 2022 with no EA benefits. In Table VI.12, we see that in those months almost half of households carried over a zero balance in months with no EA, up from just over one third in months with EA. About 16 percent carried over 50 percent or more of their account balance in months with EA, which decreased to about 7 percent in months without EA.

Table VI.12. Changes across months with and without EA in the percentage of account balance carried over to the next issuance period, for States ending EA, FY 2022

	Distribution of Households by Percentage of Account Balance Carried Over from One Period to the Next									
	Months with EA					Months with no EA				
Measure	Zero	1-25%	26-50%	51-75%	76-100%	Zero	1-25%	26-50%	51-75%	76-100%
Percentage of households	36.4	37.3	10.7	9.0	6.7	49.1	38.1	6.1	4.0	2.7

Source: Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month for the 8 States that ended EA in FY 2022.

Note: Analysis excludes periods with a P-EBT issuance. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022. A household's issuance period begins on the day they received a benefit issuance and ends on the day before they received their next issuance. Households receiving standard and EA benefits in separate issuances have issuance periods of less than one month that vary in length. See Table B.32 for the distribution of household issuance periods by length.

C. Benefit redemption changes related to P-EBT

P-EBT was issued to households in lump sums to account for the additional cost of providing food for their children when the children were not able to eat lunch in schools or childcare centers because of COVID-19. States had a variety of policies for their distribution schedules and the amounts they were approved to distribute (FNS 2024b). States could choose to use standardized amounts set by FNS. For the 48 States in the contiguous United States, the standardized amounts were $6.82 per child per day for school year 2020-2021, which some States issued in FY 2022, and $7.10 per child per day for school year 2021-2022. Standardized amounts for the summer months were $375 in 2021 and $391 in 2022. Amounts for Alaska, Hawaii, Guam, and the Virgin Islands were higher.

The ALERT transaction data do not identify type of issuance, but identifying multiples of these standardized amounts was straightforward in many cases. For example, balance increases for standard and EA benefit issuances are typically integers, so multiples of the daily decimal amounts were typically easy to identify. The summer amounts were relatively large additions to a household's monthly issuance. In some instances, though, States opted to set P-EBT issuance amounts for ranges of missed dates, for different in-school and hybrid settings, or used rounded amounts. These were more difficult to infer from the transaction data. In the discussion below, we limit our analysis to the States for which we were confident we accurately identified P-EBT issuances. (See Appendix Table D.9 for the list of States included in these tabulations.)

In this section we compare issuance periods in which we observed a P-EBT issuance with those where we did not observe one, among SNAP households who received at least one P-EBT issuance in FY 2022. We identify types of issuances within issuance periods, rather than calendar months, using the benefit exhaustion file. This analysis does not include any households that only received P-EBT benefits in FY 2022 (P-EBT-only households).

1. Transactions

Because P-EBT issuances can be relatively large, such as $391 for each child in the household, we see that households averaged a higher number of transactions in periods with P-EBT than without (15.9 versus 11.1 transactions, respectively), although the average transaction amount difference was less than $1 (Table VI.13). Households redeemed about $250 more in periods in which they received a P-EBT issuance than in periods without this type of issuance.

Table VI.13. Average number of transactions and amounts, for P-EBT issuance periods versus non-P-EBT issuance periods, FY 2022

Average Number of Transactions per Household		Average Transaction Amount		Monthly Household Total Redemption Amount	
Periods with P-EBT	Periods with no P-EBT	Periods with P-EBT	Periods with no P-EBT	Periods with P-EBT	Periods with no P-EBT
15.9	11.1	$58.70	$58.07	$744.91	$493.44

Source: Mathematica tabulations of ALERT data, FY 2022. Average monthly statistics based on a random sample of approximately 20,000 households per State and month for the 32 States in which we were confident of our ability to identify P-EBT (see Appendix F for details).

Note: Universe includes only households that have at least one P-EBT issuance. A period with P-EBT is an issuance period that began with a standard or EA issuance that also has a P-EBT issuance before the next standard or EA issuance.

2. Benefit exhaustion and carryover

Not surprisingly, during the periods in which households received P-EBT in addition to their standard and/or EA issuances, households redeemed their combined issuances at a slower rate than during the periods in which they received only their standard and EA issuances. They redeemed about 89 percent by the end of the month in periods in which they received P-EBT, which is a level surpassed by day 21 in periods without P-EBT (Table VI.14). As we saw above with households in States ending EA, households continued to redeem carried over P-EBT benefits in the months without P-EBT. One-fifth of households redeemed all of their account balance in months with P-EBT, but that rose to more than one third (37 percent) for those same households in months without P-EBT (Table VI.15).

Table VI.14. Average percentage of benefits redeemed by days since issuance, for P-EBT issuance periods versus non-P-EBT issuance periods, FY 2022

Cumulative Percentage of Benefit Issuance Redeemed by Days Since Issuance							
Periods with P-EBT				Periods with no P-EBT			
Day 7	Day 14[a]	Day 21[b]	End of Month[c]	Day 7	Day 14[a]	Day 21[b]	End of Month[c]
40.0	63.0	78.0	88.8	59.3	83.4	91.9	95.1

Source: Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month for the 32 States in which we were confident of our ability to identify P-EBT (see Appendix F for details).

Note: The percentage of benefit issuance redeemed reflects the redemption of benefits in the issuance period relative to the amount issued during the period. For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022. A household's issuance period begins on the day they received a benefit issuance and ends on the day before they received their next issuance. Households receiving standard and EA benefits in separate issuances have issuance periods of less than one month that vary in length. See Table B.32 for the distribution of household issuance periods by length. Universe includes only households that have at least one P-EBT issuance. A period with P-EBT is an issuance period that began with a standard or EA issuance that also has a P-EBT issuance before the next standard or EA issuance.

[a] Day 14 percentage includes only households with issuance periods of at least 14 days.

[b] Day 21 percentage includes only households with issuance periods of at least 21 days.

[c] End of month percentage includes only households with issuance periods of at least 28 days.

Table VI.15. Changes across periods with and without P-EBT in the percentage of account balance carried over to the next issuance period, FY 2022

Distribution of Households by Percentage of Account Balance Carried Over from One Period to the Next (Percentage of Households)									
Periods with P-EBT					Periods with no P-EBT				
Zero	1-25%	26-50%	51-75%	76-100%	Zero	1-25%	26-50%	51-75%	76-100%
20.5	35.0	21.7	16.0	6.8	37.2	34.7	11.5	9.5	7.1

Source: Mathematica tabulations of ALERT data, FY 2022. Average statistics are based on a random sample of approximately 20,000 households per State and month for the 32 States in which we were confident of our ability to identify P-EBT (see Appendix F for details).

Note: For each household, the regular standard and EA issuance dates were imputed from EBT redemption patterns observed over the period from September 2021 to October 2022. A household's issuance period begins on the day they received a benefit issuance and ends on the day before they received their next issuance. Households receiving standard and EA benefits in separate issuances have issuance periods of less than one month that vary in length. See Table B.32 for the distribution of household issuance periods by length. Universe includes only households that have at least one P-EBT issuance. A period with P-EBT is an issuance period that began with a standard or EA issuance that also has a P-EBT issuance before the next standard or EA issuance.

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