![USDA logo] **United States Department of Agriculture**

Economic
Research
Service

November 2016

National Household Food Acquisition and Purchase Survey (FoodAPS)

Codebook:
Food-at-Home Event Data – Public Use File
faps_fahevent_puf

The OMB clearance number for FoodAPS is 0536-0068. The data were collected by the U.S. Department of Agriculture under authority of U.S.C, Title 7, Section 2026 (a)(1).

Information about the entire data collection, including instructions on how to request access to the data, may be found at http://www.ers.usda.gov/foodaps.

For further information contact: FoodAPS@ers.usda.gov

1. Introduction

This codebook provides details on the Food-at-Home event-level data in the National Household Food Acquisition and Purchase Survey (FoodAPS) public use file (PUF). Users should first read the *User's Guide to Survey Design, Data Collection, and Overview of Datasets* for information about the survey design and sample, survey instruments and data collection, and analytic notes. This codebook provides a brief overview of how information on food-at-home events was collected and how these data were processed for inclusion in this dataset. Data about the individual food items acquired at FAH events are reported in the Food-at-Home Item data (**faps_fahitem_puf**).

2. Description of Data

2.1. Data Contents

The **faps_fahevent_puf** data file contains one record per FAH acquisition event. An event is defined as a unique acquisition defined by place, date, and person obtaining the food. There are a total of 15,998 events, from 4,412 households. Variables are grouped into five main types:

- Identifying variables
- Date variables
- Place information
- Payment and purchase information
- Administrative or survey process variables

2.2. Summary of Data Collection

Data on food at home (FAH) events were collected using three methods: (1) survey booklets complemented with telephone calls, (2) hand-held scanners, and (3) post-survey processing of saved receipts. Respondents were asked to record all acquisitions in the Daily List in the Primary Respondent's Book. Respondents were then asked to fill out a corresponding detailed page for each acquisition on pages coded "Blue" for FAH, which asked for details such as location, date, and payment types.

2

Adults other than the Primary Respondent were assigned an Adult Book, while children ages 11 to 17 were assigned a Youth Book. These Food Books can be found at http://www.ers.usda.gov/foodaps.

Respondents were asked to scan items purchased using the hand-held scanner they were provided, and were asked to record details about items that could not be scanned on the Blue Page. Respondents were also asked to attach the receipt to the Blue Page. Details about how different types of items were scanned are provided in the FAH Item Codebook.

On days 2, 5, and 7 of the reporting week, respondents were asked to report all acquisitions that had been written on the Daily List. For FAH purchases, the telephone interviews collected information on the Daily List as well as supplemental information about any problems respondents had in using the hand-held scanner. At this time, respondents were reminded to save their receipts. All Blue Pages and receipts attached to Blue Pages were scanned by the survey contractor at the completion of the survey.

2.3. Summary of Data Processing

The FAH event data file (**faps_fahevent_puf**) contains all information related to each FAH acquisition event, coalescing information collected from the Food Books, telephone interviews, scanners, and receipts. The telephone interview initially populated the list of acquisition events for each household. Once the Blue Pages and receipts were received, data entry personnel matched each Blue Page and/or receipt to an event reported over the phone, and if none existed, created an event for that Blue Page and/or receipt. This matching to phone-reported events was done through a double entry process, where a second data entry person resolved any inconsistencies.

Items that were scanned or written on the Blue Pages were matched to receipts, and prices were assigned using the receipt information. In addition, item descriptions were updated using receipt information if the description from the scanned barcode or written on the Blue Page was limited or incomplete. This item-level information can be obtained in the FAH item-level data file (**faps_fahitem_puf**).

In addition to item descriptions and prices, use of item-level coupons, general coupons (coupons that could not be assigned to any specific items), loyalty card savings, and payment types and amounts were also collected from the receipt and cross-checked with information respondents provided in survey books and over the phone. When inconsistencies in the sources of information were found, the most accurate information (generally from the receipt) was used. For example, if the Blue Page Supplemental Nutrition Assistance Program (SNAP) EBT amount was different from that observed on the receipt for an event, the amount from the receipt was used in place of the amount written on the Blue Page.

Place information was collected from the Blue Pages (and telephone reports) and from receipts. Place names, categories, types, and locations were standardized through an iterative process. The first step was to identify which locations were authorized to accept SNAP benefits. This was done by linking the reported store to the list of authorized stores in the Store Tracking and Redemption System (STARS) data file obtained from the Food and Nutrition Service. The STARS system classifies stores into types. However, this classification is not necessarily consistent with other classification systems.

Place names were standardized through matching to the STARS database and then through a manual review. A final place category and place type were assigned based on information from STARS, InfoUSA, Google, and keywords in the place names. Club stores (PLACETYPE = 123) have been identified by name only (BJ's, Costco, Sam's Club, and any permutations on spelling).

To protect the privacy of respondents, all names of places other than Eating Places, Food Stores, and Non-Food Retail stores were replaced with a standardized set of place types (e.g. "work," "school") to de-identify potential personally identifiable information in this data field.

Some addresses provided were incomplete. Google was used to fill in these missing or incomplete addresses using all available information provided by respondents to identify the exact store location. Not all addresses, however, could be recovered.

Once places were cleaned, confirmed, and geocoded (only those places that were confirmed), distance measures were obtained using Google Maps and the household's and place's geocoded addresses.

ERS conducted additional cleaning and standardization of place names and types. The PLACETYPE in the **faps_fahevent_puf** file contains data after cleaning. The indicators for how/what changes were made to place names and types are named as PLACEEDIT*.

2.4. Summary of Known Data Anomalies

Data anomalies, or outliers, exist in the **faps_fahevent_puf** data file. These anomalies were not resolved with any corrective action. The FoodAPS dataset has a diverse set of purposes and users, and imposing certain assumptions to discard or alter records, beyond the editing activities described above, may not be appropriate for all uses of the data. A discussion of the known data anomalies is provided below. Researchers may use cross-tabs and scatter diagrams to identify these and other anomalies, and use their judgment to discard or adjust observations.

2.4.1. Place Information

As discussed above, reported food stores were verified against a STARS file that included all SNAP-authorized locations in 27 States as of December 2011. When a place matched to STARS, the place name and address were cleaned and standardized with the STARS data. Place names in the FoodAPS data are consistent with the STARS listing of SNAP-authorized retail stores. Therefore, the place name may reflect a parent company name, and not the storefront name, or a new company name if there was a recent change in ownership. If a match to STARS could not be made, a match to InfoUSA was attempted and when a match occurred, the place name and address were standardized with the information from InfoUSA. When no match to STARS or InfoUSA was possible, a Google Search was conducted using the information respondents provided about the place to try to identify the location visited. Users will notice that stores of the same chain may appear with slightly different names. Since names were standardized to what appeared in the STARS or InfoUSA databases, or in Google,

these inconsistencies arise from differences in how the chain appears in each database, or for each location of each chain.

The place category is populated by the STARS store type if the place matched the STARS directory. In some cases, multiple locations from the same chain have a different PLACECATEG code because they are classified differently in STARS.

2.4.2. Distances

The point of origin for acquisitions was not tracked; distance and time measures were always calculated from the respondent's home to the acquisition place. When the straight-line distance between the respondent's home and the acquisition place exceeded 200 miles, the driving distance and time measures were not calculated. It seemed likely that any acquisitions with a straight-line distance greater than 200 miles occurred while respondents were traveling for work or vacation, rather than originating from the respondent's home.

Although the study did not track travel status, the field period spanned spring, summer, and winter vacation periods. Therefore, we anticipated some respondents to be traveling near and far during the study week. While we would expect most travel acquisitions to be characterized as FAFH, FAH acquisitions are likely to occur when the respondent owns a vacation home, is staying with family or friends, or is renting an apartment or home.

When driving and walking distances were calculated, there are a small number of acquisitions where these distances significantly exceed the straight-line distance. These are instances where dead-end streets or other structures block a direct route from the respondent's home to the acquisition place. If the respondent is walking, it is possible that they cut around roads—for example through a park or wooded area—but Google walking distances are based only on established walking paths or roads. It is also possible for walking distances to exceed driving distances because Google will not calculate walking distance along roads deemed unsuitable for walking, e.g., highways.

There are 131 events where the driving distance is shorter than the straight-line distance, and 128 events where the walking distance is shorter than the straight-line distance. In all of these cases, the difference is less than 0.02 miles. This may be due to the different methods employed to calculate the distances (SAS for straight-line versus Google for driving and walking distances).

2.4.3. Food Type

FAH acquisitions from retail eating places (PLACECATEG=2) were reviewed to determine whether the acquisition should have been reported as FAFH, using a Red Page. Some FAH events were moved to the FAFH file when the items acquired were definitively FAFH (see MOVED_FLAG). Some FAH acquisitions from retail eating places remain in the **faps_fahevent_puf** file. These acquisitions are typically from bakeries, cafes, coffee shops, delis, food trucks, or specialty shops where you can acquire FAFH and FAH, e.g., a dozen bagels or donuts, whole pies or cakes, loaves of bread or stacks of tortillas, coffee beans or loose tea, and sliced lunch meats.

2.4.4. Payment and Item Anomalies

There are some FAH events with positive expenditures reported from food banks or pantries. Some programs provide subsidized food or request small "donations" per item obtained.

There are 793 FAH events with no items. Respondents filled out a Blue Page for these events, but did not scan any item or record any items on the Blue Page.

There are 520 events with no payment type reported. The respondent did not check any of the payment type boxes or the "free" indicator and did not provide a receipt with payment information on it.

There are about 90 events with inconsistent relationships among the reported SNAP amount, the reported total amount paid, and the sum of item costs. For example, when only one payment type is reported, all three dollar values should be equal or, considering the possibility of bottle caps and rounding error when summing item costs, nearly equal. In addition, the reported SNAP amount should never exceed the reported total paid, but sometimes it does.

2.4.5. Reporting Methods

FoodAPS tracked whether respondents provided FAH receipts, including whether the receipts were unusable in whole or in part. Apparent inconsistencies among variables relating to receipts (RECEIPTOBSERVED), reporting method (REPORTMETHOD), and item information (ITEMINFOTYPE) are due to a small number of non-itemized or unreadable receipts (RECEIPTOBSERVED=3). REPORTMETHOD counts non-itemized/unreadable (RECEIPTOBSERVED=2 OR 3) as provision of a receipt because the receipt may have become unreadable over time or a respondent may have shopped where itemized receipts are not available. In these cases, the respondent complied with study reporting protocols.

Receipts that are partially unreadable (RECEIPTOBSERVED=2) are characterized by:

- ITEMINFO=1 – indicating item descriptions and prices are available
- NUMMISSPRICES – indicates the number of items with missing price due to an unreadable receipt (this flag is missing if all reported/readable items had readable prices)
- Non-itemized or completely unreadable receipts (RECEIPTOBSERVED=3) are characterized by:
- ITEMINFO=2 – indicating item descriptions are available but not prices.

Events with RECEIPTOBSERVED=2 and RECEIPTOBSERVED=3 may have a number of items that underrepresents all acquired items.

Additionally, RECEIPTOBSERVED may indicate that a receipt was provided in two circumstances when a receipt is not expected: (1) when FREE=1 and someone outside the household purchased groceries; or (2) when TOTALPAID=0 because the sum of savings and coupons equals or exceeds the sum or prices.

2.4.6. Payment Information

The Blue Page asked respondents to report the "Total paid including tax and tip." While it is possible for respondents to have calculated and reported the total paid for only food items, we expect that respondents usually reported the total paid printed on the transaction receipt, even if nonfood items were purchased.

The sum of the item prices, after accounting for coupons, in the **faps_fahevent_puf** file will frequently not equal the total paid reported on the Blue Page. This difference occurs for three reasons: 1) the acquisition occurred in a State that taxes food purchases, 2) bottle deposits were paid, and 3) nonfood items were purchased. The study entered only food items and prices into the Food Reporting System (FRS) and the subtotals paid for taxes; bottle deposits and nonfood items were not recorded. There are also a small number of events with item prices that were illegible on the receipt (see NUMMISSPRICES), which will contribute to the difference.

The sum of the item prices, after accounting for coupons, will be equal to the total paid, if the respondent purchased only food items in a State that does not tax food, or if the acquisition was paid for with only SNAP and WIC (i.e., no other payment types were used). However, the total paid and the sum of item prices for SNAP acquisitions may differ if the respondent paid a bottle deposit. Bottle deposits can be paid for with SNAP, and only food items were entered into the FRS. Therefore, the difference between the SNAP total paid and the sum of SNAP item prices will be the amount of bottle deposit paid (unless the event is flagged as having unreadable prices).

A small number of FAH acquisitions have FREE=1 and TOTALPAID>0 with no payment type indicated and no receipt provided. These inconsistencies could not be resolved and remain in the data. It is possible that the respondent obtained the food at no cost and reported the total amount paid by someone outside the household, or the respondent may have checked "FREE" in error.

3. Variable List

4. Variable-by-Variable Codebook

4.1. Identifying Variables

EVENTID

Variable: EVENTID	Definition: Unique identifier for each event and can be used to link the event to the times in the faps_fahitem_puf file	Type: Numeric
	Note: EventID is unique across FAH & FAFH files. 15,998 responses with 15,998 unique values. Individual responses not shown.	

HHNUM

Variable: HHNUM	Definition: Unique 6-digit identifier for household	Type: Numeric
	15,998 responses with 4,412 unique values. Individual responses not shown.	

WHOGOTPNUM

Variable: WHOGOTPNUM	Definition: Unique identifier within each household of the person that acquired the food. To uniquely identify individuals across all individuals use HHNUM and WHOGOTPNUM together. To merge to individual-level interview data, rename to PNUM.	Type: Numeric
	Note: "Who got the food?" is on the Daily List in the Primary and Adult food books and on the Blue Page in the Primary Food Book. It was filled from the Daily List for all acquisitions reported by telephone. Daily Lists were not reviewed during data entry; they were filled from the Blue Page for acquisitions not reported by telephone and captured by data entry. For acquisitions not reported by telephone and captured by data entry, WHOGOTPNUM=BOOKPNUM.	

	Value	Count	Percent	Value description
	1	13,493	84.34	Person number 1
	2	1,896	11.85	Person number 2
	3	353	2.21	Person number 3
	4	131	0.82	Person number 4
	5	69	0.43	Person number 5
	6	25	0.16	Person number 6
	7	17	0.11	Person number 7
	8	12	0.08	Person number 8
	9	2	0.01	Person number 9

ATHOME

Variable: ATHOME	Definition: Indicates that the event was an at-home event or not			Type: Numeric
	Value	Count	Percent	Value description
	0	0	0	Not an at-home acquisition event
	1	15,998	100%	At-home (Blue Page) acquisition event collection week

4.2. Date Variables

DATE

Variable: DATE	Definition: Acquisition date	Type: Numeric Display format: DD Mon YY
Range (formatted display):	19 Apr 12 — 22 Jan 13	
Unique values:	275	
Missing observations:	0 (out of 15,998)	

DATE_FLAG

Variable: DATE_FLAG	Definition: FLAG—Revised food acquisition date			Type: Numeric
	Value	Count	Percent	Value description
	0	15,837	98.99	No update to date was made
	1	145	0.91	Per receipt
	2	16	0.10	Per revised start date for data collection week

STARTMON

Variable: STARTMON	Definition: Month of the start date for reporting food acquisitions		Type: Numeric	
	Value	Count	Percent	Value description
	1	169	1.06	January
	4	211	1.32	April
	5	2,067	12.92	May
	6	1,990	12.44	June
	7	2,151	13.45	July
	8	3,001	18.76	August
	9	2,201	13.76	September
	10	2,334	14.59	October
	11	1,383	8.64	November
	12	491	3.07	December

DAYNUM

Variable: DAYNUM	Definition: Day of data collection week		Type: Numeric	
	Value	Count	Percent	Value description
	1	3,078	19.24	First day of data collection week (equal to start date)
	2	2,559	16.00	Second day of data collection week
	3	2,406	15.04	Third day of data collection week
	4	2,151	13.44	Fourth day of data collection week
	5	2,008	12.55	Fifth day of data collection week
	6	1,865	11.66	Sixth day of data collection week
	7	1,931	12.07	Seventh day of data collection week

DAYNUM_FLAG

Variable: DAYNUM_FLAG	Definition: FLAG–Revised DAYNUM per revised or imputed		Type: Numeric	
	Value	Count	Percent	Value description
	0	15,788	98.69	DAYNUM based on unedited start date for data collection week
	1	183	1.14	DAYNUM revised per revised start date for data collection week
	2	20	0.13	DAYNUM imputed, missing originally
	3	7	0.04	DAYNUM imputed, multiple days selected originally

4.3. Place Variables

PLACEID

Variable: PLACEID	Definition: Unique ID of geocoded acquisition place	Type: Numeric
	Note: Food stores (PLACECATEG=1) and eating places (PLACECATEG=2) were geocoded and given a PLACEID if a complete address was available and confirmed for the place name where food was obtained.	
	Range:	1000024 – 3903618
	Unique values:	4,229
	Missing observations (.):	1,557 (out of 15,998)

PLACECATEG

Variable: PLACECATEG	Definition: Acquisition place category			Type: Numeric
	Value	Count	Percent	Value description
	1	14,943	93.41	Food store
	2	107	0.67	Eating place
	3	897	5.61	Other
	4	51	0.32	Unknown

PLACECATEG_ERS

Variable: PLACECATEG_ERS	Definition: ERS cleaned/standardized place category			Type: Numeric
	Value	Count	Percent	Value description
	1	4	0.03	Food store
	2	3	0.02	Eating place
	3	2	0.01	Other
	.	15,989	99.94	Not edited

PLACETYPE

Variable: PLACETYPE	Definition: Acquisition place type		Type: Numeric
	Value	**Count**	**Percent**	**Value description**
	101	92	0.58	Bakery specialty
	102	438	2.74	Combination grocery/other
	103	701	4.38	Convenience store
	104	22	0.14	Delivery route
	105	149	0.93	Direct marketing farmer
	106	860	5.38	Dollar store
	107	131	0.82	Farmers' market
	108	78	0.49	Food bank/pantry
	109	26	0.16	Fruits/veg specialty
	110	222	1.39	Gas station/market
	111	232	1.45	Grocery store, large
	112	286	1.79	Grocery store, medium
	113	75	0.47	Grocery store, small
	114	83	0.52	Grocery store, not further specified
	115	140	0.88	Liquor store, winery
	116	57	0.36	Meat/poultry specialty
	117	14	0.09	Military commissary
	118	22	0.14	Non-profit food-buying co-op
	119	405	2.53	Pharmacy
	120	12	0.08	Seafood specialty
	121	5,489	34.31	Super store
	122	4,968	31.05	Supermarket
	123	434	2.71	Club wtores
	124	7	0.04	Wholesale
	201	26	0.16	Bakery (including bagel, donut, and cookie shops)
	204	7	0.04	Café & bakery-café
	205	2	0.01	Chicken restaurant
	206	14	0.09	Coffee shop (including tea house)
	207	1	0.01	Dairy desserts (ice cream, frozen yogurt)
	209	18	0.11	Misc specialty (candy, cheese, juice, pretzel, popcorn)
	211	8	0.05	Restaurant, American
	214	8	0.05	Restaurant, Mexican/Tex-Mex/Latin American

Value	Count	Percent	Value description
217	1	0.01	Restaurant, not further specified
218	15	0.09	Sandwich shop (including deli & salad shops)
219	3	0.02	Travel place (airport, hotel, truck stop)
220	5	0.03	Vending machine, food truck
303	1	0.01	Camp, after-school program
306	3	0.02	College
309	3	0.02	Fair, concert, amusement park
310	161	1.01	Family
311	26	0.16	Fishing/hunting
313	145	0.91	Friend
314	292	1.83	Garden, home
315	73	0.46	Garden, other
318	7	0.04	Institution
319	5	0.03	Meals on Wheels
322	103	0.64	Nonfood retailer
323	4	0.03	Park, community center
324	4	0.03	Party, cookout
325	51	0.32	Place of worship
326	1	0.01	Preschool
327	4	0.03	School
328	16	0.10	Work
402	48	0.30	Unknown

PLACEEDIT_TYPE

Variable: PLACEEDIT_TYPE	Definition: ERS edited the place type		Type: Numeric
	Value	**Count**	**Percent**	**Value description**

	Value	Count	Percent	Value description
	0	973	6.08	
	1	35	0.22	
	.	14,990	93.70	No edit to place name or type

PLACEEDIT_SPACES

Variable: PLACEEDIT_SPACES	Definition: ERS removed spaces to edit place name		Type: Numeric	
	Value	Count	Percent	Value description
	0	987	6.17	
	1	21	0.13	
	.	14,990	93.70	No edit to place name or type

PLACEEDIT_CASE

Variable: PLACEEDIT_CASE	Definition: ERS edited place name case		Type: Numeric	
	Value	Count	Percent	Value description
	0	835	5.22	
	1	173	1.08	
	.	14,990	93.70	No edit to place name or type

PLACEEDIT_NAME

Variable: PLACEEDIT_NAME	Definition: ERS edited the place name other than case or spaces		Type: Numeric	
	Value	Count	Percent	Value description
	0	216	1.35	
	1	792	4.95	
	.	14,990	93.70	No edit to place name or type

PLACECLEAN_FLAG

Variable: PLACECLEAN_FLAG	Definition: FLAG–Method of cleaning name and address Universe: PLACECATEG=1 or 2 or PLACETYPE=322		Type: Numeric
	Value	**Count**	**Percent**	**Value description**
	0	449	2.81	No cleaning needed
	1	167	1.04	Address cleaned by CAPI "Usual Store"
	2	250	1.56	Address cleaned by same store on other acquisition
	3	12,507	78.18	Name/address cleaned by match to STARS
	4	1,145	7.16	Name/Address cleaned by Google search
	7	2	0.01	Name cleaned, address could not be cleaned or verified
	9	632	3.95	Not cleaned, missing or incomplete address
	-996	846	5.29	Valid skip

PLACEDIST_S

Variable: PLACEDIST_S	Definition: Straight-line distance from home to place in miles			Type: Numeric
	10,025 unique values. Individual responses not shown.			
	N	**Min**	**Max**	**Mean**	**#Missing (.)**
	14,441	0.0022161	1345.389	5.58	1,557

PLACEDIST_D

Variable: PLACEDIST_D	Definition: Google driving distance from home to acquisition place in miles Universe: PLACEDIST_S <500 miles				Type: Numeric
	Note: "Google Maps" was used to determine the driving distance between the acquisition place and home. When multiple routes were possible, the route with the shortest duration (the default provided by Google) was selected. 6,276 unique values. Individual responses not shown.				
	N	**Min**	**Max**	**Mean**	**#Missing (.)**	**Valid Skip (-996)**
	14,403	0.002	287.969	5.88	1,555	40

PLACETIME_D

Variable: PLACETIME_D	Definition: Google driving time from home to acquisition place in minutes Universe: PLACEDIST_S <500 miles				Type: Numeric	
	Note: Google Maps was used to determine the driving time between the acquisition place and home. 2,046 unique values. Individual responses not shown.					
	N	Min	Max	Mean	#Missing (.)	Valid Skip (-996)
	14,403	0.016667	264.53	10.30369	1,555	40

PLACEDIST_W

Variable: PLACEDIST_W	Definition: Google walking distance from home to acquisition place in miles Universe: PLACEDIST_S <1 mile				Type: Numeric	
	Note: Google Maps was used to determine the walking distance between the acquisition place and home. 1,200 unique values. Individual responses not shown.					
	N	Min	Max	Mean	#Missing (.)	Valid Skip (-996)
	4,848	0.002	4.468	0.7087	1,555	9,595

PLACETIME_W

Variable: PLACETIME_W	Definition: Google walking distance from home to acquisition place in minutes Universe: PLACEDIST_S <1 mile				Type: Numeric	
	Note: Google Maps was used to determine the walking distance between the acquisition place and home. 1,345 unique values. Individual responses not shown.					
	N	Min	Max	Mean	#Missing (.)	Valid Skip (-996)
	4,848	0.30	86.58	13.93	1,555	9,595

PLACESNAP

Variable: PLACESNAP	Definition: Place is authorized to accept SNAP EBT		Type: Numeric
	Value	Count	Percent	Value description
	0	2,245	14.03	No
	1	13,753	85.97	Yes

PLACESNAP_FLAG

Variable: PLACESNAP_FLAG	Definition: FLAG–Place address was matched to SNAP authorized store, but store name is different (likely due to a change in ownership)			Type: Numeric
	Value	**Count**	**Percent**	
	0	15,431	96.46	Store name is not different
	1	567	3.54	Store name different

PLACESNAPTYPE

Variable: PLACESNAPTYPE	Definition: SNAP store type category [from STARS data] Universe: PLACESNAP=1			Type: Character
	Value	**Count**	**Percent**	**Value description**
	.V	2,245	14.03	Valid skip (not SNAP-authorized)
	BB	42	0.26	Specialty–bakery/bread
	BC	22	0.14	Non-profit cooperative
	CO	1,655	10.35	Combination grocery/other
	CS	665	4.16	Convenience store
	DF	1	0.01	Direct marketing farmer
	DR	6	0.04	Delivery route
	FM	22	0.14	Farmers' market
	FV	19	0.12	Specialty–fruits/vegetables
	LG	230	1.44	Large grocery store
	MC	12	0.08	Military commissary
	ME	43	0.27	Specialty–meat/poultry
	MG	284	1.78	Medium grocery store
	SE	9	0.06	Specialty–seafood
	SG	74	0.46	Small grocery store
	SM	4,868	30.43	Supermarket
	SS	5,801	36.26	Super store

4.4. Payment and Purchase Variables

FREE

Variable: FREE	Definition: Event was free		Type: Numeric
	NOTE: A check box appears on all Blue Pages to indicate free acquisitions. Missing data for "Free" is less prevalent than missing data for payment types due to post codes of FREE where TOTALPAID was reported as zero. See FREE_FLAG.		
	Value	Count	Percent	Value description
	0	14,954	93.47	Not checked
	1	953	5.96	Checked
	.	91	0.57	No payment type specified

FREE_FLAG

Variable: FREE_FLAG	Definition: FLAG–How FREE was edited for acquisition		Type: Numeric
	Value	Count	Percent	
	0	15,614	97.60	Not edited
	1	282	1.76	Revised from missing to 0
	2	22	0.14	Revised from missing to 1
	3	80	0.50	Revised from 1 to 0

TOTALPAID

Variable: TOTALPAID	Definition: Total amount paid, including tax (and tip when FAFH)		Type: Numeric
	N	Min	Max	Mean	#Missing
	15,842	0	1,174.8	31.24395	156

TOTALPAID_FLAG

Variable: TOTALPAID_FLAG	Definition: Reason/method for editing TOTALPAID		Type: Numeric
	Value	Count	Percent	
	0	15,623	97.77	Not edited
	1	41	0.26	Filled with SNAP or WIC amount
	2	65	0.41	Filled with receipt value
	3	249	1.56	Revised per receipt
	12	1	0.01	Edited to be amount reported over the phone [event moved from FAFH]

RECEIPTREPORTEDBP

Variable: RECEIPTREPORTEDBP	Definition: Checked on Blue Page that receipt was saved		Type: Numeric
	Value	**Count**	**Percent**	**Value description**
	0	1,810	11.31	No
	1	11,579	72.37	Yes
	.	2,609	16.31	Missing

RECEIPTREPORTEDPH

Variable: RECEIPTREPORTEDPH	Definition: Reported over the phone that receipt was saved		Type: Numeric
	Value	**Count**	**Percent**	**Value description**
	0	1,605	10.03	No
	1	10,918	68.25	Yes
	.	23	0.14	Missing
	-996	3,452	21.58	Valid skip (not reported by phone)

RECEIPTOBSERVED

Variable: RECEIPTOBSERVED	Definition: Saved receipt was observed, readability noted		Type: Numeric
	Value	**Count**	**Percent**	**Value description**
	0	3,172	19.83	No receipt
	1	12,576	78.61	Itemized receipt
	2	111	0.69	Itemized receipt, partially unreadable
	3	132	0.83	Non-itemized or unreadable receipt
	4	1	0.01	Receipt provided, type/condition unknown
	5	6	0.04	Receipt provided, payment type not shown

COUPONSREPORTED

Variable: COUPONSREPORTED	Definition: Coupons reported being used as payment		Type: Numeric
	Value	**Count**	**Percent**	**Value description**
	0	12,776	79.86	No
	1	1,143	7.14	Yes
	.	2,079	13.00	Missing

COUPONSOBSERVED

Variable: COUPONSOBSERVED	Definition: Observed coupon use (transaction-level or item level) on receipt		Type: Numeric
	Value	**Count**	**Percent**	**Value description**
	0	12,378	77.37	No
	1	1,252	7.83	Yes
	.	2,368	14.80	Missing

LOYALTYCARD

Variable: LOYALTYCARD	Definition: Respondent reported using loyalty card on survey book; does not indicate that store savings were observed on receipt		Type: Numeric
	Value	**Count**	**Percent**	**Value description**
	0	10,541	65.89	No
	1	3,429	21.43	Yes
	.	2,028	12.68	Missing

STORESAVINGS

Variable: STORESAVINGS	Definition: Observed store savings on receipt		Type: Numeric
	Value	**Count**	**Percent**	**Value description**
	0	9,849	61.56	No
	1	3,781	23.63	Yes
	.	2,368	14.80	Missing

COUPONSGENERAL

Variable: COUPONSGENERAL	Definition: Total value of coupons listed on the receipt that could not be associated with a specific item (transaction level information); does not include the value of itemized coupons		Type: Numeric
	N	**Min**	**Max**	**Mean**	**#Missing (.)**
	12,692	0	100	0.3590474	3,306

PAYTYPENUM

Variable: PAYTYPENUM	Definition: Number of payment types Universe: FREE ~=1		Type: Numeric
	Value	**Count**	**Percent**	**Value description**
	1	13,821	86.39	One
	2	682	4.26	Two
	3	24	0.15	Three
	.	518	3.24	Missing b/c payment types all missing
	-996	953	5.96	Valid skip

CASH

Variable: CASH	Definition: Cash payment used for acquisition; multiple payment types could be used Universe: FREE ~=1		Type: Numeric
	Value	**Count**	**Percent**	**Value description**
	0	8,298	515.6	Not checked
	1	6,278	39.24	Checked
	.	518	3.24	No payment type specified
	-996	953	5.96	Valid skip (event was free)

CHECK

Variable: CHECK	Definition: Check payment used for acquisition; multiple payment types could be used Universe: FREE ~=1		Type: Numeric
	Value	**Count**	**Percent**	**Value description**
	0	14,175	88.60	Not checked
	1	352	2.20	Checked
	.	519	3.24	No payment type specified
	-996	953	5.96	Valid skip (event was free)

CREDITCARD

Variable: CREDITCARD	Definition: Credit Card payment used for acquisition; multiple payment types could be used Universe: FREE ~=1			Type: Numeric
	Value	**Count**	**Percent**	**Value description**
	0	12,545	78.41	Not checked
	1	1,982	12.39	Checked
	.	518	3.24	No payment type specified
	-996	953	5.96	Valid skip (event was free)

DEBITCARD

Variable: DEBITCARD	Definition: Debit card used for acquisition; multiple payment types could be used Universe: FREE ~=1			Type: Numeric
	Value	**Count**	**Percent**	**Value description**
	0	10,615	66.35	Not checked
	1	3,912	24.45	Checked
	.	518	3.24	No payment type specified
	-996	953	5.96	Valid skip (event was free)

EBT_SNAP

Variable: EBT_SNAP	Definition: SNAP EBT payment used for acquisition; multiple payment types could be used Universe: FREE ~=1			Type: Numeric
	Value	**Count**	**Percent**	**Value description**
	0	12,230	76.45	Not checked
	1	2,297	14.36	Checked
	.	518	3.24	No payment type specified
	-996	953	5.96	Valid skip (event was free)

EBT_SNAPAMT

Variable: EBT_SNAPAMT	Definition: SNAP EBT amount reported by respondent or corrected by value observed on receipt Universe: EBT_SNAP=1				Type: Numeric
	N	**Min**	**Max**	**Mean**	**#Missing (.)**	**Valid Skip (-996)**
	2,237	0.47	616.33	39.84856	60	13,701

SNAPAMT_FLAG

Variable: SNAPAMT_FLAG	Definition: FLAG—indicates SNAP amount revised per receipt Universe: EBT_SNAP=1			Type: Numeric
	Value	Count	Percent	Value description
	0	1,963	12.27	No
	1	334	2.09	Yes
	-996	13,701	85.64	Valid skip

EBT_TANF

Variable: EBT_TANF	Definition: TANF EBT payment used for acquisition; multiple payment types could be used Universe: FREE ~=1			Type: Numeric
	Value	Count	Percent	Value description
	0	14,481	90.52	Not checked
	1	46	0.29	Checked
	.	518	3.24	No payment type specified
	-996	953	5.96	Valid skip (event was free)

EBT_TANFAMT

Variable: EBT_TANFAMT	Definition: TANF EBT amount observed on receipt (Blue Page did not collect this information) Universe: EBT_TANF=1					Type: Numeric
	N	Min	Max	Mean	#Missing (.)	Valid Skip (-996)
	21	0.50	87.81	25.04429	25	15,952

EBT_UNK

Variable: EBT_UNK	Definition: EBT payment observed on receipt; cannot determine type Universe: FREE ~=1			Type: Numeric
	Value	Count	Percent	Value description
	0	14,448	90.31	No unknown EBT observed on receipt
	1	79	0.49	Unknown EBT observed on receipt
	.	518	3.24	No payment type specified
	-996	953	5.96	Valid skip (event was free)

EBT_UNKAMT

Variable: EBT_UNKAMT	Definition: Amount paid by unknown EBT observed on receipt Universe: EBT_UNK=1				Type: Numeric	
	N	Min	Max	Mean	#Missing (.)	Valid Skip (-996)
	79	1	321.29	45.38734	0	15,919

WIC

Variable: WIC	Definition: WIC payment used for acquisition; multiple payment types could be used Universe: FREE ~=1		Type: Numeric
	Value	Count	Percent	Value description
	0	14,254	89.10	Not checked
	1	273	1.71	Checked
	.	518	3.24	No payment type specified
	-996	953	5.96	Valid skip (event was free)

WICAMT

Variable: WICAMT	Definition: WIC amount reported by respondent or corrected by value observed on receipt Universe: WIC=1				Type: Numeric	
	N	Min	Max	Mean	#Missing (.)	Valid Skip (-996)
	267	1.49	162.41	20.94348	4	15,727

WICAMT_FLAG

Variable: WICAMT_FLAG	Definition: FLAG—WIC payment amount was recoded after investigating inconsistencies and reviewing receipt Universe: WIC=1		Type: Numeric
	Value	Count	Percent	Value description
	0	221	1.38	Amount not revised
	1	51	0.32	Amount revised per receipt
	2	1	0.01	Amount filled from TOTALPAID
	-996	15,725	98.29	Valid skip (no WIC payment)

GIFTCARD

Variable: GIFTCARD	Definition: Payment used for acquisition; multiple payment types could be used (not originally captured in Survey book) Universe: FREE ~=1		Type: Numeric
	Value	**Count**	**Percent**	**Value description**
	0	14,489	90.57	Not checked
	1	38	0.24	Checked
	.	518	3.24	No payment type specified
	-996	953	5.96	Valid skip (event was free)

PAYTYPE_FLAG

Variable: PAYTYPE_FLAG	Definition: FLAG–how inconsistencies in pay types, FREE, & payment amounts were resolved		Type: Numeric
	For example, a single payment type was recoded to zero when multiple payment types were indicated on the Blue Page and the TotalPaid was equal to the SNAP or WIC amount (implying use of one payment type). Payment types were also recoded if the receipt was reviewed to resolve inconsistencies in EBT and WIC amounts.		
	Value	**Count**	**Percent**	
	0	14,448	90.31	Payment types not edited
	1	52	0.33	TOTALPAID>0, FREE & Paytype=1, Set Free=0 (some Paytypes revised per receipt)
	3	205	1.28	TOTALPAID=0, FREE & Paytypes=missing, Set FREE=1
	4	105	0.66	TOTALPAID>0, FREE & Paytypes=missing, Set FREE=0
	6	580	3.63	Receipt information filled missing payment types
	7	581	3.63	Receipt information revised payment types
	8	27	0.17	No receipt: revised for consistency w/SNAP,WIC, or item info

ITEMSTOT

Variable: ITEMSTOT	Definition: Total number of items acquired from all sources of data collection. [Sum of scanned barcodes (RITEMSSCANNED), barcodes scanned in Food Book (RITEMSBOOK), items written on Blue Pages (RITEMSBLUEPG), and items from the receipt (RITEMSRECEIPT)]	Type: Numeric
	N	**Min**	**Max**	**Mean**	**#Missing (.)**
	15,205	1.0	248	10.25748	793

ITEMSSCANNED

Variable: ITEMSSCANNED	Definition: Number of items with scanned barcode from product packaging		Type: Numeric	
	Sum of QUANTITY of items reported by scanning package UPC/barcode (ITEMREPORTMETHOD=1)			
	N	**Min**	**Max**	**Mean** **#Missing (.)**
	15,205	0	184	6.138573 793

ITEMSBOOK

Variable: ITEMSBOOK	Definition: Number of items with scanned barcode from Food Book		Type: Numeric	
	Sum of QUANTITY of items reported by scanning the Food Book barcode (ITEMREPORTMETHOD=2)			
	N	**Min**	**Max**	**Mean** **#Missing (.)**
	15,205	0	84	0.6191384 793

ITEMSBLUE

Variable: ITEMSBLUE	Definition: Number of items collected from Blue/Red Page		Type: Numeric	
	Sum of QUANTITY of items reported by Blue (or Red) Page (ITEMREPORTMETHOD=3)			
	N	**Min**	**Max**	**Mean** **#Missing (.)**
	15,205	0.0	81	0.9786912 793

ITEMSRECEIPT

Variable: ITEMSRECEIPT	Definition: Number of items collected from receipt		Type: Numeric	
	Sum of QUANTITY of items reported by receipt (REPORTMETHOD=4)			
	N	**Min**	**Max**	**Mean** **#Missing (.)**
	15,205	0.0	165	2.521079 793

NUMMISSPRICES

Variable: NUMMISSPRICES	Definition: FLAG–Number of prices that are missing because the condition of the receipt rendered it fully or partially unreadable			Type: Numeric
	Value	Count	Percent	Value description
	1	19	0.12	1 missing price
	2	9	0.06	2 missing prices
	3	4	0.03	3 missing prices
	4	3	0.02	4 missing prices
	5	2	0.01	5 missing prices
	.	15,961	99.77	Not valid for this event

ITEMINFOTYPE

Variable: ITEMINFOTYPE	Definition: Type of item information available			Type: Numeric
	Value	Count	Percent	Value description
	1	12,676	79.23	Not free: Item descriptions and prices
	2	1,751	10.95	Not free: Item descriptions only
	3	618	3.86	Not free: No item information
	4	20	0.13	Free: Item descriptions and prices
	5	758	4.74	Free: Item descriptions only
	6	175	1.09	Free: No item information

REPORTMETHOD

Variable: REPORTMETHOD	Definition: Indicates how event was reported (Blue/Red Page, Phone, Receipt, or combination)			Type: Numeric
	Value	Count	Percent	Value description
	1	818	5.11	Blue/Red page only
	2	2,634	16.46	Blue/Red page & receipt
	3	462	2.89	Phone only
	4	5	0.03	Phone & receipt
	5	1,892	11.83	Phone & Blue/Red page
	6	10,187	63.68	Phone, Blue/Red Page, & receipt

4.5. Administrative Variables

BOOKTYPE

Variable: BOOKTYPE	Definition: Type of Food Book that contained the acquisition on the Daily List	Type: Character
	Note: All FAH acquisitions were described in detail on a Blue Page in the Primary Food Book, but may be listed on the Daily List of another book if acquired by someone other than the Primary Respondent.	

	Value	Count	Percent	Value label
	Adult	1,935	12.10	Adult
	Primary	14,063	87.90	Primary

BOOKPNUM

Variable: BOOKPNUM	Definition: PNUM of person that "owned" the book where event was reported	Type: Character
	Note: All FAH acquisitions were described in detail on a Blue Page in the Primary Food Book, but may be listed on the Daily List of another book if acquired by someone other than the Primary Respondent.	

	Value	Count	Percent	Value label
	1	13,994	87.47	Book owned by PNUM=1 in HH
	2	1,497	9.36	Book owned by PNUM=2 in HH
	3	297	1.86	Book owned by PNUM=3 in HH
	4	105	0.66	Book owned by PNUM=4 in HH
	5	62	0.39	Book owned by PNUM=5 in HH
	6	22	0.14	Book owned by PNUM=6 in HH
	7	12	0.08	Book owned by PNUM=7 in HH
	8	7	0.04	Book owned by PNUM=8 in HH
	9	2	0.01	Book owned by PNUM=9 in HH

STARTDATE_FLAG

Variable: STARTDATE_FLAG	Definition: FLAG–Start date of study week was revised to reflect actual start of food reporting	Type: Numeric
	Value	Count	Percent	Value label
	0	15,802	98.77	Start date not revised
	1	196	1.23	Start date revised

SCANDATE_FLAG

Variable: SCANDATE_FLAG	Definition: FLAG- –Scanner was not set up; scanner dates for this acquisition required adjustment		Type: Numeric
	Value	**Count**	**Percent**
	0	15,332	95.84 Not adjusted
	1	666	4.16 Adjusted

ABLETOSCANBP

Variable: ABLETOSCANBP	Definition: Reported on Blue Page that they scanned all, some, or no items		Type: Numeric
	Value	**Count**	**Percent** **Formatted value**
	1	8,872	55.46 All
	2	3,135	19.60 Some
	3	2,473	15.46 None
	.	1,518	9.49 Missing but applicable

ABLETOSCANPH

Variable: ABLETOSCANPH	Definition: Claimed to have problems scanning during one of the phone calls		Type: Numeric
	Value	**Count**	**Percent** **Formatted value**
	0	11,976	74.86 No
	1	547	3.42 Yes
	.	24	0.14 Missing but applicable
	-996	3,542	21.58 Valid skip

PRACTICE_FLAG

Variable: PRACTICE_FLAG	Definition: FLAG–Acquisition was reported on a practice page but does not match prescribed practice page parameters		Type: Numeric
	Value	**Count**	**Percent**
	0	15,917	99.49
	1	81	0.51

MANUALMATCH_FLAG

Variable: MANUALMATCH_FLAG	Definition: FLAG–Scanner data was manually matched to Blue Page acquisition data by date or store name (when private label products were purchased) when there was no receipt		Type: Numeric	
	Value	Count	Percent	
	0	15,339	95.88	
	1	659	4.12	

MOVED_FLAG

Variable: MOVED_FLAG	Definition: FLAG–Acquisition was reported as FAH by phone and FAFH in food book; data were moved from the FAFH file to the FAH file		Type: Numeric	
	Value	Count	Percent	
	0	15,904	99.41	
	1	94	0.59	

MULTPLACES_FLAG

Variable: MULTPLACES_FLAG	Definition: FLAG–Single acquisitions were constructed when multiple acquisitions were reported on one page in the Food Book		Type: Numeric	
	Value	Count	Percent	
	0	15,808	98.81	
	1	190	1.19	

Appendix A. Example Blue Page

The following are sample pages from the Blue Book respondents used to report food purchase events. It gives the directions the respondents received, as well as the question where a particular variable came from.

STEP-by-STEP Guide

When you bring Food and Drinks Home...

1 SCAN the BEGIN barcode ⟶ Begin

➤ • If you forgot to scan BEGIN before scanning your groceries, scan here and continue to steps 2, 4 and 5. There's no need to rescan your groceries. ⟶ Oops

2 SCAN a barcode next to the picture of a PLACE in the "Places" section

3 SCAN ALL the FOOD and DRINKS you got from this PLACE

➤ • Find the barcode on the food or drink product and scan it. If you have more than one of the same item, scan each one.
• If the product has no barcode, look for a picture of the product in this book and scan the barcode next to the picture. Scan the quantity of fruits and vegetables using the Quantity Codes.
• If the product has no barcode and is not in this book, set it aside until you get to Step 4.

4 COMPLETE a blue page. LIST the food and drinks you could not scan at the bottom of the page. ATTACH your receipt.

5 SCAN the END barcode when you are finished ⟶ End

Foods and Drinks Brought into the Home

Complete one BLUE page for each PLACE where you got food that you brought home

(√) DAY you brought food home	■ Mon	■ Tue	■ Wed	■ Thu	■ Fri	■ Sat	■ Sun
Name of PLACE where you got food:							
Location:							
Name of PERSON who got the food:							

(√) Did you . . .

Use store or manufacturer's coupons?	☐ yes	☐ no
Use a store loyalty card or a frequent shopper card?	☐ yes	☐ no
Save your receipt?	☐ yes	☐ no
Enter total paid including tax and tip	$ _____._____	

(√) How did you pay? Check ALL that apply

☐ Cash	☐ Check	☐ Credit card	☐ Debit card
☐ WIC	☐ SNAP EBT amount: $ _____.___	☐ TANF EBT	☐ Free

(√) Did you SCAN the food and drinks?

☐ ALL	☐ None	☐ Some

TAPE RECEIPT HERE

List ALL foods and drinks you COULD NOT SCAN

Description (Please be as specific as possible)	Write size or amount if known (Ounces, grams, lbs, etc.)	How many?

QUESTIONS? Call 1-866-275-8659

Office Use

Appendix B. SNAP Store Type Definitions

The following store types are used to classify stores for the PLACESNAPTYPE variable. The definitions include the store type name, two letter code, and a general description of how the store operates its business. The definitions are provided by USDA Food & Nutrition Service.

Convenience Store (CS): Self-service stores that offer a limited line of convenience items and are typically open long hours to provide easy access for customers. Primarily engaged in retail sale of a variety of canned goods, dairy products, pre-packaged meats and other grocery items in limited amounts. Usually sell a large variety of ineligible products; such as hot coffee, alcohol, or tobacco products.

Combination Grocery/Other (CO): Primary business is sale of general merchandise but also sell a variety of food products. Such stores include independent drug stores, dollar stores, and general stores.

Direct Marketing Farmer (DF): Designation applies to direct marketing farmers; these are individual producers of agricultural products, particularly fresh fruit and vegetables, as well as meat, fish, dairy, and/or grains that are sold to the general public through a direct marketing venue such as a roadside farm stand, pick-your own operation, and/or market stall within a farmers' market. This store type differs from fruit/vegetable, meat, fish, and bread specialty firms in that the products are sold directly by the producer (farmer) rather than a retailer selling produce, meat, dairy, and/or grains purchased from a wholesale or other entity (i.e. a third party selling products purchased from or on behalf of a farmer/producer is not a direct marketing farmer).

Delivery Route (DR): A store that does not have a permanent store location, this includes delivery routes that deliver food at set locations and times, as well as rolling routes. Routes typically sell milk, bread, produce or other staple foods and are most common in rural areas.

Farmers' Market (FM): A single or multi-stall market that sells agricultural products, particularly fresh fruit and vegetables, to the general public at a single or multiple locations. This designation applies to any organization that operates a farmers' market location.

Large Grocery Store (LG): A store that carries a wide selection of all four staple food categories. They may sell ineligible items as well, but their primary stock is food items.

Medium Grocery Store (MG): A store that carries a moderate selection of all four staple food categories. They may sell ineligible items as well, but their primary stock is food items.

Military Commissary (MC): Designation applies to all retail food entities, located on military installations that sell food and non-food products. Only authorized shoppers

may shop at these entities and they must show proper military ID to use the commissary or Base Exchange.

Non-Profit Food Buying Cooperative (BC): Any store that operates as a "cooperative".

Small Grocery Store (SG): A store that carries a small selection of all four staple food categories. They may sell ineligible items as well, but their primary stock is food items.

Specialty Food Store - Bakery/Bread (BB): Food stores specializing in the sale of bread/cereal products. May also carry non-food items or other food items, but such stock is incidental to the primary specialty food stock.

Specialty Food Store - Fruits/Vegetables (FV): Food stores specializing in the sale of fruits and/or vegetables that operates in a fixed or semi-permanent location. This includes any permanent store whose primary business is the sale of fruits/vegetables, such as a produce market; as well as any produce stand that does not qualify as a Direct Marketing farmer or is not affiliated with a farmers' market. Seasonal produce stands qualify under this category. May also carry non-food items or other food items, but such stock is incidental to the primary specialty food stock.

Specialty Food Store – Meat/Poultry Products (ME): Food stores specializing in the sale of meat products. May also carry non-food items or other food items, but such stock is incidental to the primary specialty food stock.

Specialty Food Store - Seafood Products (SE): Food stores specializing in the sale of seafood products. May also carry non-food items or other food items, but such stock is incidental to the primary specialty food stock.

Supermarket (SM): Establishments commonly known as supermarkets, food stores, grocery stores and food warehouses primarily engaged in the retail sale of an extensive variety of grocery and other store merchandise. This store typically has ten or more checkout lanes with registers, bar code scanners, and conveyor belts.

Super Store/Chain Store (SS): Very large supermarkets, "big box" stores, super stores and food warehouses primarily engaged in the retail sale of a wide variety of grocery and other store merchandise. Includes stores that are large food/drug combo stores and mass merchandisers under a single roof, and membership retail/wholesale hybrids offering a limited variety of products in warehouse-type environment.