



National Household Food Acquisition and Purchase Survey (FoodAPS)

Codebook: Food-Away-From-Home (FAFH) Item Data– Public Use File

faps_fafhitem_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>.

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1. Introduction

This codebook provides details on the food-away-from-home (FAFH) items in the National Household Food Acquisition and Purchase Survey (FoodAPS) public use file (PUF). Users should first read *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. Event-level variables are described in the *FAFH Event Data Codebook*. This codebook provides a brief overview of how item-level information from food-away-from-home events was collected and how these data were processed for inclusion in this dataset.

2. Description of Data

2.1. Data Contents

The **faps_fafhitem_puf** data file contains one record per FAFH item acquired at each event. There are a total of 116,074 items from 37,407 events and 4,305 households. Variables are grouped into three main types:

- Identifying variables
- Item-level attribute variables
- Purchase variables

2.2. Summary of Data Collection

The FAFH item data file (**faps_fafhitem_puf**) contains all information related to each FAFH item acquired, coalescing information collected from the telephone interviews and Red Pages. Respondents were asked to record FAFH acquisition events in the Primary Respondent's Daily List, and then to fill out a Red Page in their Food Book (see Appendix A for an example Red Page). Adults other than the Primary Respondent were assigned an Adult Book, while children age 11 to 17 were assigned a Youth Book. These Food Books can be found at <http://www.ers.usda.gov/foodaps>.

In contrast to food-at-home (FAH) events, no FAFH items were scanned and instead all details of the food items purchased, including prices for each item, were recorded on the Red Page. Respondents were also asked to attach the receipt to the Red Page.

At each of the three telephone calls during the food reporting week (see section 3.2 in the *User's Guide*), the primary respondent reported the details for each FAFH event, including the items obtained by referring to the Red Pages filled out by the individuals in the household. The information about FAFH events and items reported over the phone was entered through a data entry system that contained drop-down lists for place names and food items. These drop-down lists were populated with items from the top 30 fast-food restaurants and the top 30 casual-dining restaurants, generic food items and menu items commonly available in reimbursable school lunches and breakfasts, and beverages. The top restaurants were identified in the *Quick Service Restaurant* magazine ranking of fast-food restaurants and in *Restaurant and Institutions* in 2009 (see table 1). The generic food items were obtained from the commonly reported food groups in the Food and Nutrient Database for Dietary Studies (FNDDS) component of the 2007-08 National Health and Nutrition Examination Survey (NHANES). Composite or combination foods (such as “pancakes, waffles, and French toast”) were separated into distinct items for the drop-down lists. The school foods were compiled from the fourth School Nutrition Dietary Assessment Study (SNDA-IV), which was collected during the 2009-10 school year. The food items in SNDA-IV were separated into distinct items, similar to what was done for items in the NHANES data.

If the items reported did not match items in drop-down lists, the interviewer could enter verbatim text. Similar to FAH items, the item-level records for FAFH events do not necessarily have one record per unique item, as the data entry depended on how respondents reported the items. For example, respondents could report a cheeseburger with quantity of 3 or a cheeseburger three times. The first case would appear as one line item in the FAFH item file and the latter case as three line items.

The drop-down list was also populated with common serving or container sizes, such as bag, bottle, bowl, can, slice, ounce, pound, cup, pint, gallon, gram, x-small, etc. Using the drop-down list size measures was the only way that telephone interviewers could enter information about the size or amount obtained. When the reported amount

didn't match one of the options in the drop-down list, the interviewers were instructed to obtain clarifying information so that they could select the best option from the drop-down list.

Table 1. Top 30 fast-food and casual dining restaurants

Top 30 Fast-Food Restaurants	Top 30 Casual-Dining Restaurants
Arby's	Applebee's Neighborhood Grill & Bar
Boston Market	Bennigan's Grill & Tavern
Burger King	Bob Evans
Carl's Jr.	Buffalo Wild Wings Grill & Bar
Checkers Drive-In/Rally's	California Pizza Kitchen
Chick-fil-A	Carrabba's Italian Grill
Chipotle	Chili's Bar & Grill
Church's Chicken	Cracker Barrel Old Country Store
Dairy Queen	Denny's
Domino's Pizza	Friendly's
Dunkin' Donuts	Golden Corral Buffet & Grill
Hardee's	HomeTown Buffet/Old Country Buffet
Jack in the Box	Hooters
KFC	IHOP
Little Caesars Pizza	LongHorn Steakhouse
Long John Silver's	Macaroni Grill
McDonald's	Olive Garden
Panda Express	Outback Steakhouse
Panera Bread	P.F. Chang's China Bistro
Papa John's Pizza	Perkins Restaurant & Bakery
Pizza Hut	Red Lobster
Popeyes	Red Robin Gourmet Burgers
Quiznos Subs	Ruby Tuesday
Sonic Drive-In	Ryan's Grill Buffet Bakery
Starbucks	Sbarro
Steak 'n Shake	T.G.I. Friday's
Subway	Texas Roadhouse
Taco Bell	The Cheesecake Factory
Wendy's	Tim Hortons
Whataburger	Waffle House

Source: QSR (Quick Service Restaurant) magazine ranking of fast-food restaurants and the *Restaurants and Institutions* magazine ranking of all restaurant chains, referenced in 2009.

Note: Lists of menu items from the "top 60" restaurants were loaded in drop-down lists to standardize item descriptions during data entry.

2.3. Summary of Data Processing

Item-level information underwent a significant amount of post-collection processing to combine information from the various sources; to standardize descriptions, weight and quantity information; and to impute missing costs.

Once the data collection week was completed and the Food Books were returned to the contractor, the Red Pages were reviewed and any acquisition that had not been reported by telephone was entered by data entry staff. This process was called Red Page Review and Capture. During this process, event- and item-level information from previously reported events was also reviewed for completeness, with any information that appeared on the Red Page but had not been reported by phone filled in by data entry staff. When information from Red Pages was entered during the review and capture process, data entry staff were not limited to the choices in the drop-down menus, but instead could enter the size and amount information exactly as it appeared on the Red Page. This information could also be extracted from receipts, when available.

The different steps taken to standardize or otherwise clean item-level information described in the remainder of this section were conducted iteratively, as the need for these steps became apparent through post-processing.

2.3.1. Item Descriptions and Combo/Buffer Identified

Items were first grouped based on the menu groups used for assembling the data-entry drop-down list. This grouping is noted in the MENUGRP variable: beverages (BEV), items from top restaurants and MenuStat (TOP), items from school, pre-school, and daycare (SCH), and all other items (GEN). This assignment was either automatic (when selected from the drop-down list) or assigned based on the acquisition place name and/or place type. Beverages were identified based on the item description.

Item descriptions were standardized initially through the use of the drop-down lists, but for items that were not matched to the drop-down lists, further processing was done to standardize more items. Whenever possible, items were matched to items listed in MenuStat data, and item descriptions and other information (size, etc.) from MenuStat replaced the various reports from respondents (see table 2 for availability of

MenuStat data).¹ Item descriptions recorded as open-ended text were standardized to ensure that abbreviations, spelling differences, or other permutations of descriptions that described like items had the same final description. For example, “Pineapple and ham pizza” and “Hawaiian pizza” are the same type of pizza, and these item descriptions were standardized. An attempt to match these corrected descriptions to the drop-down lists was then made using a SAS fuzzy algorithm, and the matches were reviewed for accuracy.² Items and their descriptions were also combined (such as components in a sandwich) using a standard order where the main component was listed first, then additional components were listed in alphabetical order. Other items were parsed into separate items to improve the match to USDA food codes. These parsed items were given a BUNDLENUM to allow users to identify their combination in the acquisition.

Combo meals and buffets were grouped, and the items were given a common BUNDLENUM. Also, items were edited to reduce under- and overreporting of items. Specifically, keywords such as “meal,” “value” (excluding single value items), “combo,” “box,” “bucket,” “dinner,” or McDonald’s “Big Breakfast” were used to identify combo meals at the top 30 fast-food restaurants. Restaurant websites were consulted to determine the composition of combo meals so that items could be linked and missing items identified. The event’s items were then edited to properly account for all items in the reported combo meals. For example, sometimes respondents would report a “Big Mac combo” along with each of the components of the combo (burger, drink, and fries) that were included in the combo. In such cases, the item described as the “combo” was removed and each of the separate items in the combo was kept, given a common BUNDLENUM, and the price for the combo was assigned to the main item (the burger). Other times, a combo meal was listed, but the additional components were not. In these

¹ MenuStat was compiled by the New York City Department of Health and Mental Hygiene, with funding in part from the U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. It aggregates nutrition information posted on restaurant websites annually since 2012. See <http://menustat.org/>.

² Each description was matched to all items in the drop-down lists via SAS PROC SQL join. Matches were evaluated using the SAS COMPGED function which assigns a match score with zero indicating an exact match and high scores indicating that the strings are very different. Scores were reviewed to determine a cut point above item descriptions that were unlikely to match the drop-down list. Matches under the cut point were manually reviewed to identify true matches.

cases, the fries and drink (or other combo components that were missing) were added to the event (and flagged with ADDITEM_FLAG).

Some bundles (i.e., a unique BUNDLENUM within an acquisition) contain multiple combos, depending on whether the respondent listed each item with QUANTITY equal to one, or aggregated items for reporting with QUANTITY greater than one. After manual review and coding, ERS examined the contents of bundles to ensure consistent counts of main items, number of potatoes (fries or hash brown), and number of drinks within the bundle.

Acquisitions that include buffet purchases posed additional challenges during post-processing. These acquisitions may include multiple buffets (purchased for multiple people) and/or a mix of buffet(s) and items ordered from the menu. All item descriptions were reviewed (together with price and number of persons at the meal) to identify and bundle buffet items. If multiple buffets were purchased in a single acquisition and listed with components, they may be bundled separately or together depending on whether respondents aggregated items (e.g., whether the number reported for “how many” was greater than one) and on the order in which items were reported. No attempt was made to deduce a buffet purchase if not identified by the respondent or knowable from the restaurant name. Sometimes “Buffet” was listed with no components; nothing could be done about this.

Table 2. Availability of MenuStat Data for Top Restaurants and Others

Top 30 Fast-Food Restaurants	Top 30 Casual-Dining Restaurants	Additional Restaurants Included in MenuStat
Included in MenuStat	Included in MenuStat	Fast Food
Arby's	Applebee's Neighborhood Grill & Bar	Baskin-Robbins
Boston Market	Bennigan's Grill & Tavern	Bojangles' Famous Chicken
Burger King	Bob Evans	Captain D's Seafood
Carl's Jr.	California Pizza Kitchen	Culver's
Checkers Drive-In/Rally's	Chili's Bar & Grill	Del Taco
Chick-fil-A	Denny's	Einstein Bros Bagels
Chipotle	Friendly's	El Pollo Loco
Church's Chicken	Golden Corral Buffet & Grill	Five Guys Burgers & Fries
Dairy Queen	IHOP	In-N-Out Burger
Domino's Pizza	LongHorn Steakhouse	Jamba Juice
Dunkin' Donuts	Macaroni Grill	Jason's Deli
Hardee's	Olive Garden	Jimmy John's
Jack in the Box	Outback Steakhouse	Krystal
KFC	P.F. Chang's China Bistro	Papa Murphy's Take 'N' Bake
Little Caesars Pizza	Red Lobster	Qdoba Mexican Grill
Long John Silver's	Red Robin Gourmet Burgers	White Castle
McDonald's	Ruby Tuesday	Zaxby's
Panda Express	T.G.I. Friday's	Casual Dining
Panera Bread	Tim Hortons	Cici's Pizza
Papa John's Pizza	Not included in MenuStat	O'Charley's
Pizza Hut	Buffalo Wild Wings Grill & Bar	
Popeyes	Carrabba's Italian Grill	
Quiznos Subs	Cracker Barrel Old Country Store	
Sonic Drive-In	HomeTown Buffet/Old Country Buffet	
Starbucks	Hooters	
Steak 'n Shake	Perkins Restaurant & Bakery	
Subway	Ryan's Grill Buffet Bakery	
Taco Bell	Sbarro	
Wendy's	Texas Roadhouse	
Whataburger	The Cheesecake Factory	
	Waffle House	

2.3.2. Size and Amount Information

Initially, only 51 percent of reported items (not including school items) included size or amount information. Respondents were instructed on the Red Page to “[w]rite size or amount if known” and to leave the space blank if unknown. The following strategies were used to standardize these data.

First, any size or amount information embedded in item descriptions was extracted through programmed searches for numeric characters, numbers represented as words, and relative size and container measures (using various abbreviations). During review of combos, size information from the main item was used to code the size of potatoes and drink when missing (e.g., “large Big Mac combo” implies a large fries and drink). If potatoes and drink were reported, but size was provided on one but not both items, the size was assumed to be the same for both components.

Next, all items that contained any information in the “size or amount” or “how many” fields were reviewed to resolve inconsistent use of these fields by respondents (see appendix A, Example Red Page). “Size or amount” was intended to capture the contents of an acquired item (e.g., ounces in a drink; number of cookies in a package; SIZE and SIZEUNIT in the data), and “how many” was intended to capture the number of units purchased at a given price or the number of acquired servings (QUANTITY in the data). Respondents often switched these fields or used them to further describe the item obtained (e.g., the breakfast plate included 2 eggs and the respondent entered 2 in the “how many” field). Since the unit cost is multiplied by QUANTITY, incorrect use of these fields resulted in acquisitions for which the sum of prices fell short of or exceeded the total paid prior to editing.

Finally, units of measure were reviewed and recoded for consistency by (1) manually reviewing items with infrequently reported units to determine the appropriate equivalent unit; (2) converting units to ounces where applicable (cup, pint, liter, gallon, pounds); (3) converting container measures (can, bottle, pitcher) to ounces for beverages; and (4) eliminating multiple equivalent units for the same food code (e.g., both piece and slice were reported as measures for pizza—slice was selected as the standard).

ERS staff conducted an additional review of the descriptions of items that the contractor did not assign a food code to (see *Food Away From Home [FAFH] Nutrient Data Codebook*) and extracted size information from the item description when present.

2.3.3. Item Cost and Cost Imputations

The FAFH item data include two measures of item cost: ITEM COST, which is the cost for one unit of the item (QUANTITY = 1), and TOTITEM COST, which is the total cost of the item obtained, calculated as ITEM COST * QUANTITY. Both ITEM COST and QUANTITY in the item-level data were reviewed and edited, along with TOTALPAID, TIPAMT, and FREE in the event-level data (**faps_fafhevent_puf**). During ERS's manual review of items that were not assigned a USDA food code, some bottle deposit fees were discovered to be listed as items. The bottle deposits were added to the item to which they were most likely related, and the bottle deposit observation was dropped from the data.

Please see *Supplementary Documentation Food Away From Home (FAFH) Data* for a complete description of the processing of item cost information.

2.3.4. Item Gram Weights

Unlike FAH items, most FAFH items do not come in packages with precise size information or with a measured weight. To determine the grams for each FAFH item reported, a variety of data sources were utilized. These included using the ounce, pounds, or grams as reported in the item size information; grams directly from MenuStat; calculating the grams using the calorie information from MenuStat and the calories per 100 grams as observed in FNDDS; grams from a similar item in MenuStat; web lookups; and median grams by FNDDS food code as reported in NHANES of similar food-at-home items and items from TOP restaurants (to fill in items from non-TOP restaurants). For the few items from which ERS extracted size information from item descriptions, gram weight was calculated using the fluid-ounce conversion for liquids and the standard dry weight conversion of 28.35 grams/ounce for non-liquids. Complete item-level gram information is provided in the **faps_fafhnutrients** data file. TOTALGRAMS is provided in the **faps_fafhitem_puf** data file.

2.4. Summary of Known Data Anomalies

Despite the extensive review and editing process, there are still some anomalies in the data that were not resolved.

2.4.1. Food Type (FAH versus FAFH)

The FAFH files include a small number of FAFH acquisitions and items that were reported on Blue Pages and recoded from FAH to FAFH during data processing (see CAPTURE_FLAG in the FAFH events data file, **faps_fafhevent_puf**). Acquisitions were moved between data files based on a review of PLACETYPE (**faps_fafhevent_puf**) and food item descriptions. FAH events were moved to the FAFH file (**faps_fafhevent_puf**) when the items acquired were definitively FAFH. Some FAH acquisitions from retail eating places remain in the FAH event file (**faps_fahevent_puf**) with items in the FAH item file (**faps_fahitem_puf**). These acquisitions are typically from bakeries, cafes, coffee shops, delis, food trucks, or specialty shops where you can acquire FAFH and FAH items (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).

FAFH events were moved to the FAH file when all items acquired were definitively FAH (MOVED_FLAG in **faps_fahevent_puf**). Food stores also provide a mix of FAH and FAFH items; some have deli counters, hot bars, or salad bars where shoppers can purchase prepared foods (usually variable weight) that can be consumed on- or offsite. To reduce burden on respondents and streamline receipt entry, respondents were asked to characterize each acquisition, not each food item, as FAH or FAFH, so that each reporting page could contain a full transaction receipt. Therefore, some FAFH acquisitions may include food items that could be characterized as FAH; however, the acquisition as a whole is characterized as FAFH.

2.4.2. Item Descriptions

FAFH item information was collected through telephone interviews and Food Books. Telephone interviewers entered information as reported by respondents, with minor probing to resolve inconsistencies. If the item information was obtained during the Review and Capture process, the food item descriptions written on the Red Page were entered as they appeared on the page; respondents were not available to clarify apparent inconsistencies. As a result, some food item descriptions appear to be

inconsistent with the place of acquisition but could not be resolved through probing with the respondent. These anomalies could indicate an error in the place name or the item descriptions. It is also possible that respondents used common brand names to describe similar or generic items.

2.4.3. Size and Amount Information

A comprehensive review of all items in the context of their event was beyond the scope of the data processing effort. As discussed in section 2.3.2, respondents reported item information inconsistently (e.g., transposing values of SIZE and QUANTITY), and consistency was not always imposed upon entry.

The manual review to resolve inconsistencies was based on the contractor's ability to identify items and/or events with inconsistent, impossible, or improbable combinations of item variables. When these items were identified, they were manually reviewed and corrected. The cleaning process aimed to ensure consistency for an individual item (or group of items) but cannot guarantee consistency across all items. Some apparent inconsistencies in the data exist because a single item is sold in multiple configurations. For example, fast-food restaurants sell single cheeseburgers (and a person can purchase more than one) and also sell a "two-cheeseburger meal." In this case, size and amount information was retained as reported and may appear in the data multiple ways, as shown in table 3 below.

Table 3. Example of size and amount configurations

ITEMDESC	SIZE	SIZEUNIT	QUANTITY	ITEMCOST	TOTITEMCOST
Cheeseburger	2	Serving	1	\$4.59	\$4.59
Cheeseburger	1	Serving	2	\$1.79	\$3.58

2.4.4. School Foods

Researchers interested in school meals should be aware of three issues that complicate the reporting of school foods:

- Multiple people and/or multiple meals: Respondents with multiple children reduced the data reporting burden by using a single Red Page to report one or

more meals for one or more persons. Therefore, examination of school meal prices must account for the number of meals and persons, understanding that some but not all meals may be obtained at no cost (e.g., a paid school lunch reported together with a free snack or a free school meal reported with a paid snack).

- Multiple venues or acquisitions: Items obtained at school (PLACETYPE=327 in **faps_fafhevent_puf**) may come from a variety of sources in addition to the school cafeteria. Therefore, a single Red Page may be used to report lunch, which consists of a free school meal and a paid vending machine item considered by the respondent to be part of his or her lunch. NONSCHMEALITEM identifies items that are not eligible for a federally subsidized school meal; acquisitions reported with FREE=1 and TOTALPAID >0 (**faps_fafhevent_puf**) indicate items obtained in addition to a free school meal that may or may not have NONSCHMEALITEM =1.
- School food obtained by adults: School acquisitions identified by PLACETYPE=327 include meals reported by adults who were likely to be school workers, or parents attending school events.

Any effort to characterize school meals in the FoodAPS data must account for the number of meals, item costs, number of persons, and age of household member acquiring food.

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4. Variable by Variable Codebook

4.1. Identifying Variables

HHNUM

Variable: HHNUM	Definition: 6-digit unique identifier for household	Type: Numeric
	116,074 responses with 4,305 unique values. Individual responses not shown.	

EVENTID

Variable: EVENTID	Definition: Unique identifier for each event and can be used to link items to event information in the faps_fafhevent_puf file	Type: Numeric
	Note: EVENTID is unique across all FAH and FAFH events.	
	116,074 responses with 37,407 unique values. Individual responses not shown.	

ITEMNUM

Variable: ITEMNUM	Definition: Sequential item number within event	Type: Numeric
	Note: To uniquely identify an item entry, use EVENTID and ITEMNUM together. ITEMNUM does not uniquely identify any particular food item.	
Range:	1 – 61	
Missing observations (.):	0 (out of 116,074)	

BUNDLENUM

Variable: BUNDLENUM	Definition: Bundle number within event (combos and other grouped items)	Type: Numeric
	Note: To uniquely identify a bundle of items, use EVENTID and BUNDLENUM together. Items with BUNDLETYP=1 or 2 do not have a BUNDLENUM as there are no separate components to link.	
Range:	1 – 6	
Missing observations (.):	99,301 (out of 116,074)	

BUNDLETYPE

Variable: BUNDLETYPE	Definition: Type of bundle			Type: Numeric
	Note: BUNDLETYPE=1 or 2 do not have a BUNDLENUM as there are no separate components to link.			
	Value	Count	Percent	Value description
	1	49	0.04	Combo meal reported without components
	2	130	0.11	Buffet reported without components
	3	11,001	9.48	Combo meal items
	4	1,114	0.96	Buffet items
	5	77	0.07	Buffet price record for BUNDLENUM (no food code on this record)
	6	4,581	3.95	Items reported together, parsed for nutrient coding
	.	99,122	85.40	Item not in a bundle

MENUGRP

Variable: MENUGRP	Definition: Item's menu group/type (used in processing)			Type: Character
	Value	Count	Percent	Value description
	BEV	33,037	28.46	Beverages
	GEN	44,139	38.03	Generic (all other items)
	SCH	16,866	14.53	School
	TOP	22,032	18.98	Top national chain

NONSCHMEALITEM

Variable: NONSCHMEALITEM	Definition: Item from school but not part of reimbursable meal Universe: MENUID=3 (MENUID is only available in the restricted use file)			Type: Numeric
	Value	Count	Percent	Value description
	0	23,422	20.18	Likely a reimbursable meal/item
	1	653	0.56	Not part of a reimbursable meal
	.	20	0.02	Unknown/missing
	-996	91,979	79.24	Valid skip

4.2. Item Level Attributes

ITEMDESC

Variable: ITEMDESC	Definition: Item/product description	Type: Character
	19,884 unique values. Individual responses not shown.	
Missing observations (.):	0 (out of 116,074)	

ITEMDESCSOURCE

Variable: ITEMDESCSOURCE	Definition: Source of item description				Type: Numeric
	Value	Count	Percent	Value description	
	5	47,686	41.08	Picked from drop-down list	
	6	49,640	42.77	Entered as open-ended text	
	7	18,748	16.15	Obtained via match to MenuStat	

QUANTITY

Variable: QUANTITY	Definition: Quantity of item acquired				Type: Numeric
	Note: Contains the edited value or original value if no edit was warranted. QUANTITY_FLAG indicates the reason or method for editing values.				
	N	Min	Max	Mean	#Missing (.)
	115,631	1.00	27.00	1.27	443

QUANTITY_FLAG

Variable: QUANTITY_FLAG	Definition: Reason/method for editing quantity			Type: Numeric
	Value	Count	Percent	Value description
	0	110,627	95.31	QUANTITY not edited
	1	824	0.71	SIZE was reported in QUANTITY or vice versa
	2	158	0.14	QUANTITY was parsed to link to multiple combos
	3	166	0.14	QUANTITY was adjusted for consistency with TOTALPAID
	4	1,036	0.89	QUANTITY was revised for consistency within bundle
	5	22	0.02	Consolidated multiple listings of exact items for consistent QUANTITY within combo
	6	1,678	1.45	Missing QUANTITY set to 1, free acquisition
	7	820	0.71	Missing QUANTITY set to 1, paid acquisition, sum of item costs consistent with TOTALPAID
	9	743	0.64	QUANTITY was adjusted for consistency with number of people sharing meal

SIZE

Variable: SIZE	Definition: Item size or volume				Type: Numeric
	Note: Contains the edited value or original value if no edit was warranted. SIZE_FLAG indicates the reason or method for editing values.				
	N	Min	Max	Mean	#Missing (.)
	59,285	0.02	1,125.00	6.622983	56,789

SIZE_FLAG

Variable: SIZE_FLAG	Definition: Reason/method for editing size measure			Type: Numeric
	Value	Count	Percent	Value description
	0	91,527	78.85	SIZE not edited
	1	3,580	3.08	Edited to standardize unit
	2	287	0.25	Extracted from ITEMDESC
	3	98	0.08	Imputed during manual review
	4	184	0.16	Filled or recoded for consistency
	5	657	0.57	SIZE originally reported as QUANTITY or vice versa
	6	19,731	17.00	Assumed SIZE=1
	7	10	0.01	SIZE was parsed to link to multiple combos

SIZEUNIT

Variable: SIZEUNIT	Definition: Units for item size or volume measure			Type: Character
	Value	Count	Percent	Value description
		58,185	50.13	Missing
	BAG	552	0.48	
	BOTTLE	58	0.05	
	BOWL	774	0.67	
	BOX	124	0.11	
	BUCKET	17	0.01	
	CAN	47	0.04	
	CARTON	341	0.29	
	CONTAINER	95	0.08	
	COUNT	1	0.00	
	CUP	836	0.72	
	EACH	1,275	1.10	
	FAMILY SIZE	24	0.02	
	GRAM	277	0.24	
	HALF	14	0.01	
	INCH	1,021	0.88	
	KIDS	40	0.03	
	KING SIZE	15	0.01	
	LARGE	4,160	3.58	
	LBS	84	0.07	
	LOAF	1	0.00	
	MEDIUM	5,128	4.42	
	OZ	22,813	19.65	
	PACK	247	0.21	
	PERSONAL	13	0.01	
	PIECE	3,682	3.17	
	PINT	468	0.40	
	SCOOP	327	0.28	
	SERVING	5,743	4.95	
	SHEET	1	0.00	
	SLICE	3,089	2.66	
	SMALL	6,126	5.28	
	STICK	78	0.07	
	TABLESPOON	70	0.06	
	VALUE	9	0.01	
	WHOLE	2	0.00	
	X-LARGE	127	0.11	
	X-SMALL	210	0.18	

SIZEUNIT_FLAG

Variable: SIZEUNIT_FLAG	Definition: Reason/method for editing size unit			Type: Numeric
	Value	Count	Percent	Value description
	0	90,391	77.87	No edit
	1	24,353	20.98	Edited to standardize unit
	2	650	0.56	Extracted from ITEMDESC
	3	462	0.40	Imputed during manual review
	4	132	0.11	Recoded for consistency if reported SIZEUNIT was missing or "SERVING"
	8	86	0.07	Filled or recoded for consistency within bundle

SIZERELATIVE

Variable: Sizerelative	Definition: Relative measure of item size			Type: Character
	Note: SIZERELATIVE is equal to SIZEUNIT if respondent provided a relative size measure. SIZERELATIVE was edited or filled by match to MenuStat for "top" restaurants (MENUGRP=TOP or MENUID>100) when respondent provided an ounce measure. SIZERELATIVE was used to obtain median size (ounces) for each relative size measure for use in imputations.			
	Value	Count	Percent	Value description
		102,334	88.16	No relative size
	KIDS	398	0.34	
	LARGE	3,306	2.85	
	MEDIUM	4,984	4.29	
	ONE SIZE	961	0.83	
	PERSONAL	8	0.01	
	SMALL	3,921	3.38	
	X-LARGE	100	0.09	
	X-SMALL	62	0.05	

GRAMSTOTAL

Variable: GRAMSTOTAL	Definition: Total gram weight of item (GRAMSUNIT*QUANTITY)			Type: Numeric
	Note: GRAMSUNIT appears in the faps_fafhnutrients data file.			
	N	Min	Max	Mean #Missing (.)
	115,600	1.00	113,664	330.9932 474

ADDITEM_FLAG

Variable: ADDITEM_FLAG	Definition: Indicates item added to data during cleaning and why/how			Type: Numeric
	Value	Count	Percent	Value description
	0	111,359	95.94	Item not added during cleaning
	1	634	0.55	Missing component of combo meal
	2	4,081	3.52	Parsed item description

4.3. Purchase Variables**ITEMCOST**

Variable: ITEMCOST	Definition: Cost for one unit of item (or bundle)			Type: Numeric	
	Note: Contains the edited value or original value if no edit was warranted. ITEMCOST_FLAG indicates the reason or method for editing values.				
	N	Min	Max	Mean	#Missing (.)
	111,545	0	1,490.18	1.339842	4,529

ITEMCOST_FLAG

Variable: ITEMCOST_FLAG	Definition: Reason/method for editing item cost			Type: Numeric
	Note: TOTALPAID is an event-level variable (faps_fafhevent_puf).			
	Value	Count	Percent	Value description
	0	102,234	88.08	No edit
	1	978	0.84	Set to missing when ITEMCOST≠TOTALPAID and multiple entrees
	2	17	0.01	Corrected typo when sum of ITEMCOST was greater than TOTALPAID
	3	339	0.29	Moved ITEM COST to correct item or split cost for multiple identical items
	4	23	0.02	Filled by web search when sum of ITEMCOST not consistent with TOTALPAID
	5	10,394	8.95	Changed missing to zero when item in combo meal/bundle or free event
	6	1,350	1.16	Changed zero to missing when all ITEMCOST=0 and TOTALPAID>0
	7	142	0.12	ITEMCOST was actually TOTITEMCOST
	8	16	0.01	Updated for consistency within event
	10	446	0.38	Changed missing to zero if reported ITEMCOST summed to TOTALPAID
	11	135	0.12	ITEMCOST set to TOTALPAID on first item in school meal

TOTITEMCOST

Variable: TOTITEMCOST	Definition: Total amount paid for item (or bundle)				Type: Numeric
	Note: This value was calculated as the product of QUANTITY and ITEM COST after both were edited.				
	N	Min	Max	Mean	#Missing (.)
	110,765	0	1490.18	1.553369	5,309

FREE

Variable: FREE	Definition: Event was free			Type: Numeric
	Note: This is an event-level variable and also appears in the faps_fafhevent_puf data file. FREE_FLAG indicates whether and how FREE was edited during the processing of item data.			
	Value	Count	Percent	Value description
	0	65,146	56.12	Not free
	1	50,928	43.88	Free

FREE_FLAG2

Variable: FREE_FLAG2	Definition: How FREE was edited during item data processing			Type: Numeric
	Note: PAYTYPE_FLAG also has information about how FREE was edited to resolve inconsistencies in TOTALPAID, payment types, and the FREE indicator. The editing process for PAYTYPE_FLAG did not use item-level information.			
	Value	Count	Percent	Value description
	0	115,094	99.16	Not edited per item data
	1	160	0.14	Revised from missing to 0
	2	128	0.11	Revised from missing to 1
	3	88	0.08	Revised from 1 to 0
	4	113	0.10	Revised from 0 to 1
	5	491	0.42	School meal FREE=1 based on interview data or other school events for person

IMPITEMCOST

Variable: IMPITEMCOST	Definition: Imputed cost for one unit of item (or bundle)			Type: Numeric	
	Note: See IMPCOSTMETHOD for method used to impute cost for item.				
	N	Min	Max	Mean	#Missing (.)
	4,886	0	31.67	3.70825	111,188

IMPCOSTMETHOD

Variable: IMPCOSTMETHOD	Definition: Method used to impute item cost			Type: Numeric
	Value	Count	Percent	Value description
	0	618	0.53	Price not imputed due to small residual value
	1	2,667	2.30	Imputed price was ratio-adjusted
	2	342	0.29	Ratio adjustment not used due to large residual
	3	489	0.42	Ratio adjustment not used because TOTALPAID was not reported
	4	65	0.06	Price was imputed as zero
	5	1,287	1.11	Price was imputed for item reported with zero price
	6	36	0.03	Paid school meal price imputed from within-sample median
	-996	110,570	95.26	Valid skip (not imputed)

IMPTOTCOST

Variable: IMPTOTCOST	Definition: Imputed total item cost				Type: Numeric
	Note: Calculated as IMPITEMCOST * QUANTITY				
	N	Min	Max	Mean	#Missing (.)
	4,885	0	57.39	4.240966	111,189

Appendix A. Example Red Page for FAFH Reporting

[illegible]

**If you do not have a receipt,
or foods are not listed on the receipt...**

Write each food and drink on a separate line

Describe each food and drink:

- ✓ The **BRAND**, product name, or menu item
- ✓ The **TYPE** of food (for example, white bread or whole wheat bread; chicken nuggets or grilled chicken breast)
- ✓ The **FORM** of the food (for example, raw carrots or cooked carrots)
- ✓ The **FLAVOR** (for example, chocolate milk, oatmeal cookie, or vanilla yogurt)
- ✓ The **FAT** and **SUGAR** (for example, whole milk or 1% milk; regular or diet soda; 100% juice or fruit-flavored drink)
- ✓ Things you **ADDED** (for example, butter on bread, ketchup with French fries, dressing on salads)

Write the size/amount of food or drink, even if you did not eat or drink all of it

- ✓ If the food or drink came in a **PACKAGE** or **CONTAINER** → write down the ounces or grams listed on the container
- ✓ If the food or drink came in **SIZES** → write down the size you got. For example, small, medium, large, super gulp, or double gulp
- ✓ If the number of ounces or grams or the size is not clear, leave this space blank

AND DON'T FORGET ...

- » **It's not about what you eat—it's about what you get!**
- » **Do not scan items that you write on a red page**
- » **Total paid is the amount paid by members of your household**