

Chapter 3

Approved Foods and Food Selection

The food-item restrictions described in the preceding chapter result in a list of approved WIC foods that is unique for each State in the study. The variations in approved foods may lead to differences in average food package costs, availability of items in the store, participant satisfaction with and consumption of available foods, and redemption of food instruments—topics discussed in subsequent chapters. This chapter presents details about the State lists of approved foods that will contribute to understanding the empirical results presented later. The chapter also gives information about the food items that participants purchase in each State.

WIC-Approved Foods

Chapter 2 described the types of food-item restrictions that the six States in the study used in 2001 to reduce food package costs: requiring participants to purchase the least expensive brand available for certain prescribed foods; limiting foods to specified types and brands; and restricting packaging or package sizes. Table 3-1 provides a detailed listing of the foods allowed in each State in January 2001, at the start of the study's data collection period. The information was gathered through a review of each State's list of allowed foods. These lists are usually printed in a format that can be used by WIC participants as a guide when they do their WIC shopping.

Table 3-1 is divided first by food category, with separate sections for milk, cheese, eggs, infant cereal, juice, dried beans or peas, peanut butter, and breakfast cereal. Within each section, information is provided on allowed brands, types (or flavors), and package sizes or forms. Several sections also list types and package forms that are not allowed. State lists of approved WIC foods frequently identify foods that are often mistakenly believed (or desired) to be approved, but are not.

State lists of approved foods must conform to Federal regulations, which specify maximum quantities of prescribed food for seven standard food packages: two for infants that are age-dependent (food packages I and II); one for children or women with special dietary needs (package III); one for children aged one to five years (IV); one for pregnant and breastfeeding women (V); one for nonbreastfeeding postpartum women (VI); and an enhanced package for breastfeeding women (VII). Appendix H presents the regulation governing WIC food packages (7 CFR 246.10).

Of special note in table 3-1 is the allowed package size/form for juice in California and Connecticut. These are the only two States in the study that allow purchase of 64-ounce containers of juice; in California, these are the only allowed containers for shelf-stable, single-strength adult juice. In the regulations, however, the maximum allowable quantity for juice is not divisible by 64 (for example, 92 fluid ounces for infants aged 4 through 12 months, 276 ounces for children and pregnant/breastfeeding women, and 184 ounces for nonbreastfeeding postpartum women). These maximum quantities are divisible by 46, which is an allowed container size for shelf-stable juice in Connecticut and the other States. Thus, one effect of the California restriction on package size for juice is that maximum allowable quantities cannot be prescribed for participants who select shelf-stable juice.¹ In Connecticut, participants can purchase the maximum quantity allowed if they select 46-ounce

¹ Participants in California wishing the maximum allowable amount of juice may select frozen juice.

Table 3-1—WIC-approved foods as of January 2001

	California	Connecticut	North Carolina	Ohio	Oklahoma	Texas
Milk						
Fluid milk						
Brand	Any brand	Store brand or least expensive	Least expensive	Any brand	Least expensive	Least expensive
Type / flavor	Nonfat, 1%, 2%, whole, acidophilus	Nonfat, 1%, 2%, whole, buttermilk	Nonfat, 1%, 2%, whole, acidophilus	Nonfat, 1%, 2%, whole	Any % fat and acidophilus	Nonfat, 1%, 2%, whole, buttermilk
Package size / form ..	Gallon except on 1-1/2 gallon check; 1/2 gallon acidophilus	Quart or larger	Size on voucher; quarts not allowed	Gallon	Gallon for cow milk; 1/2 gallon for acidophilus	Half-gallon or gallon
Not allowed	Flavored milk, buttermilk, goat milk, UHT	Flavored or protein-enriched milk	Flavored milk	Flavored milk	—	Flavored milk
Lactose reduced/free						
Brand	Lactaid, private label	[per check]	Least expensive	[per voucher]	Least expensive	Lactaid or Dairy Ease
Package size / form ..	Half gallon	Qt. or 1/2 gallon	Size on voucher	—	Qt. or 1/2 gallon	Qt. or 1/2 gallon
Evaporated milk						
Brand	Least expensive	[per check]	Least expensive	—	Least expensive	Least expensive
Package size / form ..	12-oz can	—	Size on voucher	—	12-oz can	12-oz can
Dry milk						
Brand	Least expensive	[per check]	Least expensive	Any brand	Least expensive	Least expensive
Package size / form ..	9.6 to 25.6 oz	—	Size on voucher	9.6 or 25.6 oz	—	9.6, 25.6, or 64 oz
Cheese						
Brand	Any brand	Least expensive	Any brand	Any brand	Least expensive	Any brand
Type / flavor	American Cheddar Monterey jack Mozzarella	American Cheddar Monterey jack Mozzarella Colby Muenster Provolone Swiss	American Cheddar Monterey jack Mozzarella Colby Swiss	American Cheddar Monterey jack Mozzarella Colby Swiss	American Cheddar Monterey jack Mozzarella Colby	American Cheddar Monterey jack Mozzarella Colby Colby-jack
Package size / form ..	12 oz or larger block, round, or sliced at deli; reduced fat, low sodium, Kosher are OK	— Block or slices, deli or dairy; lowfat/low cholesterol only when printed on check	8 or 16 oz prepacked block or slices, wrapped or unwrapped; lowfat, low cholesterol, low sodium OK	Up to 16 oz block or slices; low fat, deli are OK	— Block and sliced American	10 oz or larger block or slices, incl. deli sliced
Not allowed	Prepackaged slices, shredded, string	Indiv-wrapped slices, shredded, string	Shredded, deli	Indiv-wrapped slices, shredded, string, low sodium	Indiv-wrapped slices, deli, shredded	Indiv-wrapped slices, shredded
Eggs						
Brand	Any brand	Store brand or least expensive	Any brand	Any brand	Least expensive	Any brand
Type / flavor	White only, grade AA	White only	White or brown, grade A	White	White	White, grade A or AA
Package size / form ..	Small, medium, large	Large	Large, x-large	Any size	Medium (large if med. not avail.)	Small, medium, large
Not allowed	Low cholesterol, brown, vitamin enriched, specialty	Brown, Egglands Best, egg substitutes	Low cholesterol or specialty	Low cholesterol or egg substitutes	Brown or low cholesterol	Packs of 6 or 18, fertile or free range, ungraded

— Not specified on food list.

(Continued)

Table 3-1—WIC-approved foods as of January 2001 (continued)

	California	Connecticut	North Carolina	Ohio	Oklahoma	Texas
Infant cereal						
Brand	Gerber	Gerber	Beechnut, Gerber, Heinz	Beechnut, Gerber, Heinz	Gerber, Heinz	Gerber
Type / flavor	Rice, oatmeal, barley, mixed	Rice, oatmeal, barley, mixed	Rice, oatmeal, barley, mixed, Hi-Protein	Rice, oatmeal, barley, mixed, Hi-Protein	Rice, oatmeal, barley, mixed	Rice, oatmeal, barley, mixed
Package size / form ..	8 oz	8 or 16 oz	8 oz	8 oz	8 or 16 oz	8 or 16 oz
Not allowed	Cereal with fruit	Cereal with fruit or formula	Cereal with fruit	Cereal with fruit	Cereal with fruit or yogurt	Cereal with fruit
Juice¹						
Brand	Store brand only for 64-oz pineapple Allowable brands for other flavors: Campbells, Dole, Minute Maid, Seneca, Tree Top, Welch's, private label, store brands	Least expensive brand for orange and grapefruit Allowable brands for other flavors: Dole, Juicy Juice, Seneca, Welch's	Any brand of orange, grapefruit, and pineapple Allowable brands for other flavors: Campbells, DelMonte, Dole, Juicy Juice, Northland, Seneca, Welch's, two store brands	Any brand of orange and grapefruit Allowable brands for other flavors: Campbells, Dole, DelMonte, Juicy Juice, Northland, Old Orchard, Seneca, Welch's, private labels, one store brand	Allowable brands include private labels, store brands, Dole, Juicy Juice, and Welch's (frozen and liquid conc. only)	Least expensive from list of specified store brands, private labels, Seneca, Tree Top, Welch's
Type / flavor	Apple Grape Orange Pineapple White grape Vegetable	Apple Grape Orange Pineapple White grape Grapefruit Wh. grape blends Dole juice blends All Juicy Juice varieties	Apple Grape Orange Pineapple White grape Cranberry Grapefruit Tomato Vegetable Wh. grape blends Juice blends All Juicy Juice varieties	Apple Grape Orange Pineapple White grape Cranberry Grapefruit Tomato Vegetable Wh. grape blends Other blends All Juicy Juice varieties in liq. conc.	Apple Grape Orange Pineapple White grape Tomato Vegetable Wh. grape blends Dole juice blends All Juicy Juice varieties	Apple Grape Orange Pineapple White grape Grapefruit Orange-pineapple Vegetable
Package size / form ..	11.5/12-oz frozen, 64-oz plastic	11.5/12-oz frozen, 46-oz can, 64- or 128-oz refrigerated carton of orange juice	11.5/12-oz frozen, 46-oz can, 46-oz plastic, 11.5-oz liq. conc.	11.5/12-oz frozen 46-oz can 46-oz plastic 11.5-oz liq. conc.	12-oz frozen, 46-oz can, 11.5-oz liq. conc.	11.5/12-oz frozen, 46-oz can
Dried beans/peas						
Brand	Any brand	Any brand	Any brand	Any brand	Least expensive	Any brand
Type / flavor	Any variety of uncooked dried beans, peas, lentils	Any variety of uncooked dried beans, peas, lentils	Any variety of uncooked dried beans, peas, lentils	Any variety of uncooked dried beans, peas, lentils	Any variety of uncooked dried beans, peas, lentils	Any variety of uncooked dried beans, peas, lentils
Package size / form ..	—	1 lb.	1 lb.	—	1 lb.	1 lb.
Not allowed	Canned beans (unless specified on voucher)	Canned beans (unless specified on voucher)	—	Canned, prewashed, or seasoned beans	—	Canned beans, flavored or seasoned beans

(Continued)

— Not specified on food list.
¹ For infants, Ohio approves Beechnut, Gerber, and Heinz 32-oz jars; Oklahoma approves Gerber and Heinz 32-oz jars; other States provide single-strength adult juices for infants.

Table 3-1—WIC-approved foods as of January 2001 (continued)

	California	Connecticut	North Carolina	Ohio	Oklahoma	Texas
Peanut butter						
Brand	Any brand	Least expensive	Any brand	Any brand	Any brand	Any brand
Type / flavor	Plain, creamy, chunky, honey nut roasted; low sodium and low sugar are OK	Unflavored, smooth or chunky	Plain, smooth, crunchy, or whipped; low sodium and low sugar are OK	Smooth or chunky	—	Smooth or crunchy
Package size / form ..	16 or 18 oz	18 oz	18 oz	—	—	18 oz
Not allowed	With fruit, jams, or preserves; low fat or reduced fat	With jelly, honey, marshmallow, or choc.; spreads	With jelly, honey, marshmallow	With jelly, honey, marshmallow; whipped; reduced fat	With jelly, honey, marshmallow	With jelly, honey, marshmallow; reduced fat; spreads
Breakfast cereal						
Package size / form ..	12 oz or larger	10 oz or larger	12 oz or larger	—	—	Allowable sizes are product specific
Allowed products						
General Mills	Cheerios Chex, Wheat Kix	Cheerios Cheerios, Multigrain Chex, Corn Chex, Rice Kix Total, whole grain	Cheerios Cheerios, Multigrain Chex, Multi-bran Chex, Rice Chex, Wheat Country Corn Flakes Wheaties	Cheerios Chex, Corn Chex, Multi-bran Chex, Rice Chex, Wheat Kix Wheaties Total, corn flakes Total, whole grain	—	Cheerios Chex, Wheat Country Corn Flakes Kix Para Su Familia Cinnamon Corn Stars & Raisin Bran Total, whole grain
Kellogg's	Corn flakes	Complete oat bran flakes Complete wheat bran flakes Mini-Wheats, raisin Special K	Complete wheat bran flakes Corn flakes Frosted Mini-Wheats Mini-Wheats, raisin Mini-Wheats, strawberry	Complete wheat bran flakes Corn flakes Frosted Mini-Wheats Mini-Wheats, raisin Product 19 Special K	—	Corn flakes Frosted Mini-Wheats
Malt-O-Meal	—	—	—	Puffed Rice Toasty O's	—	Toasty O's
Nabisco	—	100% bran	—	—	—	—
Post	Bran flakes	Grape Nut Flakes Natural bran flakes	Banana Nut Crunch Grape Nuts Grape Nut Flakes Honey Bunches of Oats	Banana Nut Crunch Bran flakes Grape Nuts Grape Nut Flakes Honey Bunches of Oats	—	Bran flakes Grape Nuts
Quaker	Crunchy Corn Bran Life	Oat Bran	King Vitaman Life Oat Bran Oatmeal Squares	King Vitaman Life Oatmeal Squares	—	King Vitaman Life
Store brand/ private label	Crispy rice Rice squares	Toasted oats	Bran flakes Corn biscuits Corn flakes Crispy corn puffs Crispy rice Nutty nuggetts Rice squares Shredded wheat Toasted oats	—	Bran flakes Corn biscuits Corn flakes Crispy corn puffs Crispy rice Nutty nuggetts Rice squares Shredded wheat Toasted oats	Crispy rice
Hot cereal	Nabisco Cream of Wheat, Quaker Sun Country Oats	Maltex, Maypo Vermont Style, Nabisco Cream of Wheat	Jim Dandy quick grits, Nabisco Cream of Wheat, Quaker instant grits	CoCo Wheats, Nabisco Cream of Wheat, Quaker instant grits, Quaker instant oatmeal	Malt-O-Meal quick & chocolate, Nabisco Cream of Wheat, Quaker instant grits, Quaker Sun Country Oats	Malt-O-Meal quick & chocolate, Quaker instant grits, Quaker Sun Country Oats

— Not specified on food list.

Source: State lists of approved foods.

containers of juice, but they restrict the amount they can purchase if they select 64- or 128-ounce containers.

The information in table 3-1 is the basis of much of the analyses reported in following chapters. For instance, the Survey of WIC Participants asked respondents which nonapproved food items they would buy with their WIC benefits if allowed. The State lists were then used to determine which of these preferred items were actually approved.

Actual Food Selections

This study uses information about the actual food selections of WIC participants from two different sources: the Survey of WIC Participants, and scanner data on WIC transactions collected from supermarket chains in five of the six case study States. As discussed below, these data sources provide two different perspectives on WIC food purchases.

Survey Data on Purchases

The Survey of WIC Participants provides information on the percentage of respondents in each State who purchased different food items using their WIC food instruments. The survey first asked, for different categories of WIC foods, whether the food was prescribed for the respondent or her child. If it was, detailed information was collected about the items purchased, for example, the types of cheese (e.g., American, Cheddar, Colby, and Monterey jack) and their brands. For each item, the survey asked how it was packaged (e.g., blocked, sliced and prepackaged, sliced and individually wrapped, sliced and not individually wrapped). These data give a very detailed picture of what WIC participants in each study State were buying with their WIC benefits. Table 3-2 presents the survey-based information on WIC-purchased foods.

Table 3-2 is organized into sections for different food categories. Within each category, survey respondents' purchases are broken out by type or flavor, brand (summarized primarily as national, private label, or store brand), and package size. The percentages within each column section total to more than 100 percent when respondents reported buying more than one type of food within a category. For instance, 86.0 percent of Connecticut respondents said they purchased whole milk with their WIC instrument, and 19.9 percent said they bought 2% reduced-fat milk, implying that at least 5.9 percent of respondents purchased both milk types.

The information in table 3-2 provides several interesting facts about the WIC buying habits of participants in the six States. One is that the survey respondents occasionally reported buying food items that were not approved for WIC purchase in their State. An example is milk in quart containers, which is approved only in Connecticut. For the most part, however, few respondents reported purchases of nonapproved items, and later evidence on actual purchases suggests some reporting error among the respondents.

The data in table 3-2 can also be used to examine the extent to which survey respondents in States without restrictions purchase food items restricted in other States. As an example, Ohio and Oklahoma restrict milk purchases to gallon containers. By contrast, in States where participants can choose between half-gallon and gallon containers, sizeable proportions of survey respondents said they purchased half-gallons (70.1 percent in Connecticut and 78.5 percent in Texas). Variations across States in consumer demand, WIC prescriptions, and market supply mean the State-level percentages in table 3-2 are not directly comparable, but it does appear that a sizeable percentage of WIC participants in Ohio and Oklahoma might prefer to buy milk in half-gallon containers if allowed. Other notable examples where participant choice may be affected by food-item restrictions include the following:

- Large percentages of respondents in Ohio and Oklahoma (19.4 and 18.7 percent, respectively) reported buying Colby cheese, which is not approved for purchase in California.
- North Carolina is the only State within the group that allows purchase of individually wrapped, sliced cheese. Its popularity within the State is apparent, with 45.2 percent of survey respondents with cheese in their WIC prescription saying they purchased the wrapped singles.
- North Carolina and Oklahoma were the only States in the study that included significant numbers of store-brand or private-label cereals on their lists of approved foods. Unlike Oklahoma, North Carolina also allowed national cereal brands. When given the choice, survey respondents in North Carolina overwhelmingly preferred the national brands of cereal, suggesting that Oklahoma's policy may have affected participant choice there.

Of course, the fact that a restricted item in one State is purchased frequently in another does not necessarily mean that WIC participants in the State with restrictions are dissatisfied with their array of approved food items. There may not be a strong demand for the restricted item, or close substitutes may be available. For example, relatively few respondents in Connecticut, North Carolina, and Texas said they purchased Colby cheese, even though it was approved in all three States. The topics of satisfaction with approved foods and preferences for restricted foods are examined in chapter 6.

Table 3-2—Distribution of WIC family purchases, by food category

	California	Connecticut	North Carolina	Ohio	Oklahoma	Texas
<i>Percent of WIC families</i>						
Milk						
<i>Type/flavor</i>						
Whole milk	79.7	86.0	84.1	55.7	77.7	82.3
2% Reduced fat	19.9	19.9	19.1	56.8	32.7	19.9
1% Lowfat	4.8	9.1	3.5	9.3	4.4	4.4
Skim or nonfat	2.3	3.1	3.1	3.3	4.1	1.1
Lactose-reduced	—	0.8	1.1	0.3	1.9	—
Buttermilk	—	—	—	—	—	0.5
Evaporated	4.9	0.1	0.4	—	—	0.8
Dry milk	7.2	2.6	5.7	3.2	1.4	1.8
Don't know/ missing	1.1	—	2.9	0.7	1.4	1.7
<i>Brand</i>						
Store brand	41.5	71.2	87.0	77.6	84.2	76.9
Other	43.4	34.8	12.1	28.2	12.0	24.3
Don't know/ missing	21.2	2.4	3.8	5.1	8.2	7.9
<i>Package size</i>						
Quart	0.0	4.8	1.1	1.3	1.5	1.9
Half-gallon	25.5	70.1	11.0	2.9	1.1	78.5
Gallon	72.8	95.1	94.4	93.4	88.7	87.2
12-oz can evaporated	0.6	0.1	1.9	0.5	0.7	—
Other	0.0	0.4	—	—	—	1.2
Don't know/ missing	23.5	2.4	3.8	5.7	8.2	9.2
<i>Sample size</i>	168	183	182	183	154	153
Cheese						
<i>Type/flavor</i>						
American	12.7	89.3	64.5	69.4	42.3	37.8
Cheddar	17.3	14.0	22.9	28.9	52.5	32.2
Colby	—	0.9	4.4	19.4	18.7	4.4
Colby-jack	—	—	—	1.8	—	4.4
Monterey jack	54.1	0.9	2.2	8.1	17.0	33.8
Mozzarella	41.6	5.1	15.8	19.5	25.7	25.4
Muenster	—	1.6	—	0.4	—	—
Provolone	—	4.0	—	—	—	—
Swiss	—	2.2	0.4	11.1	—	1.5
Other	—	—	0.8	—	—	—
Don't know/ missing	—	4.9	9.3	2.4	1.2	2.8
<i>Brand</i>						
National brand	38.1	33.1	74.4	79.1	3.6	11.3
Private label	2.3	3.4	1.7	2.4	38.1	34.1
Store brand	11.2	43.4	7.4	7.0	26.6	27.4
Deli	—	1.2	—	3.7	—	0.6
Other	13.3	9.2	1.9	3.4	18.4	10.0
Don't know/ missing	37.3	16.5	16.5	10.1	14.4	18.1
<i>Package size</i>						
Block	29.7	2.9	33.6	33.3	1.9	7.0
Sliced, from deli	2.2	15.2	—	0.9	1.1	0.8
Sliced, individually wrapped	—	—	45.2	0.4	—	0.2
Sliced, not individually wrapped	—	15.4	12.5	53.4	2.0	6.0
Don't know/ missing	69.2	69.6	26.6	23.5	95.0	88.2
<i>Sample size</i>	164	184	174	181	148	148

— No purchases of item.

(Continued)

Table 3-2—Distribution of WIC family purchases, by food category (continued)

	California	Connecticut	North Carolina	Ohio	Oklahoma	Texas
<i>Percent of WIC families</i>						
Infant cereal						
<i>Type/flavor</i>						
Barley	24.9	23.9	–	10.4	12.9	9.5
Mixed	55.6	40.8	28.2	33.7	30.7	30.9
Oatmeal	49.8	77.0	64.2	53.3	49.6	43.2
Rice	67.8	82.0	83.3	66.5	67.0	64.6
Hi-Protein	–	–	–	2.6	–	–
Don't know/ missing	–	0.3	8.2	2.9	6.0	–
<i>Brand</i>						
National brand	89.5	99.7	84.8	93.4	91.6	86.7
Don't know/ missing	10.5	0.3	15.2	6.6	8.4	13.3
<i>Package size</i>						
8-oz	69.4	96.5	76.9	65.6	62.7	55.9
16-oz	20.1	5.1	5.3	15.8	41.4	33.9
Don't know/ missing	10.5	0.3	21.1	19.0	9.9	13.3
<i>Sample size</i>	41	53	29	40	34	54
Juice						
<i>Type/flavor</i>						
Apple	80.7	60.0	76.7	58.6	65.3	78.6
Berry	–	4.0	3.4	7.0	5.0	–
Cherry	–	15.1	23.6	35.0	14.3	–
Cranberry blend	–	1.1	1.9	6.6	0.7	–
Cranberry	–	2.9	1.1	5.1	1.1	1.4
Grape	47.6	45.6	50.1	40.1	46.8	13.5
Grapefruit	–	–	2.1	5.3	1.8	4.9
Orange	53.7	53.7	33.7	29.8	37.0	75.1
Pear	–	–	–	4.5	3.9	–
Pineapple	20.7	7.9	5.1	4.0	10.7	20.7
Punch	–	29.3	30.2	32.4	34.2	0.2
Strawberry	–	9.4	12.9	11.9	10.0	–
Tomato	0.7	–	0.4	1.4	3.5	–
Vegetable	3.2	–	0.7	0.7	–	3.5
White grape	12.5	12.9	11.6	9.5	16.1	7.6
White grape blend	–	1.7	4.0	2.6	10.3	1.3
Other	–	–	–	–	0.7	–
Don't know/ missing	0.1	0.7	0.4	0.3	2.3	–
<i>Brand</i>						
National brand	82.8	85.4	94.4	96.3	80.2	25.3
Private label	4.3	1.2	–	1.3	3.9	42.5
Store brand	12.3	21.2	7.9	8.0	18.2	28.7
Other	1.1	2.2	1.5	–	–	8.4
Don't know/ missing	9.2	5.4	2.8	2.7	12.1	9.0
<i>Package size</i>						
Frozen (11.5/12-oz)	12.8	28.5	14.0	17.0	21.9	22.6
Liquid concentrate (11.5-oz)	–	0.1	7.2	12.2	25.0	–
46-oz can	2.2	63.4	40.8	25.8	38.5	24.1
46-oz plastic	–	0.5	57.5	59.0	2.7	–
64-oz plastic	78.9	0.9	0.5	0.3	–	2.3
Refrigerated carton	–	17.5	–	–	–	–
Other	–	0.5	0.4	3.2	–	–
Don't know/ missing	11.1	7.1	6.8	3.0	14.9	54.9
<i>Sample size</i>	172	193	191	180	162	165

(Continued)

– No purchases of item.

Table 3-2—Distribution of WIC family purchases, by food category (continued)

	California	Connecticut	North Carolina	Ohio	Oklahoma	Texas
<i>Percent of WIC families</i>						
Breakfast cereal						
General Mills						
Cheerios	40.7	57.8	36.3	49.7	—	40.4
Cheerios, Multigrain	—	12.5	15.8	—	—	—
Chex, Corn	—	15.2	1.0	15.7	1.1	—
Chex, Multi-bran	—	—	1.6	0.4	—	—
Chex, Rice	1.2	8.2	9.1	16.8	0.5	—
Chex, Wheat	3.6	0.1	1.0	2.4	1.2	1.6
Country Corn Flakes	—	—	7.7	—	0.5	10.7
Kix	49.4	56.9	1.0	34.2	1.5	30.0
Para Su Familia Cinnamon Corn Stars	—	—	—	—	—	4.4
Para Su Familia Raisin Bran	—	—	—	—	—	6.5
Total, corn flakes	—	2.1	—	6.0	—	—
Total, whole grain	0.7	14.2	—	3.9	—	0.5
Wheaties	—	0.3	2.6	3.6	0.3	0.6
Kelloggs						
Complete oat bran flakes	—	0.1	—	—	—	—
Complete wheat bran flakes	—	2.3	0.6	1.1	—	—
Corn flakes	42.8	6.4	46.8	16.6	1.4	31.2
Frosted Mini-Wheats, bite size	—	0.1	13.9	25.5	0.4	6.7
Mini-Wheat Squares, strawberry	—	—	1.2	—	—	—
Mini-Wheat Squares, raisin	—	3.7	—	1.8	—	—
Product 19	—	—	—	0.3	—	—
Special K	—	19.8	0.6	4.7	—	—
Post						
Banana Nut Crunch	—	—	6.8	5.4	—	—
Grape Nuts	—	—	0.6	1.4	—	0.6
Grape Nut Flakes	—	3.7	1.5	2.0	0.4	—
Honey Bunches of Oats	—	—	18.1	11.3	—	—
Natural bran flakes	5.0	0.1	—	1.5	—	4.8
Quaker						
Crunchy Corn Bran	7.1	—	—	—	—	—
King Vitaman	—	—	9.7	7.5	—	6.6
Life	10.4	1.3	1.0	9.5	0.8	4.2
Oat Bran	—	1.5	0.6	—	—	—
Oatmeal Squares	—	—	1.8	4.1	—	—
Store brand / private label						
Bran flakes	—	—	0.9	—	5.1	—
Corn flakes	—	1.6	1.1	—	33.8	3.0
Crispy rice	15.0	—	3.6	—	26.3	6.2
Frosted shredded wheat	—	—	0.7	—	24.7	—
Toasted oats /tasteos	—	1.3	1.8	—	23.4	5.5
Wheat & barley cereals	—	—	0.4	—	3.8	—
Other rice cereals	3.4	—	0.8	—	14.9	—
Other corn cereals	—	—	1.0	—	25.1	3.6
Hot cereal						
Coco Wheats	—	—	—	8.7	—	—
Malt-O-Meal hot cereal	—	—	—	—	18.4	4.0
Maypo Vermont Style	—	3.5	—	—	—	—
Nabisco Cream of Wheat	6.9	6.5	4.1	10.2	10.4	—
Quaker grits	—	—	11.0	7.2	2.5	7.6
Quaker instant oats	—	2.8	2.2	15.8	1.5	—
Quaker Sun Country Oats	2.0	—	—	—	2.8	11.0
Other	0.5	2.9	0.9	0.3	0.7	0.2
Don't know/ missing	6.9	3.3	5.0	4.2	6.4	7.0
Sample size	166	187	183	182	153	153

— No purchases of item.

(Continued)

Table 3-2—Distribution of WIC family purchases, by food category (continued)

	California	Connecticut	North Carolina	Ohio	Oklahoma	Texas
<i>Percent of WIC families</i>						
Dried beans/peas						
<i>Type/flavor</i>						
Black beans	26.5	7.3	8.7	3.0	9.5	17.0
Dried peas	2.4	30.4	14.1	50.1	20.3	9.3
Great northern beans	—	0.3	—	8.2	3.1	—
Kidney beans	2.9	20.0	3.8	6.2	7.5	0.8
Lentils	8.1	4.8	1.0	1.2	7.5	5.3
Lima beans	0.1	9.6	8.3	23.2	7.3	2.4
Navy beans	2.7	0.6	5.3	21.3	1.4	1.1
Pinto beans	60.8	29.5	67.1	41.9	68.0	81.4
Small red beans	2.2	37.7	3.7	—	8.2	—
Small white beans	3.0	3.1	4.2	—	3.0	1.0
Other beans	0.9	14.9	3.5	1.1	—	2.4
Other	—	0.6	4.8	4.9	1.1	—
Don't know/ missing	1.3	1.4	4.8	—	—	1.1
Sample size	86	60	85	37	77	108
Peanut butter						
<i>Type/flavor</i>						
Jif	37.6	6.2	39.6	74.4	24.2	26.2
Peter Pan	0.3	5.4	38.0	11.0	42.1	18.9
Reese's	4.0	—	4.1	1.7	5.1	3.2
Skippy	42.1	21.4	3.0	3.6	1.5	1.7
Other	6.8	61.6	12.6	8.3	23.6	41.5
Don't know/ missing	9.2	5.4	2.6	1.2	3.5	8.4
Sample size	102	139	126	152	110	57

— No purchases of item.

Note: Distribution of purchases by WIC families may not sum to 100 percent due to multiple food type purchases within food category. High percentages of *Don't know/missing* responses sometimes reflect problems with the computer assisted survey program whereby unintentional skips led to missing responses.

Sample size varies by food category because the sample contains families who were prescribed the food category and who purchased all or some of their WIC prescription in the month prior to the survey.

Source: Survey of WIC Participants.

WIC Transaction Data

Although the survey data described above provide information about the percentage of WIC families buying specific food items, the survey does not indicate how much of the item was being purchased. Such **quantity** information is available from the scanner data collected from supermarkets in all States except Oklahoma. Nearly 600 supermarkets, representing six supermarket chains in the five States, provided WIC transaction data for the study. Data were collected on over half a million transactions during a six-week period in February and March 2001.

Table 3-3 presents the percentage distribution of dollars spent on WIC food items for the five States with scanner data, by major food category. The top portion of the table includes infant formula and foods prescribed for breastfeeding mothers (carrots and tuna). These food items are not explored further in this report, so the bottom portion of the table excludes them from the distributions.² An

² Per the authorizing legislation for this study, cost-containment practices involving rebates on infant formula are not part of the scope for the study. Carrots and tuna have been excluded because they are prescribed for only a small percentage of WIC participants, breastfeeding mothers.

examination of the top portion shows that, in these supermarkets, infant formula represented between 34.1 and 54.5 percent of all WIC sales.

The bottom portion of table 3-3 shows that—after infant formula, carrots, and tuna are excluded—on a dollar-cost basis, fluid milk was the predominant WIC food item purchased in the supermarkets participating in the study. The second most common item was juice. Cheese and cold cereals followed, with approximately equal amounts spent on each.

Table 3-3—Expenditure distribution of scanned WIC purchases, by major food category

	California	Connecticut	North Carolina	Ohio	Texas
<i>Percent of expenditures on all items</i>					
Milk					
Fluid milk	19.4	17.2	16.5	13.8	13.9
Evaporated milk	0.4	0.1	0.0	—	0.1
Dry milk	0.0	—	0.0	0.0	0.0
Cheese	11.5	8.2	6.9	8.6	7.5
Eggs	4.3	2.7	3.1	1.9	2.8
Juice	16.4	11.4	15.2	11.4	11.2
Infant juice	—	—	—	1.3	—
Infant cereal	0.7	1.1	1.0	1.0	0.9
Breakfast cereal					
Cold cereal	10.7	7.0	6.9	8.4	7.7
Hot cereal	0.2	0.3	0.1	0.6	0.2
Dried beans/peas	0.7	0.2	0.3	0.1	0.5
Peanut butter	1.5	0.5	1.1	1.9	0.7
Breastfeeding foods					
Carrots	0.0	0.0	0.1	0.0	0.0
Tuna	0.1	0.0	0.1	0.1	0.0
Formula	34.1	51.3	48.8	50.9	54.5
Total	100.0	100.0	100.0	100.0	100.0
<i>Percent of expenditures on items excluding carrots, tuna, formula</i>					
Milk					
Fluid milk	29.5	35.3	32.2	28.1	30.7
Evaporated milk	0.5	0.2	0.0	—	0.1
Dry milk	0.0	—	0.0	0.0	0.0
Cheese	17.5	16.7	13.5	17.6	16.4
Eggs	6.6	5.6	6.0	3.9	6.1
Juice	24.9	23.4	29.7	23.3	24.7
Infant juice	—	—	—	2.6	—
Infant cereal	1.1	2.3	1.9	2.0	2.0
Breakfast cereal					
Cold cereal	16.2	14.3	13.5	17.1	17.0
Hot cereal	0.3	0.6	0.3	1.3	0.4
Dried beans/peas	1.1	0.4	0.6	0.3	1.1
Peanut butter	2.2	1.1	2.2	3.9	1.5
Total	100.0	100.0	100.0	100.0	100.0

— No purchases in food category.

Source: Supermarket scanner data. Scanner data were collected from one supermarket chain in each State during a 5- to 6-week period. Data may not be representative of statewide WIC purchases.

Greater detail on these WIC transactions is presented in table 3-4, which shows the distribution of the quantity of food items purchased with WIC checks and vouchers. The format for table 3-4 is similar to that of table 3-2, which presented data from the participant survey. Although the format and content of the two tables are similar, important differences exist. First, table 3-4 focuses on quantities of items purchased within each category, whereas table 3-2 presented the percentage of WIC families purchasing specific items. For this reason, each set of columns in table 3-4 sums to 100 percent (with the exception of rounding error)—a characteristic not present in table 3-2. Second, the survey data in table 3-2 are generalizable to each State, but only with the acknowledgement that infant-only WIC families are not represented in the data. In contrast, the scanner-based data in table 3-4 are not representative of all WIC transactions in each State.³ They are presented here because they form the only source of detailed data available on the quantity of food items purchased with WIC food instruments in the study States. The following chapter uses these data to form a basis for estimating counterfactuals—what WIC participants in States with food-item restrictions might buy in the absence of those restrictions. This information is needed to estimate food package costs with and without item restrictions.

Despite the differences between the survey and scanner data presented in tables 3-2 and 3-4, the information in the two tables is relatively consistent. In general, entries that have high percentage values in one table have high percentages in both. Similarly, items that survey respondents seldom identified as being purchased often show small percentage values in the WIC transaction data in table 3-4.

³ The scanner data are not representative for three reasons. First, not all WIC vendors use scanning systems. Second, among those vendors who do use scanning systems, many are unable to identify WIC transactions from information captured on the transaction log. Third, not all WIC vendors who are able to identify WIC transactions were willing to provide their scanner data for this study. The net effect of these three factors on possible bias in the results cannot be estimated with available data.

Table 3-4—Quantity distribution of scanned WIC purchases, by food category

	California	Connecticut	North Carolina	Ohio	Texas
<i>Percent of purchases</i>					
Milk					
<i>Type / flavor</i>					
Whole milk	76.8	75.1	78.9	45.2	91.0
2% Reduced fat	19.0	12.7	14.9	47.6	6.7
1% Lowfat	1.8	8.6	2.8	2.6	1.4
Skim or nonfat	0.8	2.4	2.5	4.0	0.2
Lactose-reduced	0.1	0.8	0.8	0.5	0.3
Buttermilk	—	—	—	—	0.1
Evaporated	1.4	0.4	0.1	—	0.3
Dry milk	0.1	—	>0	>0	>0
<i>Brand</i>					
National brand	1.4	0.2	>0	0.0	>0
Private label/store brand	98.6	99.8	100.0	100.0	100.0
<i>Package size / form</i>					
Quart	—	>0	>0	0.2	0.1
Half-gallon	7.2	10.7	2.4	0.2	30.7
Gallon	91.4	88.9	97.5	99.5	68.9
12-oz can evaporated	1.4	0.4	0.1	—	0.3
9.6-25.6 oz dry milk	0.1	—	>0	>0	>0
Cheese					
<i>Type / flavor</i>					
American	—	69.3	49.8	49.8	13.6
Cheddar	7.4	14.6	33.0	19.1	22.1
Colby	—	1.0	1.5	11.3	2.4
Colby-jack	—	0.1	>0	2.3	6.2
Monterey jack	22.4	1.8	6.1	1.8	29.4
Mozzarella	70.2	5.3	9.2	11.6	26.3
Muenster	—	1.8	—	—	—
Provolone	—	1.7	—	—	—
Swiss	>0	1.4	0.2	3.9	—
Not specified	—	3.1	0.2	0.2	0.0
<i>Brand</i>					
National brand	73.2	63.0	89.3	72.4	6.2
Private label/store brand	26.6	23.8	8.6	18.6	92.8
Not specified	0.2	13.2	2.1	9.0	1.0
<i>Package size / form</i>					
Block	100.0	20.4	49.2	44.5	86.4
Sliced, individually wrapped	—	—	32.5	—	—
Sliced, not individually wrapped	—	9.9	18.3	52.0	12.6
Variable weight block or sliced	—	69.7	—	3.4	1.0
Eggs					
<i>Type / flavor</i>					
White	100.0	97.2	92.9	100.0	100.0
Brown	—	2.8	7.1	—	0.0
<i>Brand</i>					
Private label/store brand	100.0	100.0	100.0	100.0	100.0
<i>Package size / form</i>					
Medium	18.6	—	—	2.1	5.2
Large	81.4	100.0	42.1	70.9	94.8
Extra large	—	—	57.9	6.2	—
Jumbo	—	—	—	20.8	—

— No purchases of item.
>0 Value too small to display.

(Continued)

Table 3-4—Quantity distribution of scanned WIC purchases, by food category (continued)

	California	Connecticut	North Carolina	Ohio	Texas
<i>Percent of purchases</i>					
Infant cereal					
<i>Type / flavor</i>					
Barley	13.6	12.0	0.2	7.4	—
Mixed	24.3	17.9	31.7	23.9	15.1
Oatmeal	25.3	34.6	31.2	33.7	35.8
Rice	36.9	35.5	36.9	35.0	49.1
Brand					
National brand	100.0	100.0	100.0	100.0	100.0
Package size / form					
8 oz	100.0	100.0	100.0	100.0	55.3
16 oz	—	—	—	—	44.7
Infant juice					
<i>Type / flavor</i>					
Mixed	—	—	—	22.1	—
Apple	—	—	—	34.3	—
Pear	—	—	—	18.1	—
White grape	—	—	—	25.4	—
Brand					
National brand	—	—	—	100.0	—
Package size / form					
32 oz	—	—	—	100.0	—
Juice					
<i>Type / flavor</i>					
Apple	51.5	13.4	17.7	15.3	38.9
Apple/grape	—	5.4	1.3	—	—
Berry	—	9.3	7.7	9.7	—
Cherry	—	4.7	6.7	9.9	—
Cranberry blend	—	—	>0	1.2	—
Cranberry	—	—	1.6	3.3	—
Grape	18.4	18.6	19.7	20.6	6.0
Grapefruit	—	>0	0.7	0.4	2.0
Orange	19.8	19.0	8.7	10.3	22.8
Pineapple	9.7	2.8	3.9	5.0	28.6
Punch	—	13.8	12.4	12.0	—
Strawberry	—	5.9	8.8	3.8	—
Tomato	—	—	0.0	—	—
Tropical	—	3.7	1.8	—	—
Vegetable	0.5	—	1.2	1.4	1.7
White grape blend	—	3.4	7.7	7.1	—
Brand					
National brand	87.7	81.4	95.4	97.3	2.4
Private label/store brand	12.3	18.6	4.6	2.7	97.6
Package size / form					
Frozen (11.5/12 oz)	17.6	25.2	15.9	21.4	22.4
46-oz can	—	64.7	19.4	3.0	77.6
46-oz plastic	—	—	61.2	67.4	—
64-oz plastic	82.4	—	—	—	—
Liquid concentrate (11.5 oz)	—	—	3.6	8.3	—
Refrigerated carton	—	10.1	—	—	—

— No purchases of item.
>0 Value too small to display.

(Continued)

Table 3-4—Quantity distribution of scanned WIC purchases, by food category (continued)

	California	Connecticut	North Carolina	Ohio	Texas
<i>Percent of purchases</i>					
Breakfast cereal					
<i>Type / flavor</i>					
General Mills					
Cheerios	14.2	24.1	14.5	16.1	17.0
Cheerios, Multigrain	—	6.1	5.8	—	—
Chex, Corn	—	8.3	—	3.4	—
Chex, Multi-bran	—	—	>0	0.5	—
Chex, Rice	—	8.5	3.9	4.0	—
Chex, Wheat	1.6	—	0.6	0.5	0.7
Country Corn Flakes	—	—	—	—	12.2
Kix	27.4	24.7	—	8.7	13.7
Para Su Familia Cinnamon Corn Stars	—	—	—	—	7.6
Para Su Familia Raisin Bran	—	—	—	—	6.8
Total, corn flakes	—	—	—	0.6	—
Total, whole grain	—	4.8	—	1.2	1.6
Wheaties	—	—	1.2	2.1	—
Kelloggs					
Complete wheat bran flakes	—	0.1	0.7	0.2	—
Complete oat bran flakes	—	0.2	—	—	—
Corn flakes	38.8	—	22.0	7.8	19.5
Frosted Mini-Wheats	—	—	1.8	5.1	2.9
Frosted Mini-Wheats, bite size	—	—	6.0	9.5	—
Mini-Wheat Squares, strawberry	—	—	2.0	—	—
Mini-Wheat Squares, raisin	—	2.9	0.6	1.7	—
Product 19	—	—	—	0.5	—
Special K	—	10.4	—	2.2	—
Malt-O-Meal					
Puffed Rice	—	—	—	>0	—
Toasty O'S	—	—	—	—	0.6
Post					
Banana Nut Crunch	—	—	6.5	5.3	—
Grape Nuts	—	—	0.6	1.2	0.5
Grape Nut Flakes	—	1.8	0.8	0.5	—
Honey Bunches of Oats	—	—	15.8	10.2	—
Natural bran flakes	1.2	—	—	0.2	0.4
Quaker					
Crunchy Corn Bran	5.9	—	—	—	—
Life	8.1	—	2.0	7.6	4.0
King Vitaman	—	—	3.3	2.2	5.6
Oat Bran	—	0.1	0.1	—	—
Oatmeal Squares	—	—	0.8	1.0	—
Store brands and private labels	—	0.7	8.2	—	3.5
Hot cereal					
CoCo Wheats	—	—	—	1.4	—
Malt-O-Meal hot cereal	—	—	—	—	2.2
Maypo Vermont Style	—	1.1	—	—	—
Nabisco Cream of Wheat	2.1	6.3	1.1	2.4	—
Quaker grits	—	—	2.2	1.8	1.2
Quaker instant oats	—	—	—	2.2	—
Quaker Sun Country Oats	0.7	—	—	—	—
Brand					
National brand	100.0	99.3	91.8	100.0	96.5
Private label/store brand	—	0.7	8.2	—	3.5

(Continued)

— No purchases of item.
>0 Value too small to display.

Table 3-4—Quantity distribution of scanned WIC purchases, by food category (continued)

	California	Connecticut	North Carolina	Ohio	Texas
<i>Percent of purchases</i>					
Breakfast cereal (cont.)					
Package size / form					
9-12 oz	9.9	47.5	13.7	30.8	19.0
13-16 oz	16.9	30.9	48.0	38.4	15.6
17-20 oz	59.8	15.4	26.1	17.8	33.2
21-36 oz	13.4	6.2	12.2	13.0	32.2
Dried beans/peas					
Type / flavor					
Black beans	17.1	4.4	6.6	1.1	3.6
Cranberry beans	—	—	7.0	1.4	—
Dried peas	2.6	13.1	11.0	24.6	3.1
Great northern beans	2.4	5.0	4.4	12.2	1.5
Kidney beans	3.7	35.0	3.7	12.2	2.0
Lentils	6.6	6.9	2.5	5.1	5.1
Lima beans	1.1	5.0	11.4	12.2	0.8
Mayacoba beans	15.3	—	—	—	—
Navy beans	—	1.2	2.8	9.7	>0
Pinto beans	44.2	13.8	42.3	20.3	82.1
Small red beans	4.6	5.6	0.6	0.2	0.3
Small white beans	1.2	0.6	0.2	0.6	1.5
Other beans	1.3	9.4	6.4	0.5	—
Not specified	—	—	1.2	—	—
Brand					
National brand	6.6	61.9	10.7	17.7	4.3
Private label/store brand	93.4	38.1	89.3	82.3	95.7
Package size / form					
16 oz	100.0	100.0	100.0	100.0	100.0
Peanut butter					
Type / flavor					
Jif	43.1	7.8	40.8	69.4	33.5
Peter Pan	3.7	3.1	35.9	15.0	28.5
Reese's	2.0	—	11.8	—	4.4
Skippy	43.3	42.7	8.3	11.7	4.9
Private label/store brand	7.9	46.4	3.3	3.9	28.6
Brand					
National brand	92.1	53.6	96.7	96.1	71.4
Private label/store brand	7.9	46.4	3.3	3.9	28.6
Package size / form					
18-oz jar	100.0	100.0	100.0	100.0	100.0

— No purchases of item.
>0 Value too small to display.

Source: Supermarket scanner data. Table shows percent of volume purchased within food category.