

Overview

The purpose of the study was to learn the extent to which retail grocers, defined as "vendors" in the WIC Program, authorized to provide food to WIC participants, were violating program rules and procedures, and to determine which programmatic and/or demographic variables could be associated with vendor violations. The study examines three critical research questions in the area of WIC vendor management:

1. To what extent do WIC vendors commit vendor violations and administrative errors when conducting a WIC transaction at the point of sale?
2. To what extent do WIC vendors overcharge or undercharge the WIC Program?
3. To what extent do WIC vendors allow participants to substitute unauthorized items for their WIC-authorized food items?

These questions were answered through a national data collection effort involving data collectors posing as WIC participants and conducting compliance buys at a nationally representative sample of 1,565 WIC retail vendors. Data collected and analyzed for this study can be useful to Federal and State officials in evaluating the extent to which vendors comply with program rules. Key areas in which these data may be useful are described below:

- Quantifying the Level of Vendor Errors;
- Identifying Administrative Practices on Which Vendor Training Should be Focused; and
- Identifying Vendor Demographics Associated with WIC Program Compliance.

Methodology

The population of interest for the study was defined as all vendors operating in States with retail food delivery systems. Excluded from the study were States with direct food delivery systems (Mississippi), home food delivery systems (all of Vermont and part of Ohio), State-run WIC vendors (parts of Illinois), military commissaries, and pharmacies which only provided WIC participants with exempt infant formula and/or WIC-eligible medical foods. Vendors operating in Alaska, Hawaii, Puerto Rico, and the U.S. territories, as well as vendors authorized by Indian Tribal Organization State agencies were also excluded from the study population.

The study sample was designed to meet the precision constraints of estimating national proportions within 3 percentage points and estimating subgroup proportions within 5 percentage points, with 95 percent confidence. A total sample of at least 1,500 vendors was needed to meet the study's precision requirements. Vendors were oversampled to ensure the study had a sufficient number of vendors.

To successfully perform the required compliance buys, it was essential that the data collectors embody the physical characteristics of women who receive WIC benefits. This meant, for example, that all data collectors had to be females of childbearing age. In addition, if data collectors were to perform their assignments without creating suspicion among vendors, it was also necessary for the data collectors to belong to one of the racial or ethnic groups of customers who regularly shop at those vendors.

Each data collector was responsible for completion of three compliance buys at each assigned vendor. Data collectors were assigned an average of 18 vendors, although some had

considerably more and a few had less. The assigned buys at each vendor were performed as follows:

- Buy #1: Safe Buy Buyer purchased all food items listed on the food instrument in the quantities and types listed.
- Buy #2: Partial Buy Buyer attempted to purchase some, but not all, of the food items listed on the food instrument.
- Buy #3A: Minor Substitution Buyer attempted to substitute an unauthorized food item within an approved food category.
- Buy #3B: Major Substitution Buyer attempted to substitute an unauthorized item clearly outside an approved food category.

Three buys were attempted at each vendor. The third buy was either a "Buy 3A" or a "Buy 3B," as preprinted on the compliance buy form. To avoid arousing suspicion among vendor staff, data collectors were instructed to allow five or more days between buys at each sampled vendor. The primary tasks associated with a compliance buy entailed selecting the correct foods for the buy type being undertaken, obtaining the shelf price of each item, presenting the food instrument (FI) at the checkout counter, and observing any administrative violations of WIC procedures.

Data were collected and reviewed for accuracy. Once a complete database was developed, weights were assigned to each vendor, and data were prepared for analysis using SAS and SUDDAN software. Statistical analysis was performed on the database using a combination of descriptive analysis and multivariate analysis. Results were then organized into four categories: descriptions of the study population, administrative errors, overcharge/undercharge, and substitutions.

Description of the Study Population

Vendor demographics were divided into two categories: descriptions of the physical location of the vendor, and descriptions of the vendors'

ability to conduct a WIC transaction. With regard to location, 70 percent of the study vendors were located in metropolitan areas as compared to nonmetropolitan areas. Almost 80 percent of the vendors were located in States with open FI systems and slightly over 20 percent were located in States with vendor-specific FI systems.

With regard to descriptive information about the vendors' ability to conduct a WIC transaction, two areas were examined. First, vendors were grouped by physical size using the number of cash registers as a proxy. Thirty-one percent of the vendors were classified as small vendors, 35 percent were classified as medium-sized and 33 percent were classified as large. Use of scanning equipment was also examined, with 69.1 percent of study vendors using scanners, 27.4 percent lacking scanning equipment, and 3.6 percent having scanning equipment, but choosing not to scan.

Findings Related to Administrative Errors

This study examined some universal factors related to conducting a WIC transaction to determine the extent to which vendors were not following proper WIC transaction procedures and the extent to which such administrative errors were associated with overcharging, undercharging, and allowing substitutions. For the purpose of this study, not following proper WIC transaction procedures was considered an administrative error. The following categories of administrative errors were examined:

- Requiring the data collector to sign the WIC FI prior to the cashier entering the purchase price;
- Having insufficient stock thereby preventing the data collector from obtaining her authorized foods;
- Offering rain checks for foods not available; and
- Asking the data collector to pay cash in addition to the FI for WIC food items.

In addition, while not considered an administrative error in all States, the study

examined the percentage of all WIC vendors that provided a receipt to the data collector.

The most common error noted in the study was the failure of the cashier to have the data collector sign the WIC FI after the cashier entered the purchase price. A total of 35.4 percent of all WIC vendors failed to follow the proper countersignature procedures. To a lesser extent, vendors being out of particular WIC foods was a problem. A total of 5.5 percent of the vendors were not able to fill the food prescription because they did not carry at least one of the WIC food items on the data collector's FI. Other variables examined were far less significant. Less than 0.5 percent of the vendors issued rain checks or asked the data collector to pay cash in addition to the FI.

Findings Related to Overcharges and Undercharges

As was true in past vendor studies, vendors in this study both overcharged and undercharged the buyers for items purchased. Vendor overcharges and undercharges were examined in total and as a function of several variables. Significant findings include:

Across all three buy types, an average of 8.7 percent of all vendors overcharged. When vendors were examined for frequency of overcharge, 81.9 percent never overcharged, 12.4 percent overcharged only once, 4.2 percent overcharged twice, and 1.5 percent overcharged three times.

Vendors were most likely to overcharge on a partial buy. In addition, vendors who overcharged on the partial buy overcharged a larger dollar amount than on other types of buys. The average amount of overcharge was \$0.19 for safe buys, and \$0.47 for partial buys.

When logistic regression models were run for overcharge as a function of variables, results indicated that vendors who failed to provide a receipt were ten times more likely to overcharge than those providing a receipt. Other variables that seem associated with overcharge include vendor size, with small vendors being three

times as likely to overcharge than middle-sized or large vendors; and countersignature timing with those vendors that failed to have the data collector sign the FI prior to entering the purchase price, being four to six times more likely to overcharge than those who had the data collector sign the FI after the purchase price was written in.

As noted above, vendors also undercharged. An average of almost seven percent of all vendors undercharged over the three buys. Of the vendors where three buys were completed, 83.7 percent never undercharged, 13.4 percent undercharged only once, 2.3 percent undercharged twice, and less than 1 percent undercharged all three times.

Approximations of national estimates of total vendor overcharge and undercharge were also developed. The estimates are approximations because data were analyzed over all three buy types, but it is unknown how often WIC participants make partial purchases or attempt to substitute foods.

When the amount of overcharge is calculated based on all three buys, it is estimated that 1.6 percent of the total 1998 WIC redemptions nationally are attributed to overcharge. When only the safe buy is used to calculate the estimate, the percent drops to 0.9 percent of the national WIC redemptions being attributable to overcharge.

An approximation of national estimates for vendor undercharges was also developed. When examined across all three buys, 0.6 percent of the 1998 WIC redemptions nationally were attributable to vendors undercharging. When only the safe buy was used to calculate the undercharges, the rate dropped to 0.4 percent of 1998 national WIC redemptions.

Findings Related to Substitutions

The vendors' willingness to accept substitution of unauthorized foods for the WIC prescription was also examined. Data collectors were asked to conduct a substitution buy on the third and final buy in the series. Half the vendors were

selected for a minor substitution buy, that is a substitution of unauthorized foods within a WIC food category (e.g., unauthorized cereals and juices); while the other half of the vendors were selected for a major substitution buy, which is an attempt to purchase an item outside of the WIC food category (e.g., soda instead of juice). Findings were as follows:

A large number (34.7 percent) of vendors allowed minor substitutions. It is interesting to note that most vendors who allowed minor substitutions also scanned the items. Because

scanning equipment can be programmed to screen out unauthorized purchases, this problem may be best addressed through stricter requirements for vendors who have scanners to do such screening.

Just under four percent of the vendors allowed major substitutions. Vendor size, cashier familiarity with WIC transactions, and use of scanning equipment were all associated with major substitutions.

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