

WIC VENDOR PEER GROUP STUDY (SUMMARY)

Overview

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) is administered at the Federal level by the U.S. Department of Agriculture, Food and Nutrition Service, which provides grants for program administration and operation to 90 WIC State agencies (SAs), including the 50 geographic States, 34 Indian Tribal Organizations, 5 U.S. territories, and the District of Columbia. SAs authorize retail vendors where WIC participants use benefits to purchase authorized food items. As a vendor cost containment measure, SAs are required to group vendors with similar characteristics using a peer group system.

Federal regulations¹ state that SAs must have a methodology for establishing a vendor peer grouping system, which considers at least two criteria (one of which is a measure of geography), and for periodically assessing the effectiveness of the peer grouping system. Grouping vendors with similar characteristics allows for monitoring (and subsequently containing) vendor prices while ensuring that they are cost competitive. The purpose of this study is to evaluate the effectiveness of SAs' current peer group systems, and to provide guidance to SAs on how to evaluate and update their systems. Specifically, it uses empirical analysis to identify one or more effective models for establishing vendor peer groups that could apply to most SAs.

Methods

Four SAs currently using electronic benefit transfer (EBT) systems were included in the study. SAs were selected based on their diversity in peer group characteristics, food benefit delivery method, regional location, size, and cost containment policies. Each SA submitted redemption data for June – August 2014. The examination of each SA's system involved three phases:

- 1) The mean per-unit prices were calculated to construct a complete food basket cost (FBC) that served as the main outcome measure. This food basket included a variety of WIC food categories in quantities that are typically prescribed to women and children (cheese, eggs, cereal, legumes, whole grains, milk, juice, infant cereal, and infant fruits and vegetables).
- 2) Seven vendor characteristics were selected for testing as potential determinants of FBC: annual WIC food sales, number of cash registers in a store, number of unique Universal Product Codes redeemed during June-August 2014, geographic locality (rural/urban), store types for Supplemental Nutrition Assistance Program (SNAP) retailers, distance to the interstate, and business model store type².
- 3) After examining the peer group structures of the four SAs, the consistent and significant predictors of mean FBC prices were the number of cash registers and business model. These two variables, along with geography (which is required), were considered in the creation of six alternative peer group system models and tested in each of the four SAs. The six alternative peer group system models were the following:
 1. Store type only.
 2. Store type, geography (urban versus non-urban).
 3. Store type, number of cash registers.
 4. Store type, number of cash registers, geography.
 5. Number of cash registers, geography.
 6. Number of cash registers only.

To identify the most effective peer group system(s), simulation modeling applied the

¹ WIC Vendor Cost Containment Final Rule

² This characteristic employs industry definitions including mass merchandisers, grocery chains, pharmacy chains, independents, and a number of other store types.

potential groups across the study’s SA vendors. The simulation aimed to optimize peer groupings such that vendors within a peer group had consistent average food prices, while average prices across peer groups were distinct. This iterative process generated “optimal” peer group systems tailored to each SA and takes into account the unique composition of an SA’s authorized vendors, as well as geography and other criteria.

Findings

Figure 1 shows the optimal peer group modeling results for one SA in the study. Among the first 3 models listed that meet current requirements, only the second model (highlighted below) results in significant differences between all possible pairs of peer groups and ensures that all groups have at least 30 vendors.

Among the last 3 models tested (that exclude geography), store type only and number of cash registers only had generated peer groupings where all pairs were significantly different from each other and all groups had at least 30 vendors.

Figure 1 Example of Peer Group Testing Results for a State Agency

Peer Group System Models	Number of peer groups	Number of peer group pairs compared	All peer group pairs significantly different (# not different)	All peer groups have 30+ vendors
1. Store type, geography	6	15	No (1)	Yes
2. Cash registers, geography	4	6	Yes	Yes
3. Store type, cash registers, geography	6	15	No (1)	Yes
4. Store type	4	6	Yes	Yes
5. Cash registers	3	3	Yes	Yes
6. Store type, cash registers	6	15	No (1)	Yes

This simulation provides options from which the SA can choose. While systems with only one criterion may be effective, the most optimal system is most likely one where peer groups are constructed using as many vendor characteristics as needed to adequately account for differences in the

composition of vendors within a group, while still maintaining minimum overlap in mean FBC between groups.

In Figure 1, Options 1, 3, and 6 contain only one pair of peer groups each that are not significantly different from one another. The SA would have to assess whether one or more of these peer group pairs are appropriate for collapsing into one group. For example, it may be appropriate to combine national chain stores with 10 or more cash registers with mass merchandisers. However, it would be inappropriate to combine mass merchandisers with convenience stores, even if their average FBCs are similar, given the differences in store type.

Overall, the study found that the peer group systems identified as most effective in three of the four study SAs did not include geography as a criterion. Although geography is required as a peer group criterion in regulations, SAs can request an exemption from this requirement. The SA must be able to demonstrate that the use of geography does not account for significant differences in vendor food prices. All geography exemption requests must be submitted to FNS for approval prior to excluding geography as criterion. The results from the study and the accompanying guidelines will help SAs empirically test their peer groups and determine whether such an exemption is warranted.

Conclusion

The findings from this study indicate that effective peer group systems using the recommended vendor characteristics and methods will vary by SA due to the unique composition of an SA’s authorized vendors. Because the methods and criteria used by SAs can vary, this report includes an appendix that provides SAs with guidelines on how to develop and empirically test their peer group systems based on the approach employed in this study.

For More Information

Altarum Institute. WIC Vendor Peer Group Study. Prepared by Altarum Institute Under Contract No. AG-3198-D-13-0071. Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service. Project Officer: Dr. Chan Chanhatasilpa.

Available online at: www.fns.usda.gov/research-and-analysis.