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« SPECIAL WIC PROGRAM »

Editorial

USA's WIC program improves access to healthy foods in communities across the nation

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) administered by 2,200 state and local WIC agencies under the auspices of the United States Department of Agriculture serves nearly nine million qualifying mothers, children, and infants. These people are income eligible and at nutrition risk, and include over half of all America's infants and one-quarter of its children between one and five years of age. Quality nutrition services are the centerpiece of WIC: nutrition and breastfeeding education, nutritious foods, and improved healthcare access for low and moderate income women and children with, or at risk of developing, nutrition-related health problems, including overweight, obesity, and type-2 diabetes.

The foods included in the WIC food packages are specifically selected for their nutritional value to supplement the nutrients found lacking in the diets of low-income populations. The foods include fresh, frozen, canned, and dried fruits and vegetables, prepared baby fruits, vegetables, and meats, low-fat dairy, whole grain cereals and bread, light tuna, salmon, sardines, and mackerel, canned and dried beans, peanut butter, eggs, juice, and iron-fortified infant formula.

WIC's current food package reflects revisions made in 2009 to include healthier food choices such as fruits, vegetables, low-fat dairy, and whole grains. Following the food package revisions, WIC food vendors, specifically convenience stores and groceries in low-income areas, were prompted to improve their selection of healthy foods to maintain their status as a WIC-authorized vendor. Researchers have been evaluating the impact of the revised food package on lower-income areas where healthy, affordable foods may have been previously unavailable. The following three studies examine how the WIC Program contributes to improving access to healthy foods, including fruits and vegetables, in communities across the nation.

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How do you pick your produce? Insights from WIC participants on their use of a cash value voucher to purchase fruits and vegetables

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In August 2009, the Oregon program for Women, Infants and Children (WIC) implemented new food packages that included a Cash Value Voucher (CVV) providing WIC participants with $6-$15 per month to use towards the purchase of fresh or frozen fruit and vegetables. Early tracking of the redeemed dollar value for each denomination of CVV showed an average redemption value approximately $0.25 less than the maximum value.

Evaluation of the use of vouchers by participants

The purpose of this study was to explore WIC participants' understanding of how to use the vouchers, what factors influenced their produce purchasing decisions, how having a cost-offset for produce impacted other grocery purchases, and their experiences in grocery stores using the CVV.

A stratified random sample of WIC participants was drawn based on caseload size of the WIC local agency and participants' language (English/Spanish). Ninety-seven current WIC participants completed telephone interviews averaging 30 minutes in length. All interviews were conducted in April 2010, eight months after introduction of the fruit and vegetable cash value voucher.

The most commonly purchased items : apples, oranges and bananas

WIC participants reported being very appreciative of the new CVV and stated that only under extraordinary circumstances would they not use their CVV. The majority reported hearing from their WIC clinic that they could pay over the amount of their CVV. The three most commonly purchased items were apples, oranges, and bananas. Grapes, strawberries, and kiwis were mentioned less often and in the context of purchasing a treat. Lettuce, broccoli, baby carrots, and mushrooms were the most frequently mentioned vegetable purchases. A few bought frozen items, largely peas, carrots and broccoli.

The CVV, an efficient tool to reinforce WIC nutrition messages

The vast majority of participants chose their produce based on their family's taste preferences, with meal planning also influencing purchases. Participants were evenly split as to whether they primarily used weight or count to determine how much produce to pick and estimate its cost. Eighty-percent reported paying over the amount of their CVV and largely had positive experiences with using the CVV at check-out. A few did share that selection was somewhat limited in small, rural stores.

When asked if they would purchase the same items without the CVV, responses were split. Of those who would keep their produce items, half would cut back on snack or processed foods to balance their funds, while others would buy fewer produce items or not buy produce considered to be more of a treat. Multiple participants stated that the CVV helped reinforce the nutrition messages they received in WIC.

The importance of fruits and vegetables for family's health

While most respondents indicated clearly understanding that they could pay over the amount of their voucher, and often doing so, the average redemption value remains at about $0.25 less than the maximum value. Participants unmistakably valued the CVV and the importance of fruits and vegetables in their family's health. Correspondingly, much thought is given to which produce items to purchase in response to family favorites, meal and snack plans, and to a lesser extent, budget.

Future work to help more WIC participants maximize their use of the CVV should focus on the positive health beliefs and purchasing patterns that already exist within the population, while exploring ways to help participants estimate purchase costs and encouraging full redemption of each CVV.

Positive Influence of the Revised WIC Food Packages on Access to Healthy Foods

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The New WIC Packages

The Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides healthy foods (via WIC food packages), nutrition education, and medical referrals to approximately 50% of all infants born in the United States, 25% of American children under five years of age, 29% of pregnant women and 26% of postpartum women in the US. Because of its broad reach and targeted impact on young high-risk children, WIC has considerable potential for early intervention to prevent excessive weight gain in low-income children.

Following recommendations from the Institute of Medicine, the United States Department of Agriculture recently revised WIC food packages to offer foods that better reflect dietary recommendations and promote healthy weight in WIC participants. The main changes included the provision of cash-value vouchers for fruits and vegetables, new whole grain products, lower fat content of dairy foods, and reduced juice quantities. The revisions reflected the most significant WIC package change since the program's inception in 1972. It has also provided a unique natural experiment to assess the ability of food assistance policy to improve diet quality in low-income children.

Connecticut Study of WIC Revisions Impact on Access to Healthy Foods

There is substantial policy interest in how the WIC package revisions influenced access to healthy foods in low-income populations. This study was designed to measure the impact of the revised WIC packages on the provision of healthy foods in convenience and grocery stores in the state of Connecticut, US. The study included all food stores from five Connecticut towns that were selected to represent communities of diverse income and food store densities.

A systematic inventory of 252 non-chain grocery and convenience stores was completed before and after implementation of the WIC package revisions (spring 2009 and spring 2010). Trained raters used a standardized inventory tool to assess food availability, price, variety, and produce quality. The list of 65 products included cow's milk, fresh/canned/frozen fruit and vegetables, juice, bread, cereal, baby foods, tofu, soy milk, rice, eggs, peanut butter, dry beans, cheese, and canned fish. Changes in food availability, variety, prices and quality were summarized in a composite score of the healthy food supply. It was heavily weighed to reflect availability and variety of whole grains, fruits and vegetables. Fresh fruit and vegetables were weighed greater than frozen and canned fruit and vegetables because lack of produce, not canned vegetables, is a common problem in convenience stores.

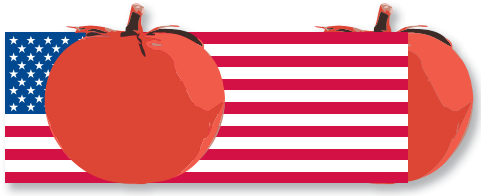
Estimating the Effects of the WIC Package Revisions

The effect of the WIC food package revisions was measured by differential changes in the scores for WIC stores and stores not participating in WIC, including differences by neighborhood income. A three-level linear random intercept model was estimated to assess the effect of the WIC revisions on healthy food supply scores. The model controlled for store size, participation in the Supplemental Nutrition Assistance Program (SNAP) and WIC, and the food environment surrounding each store, including supermarket proximity, population density, census tract household income, and competition among food stores and fast food outlets in the area.

Significant Improvements in Access to Healthy Foods duet to the WIC Revisions

In the state of Connecticut, the implementation of the revised WIC food packages led to a significant increase in the provision of healthy foods, such as whole grain products and fruit and vegetables, in WIC-approved stores but also non-WIC stores. The increase in the composite score of healthy food supply varied from 16% in WIC stores in higher-income neighborhoods to 39% in lower-income areas. Better improvement in underserved communities is a welcome change that might reduce disparities in food access across communities. While many of the assessed healthy foods (including fresh fruits and vegetables) had better availability following the WIC revisions, the most substantial gains were for whole grain products.

One of the beneficial consequences of the WIC food package revisions was improved access to new WIC foods in supply chains for all stores. The change occurred shortly after the new WIC policy took effect (6-7 months after implementation) suggesting that WIC stores have found ways to deliver new healthy foods when they were required to do so. If the experience in Connecticut is typical of other states, national food policy that promotes consumption of healthy foods, but also requires changes in stores, can help to improve local food environments for program participants and non-participants alike. This can occur at no additional cost to taxpayers as the WIC food package revisions were designed to be cost-neutral.



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The Impact of WIC Food Package Changes on Access to Healthful Food in 2 Low-Income Urban Neighborhoods

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This study tested the hypothesis that the changes to the WIC food package would increase the availability of healthful food at WIC-participating retailers—a major urban food source for both WIC participants and nonparticipants. It used a pre- and post-intervention design to assess the impact of the changes on stores in two adjacent low-income neighborhoods in Philadelphia.

Food Store Surveys

Trained research assistants surveyed every store located within the 3.6-square mile study area twice using a modified version of the Nutrition Environment Measure Survey for Stores (NEMS-S)*, once in the spring of 2009 (baseline), and once in spring 2010 after the changes were implemented. The NEMS-S instrument was modified for this study by adding frozen and canned vegetables, canned and dried beans, tofu, canned fish, whole-grain tortillas, and brown rice. Fresh fruits and vegetables, whole grain bread, reduced fat milk, 100% juice, and low-sugar whole-grain cereal are included in the standard NEMS-S instrument.

Higher NEMS-S score indicate more diverse : inventory of healthful food items

The primary outcome measure was the NEMS-S scores at baseline and in 2010. Higher scores indicate more diverse inventory of healthful food items of acceptable quality and equivalent prices for healthful and less healthful items. Paired t tests were used to determine whether the changes in NEMS-S score were statistically significant. Ordinary least squares (OLS) regression models were calculated to determine whether the baseline NEMS-S score, WIC store participation status, type of food store, percentage Hispanic residents (block group), and median household income (block group) were significant predictors of 2010 NEMS-S scores.

Scores have significantly increased since baseline

At total of 115 stores were surveyed at both time periods. Corner stores consistently scored the lowest (mean = 14.1 at baseline, 20.7 in 2010) and the four chain supermarkets scored the highest (mean = 38.0 at baseline, 44.0 in 2010). NEMS-S scores increased significantly between baseline and 2010, indicating that all stores were stocking more healthful food by the second year (change in NEMS-S score from 11.9 to 16.0, P < .01), but WIC-approved stores had more healthful foods at baseline and saw a greater increase in the availability.

Across both WIC and non-WIC stores, the most considerable improvements were in the milk, juice, and whole-grain categories. Only 50.0% of stores carried reduced-fat milk at baseline; 77.0% of those same stores carried reduced-fat milk in 2010. Only 33.0% of stores carried whole-grain bread at baseline; 52.0% of them carried whole-grain bread in 2010. Only 25.0% of stores carried brown rice at baseline; 55.0% of them carried brown rice in 2010. Improvements in fruits and vegetables were more modest. The OLS regression model showed that baseline NEMS-S score, WIC status, and type of store were all significant positive predictors (P< .01) of 2010 scores.

Federal subsidy of specific healthful food items had positive results

This study demonstrated that a federal subsidy of specific healthful food items was associated with statistically significant and meaningful changes in the food environment in two low-income neighborhoods. The results suggest that by subsidizing specific healthful food items and requiring that participating vendors stock them, the 2009 WIC food package changes may increase the access all residents have to healthful food. Results also indicate substantial variation in the availability of healthful food across food stores even after the food package changes, particularly within small corner stores. State WIC agencies might consider changing procedures for authorizing and inspecting food stores that participate in the WIC program and changing minimum food inventory guidelines to reduce this variability. Further research on the implications of food store choice on the types of food that WIC participants choose is needed, but it may be advisable for WIC agencies to discuss the type of food stores where participants shop as part of their nutrition education.

Based on:
Hillier A, McLaughlin J, Cannuscio CC, Chilton M, Krasny S, Karpyn A. The Impact of WIC Food Package Changes on Access to Healthful Food in 2 Low-Income Urban Neighborhoods. J Nutr Educ Behav. 2012 May-June; 44(3):210-6

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