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Research Article

Women, Infants, and Children Cash Value Voucher (CVV) Use in Arizona: A Qualitative Exploration of Barriers and Strategies Related to Fruit and Vegetable Purchases

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Objective: Women, Infants, and Children (WIC) cash value vouchers (CVV) have been inconsistently redeemed in Arizona. The objective of this study was to explore perceived barriers to use of CVV as well as strategies participants use to overcome them.

Design: Eight focus groups were conducted to explore attitudes and behaviors related to CVV use.

Setting: Focus groups were conducted at 2 WIC clinics in metro-Phoenix, AZ.

Participants: Participants in WIC who were at least 18 years of age and primarily responsible for buying and preparing food for their households.

Phenomenon of Interest: Perceived barriers to CVV use and strategies used to maximize their purchasing value.

Analysis: Transcripts were analyzed using a general inductive approach to identify emergent themes.

Results: Among 41 participants, multiple perceived barriers emerged, such as negative interactions in stores or confusion over WIC rules. Among experienced shoppers, WIC strategies also emerged to deal with barriers and maximize CVV value, including strategic choice of times and locations at which to shop and use of price-matching, rewards points, and other ways to increase purchasing power.

Conclusions and Implications: Arizona WIC participants perceived barriers that limit easy redemption of CVV. Useful strategies were also identified that could be important to explore further to improve WIC CVV purchasing experiences.

Key Words: WIC food package, food access, low-income, cash value vouchers, fruits, vegetables, focus group (*J Nutr Educ Behav.* 2014;46:S53-S58.)

INTRODUCTION

Consumption of nutrient-dense fruits and vegetables is associated with reduced risk for a number of chronic conditions and diseases, including diabetes, some cancers, and overweight and obesity.¹⁻⁵ The 2010 Dietary Guidelines for Americans emphasize the adoption of a healthy diet abundant in fruits and vegetables.¹ Nonetheless, fruit and vegetable intake

remains relatively low, and few adults consume at least 5 servings a day. In 2009, only 32.5% and 26.3% of US adults consumed ≥ 2 fruits and ≥ 3 vegetables per day, respectively.⁶ Health-disparate populations (ie, low-income and minority communities and those participating in food assistance programs) are more likely to consume lower amounts of fruits and vegetables, often because of poor food environments that lack access to healthy foods.^{1,7,8}

One potentially effective policy strategy to improve the dietary quality of at-risk women and children in these communities is to improve their ability to purchase nutrient-dense foods, such as that accomplished by the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).⁹ However, despite the multiple positive health outcomes associated with WIC participation, such as protection against low birth weight and increasing consumption of certain nutrients among children,^{10,11} until recently WIC food packages did not support an eating pattern high in fruits and vegetables. A significant programmatic overhaul of the WIC food package in 2009 targeted this issue and identified nutritional deficits among WIC participants.^{12,13} Among other changes, cash value vouchers (CVV) were provided to WIC participants to purchase fruit and vegetable products specifically.¹⁴

Recent studies have shown that improved access to and increased

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The authors have no conflict of interest to report with the sponsor of this supplement article or products discussed in this article.

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consumption of foods that better reflect dietary recommendations may be attributed to the revised WIC food packages.¹⁵⁻¹⁷ However, the increased consumption of healthful foods consisted primarily of whole-grain foods and lower-fat milk with a small increase in fruit and vegetable intake.¹⁷ Data related to purchase of fruits and vegetables specifically suggested that providing benefits for purchase of these foods could also lead to a sustained increased consumption of them.^{18,19}

In Arizona, redemption rules regarding CVV have changed over time. Initially, CVV use was restricted to the purchase of fresh produce, but redemption rules changed in 2011 to allow for frozen and canned vegetable purchase along with purchase of fresh produce. Although CVV redemption has increased among participants as a result of rules changes, redemption has remained inconsistent among WIC participants in Arizona. As such, a better understanding of the barriers and facilitators of CVV redemption in Arizona could provide insight regarding how to increase CVV use for the purchase of fruits and vegetables and, ultimately, fruit and vegetable intake among WIC participants. The purpose of this exploratory, focus group-based study was to explore attitudes and behaviors related to the ease or difficulty of WIC CVV use among categories of WIC participants. In particular, the study objectives were twofold: (1) to investigate experiences, perceived facilitators, and perceived barriers of WIC participants related to CVV use in Arizona; and (2) to explore attitudes and behaviors related to CVV redemption, including identifying strategies employed to overcome perceived barriers.

METHODS

Participants

Participants for focus groups were recruited from current WIC participant lists assembled by a state agency administering WIC. Participant lists were divided into 4 categories: women who were currently pregnant (henceforth referred to as “pregnant”); women who were up to 6 months postpartum (“postpartum”); women who were exclusively or partially

breastfeeding up to 1 year after delivery (“breastfeeding”); and women who were not themselves participating in WIC, but whose children were (“children”). To avoid the burden of excessive travel for participants because of the wide geographic area of Arizona, recruitment began with a focus on participants who attended the clinics at which focus groups would be conducted, and if exhausted, extended to those who resided in zip codes proximal to focus group locations.

The researchers contacted focus group participants via telephone, and only WIC participants who had previously agreed to be available for research purposes were included. Participants were asked if they would be willing to participate in a short, 1-time meeting for 1–1.5 hours. Researchers focused on recruitment of mothers and caregivers of children participating in WIC. Mothers and caregivers had to be at least 18 years of age and have the primary responsibility of buying and preparing food for their households. Researchers over-recruited for each group in anticipation of potentially high no-show rates, an issue noted by state partners on the project. Of 192 women recruited for the study, 41 participated across the focus groups: 11 pregnant, 8 postpartum, 9 breastfeeding, and 13 children. All participants signed letters of informed consent, and participants received \$20 compensation for participation. The Arizona State University Institutional Review Board approved the study.

Focus Group Design

Focus groups were conducted at 2 WIC clinics located within high-WIC participant areas in metro-Phoenix. Four focus groups were conducted at each site from August to November, 2012. Each focus group was composed of WIC participants from only 1 of the categories of WIC participants (pregnant, postpartum, breastfeeding, or children). All focus groups were conducted in English, and the same moderator was used for all 8 focus groups.

An experienced focus group leader employed a semistructured focus group guide. The guide was based on a previously published focus group

discussion guide designed to evaluate the effects of revisions to WIC food packages on redemption of WIC benefits.¹² The guide was modified for purposes of this study in close collaboration with the administrative state agency. The focus group leader used the guide to conduct discussions among focus group participants about their perceptions of CVV usage in terms of benefits and limitations (eg, perceived barriers, cost, access to stores, interactions within stores, and redemption strategies). The focus group also explored themes that arose organically and were relevant to participants. Each focus group discussion was recorded, and resulting recordings were transcribed for analyses.

Data Analysis

Transcribed data were checked for accuracy, then separated and grouped together by question from the semistructured guide. Using a general inductive approach, a single coder hand-coded responses to questions to identify general categories.²⁰⁻²⁷ Transcripts were then entered into a qualitative analysis software program, NVivo (version 10, QSR NVivo Software, QSR International Pty Ltd, Melbourne, Australia, 2013), and recoded to verify no themes were missing. Based on previously published methods, categories and subcategories were iteratively identified from actual phrases in text segments.^{22,23,26,27} Categories and subcategories were next quantified by the number of coded phrases relating to each.^{24,28} Those that had ≥ 8 independent references across the 41 participants, representing roughly 20% of the sample, were considered to be of broader importance and were retained. At the conclusion of this process, specific themes had clearly emerged across categories related to each objective of the study, under which were subthemes that captured multiple subcategories.

RESULTS

Nearly all participants were white (98%) and 37% were Hispanic. Participants' average age was 29.9 years (range, 19–49 years). Focus group participants identified key issues and

attitudes related to WIC CVV use. There was overlap across the 8 focus groups; thus, results across focus groups are presented together by objective. Two primary themes and 6 subthemes emerged in relation to the first objective of the study, and 3 themes and 7 subthemes emerged regarding the second objective of the study.

Experiences, Perceived Facilitators, and Perceived Barriers Related to CVV Use

Two themes emerged from participant discussions that addressed experiences, facilitators, and barriers in the store while redeeming WIC CVV: positive experiences and facilitators, and negative experiences and barriers. Under positive experiences and facilitators, 2 subthemes emerged: comparative ease of use of CVV, and inclusion of fresh and processed fruits and vegetables to maximize convenience. The theme of negative experiences and barriers included a variety of subthemes, including negative interactions with either the cashier or other shoppers, issues with lack of training of store cashiers, difficulty keeping up with changes in the WIC rules, and embarrassment and judgment in relation to using WIC.

Positive experiences and facilitators using WIC CVV. Across the 8 focus groups, a subtheme emerged regarding the comparative ease of use of CVV over other WIC benefits for a number of reasons, including that cashiers seemed most comfortable processing CVV transactions compared with other WIC vouchers. Several participants expressed the desire to make all WIC vouchers as flexible and easy to use as the WIC CVV. One participant said, “[When using] the produce checks, everybody is the nicest. It's the other ones [that are the problem].” Another noted, “If all the other WIC ones would be like this, it would be nicer.”

Because of the variety of choices and flexibility of CVV, many participants noted that purchasing foods with CVV was worth the effort each month, even though that meant using multiple purchasing tools to complete transactions on occasion.

Similarly, many respondents claimed they attempted to use the whole amount of CVV allotted to them each month. One participant, noting the importance of having fruits and vegetables available to support her family's health, said, “We prefer to go over [on CVV-based purchases] than to be short; I just pay the difference.” Another participant said, “I use all of it and I could use more fruits and vegetables.”

A second subtheme emerged in relation to inclusion of fresh and processed fruits and vegetables to maximize convenience. Participants consistently described their preference for purchasing fresh produce, but that availability of frozen and canned fruits and vegetables facilitated convenient incorporation of these foods into their diet. Participants mentioned that their occasional preference for frozen fruits and vegetables came from both the convenience at the point of purchase, because prices on packages were simpler to manage than bulk items, and convenience in preparation. One mother said, “I buy vegetables probably entirely frozen, like steamer packs... I would say that's probably most for convenience.”

Negative experiences and barriers to using WIC CVV. Despite interest in fully redeeming CVV, participants described a variety of negative experiences that limited their ability to do so. The most prominent subtheme that emerged was in relation to participants' perception of annoyance or anger expressed by the cashier or other shoppers. Participants described different strategies for dealing with this, such as leaving the store or trying to explain their financial situation. One participant described the experience of dealing with anger from a shopper in line:

You can just tell, you know, they give you dirty looks; others, like, sigh. Like, one time, one lady... was, like, ‘Are you [expletive] kidding me?’ This is ridiculous because I was... just doing my WIC checks and I turn around and was, like, ‘Really?’ I got so mad... I didn't even do that check there and I just left.

Another described an interaction with a cashier:

I had an incident when I brought multiple checks in and the cashier was, like [to other customers], ‘I wouldn't get in this line; [you] might want to try another line because we are going to be here forever.’ She made me feel bad because she is making other customers go to somewhere else and telling me that I am taking up her line and her time basically.

A second subtheme emerged in relation to participants' frustration with what they perceived to be cashiers' lack of training. Several noted that they sometimes had to teach cashiers how to process WIC vouchers. In these cases, participants described having to spend more time at the point of purchase. Other participants noted that this barrier led to them not being able to fully redeem their CVV because the cashier was not clear on rules related to CVV transactions. In some cases, the lack of training prevented participants from being able to pool their WIC CVV or use mixed tender (using CVV along with other payment options) to complete transactions, a process that is allowed in Arizona.

A third subtheme, fluctuation in the enforcement of redemption rules from store to store, week to week, and sometimes cashier to cashier, was described as creating significant barriers for CVV use. One participant said,

I buy the same things all the time and then I go in there [and they're] like, ‘Oh, this is not approved,’ and then I am, like, ‘Oh, I just bought it last month.’ But then I am back next month and then it's back on the approved list...

Finally, a subtheme regarding the feeling of embarrassment when using CVV was identified. Many participants described feeling compelled to justify their enrollment in WIC as a response to feeling judged. Some participants noted that they felt less interested in using CVV as a result. One participant noted,

...When we first started [on WIC], it was because my husband lost his job so it was no control of our own. So I felt like I had to explain that to every cashier.

Attitudes and Behaviors Related to CVV Redemption

Three themes emerged in relation to the second objective of this study: making efficient use of CVV, maximizing value of CVV, and program recommendations. Regarding efficient use of CVV, 2 subthemes emerged that described in-store strategies for efficiency. Maximizing use of CVV included 3 subthemes of related strategies to stretch the value of participants' CVV to their fullest. Finally, program recommendations included 2 subthemes composed of suggestions from participants about how CVV could be made even more effective for fruit and vegetable purchases.

Making efficient use of CVV. As a mechanism to avoid in-store experiences of perceived annoyance, anger, or judgment, participants expressed multiple strategies that both enhanced the shopping experience and allowed them to make efficient use of CVV while shopping. These comprised 2 subthemes: choosing particular cashiers for CVV transactions, and choosing more convenient shopping times and locations. For example, participants said that the strategy of selecting a more knowledgeable cashier each time a participant shopped using CVV often resulted in fewer negative experiences or confusion at the cash register. Regarding shopping times and locations, some participants said they would shop during specific hours when crowds were smaller or when a cashier they knew well was working. Some participants also mentioned shopping at particular stores at which WIC benefits were more commonly used.

Maximizing value of CVV. Of the various purchasing tools provided to WIC participants in their food package, CVV was the only benefit in which the price of the item might come into consideration for participants. As a result, participants described a number of strategies for maximizing value, which resulted in 3 subthemes: maximizing purchasing power, directly maximizing CVV value, and indirectly maximizing CVV value.

Across focus groups, many participants described pooling CVV (using multiple vouchers at once) at the point of purchase to maximize purchasing power. Participants also discussed choosing certain grocery stores for their produce prices, because they placed greater value on maximizing the amount of fruits and vegetables than on the quality of these items. For instance, 1 participant noted,

The most savings are on fruits [at 1 grocery store chain], and so I used my food vouchers in those stores, and 'cause you can get a lot more for the 6 bucks there, more than you can at [other stores].

Participants described a variety of other strategies for maximizing the value of CVV either directly or indirectly. Participants noted using sales, coupons, and price matching to stretch the CVV amount directly. In addition, a number of participants described methods of maximizing value indirectly, such as using loyalty cards in combination with CVV to build rewards points for redemption on food purchases later. Participants also noted redeeming CVV at stores that offered gas points, allowing for CVV purchases to indirectly subsidize purchase of gas. One participant said, “[I shop at a local grocery store] mainly because I do fill up on the gas points, so I do my best bargain by going there for my gas.”

Program recommendations. In several focus groups, 1 or more participants had recently moved to Arizona from a state that incorporated the Electronic Benefits Transfer (EBT) system for WIC vouchers. In these cases, participants described the ease of using such a system as an improvement that should be considered in Arizona. Participants described EBT cards as providing more flexibility and convenience to the WIC shopping experience. Several mentioned that it would reduce the time it took to process WIC at the point of purchase, and that using a card compared with a book with checks would decrease perceived bias. One participant said, “It would be faster and easier without bothering people and taking too long.”

Many participants also suggested that the WIC program should increase

the monthly amount provided for CVV because of its convenience and its importance for healthy diets. Several suggested that the produce purchased with CVV was eaten not only by their children enrolled in WIC, but also by their older (non-WIC enrolled) children and other members of the household. One mother even suggested she would opt for more CVV over other benefits: “I wish I could get more fresh fruits and vegetables on the checks rather than some of the other stuff they provide because of the [value].”

DISCUSSION

The aim of this qualitative study was to examine participant experiences using WIC CVV in Arizona, as well as the strategies participants used to make best use of this benefit. Across 8 focus groups composed of pregnant women, women who were breastfeeding, women with children, and postpartum women, a number of themes emerged that could be important to explore further regarding how the value of CVV can best be realized among WIC participants.

Women participating in focus groups understood and were appreciative of CVV benefits, which in most instances was the primary tool for fruit and vegetable purchases. They consistently described their interest in using benefits fully, in particular as a way to provide healthy foods and instill healthy behaviors in their children through healthy snacks and meals. These attitudes reflect the findings of at least 1 other study, which showed a positive impact of the revised food package on fruit and vegetable intake.¹⁷ However, multiple barriers have also been identified that potentially limit individuals' ability to use CVV fully. In this study, barriers included experiences of negative interactions in stores, dealing with misunderstandings over WIC benefits redemption rules, or feeling embarrassed or judged in relation to using WIC benefits. Previous studies have also identified a variety of barriers to purchasing fruits and vegetables, which were not addressed in this study, but these included other pressing problems, such as limited transportation, distance to the market,

and the math associated with purchasing in bulk.^{29,30}

The most discussed barriers associated with WIC CVV use related to women's interactions with store staff, specifically the checkout cashiers. Similar to a previous study,²⁹ these barriers were related to 1 of 2 issues: (1) a perceived lack of training among store cashiers in terms of WIC rules and regulations; and (2) poor customer service specifically for WIC participants, which was perceived to border on bias or outright discrimination. Participants also described being sensitive to reactions and responses from other customers, and this in part dictated where they felt comfortable redeeming their benefits.

Nevertheless, it also became clear that many participants were savvy WIC users and were thoughtful about how the program could work better for them. Many women described the multiple strategies they used to minimize the time in line or the impact on other customers. They also described a variety of innovative ways to maximize CVV benefits at the point of purchase or indirectly for future purchases. Many women also registered their preference for WIC EBT cards. This could be a novel way to improve CVV use specifically and WIC benefits broadly. Although no published data exist confirming the positive impacts or potential barriers (eg, cost, system management) of EBT implementation for WIC, a multiple-dimensions model developed to reduce stigma associated with welfare assistance concluded that implementing a WIC EBT system could increase usage rates by 23%.³¹ Implementation of EBT cards for WIC is currently in the planning phase in Arizona.

Taken together, the variety of facilitators, barriers, and strategies for overcoming barriers offer insights for further exploration. Other novel insights from this study might also be worthy of consideration. For example, many focus group participants were seasoned WIC users. In response to the moderator's question regarding whether this was their first time participating in WIC, 28 of 41 participants noted that this was at least their second time. In some cases, participants had used WIC on and off for close to 10 years. It is possible, there-

fore, that these women learned how to use WIC most effectively and had already overcome barriers that may be more difficult to deal with for novice users. As such, lessons from these groups can shed light on what novice users—who have not yet mastered using WIC in stores—might be facing and what might be driving under-redemption of WIC and CVV.

Although the study results provide insight into WIC participant experiences using CVV, these findings may not be generalizable to WIC participants nationwide or across Arizona. For example, whereas the sample in this study was primarily white (a potential result of focusing specifically on English speakers), the WIC-eligible population in Arizona is only 68.7% white.³² Similarly, this sample was 36.5% Hispanic, and the WIC-eligible population in Arizona is 57.7% Hispanic.³² Also, telephone recruitment methodology, as opposed to onsite recruitment, may have led to a high level of no-shows across focus groups, resulting in self-selection bias among those who did participate. Furthermore, the group setting may have discouraged participation of reticent participants. However, all efforts were made to encourage participants to voice their opinions freely.

IMPLICATIONS FOR RESEARCH AND PRACTICE

To date, little research has considered the experiences, attitudes, and behaviors of WIC participants regarding their use of CVV. This study suggests the possibility that WIC participants may experience a variety of factors that can both facilitate as well as detract from convenient redemption of CVV for fruits and vegetables. However, future systematic studies should be conducted to understand the extent to which issues identified here might be replicated among WIC participants in other settings. Future research should also consider the extent to which context-specific strategies can be employed, such as creating less stigmatized, more streamlined purchasing experiences, to improve WIC CVV usage. This could include targeted training for store personnel within stores at which

participants most often shop, which in this study was primarily larger supermarkets and big-box stores. Future work might also consider strategies for coupling messages regarding the maximization of WIC benefits both for food and for nonfood value. Finally, it might be important to explore the way more experienced WIC participants make use of CVV benefits and whether these strategies could be taught to new WIC participants as they enter the program.

ACKNOWLEDGMENTS

Funding for this study was provided by Grant 12071769 from the Arizona Department of Health Services. The authors thank Sujata Dixit-Joshi, PhD, Carol Johnston, PhD, RD, and Joan Agostinelli, MS, for contributions to and feedback on the project. Publication of the supplement in which this article appears was supported by General Mills. However, the research in this article was not funded by General Mills.

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