What Mothers in the Women, Infants, and Children (WIC) Program Feel About WIC and Immunization Linkage Activities

A Summary of Focus Groups in Wisconsin

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Background: Although studies indicate that strategies to improve immunization coverage among preschool-age children enrolled in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) are effective, the attitudes of parents of children enrolled in WIC toward the linkage between WIC and immunization programs is unknown.

Objective: To gain a better understanding of how parents using WIC resources feel about the association of WIC and immunization services, their attitudes toward WIC immunization activities, factors that may cause clients to drop out of the program, and the effects of racial background on parent attitudes.

Participants and Methods: We conducted 8 focus group sessions with mothers whose children receive WIC services in Milwaukee, Wis. Mothers were between 18 and 35 years old, with at least 1 child between 6 and 24 months of age. The 47 mothers participating were each assigned to 1 of 8 focus groups, including 2 groups each of Asian, white, African American, and Hispanic mothers. A systematic content analysis was conducted for themes and key points within and across ethnic groups.

Results: Socially disadvantaged mothers reported their overall experiences in WIC to be very positive. Lengthy waiting time during a WIC visit was identified as the most important barrier to participation. Mothers believed strongly that it was the responsibility of parents to get their children vaccinated, but that WIC staff and the primary care provider should work together to remind parents when vaccinations were due. Mothers expressed very positive attitudes toward the linking of WIC and immunization activities. Telephone reminders and education were mentioned as the best ways to encourage mothers to get their child vaccinated on time. Immunization linkage activities and the requirement that a parent report to a WIC center more frequently if the child was underimmunized were not mentioned as reasons for dropping out of the WIC program; indeed, more frequent visits to a WIC center were actually viewed as a potentially effective strategy by several mothers. Some mothers found obtaining immunizations and WIC services at the same time and place to be very convenient. There did not seem to be any significant differences among ethnic groups in attitudes toward immunization linkage activities being performed in WIC.

Conclusions: Mothers with preschool-age children enrolled in WIC feel that the linkage of immunization activities with WIC services is a helpful way to improve the health of their children. This linkage was not identified as a contributing factor for leaving the WIC program.


Although recent data suggest that immunization coverage of 2-year-olds has reached 74% nationwide, vaccine coverage for the basic series of 4 doses of diphtheria and tetanus toxoids and pertussis vaccine, 3 doses of oral poliovirus vaccine, and 1 dose of measles-mumps-rubella vaccine among low-income populations is estimated to be 66%.1 The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), a categorical federal grant program administered by the US Department of Agriculture, Food and Consumer Service, enrolls substantial numbers of low-income, preschool-age children, a population at risk of low immunization coverage.2,3 Nationally, WIC serves 44% to 47% of the US birth cohort, enrolling more than 4.4 million children younger than 5 years. Although WIC's primary mission is to improve the nutritional status of at-risk,
PARTICIPANTS AND METHODS

SITES

We conducted focus groups in Milwaukee, Wis, where the WIC and immunization programs are implementing a variety of linkage strategies to improve immunization coverage among WIC participants. These strategies include an assessment of the child’s immunization status, using a documented immunization record; referral to an immunization provider; telephone outreach for underimmunized children; and varying the frequency of food voucher issuance according to a child’s immunization status. In the Milwaukee WIC program, food vouchers are usually issued to WIC participants every 2 months; participants at selected sites are issued 1-month food vouchers if their child is found to be underimmunized.

PARTICIPANTS

We conducted 8 focus groups with mothers whose children receive WIC services. Participants were randomly selected from WIC sites in the Milwaukee area using a computerized database. Their ages ranged from 18 to 35 years, with more than 60% of the mothers being in their early 20s. Participants had at least 1 child between the ages of 6 and 24 months enrolled in WIC. Focus group participant characteristics are presented in Table 1. Participant characteristics did not differ among ethnic groups. Less than half the mothers had completed high school and more than 70% were enrolled in a managed care plan; these characteristics were similar to all participants in the WIC program in Milwaukee. Nationally, of women participants in WIC between 18 and 35 years of age (82% of total women participants), 61% had completed high school. Participants received refreshments, $25 in compensation, and transportation fees, if requested.

Participants were chosen from 12 of the 17 WIC sites in Milwaukee because linkage strategies were being more closely monitored there and participants were more likely to have been exposed to the immunization interventions at these sites. Approximately 3 of every 4 mothers who met the eligibility criteria (ethnicity, age, and family composition) agreed to participate; 12 mothers were recruited for each focus group to try to reach a minimum group size of 6 participants.

A total of 47 women participated in the focus group sessions. Group size varied from 4 to 8 mothers. Two focus groups each of Asian, White, African American, and Hispanic women were conducted. There were 12 Hispanic, 13 African American, 11 white, and 9 Asian mothers. At the time of the focus groups, the overall racial composition of participants in the Milwaukee WIC program was 59% African American, 20% white, 15% Hispanic, and 5% Asian (M.B., oral communication, August 1996).

DEVELOPING THE FOCUS GROUP QUESTIONS

The questions used in the focus groups were developed by the CDC in collaboration with the US Department of Agriculture, the National Association of WIC Directors, state and local immunization authorities, and WIC staff. In the focus groups, we asked mothers how they keep their children healthy, their experiences using both immunization and WIC services, and their immunization experiences at WIC (Table 2). All questions were open-ended, eg, “How do you feel about phone calls to remind you about appointments or that your child needs a shot? What do you think is the best way for WIC to encourage moms to take their children to get baby shots?”

DATA COLLECTION PROCEDURES

The 8 focus groups were led by female facilitators and a moderator; the facilitators were the same ethnicity as the participants in each group. The interviewers did not work in the immunization or WIC programs and were not known to the focus group participants. Each focus group session was audiorecorded. In addition, moderators and facilitators took notes during the sessions. The focus groups were held at facilities in Milwaukee that were owned by the contractor coordinating the focus groups, and were not connected to the immunization or WIC programs. At the beginning of each focus group, parents were told that the groups were being conducted to learn about how parents feel about integrating WIC and immunization services.

DATA ANALYSIS

Transcript-based analysis was used to analyze the focus group data. The information from each focus group was compiled from moderators’ notes, facilitators’ notes, and audiotapes. After all focus groups were completed, the moderators and facilitators from each group met to discuss the overall trends and patterns that emerged. These notes were then written down by a moderator. The audiotapes were transcribed by the moderator. If the focus group was conducted in an Asian language or Spanish, the audiotape was transcribed by the facilitator who is fluent in that language.

The transcripts were entered verbatim into a software program similar to the Ethnograph data analysis program (Qualis Research Associates, Amherst, Mass). Relevant constructs and themes were highlighted in the text and margin-coded. Several focus group sessions were reviewed by 2 members of the research team (A.S. and J.M.) to validate the coded responses. The software sorted the transcripts by code word and generated printouts of only the coded sections of text for each session. These data were then sorted by major topical area. The researcher examined each topical area for themes relevant to the theoretical constructs for each session. If 2 or more participants identified a particular concept, it was considered a theme. Using this standard, if at least one third of the participants converge around a theme, it is considered representative of a shared reality of the group. The common group themes were then compared across groups. Themes were weighted based on how often they appeared across the 8 focus groups: (1) minor theme, appeared in 3 or 4 groups; (2) major theme, appeared in 5 or 6 groups; or (3) dominant theme, appeared in 7 or 8 focus groups. A theme was considered relevant for a particular ethnic group if it appeared in 1 minor theme for ethnic group) or both (major theme for ethnic group) of the 2 focus groups for that ethnic group.

The project was explained in a letter sent to all participants before the focus group was conducted and consent was given by participating in the focus group. The project was approved through appropriate procedures at both the state and local WIC and immunization programs in Wisconsin.
low-income, pregnant, postpartum, and breast-feeding women and of children younger than 5 years, it also serves as a gateway to other health services, including immunizations.

Studies conducted in 4 large US cities after the 1989 to 1991 measles outbreak showed that strategies to link immunization services with the WIC program improved coverage rates by 7% to 40% within 6 to 12 months after the interventions became operational. Because these studies indicated that WIC and immunization linkages are effective at improving immunization rates among WIC participants, approximately 10% of each state’s immunization funds (or $10 million annually) now goes toward improving this linkage (Centers for Disease Control and Prevention [CDC], Atlanta, Ga, unpublished data, September 1997).

We conducted focus groups with mothers of children participating in WIC to better understand (1) how parents in WIC feel about immunizations in general and about immunization activities in WIC; (2) the factors that may cause clients to drop out of the WIC program; and (3) the effects of racial background on parent attitudes. Dropping out of the WIC program is an important concern because funding to state and local WIC programs is dependent on monthly participation rates, which are based on the number of participants who pick up food vouchers each month. Our goal was to develop a better understanding of the factors that may present barriers to the use of linked WIC and immunization services. We believe that understanding the concerns of WIC participants would help WIC and immunization programs better incorporate interventions that would be accepted by program participants.

### RESULTS

#### GENERAL HEALTH ATTITUDES

Mothers in all groups agreed that feeding nutritious foods was an important way to keep their child healthy. Though sometimes only mentioned after prompting, mothers also agreed that getting immunizations for their child was “definitely and very important” to keep their child healthy. Seeing their physicians regularly for check-ups was mentioned by several mothers. None of the mothers voiced concerns about the danger or necessity of vaccinations.

#### GENERAL WIC EXPERIENCES

**WIC Experiences and How WIC Keeps Children Healthy**

Good experiences with WIC was a major theme overall, a major theme for Hispanics, and a minor theme for all other groups. Waiting too long for services was mentioned by at least 1 person in 5 of the 8 focus groups. Several mothers mentioned their confusion as to whether they could participate in WIC if they were not breast-feeding. The mothers also stated that there “shouldn’t be a double standard. . . . They treat the breast-feeding women better than they do the non–breast-feeding women.”

When asked what the program does to keep their children healthy, providing healthy foods was a major theme overall, a major theme for Asian mothers, and a

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**Table 1. Focus Group Participant Demographics**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>All Groups, % (N=47)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, y</td>
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<tr>
<td>Mean</td>
<td>23</td>
</tr>
<tr>
<td>Median</td>
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<tr>
<td>18-19</td>
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<tr>
<td>20-25</td>
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<tr>
<td>26-30</td>
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<tr>
<td>&gt;30</td>
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<tr>
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<tr>
<td>Some college</td>
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<td>49</td>
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<td>2-3</td>
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<tr>
<td>&gt;5</td>
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<td>No. of children &lt;2 y living at home</td>
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<tr>
<td>Commercial</td>
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</tr>
<tr>
<td>Other</td>
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</tbody>
</table>

**Table 2. Topics Covered in the Focus Group Discussion Guide**

<table>
<thead>
<tr>
<th>Topics</th>
<th>Discussion Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>General health</td>
<td>How participants can keep their children healthy</td>
</tr>
<tr>
<td>General immunization experiences</td>
<td>How participants describe their experiences in getting immunizations for their children, where immunizations are obtained, and whose responsibility it is to get child’s immunizations on time</td>
</tr>
<tr>
<td>General WIC* experiences</td>
<td>How participants define what WIC does to keep their child healthy, experiences participants have had at WIC and reasons they come to WIC, discussion of how WIC could be run more smoothly, reasons for dropping out of WIC</td>
</tr>
<tr>
<td>Immunizations and WIC linkage experiences</td>
<td>How participants describe their immunization experiences at WIC, barriers in getting vaccine information from providers, how participants feel about telephone calls to remind them about appointments or to get vaccines for their children, how participants feel about coming in more often for vouchers if their child is not up to date with immunizations</td>
</tr>
</tbody>
</table>

*WIC indicates Special Supplemental Nutrition Program for Women, Infants, and Children.*
minor theme for the other ethnic groups. Several mothers also mentioned that WIC staff “checking the baby for iron” also kept their children healthy.

A dominant theme overall was that mothers were motivated to come to WIC because of the cost of the food items that WIC provides: “WIC helps with things I can’t afford”; “So you don’t have to take out of your pocket what WIC can give to you”; “I’m in school and I can’t afford the high-priced milk.” Education and health monitoring were also mentioned as reasons for coming to WIC by at least 1 person in 7 of the 8 focus groups. Several African American mothers also mentioned that they came to WIC “for my kids shots” and “It’s much faster at WIC because [otherwise] you have to make an appointment with your doctor.”

Barriers in and Dropping Out of the WIC Program

When asked what would make the WIC program run more smoothly, many mothers felt that WIC staff “shouldn’t make you wait so long,” should “give appointments more spread apart,” and “stay on time with their appointments”—this was a major theme overall and for the African American and Asian groups, a minor theme for the white groups, and was not a theme for the Hispanic groups. Several mothers mentioned that voucher issuance could be made easier: “[WIC] should make it where you can pick your checks up on any day,” or “they should have more days available to pick up your vouchers.” Transportation problems in coming to the WIC clinic were mentioned by several African American mothers and this was a minor theme in this group.

In 2 of the focus groups (African American and Asian), 3 mothers had dropped out of the WIC program in the past. The reasons mentioned for dropping out included: “kids were over age,” “I would get too busy. I was working and going to school . . . .”, and “their [WIC staff] attitudes made me stop coming.” Mothers mentioned several other issues that may potentially play a role in dropping out of the WIC program including (1) being treated rudely by staff (minor theme for African American group and mentioned in 3 other focus groups) and (2) transportation problems (minor theme for African American group and mentioned in 1 other group). Two Hispanic mothers mentioned that staff “should not nag you so much about getting shots” and they “should be more understanding when doctors are booked.”

GENERAL VACCINATION EXPERIENCES

Vaccination Experiences

Having had negative vaccination experiences at the clinic or physician’s office was a major theme overall, a major theme for African American and Hispanic groups, a minor theme for Asian groups, and was not a theme for white mothers. The negative experience was attributed to the pain from the vaccinations and the child crying. Several mothers mentioned that someone in the clinic had been rude during the procedure. None of the mothers suggested ideas for making vaccinations easier to get. Emphasis was placed on vaccinations as an unpleasant experience: “When it comes to needles, nothing is easy” and “The only way to make it easier is to not be there.”

Vaccination Knowledge and Responsibility

A dominant theme overall was that mothers expect information on when vaccinations are due to come from the physician or health care provider. Although “the doctor’s office is responsible for telling you when the child is due for a shot,” it is ultimately “the parent’s responsibility to get the child vaccinated.” This was a dominant theme overall and a major theme for all ethnic groups.

IMMUNIZATIONS AND WIC

Attitudes Toward Linkage

Overall, a dominant theme was that WIC staff and physicians should work together to remind parents when vaccinations are due even though it is ultimately the parent’s responsibility to ensure their child is vaccinated. When asked if immunization activities in WIC had helped them get their child vaccinated, reminders were mentioned most frequently as being helpful in all of the focus groups except the African American group. Several African American and Asian mothers also mentioned that it “would be good for WIC to enforce” getting children vaccinated. In 5 of the focus groups, mothers expressed that it was all right for WIC staff to ask about vaccinations as long they talked to the client “with respect” and “not like I’m some kind of child.”

Vaccination Records and Appointments

Most mothers in each group said that they had been asked for their child’s vaccination record during their last WIC visit. When asked why they think they were asked, mothers mentioned “kids need shots,” “because they [WIC] cares,” and “to make sure we are getting the shots . . . .” and that babies are getting the proper care.” Mothers did not feel that complying with WIC staff’s request to obtain a vaccination record was a problem; this was a major theme overall. Mothers also did not feel that they had any problem getting an appointment to see their child’s physician (minor theme), and did not feel that WIC staff should be involved in appointment scheduling at the physician’s office. Several African American mothers did express some difficulty in getting an appointment with their child’s health care provider.

Telephone Reminders

A dominant theme was that telephone reminders were an acceptable and useful way to help parents get their children vaccinated on time. Most mothers felt strongly that the calls were helpful; “It’s harder to remember when the older kids have to go in for shots.” When asked if receiving too many telephone calls was annoying, several mothers mentioned that “one phone call is enough” and they do not want “more than 2 calls within a month.” Mailed reminders were mentioned as useful if “they can’t contact you by phone.” Only 1 person noted that “re-
minder cards work better.” Both telephone reminders and education were mentioned most often as the best ways to encourage mothers to get their child’s vaccinations on time.

**Receiving Vaccinations From the WIC Program**

Mothers felt it would be convenient to be able to receive vaccinations for their children at the same place and time as they receive WIC services; this was a major theme overall and for the Asian and Hispanic groups, a minor theme for the African American groups, and not a theme for the white groups. Reasons mentioned as to why this would be more convenient included that the “WIC office is much closer to me than my doctor” and “[it is] easier to get an appointment at the WIC office” than at the physician’s office.

**Voucher Issuance According to the Child’s Immunization Status**

Very few of the mothers had actually experienced having to come to a WIC site more frequently because their child was underimmunized, and many did not understand how the voucher issuance strategy was implemented (eg, they thought food vouchers would be withheld if their children were underimmunized). Mothers expressed mixed feelings about the use of this strategy to encourage them to get their children vaccinated. Several African American and Asian mothers mentioned that it “would be good for WIC to enforce” getting a child vaccinated; 1 Asian mother noted that “not [getting] vouchers” was a “good way to make sure they [children] are up to date.” Many mothers thought that although it was unpleasant, it may still be a good thing to do: “I would get mad at first but it would be OK...” “It would be OK because it is necessary for kids to get shots and that way I would remember,” and “I think it would be fair of WIC to do something like that.” Other mothers remarked that they would be “mad” if this happened to them, and 1 Hispanic mother felt it would be unfair because “they shorten up [my] vouchers when it is not [my] fault... when I can’t make it to the doctor.” When mothers were asked if WIC should do if a child does not get all the vaccinations he or she needs, the strategy of varying the frequency of voucher issuance was brought up by at least 1 mother in 4 of the groups. There was some confusion expressed by mothers in several groups as to how varying the frequency of voucher issuance was actually implemented; several Asian mothers in 1 group said that they thought they would not get a “WIC [voucher] check” if the child was not up to date with immunizations.

**COMMENT**

Immunization activities that are linked to the WIC program have been shown to be one of the most effective strategies to raise coverage levels of preschool-age children at high risk of vaccine-preventable diseases. With an increasing portion of each state’s immunization funds directed toward promoting this linkage, it is estimated that approximately 75% of infants and children participating in WIC are receiving some type of linkage intervention (CDC, unpublished data, September 1997). Establishing that these activities are helpful and well accepted by parents in the WIC program has been important in identifying useful strategies and promoting further collaboration between state and local immunization and WIC programs.

Mothers expressed positive attitudes toward the linking of WIC and immunization activities. Although there were strong feelings that it is ultimately the parent’s responsibility to get the child vaccinated, they believed it was very useful for WIC staff to work together with physicians and remind parents when vaccinations are due. Telephone reminders were considered very helpful, and mothers felt that this activity had helped keep their children up to date with immunizations. Asking about vaccinations in a polite manner and treating the client with respect and not “like some kind of child” were considered to be very important factors in whether the mother accepted immunization activities through the WIC program. There did not appear to be any significant differences among ethnic groups toward immunization linkage activities being performed at WIC sites.

Mothers did not feel that the information WIC staff requested was difficult to obtain, ie, an immunization record that WIC staff use to do the immunization assessment. Although African American mothers did express some difficulty in getting appointments for shots with their physicians, mothers in general did not think WIC staff should assist them in scheduling appointments at the physician’s office.

Most mothers felt that being able to obtain immunizations at the same place as the WIC visit would be very convenient. In Milwaukee, about half of the WIC sites are located at the same place as immunization services. It is estimated that less than 70% of local WIC agencies nationwide have immunization services available on site at the principal WIC clinics in that agency, and probably less so at other WIC clinics within a local agency.

Even though some mothers complained about long waiting times at the WIC site, this factor was only mentioned by 1 mother as a reason for dropping out and was not considered an important factor for mothers who drop out of the WIC program. Immunization activities linked to the WIC program were well accepted and did not appear to influence decisions to drop out of the program. Additionally, the frequency of visits to WIC sites to pick up food vouchers was not mentioned by mothers as a reason for dropping out of the WIC program. Dropouts were of special concern to the Wisconsin WIC program because participation rates had been decreasing at most of the 17 WIC sites in Milwaukee during the previous year; this was felt to be at least partially due to welfare reform and subsequent shifts in the population occurring throughout the state (P.H., oral communication, June 1997). To further evaluate this concern, a telephone survey of 86 mothers who dropped out of the WIC program in Milwaukee found that none of the mothers mentioned immunization activities or coming in more frequently to pick up food vouchers as reasons for not participating. When asked how they felt about WIC staff
asking for their immunization record, 66 (77%) felt that “it was helpful” or they “did not mind.” 18 (21%) gave no response, and only 2 (2%) said they “did not like it” (Milwaukee Immunization Program, unpublished data, May 1997). Because of the variation in characteristics and practices among WIC programs, reasons that participants drop out of WIC have to be evaluated on a program by program basis; however, information from our focus group study and from the survey conducted by the Milwaukee Immunization Program was helpful to the local WIC program in Milwaukee for guiding future policy. The use of telephone calls to remind parents that their child needed a vaccination was well accepted by focus group participants. Although the telephone call reminders had been very helpful, mothers felt that too many telephone calls were annoying. As well, the use of varying the frequency of food voucher issuance according to the child’s vaccination status was felt to be a useful strategy by many parents as long as they understood the reason why WIC staff were requiring them to come in more often. Several mothers mistakenly thought that food vouchers would not be given if their child was underimmunized, indicating more education is needed to ensure that parents understand exactly how this strategy works. For those WIC sites nationwide that are implementing some type of immunization activity, approximately 70% are using mail or telephone reminder systems for underimmunized children, and 20% are varying the frequency of food voucher issuance according to the immunization status (CDC, unpublished data, September 1997).

There are inherent limitations with using a qualitative method such as focus groups to gather information that is representative of the population studied. Although our study sample was relatively small, the participants were randomly selected from a pool of all active clients through a computerized database that categorized clients according to racial background. In addition, the facilitators were from the same ethnic group as the respondents and the focus groups were conducted in the language of choice for the respondents. Many of the findings from our focus group research are consistent with the published literature that used more quantitative research methods, including surveys of parental attitudes on the importance of vaccinations, the parent as being ultimately responsible for getting the child immunized, and the acceptability of telephone reminders.13-15 This corroboration strengthens the generalizability of our findings.

Overall, mothers were very accepting of WIC immunization linkage activities and felt these activities help keep their child healthy. To be able to efficiently incorporate immunization activities into WIC services while not disrupting patient flow and clinic efficiency is of paramount importance. All WIC sites should use linkage strategies that fit best into the characteristics and set-up of their individual clinic.

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REFERENCES


