



Vegetable Purchasing, Preparation and Consumption Behaviors Among WIC Participants in Maine



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Abstract

The Maine WIC Nutrition Program and University of Southern Maine commissioned a pre-tested telephone survey (n = 400) conducted among WIC participants to determine their barriers and attitudes towards consuming vegetables. Results showed that a majority (63%) of WIC clients surveyed ate two to three servings of vegetables per day. The majority of participants believed that eating enough vegetables is either 'very' (89%) or 'somewhat' (9.5%) important. 'Cost' was a common concern when purchasing vegetables; 62% of the respondents indicated cost as a 'somewhat' or 'big' problem. Additionally, more than half of the respondents (53%) indicated that increasing their knowledge of how to prepare a variety of vegetables would help them serve more vegetables. In addition to the grocery store, other reported sources of vegetables included: 'farmers' markets' (50%); 'family/friends' (18%); 'garden' (17%); 'convenience stores' (9%); and 'food pantry' (8%). In regards to the form of vegetables consumed, 51% indicated that they eat fresh vegetables the most, while the remaining indicated either frozen or canned as the most common form of vegetables eaten. This knowledge of concerns and issues faced by the WIC participants can help to develop need-based education curricula and provide valuable information to agencies charged with the allocation of food assistance benefits. The study was funded by the United States Department of Agriculture, Food and Nutrition Service.

Objective

To develop an education curriculum for to promote increased vegetable consumption in Maine WIC participants.

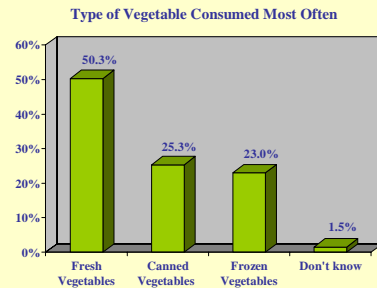
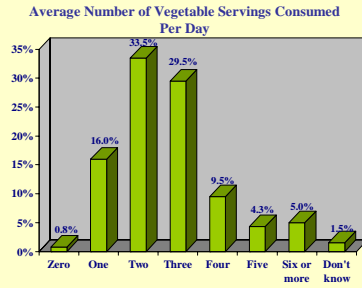
Methodology

- Telephone survey with 400 participants (list provided by the Maine WIC Nutrition Program)
- Sample stratified in proportion to population of WIC clients in survey areas.
 - 243 from the city of Portland
 - 77 from Waldo county
 - 80 from Washington county
- Survey instrument developed by Maine WIC Nutrition Program and Maine Nutrition Network
- Survey was pre-tested for comprehension
- Results were tabulated and analyzed using standard statistical methods

Demographics

Gender	Age
• 85% Female	• 24 or younger—29.3%
• 15% Male	• 25-34—46.5%
	• 35-44—17.8%
	• 45-54—3.3%
	• 55-64—3.0%
	• 65 or older—0.8%
	• Refused—0.5%

Results



Have you tried to increase your vegetable intake in the past six months?



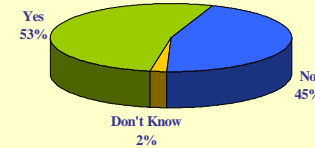
Do you cook vegetables for your family that you don't personally eat?



What would make serving different kinds of vegetables easier in your household? [Unaided; Multiple responses were recorded]

Top Answers	N=400
Having more money since vegetables are so expensive	11.8%
More recipes / knowing how to prepare all vegetables	6.5%
If family members weren't so picky	4.8%
Having more time / finding an easier way to prepare them	4.5%
Availability / more choices	4.3%
If my kids ate vegetables	2.5%
If everybody ate them	2.5%
Buying a larger variety of vegetables	2.0%
Don't know	20.8%
Nothing	35.5%

Would knowing how to prepare more kinds of vegetables help you serve vegetables more often?



Where do you buy or get your vegetables? [Aided; Multiple responses were recorded]

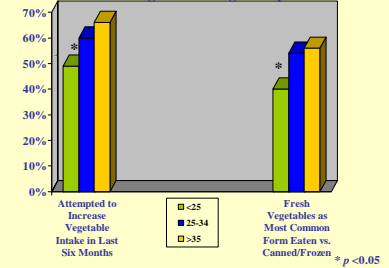
- Grocery store—99.8%
- Farmers' market—50.3%
- Family/friends—17.8%
- Garden—17.3%
- Convenience store—9.0%
- Food pantry—8.3%

How big of a problem is _____ when you purchase vegetables?

	Somewhat of a problem / A big problem combined*
The cost of the vegetables	62.0%
The quality of the vegetables	40.8%
Not knowing about certain kinds of vegetables	31.8%
The kinds of vegetables that the store sells	19.3%
The location of the store or market where you buy vegetables	8.5%
Transportation problems	8.3%
The store or market's hours of operation	5.3%

N=400 * Response categories were collapsed

(1) Attempted to Increase Vegetable Intake and (2) Eat Fresh Vegetables vs. Age Group



Implications

The results obtained through the telephone survey highlight the self-perceived vegetable purchasing, preparation and consumption behaviors of Maine WIC clients. This study was done to determine the nutrition education needs of WIC clients in respect to increasing vegetable intake. Based on the results of the survey, the following core education needs were identified:

- Perceived high cost of vegetables and budgeting
- Low knowledge of preparation techniques
- Poor feeding relationships with other family members
- Limited access to quality vegetables

In response to these issues, the project planning committee consisting of representatives from the Maine Nutrition Network, the Maine WIC Nutrition Program, University of Maine Cooperative Extension and the local WIC agencies developed a quarterly intervention that educated participating clients on the following topics:

- Quarter 1—Food resource management; shopping behaviors
- Quarter 2—New preparation techniques; using new recipes
- Quarter 3—Feeding relationships; increasing vegetable consumption in children
- Quarter 4—Taking advantage of WIC farmers' market vouchers; exploring seasonality in vegetables

Evaluation

Program messages were delivered through a variety of channels. Participants were offered food preparation tools as incentives, recipe books, and vegetable related children's books. Education was given during clinic visits through discussion with the counselors, via bulletin boards, and through live demonstrations. Messages were reinforced with a quarterly newsletter.

Baseline assessments of attitudes, barriers and behaviors in respect to vegetable consumption, preparation and purchasing were completed by each participant. Follow up surveys will be administered at the end of the pilot project (Fall, 2006). In addition focus groups will be held with participants and WIC staff to assess the strengths and weakness of the program. Materials and methods will be adjusted based on the findings from assessments and focus group research and the feasibility of expanding the project to additional WIC clinics will be determined.