

Acknowledgements

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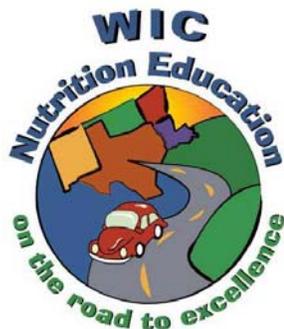
Introduction

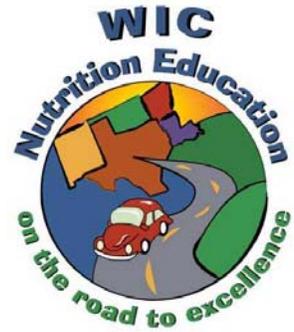
In 2001, the WIC Nutrition Services Program Integrity (NSPI) team contracted with a research team from the University of Nevada, Reno (UNR) to evaluate the effectiveness of a video-conference (VTC) as well as to describe a model for improving WIC nutrition education. The NSPI is a group of nutrition educators representing the five states (Arkansas, Louisiana, New Mexico, Oklahoma and Texas), the Indian Tribal Organizations (the Pueblo of Zuni, the Five Sandoval Indian Pueblos, and the Chickasaw Nation of Oklahoma), and the USDA Food and Nutrition Service (FNS) in the Southwest Region (SWR).

Three themes emerged during the evaluation and follow-up study. WIC nutrition education can be perceived through (1) a nutrition educator, (2) a client, or (3) an organization orientation.

This Executive Summary is structured to present overarching recommendations, followed by discussions and supportive documentation. The information presented has implications for other WIC regions and for the WIC program nationally.

For any party interested in more information, a detailed report resides at the USDA FNS WIC office in Dallas, Texas and with the members of the UNR research team.





Several qualitative and quantitative methodologies were used to meet the evaluation and follow-up study goals. During the VTC, facilitators conducted on-site activities along with administering pre- and post-conference surveys and soliciting volunteers for the follow-up study. During the months following the VTC, the UNR research team designed, distributed and collected post-post-conference surveys and client satisfaction surveys; guided the intensive clinic activities at volunteer sites (ethnographic study); distributed six newsletters to volunteers and obtained feedback on them; and conducted WIC administrator telephone interviews. Using these techniques, the UNR team uncovered relevant and significant information regarding the state of WIC nutrition education in the region. Analysis of the information gathered was guided using the nutrition educator, client and organizational themes. The team also obtained information regarding the value of the VTC as a professional development tool for WIC.

Methods Used

- ◆ The commitment to WIC nutrition education should be pervasive throughout WIC at all organizational levels, with WIC clients, and with nutrition educators themselves.
- ◆ Time is a critical component to the delivery of quality nutrition education and should be valued by all involved with WIC.
- ◆ Outcome expectations of WIC nutrition education should be appropriate to the diversity of WIC situations, clients, and educators.
- ◆ Support of existing USDA FNS recommendations guiding staffing profiles, characteristics and qualifications should be provided in order to ensure consistency and professionalism in the delivery of WIC nutrition education.
- ◆ WIC staff and administration should actively acknowledge and foster the intangible support system WIC offers clients, support that goes beyond supplemental foods (e.g., nutrition education guidance, referral systems, empathy, etc.).
- ◆ Continued use of video teleconferencing as an effective means of providing professional development to a diverse audience should be supported.

Recommendations

State of WIC Nutrition Education in the Southwest Region

**FINAL
CONCLUSION**
**Six Factors were
most often cited as
supports or barriers
to delivering high
quality nutrition**

Discussion

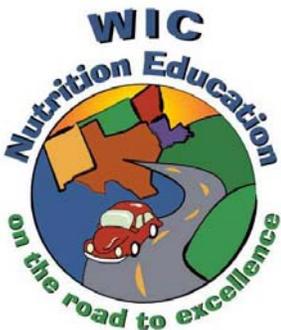
Factors included administrative policies; staff qualifications and support for changes in nutrition education; facilities; resources (such as technology, supplies and curricula); continuing education and professional development opportunities; and nutrition education delivery system structures. Combining these factors with responses from nutrition educators and administrators, the UNR research team developed the chart on page 14 (Significant Factors Supporting the Quality of WIC Nutrition Education) that identifies practices, protocols, and activities to describe three levels of support—low, moderate, and high—for nutrition education. Following the construction of this chart, the UNR team was able to identify and incorporate ideas presented in USDA FNS WIC Nutrition Services Standards into the chart. WIC agencies wishing to assess where their organizational strengths and challenges lie in supporting high quality nutrition education may find this chart useful.

- ✦ *Outcome expectations of WIC nutrition education should be appropriately developed to meet the diversity of WIC clients, educators and settings.*

Not all clients come into WIC at the same level of readiness to change behaviors. Not all WIC nutrition educators have been trained in facilitating client change through the use of a variety of educational strategies. Not all WIC agencies can provide the same level of education to their clients due to limited facilities. Yet each entity should strive for best practices while maintaining realistic expectations of what can be achieved within current environments.

- ✦ *Most nutrition educators believe the primary responsibility for facilitating client behavior change is placed directly on them, yet these educators may be in a WIC organizational environment that may or may not value nutrition education.*

As a member of a profession (e.g., dietetics or nursing) nutrition educators have been trained to facilitate behavior change in those with whom they work. Most nutrition educators are highly committed, concerned professionals. They take their job seriously and believe change is not only possible, but given the appropriate conditions and supports, it is likely. Many nutrition educators in this study saw themselves as agents of change, although they said they



need time to process and adjust when they are asked to change. Nutrition educators wish to engage clients in the educational process in order to achieve the primary expectation of WIC—positive client behavior change. Yet several factors revealed in this study show that this expectation might be unrealistic.

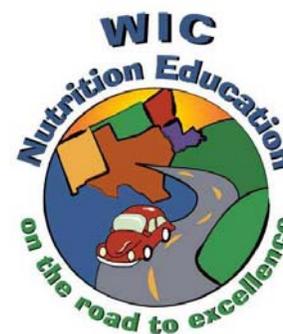
- ◆ *Nutrition educators face daily challenges in delivering their services.*

Time was the most consistently mentioned challenge to nutrition educators and administrators: time to spend with clients, time to determine clients' needs, time to try new ideas and implement change, time to discuss professional challenges with their colleagues. This lack of time impinged upon their ability to deliver quality nutrition education. Specific examples of time constraints and their impact include the impracticality of two 15-minute individual sessions over a six-month period in motivating clients to change; the physical, emotional and intellectual difficulty of teaching sessions back to back without a break; and the demands of travel required by many nutrition educators. In addition, some nutritionists were required to function in multiple roles, such as clinic coordinator, home visitor, and outreach worker.

Time was an issue for clients as well. Some educators mentioned that clients were not willing to give more than 15 minutes for nutrition education. Additionally, because of clients' schedules, it was often difficult to arrange groups—a method seen by many to reduce client resistance.

Staffing was another issue frequently mentioned. Some clinics did not have a permanent nutrition educator on site. At others, support staff were reported to be less than supportive in terms of their commitment to procedures that would enhance nutrition education (e.g., scheduling).

Although most clinics were well-kept, clean and had operating restrooms and water fountains, facilities and resources still presented challenges. Administrators and staff suggested many clinics had insufficient space for the types of services being provided, resulting in a high noise level, the appearance of being crowded and cluttered, and lack of appropriate accommodations for WIC clients (e.g., having diaper changing stations and breastfeeding rooms). Space for nutrition classes was insufficient or even non-existent at some clinics, making activities such as facilitated discussions impossible. Some WIC administrators stated that facilities were provided free or at reduced costs. These often were of inferior quality and not suited for WIC services.



This limitation restricts clinics in the number and variety of nutrition activities they can offer.

In terms of resources, most clinics had adequate furnishings but many did not have sufficient funds to expand nutrition education services. Comments indicated that the most restrictive resource was a lack of computers, leaving many local sites with limited access to intra-agency communications (e.g., email) as well as to the Internet (e.g., WIC Works).

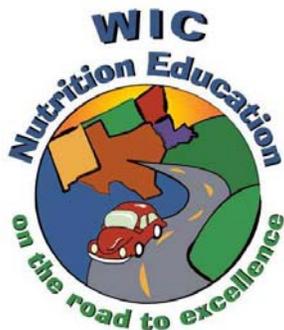
WIC clients were perceived as a challenge by some nutritionists. Nutritionists and administrators alike bemoaned the negative impact of not requiring WIC clients to participate in nutrition education. Mailing vouchers reduced the need for clients to come into clinics, reinforcing the lack of client interest in and time committed to nutrition education as perceived by many responding WIC nutritionist.

◆ *Comparison of Nutrition Educators' Perceptions of Clients and Actual Client Responses.*

Although information regarding reasons that clients enroll in or value WIC services, was collected from both groups, direct comparison of nutrition educator perceptions and client responses were difficult due to differences in methodology. Nutrition educators were asked what they thought clients valued most about WIC services, and their open-ended responses were categorized based on the UNR research team's perception of the most salient answers. In contrast, clients were given a list of possible reasons to enroll in WIC and then were asked to rate the importance of each reason based on a five-item Likert scale, ranging from very important to not at all important. Although these methodological differences make direct comparisons between the two groups difficult, some interesting information was gleaned.

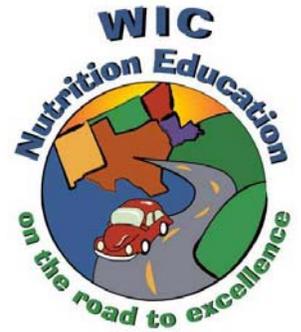
Both clients and nutrition educators alike acknowledge that WIC provides more than supplemental foods to WIC families. When nutrition educators were asked what clients value most, they provided a variety of answers that could be classified as tangible (e.g. food) and intangible (e.g. nutrition education, referrals, empathy, etc.) supports. Listed in the order from most frequently mentioned, reasons were as follows: food and medical services, social and other intangible types of support; information; their own personal health; their family's health; and empowerment.

When WIC clients rated the importance of possible reasons to enroll in WIC, the ranked ordering was their family's health; their



personal health; food and other products; nutrition information; and support from WIC staff. It should be noted that the number of WIC clients agreeing to these factors as being important ranges from 74-93%, indicating that all these supports were valuable to them.

- ◆ *Changing delivery of nutrition education to incorporate more discussion rather than just providing information does result in improved communication between nutrition educators and clients. However, this requires guided practice.*



Changes to nutrition education suggested during and following the VTC may or may not have fit into the attendees' professional paradigms. Those nutritionists participating in the intensive follow-up study were presented with guided activities to help them overcome their own resistance and increase their exposure to new ideas. Their experiences, related below, have tremendous implications for WIC nutrition education. Indeed, these educators demonstrated increased sensitivity and respect for their clients—two of the factors suggested by VTC attendees as critical to a positive learning environment.

Use of open-ended questions appeared to decrease client resistance. Specifically, clients responded with increased openness. This openness appeared to increase the likelihood of change. In turn, nutrition educators developed a more positive attitude towards their clients. One nutrition educator indicated that she would use this "new approach" in the future because it gives the client ownership of the session.

Asking open-minded questions also facilitated the understanding of what basic changes were possible for the client. While "clients ultimately must make the decision to change," educators realized that clients' perceptions, culture, family dynamics, and personal fears affected their willingness to change.

Nutritionists were able to critically distinguish the benefits and drawbacks of group versus individual counseling sessions. This is an invaluable skill because occasions arise when one technique is more appropriate than the other.

When dealing with groups, facilitated discussion was an effective strategy. Group discussion encouraged questions thereby increasing client participation. However, nutritionists may initially need to keep the discussion going by probing until a WIC client

responds. Individual education sessions may make it easier for WIC clients to trust and open up. These sessions also may be necessary before scheduling the client for group sessions.

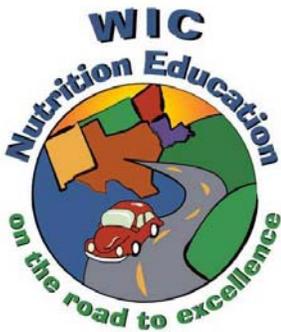
- ◆ *Although agencies may meet minimal Federal Regulations for staffing, some professionals and paraprofessionals may not be fully knowledgeable in nutrition or education.*

There are many, if not more, differences among WIC clinics and nutrition education delivery systems within each state in the SWR as there are between states. This is no more apparent than in staffing.

Of the 13 WIC administrators interviewed, 90% communicated that their agencies only had one staff member with some level of training in nutrition or in educational strategies, or had direct nutrition education experience. Many clinics did not have a nutrition educator on site daily, requiring the educator to travel between clinics to provide nutrition education services.

WIC Nutrition Services Standards (NSS) for Certified Professional Authorities (CPA's) recommends that local agency nutrition services be overseen by a nutritionist who possesses a bachelor's degree in the field of nutrition, has at least 2 years experience and has completed training on providing nutrition services. About 50% of the administrators interviewed indicated at least one of their staff members had a bachelor's degree. However, this degree was not always in nutrition. It is even less likely that persons conducting nutrition education received training in educational and counseling techniques, a component critical to quality education. Published standards for community nutrition educators (Ullrich, 1987) and the WIC NSS (USDA, FNS, 2001) could be used to prepare WIC educators.

During the new employee training period, over three-fourths of administrators reported using some form of observation (e.g., mentoring, coaching). Approximately one month was devoted to training new professionals. One month is insufficient to train a nutrition educator to become proficient in nutrition information, and in educational strategies. New educators need experience in the preparation, planning, practice, and evaluation of education techniques.

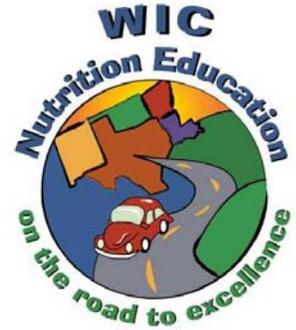


- ◆ *Commitment to professional development is critical to the overall effectiveness of WIC nutrition education.*

Most administrators interviewed commented on the importance of their staff participating in continuing education opportunities as a means of “increasing professionalism.” However, many nutrition educators and administrators expressed concern for sustained state support for WIC professional development.

Professional development was not seen as just an annual event, but rather as a continuous cycle of preparation, planning, practice, and evaluation, where colleagues could be involved in supporting each other in their learning. Of the SWR administrators interviewed, 84% stated their agencies provide moderate to high support for professional development. Most agencies underwrite yearly attendance at local, regional, or state level seminars and meetings that are either offered by WIC staff, public health agencies, or professional organizations.

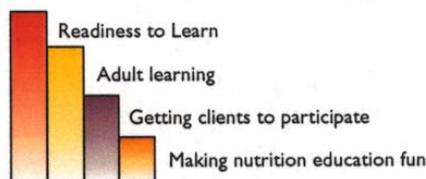
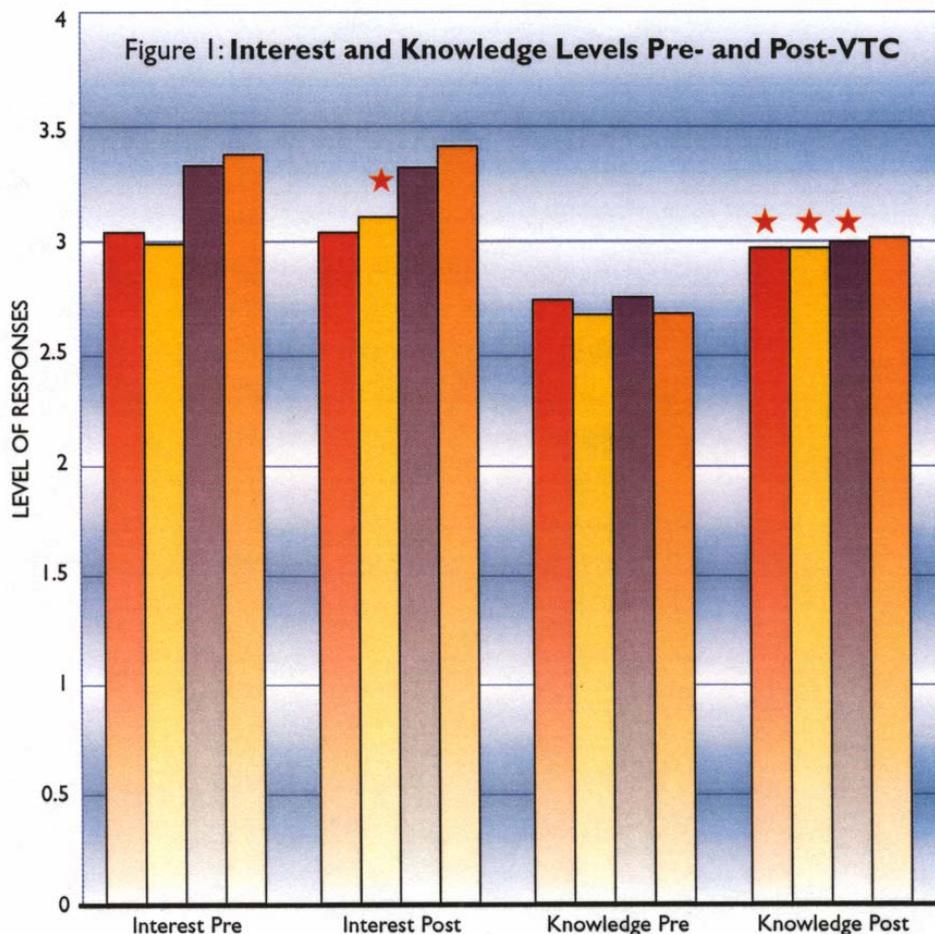
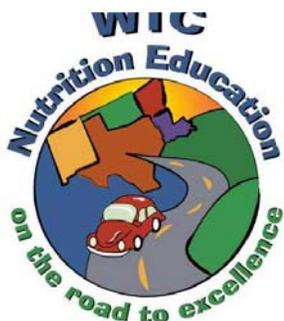
Local agencies had different profiles, depending on geographic location, and whether they were housed within another agency or served as a stand-alone site. Given these variations it is hard to imagine that any single federal, regional or state professional development opportunity would consistently meet the range of needs at the local level. Furthermore, federal and state WIC agencies should explore all potential avenues for professional development; promote staff participation; and directly offer educational improvement opportunities for every WIC staff member, including clerical and support staff. Finally, some administrators suggested that states could seek out and offer a variety of opportunities to assist local agencies in coordinating conference, meetings and other types of continuing education.



Effectiveness and Value of the Video Teleconference as a Training Tool.

FINAL CONCLUSION
The use of video-teleconferencing is an innovative, viable and valuable tool for educating and training a diverse WIC staff.

Discussion



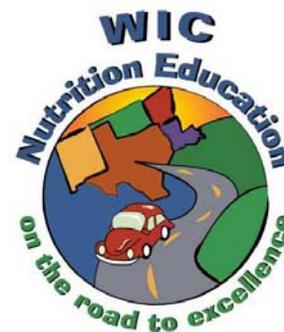
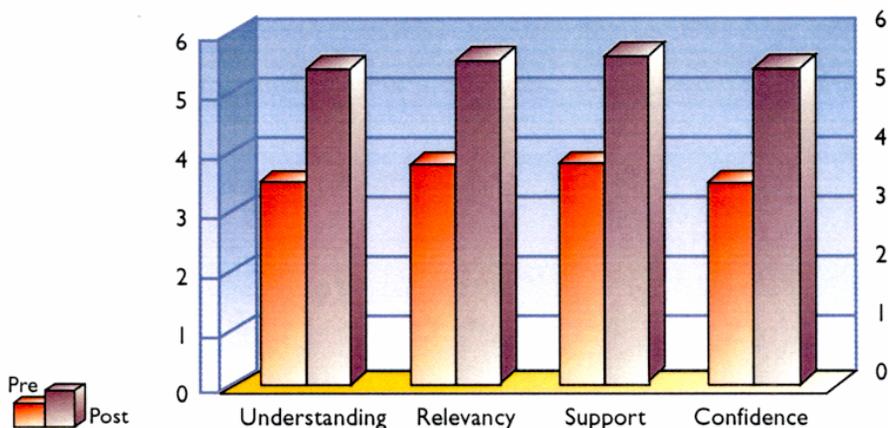
Stars indicate significant differences between pre- and post-VTC responses at the $p < .001$ level.

- ◆ Attendees reported positive and significant changes in their knowledge, interest, understanding, support and confidence from pre- to post-VTC.

Survey responses showed that nutrition educators' knowledge of relevant topics increased significantly between pre- and post-VTC (Figure 1). This change occurred for three of the four VTC topics – readiness to change, adult learners and getting clients to participate. A similar trend was noted for nutrition educators' interest in these topics.

Significant increases also were reported for the following personal attributes of nutrition educators ($p < .001$)(Figure 2):

Figure 2: Pre- and Post-VTC Responses



- ◆ level of understanding of the link between the topics and their role in WIC
- ◆ personal relevancy of information presented at the VTC
- ◆ likeliness to support use of VTC information
- ◆ self-confidence in ability to facilitate change in WIC clients' behaviors

The majority of attendees commenting on the value of the VTC (89%) provided positive statements; attendees also offered suggestions for improvement of future VTCs.

Attendees critiqued the VTC using a traditional tool that provided space for written comments. Table 1 presents the content categories that emerged from these comments as well as the total number of comments addressing each category, and the number of complimentary comments versus those that provided guidance for improvement.

In considering this issue, it is particularly noteworthy that most participants did not differentiate at all between a VTC and on-site modes of training, such as classes, lectures, or conferences. In fact, only 4 out of 564 comments stated a preference for an on-site conference over a VTC, while several comments indicated that this was not only the best video-conference they had attended but the best training, period.

Comments directed towards future use of the VTC reflect the diversity of expertise and experience of the attendees, which makes it difficult to structure an agenda appropriate for every need. Suggestions offered for future presentations included providing ideas for large classes; provided more discussion, demonstrations,

Table 1. Content and Breakdown of VTC Evaluation Survey Comments

Content Category	*Total number of comments	Number of complimentary comments	Number of suggestions for improvement
Value Usefulness of information and ideas presented	123	109	14
Speakers Individual speakers, speakers in general, and speaker attributes	135	96	39
General VTC as a whole	86	78	8
Content/Presentation Content areas and the difficulty level of material covered	155	55	100
Non-modifiable facilities/Environment Room temperature, space, technology, and ease of attendance	111	20	91
Preparation/Organization VTC organization, facilitator preparedness, usefulness of materials, and clarity of instructions	55	15	40
Agenda structure Timing and length of specific agenda items, length of VTC	160	10	150

*Total comments do not equal 564 as many comments addressed more than one content category.

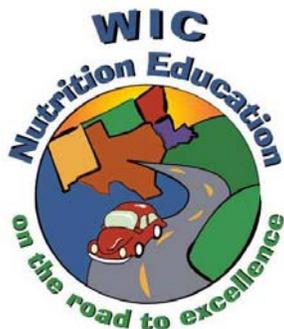
and practice sessions related to the implementation of ideas presented; and changing the agenda to include more time to complete on-site activities. Table 1 presents the content categories that emerged from the analysis as well as the number of total comments addressing each category. The number of positive or complimentary comments versus those that provided guidance related to conference improvement is also noted.

◆ *The VTC reached a diverse audience.*

A range of WIC employees—from clerical staff, paraprofessionals, nurses, and dietitians, to administrators—were able to participate together in viewing and interacting during the VTC. This ensured that messages reached everyone involved with WIC within a clinic, local agency, state and region. Approximately 3,000 attendees from the 16 state agencies in the SWR and another 21 states outside the region viewed the VTC.

◆ *Potential savings in training cost.*

In general, it is difficult to directly compare the cost of VTC versus an on-site conference as the scope of pre-conference activities varies greatly. Putting on a VTC of the magnitude required



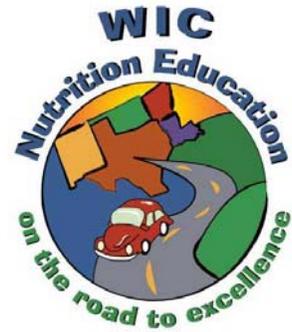
for *On the Road to Excellence* required significant time and effort that was difficult, if not impossible to accurately quantify. Costs of speakers, local facilities, material reproduction, etc. are costs that would be incurred with any conference. This VTC had the costs of substantial

pre-conference planning and production including pre-recorded video segments; graphic design elements; moderator and speaker script development; hiring or contracting of professional staff including the producer, video production staff, actors and on-camera talent; on-site makeup and costume talent; and production and studio costs. Some on-site conferences incur these costs in whole or part as well, depending on the magnitude of the conference. However, teleconferences frequently use more visual pre-recorded portions due to the nature of the medium. Even for an elaborate VTC such as this one, though, the substantial reduction in travel costs and the ability to reach a far larger audience greatly underscores the value of this medium for providing cost effective consistent training to a very large number of participants.

- ◆ *VTC attendees acquired some skills to provide meaningful nutrition education to clients. However, those participating in post-conference follow-up activities appear to have gained greater skills in incorporating the VTC information into daily practice and demonstrated increase sensitivity and respect for their clients.*

Guided practice appeared to enhance the adoption and internalization of the information discussed during the VTC. Several follow-up activities related specifically to the educators and their personal attitudes, beliefs and practices towards changing nutrition education for WIC clients. These included facilitating group discussions where a nutrition educator guided the group through an exchange of ideas; completing tasks directed to overcoming client resistance; providing nutrition education in groups versus with individuals; and sharing perceptions of the role of nutrition education in their clinics.

Overall, the VTC and subsequent follow-up activities were viable vehicles for moving WIC nutrition education *On the Road to Excellence*. Combining distance education with on-site and post-conference supportive guidance can provide WIC staff with information, skills and insights needed to extend and improve their effectiveness.



Significant Factors Supporting the Quality of WIC Nutrition Education ¹

Factor	Low Support ² Minimal Federal Regulations (FR) ³	Moderate Support ² Recommended Criteria (RC) ³	High Support ² Best Practices (BP) ³
Administrative Policies	<ul style="list-style-type: none"> ● Mandatory federal/state guidelines ● Focus on quantity vs. quality 	<ul style="list-style-type: none"> ● Changes accepted and/or adopted as a standard strategy ● Client benefits are the primary focus 	<ul style="list-style-type: none"> ● Creative/flexible ● Focus on quality with quantity ● Change is encouraged as a motivator for staff
Qualifications and Characteristics of Nutrition Education Staff: for Professionals	<ul style="list-style-type: none"> ● Mandatory federal/state guidelines ● Nutrition education is not necessarily a major interest ● Low respect/sensitivity to clients evident 	<ul style="list-style-type: none"> ● BA degree but not in nutrition or health ● Experience with WIC clients ● Availability of high risk counselor, although not on a daily basis 	<ul style="list-style-type: none"> ● BA & experience in nutrition ● At least one professional available daily, inclusive of high risk counselor ● High client sensitivity and respect ● Open to new ideas, techniques and experiences
for Paraprofessionals	<ul style="list-style-type: none"> ● No training ● Little or no sense of ownership/value for nutrition education ● Not working as a team member 	<ul style="list-style-type: none"> ● Trained to do certifications and substitute in the classrooms when professional staff are unavailable ● Able to conduct individual counseling sessions as needed ● Non-nutrition education staff support/value of nutrition education for clients 	<ul style="list-style-type: none"> ● 100% receive standardized training in nutrition ● Understand, support and value nutrition education ● Able to substitute or conduct classes and counseling sessions ● Open to new ideas, techniques and experiences
Facilities	<ul style="list-style-type: none"> ● Waiting/lobby area serves as multi-purpose room ● No private office/counseling space ● Use of clinic space for WIC services has lowest priority within larger facility 	<ul style="list-style-type: none"> ● Shared use of private offices/counseling space ● Small, limited classroom space ● No food demonstration areas 	<ul style="list-style-type: none"> ● Sufficient space to accommodate varied nutrition education structures ● Private counseling offices ● Classrooms ● Food Demonstration areas ● Waiting area/lobby
Resources: funds, technology, supplies and curricula	<ul style="list-style-type: none"> ● No/limited computer access for communications via Internet & email ● Insufficient funds to support nutrition education with consumable supplies ● Facilities are functional, with no added aesthetic or client-centered amenities (e.g., toys) 	<ul style="list-style-type: none"> ● Shared computers; limited access ● Funds are available to support nutrition education with some consumable supplies and curricula ● Facilities are aesthetically pleasing but no additional client-centered amenities 	<ul style="list-style-type: none"> ● Computer for every nutrition educator as well as certification/voucher system ● Adequate supplies to support broad-based nutrition education and varied structures, including demo kitchen ● Very client-friendly atmosphere
Continuing Education (CE) and Professional Development (PD) Opportunities	<ul style="list-style-type: none"> ● Support for one or less PD/CE opportunities per year 	<ul style="list-style-type: none"> ● At least 2 PD/CE opportunities offered annually ● Internal training system is offered 	<ul style="list-style-type: none"> ● At least 2 PD/CE opportunities offered annually ● Agency incorporates CE into employee action plans or into regularly scheduled staff meetings ● Both formal and informal PD/CE opportunities are encouraged independently and collectively ● Staff are recognized for growth and performance
Nutrition Education Delivery System Structures	<ul style="list-style-type: none"> ● Nutrition education services consist mainly of informational hand-outs and bulletin boards ● 2 client contacts per 6 month period, with one being the certification ● No classes offered 	<ul style="list-style-type: none"> ● Individual counseling and/or classes are offered, but conducted in a nominally interactive style (e.g. video/lecture) ● 3-4 client contacts per 6 month period ● Large classes often the norm ● Breast Feeding Peer Support Groups are evident 	<ul style="list-style-type: none"> ● Full range of nutrition education: informational hand-outs, one-to-one counseling, classes, and food demonstrations ● Interaction and active participation ● Both small and large groups and facilitated discussions ● Monthly client contacts are norm ● Mentor Moms are recruited in addition to Breastfeeding Peer Support Groups
Anticipated Educational Outcomes*	Cognitive	Cognitive, Affective	Cognitive, Affective, Behavioral

* Educational outcomes are categorized by changes in three domains: cognitive (awareness, knowledge, skills), affective (beliefs, attitudes, perceptions, problem recognition), or behavioral (actions, activities, practice).

¹ Can be used as an assessment tool for determining overall quality of WIC Nutrition Education

² Data Source: combined results of the WIC Evaluation and Follow-up Study, University of Nevada, Reno. 2002

³ Denotes language found in **WIC Nutrition Services Standards Report**. (USDA FNS) Oct 2001. 51 pages.