Technological Whizzes - Winning Approaches to Providing Nutrition Education, Electronically!

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Novel Techniques in the Delivery of Nutrition Education Using Videoconferencing Technology

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It is a pleasure to be here this afternoon and I hope that you will take some of this information back with you to your States and other areas. Hopefully, everyone has either heard of, seen, or experienced videoconferencing at some point. Videoconferencing is real-time interactive communication utilizing onscreen video and live audio. The technology is typically used for the purpose of sharing face-to-face information among individuals that may be located many miles apart. The concept is virtually simple--you want to move the information, not the people.

When initiating conversations about implementing videoconferencing in a WIC setting, we asked the question, "How we can do this--how can we share nutrition education using this new type of delivery method with our clients?" By understanding the capabilities of the technology, we were able to determine that the nutrition education required by USDA could in fact be delivered through videoconferencing since it was face-to-face and in real time. In addition, we recognized the great potential for staff training, which seems to be the easiest thing to accomplish with this kind of technology. We have also discussed the possibility to conduct certifications at some point in the future, with the appropriate approvals and FNS protocols of course.

Even this conference--could it be videoconferenced? Living in Georgia, with the recent hurricane emergency, my USDA counterpart said, "Regina, there is a possibility you might not be able to go. The State might not release you, but maybe you could be videoconferenced into your videoconferencing session." I thought, wow, that would take a lot of technology, but seriously considered it. Thankfully, I was able to come.

Have you ever heard of the opportunity to go online and get your Masters degree? You could have a camera on your monitor to be a part of the discussion through videoconferencing. In Georgia, we have physicians who practice telemedicine throughout rural areas in the health districts to conduct procedures, such as perform a colonoscopy, so the students and internists back at Emory University are able to see everything that the rural health physician sees.

So, we thought that, in our situation, maybe videoconferencing could be used to streamline the delivery of WIC nutrition education as well. We deduced that low-, moderate-, and high-risk group or individual nutrition education contacts could be completed utilizing a videoconferencing delivery system. Multiple or individual clients could be set up in remote locations with the technology at their sites and staff could educate on various topics. Additional staff training topics may include civil rights, providing customer service, clinical nutrition topics, or new VENA protocols. The opportunities are endless.

This would streamline nutrition education and potentially reduce travel time and expense given the recent emergency events and gas prices in Georgia going over $5 per gallon. When a nutritionist has to travel 2 hours to a clinic to see two participants, and one of them is a no-show, and then she travels 2 hours back to her office location, that may be 4 or 5 hours of wasted State time, energy, and resources that could now be tapped into. She could be sitting at a health department or clinic site, emitting her services out to the remote locations. Therefore, anyone coming in throughout the day could be connected to her, and she would be able to engage in a real-time nutrition session with them. This creates a better utilization of staff time and resources overall.

Have you have ever experienced a possible mixed message delivered in your program? Perhaps from a different provider or family member that provides conflicting information than what you wanted to convey to your participants. Has that happened to anyone? I see some hands. Good--I am not alone. That happens in Georgia, too. There may be inconsistencies and mixed messages provided out there. Even within our local agencies, sometimes one agency or professional might not be saying something exactly the way it was originally intended. So, we wanted to provide concise and consistent lessons to teach during the pilot in order to get a stringent evaluation of how those lessons were being perceived by clients.

In scheduling participants, we needed to figure out how to schedule participants qualifying for the program with different risks identified. They have different risks and different voucher pickup times, and we wanted to make sure that we didn't miss scheduling them for a session they would benefit from. This was a very big component--providing the group and individual nutrition education sessions and tracking the nutrition education that was delivered. We thought about all these things in designing the methodology for this pilot before it began.

A milestone accomplished thus far, is that we completed a needs assessment in our local participating agencies. We have three clinic sites participating in one local agency and needed to determine their capacity; i.e., Do they have the space? Do they have the staff? Do they have the time to implement something of this nature? And do they have the desire? If they weren't brought into the process early on, then it obviously wouldn't work very well. We determined what the top 10 risks might be for qualifying a participant for the WIC program and certifying them. We then developed each of the tools and protocols that went along with those tools. You would be surprised at how many people don't know how to

complete a simple sign-in sheet, a pretest, or posttest. So, we had to develop them to make it easier at the local level.

Regarding researching and securing the equipment--we had to decide whether to just use what they currently had in place or to give them new equipment. One of our local agencies uses telemedicine in nine of their clinics already. With the physician schedules and everybody else using that equipment, we thought that it is best to give them new equipment designated for the pilot. We then could potentially utilize the nine additional sites equipped with the telemedicine technology as education vehicles in addition to the three that we provided. So, in that local agency, we will have the capacity to deliver nutrition education through videoconferencing to 12 different sites.

The sixth highest risk code identified for certification in Georgia was "short stature," but we didn't feel we could impact a growth pattern change in the short time span of the pilot. So, we started with the top nine codes. Underweight surprisingly was the 11th. So, underweight made the list for module topic development. Since one of our local agencies has a 40-percent Hispanic clientele, we wanted to make classes available to them in Spanish as well. We created the pretest and posttest in Spanish and had bilingual interpreters available for those classes.

The staff training conducted prior to implementation included all of the materials and resources that we previously developed.

Here are the lessons we learned:

- Scheduling proved to be a challenge,
- High-risk documentation protocols were needed for noncomputerized systems,
- Staff desire to increase sessions offered,
- Staff desire to expand lessons to include general topics for family-centered secondary education,
- Interpreters are necessary to serve the Hispanic population, and
- Trained facilitators to monitor the equipment and participant tools are beneficial.

Scheduling is definitely a challenge when you are trying to schedule participants related specifically to their risks. No-shows were initially high and attendance was lower than anticipated. We had maybe three to nine participants at each session, including all three sites. We desired to increase that number to potentially six at each site for a total of approximately 18 in the group with all three sites connected.

High-risk documentation protocols are definitely needed. If you want to provide high-risk contacts with videoconferencing, what if each site is not connected to the same computer system? In order to provide an accurate high-risk contact, you need to have access to the client's chart. We currently have facilitators in the remote locations that are signing onto the videoconference before the lesson starts and before the client comes into the room,

to educate the dietitian on the participant's previously triggered risk codes and provided education. The nutritionist is then able to adequately counsel the participant on their pertaining risks.

The staff desire has definitely been to increase session topics offered. The top nine topics were based on the theoretical model that we used to identify the top 10 risks for certification, but the staff wanted to provide education on additional topics as well, such as picky eaters, healthy snacks, etc. That is wonderful news, because now they feel empowered to use the equipment and they want to share more knowledge to our program participants utilizing this delivery method.

Interpreters and trained facilitators were extremely beneficial as well. The interpreters allowed us to provide these services to our growing Hispanic population receiving program benefits. In addition, we could not have done some of the pilot tests without the trained facilitators, because they helped implement the pretest, posttest, and sign-in sheets, as well as assisted with the operation of the videoconferencing equipment for each session. The WIC clerks have so much to do already, and we didn't want to burden them with one more thing to do in the clinic during the first phase of the pilot. These facilitators were wonderful in helping us get the process rolling. When the pilot project concludes, we may need to figure out ways to incorporate the current clerical staff in the clinic into the delivery system. However, we didn't want to change too much too soon in order not to scare everybody away and make them not want to participate.

In Georgia, we started with videoconferencing in May of 2005, it seemed like an impossible challenge at first, but now we are going into our fifth month, and going strong. We initially thought, "How is this going to happen? How is the technology going to be implemented? How are the staff going to like giving education this way? How are the participants going to enjoy receiving it?" Well, we are off to good start thus far and have even conducted some preliminary customer satisfaction surveys. Unfortunately, we don't have all the data back, since we are still in the first phase of the pilot. But, we are told the participants are commenting, "I like to be on TV. I can see myself up there." They feel like they are truly a part of a special nutrition class. They can't just sit in the back and hide anymore or just listen and look at their brochure. Now, they are actually involved in their nutrition education delivery, so we feel there IS light at the end of the tunnel!

I couldn't conclude without acknowledging our wonderful FNS staff at the Southeast Regional Office, our WIC State staff, and our chief epidemiologist who helped with all of the protocols and tools that we used for data collection and implementation of the pilot. Thank you.

HealthSmart - Computer Based Nutrition Education that Works!

Linda R. Stoll, MPH, Director, Child Obesity Program, Education Division, Horizon Software International, Loganville, GA

Thank you very much. I was the director of the school lunch program in the Mat Su Borough School District for 21 years, but my love has always been nutrition education. I started out as a WIC girl before I went to the school lunch program, and I always joked with my Superintendent and told him that the only reason I was talked into doing school lunches was because it gave me a way to get into the classroom and play with the kids. During my last 2 years in my school district, I had the opportunity to develop two interactive CDs that teach nutrition to kids.

I made a presentation to Horizon Software, and they have an interest in nutrition education. So, they asked me to write a comprehensive nutrition education curriculum that would use the interactive CDs as the student resource. I had to laugh when I saw that the name of this session was "Technological Whizzes." My boss would die if he knew that I was up here in front of people claiming to be a "technological whiz" because I certainly am not. I came kicking and screaming into the computer age, and I will present to you "HealthSmart," the nutrition education curriculum that we have developed.

For people who have been involved in child feeding for years, the child obesity crisis as it cropped up was not a surprise. We have seen children's bad eating habits for years. When it started being published in national magazines, such as Newsweek and Time which had it on their covers, then, the general public started realizing the problem. Numbers have increased not just in adults, but in children. The Surgeon General has been doing a marvelous job of using his presence to let people know the risks associated with it. He has said publicly that, if the trend is not reversed, one in three babies born in the year 2000 will develop Type II Diabetes. When I was in college, there wasn't even Type II Diabetes--it was juvenile onset and adult onset diabetes. Unfortunately, all these numbers that talk about the health risks associated with it aren't the ones that have been getting the attention of the right people. It is the dollars associated with the obesity epidemic, and I know this group is familiar with that.

Every State, every region, every department in the government is doing some kind of a study, conference, or taskforce to figure out what to do about it. But, it is actually a pretty easy problem to solve. You have to teach kids to eat better and get them to be more active. That being said, it is a hugely complicated solution to implement. We don't just need to educate kids, but we need to educate parents and teachers. We need to make environmental changes in the school and community.

So, everyone is struggling, but we agree that the first step has to be to get the kids to know the information that they need to know. They have to make better food choices and be aware that they have to have activity in their lives every day. Horizon Software, the company

I work for now, provides point-of-sale software to school lunch programs. We provide back-of-the-house software, menu planning, nutrient analysis, inventory, etc. We also feel that if we are going to help people provide meals to children, we have an obligation to help educate children to make better food choices when they are selecting those meals. That is where "HealthSmart" came in.

The curriculum is written using the CDC National Health Education Standards. If you are going to teach health to kids, you have to use CDC standards as your basis. But, we also recognize that each State has their own standards and learning objectives that they want kids to accomplish. We have done a very thorough job researching the 50 State standards and have included those as learning standards in our curriculum.

"HealthSmart" uses the interactive CDs "Good Food and Play" and "Good Food and Play Junior." Kids pop the CD in, they learn and play games, and the rest of it is a comprehensive portion designed for teachers. It comes in paper copies, like every other CD that you have seen, but this is also available on a CD. So, teachers can pop the CD in and have it totally electronic. The games take 5 to 10 minutes at the most. Kids can go back and play as many times as they want and put different choices in each time, but the games themselves are not long. They would go through a 5- to 7-minute lesson where they are learning what foods go in what groups. Then they would play their game as many times as they wanted to. The Good Food and Play Junior is designed for the little guys. It is for the kids who don't have reading ability, like 4- to 7-year-olds, and it would work very well in a WIC setting.

The "Good Food and Play" CDs that we use as a student resource offer good, sound information. I am proud to say that we won the Conference Choice Award at the last FNS National Nutrition Education Conference in 2003. People liked the CD and thought that it was a good tool. We had it reviewed by the National Environmental Health Association, and it is listed on their resource site as a highly recommended resource.

We wanted the CD to feel familiar to the teachers. We wanted it to feel just like a lesson plan book to them and wanted it be easy to navigate. They click on hyperlinks and the little pages of the book turn and take you to the lesson you need to do. It is easy for teachers to operate and has a very familiar feel to them. We have given them all the information they need to teach this curriculum. If we ask them to lead students in a group discussion, we are going to tell them the questions that they should be asking in this group discussion and the answers that they should be eliciting from the students as they lead the discussion. We do not expect classroom teachers to be experts in nutrition. They have many other things that they are responsible for, so we are providing everything they need to complete this curriculum.

The student worksheets that are used for the lessons are very well developed. We brought in the experts such as the kindergarten, first-grade, and second-grade teachers, and had them tell us what was cognitively appropriate for each grade level. The worksheets are fun for kids to do and can be sent home with kids just as easily as done in class, so this is an opportunity to involve Mom and Dad in the learning as well. Complete testing materials are

included in the curriculum, so you can test knowledge before and afterwards to document that kids are getting the information that you want them to have.

We are excited to say that, as of last week, we have completely upgraded our CDs to include the 2005 *Dietary Guidelines* and *MyPyramid*. In the CD, the students go through *MyPyramid* and they learn what foods go in what groups. We then play a couple of games. They then learn how many servings you need from each of the groups. But first, they go in and select their age and their gender, and they come up with a customized calorie plan. It tells them "Your calorie plan is 1800 calories." Every game from that point on is customized for their calorie level. So, the CD is really a useful learning tool for them. We encourage them to use the website as much as they possibly can, to go onto *MyPyramid*, and learn more about the information there.

We have done a good job of making connections to core subject areas. If one of the lessons would work as a science, math, or language arts unit, we have done those identifications for the teacher. We tell them it can be a letter writing unit, or a comprehension unit, or a writing unit. Teachers in classrooms are encouraged to include nutrition education if they know it can count for something else as well.

Both the curriculum portion and the CDs have been designed to include families as much as possible. We know with young children that parents are still making the majority of the food decisions. We also know that there is a whole generation of parents out there who probably don't know a whole lot more about nutrition and activity than their children do. So, we are trying to include them as much as possible. When you first put the CD in, it shows parents and kids where to click. It presents the information to the parents in a fast, informative fashion without the interactive games, although they certainly can go in and play the games if they want.

The curriculum is designed with a fairly flexible teaching plan. Teachers could teach it 30 to 45 minutes a week for 3 weeks and be completely through. We have had PE teachers who teach it once a week throughout the course of the semester. We have had others who pluck particular units out and just use those that fit into their teaching plan. We think it is fairly easy for teachers to use.

We did seven pilots in the spring of 2005. If I could change one thing, I would never do an educational pilot in the spring. Everyone in these school districts had already had a nutrition unit before we were able to start our pilot, but we still saw a 32-percent increase between their pretest score and their posttest score after doing "HealthSmart." We had pilots in Pensacola, Florida; Mississippi; Glens Falls, New York; Fairfield-Suisun, which is Sacramento, California; and the Matanuska Susitna Borough School District. The results that we got on the pre- and posttests were very encouraging. Even more encouraging were some of the comments that we got back. Every teacher who did it said the kids loved the CD--they play it over and over again. You know they are getting the information that they need.

Good Morning Mississippi interviewed the Pascagoula school district and, in their segment on *Good Morning America*, they interviewed the mother of a kindergartner, and she said, "You know what? This is almost too much for me to bear." She said, "I have busy mornings and I don't always get around to eating breakfast. So on the way to taking my child to school I stop and buy a cup of coffee and a box of donuts, and when I get back in the car my daughter said, 'Mother, both of those come from the top of the pyramid and they're not an appropriate breakfast.'" So she said, "I'm not sure that I'm really appreciative of all this new-found knowledge my daughter has." So, we know it is working with the little guys if they are bringing it home and telling it to their parents.

We are really excited about another opportunity that we have. As I told you, Horizon does software for school lunch programs. One of the things we have is the point of sale, the little cash register that the kids go through. We have something called Meal Pay, which is an online payment system. Parents can put money on using their credit card and it is automatically on their kid's account. A feature that it has is called purchase history. It allows moms and dads to go online and see exactly what foods their students are buying and at what time. We think that if we tie this with "HealthSmart," we will get some fantastic tracking possibilities. We think we can flag certain foods, such as French fries. We think we can flag deep-fried things, salads, and fresh food and actually document whether children's buying habits are changing from before the curriculum to after the curriculum. We have a couple of pilots that we will be starting this fall that will be using the "HealthSmart" curriculum and the purchase history on Meal Pay. We are hoping that we are going to see some real changes not just in knowledge, but in the habits that the kids are practicing.

I tried to find out who made this little quote, "It takes a village to raise a child," but if that is really true, we know that we have to expand our village if we are going to make changes in the way that kids are eating today. Does anyone have questions for me?

Wichealth.org: An Internet-Based Approach for Parent-Child Nutrition Education

Robert J. Bensley, PhD, Professor, Health, Physical Education and Recreation Department, Western Michigan University, Kalamazoo, MI

I want to share with you a WIC-based parent-child nutrition education project we have been implementing over the last 3 years, which is Wichealth.org. This is a seven-State project, including six Midwest States and Washington. Wichealth.org has been funded by the USDA and individual States. I will explain what this project is and what we have found in the 3 years that it has been operational.

First of all, we have a tremendous resource out there--the Internet--which is probably the most underutilized resource we have ever seen. We know that one great advantage of

using the Internet is that we can serve many people at low costs, and even more with the free, wireless connections that are popping up all over the place--the whole concept of the Internet is that it has become a free type of service.

With the Internet approach, we can tailor information to individuals. Rather than a one-size-fits-all approach, we can take a singular approach per individual. We know that, with the Internet, time is not limited. One can access the Internet anytime, anywhere. We found that there is a huge trend to use the Internet late at night, around midnight. We get comments that WIC mothers submit, such as "You know, this is great because I've got the kids in bed. I'm hanging out. I've got time now and I'm doing it." This is at midnight.

The benefits of using the Internet for WIC clients are that it is easy, fun, and convenient, and we can target interests and needs. From a WIC standpoint, we can also stage readiness to change. For WIC staff, we found that wichealth.org saves staff time. Just imagine 80,000 clients that are not attending educational sessions. Wichealth.org allows staff to follow up with clients. The information Wichealth provides the client--which they bring back to the WIC office at the next visit-- relates to what stage the client is in, what module were completed, what information was accessed, and an action plan to undertake. For the WIC staff, it allows one more avenue for reinforcing stage-specific information around parent-child feeding behaviors.

Wichealth was developed because we wanted something innovative, new, and different in relation to how we deliver nutrition education. What more can be done other than the traditional classroom type of education? We wanted to make education more targeted. We found that, as we were doing our initial assessment, a number of clients were saying, for example, "The only thing available for me at this day and time when I come to the WIC office is a breastfeeding class, and my child is 4 years old. So, I just attended it anyway because I wanted to get the secondary contact completed so that I could get my WIC coupons and leave."

We based this whole project on a theoretical approach using the stage-of-change transtheoretical model. We use a stage-based approach, coupled with persuasive communication, which is both transactional and response-dependent. These two concepts, when you put them together, are the type of communication that occurs when you are talking with an individual: For instance, I say something; you process that; you respond to me, which then leads to another comment. Through Wichealth, we are really trying to create an artificial intelligence--not trying to replace individuals--in order to have a low-cost option. Wichealth also utilizes the behavior intent concept of the theory of planned behavior and Ellyn Satter's division of responsibility related to parent-child feeding behavior.

We are not taking a traditional website approach where you have a hierarchy list of things on which to click. We are not using that approach at all; that menu-driven sort of approach. I am not saying that that's bad, but we wanted to have something that was more interactive than that. We use existing information on the web, which we call end nodes. These end

nodes are the content and skills, and most of these come from WIC, Extension Service, universities, and government resources. There are all sorts of resources that currently exist on the web. We are just providing an avenue for directing the individual to that information, which is stage-appropriate and interest-level appropriate. All of our messages on the screens try to mimic the conversation that would occur. So, there is feedback, an empowering statement, information, and a questioning process. These make up the persuasive communication approach.

In terms of maintaining the end nodes, we use an automated checking system that operates twice a week. We have a staff member who checks end nodes twice a week, and we have requested the end node owners to identify or email us when a change occurs. Typically, we find that few end nodes change. So, there are not great changes to end nodes, especially since we are not talking about fly-by-night organizations, but rather credible sites, such as USDA's *MyPyramid*. The seven States and representatives from the State WIC agencies review all of the end nodes, the comments, and wording to make sure that it is WIC-specific and that it is connected with and piloted with the clients before we link to it from the site.

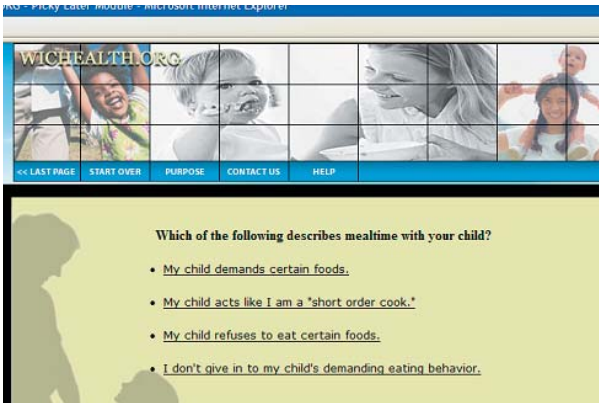
Upon completion of the module, a user receives a certificate of completion. It identifies the module they completed, where they started, the stage they started in, the stage that they ended in, and what they plan to do with the information they learned. When they sign up for Wichealth.org they are told that at the end there is a certificate of completion that they bring back, which will evidence completion of their secondary contact.

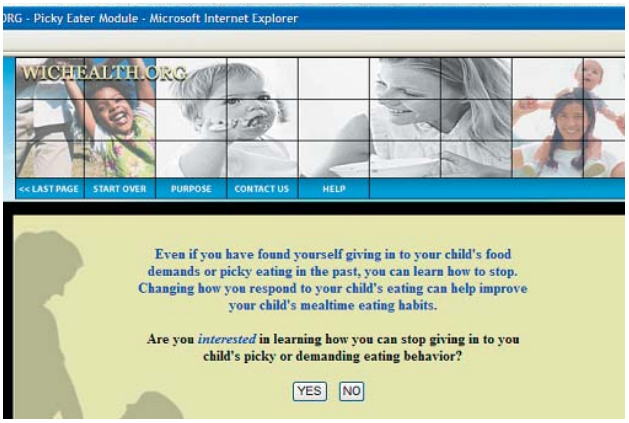
The topics of the eight modules we have implemented to date include breastfeeding, physical activity, postpartum wellness, trust your child to eat enough, make meals and snacks simple, secrets for feeding picky eaters, creating good eating habits, and helping your child make good eating choices.

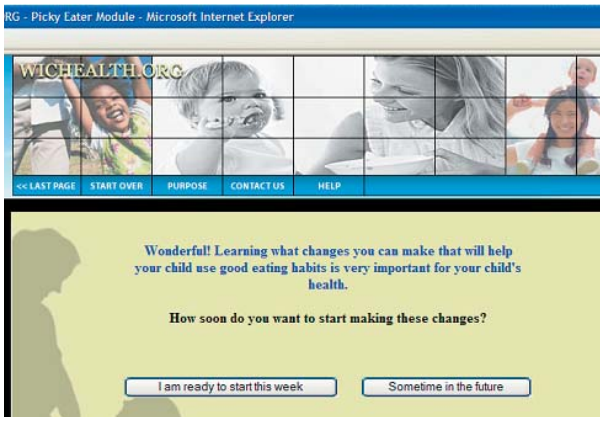
For example, accessing the Picky Eater module results in the initial question "Which of the following describes mealtime for your child? The user's choices are:

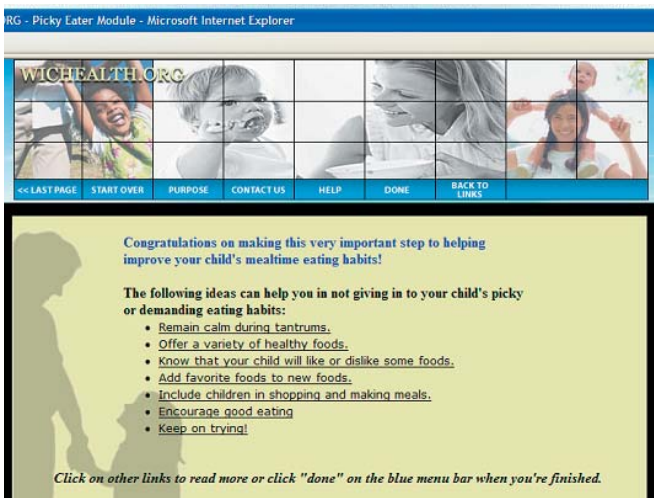
- my child demands certain foods,
- my child acts like I'm a short-order cook.
- my child refuses to eat certain foods,
- I don't give in to my child's demanding eating behaviors.

They have an option of selecting one of these.









If the client indicates that “my child refuses to eat certain foods,” this is a picky eating situation for the parent. The client receives empowering feedback--“You are not alone.” Many parents and caregivers find their children are picky eaters and refuse to eat certain different types of foods. Parents and caregivers then sometimes end up giving into these food demands. The next question: “Do you often find yourself giving into your child’s picky

eating demands?" may elicit a response "Yes, I do," resulting in the client clicking on "yes." The next screen provides the response feedback: "Even if you found yourself giving in to your child's food demands or picky eating in the past, you can learn how to stop." At this point, the client receives more information, followed by the question: "Are you interestied in learning how you can stop giving into your child's picky or demanding eating behavior?" If the client is interested, then "Yes" is clicked. The following response that the client receives is "Wonderful. Learning what changes you can make that will help your child's good eating habits is very important to your child's health. How soon do you want to start making these changes?" This then provides the client with an option: "I am ready to start this week," or "sometime in the future." Let's pretend the client clicks: "I am ready to start this week."

What stage is the client in based upon from this scenario? The client has a picky eating problem, right? She is interested to start this week. So, she is in a "preparation" stage. The client starting stage was identified without having to take a pretest. We have identified that the client is starting in a "preparation" stage. We store that in a computer database behind the scenes. Once they get into the stage, they access the actual information. We have targeted the person, tailored her into the stage, and found out where she is in relation to her interests. It is at this point that we are going to give her stage-specific information.

The client would then see on the next screen a list of typical conditions or issues that WIC local agencies have told us relate to "preparation" stage picky eating issues:

- Remaining calm during tantrums,
- Offering a variety of healthy foods,
- Knowing your child will like or dislike some foods,
- Adding favorite foods to your new foods,
- Including children in shopping and making meals,
- Encouraging good eating, and
- Keep on trying.

These are all preparation-oriented. If I click on one of these (such as the first one), it connects me to the actual end node itself, in this case, from the University of Minnesota Extension Service relating to temper tantrums. So, the information clients get to has already been identified by nutrition experts. Through Wichealth we are just tailoring it and providing access right to the individual.

When the individual is done learning, she then has the option of indicating, based upon what has been learned, if she is ready to move forward. This basically means she is ready to start taking action. The next screen that appears is the "action" stage with corresponding action stage issues and end nodes. This is where stage progression actually occurs. If in contrast, the client does not chose to progress forward but rather decides that she is finished learning and says, "I'm done. I'm completely done. I don't want to progress anymore," then the question comes up, "Why are you giving into your child's picky eating behavior?" The client provides information that we then use to aid in developing new end nodes.

There is a small online survey clients complete where they indicate what they are willing to start doing now to make changes. Once the survey is submitted, they receive a screen that has the certificate of completion, which identifies the module, starting stage, ending stage, and what the client is planning to do with the information learned. This certificate is brought into the WIC clinic at the next visit. The clinic can use the information from the certificate as a starting point during the next visit. At the next client appointment, the certificate can be pulled from the client file and the staff can say, "Oh, I see that you were going to try to start making changes. How have you been doing with that?" This provides the clinic with the ability to use Wichealth for initial triage providing a starting point for the next counseling session.

Our evaluations we have been completing over the past 3 years are based on 80,000-plus clients. Some important findings include 82 percent of all clients have computer access from home, work, or parent's or friend's home. This is across the board, across all the States, across all 3 years we have been conducting evaluation. We have had extremely consistent results over the past 3 years. We also find that not all clients, but a majority of clients, are making some sort of stage progression during their Wichealth session.

We found that those, to whom this approach is most geared, tend to be in preparation, action, and maintenance, which makes sense. Those who are seeking alternative education are going to be more active toward change. This has allowed the local agencies to identify individuals who are in the more active stages, and move them into Wichealth.org so they can concentrate more in clinic offerings on the contemplation- and precontemplation-stage clients.

There are a number of challenges, such as constantly being able to stay ahead of the technology game--which is changing every day--and trying to maintain end nodes. Since we do not own the end nodes--we get permission to link to them--we try to ensure they are constantly up-to-date. We are adding two modules this year. In addition, we received a USDA Special Projects Grant for developing two fruit and vegetable modules and testing those against traditional education. We are consistently working with other States or looking to partner with other States so that they, too, can move forward with clinic nutrition education. We are also constantly looking at new technologies and how to add those. One other piece is that we do not have a Spanish speaking option at this point, but we are looking at trying to locate funding to translate everything on the site so that it is bilingual.

This project involves an innovative use of technology, and we are continually adding modules. I encourage you to go to the web and take a look at Wichealth.org if you haven't visited the site before. You are welcome to see how it works. Please feel free to contact me if you have questions.

(For all the slides for this presentation, see the FNS Conference website at: http://www.fns.usda.gov/oane/menu/NNEC/Presentations.htm)

Empowering Adolescents To Make Personal Nutrition Decisions Using an Interactive Software Program

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Today I will talk to you about a product that is being released through the National Food Service Management Institute. For those of you who are not familiar with who we are, we provide education and training resources along with conducting research for child nutrition programs. Our product is a CD-ROM called "Nutrition Decision," and it was developed because we wanted to produce a nutrition education resource for adolescents. Adolescents are a group that sometimes are hard to reach. We know that there is a lot of nutrition education information out there for the lower level. But, research has indicated that, as kids reach middle-school age, some of the habits they have learned in elementary school sometimes seem to change when they are becoming more independent and making more personal decisions on their own.

So, through a collaborative agreement with USDA, we were able to produce a CD-ROM, nutrition interaction games, and the designer for this product, New Mexico State University, helped us with the actual development of this product. I will take you through the CD-ROM. You are probably one of the very first groups who are seeing this game design. It is also available on a website called NutritionDecision.org. Anyone can go onto that website and use it. We encourage you to share that information and put that link on your websites to be used by your clientele.

The games went through focus groups for this age group. They have been beta tested. The students who went through the focus group in the beta test gave us suggestions of how they wanted the characters to look and how they related to the characters in the games. They also gave us feedback on whether they could not understand the game or if they struggled with certain things. When we go through the different games, I will show some of the ideas recommended by the students if they felt they were struggling.

The CD-ROM also went through the Dietary Guidance Working Group Review Committee through USDA for nutrition content. I will walk through the CD-ROM. The CD-ROM runs with Flash. Most computers should have a Flash mechanism. The CD-ROM already has that built in, so it will load automatically on computers. If you do not have Flash on your computer, when you go to the website, there is a little icon on there where you can download the free Flash program.

There are three areas that you can enter. The first series is "Are you Label Able?" The second one is "Measurement Matchup," and the third one is "Poster-rama." The games were taken from the resource called *Power of Choice*. Are you all familiar with that Team Nutrition resource, *Power of Choice*? This is something that you can use with that

resource. The games are also designed so that the students could do this on their own. It did not have to be classroom structured. It could be used in after-school programs, when they got home from school. Teachers could use it in their classrooms if they wanted to or in the library when they had breaks.

They were also designed so that the students would want to come back and repeat the game. When they come back for repeat games, the games don't always come back the same. So, it is not like once they have played it, that is all they can do with it. They can reenter and it will mix up again. The thought behind that was that the more they play with it, the more knowledge retention they would have, because it is like a drill, a practice. The more you play with it and practice with it, the more information you will retain from that.

The first series is called "Are you Label Able?" This teaches how to read a food label. On the first screen, it says that the games need to be played in order, and the reason for that thought process is so that they wouldn't jump around and get confused learning the different areas of the food label.

I will give you all one trick, which I am sure the students will eventually be able to figure it out because they are just computer whizzes. If you don't want to play on your own at home, if you go up and click the cloud, it will unlock all the games. That is just a trick for you guys. When you click on the first one, the first game is called "Simon Says." You will see that there is a little bit of reading that goes along with the games, so they read about why it is important to use a Nutrition Facts label. Then, they click on it, it highlights, and the highlights correspond with the poster colors that are on the *Power of Choice* color bars. They tell you about what is on the label, and then about the calories. Then, it asks you to play or, if you don't understand how to play, then you can click on "How to Play." But through experience, we have realized that they are more than likely to just hit "Play" and figure it out on their own.

The idea behind this was that they would learn the different categories on the label, so, it goes through level to level. If they don't want to keep going, then they can hit the "Back" button and it will take them to their next game. The more levels you go up, the faster the game goes.

The next game would be "Enough or Less." This game shows you the 20-percent/5-percent rule and it goes through the description of what to eat and what not to eat too much of. Again, it shows the highlights of the food label. Then, you have to decide if you have to have enough or less of this product. If you hit less, it kicks it away, and the same with vitamin A, enough. But, if you hit it wrong and you say you want enough, then it gives a little message, a nutrition message of why you need to eat less sodium. The same thing with saturated fat, and the messages are simple, nothing very complicated. This has levels, with karate belts at the top, and you can go through three levels.

Then, you have the option of playing again or exiting and going onto another game. The next one would be "Serving Size Roundup," and this is one of the games in which the focus groups in the beta testing added a calculator and some different things, because this one has a little bit of math calculations--some of the beta testers felt that they needed a calculator. It tells you again on the label where you would find the information. If I let my time run out, then it comes up and tells you that your time has run out--hopefully it will bring focus so that the students are realizing that if you eat a whole lot more than what the serving size is, then your calorie count goes up within the food.

The next game after they learn that is "High-Low Hop-Along." This one uses different keys on the computer, and is talking about the Daily Values, another piece of the food label that they need to know. It involves some reading. In this one, you have logs and you can jump over the obstacles and, every so often, you get a question and have to answer according to the food label. You can choose to play again or move on.

The very last game then ties it all together, and now they have to compare food labels. You have to look at the food label and see which one has fewer calories and less fat and click on that food label. You go through this, and again this one talks about eating 12 pieces of candy. That way, it is incorporating the serving size and which is the better one for you. This one talks about fiber and iron. So, you go through a series of labels. If you go back to the very main page you can now decide which of the other two games you want to play. You can go to "Measurement Match-Up." This focuses on portion size. This is also taken from the *Power of Choice*.

We wanted to incorporate information about physical activity which is in the very last one. We have them sitting in front of a computer, but you want to empower them to make physical activity choices in their lifestyle. This one is called "Poster-rama," and they can actually go in and design posters for their school or amongst their friends, and it gives them information about being physically active. It includes some motivation like "congratulations." You can pick "to promote physical activity." There are themes: do you want to get active in less than 30 minutes, try different kinds of activities, move more, being busy is not the same thing as being physically active, physical activity is fun, and being physically active has many benefits.

So, you can choose a door to go through. Then, you have brainstorming activities, and each person in this scene gives you some information about what they think this slogan could possibly be, or you could write your own activity, your own ideas. Then, it is time for you to design your poster. In here, there are some clip art images that they can put on their poster, some slogans that they can pick, and then they can move them up and rotate them around. If they don't like what they have, they can always take it to the trash can, delete it, and start over. There is a print option, so you can print off your poster. You can also decide if you want to add a border around it or change the border and the way that it looks. Then, if you have your brainstorms from the very beginning where you typed some brainstorms, your brainstorms would come in at this point, and you can remember what your ideas were. We hope this will encourage physical activity.

The whole idea behind these games is to just encourage kids to make their own personal decisions. With repeat play, we hope that they will be able to retain the information that is being taught to them in the CD-ROM or from the website without them actually thinking that they are being taught anything. You are one of the first groups to see this resource, and we hope that you take it back to your areas of expertise, and use it in your WIC clinics and food stamp offices and after-school programs.