

**Strengthening WIC Nutrition Assessment Skills:  
Establishing a Competency-to-Training Framework  
in a Learning Management System**

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**Submitted by  
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## EXECUTIVE SUMMARY

**Background.** Staff competencies and training were identified as the priority focus area in the Iowa WIC Program’s Value Enhanced Nutrition Assessment (VENA) Self-Evaluation and training was identified as the principal challenge. Well-trained personnel are essential to ensure quality WIC nutrition services. While face-to-face training is often preferred because it allows interaction among trainees, it is not always feasible due to travel costs and clinic schedules. Face-to-face training events may also delay the timing of training since they must be scheduled well in advance. The VENA policy guidance introduced essential staff competencies for the WIC nutrition workforce in 2006. Since the core nutrition assessment competencies are relevant for all members of the WIC nutrition workforce, this project proposed to validate nutrition assessment competencies, incorporate the competency model and online self-assessment tool into an existing online learning management system (LMS), and develop three new online courses related to training gaps identified using aggregate data from the self-assessment tool.

**Project Outcomes.** The primary products from this project are virtual products and available in the Prepare Iowa Learning Management System at [www.prepareiowa.com](http://www.prepareiowa.com). These products and related project outcomes are described below.

Competency model. A modified Delphi technique was used to guide two work groups through the validation of competencies. The first work group represented the Iowa local WIC agency perspective while the second work group included Iowa local agency staff members, state office WIC staff from four other states and a USDA regional nutritionist. The second group provided a systems level perspective and critical input about how differences between state programs might affect the competency model. The final competency model uses the same domains as the VENA policy guidance and includes 85 statements.

Online competency self-assessment tool. An online self-assessment tool was developed and pilot-tested in the LMS. Based on feedback from the two competency work groups, information was added to describe the competency in practice as well as links to definitions and supporting resources.

Local agency personnel self-assessments. Three phases of online self-assessments were completed by local agency Competent Professional Authorities (CPAs). The aggregate data from these assessments identified that the largest training gaps were found in two domains — hematological data collection and assessment and multicultural awareness.

Competency and training gaps analysis. Analysis of the aggregate self-assessment data, the training events routinely offered by the Iowa WIC Program, and the lack of credible and relevant online courses confirmed that the same domains should be addressed by developing new online courses.

New online courses. Three courses were developed, pilot-tested and released in the LMS. The first course addresses hematological data collection and emphasizes critical thinking skills in evaluating the results in relationship to other health, lifestyle and behavioral factors. The second course addresses cultural competence and how culture affects food practices and beliefs and the third course targets cross-cultural communication issues. All three courses are free and were approved for continuing education units for dietitians. Nursing CEUs were also approved for Iowa and may be accepted by other state boards of nursing.

Links to external courses. Over the course of the project, 200 external courses from state WIC programs, other government resources and the private sector were reviewed for possible linkage in the LMS. The review criteria included relevance, efficiency and appropriateness. Sixteen courses from 11 sources were linked. When users search the LMS catalog using WIC as the key word these courses, along with the new courses, are listed.

Supervisor assessments. A small pilot study of the supervisor assessment feature was completed. The WIC Coordinators agreed these assessments complement the annual evaluation completed using their own agency tools and would be most useful with new employees soon after hire and again once initial training was completed. When supervisor ratings were compared to CPA ratings, the supervisors generally rated the CPAs as more competent than the CPAs rated themselves.

**Evaluation.** The project employed a variety of process and implementation evaluations that incorporated both qualitative and quantitative data. Aggregate pilot self-assessment data was analyzed to determine user comprehension and interpretation. Once the online tool was released, aggregate self-assessment data was reviewed to identify training gaps. Learner satisfaction, comprehension and pre- and post-test scores were reviewed to determine the relevance and usability of the new online courses. A small follow-up evaluation for the hematological data collection course found that CPA skills, knowledge and behavior appeared to change six months after completing the course. All of the short-term work groups participated in process evaluations and debriefing to provide feedback.

**Conclusions.** Broad-based participation in project activities was critical to ensure the final products met the needs of local agency WIC personnel in Iowa and across the country. The online system complements traditional training methods, maximizes limited training resources and improves timeliness of training. The competency model is available 24/7 to anyone with an internet connection at no charge; individuals only need to create a free user account in the LMS.

A validated nutrition assessment competency model will provide support for WIC programs across the country in developing, updating and revising job descriptions; orienting and training new personnel; planning staff development activities; and evaluating personnel performance. Aggregate data can also be used to identify training gaps and develop training strategies to address those gaps.

## INTRODUCTION AND BACKGROUND

Well-trained personnel are essential to ensure quality WIC nutrition services. Successful and sustained implementation of the Value Enhanced Nutrition Assessment (VENA) policy guidance requires a trained and knowledgeable workforce. VENA identified the staff competencies required for quality and comprehensive nutrition assessment services. Training activities and resources related to these competency areas must be readily available to all local WIC personnel providing nutrition services. Training must also adequately and appropriately address all of the nutrition assessment competency areas for new and existing personnel. New personnel must receive timely training that encompasses core knowledge and skills and addresses emerging issues. Ongoing training is also important to reinforce initial training, continue skill development, and to increase nutrition knowledge and understanding of human behavior.

### Iowa WIC Program CPA Workforce

The 20 local WIC agencies in Iowa employ registered nurses, licensed dietitians and nutrition educators to work as Competent Professional Authorities (CPAs). According to Iowa WIC program policy, nutrition educators must have at least one of the following qualifications:

- Registered dietitian but not licensed in Iowa,
- Successful completion of an undergraduate degree in dietetics from an accredited institution but has not completed an internship,
- Successful completion of an undergraduate degree in dietetics and an internship from accredited institutions but has not completed or passed the dietetic registration exam, or
- Successful completion of an undergraduate or graduate degree in nutrition from an accredited institution.

Several agencies also employ licensed practical nurses. They complete important tasks such as anthropometric measurements, blood tests, health histories, and anticipatory guidance. However, the scope of practice for LPNs in Iowa does not allow them to do risk assessment, a key task in determining WIC eligibility. Therefore, the LPNs cannot work as CPAs in Iowa.

At the beginning of this project (based on FFY 2007 continuation applications), Iowa local WIC agencies employed 86 registered nurses (31.66 FTEs), 106 licensed dietitians (59.82 FTEs), and two nutrition educators (1.33 FTEs) for a total of 194 CPAs (92.81 FTEs). At the end of the project (based on FFY 2011 continuation applications), the local agencies employed 65 registered nurses (34.825 FTEs), 110 licensed dietitians (71.65 FTEs), and nine nutrition educators (6.25 FTEs) for a total of 184 CPAs (112.725 FTEs). It should be noted that throughout the project three individuals with both nursing and dietetics credentials were employed by the local agencies. These individuals were counted only as dietitians based on the state program policy specifying 0.5 FTE licensed

dietitian per 1000 participants. This ratio helps assure adequate availability of dietitians to provide services to high risk participants.

The 20 WIC Coordinators in the state (i.e., local WIC directors) represent a variety of disciplines including nursing, dietetics, social work and nutrition. Most but not all of these WIC Coordinators occasionally provide direct client services.

The local WIC agencies are required to have Internet access and multiple computer terminals are accessible to the local agency personnel. Over the past several years, these staff members have become increasingly comfortable with computers and online applications. For example, online registration is frequently required for state-sponsored training events. Since this requires an individual e-mail address, many already have an address at their worksite. In addition, the implementation of a Web-based WIC data system in December 2005 increased staff comfort with technology since all certification data is now recorded in the system by the individual staff member providing the services.

### **Iowa WIC Training Plan**

The training plan at the beginning of the project required all new WIC employees to participate in a two-day face-to-face training event in Des Moines. On the first day, personnel who complete nutrition assessment tasks meet separately from support staff. Their session includes discussion of the nutrition assessment process and a brief introduction to the health outcome-based approach to nutrition assessment. Several critical thinking activities are also incorporated into the day's agenda. On the second day of the New Employee Training Course, all personnel meet as one group and training focuses on WIC policies and procedures that everyone must understand.

New employees are also assigned homework to complete before the training event including online courses and policy review with related worksheets. Most of this homework is assigned to personnel who complete nutrition assessment tasks. Trainees have reported that the online courses are very helpful. However, they often experienced technical difficulties because of the number of different Websites they must register with to complete the courses.

New WIC CPAs also attend five workshops (referred to as core training), preferably in their first year of employment. These workshops address pregnancy nutrition, breastfeeding promotion and support, infant nutrition, preschool child nutrition, and communication and rapport building skills. The communication and rapport building skills workshop was introduced as a regional workshop in FFY2008. The workshop was not presented in FFY2009 due to all of the resources directed to implementation of the new food package. In FFY2010, the workshop became part of the annual training calendar.

Each of the core training workshops provide approximately six hours of continuing education. Over the last several years, the workshops have incorporated more discussion, critical thinking activities and other application activities related to implementation of the VENA policy guidance. These workshops are developed and presented by state WIC staff. Sessions are also presented by department partners including Maternal and Child Health nurse clinicians, public health dental hygienists, the dietitian with the state Children with Special Health Care Needs Program, and state Child and Adult Care Food Program (CACFP) staff.

Existing WIC personnel are provided training opportunities through an annual full-day breastfeeding conference, the annual state public health conference and the biennial state WIC conference. Additional training sessions are provided face-to-face or via the statewide fiberoptics communication network (Iowa Communication Network or ICN) as needed. Textbooks and other professional resources are purchased in quantity for local agencies as funding allows. The weekly electronic newsletter for local WIC agencies also provides information and links about resources and training opportunities sponsored by other organizations.

The Iowa WIC Program policies recommend best practices for local agency sponsorship of continuing education hours for local agency nurses, nutrition educators and dietitians as follows:

- 9 hours CPE per year for full-time dietitians and nutrition educators
- 4 hours CEUs per year for full-time nurses completing nutrition assessment tasks
- Prorated hours for part-time staff

These hours may be obtained from events sponsored by the Iowa WIC Program or other organizations.

### **Iowa's VENA Self-Evaluation Results**

Staff competencies and training were identified as the priority VENA focus area in the Iowa WIC Program's VENA Self-Evaluation and training was identified as the principal challenge. The Iowa WIC Program historically has provided training face-to-face and via the statewide fiber optics communication network (Iowa Communications Network or ICN). While face-to-face training is often preferred because it allows interaction among trainees, it is not feasible to provide all training face-to-face. The travel costs for local agencies are significant and clinic schedules are often negatively affected. Face-to-face training events may also delay the timing of training since they must be scheduled well in advance.

The Iowa WIC Program has also provided training via web-conferencing, especially for data system training. The department recently acquired licensing for GoTo Meeting™ software so state WIC staff can now host online meetings and webinars.

Using distance learning technology such as the ICN and GoToMeeting™ for training is an effective strategy primarily for short training sessions that focus on sharing information. These technologies significantly reduce the travel costs associated with face-to-face training events. While it is possible to plan and present a distance learning session that promotes trainee participation in activities and discussion, it is challenging to do so. Many individuals also find the technology intimidating. It is difficult to hold the attention of trainees for training sessions lasting much longer than two to three hours even with scheduled breaks and skilled facilitators. In addition, learners no longer find “talking heads” or visuals with an invisible narrator acceptable as a primary training method.

The VENA Self-Evaluation Work Group recognized that a systems approach was needed to ensure that new and existing personnel training needs were met and that limited resources were used effectively. The group identified desirable characteristics of an effective WIC training system including flexibility for learners, accommodations for variations in preferred learning styles, maximizing limited training resources at the local and state level, and timely access to information and training. Blended instruction (i.e., online interactive modules) can align learning content with specific competency objectives, accommodate different learning styles and combine media and technology for greater learner impact.

A report from the Western Region VENA Project (Alaska WIC Program and University of Alaska Anchorage, 2007) stated that while agencies were increasingly using technology to help deliver training, most often it was posting PDF self-paced modules online rather than online interactive instruction. The training methods reported in response to their national survey included the following:

- 82% group live training sessions
- 74% paper and pencil modules
- 65% one on one training
- 29% downloaded modules or manuals
- 29% interactive online training via the Internet or CD-ROM
- 18% video conferencing
- 12% other methods

Several state WIC programs in the Western Region collaborated with the University of Alaska Anchorage to deliver CPA training programs. These states include Alaska, Hawaii and Nevada. The University of Alaska Anchorage uses a distance learning format with self-paced online training modules, instructor-led courses, hands on learning with preceptors and exams. Some of the modules are relevant to the VENA competencies while other courses are relevant to other WIC CPA responsibilities such as customer service and tailoring the food prescription. However, these courses are only offered to specific states based on funding provided by that state. Many of the

courses do allow guest access to view the content of the self-paced courses. More information can be found at <http://www.wictraining.org/>.

## **DEVELOPING A COMPETENCY MODEL IN A LEARNING MANAGEMENT SYSTEM**

Developing a WIC nutrition assessment competency model was selected as a focus for this project for two reasons:

1. Core WIC nutrition assessment tasks are consistent for all members of the WIC nutrition workforce regardless of their background, and
2. The nutrition assessment competencies in the federal VENA policy guidance provided a framework or foundation for this work.

Validating a WIC nutrition assessment competency model would provide support for WIC programs across the country in developing, updating and revising job descriptions; orienting and training new personnel; planning staff development activities; and evaluating personnel performance. This model could then be made available as an online competency self-assessment tool. Aggregate data could be used to identify gaps in training and to develop training strategies to address those gaps.

### **What are competencies?**

A cluster of related knowledge, skills and attitudes that affect a major part of one's job (a role or responsibility) that correlates with performance on the job, can be measured against well accepted standards, and that can be improved via training and development.

Lucia and Lepsinger, 1999

Housing the competency model, the online self-assessment tool and courses linked to the competency model in a learning management system would provide access to the WIC community across the country. The state's first Internet-based learning management system for public health, Prepare Iowa Learning Management System (PILMS; located at <http://www.prepareiowa.com>), was selected as the home for this project. The PILMS came into being when the Iowa Department of Public Health and the Institute of Public Health Practice at the University of Iowa College of Public Health contracted with the University of Illinois at Chicago and their Centers for Disease Control and Prevention (CDC) funded academic center for public health preparedness to modify their established learning management system to support the Iowa's continuing education registration and data reporting requirements related to emergency preparedness. The vision for the PILMS included

not only the identification of courses for individuals to take, but a surrounding strategy of identifying and linking state of the art competency guidelines to both job descriptions and learning objectives.

PILMS has served as an important resource for public health workforce development related to bioterrorism and preparedness competencies and resources since December 2003. The system allows users to assess their level of competence on key professional or topical competencies (core public health, emergency preparedness, and others), and then guides them to competency-based training and courses to fulfill their professional development needs. Competency assessments are also archived in the learning management system.

Public health personnel from Iowa and states in the Midwest have been joined by participants from around the world in using this distance-based technology to meet specific competency requirements. As of March 2007 there have been over 8,500 people — 3,752 in Iowa, who have used the system at some point.

## **PROJECT GOALS AND OBJECTIVES**

This project intended to validate the VENA nutrition assessment competencies and build a new portal in a learning management system for self-assessment and online training opportunities for the Iowa WIC Program CPAs. Aggregate data from the online self-assessment tools would then be used to identify training gaps with selected gaps addressed by developing three interactive online courses. The project also sought to create links from the competency model in the learning management system to relevant and credible external courses.

The project would significantly strengthen the Iowa WIC Program's training plan related to nutrition assessment competencies. The resulting plan would use a blended training approach with face-to-face, distance learning and online self-directed training opportunities that compliment and build upon one another. This approach would also provide timely access to information and training while maximizing limited training resources at the state and local levels.

Since the core nutrition assessment competencies in the VENA policy guidance are relevant for all members of the WIC nutrition workforce and this portal would be available 24/7 to anyone with an Internet connection, the project also has the potential to benefit members of the WIC CPA workforce across the country.

The project goals and objectives are listed below.

- Develop and validate a nutrition assessment competency set and online self-assessment tool for use by local WIC agency personnel
  - Complete the validation process.
  - Pilot test the online competency self-assessment tool.
  - Complete three rounds of competency self-assessments with local agency CPAs.
  - Pilot test and compare supervisor assessments of CPAs to the CPAs own assessments.
  
- Develop, implement and evaluate an online training and documentation component addressing the WIC nutrition assessment competencies
  - Identify and link acceptable external courses in the learning management system.
  - Complete a competency and training gaps analysis to identify missing content areas.
  - Develop, test and post three new online training courses in the learning management system that address identified training gaps.
  - Complete a follow-up survey to assess learner retention and impact on practice after completion of the first new course developed for this project.

## **THEORETICAL BASIS**

This project was based on published information and research about the WIC nutrition workforce development needs, competency models, the demonstrated advantages of Web-based learning, and the benefits of learning management systems.

### **WIC Nutrition Workforce Development Needs**

The 2006-2007 Association of Territorial and Public Health Nutrition Directors (ASTPHND) Workforce Survey identified WIC as the primary funding source for the public health nutrition workforce at nearly 90% (88.6%), a slight decrease from the 1999-2000 survey (90.4%) (Haughton and George, 2007). WIC funded 79.3% of all full time equivalents, also a slight decrease from the 1999-2000 survey (81.0%).

The public health nutrition workforce is increasingly contracted and/or part-time rather than employed. The majority remained employed (93.6%) with 6.4% contracted, an increase from 1999-2000 (3.7%). The proportion of full-time WIC employees decreased from 1999-2000 (78.0% vs. 81.5%).

The WIC nutrition workforce comes from a variety of backgrounds. The majority of WIC nutrition workers are professionals with discipline-specific core competencies and credentials. The ASTPHND 2006-2007 survey found that paraprofessionals represented 26.4% of the WIC workforce. These staff members generally meet the USDA regulatory definition for CPAs, State or

local medically trained health official. The ASTPHND survey does not capture information about nurses who function as CPAs in WIC programs across the country.

Overall, the 2006-2007 survey found that WIC nutrition workforce is very experienced. While 51.6% of the WIC workforce had at least 10 years of dietetics or nutrition experience, 29.6% had less than 5 years of experience in dietetics or nutrition. This reflects a workforce that is both “young” and “seasoned” in terms of experience.

These survey findings support the need for a validated competency model and aggregate self-assessment data to identify training needs and gaps. In addition, some of the changing demographics of the WIC nutrition workforce, such as the increase in contracted staff and part-time staff and the proportion of the workforce represented by paraprofessionals, point out the need for just-in-time access to training as well as interactive training that accommodates variations in learning styles.

Many WIC nutrition workers are classified as professionals with their own discipline-specific core competencies such as nutrition and nursing. Other members of the WIC nutrition workforce develop their nutrition assessment skills primarily through on-the-job training activities. The VENA nutrition assessment competencies provide a much needed framework — core competencies for all members of the WIC nutrition workforce regardless of their background. This framework will be useful in developing, updating and revising job descriptions; orienting and training new personnel; planning staff development activities; and evaluating personnel performance.

## Competency Model Development

As Bernard Turnock discusses in his book, *Public Health Career Choices That Make a Difference*, comprehensive public health workforce development efforts need to address training, education, promotion of competencies and their enhancement. Individuals who demonstrate practice-relevant competencies at a specified level may be more motivated to enhance their skills if their employer values those competencies and correlated performance through human resource application and practice. This analysis by Turnock about public health workforce development is easily translated to this project.

Several competency sets or standards of practice in nutrition and dietetics have been published and include the following:

- *Eligibility Requirements and Accreditation Standards*. Commission on Accreditation for Dietetics Education; revised 2009. <[www.eatright.org/cade](http://www.eatright.org/cade)>
- *Standards of Practice and Professional Performance*. American Dietetic Association; 2008. <<http://www.eatright.org/sop/>>

- *Value Enhanced Nutrition Assessment in WIC: The First Step in Quality Nutrition Services*. U.S. Department of Agriculture, Food and Nutrition Service; 2006. <[http://www.nal.usda.gov/wicworks/Learning\\_Center/VENA/VENA\\_Guidance.pdf](http://www.nal.usda.gov/wicworks/Learning_Center/VENA/VENA_Guidance.pdf)>
- *WIC Nutrition Services Standards*, U.S. Department of Agriculture, Food and Nutrition Service; 2001. <<http://www.fns.usda.gov/wic/benefitsandservices/nutritionservicesstds.HTM>>

The traditional approach to training is to determine what content needs to be learned, teach it, and then test to see if the content was learned. Current research supports the transition to competency-based training – the alignment of training with the outcomes and assessment of worker performance in relation to specific work conditions. This approach requires the identification of knowledge, skills and behaviors as applied in real working conditions and settings. The effectiveness of training and continuing education is enhanced when learners identify their learning needs by assessing their current level of competence, and then select and participate in learning activities that address those needs.

## Web-Based Learning

Web-based, interactive training modules allow learners to navigate material at their own pace. The benefits of web-based training include just-in-time training, access of training when it is needed, shorter learning time, greater retention of material, consistent training (there is no variation between different trainers), and savings from reduced travel time.

Instructional designers can create highly potent self-instructional materials that grab and maintain the attention of learners and that allow learners to acquire knowledge and competencies in efficient ways. These e-learning techniques are sometimes media-rich and can be expensive to develop. However, there are economical yet efficient solutions, including collaboration with academia.

An array of talent and skills is needed from fields as diverse as graphic design, nutrition science and assessment, computer programming, sound engineering, adult education, instructional design and others to develop effective interactive online courses.

The Western Region Value Enhanced Nutrition Assessment Competent Professional Authority Training Project concluded that distance or online education appeared to be the most realistic and efficient method of delivering WIC Competent Professional Authority training for state or local medically trained health officials (often referred to as paraprofessionals) in their region. This project identified 67 existing training programs for paraprofessionals then reviewed and analyzed those programs via online surveys. Twenty-three of the training programs met the project criteria for a telephone interview. The final project recommendations provided a starting point for a strategic plan to realize collaborative cost savings for providing this training in the region. Factors considered in this strategic plan included software compatibility, online training principles, training

needs, potential trainee pool, and access to training content. The report also acknowledged the need for guidance about the appropriate use of online training, how to blend online training with face-to-face training, and how to create quality online content (Alaska WIC Program and the University of Alaska Anchorage, 2007).

## **Using a Learning Management System**

The use of a learning management system accelerates the penetration of e-learning by placing an important part of the responsibility in the learner's hands. A variety of tools can be used to link competencies to e-learning content.

Housing competency models and training resources in a learning management system can lead to a nationwide, coordinated learning system to identify availability and gaps in training needed to assure a competent workforce, support and expedite training, and understand and improve performance. The following features and characteristics of learning management systems contribute to the overall goal of a competent workforce.

- Analyzing needs for training
- Prioritizing program and product development (e.g., courses, curriculums, resources)
- Accessing online courses
- Accessing experts and credible resources
- Obtaining and filing CEU transcripts including verification of course completion
- Receiving rapid learner satisfaction feedback and evaluation
- Partnering with academia and other public health programs to develop resources that cross disciplines and practice settings

Most learning management systems can be accessed 24/7 by anyone with an internet connection. This reduces the typical travel and time cost associated with face-to-face training and also provides more options for self-directed learners outside of their work hours.

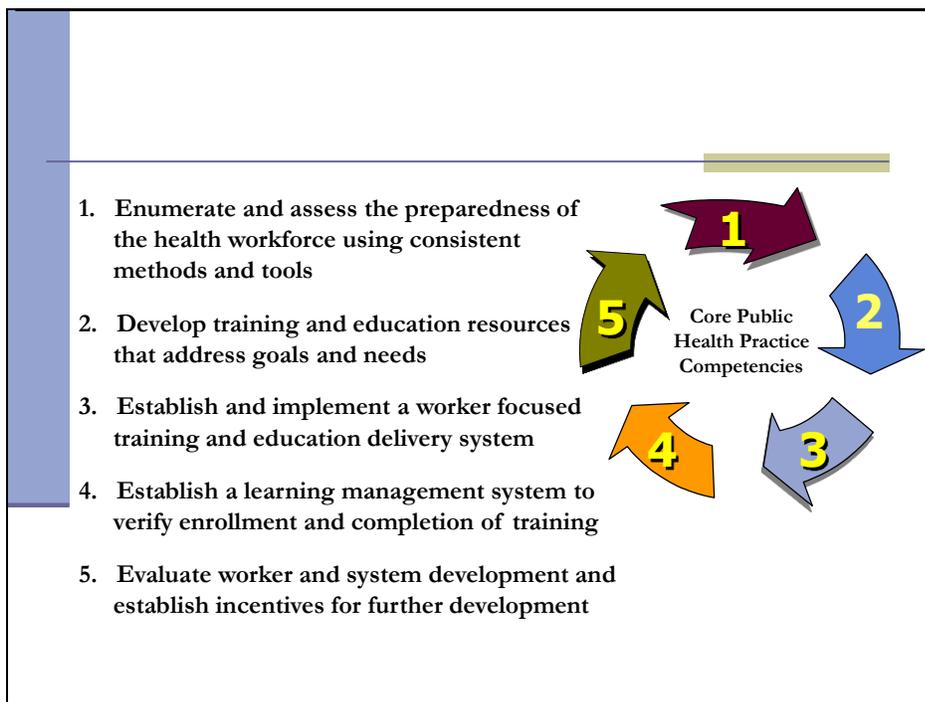
## **IMPLEMENTATION PARTNERS**

### **Technical Project Partner**

Project activities were completed through a contract with the Institute for Public Health Practice (IPHP), an operational unit of the dean's office at the University of Iowa, College of Public Health. The mission of IPHP is to "promote and support the College's involvement in workforce development, service learning, and identifying and advancing best practices in public health."

The IPHP had the learning management infrastructure, staff and program operations in place for this project. The Institute’s systems model approach to public health training and education — assessment, curriculum development and delivery, and evaluation —has successfully supported several other similar projects. See Figure 1 on the next page for more information about the model. IPHP has extensive experience developing and validating competency sets, identifying external courses, and developing new ones. The Institute also had the capacity to design, deliver and monitor online courses using a variety of technology including digital video recording, live Web cast, archived Web casts and others.

**Figure 1. Public Health Workforce Training and Education Systems Model**



## WIC Partners

The project was designed with many short-term workgroups with representation from CPAs across the 20 local WIC agencies in the state. This broad-based participation and representation was critical to ensure that project activities adequately and appropriately addressed CPA needs. Conducting work group activities via distance technology also helped facilitated involvement of staff from across the entire state. The goal was to have each of the 20 Iowa local agencies represented in at least one of the work groups. By the end of the project, 19 of 20 agencies had been represented with a total of 107 different local agency staff members participating in work groups.

The project was also designed to include each state WIC agency nutrition consultant in at least one work group during the project. During the project five different individuals were employed in the four state WIC agency consultant positions. By the end of the project, all five had participated in at least one work group. One individual participated in an early work group while employed at a local agency then subsequently was hired by the state and participated in another work group.

State WIC agency personnel from other states were also invited to participate in selected project activities including the competency validation process and course review for continuing education applications. By the end of the project, 11 different states representing four of the seven USDA regions were represented in these activities.

In addition, the project was pleased to include VeeAnn Miller, the Mountain Plains Regional Office nutritionist, in the competency validation process. She brought two important perspectives to this process – her experience as a member of the VENA Work Group that drafted the policy guidance and her familiarity with the variety of local agency staffing models in the region and country.

### **Project Advisory Committee**

Project Advisory Committee members included the state WIC director and bureau chief (Nutrition and Health Promotion), a local agency WIC Coordinator, a local WIC dietitian, a local WIC nurse, a director of a dietetic internship program, and project staff (see Table 1 below). The five members of the committee who were not project staff brought 117 years of professional experience to the table and 72 years of WIC experience.

**Table 1. List of Project Advisory Committee Members**

Jean Anderson, MS RD LD Dietetic Internship Director Iowa State University Ames, Iowa	Chris Simms, RN WIC Nurse Hillcrest Family Services Dubuque, Iowa
Sharon Schroeder, RD LD WIC Coordinator Siouxland District Health Department Sioux City, Iowa	Judy Solberg, MPH RD LD Chief, Bureau of Nutrition and Health Promotion Iowa Department of Public Health Des Moines, Iowa
Margaret Hallman, RD LD WIC Dietitian and Breastfeeding Coordinator Broadlawns WIC Program Des Moines, Iowa	<u>Project Staff:</u> Dawn Gentsch, MPH CHES, Education Coordinator Tanya Uden-Holman, PhD, Evaluation Coordinator Diane Heckman, MPA; Kylie Davidson, BS; Maria Osterhaus Scott, MPH; and Maureen Myshock, LBSW MPH; Project Assistants Brenda Dobson, MS RD LD; Project Coordinator

The project advisory committee was convened via conference call during the first month of the project. The committee held quarterly conference calls during the first two years of the project and two conference calls during the final year. The committee was charged to critique project activities, provide feedback and suggestions to ensure that activities were relevant to practice, and recommend individuals for the various workgroups throughout the project.

The committee members provided valuable feedback and direction throughout the project. Their questions were insightful and helpful to the project staff. Committee members also participated in activities outside of the committee conference calls including review and testing of the online assessment tool, the courses developed during the project, and external courses being considered for linkage to the competency model.

### **Project Key Personnel**

The key personnel for this project included the following individuals:

- Dawn Gentsch, MPH CHES, Education Coordinator

Dawn was employed by the technical project partner, the Institute for Public Health Practice (IPHP) with the University of Iowa College of Public Health. She also assisted with the application for the special project grant. When the IPHP made the difficult decision to close the Des Moines office in August 2010 (where Dawn worked), she explored other employment opportunities and left the project in mid-May, 2010.

Following Dawn's departure, IPHP hired Dena Fife, MA on a consultant basis to coordinate the development, testing and release of the third course. Dena had been the PILMS Coordinator for the Iowa Department of Health from October 2003 to January 2007 and was therefore very familiar with the learning management system and online programming. Her graduate degree in eLearning Design and Implementation also allowed her to provide valuable input and guidance to the tasks to complete the third course.

- Tanya Uden-Holman, PhD, Evaluation Coordinator

Dr. Uden-Holman is an Associate Dean for Education and Student Affairs, Associate Professor (Clinical), and Health Management and Policy Deputy Director with the technical project partner, IPHP. She provided oversight of the evaluation component of the project and served as the point of contact for the subcontract with university. Dr. Uden-Holman assumed the role as primary contact at the IPHP for project activities after Dawn Gentsch left the project.

- Laurie Walkner, MA RN, Subcontract Coordinator  
Laurie is the Grants Coordinator for the IPHP. She supervised and coordinated the work of the Iowa City-based IPHP staff who worked on the project including the instructional designer (Nor Hashidah Abd Hamid), the PILMS coordinator (Tim Beachy), project assistants and other support staff.
- Diane Heckman, MPA; Kylie Davidson, BS; Maria Osterhaus Scott, MPH and Maureen Myshock, LBSW MPH, Project Assistants  
All of these individuals held this part-time position and contributed immensely to activities during their time with the project. Diane and Kylie both left the project to return to school (a law degree and graduate school, respectively) and Maria left the project for a full-time position. Since Dawn Gentsch provided general oversight to Maureen, she also left the project at the same time as Dawn. Despite the turnover in this position, project tasks proceeded smoothly. Frequent communication and good documentation also made these transitions easier.
- Brenda Dobson, MS RD LD, Project Coordinator  
Brenda was the WIC Nutrition Services Coordinator at the beginning of the project. She provided oversight for the contract with IPHP, participated in the various project tasks, helped recruit and coordinate work groups and maintained regular communication and reporting schedules with key personnel to ensure timely completion of tasks and submission of the required quarterly reports. During June 2010 she assumed interim responsibilities as the state WIC director. In September 2010 she accepted the permanent position as bureau chief and state WIC director.

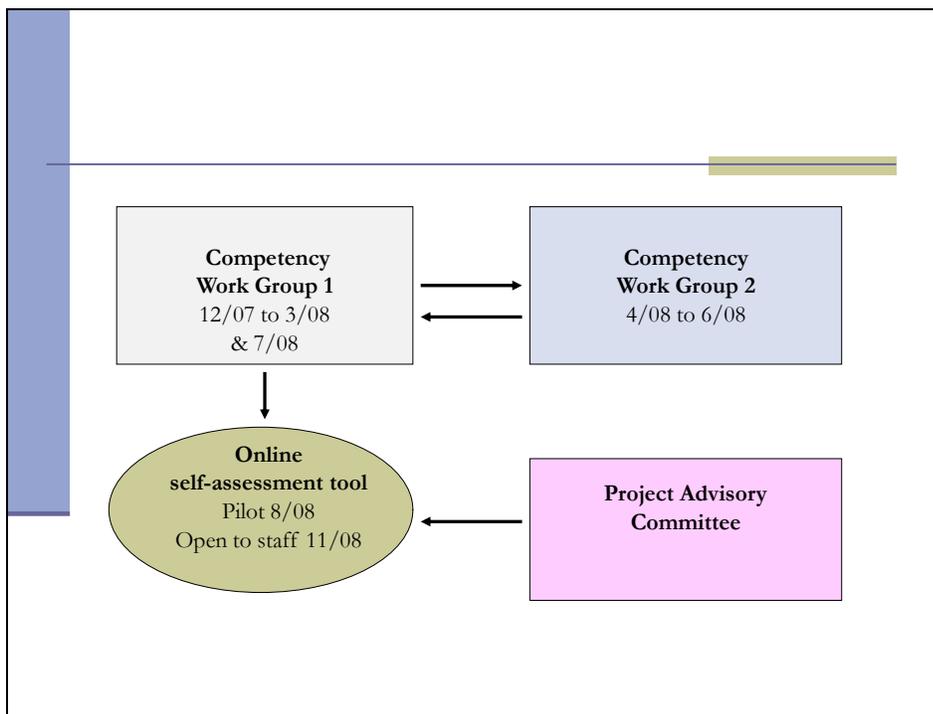
## **DEVELOPING AND VALIDATING THE COMPETENCY MODEL AND SELF-ASSESSMENT TOOL**

A modified Delphi technique was used to guide two workgroups through the creation of the competency model. Competency Work Group 1 (CWG1) members represented the Iowa local WIC agency perspective. The knowledge requirements and performance expectation statements suggested for each competency area in the federal VENA policy guidance were used as the starting point for their work.

Members of Competency Work Group 2 (CWG2) included Iowa local agency staff members and state office WIC staff from other states that had different staffing patterns than the Iowa WIC Program. CWG2 represented a more systems level perspective for WIC nutrition assessment competencies in an effort to develop a competency model that could be used by WIC programs

across the country. In addition, members of CWG2 provided critical input about how other differences between programs might affect the competency model (e.g., differences in models of operation, state policies, documentation procedures, allowed risk criteria, data systems, and approaches to staff training). See Figure 2 below for an overview of the process used.

**Figure 2. Competency Validation Process**



### Competency Work Group 1 (CWG1)

Competency Work Group 1 (CWG1) was convened in December 2007 over two conference calls in order to accommodate schedules. Group members included four local agency nurses, two local agency dietitians, one local agency nutrition educator (who also was the WIC Coordinator), and two state agency WIC nutrition consultants for a total of nine members. These nine individuals had a combined 92.5 years of WIC experience. See Appendix A for a list of work group members. The initial conference calls were used to introduce the project and the learning management system, describe competency statements and how they are developed and used, provide an overview of the validation process, define workgroup member expectations, and schedule calls for the remainder of the validation process.

The full work group met in January 2008 via the statewide distance learning fiber optics network to review what makes a good competency statement and discuss how to use Survey Monkey™ to complete their task assignments. Supporting materials were provided to the workgroup including

the VENA policy guidance, a hyperlink to the WIC Nutrition Services Standards document, sample skills from Bloom’s taxonomy and a description of what makes a good competency statement with specific examples related to WIC nutrition assessment competencies. This discussion was facilitated by Dawn Gentsch and other project staff. See Appendix B for copies of the resource materials about writing competency statements that were provided to the workgroup.

The work group members discussed whether to include three levels of achievement in the competency set defined as follows:

- Novice: Has been exposed to competency, recognizes and understands
- Competent/proficient: Can describe, evaluate
- Expert: Teaches, organizes curriculum, supervises program

Novice skills are often considered entry level skills. Higher level skills build upon those novice skills, making novice skills “embedded” in those higher level skills. Competent/proficient skills and expert skills are more complex and require more time to reach mastery. It is common to have varying levels of achievement reflected in the statements that make up a competency model. The workgroup agreed that the competency set should be usable by all WIC CPAs. Therefore, statements would be written at all levels to accommodate the needs and level of understanding of new WIC CPAs as well as seasoned and experienced WIC CPAs.

The work group reviewed and expanded the definition of nutrition assessment in the VENA policy guidance by adding the italicized text included in the definition below:

Nutrition assessment is *a dynamic process* and in-depth review and analysis of a person’s medical and diet history, laboratory values, and anthropometric measurements to verify nutritional risk or malnutrition and identify underlying causes so that appropriate nutrition intervention, tailored to the needs of the individual, can be planned and initiated.

The work group also agreed on the following parameters as standard project elements to guide the development of the competency model:

- The model will address nutrition assessment knowledge, skills and behaviors; it will not address nutrition education knowledge, skills and behaviors.
- The model should apply to WIC CPAs across the nation, not just credentialed health professionals as reflected in the Iowa staffing models. Therefore, the model must avoid references to Iowa policies and staffing patterns and must be written at an appropriate reading and comprehension level for the broad target audience.
- Terms that required definition would be defined.
- Subgroups of the WIC client target population (e.g., women of childbearing age, infants and children) would be looked at separately in some competency statements. This is necessary to

ensure that the competency statement addresses only one subject matter or skill area. For example, someone could have significant experience with infant nutrition but have limited experience and skills with child nutrition.

- The breastfeeding competency statements would remain in the life cycle nutrition domain and not in a separate domain.
- The competency domain titles would remain consistent with those listed in the VENA policy guidance.
- The word “WIC” will only be used in a competency statement when absolutely needed. Many of the competency statements are relevant to other practice settings.
- The word “client” will be used in the competency set instead of participant or individual.
- Tests that some WIC agencies may conduct based on how they function and partner with other organizations will not be included if the tests are not part of core WIC services. Examples include lead screening and immunizations.
- All components of a comprehensive nutrition assessment are implied in the following phrase when used in a competency statement phrase — anthropometric, biochemical, clinical, dietary, environmental and family.
- The competency set is for new WIC employees (to help with orientation and training) as well as for seasoned employees. Therefore, it will include competency statements for all three levels — novice, competent/proficient, and expert.
- It will be recommended that WIC employees involved in nutrition assessment tasks complete the online self-assessment tool at least annually. Individual and aggregate data from these assessments can be used to develop training plans. The use of the competency set and data is not meant to be punitive in any way.
- Based on best practices for developing competency models, this model should be revisited in approximately five years to incorporate changes and new information and practices.

The nine members of CWG1 were divided into three teams with three members each. Each team was assigned to review two of the six competency domains in the VENA policy guidance during each round for a total of four rounds. By the time the third round was completed, every team had reviewed each of the six competency domains. During the fourth round, teams reviewed the two competency domains they had reviewed during the first round. Work group members were also invited to review the remaining four domains and several chose to do so. Survey Monkey™ tools were used with a modified Delphi technique for reviewing, editing and finalizing the competency statements. This also allowed for easier compiling of cumulative input for subsequent rounds.

For the first round, team members were assigned to achieve a mix of health disciplines and range of WIC experience. For the subsequent rounds, it was only possible to assign team members based on health discipline.

During Round 1, the teams reviewed the 67 knowledge required and performance expected statements from the VENA policy guidance and proceeded through the following steps:

1. Suggest what to do with each statement (keep, delete, add to, divide, edit).
2. Revise the statement as needed.
3. Suggest specific actions that would demonstrate the competency in action, i.e., describe how they would know someone was competent in regard to each statement.
4. Use Bloom's Taxonomy to suggest descriptive or action verbs for each statement.

During Round 2, the teams were assigned to two new competency domains and they reviewed the summary work from the Round 1 team. Their tasks during this round were as follows:

1. Review the competency statements.
2. Indicate if any competencies are missing and identify them (general content, topic or issue)
3. Review each statement based on the following checklist and edit as needed.
  - a. Does it describe the performance of a skill?
  - b. Does it begin with an action verb describing what the person doing the nutrition assessment will be able to do?
  - c. Is it measurable and observable?
  - d. Is it clear, concise and precise in describing an action?
  - e. Does it specify a single performance or outcome and not a combination?
4. Describe the intended outcome for each statement, i.e., what you want the person to do on the job.
5. Review for consistency in format for all statements in the domain, i.e., behavioral language, grammar, verb tense.
6. Revise statements as needed and provide an explanation about why it was revised.

During Round 3, the teams were assigned to the last two competency domains. They reviewed the summary work from the two previous teams and proceeded through the following steps:

1. Review the competency statements.
2. Indicate if any competencies are missing and identify them (general content, topic or issue)
3. Edit and comment on each of the statements based on the checklist criteria for Round 2.
4. Order the competency statements in a logical and sequential manner as appropriate for each domain for the self-assessment.

The draft competency model had 101 statements when it was passed on to Competency Work Group 2 (CWG2).

The proposed plan for CWG1 was to complete the work using only two conference calls for the full group. However, project staff suggested additional conference calls to allow for more discussion and the workgroup members agreed to this plan. Table 1 on the next page summarizes the time table followed by the workgroup.

**Table 1. Competency Work Group 1 Schedule of Work**

<b>Date</b>	<b>Activity</b>
December 7 and 14, 2007	Initial conference calls to orient the workgroup members (two options to accommodate schedules)
January 11, 2008	Conference call for all workgroup members
January 14 – February 1, 2008	Round 1 independent work Project Assistant also called each person to provide assistance and answer questions
February 2 – February 21, 2008	Education Coordinator and Project Assistant convened a conference call for each Round 1 team
February 22 – March 7, 2008	Round 2
February 29, 2008	Mid-point conference call for all workgroup members
March 8 – March 13, 2008	Education Coordinator and Project Assistant convened a conference call for each Round 2 team
March 14 – March 25, 2008	Round 3
April 2 – April 10, 2008	Round 4
April 11, 2008	Conference call for all workgroup members; work sent on to the Competency Work Group 2
July 29, 2008	Conference call for all workgroup members to discuss work done by Competency Work Group 2

### **Competency Work Group 2 (CWG2)**

CWG2 included state WIC staff from Iowa, state WIC staff from other states representing a variety of WIC clinic staffing models and a USDA regional nutritionist (n = 8, representing states of California, Colorado, Illinois, Iowa, and Maryland). This group had a total of 155 years of WIC and MCH experience with a range of 6-28 years and an average of 19.3 years. Some of the CWG2 members were members of the national VENA workgroup convened by USDA in collaboration with the National WIC Association; others were not. These states represented a variety of staffing patterns and intentionally included states that employ primarily state or locally trained health officials (sometimes referred to as paraprofessionals) as WIC CPAs. See Appendix B for a list of work group members.

Survey Monkey™ was also used by CWG2 to collect input and feedback. Two surveys were used by this workgroup to accomplish their tasks.

For the first survey, the workgroup proceeded through the following steps:

1. Review original VENA policy guidance competency domains and the related knowledge expected and performance required statements.
2. Review the 101 competency statements for all six domains and respond to the following questions:
  - a. Should the statement be altered (edits, additions, divided)?
    - i. Is the statement relevant for WIC providers across the nation?
    - ii. Do the statements make sense? If not, suggest edits so that it does make sense.
  - b. Are there specific topics or content areas under each domain that are missing? If yes, identify and describe.
  - c. Are there skills, actions or behaviors related to a specific competency domain that are missing? If yes, identify and describe.
  - d. What descriptive/action verb should be selected to describe each competency statement? Is the right verb being used?
    - i. Create a behavioral statement vs. an outcome statement. Behavioral statements describe the competency in action and determine the supporting knowledge competencies that are applicable to the people conducting nutrition assessments with WIC clientele.
    - ii. Create a list of behavioral indicators for each competency that describe how the competency is demonstrated in the workplace.

For the second survey, workgroup members focused on the text for the “more information” drop downs tied to each competency statement and proceeded through the following steps:

1. Review the text.
2. Determine what words need to be defined, if examples need to be included and the list of activities that would be demonstrated in action if the competency was being addressed on the job.
3. Review the order of the competency statements for each domain and edit the order as needed.
4. Review the competency statements for each of the domains and make any final edits or comments.

Each workgroup member was assigned two domains to review in preparation for the final conference call and was prepared to answer the following questions:

1. Is each competency statement straightforward, specific, measurable and realistic? If not, please clarify and edit.
2. Does each competency statement make sense as a statement that an individual CPA will respond to in a self-assessment tool?
3. Is the correct verb used for each competency statement? Should a lower or higher level verb be used?

4. Is there any word or phrase in a competency statement that needs to be altered so that a majority of CPAs will understand it?

Two hours was not enough time to critically review all of the domains and statements so an additional conference call was scheduled for July 17, 2008. Although each workgroup member was only assigned to review and provide feedback about two domains, everyone was encouraged to review and participate in the discussion of all of the domains. Seven members of the workgroup participated in both of the July 2008 conference calls.

During the final two conference calls for this workgroup, several decisions were made about the competency set to achieve consistency between domains and to simplify sentence structure.

- Use the words “infants” and “children” rather than defining them by using age ranges.
- Use the phrase “all women clients” or “all postpartum clients” depending on the context of the statement.
- Use the term “data” for numerical measurements such as weights and hemoglobin levels.
- Use “nutrition assessment information” as a global term for all of the relevant assessment information collected.
- Limit the use of the verb “demonstrate” to only those competency statements that do not imply a return demonstration of a skill. Use the verb “completes” instead.

By the time CWG2 members completed their work, they had carefully checked competency statements for consistency in format, edited the action verb in several instances, deleted several competency statements and added several new competency statements. They also reviewed the “more information” language and helped to determine the order of statements under each domain so that they flowed logically for the user in the online self-assessment tool.

The competency model had 80 statements when it was returned to CWG1.

The proposed plan for CWG2 was to complete the work with two conference calls for the full group. However, project staff suggested additional conference calls to allow for continued in-depth discussion and the workgroup members agreed to this plan. Table 2 on the following page summarizes the time table followed by CWG2.

**Table 2. Competency Work Group 2 Schedule of Work**

<b>Date</b>	<b>Activity</b>
April 18 and 28, 2008	Initial conference calls to orient the workgroup members (two options to accommodate schedules)
April 18 – May 12, 2008	All workgroup members review all competency statements
May 19, 2008	Mid-point conference call to discuss selected competency domains: <ul style="list-style-type: none"> <li>• Anthropometric/Blood Work</li> <li>• Communication</li> </ul>
May 28 – June 10, 2008	Review the “more information” link language for each competency statement and provide input about the order of the statements in each domain
June 5, 2008	Mid-point conference call to discuss selected competency domains: <ul style="list-style-type: none"> <li>• Multicultural Awareness</li> <li>• Lifecycle Nutrition</li> </ul>
June 6, 2008	Mid-point conference call to discuss selected competency domains: <ul style="list-style-type: none"> <li>• Nutrition Assessment Process</li> <li>• Critical Thinking</li> </ul>
July 2, 2008	Conference call for all workgroup members
July 17, 2008	Final conference call for all workgroup members

### **Final Review by Project Advisory Committee and Competency Work Group 1**

The 80 competency statements, as edited by CWG2, were shared with the Project Advisory Committee (PAC) and CWG1 members for review and input. A conference call was convened on July 23, 2008 for the PAC; their suggested edits and recommendations were shared with CWG1 during their July 29, 2008 conference call. CWG1 members made final additions and edits resulting in 85 competency statements being forwarded to the learning management system staff to create the online self-assessment tool.

Table 3 on the next page summarizes the change in the number of statements in the competency model through the development process.

**Table 3. Number of Competency Statements Through the Development Process**

Area	Knowledge required statements*	Performance expected statements*	Total statements*	CWG1 statements	CWG2 statements	Final number
Principles of Life Cycle Nutrition	4	9	13	20	18	15
Nutrition Assessment Process	3	10	13	19	15	11
Anthropometric and Hematological Data Collection Techniques	2	5	7	22	15	14
Communication	2	11	13	16	10	12
Multi-Cultural Awareness	3	7	10	11	8	15
Critical Thinking	1	10	11	13	14	18
TOTAL	---	---	67	101	80	85

\*From VENA policy guidance

The final competency model can be found in Appendix C. Appendix D lists all of the competency statements and the related “more information” text and links to definitions and other resources.

### **Evaluation: Competency Work Group 1**

Workgroup members were e-mailed an evaluation questionnaire to complete and return to the evaluation coordinator via e-mail, fax or postal mail. Seven evaluations were sent to the local WIC agency members of the workgroup; six were returned for a response rate of 86%. A summary of the questionnaire responses follows:

- Although several individuals encountered a few difficulties using Survey Monkey™, respondents felt they received detailed information and instructions and that the trainings were very beneficial.
- The majority of respondents felt the overall time commitment for involvement as a workgroup member was reasonable and that the amount of time it took to complete the surveys and other workgroup tasks was reasonable.
- The majority of respondents were satisfied with the competency development and validation process, the finalization of the “more information” language and the competency set developed.
- Several individuals mentioned that their responsibilities as a workgroup member were more complicated and time consuming than they expected.
- Respondents were positive overall regarding the process and their involvement in the project.

## Evaluation: Competency Work Group 2

Workgroup members were e-mailed an evaluation questionnaire to complete and return to the evaluation coordinator via e-mail, fax or postal mail. Eight evaluations were sent to the local WIC agency members of the workgroup; seven were returned for a response rate of 87.5%. A summary of the responses follows:

- All respondents felt the overall time commitment for involvement in the workgroup was reasonable, met the expectations they had when the project started, and that the time it took to complete the surveys and other workgroup tasks was reasonable. All seven respondents rated the overall time commitment for involvement in the work group as reasonable.
- The majority of respondents were satisfied with the competency review and validation process, the finalization of the “more information” language and the final competency set developed.
- Narrative responses to the open-ended question about what worked well in the process mentioned the diversity of the group as a strength because of the depth of the group conversations. Workgroup members stated that assigning group members a couple of domains was helpful in terms of work load, and the organizational skills of the project team were also mentioned. One member commented about the amount of time spent reviewing previous discussions as frustrating, but a common experience in projects where group members are asked to complete tasks on their own between conference calls.
- Overall, respondents were very positive about the competency development and validation process. One respondent suggested allowing more time for the conference calls while another suggested shorter, more frequent calls with minimal individual work between those calls. A third respondent suggested one face-to-face meeting early in the project to establish constructive working relationships; develop a base understanding of the project, scope and tasks; and achieve an initial “trial run” of the process before being completely dependent on e-mails, conference calls, and the telephone.

## Online Self-Assessment Tool

The learning management system transitioned to a new vendor in mid-August 2008, delaying the pilot test of the online self-assessment tool until September 2008.

The WIC nutrition assessment competency model was created in the learning management system as a separate competency model with its own self-assessment tool. The format of the self-assessment tool was dictated by the other models already in the system. Figure 3 on the next page provides a screenshot of the tool for the Critical Thinking domain with labeled sections.

Figure 3. Components of the Online Self-Assessment Tool

The screenshot shows a web browser window titled "Skills Survey - Microsoft Internet Explorer provided by Iowa Dept. of Public Health". The address bar shows the URL: <http://prepareiowa.learnpublichealth.com/kview/CustomCodeBehind/base/idp/survey/idptakesurvey.aspx>. The browser menu includes File, Edit, View, Favorites, Tools, and Help. The page content is organized into a table with two columns: "KSA Title" and "Skills Rating".

**Table Content:**

KSA Title	Skills Rating
<p>NAWIC-3-001</p> <p><b>Considers the client's ability to obtain, process, and understand basic health information and services needed to make health decisions.</b></p> <p><i>More Information</i></p> <p>CPA uses resources to promote client success and their readiness to learn by facilitating the combined efforts of the WIC program, family members and the community to address the needs of the client.</p> <p>For more information and a Critical Thinking Presentation visit:  <a href="http://www.nal.usda.gov/wicworks/Learning_Center/Training_CriticalThinking.html">http://www.nal.usda.gov/wicworks/Learning_Center/Training_CriticalThinking.html</a></p> <p>Nutrition Assessment for WIC &gt;&gt; Critical Thinking &gt;&gt; Competency Statement 1</p>	<p>1 - Not Confident</p> <p>2 -</p> <p>3 -</p> <p>4 -</p> <p>5 - Very Confident</p>
<p>NAWIC-3-002</p> <p><b>Recognizes own personal world view and separates it from the assessment.</b></p> <p><i>More Information</i></p> <p>CPA evaluates if their thinking is good, fair and just and open to new information.</p> <p>Nutrition Assessment for WIC &gt;&gt; Critical Thinking &gt;&gt; Competency Statement 2</p>	
<p>NAWIC-3-003</p> <p><b>Recognizes health and dietary factors that contribute to nutrition risk factors.</b></p> <p><i>More Information</i></p> <p>CPA considers all factors of the client including lifestyle, environment, and socio-economic, not simply just the information required by the WIC data system. CPA asks client about food security, condition and use of appliances, who is involved in feeding children, and health and dental conditions. CPA evaluates barriers for nutritional health and assesses client's compliance to health providers' recommendations.</p> <p>For more information on Dietary Risk Assessment visit:  <a href="http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#recall">http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#recall</a></p> <p>Nutrition Assessment for WIC &gt;&gt; Critical Thinking &gt;&gt; Competency Statement 3</p>	

**Callout Boxes:**

- Knowledge, Skills & Attitudes:** Points to the "KSA Title" column.
- Skills rating:** Points to the "Skills Rating" column.
- Identifier: competency model, domain & statement:** Points to the "KSA Title" column.
- Competency statement:** Points to the "KSA Title" column.
- More information:** Points to the "More Information" section within the "KSA Title" column.
- Breadcrumb path:** Points to the navigation links at the bottom of the "KSA Title" column.

The Windows taskbar at the bottom shows the Start button, several open applications (Dev and validating co..., Pending Skills Survey..., Skills Survey - Micros...), and the system clock showing 11:11 AM on 6/16.

The Likert scale for the skills rating ranged from 1 = Not confident to 5 = Very confident. The scale did not allow a response “Not applicable.” Survey respondents had to select one of the ratings for each competency statement even if the competency was not part of their assigned job responsibilities. Some CPAs found this frustrating because they were concerned about potential negative ramifications of having some statements rated as not confident. Project staff reassured these CPAs that ratings on the online self-assessment tool would not be used in any punitive manner.

This concern helps illustrate one of the limitations of the competency model as currently designed and available in the learning management system. Each competency domain includes all of the statements relevant to that domain; the six domains comprise the full competency model. However, staffing patterns and assigned job responsibilities may not align with these domains. This design in the learning management system does allow CPAs to choose from one to six of the competency domains for their self-assessment based on their job responsibilities. However, within a given competency domain there still may be statements that are relevant to an individual CPA’s job responsibilities and other statements that are not relevant. The self-assessment tool design requires the CPA to rate themselves for each statement; the system does not allow users to leave statements unrated.

It is possible, although time consuming, to select individual competency statements to create a skills survey personalized to a CPA’s job responsibilities.

During the development of the competency statements project staff had discussed the use of hyperlinks in the online self-assessment tool (i.e., skills surveys) to provide the following:

- Definitions for words or phrases
- Examples of the competency in action (previously discussed as “more information” links)
- Access to relevant resources

Project staff concluded that there were significant advantages associated with providing definitions and examples of competencies in action within the skills surveys instead of providing hyperlinks for this information. This allows all users to see the information instead of making it optional based on their choice to open the hyperlink. The definitions and examples are particularly important for new staff. The pilot test also found that the examples of competencies in action provided helpful context for seasoned staff completing the skills surveys.

### **Pilot Test of the Online Self-Assessment Tool**

The pilot test work group included 20 individuals with 13 local agency dietitians and nutrition educators (two of whom were also WIC Coordinators), six local agency nurses (1 of whom was also

the WIC Coordinator), and one state agency nutrition consultant. The local agency personnel also included a representation of the staffing models used across the state — single provider model where a nurse or dietitian completes both the health and diet histories and the traditional model where the nurse completes the health component and the dietitian completes the diet component. The WIC experience of the local agency members of this workgroup ranged from 1½ to 15 years. See Appendix A for a list of work group members.

Pilot test work group members received training about how to register for the learning management system and send the skills surveys (i.e., self-assessment) to themselves. This training was provided via a one-hour conference call and Elluminate™ (real-time virtual classroom technology for distance education). Two training sessions were offered and follow-up was provided by the Kylie Davidson, project assistant.

CPAs completing skills surveys for the first time must complete the following steps:

1. Create a PILMS account
2. Assign the competency model to their development plan.
3. Send the skills surveys to their email account.
4. Complete the skills surveys.
5. Print the skills surveys (optional).

See Appendix E for the document developed by project staff to help local agency staff through this process.

Skills surveys were completed by 19 members of the workgroup and all of these individuals also completed the evaluation survey provided via Survey Monkey™. These 19 individuals included four nurses and 15 dietitians and nutrition educators. The results did not indicate any need to edit the competency statements or the process at this point in the project.

Workgroup members were asked to rate how understandable the competency statements were by domain. Table 4 on the next page summarizes their responses to this question.

**Table 4. Online Self-Assessment Tool Pilot Test Evaluation Results:  
How Understandable are the Competency Statements**

<b>Domain</b>	<b>1 = Not at all</b>	<b>2 = Somewhat</b>	<b>3 = Neutral</b>	<b>4 = Understandable</b>	<b>5 = Very</b>	<b>Response count</b>
Anthropometric and Hematological Data Collection Techniques	0.0% (0)	0.0% (0)	0.0% (0)	47.4% (9)	52.6% (10)	19
Communication	0.0% (0)	0.0% (0)	0.0% (0)	52.6% (10)	47.4% (9)	19
Critical Thinking	0.0% (0)	0.0% (0)	0.0% (0)	52.6% (10)	47.4% (9)	19
Multi-Cultural Awareness	0.0% (0)	0.0% (0)	5.3% (1)	47.4% (9)	47.4% (9)	19
Nutrition Assessment Process	0.0% (0)	0.0% (0)	5.3% (1)	42.1% (8)	52.6% (10)	19
Principles of Life Cycle Nutrition	0.0% (0)	0.0% (0)	5.3% (1)	42.1% (8)	52.6% (10)	19

Overall the work group members felt that the statements were relevant to their positions and duties related to nutrition assessment.

- 47.4% (9) felt the statements were very relevant to their jobs.
- 47.4% (9) felt the statements were relevant to their jobs.
- 5.3% (1) felt the statements were somewhat relevant to their jobs.

The average time to complete all of the skills surveys was 62 minutes. Eighteen of the 19 individuals who completed the skills surveys felt this length of time was reasonable; one person felt it was too long.

Several respondents commented about the challenges learning to navigate in the learning management system. Only one respondent reported having experience completing skills surveys in the learning management system before participating in this pilot test.

Pilot workgroup members were also asked to share comments about the “More Information” content on the skills surveys. The majority of the respondents found this information to be helpful in clarifying competency statements, especially the links to other resources. A few respondents found the statements distracting.

The Likert scale ratings for competency ranged from 1 = Not confident to 5 = Very confident. Table 5 below lists the competency statements with the largest training gap based on the pilot test aggregate data.

**Table 5. Pilot Test Aggregate Data: Competency Statements with Largest Training Gap**

<b>Competency Statements</b>	<b># with rating=1</b>	<b># with rating=2</b>	<b># with rating=3</b>	<b>% needing more training</b>
Determines the safety implications of parents'/caregivers' feeding practices impacting infants.	0	1	1	11.8%
Determines the safety implications of parents'/caregivers' feeding practices impacting children.	0	1	1	11.8%
Applies nutrition assessment information when determining food packages.	1	1	1	17.7%
Applies knowledge of lactation management techniques.	0	1	2	17.7%
Completes hemoglobin and hematocrit assessments according to State agency policy.	3	1	0	22.3%
Describes the values and belief systems of cultural groups in the target population.	0	1	3	23.5%
Maintains hematological equipment appropriately according to State agency policy.	3	0	2	27.8%
Selects appropriate communication techniques based on assessment of client's verbal and nonverbal cues.	0	1	4	27.8%
Collaborates with the prenatal client to identify the most appropriate infant feeding plan.	0	1	4	29.4%
Verifies inconsistent referral data according to State agency policy.	0	1	5	35.3%
Uses a variety of strategies to learn more about a client's cultural eating patterns and traditions.	0	1	5	35.5%
Uses culturally appropriate strategies to assess pregnant women's eating practices and beliefs.	0	1	5	35.5%
Evaluates food preparation practices within a cultural context.	0	2	6	47.1%

### **Release of Online Self-Assessment Tool**

State WIC staff participated in a two-hour training event in September 2008 to learn how to complete the self-assessment tools. This training session was facilitated by project staff.

The online self-assessment tool was released in conjunction with the state WIC conference on October 28-29, 2008. Two concurrent sessions were presented during the conference describing the project and providing CPAs with information and resources to complete their own self-assessments.

Project staff affiliated with the University of Iowa College of Public Health, Institute for Public Health Practice also had an exhibit during the conference where local WIC staff registered in the learning management system and sent themselves skills surveys (the first step in the process).

Two additional training sessions were held on November 7 and 10, 2008 via conference call and Elluminate™ technology; these sessions presented the same content as the conference sessions.

## **DEFINING COMPETENCY AND TRAINING GAPS: CPA SELF-ASSESSMENTS**

Three phases of CPA self-assessments were completed during the project using the online skills surveys with the validated competency model. The aggregate results of the first phase were used by the project staff along with information about existing online courses to determine the topics for the three courses that were also developed during this project.

### **Phase 1: November – December 2008**

The project goal was to have 75% of the local agency nurses and dietitians (n = 190 at this point in the project) complete an initial self-assessment. An incentive was offered to the two agencies with the highest participation rates. The University of Iowa College of Public Health provided travel drives to the CPAs in these agencies who completed surveys.

The participation rate in Phase 1 was 59.8% (113 of 190). The top two agencies had 100% participation (10 of 10) and 87.5% participation (7 of 8). Forty-seven percent (47%) of the respondents identified themselves as dietitians, 21% as nurses and 32% as other. When project staff reviewed the user profiles for position title responses, some problems were identified with the response options (i.e., multiple options included nurses) so profiles were correctly aligned prior to Phase 2.

Project staff identified several factors affecting participation including technology difficulties with the learning management system, challenges for new users learning to navigate in the system, and holiday schedules.

Aggregate data was compiled from the assessments to identify the competencies with the largest skills gaps. CPAs rated themselves on each competency statement using a scale of 1-5 where 1 = Not confident and 5 = Very confident. The skills gap was calculated in the following manner — individuals who rate themselves as a 5 on a competency statement have a skills gap of 0 and those rating themselves as a 1 on a competency statement have a skills gap of 4. Therefore, the larger the number, the bigger the skills gap is. The average skills gap was calculated for each competency statement as well as each competency domain.

At the domain level, the range in skills gaps was 0.69-1.23. Table 6 provides a summary of the aggregate CPA self-assessment data at the domain level. The domains are listed in alphabetical order. It should be noted that the same color coding scheme for domains is used for all remaining tables reporting self-assessment data.

**Table 6. Phase 1 CPA Self- Assessment Data: Aggregate Skills Gap by Domain**

Domain	Skills Gap
Anthropometric and Hematological	0.69
Communication	0.70
Critical Thinking	0.87
Multi-Cultural Awareness	1.23
Nutrition Assessment Process	0.90
Principles of Life Cycle Nutrition	0.95

At the competency statement level, skills gaps ranged from 0.32-1.56. Table 7 on the next page lists the 10 competency statements with the smallest skills gap. These statements potentially reflect areas of strength and areas where WIC CPAs believe they have the greatest knowledge and/or the most confidence.

**Table 7. Phase 1 CPA Self-Assessment Data: Competency Statements with Smallest Skills Gap**

<b>Competency Statements</b>	<b>Skills Gap</b>
Interacts with each client in a respectful and sensitive manner.	0.32
Adheres to State agency policies concerning client confidentiality.	0.34
Uses the appropriate growth chart for infants and children based on age, gender, and linear measurement.	0.50
Uses verbal and non-verbal communication techniques to create an environment that engages clients in conversation.	0.50
Reads, records, and plots anthropometric measurements accurately for women, infants, and children according to State agency policy.	0.54
Interprets growth patterns appropriately for infants.	0.55
Verifies inconsistent and unusual measurements according to State agency policy.	0.55
Incorporates hematological data in assessing health and nutritional status.	0.57
Interprets growth patterns appropriately for children.	0.58
Respects the beliefs and health practices of clients when conducting a nutrition assessment.	0.59

The competencies were further analyzed based on primary job title or position (i.e., nursing vs. nutrition professionals). Table 8 on the next page lists the 13 competency statements with the largest skills gaps by position title. This information was shared with the Project Advisory Council (PAC) in January 2009 and subsequently with the local agency WIC coordinators in February 2009 to obtain feedback and insight into the results. Both the PAC and the local agency WIC coordinators were also asked for their recommendations about the content of the first course to be developed based on these results.

**Table 8. Phase 1 CPA Self-Assessment Data:  
Competency Statements with Largest Skills Gap Sorted by Average Skills Gap**

Competency Statements	Average Skills Gap	Skills Gap Nurses	Skills Gap Dietitians
Uses culturally appropriate communication styles to collect nutrition assessment information.	1.2	1	1.19
Completes hemoglobin and hematocrit assessments according to State agency policy.	1.21	0.08	1.65
Maintains hematological equipment appropriately according to State agency policy.	1.21	0.24	1.63
Applies knowledge of lactation management techniques.	1.22	1.77	1
Uses culturally appropriate strategies to assess child's feeding/eating practices and beliefs.	1.24	1.41	1.15
Applies creative problem solving and flexible thinking in partnership with the client to identify solutions for nutrition issues.	1.26	1.48	1.21
Assesses cultural practices for potential harm to client's health or nutritional status.	1.28	1.41	1.21
Uses culturally appropriate strategies to assess infant feeding practices and beliefs.	1.33	1.55	1.25
Describes the values and belief systems of cultural groups in the target population.	1.33	1.41	1.33
Uses culturally appropriate strategies to assess pregnant women's eating practices and beliefs.	1.36	1.55	1.25
Identifies culturally appropriate referral resources that may be used by the client.	1.46	1.36	1.42
Evaluates food preparation practices within a cultural context.	1.55	1.64	1.4
Uses a variety of strategies to learn more about a client's cultural eating patterns and traditions.	1.56	1.73	1.4

See Appendix F for the aggregate results for Phase 1 for all of the competency statements.

Based on the aggregate results of the initial self-assessments, the priority focus areas for the first course were multicultural awareness and hematological assessment. The project team decided to focus on hematological assessment competencies for the first course due to the differences in the skills gaps between nurses and dietitians. The differences in the skills gaps between these two groups reflect training and experience as well as staffing patterns and job responsibilities. Given that many local agencies across the state were moving towards clinic models where the CPA completes

both the health and the diet history components of the nutrition assessment, this topic was selected for the subject matter of the first course. This decision also allowed project staff additional time to collect resources and input from local agency staff and others so that a course related to multicultural awareness and nutrition assessment would adequately address CPA needs.

## **Phase 2: July — August 2009**

The second phase was completed during the summer of 2009 due to the activities associated with the implementation of the new food packages in October and November 2009. An incentive was offered to the four agencies with the highest participation rate — a set of food package labels and containers used in the spring 2009 regional training activities about shopping for fruits and vegetables with the new cash value vouchers and buying canned legumes.

In addition, the instructions for completing the skills surveys were revised for clarity prior to Phase 2 based on feedback from Phase 1 participants. In addition, the process for completing the skills surveys was changed to completing the full set in one survey rather than six smaller surveys organized by domain.

The participation rate in Phase 2 was only 37% (71 of 189). The top four agencies had participation rates of 100% (10 of 10), 80% (4 of 5), 75% (6 of 8) and 71% (5 of 7). Fifty-two percent (52%) of the respondents identified themselves as dietitians, 38% as nurses and 10% as other (nutrition educators). Of the 71 CPAs participating in this phase, 35 had participated in Phase 1 and 36 were completing skills surveys for the first time.

The low participation rate was very disappointing. The project team was aware that local agency staff had several other demands placed on them during the final months leading up to the implementation of the new food packages. These demands included required data system training activities and contact with community partners to discuss breastfeeding promotion and support in light of the new food packages for breastfeeding mothers and infants. In addition, the project team anticipated that summer vacations would make it difficult for some staff to complete assessments.

Despite the low participation rate, the project team believes that an even lower participation rate may have resulted if Phase 2 had occurred during October and November 2009 as originally planned. WIC appointments during these months were longer due to education activities about the new foods and food packages. This time demand continued through December 2009 since Iowa chose to phase in the new food packages based on participants' food instrument issuance cycle.

Since one more round of skills surveys was planned during the final year of the project, Maria Osterhaus Scott (project assistant), called five local agency WIC Coordinators whose agencies had low participation rates to ask questions about the role of incentives, local agency data use, and

participation barriers. One WIC Coordinator suggested awarding “points” towards the purchase of new equipment (either individual or agency). Otherwise, the WIC Coordinators thought knowing the data would be used and having the time to complete the survey would be enough incentive for staff to complete the surveys. Other barriers to participation identified by the group included time, computer literacy, and the fact that the assessment was voluntary. Overall, this group of WIC Coordinators was excited about the ways the data could be used at the local and state level for identifying training needs.

At the domain level, the range in skills gap was 0.52 to 1.06. Table 9 provides a comparison of the aggregate CPA self-assessment data at the domain level for both phases. The skills gap was calculated in the following manner — individuals who rate themselves as a 5 on a competency statement have a skills gap of 0 and those rating themselves as a 1 on a competency statement have a skills gap of 4. Therefore, the larger the number, the bigger the skills gap is.

**Table 9. Comparison of Phase 1 and Phase 2 Aggregate CPA Self-Assessment Data by Domain**

Domain	Phase 1 Skills Gap	Phase 2 Skills Gap
Anthropometric and Hematological	0.69	0.53
Communication	0.70	0.52
Critical Thinking	0.87	0.58
Multi-Cultural Awareness	1.23	1.06
Nutrition Assessment Process	0.90	0.59
Principles of Life Cycle Nutrition	0.95	0.66
Number of individuals completing surveys	113	71

At the competency level, skills gaps ranged from 0.41 to 1.41. The competency statements with the largest skills gaps in Phase 2 were nearly identical to those in Phase 1. Table 10 on the next page lists the competency statements with the largest skills gaps for both phases of data collection. The list of competency statements is ordered by the Phase 2 results from smallest to largest skills gap.

**Table 10. Comparison of Phase 1 and Phase 2 Aggregate CPA Self-Assessment Data:  
Competency Statements with the Largest Skills Gap  
Ordered from Smallest to Largest Gap for Phase 2**

Competency Statements	Phase 1 Skills Gap	Phase 2 Skills Gap
Applies creative problem solving and flexible thinking in partnership with the client to identify solutions for nutrition issues.	1.26	0.81
Recognizes how a client's cultural communication style may affect the nutrition assessment.	1.03	0.83
Applies knowledge of lactation management techniques.	1.22	0.86
Identifies the mother's and/or infant's strengths and challenges to breastfeeding.	1.08	0.86
Completes hemoglobin and hematocrit assessments according to State agency policy.	1.21	0.96
Maintains hematological equipment appropriately according to State agency policy.	1.23	1.0
Uses culturally appropriate communication styles to collect nutrition assessment information.	1.20	1.0
Assesses cultural practices for potential harm to client's health or nutritional status.	1.28	1.05
Uses culturally appropriate strategies to assess infant feeding practices and beliefs.	1.33	1.12
Describes the values and belief systems of cultural groups in the target population.	1.33	1.19
Uses culturally appropriate strategies to assess pregnant women's eating practices and beliefs.	1.36	1.26
Uses culturally appropriate strategies to assess child's feeding/eating practices and beliefs.	1.24	1.27
Identifies culturally appropriate referral resources that may be used by the client.	1.46	1.36
Uses a variety of strategies to learn more about a client's cultural eating patterns and traditions.	1.56	1.4
Evaluates food preparation practices within a cultural context.	1.55	1.49

See Appendix G for the aggregate results for Phases 1 and 2 for all of the competency statements.

### **Phase 3: May — June 2010**

The third and final phase was completed in the spring of 2009. Incentives were offered for the three local agencies with the highest participation rates. The incentives were various sets of reference books purchased from the American Dietetic Association using Nutrition Services Administration funds.

Project staff again made significant improvements to the step-by-step directions for completing assessments and provided technical assistance as needed.

Only 35% (66/189) participated in the last phase of self-assessments. The top three agencies had participation rates of 81% (13 of 16), 80% (4 of 5), and 66% (4 of 6). Seventy-one percent (71.88%) of the respondents identified themselves as dietitians, 21.9% as nurses, and 6.25% as other (nutrition educators).

Summary totals for participation in the three phases of CPA self-assessments are listed below:

- 75 participated in only one phase (39.5%)
- 54 participated in two phases (28.6%)
- 43 participated in all three phases (22.8%)

Based on conversations with local agency staff, the primary barriers appeared to be time and issues related to the learning management system including remembering passwords and how to navigate in the system.

At the domain level, the range in skills gap was 0.51 to 1.17. Table 11 on the next page provides a comparison of the aggregate CPA self-assessment data at the domain level for all three phases. The skills gap was calculated in the following manner — individuals who rate themselves as a 5 on a competency statement have a skills gap of 0 and those rating themselves as a 1 on a competency statement have a skills gap of 4. Therefore, the larger the number, the bigger the skills gap is.

**Table 11. Comparison of Aggregate CPA Self-Assessment Data for All Phases by Domain**

<b>Domain</b>	<b>Phase 1 Skills Gap</b>	<b>Phase 2 Skills Gap</b>	<b>Phase 3 Skills Gap</b>
Anthropometric and Hematological	0.69	0.53	0.53
Communication	0.70	0.52	0.62
Critical Thinking	0.87	0.58	0.72
Multi-Cultural Awareness	1.23	1.06	1.19
Nutrition Assessment Process	0.90	0.59	0.71
Principles of Life Cycle Nutrition	0.95	0.66	0.70
Number of individuals completing surveys	113	71	66

Table 12 on the next page compares the aggregate data for all three phases with the largest skills gaps ordered from smallest to largest for Phase 3.

**Table 12. Comparison of Aggregate CPA Self-Assessment Data for All Phases:  
Competency Statements with the Largest Skills Gaps  
Ordered from Smallest to Largest Gap for Phase 3**

Competency Statements	Phase 1 Skills Gap	Phase 2 Skills Gap	Phase 3 Skills Gap
Applies knowledge of lactation management techniques.	1.22	0.84	1.09
Identifies the mother’s and/or infant’s strengths and challenges to breastfeeding.	1.03	0.84	0.94
Recognizes how a client’s cultural communication style may affect the nutrition assessment.	1.03	0.85	0.99
Applies creative problem solving and flexible thinking in partnership with the client to identify solutions for nutrition issues.	1.26	0.87	1.19
Maintains hematological equipment appropriately according to State agency policy.	1.21	0.95	0.68
Uses culturally appropriate communication styles to collect nutrition assessment information.	1.2	0.98	1.09
Completes hemoglobin and hematocrit assessments according to State agency policy.	1.21	1.01	0.91
Assesses cultural practices for potential harm to client’s health or nutritional status.	1.28	1.08	1.28
Uses culturally appropriate strategies to assess infant feeding practices and beliefs.	1.33	1.08	1.29
Describes the values and belief systems of cultural groups in the target population.	1.33	1.12	1.32
Uses culturally appropriate strategies to assess child’s feeding/eating practices and beliefs.	1.24	1.14	1.28
Uses culturally appropriate strategies to assess pregnant women’s eating practices and beliefs.	1.36	1.17	1.43
Identifies culturally appropriate referral resources that may be used by the client.	1.46	1.27	1.35
Uses a variety of strategies to learn more about a client’s cultural eating patterns and traditions.	1.56	1.34	1.43
Evaluates food preparation practices within a cultural context.	1.55	1.41	1.54

See Appendix H for the aggregate results for all three phases and for all of the competency statements.

## Conclusion

Based on the aggregate data from three phases of CPA self-assessments, the largest competency and training gap appears to be in the multi-cultural awareness domain. The results were consistent across the three phases of data collection.

Given these results, it is interesting to consider the top 10 choices for training topics for the WIC nutrition workforce in the ASTPHND Survey of the Public Health Nutrition Workforce, 2006-07 (Haughton and George, 2007). This survey provided a list of defined list of training topics including several that are directly related to the domains in the nutrition assessment competency model. See Table 13 below for a summary of the top 10 rankings in this national survey.

**Table 13. Top 10 Choices for Perceived Training Needs of the WIC Workforce**

Topic	WIC Nutrition Workforce		
	All	Professional	Paraprofessional
Breastfeeding	1	1	1
Prenatal nutrition	2	2	2
Infant and preschool age nutrition	3	3	3
Childhood nutrition	5	6	4
Nutrition counseling, behavioral change, client education	4	4	5
Use of current information technology, including computers	7	7	7
Nutrition for children with special health care needs, developmental disabilities or high risk	6	5	
Women's health	8	9	6
Assessment of nutritional status	9	8	8
Communicating with low-literacy populations	10		9
Community nutrition assessment		10	
Cultural competency			10

## DEVELOPING AND PILOT TESTING ONLINE COURSES

Three new online courses linked to the validated nutrition assessment competency model and identified training gaps were developed during this project.

### Goals for the Courses

The initial goals for these courses included the following:

- Each course takes approximately two hours to complete
- Course content is presented in chunks or modules

- Learners could stop and start in a course and their progress would be saved.
- Interactive components address different learning styles and preferences
- Emphasis is placed on application of critical thinking skills
- Content is relevant for WIC CPAs across the country
- Content is relevant across practice settings (public health, clinical practice, etc.) when feasible
- Pre- and post-tests as well as other review opportunities are used in each course
- PDF files are available to allow CPAs to print documents and information they may want as reference material
- Approved for nursing and nutrition continuing education units

### **Defining the Topics for the New Online Courses**

The focus and content for these courses was based on several factors including the aggregate data about skills gaps for Iowa CPAs; the availability or lack of credible and well-designed online modules linking to the competency statements with the largest skills gaps; and additional feedback from CPAs, WIC Coordinators and subject matter experts about the skills gaps in the multi-cultural awareness domain.

Aggregate data from CPA self-assessments. As described earlier in this report, the aggregate data from Phase 1 identified the Multi-Cultural Awareness domain as the domain with the largest skills gap. When the competencies were analyzed based on primary job title or position (i.e., nursing vs. nutrition professionals), the competency statements with the largest skills gaps came from the following domains:

- Nine from Multi-Cultural Awareness
- Three from the hematology portion of the Anthropometric and Hematological Data Collection
- One from Critical Thinking

Environmental scans. Environmental scans of external courses completed by project assistants identified several excellent courses addressing multi-cultural awareness in the public health arena, but not specifically related to nutrition assessment. Only one course was identified related to hematological data collection; however, the course was targeted to laboratory personnel instead of ambulatory care and public health professionals.

Topic for first course. After further discussion with the Project Advisory Committee and the local agency WIC Coordinators, the project team determined that additional information and resources needed to be gathered before beginning work on a multi-cultural awareness course. Given the aggregate results, the trends in local WIC agency staffing patterns toward cross-training between nursing and nutrition professionals and an environmental scan completed by Maria Osterhaus Scott

(project assistant) that did not find any online courses on the topic, hematological data collection and assessment was identified as the topic for the first course.

Activities to define a course related to multi-cultural awareness. At this point in the project, it was unclear whether multi-cultural awareness would be the focus of the second or the third course. However, the project team identified several strategies to help define the content for a course related to this topic.

Brenda Dobson, project coordinator, attended the February 2009 meeting of the local WIC Coordinators to share the results of the Phase 1 CPA self-assessments and to get their feedback about the data. Several of the WIC Coordinators suggested that CPAs would never rate themselves as competent in the multi-cultural domain because there is always more to learn. Comments were also made about the breadth of information and skills encompassed in competency statements in this domain.

The WIC Coordinators involved in Phase 1 of the Supervisor Assessment Pilot were also given the opportunity to provide additional feedback during their summary conference call in April 2009. They agreed that CPAs were most interested in resources and information about specific cultures and ethnic groups because of the increasing diversity in their service areas. They also suggested that online resources would be the best option for providing this information. The WIC Coordinators gave lower priority to providing information and resources about developing culturally competent communication skills and strategies for identifying resources.

During the May 2009 grantee meeting, Dawn Gentsch, education coordinator and Brenda Dobson, project coordinator had the opportunity to learn about the multi-cultural awareness components of the New Mexico and Maine special project grants that intersected with this project. The project team concluded that additional information was needed from CPAs about their self-assessment ratings for the multi-cultural competency statements. Therefore, an online survey was developed and sent to the members of the Online Self-Assessment Tool Pilot Test Work Group in June 2009. Surveys were completed by 13 of the 18 members (72%) who were still working for WIC (two members of the work group had left their WIC positions). Highlights of the survey results include the following:

- The majority of respondents were very interested in information and resources describing food practices (preferences, taboos, preparation practices, etc.) and health beliefs for the cultural groups served by their local agency.
- A few respondents identified the need to improve their ability to identify resources to help them become more comfortable and confident working with clients from different cultures.
- Language barriers were mentioned by several respondents.

Overall, the respondents had based their self-assessments on their current knowledge and understanding of the cultural groups in their service area even though several of the competency statements were more related to their skills and abilities in communication, assessment and identifying resources.

All of this feedback was used by the project team to draft a course outline.

The next step was to convene conference calls with several subject matter experts both in-state and out of state for brainstorming conversations about the draft course outline, possible application activities, and potential resources. The following individuals participated in conference calls with the project team during August and September 2009:

- Janice Edmunds-Wells, MSW, Office of Multicultural Health, Iowa Department of Public Health
- Marilyn Alger, Education Coordinator, Iowa Department of Public Health
- Debbie Kibbe, MS, RD, International Life Sciences Institute Research Foundation
- Michele Devlin, DrPH, Professor and Executive Director, Iowa Center on Health Disparities, University of Northern Iowa

The input from these experts, along with feedback from the local agency WIC Coordinators and the survey responses from the CPAs, was used to determine the focus for the second course — developing cultural competence, cultural influences on feeding and eating practices, and identifying reputable resources. This decision was supported by the continuing environmental scan of external courses indicating that current courses offered limited content in this area.

Topic for third course. When the aggregate results of Phase 2 CPA self-assessments reported largest skills gaps that were nearly identical to Phase 1, the Project Advisory Committee and the project team concluded that the third course would also focus on the multi-cultural awareness domain, specifically on cross-cultural communication skills in nutrition assessment.

## **Development and Pilot Testing Process**

All three of the courses were developed and tested following the process outlined below:

- The Project Advisory Committee and the state office WIC staff helped identify subject matter experts to serve on each course planning committee. For each course three individuals served as subject matter experts for course development. Although the work group composition varied between courses, each work group included representatives from local WIC agency CPAs, state WIC nutrition consultants, and other subject matter experts. Each work group drafted course learning objectives, identified learning objects and reference material to be considered and reviewed for each course, and drafted the course script.

- The other members of the course work group included Dawn Gentsch, education coordinator, the current project assistant, and Brenda Dobson, project coordinator, along with Institute for Public Health Practice project and technical staff (instructional designers, instructional developers, test item writers, digital media and graphic artists, pilot test administrators, and course administrators).
- The pilot test group for each course included a state WIC agency consultant and local WIC agency CPAs. The goal was to include at least 20 local WIC agency CPAs in each pilot test group; two of the three pilot test groups met this goal.
- The Project Advisory Committee and state office WIC staff also identified content experts to serve as course reviewers for continuing education applications for dietitians.

This extensive use of practitioners during course development, pilot testing and continuing education review was critical to ensure that the end users found the courses to be of value and that the courses would improve competence.

Subject matter experts. The subject matter experts serving on the planning committee for each course were convened via a conference call with the lead project staff. During the initial call, the group learned more about the project goals related to course development, discussed the relevant competency statements with larger skills gaps and reviewed the proposed timeline for developing the course. Project staff then presented a draft course outline to provide a starting point for group discussion about the structure of the course. Examples of the interactivity components possible in a course were also reviewed with the work group. After ideas and recommendations for course content, structure and interactive components were shared, each member of the work group selected one of the sections of the course to draft a more detailed outline for the next conference call. The section outlines were merged and continued to become more detailed with each conference call based on the input and feedback from group members and project staff. At this point, the course document was referred to as the course script.

Methodology for designing and developing instructional activities. The Institute for Public Health Practice has developed a methodology for designing and developing instructional activities, including online courses. The general methodology is discussed below.

The first step in developing any instructional activity is to identify the goals and learning objectives. In developing the goals and learning objectives it is important to take into account which competencies are to be addressed through the activity as well as the target audience and anticipated outcomes of the training. Based on this information learning objectives are written using Bloom's Taxonomy for the appropriate level of cognitive thinking. It should be noted that learning objectives are included at the beginning of each course so students know what they are expected to learn upon completion of the course.

Because learners have different preferred learning styles, or utilize a combination of learning styles, instructional activities are designed and developed employing multiple instructional strategies.

Below are examples of some of the instructional effectiveness strategies that were used in the development of the online courses for this project along with specific examples:

- Securing the attention of the learner (reception): Video presentation regarding the changing demographics of WIC participants, visual images of different cultures and foods in the course banners
- Informing learners of the objectives (expectancy): Learning objectives are stated at the beginning of each module. All activities, as well as pre- and post-tests, were developed based on these objectives.
- Providing guidance for the learner via interactive activities: Video showing how to properly collect blood samples, problem-based scenario activity
- Providing feedback (reinforcement): Review questions are included that provide the learner with immediate feedback
- Eliciting performance (responding): Questions following each scenario that require a response from the learner. These activities also involve critical thinking as learners need to make decisions about the specific issues that are presented.
- Assessing performance: Providing the learner their score and feedback on the post-test; providing feedback to responses selected for scenarios and other activities.
- Enhancing retention and transferability: This is achieved through interactive activities including games, scenario-based assessments, and post-test questions.
- Collaboration: When appropriate, courses include a discussion board where learners may post their thoughts and experiences to share with other learners.

Technical staff. When the subject matter experts were satisfied with the course script, the technical team started its work to bring the course to life and to meet the team's criteria for relevance, efficiency and appropriateness — the same criteria used to evaluate external courses for linkage to the competency model. The instructional designer (Nor Hashidah Abd Hamid) had already collaborated with the subject matter experts while they determined content. This provided helpful insight and background for the development tasks such as selecting and integrating appropriate media resources, preparing prototypes for Flash design if applicable, completing the instructional design documentation, coordinating communication and development activities with the rest of the technical team, coordinating resource allocation for the course, and preparing a blueprint for the questions bank. Other Institute for Public Health Practice staff working on the course design and development components of each course included Jay Cooper and Peter Ostrander (Flash development) and Samara Wright and Jeremiah Stai (video and photography production). Subject matter experts reviewed sections of the draft course as they were completed and provided comments and feedback to the technical team and the project staff.

While the technical team was doing their work, the test item writers (Daniel Pschaida, Dawn Gentsch, Kathleen Glady and Dena Fife) reviewed the learning outcomes for the course and drafted pre- and post-test items and review questions for each section of the course. Each pre-test has 15 questions; these questions are the same for each learner. The test item writers also drafted at least three post-test questions for each course objective. This allows post-test items to be randomly drawn from the bank of test items. Therefore, the post-test presents 15 random questions for every attempt to complete the post-test. At least 80% of the post-test questions must be correctly answered for the learner to receive a certificate of completion.

When the course work group identified client scenarios as a desirable practical application activity, the course item writer(s) also reviewed and edited those scenarios and questions. All of the questions were reviewed multiple times by the course work group and the project staff to ensure that the most important content had been addressed in the questions and that the proposed responses to each question were categorized appropriately (i.e., correct or incorrect).

Pilot test. Local WIC agency CPAs were recruited for the pilot test of each course via e-mail announcements to their WIC Coordinators and via items in the WIC Program's weekly e-newsletter. See Appendix I for a sample recruiting announcement for one of the courses. When all of the course components were available in the online format, the pilot test began. All pilot testers who successfully completed the course before the deadline received a 1 GB USB drive from the Institute for Public Health Practice in appreciation for their participation and feedback. Members of the Project Advisory Committee were also invited to review the course during the pilot test and provide feedback.

To complete the pilot test staff had to register in the learning management system, if they had not already done so, and then access the course. Successful completion of the course was defined as reviewing the course, passing the post-test with a score of 80% or higher and completing the course evaluation. Project staff estimated that completing each course would require approximately two hours.

Feedback from the pilot test was then reviewed by course work group, project staff and the instructional designer. The pilot test administrator provided spreadsheets for test item analysis, learner pre- and post-test scores, time spent in the course, and the cumulative results from the evaluation.

Test item analysis was based on the statistics provided by the content management system. Reports were generated that listed each test item and the percentage of respondents who selected each response. In general, the difficulty levels for both the pre- and post-test should be balanced with an average score of 80% or above.

For the pre-test, the goal was to write questions that addressed the learning objectives and yet were not too specific to the course content and details. In doing so, there was a tendency to write questions that were too easy, i.e., questions where 100% of the learners answered the item correctly. Questions that performed at this level were reviewed with particular attention given to relevance to the learning objective and the distracters used in the incorrect responses. Items were revised to increase their difficulty level.

For the post-test, the opposite approach was taken. Questions were identified as potentially too hard and in possible need of revision when fewer than 80% of the learners answered the question correctly. The questions with the lowest percentage of learners answering the question correctly received the most attention. The instructional designer, test item writers, subject matter experts and project team members considered several factors before revising items.

- The validity of the test question was discussed with subject matter experts since test analysis statistics do not tell the whole story. Based on this discussion, some questions were revised to more directly address the relevant learning objective. Some questions were also deleted from the pool because they were too specific, i.e., they required recall of details rather than key concepts.
- Distracters for the incorrect answers were reviewed to determine if those answers needed revision instead of the correct answer. For example, if 50% of the learners selected the incorrect answer, the distracter needs to be revised.

After final edits were made to the course based on this information, the course was posted on the learning management system.

Continuing education applications. Throughout the development and testing process, supporting materials were collected for continuing education applications for nurses through the Iowa Board of Nursing Provider Number 94. These three courses were the first online courses to request nursing continuing education units (CEUs) from this provider, so several issues had to be resolved to make this possible.

- Nurses cannot be required to complete a course evaluation in order to receive CEUs. In the learning management system these two components had been linked in courses for other disciplines. The components were easily de-linked for these courses to meet this requirement. However, the number of completed course evaluations has been negatively affected.
- The normal procedure for this provider is to receive a list of nurses who completed a CEU activity and then provide the activity sponsor with hard copy certificates to complete and mail to the nurses. The provider approved adding the nursing CEU statement to the certificate because the learner must achieve a score of 80% or higher on the post-test. The

course administrator reviews those scores and completes the documentation in the learning management system that alerts the learner via an e-mail message that the certificate is available to print. This approach resulted in more consistent responsibilities for the department's course administrator across all courses in the learning management system and reduced the burden on the nursing provider and the state WIC Program to produce and distribute hard copy certificates.

Supporting materials were also compiled for continuing professional education units (CPEUs) for dietetics professionals (dietitians and dietetic technicians registered) through the Commission on Dietetic Registration. This application process required several additional components — three letters from content experts and their resumes or vitae, documentation of the background of the test item writers, and hard copies of all of the course content. Content experts included dietitians from Iowa and state WIC staff from other states.

On a quarterly basis, project technical staff generates a spreadsheet listing information about all learners who started and/or completed the course. The spreadsheet includes additional required information about the nurses completing the course for credit; this information comes from a small wizard application created for this purpose. While this data does not need to be reported for dietetics professionals, it is also collected from them as a means to monitor the number of course completions for CPEUs. The spreadsheet is then used by the state WIC program to create the required report for the nursing provider.

Project technical staff also produces a cumulative evaluation report for each reporting quarter. This report includes bar graphs and other analyses of the responses to the questions on the course evaluation.

All three courses were approved for CEUs and CPEUs by the respective organizations.

The Iowa Administrative Code (IAC 655, Chapter 5 - 5.2(2)f(1)) states that self-study courses, including those completed over the Internet, are acceptable CEUs if they are:

- Taken from an Iowa Board of Nursing approved provider;
- Approved by a board of nursing in another mandatory continuing education state;
- Approved by the American Nurses Credentialing Center (ANCC), National League for Nursing (NLN), National Federation of Licensed Practical Nurses (NFLPN), and the National Association of Practical Nurse Education and Service, Inc. (NAPNES); or
- Special approved (i.e., CEU offerings outside of Iowa sponsored by providers or organizations other than those listed above).

According to the Iowa Board of Nursing Web site, Iowa is one of 30 mandatory continuing education states for renewal of nursing licenses. While it is very likely that the other mandatory continuing education states would recognize these online courses as approved CEUs, all nurses who are licensed or registered by states other than Iowa are advised in the course materials to check with their state boards of nursing to determine whether the courses are approved in their respective states.

The courses are available for all registered dietitians and dietetic technicians registered across the United States because these are national credentials. Many state licensing boards for dietitians and nutritionists across the country also grant approval for any CPEUs offerings approved by the Commission on Dietetic Registration, increasing the availability of CPEUs for nutrition professionals.

Learners who are interested in CEUs from their other credentialing organizations can print information from the course (e.g., learning objectives, overview, sponsor information) to use in their applications for CEU approval.

All learners who successfully complete the course receive a certificate of completion to document the learning activity regardless of whether or not the course is approved for continuing education units by their respective credentialing organizations.

The remainder of this section provides specific information about each course including the composition of each expert work group, course timeline, major development decisions, the course release date, and course completion statistics.

## **COURSE 1: HEMATOLOGICAL DATA COLLECTION, ASSESSMENT AND CRITICAL THINKING APPLICATION**

### **Expert Work Group**

The expert work group for the first course convened its first conference call on March 20, 2009. The work group members included a nurse epidemiologist, a state agency WIC consultant/dietitian, a local agency CPA who is credentialed as a dietitian and a registered nurse, and project staff (instructional designer, education coordinator, and project assistant). See Appendix A for a list of the work group members.

Group members participated in three more conference calls (May 7, 2009; May 28, 2009 and June 18, 2009) and frequent e-mail exchanges to complete the task of developing the course script. During this time they reviewed and edited numerous drafts of the course narrative, review questions, pre- and post-test questions, and a “game” to engage learners. Video footage and digital pictures

depicting appropriate blood collection techniques were completed at the Johnson County Health Department WIC Program in early June 2009.

### **Additional Needs Assessment Activities**

A brief e-mail survey of selected geographic state agencies and Indian Tribal Organizations was completed to identify current practices regarding staff members that completed hemoglobin or hematocrit assessments, the specific test used, equipment used, and major differences in state screening and referral policies compared to federal policy guidance. Responses were received from nine geographic state agencies and two Indian Tribal Organizations representing three USDA regions.

The survey responses were used by the work group to ensure that the course content and language was relevant to WIC Programs across the nation. Specific examples of development decisions made based on the survey responses included the following:

- Due to the wide range of position titles and roles for staff completing the blood work tests, the narrative and print materials in the course used generic titles (i.e., CPAs) to discuss blood collection techniques and use of the results.
- Both hemoglobin and hematocrit measures were discussed and included in the course.
- Links were provided to equipment produced by Hemocue™ and Stanbio™.
- Screening and referral policies were discussed as presented in the federal policy guidance along with several references to check with state agency policies for more information.

### **Pilot Test**

The course pilot test was completed August 10-23, 2009. The pilot test group included 13 local agency CPAs representing nine of the 20 local agencies (one nutrition educator, seven dietitians, and five registered nurses), a department intern (an undergraduate student in dietetics), and one state WIC agency consultant (dietitian) for a total of 15 individuals. See Appendix A for the list of members. Thirteen members of this group completed the pilot test (took the pre-test, reviewed the course and completed the post-test). The department intern also completed the course but only took the pre-test. The remaining member of the group did not complete any pilot-test activities. Table 14 on the next page provides information about the pre- and post-test scores.

**Table 14. Pre- and Post-Test Data for Hematological Data Collection Course Pilot**

	<b>Pre-Test</b>	<b>Post-Test</b>
Average score	12.07 (80.5%)	13.38 (95.9%)
Number passing (score $\geq$ 80%)	10 (71.4%)	13 (100%)
Number not passing	4 (28.6%)	0
Number taking the test	14	13

Pre- and post-test scores were also compared with the following results:

- 10 had higher scores on the post-test,
- Two had identical scores (both individuals scored  $>80\%$ ), and
- One had a lower score on the post-test (pre-test was 100% and post-test was 93.33%).

Feedback and evaluation comments were also collected as part of the pilot test. Evaluations were completed by 14 individuals including four nurses, eight dietitians, one nutrition educator and the department intern.

The pilot test work group was asked to report how long it took to complete the course.

- Ten of the 14 individuals reported that it took 1½ to 2 hours,
- Three reported that it took 1½ hours or less, and
- One reported that it took more than 3 hours.

The pilot test work group members were asked to rate the degree to which they agreed or disagreed with a number of statements about the course. Table 15 on the next page summarizes the ratings.

**Table 15. Evaluation Questions: Hematological Data Collection Course Pilot**

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not applicable
The information in the course was clearly presented.	0.0% (0)	0.0% (0)	7.1% (1)	14.3% (2)	78.6% (11)	0.0% (0)
It was generally easy to navigate from one part of the course to another.	0.0% (0)	0.0% (0)	7.1% (1)	35.8% (5)	57.1% (8)	0.0% (0)
It was clear to me what I needed to do to successfully complete the course.	0.0% (0)	0.0% (0)	0.0% (0)	50.0% (7)	50.0% (7)	0.0% (0)
The content of this course was relevant to the duties I perform on the job.	0.0% (0)	0.0% (0)	0.0% (0)	28.6% (4)	64.3% (9)	7.1% (1)
The review questions at the end of each section were useful in helping me learn the course materials.	0.0% (0)	0.0% (0)	0.0% (0)	14.3% (2)	85.7% (12)	0.0% (0)
The case study in section 4 was useful in helping me learn the course materials	0.0% (0)	0.0% (0)	7.1% (1)	28.6% (4)	64.3% (9)	0.0% (0)
The practice activity, Choose the Right One, at the end of the course was useful in helping me learn the course material.	0.0% (0)	0.0% (0)	0.0% (0)	42.9% (6)	57.1% (8)	0.0% (0)
The resources at the end of the course were useful to the duties I perform on the job.	0.0% (0)	0.0% (0)	7.1% (1)	50.0% (7)	42.9% (6)	0.0% (0)

The pilot test group was also asked to rate to what degree their knowledge and abilities improved after taking the course. These knowledge and ability statements reflect the learning objectives for the course. The ratings used a 1 to 5 scale where 1 = No improvement and 5 = Not applicable, I took the course for other reasons. Table 16 on the next page presents the data from the pilot test.

**Table 16. Improvement in Knowledge and Abilities: Hematological Data Collection Course Pilot**

	No improvement	Little improvement	Moderate improvement	A great deal of improvement	Not applicable, I took the course for other reasons
Identify differences in screening schedule for women, infants and children	28.6% (4)	28.6% (4)	35.7% (5)	7.1% (1)	0.0% (0)
Describe situations when it is appropriate to skip the blood test.	28.6% (4)	35.7% (5)	21.4% (3)	14.3% (2)	0.0% (0)
Identify appropriate puncture sites for blood collection in all populations.	14.3% (2)	50.0% (7)	21.4% (3)	14.3% (2)	0.0% (0)
Describe collection procedure including appropriate use of personal protective equipment.	57.1% (8)	14.3% (2)	21.4% (3)	7.1% (1)	0.0% (0)
Identify low and high hemoglobin and hematocrit values in women, infants and children	35.7% (5)	35.7% (5)	21.4% (3)	7.1% (1)	0.0% (0)
Identify appropriate referral criteria for abnormal blood values.	14.3% (2)	50.0% (7)	28.6% (4)	7.1% (1)	0.0% (0)
Describe nutritional factors that affect hemoglobin and hematocrit levels.	21.4% (3)	50.0% (7)	21.4% (3)	7.1% (1)	0.0% (0)
Describe behavioral/lifestyle factors that affect hemoglobin and hematocrit levels.	14.3% (2)	42.9% (6)	28.6% (4)	14.3% (2)	0.0% (0)
Provide examples of additional assessment questions.	0.0% (0)	64.3% (9)	21.4% (3)	14.3% (2)	0.0% (0)
Analyze situations where lifestyle and nutritional factors can affect hemoglobin and hematocrit levels.	7.1% (1)	42.9% (6)	35.7% (5)	14.3% (2)	0.0% (0)

All 14 of the CPAs reported they would recommend the course to others.

When asked what they liked best about the course, the pilot testers provided a variety of answers including the following:

- Variety of methods used
- That is was concise and each section was not overly long.
- The interactive parts were fun to do!
- Pictures and visuals along with reading
- Could come back if couldn't finish at one time

- Clear explanations, review questions and testing
- Detailed, easy format for learning. I also liked the reference material that was provided at the end.
- This was a great course for providing an overview of the topic. I think it is perfect for new employees for training and also for other employees as a refresher course. My favorite feature in the course was the resource Recommendations to Prevent & Control Iron Deficiency in the United States from the MMWR because of the detail.
- Choosing the right picture
- Review questions with feedback
- Easy to navigate and complete
- Learned about altitudes affecting hemoglobin

The pilot testers were also asked what they liked least about the course. Again, the responses varied and included the following issues:

- A couple questions were misleading
- Music on the Choose the Right One activity
- I felt the explanation on when to refer the least helpful
- Some pages had too much information on them
- Time
- Didn't care for the tutorial with sound showing gloves, etc., thought it was long but would probably be helpful for first timers

The final evaluation question asked for suggestions to improve the course. The suggestions included the following issues:

- Several questions and comments about specific pre-test items and review questions in the case study.
- It would be nice to be able to copy and paste some of the information from the video portions into a document for future reference.
- Show both pre- and post-test results to compare knowledge level before and after learning module.
- I liked the idea of the course, great for reviewing, however was too long. Liked all the activities and self-testing. Maybe should try a test at the beginning, and if answers are 80% correct, then skip the rest.

Final editing of the course was completed based on this feedback and input from the Project Advisory Committee. Additional PDF documents were created to provide reference material for learners. In addition, several grammar and spelling errors were corrected.

Test item analysis was also completed by the instructional designer with input from the project team. This analysis focused on item difficulty and clarity of response choices and resulted in revision of several test items.

### **Course Release and CEUs**

The project team made the decision to delay the release of the course until CEUs could be provided. Due to the lengthy process for continuing education approval, the course was not released until December 2009. The course was approved for .24 nursing CEUs by Iowa Board of Nursing Provider #94 and 2 CPEUs (Level 2) by the Commission on Dietetic Registration. These approvals end in November 2012 and January 2013 respectively. See Appendix A for the list of content experts for the CDR application.

The course was also added to the list of required homework assignments for new Iowa local agency CPAs. These assignments must be completed before attending the face-to-face training session presented by state agency staff.

For the time period December 2009 through the first week of March 2011, 136 learners enrolled in the course and 78 completed it.

## **COURSE 2: CULTURAL COMPETENCE AND WIC NUTRITION ASSESSMENTS: HOW CULTURE AFFECTS FOOD BELIEFS AND PRACTICES**

### **Expert Work Group**

The expert work group for the second course convened its first conference call on October 8, 2009. The work group members included a local agency nurse/WIC Coordinator, a local agency dietitian, a state agency WIC consultant/dietitian, and project staff (instructional designer, education coordinator, project assistant and project coordinator). See Appendix A for a list of the work group members.

Group members participated in four more conference calls (October 28, 2009; November 18, 2009; December 18, 2009 and January 21, 2010) and frequent e-mail exchanges to complete the task of developing the course script. During this time they reviewed and edited numerous drafts of the course narrative, review questions, pre- and post-test questions, and interactive components to engage learners. Video footage for the sample dialogue sessions and the opening presentation about the changing demographics in the WIC Program was filmed in early March 2010.

Specific examples of development decisions included the following:

- Early course outlines included information about the new food packages implemented in October 2009. This was likely the work group's reaction to having been immersed in the planning, training and implementation of these major changes for the previous couple years. However, the group concluded that it was more appropriate to provide a link to information about the food package prescriptions given that the interim rule was still in place.
- Information about the changing demographics of WIC clients across the country was included in the course as background information to build the case for strengthening cultural competence.
- The course includes several opportunities for personal reflection about beliefs and values and how they affect attitudes toward clients from other cultures.
- The course includes examples of cultural feeding and eating practices in direct response to the CPA and WIC Coordinators feedback. These components of the course are also available as PDF files and can be printed for use as reference material (the entire course can be printed). However, these examples are always presented with the caveat that the information can be used as a starting point for conversations with clients as they learned more about the client's specific practices and beliefs. In addition, the learners are reminded several times in the course that even when they know some of the common beliefs held by particular cultural groups, it is critical to take the time to determine if each individual client from that group holds the same or different beliefs.
- The course suggests examples of local resources for learning about cultural groups and presents a checklist for evaluating Internet sites. Over 40 links are provided to relevant national resources about nutrition and health, specific cultural or ethnic groups, health disparities, cross-cultural service delivery strategies, and cultural food practices.
- An extensive bibliography is also provided in the course.
- Work group members agreed that the course would take more than three hours to complete, especially if learners explored the links to national resources. The work group identified course content to be migrated to the third course about the same time that the pilot test started.

## **Pilot Test**

The course pilot test was completed May 19 – June 8, 2010. The pilot test group included 20 local agency CPAs representing 12 of the 20 local agencies (one nutrition educator, seven nurses, and 12 dietitians) and one state WIC agency consultant/dietitian for a total of 21 individuals. See Appendix A for the list of members. Sixteen members of this group completed the pilot test (took the pre-test, reviewed the course and completed the post-test). Two individuals completed only the pre-test. One member experienced technical difficulty resulting in the loss of her pre-test score; however, she reviewed the course and completed the post-test. The remaining two individuals did

not complete any pilot test activities. Table 17 below provides information about the pre- and post-test scores.

**Table 17. Pre- and Post-Test Data for Cultural Competence Course Pilot**

	<b>Pre-Test</b>	<b>Post-Test</b>
Average score	12.1 (80.67%)	13.89 (92.6%)
Number passing (score ≥80%)	13 (72.2%)	17 (100%)
Number not passing	5 (27.8%)	0
Number taking the test	18	17

Pre- and post-test scores were also compared with the following results:

- 10 had higher scores on the post-test,
- Four had identical scores (both four individuals scored >80%),
- Two had lower scores on the post-test (for one individual the pre-test was 100% and post-test was 93.33%; for the second individual the pre-test was 93.33% and the post-test was 80%), and
- One post-test could not be compared due to data system loss of the pre-test score.

Feedback and evaluation comments were also collected as part of the pilot test. Evaluations were completed by 11 individuals including four nurses and seven dietitians.

The pilot test work group was asked how long it took to complete the course.

- One reported 1 to 1½ hours,
- One reported 2½ to 3 hours,
- Six reported 3 to 3½ hours, and
- Three reported more than 4 hours.

The pilot test work group members were asked to rate the degree to which they agreed or disagreed with a number of statements about the course. Table 18 on the next page summarizes the ratings.

**Table 18. Evaluation Questions: Cultural Competence Course Pilot**

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not applicable
The information in the course was clearly presented.	9.1% (1)	0.0% (0)	0.0% (0)	81.8% (9)	9.1% (1)	0.0% (0)
It was generally easy to navigate from one part of the course to another.	0.0% (0)	0.0% (0)	0.0% (0)	45.5% (5)	54.5% (6)	(0)
It was clear to me what I needed to do to successfully complete the course.	0.0% (0)	9.1% (1)	9.1% (1)	18.2% (2)	63.6% (7)	0.0% (0)
The content of this course was relevant to the duties I perform on the job.	0.0% (0)	0.0% (0)	9.1% (1)	27.3% (3)	63.6% (7)	0.0% (0)
The review materials at the end of each section were useful in helping me learn the course materials.	9.1% (1)	0.0% (0)	0.0% (0)	63.6% (7)	27.3% (3)	0.0% (0)
The self-reflection activity was useful in helping me learn the course materials and advance my personal cultural competence.	9.1% (1)	0.0% (0)	18.2% (2)	63.6% (7)	9.1% (1)	0.0% (0)
The audio and video presentation regarding the changing demographics and importance to WIC was useful in helping me learn the course materials.	0.0% (0)	9.1% (1)	36.4% (4)	36.4% (4)	18.2% (2)	0.0% (0)
The dialogues used to illustrate the levels or stages of cultural competence were useful in helping me learn the course materials.	0.0% (0)	0.0% (0)	9.1% (1)	45.5% (5)	45.5% (5)	0.0% (0)
The use of pictures of people and food complimented the content and aided in the learning process for the course.	0.0% (0)	9.1% (1)	18.2% (2)	18.2% (2)	54.5% (6)	0.0% (0)
The scenario section at the end of the course was useful in helping me learn the course materials.*	10.0% (1)	0.0% (0)	0.0% (0)	40.0% (4)	50.0% (5)	0.0% (0)
The game at the end of the course was useful in helping me learn the course materials.	18.2% (2)	0.0% (0)	18.2% (2)	27.3% (3)	27.3% (3)	9.1% (1)
The resources at the end of the course were useful to the duties I perform on the job.	0.0% (0)	0.0% (0)	9.1% (1)	63.6% (7)	27.3% (3)	0.0% (0)

\*Only 10 of 11 respondents answered this question.

The pilot test group was also asked to rate to what degree their knowledge and abilities improved after taking the course. The ratings used a 1 to 5 scale where 1 = No improvement and 5 = Not applicable, I took the course for other reasons. These knowledge and ability statements reflect the learning objectives for the course. Table 19 on the next page presents the data from the pilot test.

**Table 19. Improvement in Knowledge and Abilities: Cultural Competence Course Pilot**

	No improvement	Little improvement	Moderate improvement	A great deal of improvement	Not applicable, I took the course for other reasons
Define culture, acculturation and cultural competence.	18.2% (2)	9.1% (1)	36.4% (4)	36.4% (4)	0.0% (0)
Determine how your own beliefs and values might affect your behavior and attitude toward a WIC participant or the participant’s beliefs and values.	9.1% (1)	9.1% (1)	54.6% (6)	27.3% (3)	0.0% (0)
Identify trends in changing demographics and how they apply to WIC participants.	0.0% (0)	9.1% (1)	27.3% (3)	63.6% (7)	0.0% (0)
Recognize the importance of cultural competence.	18.2% (2)	9.1% (1)	18.2% (2)	54.6% (6)	0.0% (0)
Recognize that different cultures may have different feeding/eating practices and beliefs.	18.2% (2)	9.1% (1)	18.2% (2)	54.6% (6)	0.0% (0)
Describe the role of culture in food habits, health and illness of WIC participants.	0.0% (0)	18.2% (2)	27.3% (3)	54.6% (6)	0.0% (0)
Determine what kinds of questions to ask a participant of any culture about their feeding/eating practices and beliefs.	9.1% (1)	0.0% (0)	18.2% (2)	63.6% (7)	9.1% (1)
Recognize ways the participants and the WIC CPA can work together to incorporate foods from the WIC food package into the participant’s diet.	9.1% (1)	18.2% (2)	27.3% (3)	36.4% (4)	9.1% (1)
Identify resources (local and/or national) that can be used to learn about different cultures, the types of food they eat, and food preparation techniques.	9.1% (1)	0.0% (0)	36.4% (4)	54.6% (6)	0.0% (0)
Determine how to access reputable resources that are useful to your own personal knowledge regarding different cultures.	0.0% (0)	18.2% (2)	45.5% (5)	36.4% (4)	0.0% (0)
Identify reputable culturally appropriate resources (local and/or national) that you can provide to WIC participants so that you able to be a “resource.”	9.1% (1)	0.0% (0)	45.5% (5)	45.5% (5)	0.0% (0)

Ten of the 11 CPAs reported they would recommend the course to others. The individual who responded negatively to this question provided an explanation for their response. This individual felt the course “provided way too much information and the material seemed to assume that a WIC CPA has almost no cultural competency.”

When asked what they liked best about the course, the pilot testers provided a variety of answers including the following:

- Sections 1 and 3
- The dialogues and scenarios were very helpful
- The slides on cultural food practices were also very informative
- Could do it online as my time allows
- Made me more aware of good communication to clients and better ways to get information by being aware of cultural differences.
- Short slides in quick, easy to read form
- Sections about different ethnic/racial groups and their food practices

The pilot tests were also asked what they liked least about the course. Again, the responses varied and included the following issues:

- Too long
- The video of the speakers was distracting
- Too much demographic detail
- There was a lot of information to learn

The final evaluation question asked for suggestions to improve the course. The majority of the suggestions focused on decreasing the length of the course and improving the audio component. A few comments were also made about the post-test items.

Final editing of the course was completed based on this feedback and feedback from the Project Advisory Committee. Some course content was migrated to the third course to address the length of the course and to improve the course flow. Technical enhancements were made to the audio components and some audio was deleted because the same text appeared on the screen. In addition, several grammar and spelling errors were corrected.

Test item analysis was also completed by the instructional designer with input from the project team. This analysis focused on item difficulty. Several test items performed “too well” meaning too many individuals answered the item correctly on the post-test. The response choices for a few test items were also reviewed and edited to address this concern.

## **Course Release and CEUs**

The course was released in the learning management system in early July 2010. The course was approved for .24 nursing CEUs by Iowa Board of Nursing Provider #94 and 3 CPEUs (Level 2) by the Commission on Dietetic Registration (CDR). These approvals end in July 2013 and September 2013 respectively. See Appendix A for the list of content expert reviewers for the CDR application.

The course was also added to the list of recommended homework for new Iowa local agency CPAs.

Development of this course progressed much slower than planned for several reasons. The project experienced turnover in the position for the project assistant with time lost to hiring and training two new project assistants. In addition, 50% of Dawn Gentsch's position with the University of Iowa College of Public Health was identified to be furloughed at the end of August 2010. This was due to the end of other sources of IPHP grant funding. She secured a new position outside of the project. Both Dawn and Maureen Myshock, the project assistant Dawn supervised, ended their work with the project on May 19, 2010.

Despite these challenges, the course was released in the learning management system on schedule. This was accomplished by reducing the amount of time allowed for final editing of the course after the pilot test. This was an intense period of activity, particularly for the remaining members of the project team and the instructional design members of the team, because they were also working on the final course.

For the time period July 2010 through the first week of March 2011, 80 learners enrolled in the course and 35 completed it.

### **COURSE 3: CROSS-CULTURAL COMMUNICATION AND NUTRITION ASSESSMENT**

#### **Expert Work Group**

The expert work group for the third course convened its first conference call on May 4, 2010. The work group members included a local agency nurse, a local agency dietitian, a state agency WIC consultant/dietitian, and project staff (instructional designer, education coordinator, project assistant and project coordinator). See Appendix A for a list of the work group members.

Group members participated in three more conference calls (May 17, June 3 and June 17, 2010) and frequent e-mail exchanges to complete the task of developing the course script. During this time they reviewed and edited numerous drafts of the course narrative, review questions, pre- and post-test questions, and interactive components to engage learners. Video footage for examples of effective and ineffective non-verbal language was filmed at the Johnson County Health Department in June 2010. The video footage about the changing demographics in the WIC Program filmed for the second course was migrated to this course.

As described earlier, Dawn Gentsch, education coordinator and Maureen Myschock, project assistant left the project on May 19, 2010. The University of Iowa College of Public Health hired

Dena Fife on a consultant basis to coordinate the remaining work for the third course. Dena’s experience as the Learning Management System Coordinator for the Iowa Department of Public Health and her master’s degree in eLearning Design and Implementation were consistent with the project needs and goals and allowed the project to move forward and complete the final course on schedule.

Although the work group included some specific examples and application activities relevant to CPAs in WIC clinics, most of the content of this course is relevant to health professionals in any area of practice.

### Pilot Test

The course pilot test was completed August 15-31, 2010. The pilot test group included 28 local agency CPAs representing 10 of the 20 local agencies (three nutrition educators, 17 dietitians, and 8 nurses). See Appendix A for the list of members of completed the pilot test. Twenty-three members of this group completed the pilot test (took the pre-test, reviewed the course, and completed the pre-test). One member’s pre-test score was lost by the learning management system; however, she reviewed the course and completed the post-test. The four remaining members did not complete any pilot test activities. Table 20 below provides information about the pre- and post-test scores.

**Table 20. Pre- and Post-Test Data for Cross-Cultural Communication Course Pilot**

	<b>Pre-Test</b>	<b>Post-Test</b>
Average score	13.58 (90.5%)	13.23 (88.2%)
Number passing (score $\geq$ 80%)	22 (95.7%)	23 (95.8%)
Number not passing	1 (4.3%)	1 (4.2%) (different person than pre-test)
Number taking the test	23	24

Pre- and post-test scores were also compared with the following results:

- Nine had higher scores on the post-test,
- Two had identical scores (both individuals scored  $>80\%$ ),
- 12 had lower scores on the post-test (including one individual 93.33% on pre-test and 75% on post-test), and
- One post-test could not be compared due to data system loss of the pre-test score.

Feedback and evaluation comments were also collected as part of the pilot test. Evaluations were completed by 24 individuals including 16 dietitians, five nurses, and three nutrition educators. A majority of the evaluation questions were answered by only 23 individuals.

The pilot test work group was asked to report how long it took to complete the course.

- Nine reported 1 to 1½ hours,
- 13 reported that it took 1½ to 2 hours, and
- Two reported more than 2½ hours.

Sixteen rated the difficulty of the course as fairly easy, six rated it as challenging but not too difficult and two rated it as too difficult.

The pilot test work group members were asked to rate the degree to which they agreed or disagreed with a number of statements about the course. Table 21 below summarizes the ratings.

**Table 21. Evaluation Questions: Cross-Cultural Communication Course Pilot**

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not applicable
The information in the course was clearly presented.	0.0% (0)	4.4% (1)	8.7% (2)	39.1% (9)	47.8% (11)	0.0% (0)
It was generally easy to navigate from one part of the course to another.	0.0% (0)	0.0% (0)	4.4% (1)	34.8% (8)	60.8% (14)	0.0% (0)
It was clear to me what I needed to do to successfully complete the course.	0.0% (0)	4.4% (1)	0.0% (0)	34.8% (8)	60.8% (14)	0.0% (0)
The content of this course was relevant to the duties I perform on the job.	0.0% (0)	0.0% (0)	0.0% (0)	34.8% (8)	65.2% (15)	0.0% (0)
The review questions at the end of each section were useful in helping me learn the course materials.*	0.0% (0)	9.1% (2)	4.5% (1)	40.9% (9)	45.5% (10)	0.0% (0)
The video used to illustrate the non-verbal communication was useful in helping me learn the course materials.	0.0% (0)	8.7% (2)	8.7% (2)	34.8% (8)	47.8% (11)	0.0% (0)
The scenario at the end of the course was useful in helping me learn the course materials.	0.0% (0)	4.4% (1)	0.0% (0)	56.5% (13)	39.1% (9)	0.0% (0)
The game at the end of the course was useful in helping me learn the course material.	8.7% (2)	34.8% (8)	26.1% (6)	17.4% (4)	13.0% (3)	0.0% (0)
The resources at the end of the course were useful to the duties I perform on the job.	0.0% (0)	4.4% (1)	17.4% (4)	56.5% (13)	21.7% (5)	0.0% (0)

\*22 of 23 respondents answered this question.

The pilot test group for this course reported several technical difficulties including the following:

- A video that didn't load
- Some screens with “jumbled” text with letters on top of one another
- A blank screen
- Downloading PDF files took me out of the course

The pilot test group was also asked to rate to what degree their knowledge and abilities improved after taking the course. These knowledge and ability statements reflect the learning objectives for the course. The ratings used a 1 to 5 scale where 1 = No improvement and 5 = Not applicable, I took the course for other reasons. Table 22 below presents the data from the pilot test.

**Table 22. Improvement in Knowledge and Abilities: Cross-Cultural Communication Course Pilot**

	No improvement	Little improvement	Moderate improvement	A great deal of improvement	Not applicable, I took the course for other reasons
I can identify client demographics and their backgrounds.	8.7% (2)	26.1% (6)	65.2% (15)	0.0% (0)	0.0% (0)
I can recognize the importance of cross-cultural communication.	4.4% (1)	13.0% (3)	47.8% (11)	34.8% (8)	0.0% (0)
I can recognize how your culture and background may influence your communication skills during nutrition assessment.	0.0% (0)	13.0% (3)	52.2% (12)	34.8% (8)	0.0% (0)
I can identify communication challenges when working with multicultural clients.	4.4% (1)	13.0% (3)	47.8% (11)	34.8% (8)	0.0% (0)
I can identify ways to establish trust and build rapport with participants.	0.0% (0)	13.0% (3)	30.4% (7)	52.2% (12)	4.4% (1)
I can apply effective communication techniques when completing nutrition assessment.	0.0% (0)	17.4% (4)	56.5% (13)	26.1% (6)	0.0% (0)
I can describe the process of selecting and working with interpreters and language lines.	4.4% (1)	13.0% (3)	47.8% (11)	30.4% (7)	4.4% (1)
I can identify the appropriate strategies when communication with clients that have language differences.	0.0% (0)	17.4% (4)	52.2% (12)	30.4% (7)	0.0% (0)
I can define low literacy and health literacy.	4.4% (1)	17.4% (4)	43.4% (10)	34.8% (8)	0.0% (0)
I can apply the practice of cultural sensitivity and critical thinking when completing nutrition assessment.	0.0% (0)	17.4% (4)	47.8% (11)	34.8% (8)	0.0% (0)

Twenty-two CPAs reported they would recommend the course to others. One CPA responded no to this question and provided this explanation:

- I would like there to be a maybe answer. If you had no cross-cultural awareness, I would definitely recommend it. If you have had a lot of experience with other cultures and using interpreters, not so much.

When asked what they liked best about the course, the pilot testers provided a variety of answers including the following:

- The different resources listed at the end; I didn't know about the language line before this
- Scenarios
- Videos, activities
- Good content
- Learning more about non-verbal body communication which builds rapport with clients
- The effective and ineffective communication. It realistically shoed WIC specific situations and how even slight changes in our approach can make a difference. It was not exaggerated or humorous –just real life.
- Easy to read and understand
- Videos provided great visuals of written objectives and information
- The personal stories from WIC staff
- It wasn't boring or tedious. Very directly relevant to my daily work. Very specific suggestions that can be immediately applied to my work.
- It really made me think about how interpreters are used in our WIC setting and will make me more “selective” when it comes to who will interpret for me.
- Good content, nice review, even though I have worked for WIC for almost 30 years.
- Mixed media, teaching styles. Could go back and forth between clients and phone calls to get it completed, could print materials if found useful
- Case scenarios

The pilot testers were also asked what they liked least about the course. Again, the responses varied and included the following issues:

- Some of the materials was a lot of common sense
- Pre- and post-testing
- Length
- The tests within the course, not the pre- and post-tests, the self-reflection type tests
- Many of the things I disliked about the other cultural awareness course did not show up in this course
- The game at the end was difficult to read over the picture

- The game didn't seem to enhance my understanding
- I didn't like the sound of the game so turned it off but it did make the point that this is part of the "fun"
- Would like the references at the end available as a reference without logging back into the course

The final evaluation question asked for suggestions to improve the course. The suggestions listed below reflect the range of issues covered.

- Some text ran off the screen
- Make sure to proofread and fix any spelling errors
- Can't read the U.S. map of WIC enrollment that the presenter refers to
- It is not readily apparent how to answer the questions about the scenarios. There is no instruction
- Some post-test questions were confusing (specific examples were identified)
- Explain more how to set up language lines and address the cost factor

Final editing of the course was completed based on this feedback and feedback from the Project Advisory Committee. Brief instructions were added so that learners would close only the new browser window and not the course when downloading PDF files. The game was also reviewed and the format changed to place more focus on the content rather than the process.

Test item analysis was also completed by the instructional designer with input from the project team. This course required the most review and revision of test items.

Feedback and evaluation comments were also collected as part of the pilot test. Final editing of the course was completed based on this feedback and feedback from the Project Advisory Committee.

### **Course Release and CEUs**

The course was released in the learning management system in mid-September 2010. The course was approved for .24 nursing CEUs by Iowa Board of Nursing Provider #94 and 2 CPEUs (Level 2) by the Commission on Dietetic Registration. These approvals both end in October 2013. See Appendix A for the list of content expert reviewers for the CDR application.

The course was also added to the list of recommended homework for new Iowa local agency CPAs.

For the time period September 2010 through the first week of March 2011, 81 learners enrolled in the course and 51 completed it.

## **COURSE FOLLOW-UP EVALUATION FOR LEARNER SATISFACTION AND KNOWLEDGE**

A follow-up evaluation to reassess the satisfaction and knowledge of WIC staff who had completed one of the new online courses was added to the scope of the project at the request of Food and Nutrition Services, USDA. Due to the calendar of course releases, it was possible to complete this evaluation only for the first course, Hematological Data Collection, Assessment and Critical Thinking Application.

### **Sample**

A follow-up survey was emailed to 29 local agency CPAs who had successfully completed this course approximately six months earlier and had volunteered to participate in a follow-up evaluation. These 29 individuals represented 14 of the 20 local WIC agencies and included 16 dietitians and 13 nurses. See Appendix A for a list of individuals in this group. Of those 29, two were no longer employed by the agency, two did not recall that they had completed the course, and one did not feel prepared to answer the questions given how long ago she had completed the course. Thirteen of the remaining 24 CPAs completed the follow-up evaluation (54%). These 13 individuals included five nurses and eight nutrition professionals. The CPAs were asked to mark the best description of their WIC clinic responsibilities related to blood work; the results follow:

- 0.0% (0) = I collect blood samples and use the hemoglobinometer
- 53.8% (7) = I provide nutrition education and make referrals related to blood test results
- 46.2% (6) = I complete both of these tasks for the clients I certify

### **Survey Tool**

Project staff adapted a six-month follow-up survey previously developed and tested by the Institute for Public Health Practice to assess staff satisfaction and transfer of learning for the emergency preparedness courses available in the learning management system. Questions were asked about application of learning for the following course topics:

- Blood work screening schedules
- Blood collection techniques and universal precautions
- Nutritional factors that affect hemoglobin and hematocrit levels
- Behavioral and lifestyle factors that affect hemoglobin and hematocrit levels

The follow-up questions were based on the response to the initial response about that course topic. The same follow-up questions were used for four questions as listed below:

- If yes,
  - What changed after you completed the course (please provide examples)?
  - Did this change also affect colleagues or community partners?
    - Yes — How?
    - No
- If no,
  - What have been the barriers to applying the course information in your workplace?

Table 23 on the next page summarizes the responses to the initial follow-up questions.

**Table 23. Reported Application of Course Content 6 Months Later**

<b>Have you applied any of the things you learned about:</b>	<b>Yes</b>	<b>No</b>
Blood work screening schedules	61.5% (8) <u>Affected colleagues or partners?</u> Yes - 12.5% (1) No - 75.0% (6) No answer – 12.5% (1)	38.5% (5)
Blood collection techniques and universal precautions	53.9% (7) <u>Affected colleagues or partners?</u> Yes – 42.9% (3) No – 42.9% (3) No answer – 14.2% (1)	46.1% (6)
Nutritional factors affecting hemoglobin and hematocrit levels	69.2% (9) <u>Affected colleagues or partners?</u> Yes – 44.4% (4) No – 55.6% (5)	30.8% (4)
Behavioral/lifestyle factors affecting hemoglobin and hematocrit levels	84.6% (11) <u>Affected colleagues or partners?</u> Yes – 18.2% (2) No – 63.6% (7) No answer – 18.2% (2)	15.4% (2)

### Examples of Applied Learning

Examples of the things learned about the blood work screening schedules are listed below:

- Knowing which finger to poke, location of the poke
- Better understanding of why blood levels vary
- Increased awareness of screening schedules for WIC participants
- Understanding when to refer data to health providers

The list below provides examples of changes reported about blood collection techniques and universal precautions:

- Knowing how many drops to wipe off, collecting the blood in one smooth motion, not “milking” the finger
- Discussion with clients
- More conscious of which sites used for adults and children.
- More conscientious with overall technique and disposal of supplies used for the specimen collected
- Remembering to use hand sanitizer more often

Examples of responses describing changes related to nutritional factors affecting blood levels are listed below:

- Being able to tell parents the side effects of low hemoglobin levels, sometimes I feel like they think it's no big deal, but now they take it more seriously
- Again, just reminding me of some of the facts behind the counseling that I do with participants that have low hemoglobins
- I am more careful to ask about tea use and counsel on that
- My counseling was better for nutrition
- I know that high altitude can make levels high
- I have shared with clients how smoking affects their hemoglobin level
- Gave me more knowledge when counseling clients on low or high hemoglobin
- Improved ability to tailor nutrition education to individuals based on their diet history

Five of the 11 reported changes related to behavioral/lifestyle factors affecting blood levels discussed the relationship between smoking and blood levels and how the CPAs were using that information in client counseling. Examples of other responses to this question follow:

- Again, informing parents by giving them ideas for raising low hemoglobin levels and how to maintain them at normal levels
- It's all pertinent information to use in our WIC clinics
- Awareness of the whole picture of the client
- I have incorporated the information into the nutrition education presented to the clients
- Smoking and living at higher elevations
- Able to give more information to clients
- Informing parents also to create lifestyle changes/eating habit changes
- Shared information

## **Impact on Colleagues and Community Partners**

The most frequent response to the question about how the respondent's change affected colleagues or community partners was that the respondent shared the information with colleagues. Specific examples were not cited although several respondents included comments that their colleagues' practices already reflected the course content.

## **Barriers to Applying Course Information**

The barriers to applying the course information in the work place were similar across the four course topic areas. Examples of the common barriers listed by respondents follow:

- Trying to set up referral criteria and keep track of it for a 5 county area could be a challenge
- No barriers. It was what I was already doing
- I am a dietitian and do not take blood samples. It is good info however

- I think we were already following proper procedure, as outlined in our WIC manual
- Most of the nutritional information provided I already use with clients
- Time and number of clients that are seen in an allotted period of time

## **Conclusion**

Based on this very small sample with self-reported data, it appears that CPA skills, knowledge and behavior changed after completing the course. This appears to be especially true with regard to the course topic, behavioral and lifestyle factors affecting blood levels.

## **LINKING EXTERNAL COURSES IN THE LEARNING MANAGEMENT SYSTEM**

One of the project objectives was to identify and link acceptable external courses that were relevant to the competency set. Having a broad array of online courses provides greater flexibility for learners to learn at their own pace and on their own time in comparison to the travel time to attend face-to-face training events.

At the outset of the project, the Iowa WIC Program had already identified a number of courses related to the nutrition assessment competencies as described in the federal policy guidance. These courses were available from the WIC Learning Online Website, other state WIC agencies, federal agencies (the Centers for Disease Control and Prevention [CDC] and the Maternal and Child Health Bureau) and other organizations. Some of these courses were already required homework for the program's New Employee Training Course; other courses were recommended training for new staff. Project staff were also aware that additional courses of potential interest would be released in FFY2008 in WIC Learning Online including infant nutrition courses and VENA skills training courses.

Throughout the three year project, the Project Advisory Committee members and project staff identified potential courses to review for possible links in the learning management system. The various project assistants assigned to the grant activities also completed several environmental scans during the project period. Approval to link desired courses was obtained and the courses were linked to the nutrition assessment competency model in the learning management system.

During the summer of 2008, 97 external courses that appeared to be relevant to four of the competency domains were reviewed by project staff. These domains included critical thinking, principles of life cycle nutrition, multi-cultural awareness, and the nutrition assessment process. Courses relevant to the two remaining domains (communication and hematological/anthropometric

data collection) were considered to be lower priority for the state WIC program at that time for two reasons:

1. Interactive workshops about communication and rapport-building skills had been added to the series of workshops for new CPAs, and
2. The state WIC program already required new CPAs to complete online modules about anthropometric measurements and growth charts as part of their new employee training.

These 97 courses were reviewed using the Institute for Public Health Practice criteria checklist that includes relevance, efficiency and appropriateness (see Appendix J). These criteria are parallel to the criteria for developing and evaluating electronic-based nutrition education for WIC participants distributed by USDA (MPSF: WC-06-17-P WIC Nutrition Education Guidance). Courses were also evaluated for technical feasibility for linkage.

Project staff narrowed the list to 23 based on the checklist criteria and then invited each member of the Project Advisory Committee to review a subset of these courses. In most cases each course was reviewed by two members, however, some courses were only reviewed by one member. The comments from the Project Advisory Committee were then compiled into a summary document and the top four courses were identified. Representatives of those courses were contacted to make sure there were no copyright issues or potential user overload problems on their respective Websites.

The first four external courses were linked in October 2008 so that they were available for Iowa CPAs when the online self-assessment tool was launched.

Project staff continued to identify potential courses and the project assistants periodically completed environmental scans of available courses. Using the same review procedure described earlier, two more sources for online courses were linked to the competency set by September 2009. Both of these sources provided access to several courses or modules.

During the last summer of the project, several more courses were reviewed and linked to the competency set.

Table 24 on the next page lists the courses, the source, the year linked and the domains addressed by each course.

**Table 24. External Courses Linked to the Nutrition Assessment Competency Model**

<u>Course Information:</u> Course Title Source Year Linked	Anthropometric & Hematological Data	Communication	Critical Thinking	Multi-Cultural Awareness	Nutrition Assessment Process	Principles of Life Cycle Nutrition
<b>Client-Centered Counseling Training</b> Michigan WIC Program 2008		X			X	
<b>Exploring Cross Cultural Communication</b> New York and New Jersey Public Health Training Center 2008		X		X		
<b>Growth Chart Training (3 modules)</b> Centers for Disease Control and Prevention (CDC) 2009	X		X			
<b>Growth Chart Training (7 modules)</b> Maternal and Child Health Bureau and CDC 2010	X		X			
<b>Health Literacy &amp; Public Health: Introduction</b> New York and New Jersey Public Health Training Center 2010		X	X	X		
<b>Health Literacy &amp; Public Health: Strategies for Addressing Low Health Literacy</b> New York and New Jersey Public Health Training Center 2010		X	X	X		
<b>Nutrition and Oral Health for Children</b> Pacific West MCH Distance Learning Network 2010			X		X	X
<b>Nutrition and Pregnancy</b> University of North Carolina School of Public Health 2008 (no longer available in 2010; link removed)			X			X
<b>Nutrition for Children with Special Health Care Needs</b> Pacific West MCH Distance Learning Network 2008	X		X		X	X
<b>Practicing Cross-Cultural Communication: Community Health Worker</b> New York New Jersey Public Health Training Center 2010		X	X	X		
<b>WIC Learning Online Modules</b> United States Department of Agriculture, Food and Nutrition Service 2009 (15 modules in 5 topic areas) 2010 (Increased to 18 modules in 6 topic areas)		X	X	X	X	X

All of these courses include application activities. The courses can generally be completed in 60 minutes to two hours. Each course also allows learners to start the course, stop and return at a later time or date to continue the course. Many of the courses also provide continuing education credits to a variety of health professionals.

The courses relevant to the nutrition assessment competency model can be easily found by searching the course catalog in the learning management system by typing WIC in the search data field. All of the courses will be listed on the screen. Course information can be viewed and/or printed for each course by clicking on the course information icon.

By the end of the three year project period, over 200 courses had been reviewed by project staff. Some of the common issues encountered while reviewing courses include the following:

- Limited access of courses to outside users
- Courses offered only in PDF format and not as online modules
- Courses with numerous references to specific program policies and procedures that limited applicability to learners from other programs or areas of practice
- Challenges contacting representatives of courses to discuss possibility of linking to the course

During the summer of 2010, the course information for each linked course was revised and updated for consistency with the information provided about courses housed in the learning management system — course description, course content, duration, cost, course provider and credit.

## **SUPERVISOR ASSESSMENTS USING THE ONLINE TOOL**

The initial project plan included exploring how the new supervisor assessment feature, made available in the learning management system in February 2007, could be used to evaluate personnel performance, write individual staff development plans, and plan agency-wide staff development opportunities. This feature allowed agency supervisors with “agency administrator” access rights to complete the same competency assessment as their individual employees. The learning management system “agency administrators” could then review all of the users from their agency and access a greater array of reports and functions than individual users. The initial proposal involved a limited number of local agency WIC Coordinators (n=3) and a state agency WIC consultant completing a pilot study of this feature to make recommendations for improvement. This work group would have been the first to evaluate this feature in the learning management system and the plan was to share pilot study results with other partner states using the same learning management system platform.

In August 2008 the vendor for the learning management system changed, resulting in greater capacity for evaluation. The learning management system now allows for 360 degree evaluation from individual staff members, peers and their supervisors. Therefore, this component of the project was expanded to include two phases of online supervisor assessments using the validated competency model.

Two phases of supervisor assessments were completed during the project using the online skills surveys with the validated competency model. The primary intent of completing supervisor assessments was to provide information on the pilot to the partner states using the learning management system. However, skill gaps were also calculated for the small samples in each phase and are included in this report as additional information about this component of the project.

### **Phase 1: December 2008 — January 2009**

Six WIC Coordinators, representing a mix of large and small agencies (based on active caseload) and a mix of rural and suburban agencies, participated in the first phase of supervisor assessments. One WIC Coordinator subsequently changed her mind about participating in this activity due to computer problems and competing agency priorities, leaving five members in the work group. See Appendix A for a list of the work group members.

Dawn Gentsch, education coordinator, talked with all of the work group members via telephone calls to explain the process and timeline. Follow-up documentation was provided with step-by-step directions for completing the skills surveys. Completing online assessments involved the following steps:

1. Creating an account in the learning management system if not already a registered user. This step was necessary when the WIC Coordinator was not a CPA and therefore had not participated in that part of the project.
2. Asking their CPAs to identify them as their manager in the learning management system and then to send the nutrition assessment skills surveys to them.
3. Completing the skills surveys for at least 50% of their CPAs who had completed skills surveys during the same time period. For example, if the six CPAs had completed surveys for an agency, the WIC Coordinator was asked to complete the survey for at least three of those CPAs.

The five local agency WIC coordinators completed a total of 13 skills surveys for CPA members of their staff. The CPAs included three nurses and 10 dietitians. The number of skills survey completed per WIC Coordinator ranged from one to seven.

The supervisor assessments were compared with the respective CPA assessments at the agency level for one agency where the WIC Coordinator completed seven skills surveys. The CPAs in this

sample included one nurse and six dietitians. Table 25 on the next page provides a comparison of the average supervisor skills gap with the average CPA skills gap at the domain level for these seven CPAs. The skills gap was calculated in the same way as it was calculated for the CPA self-assessment aggregate data: Individuals who rate themselves as a 5 on a competency statement have a skills gap of 0 and those rating themselves as a 1 on a competency statement have a skills gap of 4. This means that the larger the number, the bigger the skills gap.

**Table 25. Phase 1 Supervisor Assessments Compared to CPA Assessments:  
Aggregate Skills Gap by Domain**

Domain	Supervisors Skills Gap (average)	CPAs Skills Gap (average)
Anthropometric and Hematological	1.28	1.23
Communication	0.35	1.01
Critical Thinking	0.56	1.24
Multi-Cultural Awareness	0.92	1.62
Nutrition Assessment Process	0.45	1.11
Principles of Life Cycle Nutrition	0.61	1.36

A summary of the average skills gap by competency for all supervisors and CPAs is described below.

- For 73 of 85 (85.9%) competency statements, the supervisors rated the CPAs as more competent than the CPAs rated themselves.
- For 9 of 85 (10.6%) competency statements, the CPAs rated themselves as more competent than their supervisors rated them.
- For 3 of 85 (3.5%) competency statements, the CPAs and supervisors gave identical ratings.

The aggregate data from the WIC Coordinators also identified the largest skills gaps in the Multi-Cultural Awareness domain. See Appendix K for the summary data for all competency statements from this phase.

The WIC Coordinators generally rated the CPAs as more competent than the CPAs rated themselves. This is consistent with findings from performance appraisal and industrial and organizational psychology literature (Fallon and McConnell 2007; Novick 2008). In general, supervisors tend to be more comfortable focusing on positive ratings and results rather than focusing on areas where objectives are not being met.

A conference call was convened on April 14, 2009 with the group to discuss the overall process and invite feedback from the supervisors. Three of the five WIC Coordinators were able to participate in this call; the remaining two were contacted by telephone to obtain their feedback about the supervisor assessment process. A summary of their feedback follows.

- Completing one skill survey took 20 to 45 minutes. However, the WIC Coordinators agreed that once they were more familiar with the learning management system, the skills surveys would likely take 30 minutes or less to complete. All of them agreed that this was a reasonable amount of time.
- The rating scale used in the assessment surveys was 1-5 where 1 = Not competent and 5 = Very competent. All of the WIC Coordinators agreed that the scale was descriptive enough. However, several mentioned that it would have been helpful to have the option, “Not applicable,” when a specific competency didn’t apply to the CPA they were evaluating. Project staff responded that this option was not available in the learning management system. However, staff described that it was possible to create a custom skills survey including only the competency statements relevant to an individual’s job description and responsibilities.
- All of the WIC Coordinators agreed that one of the strengths of this process was using the same skills surveys as the CPAs. They also agreed that the statements were clearly written for use from both points of view (self- and supervisor-assessment).
- The WIC Coordinators were asked whether the evaluation would be more useful at the domain level or at the competency statement level. They recognized that assessment at the domain level would result in time savings, but felt that assessment at the competency statement level was much more useful.
- The group suggested that the directions for completing the skills surveys could be more detailed and they identified specific steps in the process where more information would be helpful. Technical difficulties were also discussed.
- All of the WIC Coordinators agreed that the supervisor skills surveys would complement, but not replace, the annual evaluations completed using their local agency’s tools.
- The convenience of the online format for the skills surveys was mentioned as a positive feature.
- In addition, one of the WIC Coordinators suggested that agencies using team leaders could benefit from peer assessment using this same process.

## **Phase 2: February — March 2010**

Three different WIC Coordinators and a clinic lead staff person representing a mix of large and small agencies (based on active caseload) and a mix of rural and suburban agencies participated in the second phase of supervisor assessments. See Appendix A for a list of the work group members.

Dawn Gentsch, education coordinator, talked with all of the work group members via telephone calls to explain the process and timeline. Follow-up documentation was again provided with improved step-by-step directions for completing the skills surveys based on the feedback from the Phase 1 participants. Completing the online skills surveys involved the same steps as the first phase.

The three work group members completed seven skills surveys for CPA members of their staff. The CPAs included one nurse, five dietitians, and one individual who had both nursing and dietetics credentials. The number of skills surveys completed per work group member ranged from one to five.

The supervisor assessments were compared with the respective CPA assessments at the agency level for seven CPAs across three local agencies. Table 26 below provides a comparison of the average supervisor skills gap with the average CPA skills gap at the domain level for these seven CPAs. The skills gap was calculated in the same way as described for Phase 1 such that the larger the number, the bigger the skills gap is.

**Table 26. Phase 2 Supervisor Assessments Compared to CPA Assessments:  
Aggregate Skills Gap by Domain**

Domain	Supervisors Skills Gap (average)	CPAs Skills Gap (average)
Anthropometric and Hematological	0.31	0.38
Communication	0.49	0.61
Critical Thinking	0.68	0.65
Multi-Cultural Awareness	1.23	1.30
Nutrition Assessment Process	0.81	0.59
Principles of Life Cycle Nutrition	0.55	0.60

A summary of the average skills gap by competency for all supervisors and CPAs is described below.

- For 36 of 85 (42.4%) competency statements, the supervisors rated the CPAs as more competent than the CPAs rated themselves.
- For 30 of 85 (35.3%) competency statements, the CPAs rated themselves as more competent than their supervisors rated them.
- For 19 of 85 (22.3%) competency statements, the CPAs and supervisors gave identical ratings.

See Appendix L for the summary data for all competency statements from this phase. The aggregate data from the WIC Coordinators again identified the largest skills gaps in the Multi- Cultural Awareness domain.

Project staff also developed an online evaluation survey using Survey Monkey™ for process evaluation and to collect feedback about the utility of this component of the learning management system in relationship to their agency performance evaluation and training processes. The questions in the online survey were the same as those asked of the Phase 1 supervisors during the follow-up conference call. A summary of the survey responses follows:

- Two of the three work group members of the work group rated the skills survey scale (from 1 to 5) with the highest rating in terms of being descriptive enough to assess CPA competence.
- Two of three members reported that the instructions about the learning management system and completing skills surveys were clear. The third member of the group responded no to this question and commented specifically that her staff CPAs had so much difficulty with the instructions that only one CPA was able to send the skills surveys to her for completion.
- The work group members agreed that using the same skills surveys contributed to the strength of this strategy for performance evaluation.

A conference call was convened on April 23, 2010 with the work group to review their combined responses to the online survey and to invite additional feedback. All of the work group members participated in this call. A summary of the feedback provided during this conference call follows:

- The work group members suggested that these supervisor assessments would be most useful with new employees soon after hire and again when they had completed their initial training.
- They emphasized that the competency set addresses only one facet of the CPA's responsibilities.
- The work group members agreed that the competency model adequately captures the skills related to the nutrition assessment process.
- The group concluded that the comparison of the supervisor and CPA skills surveys provided valuable insight into training and professional development needs.
- The work group members also acknowledged that this online assessment should follow direct observation of the CPA in the clinic setting to ensure fair and informed assessments.
- The time burden to complete the skills surveys was identified as a potential limiting factor to their use in performance reviews especially in local agencies with more staff.

The results described above are more evenly distributed than Phase 1. This could be a reflection of several factors. Phase 2 data represents the ratings of three supervisors compared to the ratings from only one supervisor in Phase 1. It is possible that the three supervisors interpreted the competency statements differently from each other or that the competence of their CPA staff

members was very different than the competence of the CPAs in Phase 1. However, the sample size in both phases is too small to draw any conclusions about the differences in supervisor versus CPA ratings.

## **LESSONS LEARNED**

The Iowa WIC Program and project staff learned several lessons during the course of this project related to documenting project elements and procedures, involving end users, and using online technology.

### **Project Elements and Procedures**

Documenting project elements and assumptions is critical. The project team identified the need to document project elements and assumptions very early in the project as discussed in the section, Developing and Validating the Competency Model and Online Self-Assessment Tool. This documentation proved to be critical. Project staff frequently referred to this documentation, particularly as new work groups were convened and oriented to the overall project and their specific tasks. The documentation helped assure consistent understanding about the scope of the project and provided an important foundation to all of the activities. Project staff also created a Frequently Asked Questions document early in the project. See Appendix M for a copy of this document.

Clear directions are needed for navigating a new software program. The Prepare Iowa Learning Management System posed challenges for local agency CPAs with one of the primary challenges being passwords. CPAs frequently lost or misplaced their passwords and created duplicate user accounts, leading to additional complications for data analysis and other project tasks. Even though the learning management system user interface is reasonably intuitive, project staff drafted and tested step-by-step directions for creating user accounts, sending and completing the online self-assessments, and registering and completing online courses. Some CPAs still had problems completing tasks with these detailed directions.

Turnover in project staffing is challenging. Staffing changes and turnover created some delays in the project timeline due to the need to hire, orient and train several new project assistants. The University of Iowa College of Public Health Institute for Public Health Practice staff dedicated to this project also shifted as the funding circumstances for their positions changed resulting in some differences in project management and strategies for maintaining project continuity. However, all of the project activities were completed by September 30, 2010.

## Involving End Users

Engaging multiple end users results in high quality and relevant products. Several short-term work groups of local and state agency WIC personnel were convened to work on the various tasks in this project. These groups included numerous Iowa local agency and state agency personnel and state WIC agency personnel from several other states. Some staff volunteered while others were specifically recruited based on professional licensure, staffing models, clinic operations, and WIC expertise and experience. By the end of the project, 19 of 20 local WIC agencies had been represented with a total of 107 different local agency staff members; state WIC consultants from eight other states participated (California, Illinois, Kansas, Maryland, Nebraska, North Dakota, Utah and Wisconsin) and one regional nutritionist (Mountain Plains Region) was involved. This broad-based participation in project activities was critical to ensure that the needs of the intended users were met in the final products, i.e., the competency statements and new online courses were understandable and relevant to their daily work.

Involving WIC personnel from other states provided valuable insight about differences between programs that could affect the wording of the competency statements. These differences included staffing models, models of operation, state policies, documentation practices, and data collection via paper or data systems. This input helped the Competency Work Groups develop a competency model for the program across the country, not just a competency model for the Iowa WIC Program.

The project staff needed this input from end users to determine whether assumptions were based in reality and if decisions about project direction were supported by their needs and interests.

Recruiting and scheduling project volunteers is a challenge. This lesson was particularly true for recruiting local agency CPAs. These CPAs are scheduled to work clinics and some of them have very limited office time to pursue other tasks. A few of the local agencies in the state primarily employ CPAs as sub-contractors and their hours were already assigned to clinics. This made it difficult to reach the project goal of involving local agency staff from all 20 agencies in the state. Clinic schedules also vary across local WIC agencies, making it challenging to schedule conference calls.

Project staff also learned that it is important to recruit more individuals than needed to complete a task such as pilot testing a course because several will not complete the task. Specific follow-up was not completed with individuals who did not complete pilot tests, however, it is likely that there were a variety of reasons for not following through.

Achieving high participation rates in specific tasks is difficult. The project team was disappointed in the participation rates for all three phases of CPA self-assessments. After the first phase, feedback from the local agency WIC Coordinators identified time as the primary barrier. A few WIC

Coordinators suggested that agency incentives might boost participation rates. While the overall participation rates did not increase when agency incentives were offered, it is likely that individual agencies responded to the availability of incentives.

Offering several opportunities for work group members to interact increases the quality of input into the project. This lesson was most apparent during the work of two Competency Work Groups. When additional conference calls were offered to these work groups as an option (i.e., more calls than the expectations shared with them when they were recruited for the work group), most of them chose to participate and provided valuable input and feedback to the group discussion.

Separating client education from assessment is challenging. Local and state WIC personnel continue to find it challenging to separate client education from assessment during discussions of the VENA policy guidance. This was apparent during the validation of competency statements and course development.

## **Online Technology**

Online survey tools are a viable mechanism for groups to work virtually on a project. The use of online survey technology with a modified Delphi technique was an effective and efficient strategy. It also allowed work groups to have participating members from across the state and/or across the country. The technology also helped project staff with summary reports and reduced the time necessary to tabulate these reports.

Web-based training has disadvantages and limitations. The literature identifies several disadvantages of Web-based training. During this project, lessons were learned about providing clear information about computer requirements for successful course loading. Limited bandwidth resulted in slower performance for sound and video for a few members of the three course pilot test groups.

Web-based training takes time and resources to develop. However, the greater portion of costs are start-up costs. The courses can now be delivered and re-used with fewer costs than traditional training methods.

Some training topics are not best served by computer-based training and require a personal touch or hands-on experiences. The expert work groups for the courses were sometimes challenged as they determined appropriate content for the courses. Project staff started the project with the understanding that computer-based training can assist the learning process, but that it cannot replace methods that already work well.

## IMPLICATIONS FOR THE IOWA WIC PROGRAM

This project poses several short-term and long-term implications for the Iowa WIC Program including policy decisions, staff resources related to the major products produced under this project, and potential future activities.

### Policy Decisions

Frequency of CPA self-assessments. The Iowa WIC Program will be discussing this issue during the FFY 2012 state plan process. At this point in time, it appears likely that policy will require newly hired CPAs to complete the online self-assessment shortly after hire and then again one year later. After that, CPAs will likely be asked to repeat the self-assessment on a regular basis; the period of time is yet to be determined.

Requiring or recommending online courses. The state WIC program already added the hematological data collection course to the required homework for newly hired CPAs. During the FFY12 state plan process, the state program staff will review the current homework requirements and the list of available courses (both the new courses and the external courses linked to the competency model) to determine whether additional courses will be required or only recommended.

Using the transcript feature. State WIC policy currently requires all local WIC agency personnel to maintain training records. The transcript feature in the current learning management system automatically documents completion of any courses housed in the system. Additional training events (e.g., external courses, conferences, seminars, self-study courses, etc.) can be manually added as personal learning events. State program staff will discuss the advantages and disadvantages of transitioning from the current paper-based form to the learning management system.

### Staff Resources to Maintain and Update the Project Products

Reviewing competency model, online courses and links to external courses. Based on best practices for developing competency models, the competency model should be revisited in approximately five years to incorporate changes and new information and practices. The online courses must also be regularly reviewed and revised to ensure that the most current up-to-date information is presented in order to maintain approved status for continuing education units. Staff time is also required on a quarterly basis to manage the required reporting for the Iowa Board of Nursing provider. The links to external courses will need to be reviewed periodically to ensure that they function; the courses themselves must be reviewed for accuracy and continued relevance to the competency model.

Using aggregate data for planning future training events. The state WIC program staff need to learn more using the various reports from the learning management system in order to make the best use

of the aggregate data. Additional reports are available to course managers including content access (number of times different courses, surveys, etc. are accessed) and course and content ratings.

## **Potential Future Activities**

Linking the QWIC LEARN modules developed by the Pennsylvania WIC Program. The Pennsylvania WIC Program also received a special project grant for the same period as Iowa to develop, produce and implement e-learning modules. Three modules were completed to be hosted in their learning management system. The topics for these modules include Introduction to VENA, Anthropometric Assessment, and Dietary Assessment. A fourth module, Biochemical/Clinical Assessment, was developed through the storyboarding phase. However, the learning management system procured by the Pennsylvania WIC Program restricts access to a finite number of licensed users.

These courses are clearly relevant to the nutrition assessment competency model validated in the Iowa special project grant. Therefore, the Iowa WIC Program will review the modules and consider placing them in the Prepare Iowa Learning Management System. This would significantly increase user access to the modules. Technical issues may also need to be addressed to accomplish this task. Preliminary discussions have already taken place with Shirley Sword, the Pennsylvania project coordinator. Further action was deferred until the final reports are submitted by both state programs.

Building curriculums in the learning management system. The learning management system allows a variety of related materials to be grouped in the system as a curriculum. Examples of materials could include an online course, PDF files of published articles, other documents, a glossary and links to relevant Websites. The Iowa WIC Program could develop curriculums related to the online courses produced by this project or develop curriculums about other topics. State WIC program staff will discuss the advantages and disadvantages of using this feature in the learning management system compared to the program's Website.

Completing further validation of the breastfeeding competencies. During the course of this project, two sets of core competencies in breastfeeding have been released — the Breastfeeding Core Competencies for All WIC Staff in the *Using Loving Support™ to Grow and Glow in WIC: Breastfeeding Training for Local WIC Staff* (USDA, 2009) and *Core Competencies in Breastfeeding Care and Services for All Health Professionals* (United States Breastfeeding Committee, revised edition 2010). Given these competency sets, it would be appropriate to revisit the breastfeeding competencies in the nutrition assessment model and repeat the validation process.

Completing additional analysis of pre- and post-test items in the online courses. State WIC program staff will consider completing additional analysis of pre- and post-test performance as the number of

course completions increase. This would provide more reliable information about the quality of the test items.

Developing additional courses for local WIC agency staff beyond nutrition assessment. Online courses appeal to many people, especially if they are attractive, easy to navigate, interactive and relevant to their daily work. These courses also offer many benefits from the state WIC program's perspective including consistent messages and information, availability and decreased costs associated with travel. However, these benefits must be carefully weighed against the disadvantages – some individuals have different preferred learning styles, some skills are best learned using different delivery methods, and online courses still have development and maintenance costs.

Given all of these factors, the Iowa WIC Program will continue to evaluate the need to develop and/or link to additional external courses addressing topics or content areas that are relevant across all states. As more state WIC programs produce online courses, it becomes critical for programs to consider designing those courses so that they are relevant to WIC staff across the country. This maximizes the use of limited resources for course development and prevents too much duplication in course development and implementation. Possible examples may include but are not limited to civil rights and bloodborne pathogens training.

Enhancing the learning management system. The administrative team working with the learning management system has many ideas for enhancing it. One of the examples of particular interest to the project team is related to recommending courses to the user. At the beginning of this project, the learning management system platform was able to suggest courses within the system based on self-assessment ratings. This capability was no longer available when the vendor changed in December 2008. The computer-generated suggestion would be very helpful because it provides immediate feedback, it helps users determine their individual learning plan, and it identifies resources that are readily and easily available to them. The state WIC program staff will continue to participate in discussions about potential enhancements.

Advocating for a national Web-based repository or central learning management system for WIC courses. A central location for all WIC e-learning courses would increase access to the courses by making them available in the same catalog. It also increases the pool of possible learners and provides additional opportunities for timely, relevant training. The Iowa WIC Program will advocate for a national Web-based repository or a similar mechanism for WIC courses to make it easier for state and local staff to locate, enroll in and complete courses.

## SUSTAINABILITY AND TRANSFERABILITY

### Sustainability

This project is financially and administratively sustainable. The project linkage to an existing learning management system rather than being a stand-alone initiative contributes significantly to sustainability. The practice-based nutrition assessment competency set will continue to be available after the project because of the underlying partnership between the department and IPHP. The nutrition assessment competency model has the capacity to be updated or revised. The IPHP will also continue to work with the state WIC staff to identify training needs based on aggregate data and then locate and link trainings to competencies related to those identified needs. This will be an ongoing relationship between community-based practice and academia.

The department and IPHP currently share the maintenance fee for the learning management system. Institute for Public Health Practice pays for the majority of learning management system enhancements using other grant funds with assistance from the Iowa Department of Public Health when funds are available. However, no separate maintenance costs are associated with online assessment tools, online courses, or links to other courses. Regular monitoring of the pieces of the nutrition assessment competency model (competency set, online courses, and linked courses) will be a shared responsibility of the Iowa WIC Program and IPHP. If revisions or additions are needed, those development costs are reasonable and can be projected so that they can be incorporated into the state WIC office operating budget. For more extensive and therefore more expensive revisions, the state WIC program would also consider other potential sources of funding including Operational Adjustments and grant sources.

This project is also sustainable because it is based on a solid foundation of information and input from many partners including Project Advisory Committee members, local WIC agency personnel and WIC Coordinators from across the state, state WIC agency consultants, state WIC staff from other states, and a regional office nutritionist.

The project aligns with the Redesigning Public Health in Iowa initiative, a collaborative effort between local and state public health to improve the quality and performance of Iowa's public health system and ensure a basic standard of service delivery to all Iowans. A workgroup drafted public health standards that apply to local boards of health and the State Board of Health addressing organizational capacity and public health services (Work Group for Redesigning Public Health in Iowa, 2007).

Workforce standards are one category of standards within organizational capacity. The introduction to the Workforce Standards is reprinted below:

“A qualified and well-trained public health workforce is essential to deliver consistent high-quality public health services statewide. To meet the diverse and dynamic public health needs of Iowans now and in the future, the Workforce Standards provide for appropriately qualified workers, a sufficient number of personnel and skill mixes, and on-going training to maintain competency and currency in the public health workforce.”

This project directly connects with the following state criteria in the Workforce Standards:

- Identify and/or develop workforce assessment tools for use by local public health (WK2b-S).
- Identify evidence-based state or nationally recognized public health competency models for use by local and state public health (WK3a-S).
- Use the assessment of competencies to identify individual and organizational training needs and establish learning goals that incorporate lifelong learning and development of leadership skills (WK3c-S).
- Assure the availability of practice-based and competency-based education and training for the public health workforce (WK3e-S).
- Provide learning opportunities for the public health workforce through partnerships with academia (WK3f-S).

The Public Health Modernization Act, part of House File 811 (the Health and Human Services Appropriation Bill), was signed into law in May, 2009. This act called for two committees to be convened to advise the director of the Iowa Department of Public Health about matters regarding implementation of the public health standards.

- The Public Health Advisory Council was established to advise the director of the Iowa Department of Public Health about the implementation of a voluntary accreditation system for Iowa's local and state public health departments, further development of the Iowa Public Health Standards, and to make recommendations about furthering Iowa's public health system.
- The Public Health Evaluation Committee was established to evaluate Iowa's governmental public health system and voluntary accreditation program to assess the impact on population health outcomes.

These committees are continuing to improve the metrics for the public health standards and to ensure that Iowa's standards align with the national standards developed by the Public Health

Accreditation Board (PHAB). The goal set in the Public Health Modernization Act is that a county may apply for accreditation beginning January 2, 2012.

For more information about Iowa Public Health Modernization, please go to <http://www.idph.state.ia.us/mphi/>.

## **Transferability**

This project has the potential to improve staff competence across the nation for two reasons — the WIC nutrition assessment competencies are consistent across programs and the learning management system can be accessed 24/7 by anyone with Internet access. It is also reasonable to expect that similar training gaps exist for CPAs working in other state WIC programs.

The project developed credible, interactive and relevant courses to address competency and training gaps among Iowa CPAs. The two courses related to the Multi-Cultural Domain may be particularly relevant given the 2006-2007 public health nutrition workforce survey results indicating that the public health nutrition workforce was more diverse than the general U.S. population, but less so than WIC participants (Haughton and George, 2007). Although the WIC nutrition workforce was more diverse than the overall public health nutrition workforce, there are still significant differences between the WIC nutrition workforce and WIC participants.

The additional benefits of online learning such as self-paced study, ease of use, and access to information when needed offer greater flexibility for local and state agency personnel. The PILMS is publicly-accessible, free to users, and easily navigable. Training completed in the PILMS is automatically recorded into a personal activity report. Non-PILMS training events can also be manually documented. This helps individuals track professional development and store information about training in one report. These tools can be used to document job training requirements, credits towards a certification or license, or progress towards personal development goals and they are accessible to the individual user. If desired, supervisors can be granted administrator access rights in the PILMS to review information about their employees.

The components of the nutrition assessment competency model (competency set, online courses, and linked courses) also remain in the public domain at [www.prepareiowa.com](http://www.prepareiowa.com).

If another organization indicates interest in replicating or adapting any of the components, the Iowa WIC program staff will collaborate with IPHP staff to make that possible. A number of possibilities are listed below:

- Program A wants to use the competency set and the online self-assessment in hard copy.
- Program B chooses to migrate the competency set and online self-assessment tool to their own learning management system.
- Program C prefers that their staff access the online self-assessment tool and courses in PILMS, and they want aggregate data and reports about course registration and completion for their own staff.

Examples of project transferability already realized are listed below:

- The competency statements were used by Anne E. Bennett, MPH, RD, Director of Nutrition Services at Tri-County Health Department in Greenwood Village, Colorado to draft competencies for WIC educators and dietitians, revise job descriptions for these positions, base performance appraisals on the competencies, and plan trainings on the same competencies. Anne stated, “The performance appraisals are now much more objective with staff knowing clearly what is expected. There are no surprises at their reviews.” (Personal correspondence, 2011)
- The Florida WIC Program requested a copy of the blood work collection video from the course, Hematological Data Collection, Assessment and Critical Thinking Application. They plan to embed this video into a PowerPoint file using Adobe Captivate. This file will be used for their VENA CPA training.
- All three classes were used on a pilot basis during the Spring 2011 semester for dietetic interns at Iowa State University. The classes will become mandatory for the next class of 55-60 interns. One of the interns commented, “The classes were great resources. The quizzes helped me to retain the knowledge, the sections were broken up so that they were easy to read and not overwhelming, and the videos were very informative. The classes definitely helped me gain a better understanding of what WIC is all about. They were not too long and summed up the information well. I would definitely recommend this for future students.” (Personal correspondence, 2011)

Project staff have presented several sessions about the project at state and national conferences. The list below includes the presentation title, event, location, and speakers.

- Assessing Your Nutrition Assessment Skills. Two breakout sessions at the 2008 Iowa WIC Program Conference in Des Moines, Iowa by Kylie Davidson, Dawn Gentsch and Brenda Dobson
- Assessing Your Nutrition Assessment Skills. Two webinars presented in November 2008 for Iowa WIC CPAs in multiple locations by Kylie Davidson, Dawn Gentsch and Brenda Dobson

- Development and Use of Nutrition Assessment Competencies in WIC for Individual Professional Development, Online Course Development and Organizational Training Plans. Oral presentation at the 2009 American Public Health Association Annual Meeting in Philadelphia, Pennsylvania authored by Dawn Gentsch, Brenda Dobson and Tanya Uden-Holman and presented by Dawn Gentsch
- Creative Uses of Technology for Training Staff. Oral presentation at the 2009 National WIC Association Technology conference by Brenda Dobson (invited but travel restrictions prevented participation)
- Special Project Grant Updates. Oral presentation at the 2010 National WIC Association Annual Conference by Brenda Dobson (invited but travel restrictions prevented participation)
- Cultural Competence & Health Communication. Oral presentation at the 2010 Cultural Competency & Health Disparity Workshop at Drake University, Des Moines, Iowa by Brenda Dobson
- Utilizing Special Project Grants to Improve VENA and WIC Sessions. Oral presentation at the 2010 National WIC Association Nutrition and Breastfeeding Conference in San Diego, California by Brenda Dobson
- Online Professional Development Resources for WIC Staff. Oral presentation at the 2010 Iowa WIC Program Conference in Des Moines, Iowa by Brenda Dobson
- Strengthening Nutrition Assessment Skills with a Competency-to-Training Program in a Learning Management System. Oral presentation at the 2010 Iowa Dietetic Association Conference in Des Moines, Iowa by Laurie Walkner and Brenda Dobson
- Developing a WIC Nutrition Assessment Competency Model for an Online Self-Evaluation Tool. Poster presentation at the 2010 Food and Nutrition Conference & Expo in Boston, Massachusetts authored by Brenda Dobson, Dawn Gentsch, Tanya Uden-Holman and Jill Lange and presented by Jill Lange
- Online Learning Methods for WIC Staff to Improve Nutrition Assessment Competence, Skills and Confidence. Abstract for oral presentation at the 2010 American Public Health Association Annual Meeting in Denver, Colorado authored by Dawn Gentsch, Brenda Dobson and Tanya Uden-Holman. Abstract was wait-listed pending any cancellations; it was not presented.
- Developing a WIC Nutrition Assessment Competency Model. Poster presentation at the 2011 National WIC Association Annual Meeting in Portland, Oregon by Brenda Dobson (application pending)

See Appendix N for an example of the handout used at presentations and poster sessions.

Additional strategies for sharing information about the project through professional association newsletter, distribution lists and list serves, and refereed publications are being discussed.

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## APPENDICES

- A. Project Work Group Members
- B. Resources for Writing Competency Statements
- C. WIC Nutrition Assessment Competency Model
- D. WIC Nutrition Assessment Competency Model with More Information for Users
- E. Directions for Completing CPA Self-Assessments
- F. Phase 1 CPA Self-Assessments: Aggregate Results Sorted by Domain
- G. Phases 1 and 2 CPA Self-Assessments: Aggregate Results Sorted by Domain
- H. All Three Phases CPA Self-Assessments: Aggregate Results Sorted by Domain
- I. Sample Recruiting Announcement for Course Pilot Test Work Group
- J. Protocol for External Course Migration to PILMS
- K. Phase 1 Supervisor Assessment Data: Average Skills Gaps from Supervisors and CPAs
- L. Phase 2 Supervisor Assessment Data: Average Skills Gaps from Supervisors and CPAs
- M. FAQs: WIC Nutrition Assessment Competency Model
- N. New WIC Courses in the Prepare Iowa Learning Management System



## **Appendix A. Project Work Group Members**

This project benefited from the input and participation of many individuals who embraced the project enthusiastically and worked diligently to complete tasks. Their insight, feedback and positive attitudes helped make this project a success.

### **Competency Model and Online Assessment Tool**

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## **Cross-Cultural Communication and Nutrition Assessment Course**

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## Appendix B. Resources for Writing Competency Statements

### Competencies MUST:

1. Describe the performance of a skill.
2. Begin with an action verb, describing what the learner will be able to do.  
(Note: Verbs that are forms of the verb “to know” or other similar verbs are unacceptable.)
1. Be measurable and observable.  
(Note: How the action is measured is *not* part of the competency and should not be written.)
2. Be clear, concise, and precise statements describing an action.  
(Note: Competency statements should be a simple, not compound, sentence of short length. Compound or very long sentences will typically be rejected.)
3. Specify a single performance/outcome, not a combination.  
(Note: Putting more than one verb together at the beginning of a sentence [e.g., Create and analyze a ...] is never acceptable. These two actions must either be two competencies or written as one action with one verb. Similarly, putting more than one object together [e.g., Repair the following: {list}] should rarely be done and only used if the objects are few in number, closely related, but distinct enough to warrant being listed separately. Usually, putting two objects together in this fashion is also unacceptable.)
4. Describe the intended outcome, not the learning process.  
(Note: The outcome should be what you want the student/employee to do on the job site, not what you want the person to do in class. For example, “write an essay on...” is not acceptable unless writing skills are needed after the course is over.)
5. Describe the learner’s performance, not the instructor’s activities, learning plans, or instructional strategies.

### **What makes a good competency statement?**

A competency is a more specific statement of expected learning outcome that is measurable.

An ideal competency statement will identify one specific ability or skill that can be measured in a fairly straightforward way. The number of competencies will depend upon the number of skills and abilities that need to be measured in order to assess the overall goal area (nutrition assessment competency area). Collectively, the competency

statements should provide comprehensive coverage of the associated program goal (nutrition assessment competency area).

If a competency statement is important enough to state, it should be important enough to assess. Good competency statements would have the following characteristics:

- Straightforward
- Specific
- Measurable
- Realistic

### Examples of Competency Statements

Competency Statement	Comments	Possible Revision
Reads, records, and plots measurements accurately.	The statement is describing three distinct outcomes which should be stated and assessed separately.	Demonstrates ability to plot anthropometric data measurements correctly.
Federal nutrition policy guidance and its implications for women, infants and children served by WIC.	The statement includes three segments of clientele (target audience) and it may be advantageous to have a separate (yet the same stem) statement for each of the 3 population groups.	Knowledge of federal nutrition policy guidance for women served by WIC. Knowledge of federal nutrition policy guidance for infants served by WIC.
Applies knowledge of physiology in the assessment of breastfeeding problems.	The outcome is too broad and will be difficult to assess.	May want to specify physiology components: milk production, prolactin, and oxytocin. Applies knowledge of milk production in relation to breastfeeding problems.
Demonstrate use of the WIC database for tracking client nutrition assessment data.	The outcome is too narrowly defined. This could be an outcome for WIC, but the outcome may need to be more broadly stated.	Demonstrate use of nutrition assessment database software tools effectively to manage client and clinic information.

### Competency Example

#### Example of applying the process to create a “good” competency statement for the self-assessment

Principles of Life-Cycle Nutrition

Competency Statement: Understands normal nutrition issues for pregnancy, lactation, the postpartum period, infancy, and early childhood.

Performance Expected Statement: **Assesses potential barriers to breastfeeding.**

1. What would you do to this statement?

- Keep
- Delete
- Divide
- Add to
- Alter slightly XX
- Edit Majorly

2. Does this statement make sense? If not, edit so that it does make sense.

- Yes, this statement makes sense
- No, this doesn't make sense, edit:

Edit: Assesses potential barriers to breastfeeding for each client.

3. For this competency statement, list the behaviors that would demonstrate the competency in action. If a colleague was competent in regards to this competency statement, how would you know that they are competent?

- Informed client about breastfeeding barriers
- Client record in database indicates staff completed this step

4. Describe the performance of the skill (what would they demonstrate).

- Can list the barriers to breastfeeding that participants may state, experience or believe
- Talks to participant about breastfeeding barriers

4. Describe the difference between low performance and high performance of competence for this statement.

- Observed staff member talking with client and the process met expectations
- Patient reported to other staff member or in client evaluation tool that the staff person didn't discuss breastfeeding

5. Select one or two descriptive/action verbs that you feel would best describe the statement? Refer to Bloom's Taxonomy

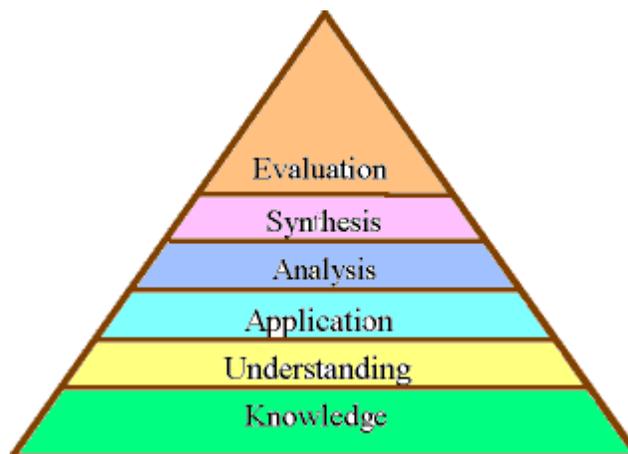
**Assess** is a verb listed in level 6 (the highest level in Bloom's Taxonomy)

## Using Bloom's Taxonomy To Write Course Competencies

### THEORY

Following the 1948 Convention of the American Psychological Association, Benjamin Bloom took a lead in formulating a classification of intellectual behaviors important in learning. This became a taxonomy that included three overlapping domains: the cognitive, psychomotor, and affective.

For the cognitive domain, Bloom identified six levels—from the simple recall or recognition of facts (the lowest level) to the more complex synthesis and evaluation of ideas (the highest levels). For each level, specific learning behaviors were defined as well as appropriate descriptive verbs that could be used for writing instructional competencies.



- **Level 1 – Knowledge:** Basic recall of information (e.g., define, identify, label, list, match, name, order, recall, recognize, state).
- **Level 2 – Comprehension:** Understand the meaning and interpretation of information and problems (e.g., classify, describe, discuss, explain, express, report, restate, review, translate).
- **Level 3 – Application:** Apply what was learned in the classroom to novel situations (e.g., apply, choose, demonstrate, dramatize, employ, illustrate, interpret, operate, practice, schedule, sketch, solve, use, write).
- **Level 4 – Analysis:** Break down material or concepts into component parts so that the organizational structure may be understood (e.g., analyze, appraise, categorize, compare, contrast, criticize, differentiate, discriminate, distinguish, examine, experiment, question, test).
- **Level 5 – Synthesis:** Use component parts to form a new whole, with emphasis on creating a new meaning or structure (e.g., arrange, assemble, collect, compose, construct, create, design, develop, formulate, manage, organize, plan, prepare, propose, set up).
- **Level 6 – Evaluation:** Judge the value of material (e.g., appraise, argue, assess, defend, estimate, judge, predict, rate, support, value, evaluate).

## Appendix C. WIC Nutrition Assessment Competency Model

### Anthropometric and Hematological Data Collection Techniques

1. Maintains anthropometric equipment according to State agency policy.
2. Completes anthropometric measurements accurately for **women** clients according to State agency policy.
3. Completes anthropometric measurements accurately for **infants** according to State agency policy.
4. Complete anthropometric measurements accurately for **children** according to State agency policy.
5. Uses the appropriate growth chart for **infants** and **children** based on age, gender, and linear measurement.
6. Reads, records, and plots anthropometric measurements accurately for **women, infants, and children** according to State agency policy.
7. Interprets growth patterns appropriately for infants.
8. Interprets growth patterns appropriately for children.
9. Calculates Body Mass Index (BMI) accurately for women and children.
10. Interprets weight gain or loss accurately for all women.
11. Incorporates anthropometric data in assessing health and nutritional status.
12. Maintains hematological equipment appropriately according to State agency policy.
13. Completes hemoglobin and hematocrit assessments according to State agency policy.
14. Evaluates hematological results according to State agency policies for unusual and inconsistent measures.
15. Incorporates hematological data in assessing health and nutritional status.

### Communication

1. Interacts with each client in a respectful and sensitive manner.
2. Uses verbal and non-verbal communication techniques to create an environment that engages clients in conversation.
3. Selects appropriate communication techniques based on assessment of client's verbal and nonverbal cues.
4. Uses communication resources to address language barriers and special needs of clients.
5. Demonstrates active listening skills.
6. Uses paraphrasing and/or reflecting skills to confirm understanding of client's statements.
7. Utilizes open- and closed-ended questions to elicit and clarify information.
8. Demonstrates professional discretion when client's concerns indicate the need to deviate from the standard nutrition assessment process.
9. Uses communication techniques to defuse a situation and to work with angry or resistant clients.
10. Adheres to State agency policies concerning client confidentiality.
11. Completes nutrition assessment tasks before providing nutrition counseling.

### Critical Thinking

1. Considers the client's ability to obtain, process, and understand basic health information and services needed to make health decisions.
2. Recognizes own personal world view and separates it from the assessment.
3. Recognizes health and dietary factors that contribute to nutrition risk factors.
4. Recognizes inconsistent, inaccurate, or unusual information and referral data.
5. Verifies inconsistent and unusual measurements according to State agency policy.
6. Verifies inconsistent referral data according to State agency policy.
7. Identifies interrelationships between client's current behaviors and nutrition risk factors.
8. Incorporates the client's point of view about nutrition and health priorities, needs and concerns into the nutrition assessment.
9. Incorporates information from current and previous assessments into decisions about health and nutritional status.
10. Evaluates previously obtained nutrition assessment information and documentation of previous intervention strategies to determine the effectiveness of services.
11. Draws conclusions about health and nutritional status supported by perspectives and strengths of client and data, observations, and reasoning.
12. Applies creative problem solving and flexible thinking in partnership with the client to identify solutions for nutrition issues.
13. Prioritizes the client's nutrition risks and concerns to be addressed.
14. Analyzes all information (including: anthropometric, biochemical, clinical, dietary, family and social environment) to determine the course of action.

### Multi-Cultural Awareness

1. Recognizes target population based upon race, ethnicity, culture, socioeconomic, education and professional backgrounds, age, religious affiliation, mental and physical abilities, and sexual orientation.
2. Respects the beliefs and health practices of clients when conducting a nutrition assessment.
3. Recognizes how a client's cultural communication style may affect the nutrition assessment.
4. Uses culturally appropriate communication styles to collect nutrition assessment information.
5. Describes the values and belief systems of cultural groups in the target population.
6. Uses a variety of strategies to learn more about a client's cultural eating patterns and traditions.
7. Assesses cultural practices for potential harm to client's health or nutritional status.
8. Evaluates food preparation practices within a cultural context.
9. Uses culturally appropriate strategies to assess pregnant **women's** eating practices and beliefs.
10. Uses culturally appropriate strategies to assess **infant** feeding practices and beliefs.
11. Uses culturally appropriate strategies to assess **child's** feeding/eating practices and beliefs.
12. Identifies culturally appropriate referral resources that may be used by the client.

## Nutrition Assessment Process

1. Describes the purpose of nutrition assessment in the WIC program.
2. Uses a systematic approach to complete nutrition assessments.
3. Completes nutrition assessment using a client centered approach.
4. Describes the importance of documenting the nutrition assessment results to provide continuity in WIC services.
5. Obtains relevant assessment information (including: anthropometric, biochemical, clinical, dietary, family and social environment) according to State agency policy.
6. Obtains medical documentation for health assessment information according to State agency policy.
7. Applies WIC nutrition criteria definitions correctly when assigning nutrition risks.
8. Applies current nutrition recommendations, such as *Dietary Guidelines for Americans*, when completing the nutrition assessment.
9. Documents WIC nutrition risk criteria for each client according to State agency policy.
10. Incorporates referral data into the nutrition assessment process.
11. Documents nutrition assessment results in care plans according to State agency policy.
12. Communicates nutrition assessment results to each client/caregiver.
13. Develops a plan for referrals based on analysis of nutrition assessment information.
14. Applies nutrition assessment information when determining food packages.
15. Develops a plan for nutrition education based on analysis of nutrition assessment information.

## Principles of Life Cycle Nutrition

1. Applies knowledge about current nutrition requirements for **women** when assessing health and nutritional status.
2. Applies knowledge about current nutrition requirements for **infants** when assessing health and nutritional status.
3. Applies knowledge about current nutrition requirements for **children** when assessing health and nutritional status.
4. Applies knowledge of **infant/child** developmental milestones when assessing feeding.
5. Compares the nutrition practices of **women** to current recommendations when assessing health and nutritional status.
6. Compares the **infant's** nutrition intake/practices (eating patterns) to current recommendations when assessing health and nutritional status.
7. Compares the **child's** nutrition intake/practices (eating patterns) to current recommendations when assessing health and nutritional status.
8. Determines the safety implications of the **women's** dietary practices.
9. Determines the safety implications of parents'/caregivers' feeding practices impacting **infants**.
10. Determines the safety implications of parents'/caregivers' feeding practices impacting **children**.
11. Recognizes the nutrition implications of health history information based on client's lifecycle stage.
12. Collaborates with the prenatal client to identify the most appropriate **infant** feeding plan.
13. Applies knowledge of lactation management techniques.
14. Evaluates the impact of feeding interactions on **infant/child** growth and development.
15. Identifies the mother's and/or **infant** strengths and challenges to successful breastfeeding.
16. Recognizes legitimate contraindications to breastfeeding based on current recommendations.
17. Recognizes the critical nature of early postpartum assessment to successful breastfeeding.
18. Evaluates breastfeeding practices to identify effective support strategies for continued breastfeeding.



Appendix D: WIC Nutrition Assessment Competency Model with More Information for Users

Anthropometric and Hematological	More Information for Users
<p>1. Maintains anthropometric equipment according to State agency policy.</p>	<p>CPA utilizes WIC approved equipment. CPA evaluates equipment for cleanliness, evaluates balance of scales, sets up length and height board appropriately and numbers are easily read. CPA utilizes appropriate equipment to accurately weigh and measure infant, children, and women.</p> <p><u>Anthropometrics</u>: measurement of the size and proportions of the human body</p> <p><u>Women</u>: Includes the following:</p> <ul style="list-style-type: none"> <li>-- <b>pregnant</b> (during pregnancy and up to 6 weeks after the birth of an infant or the end of the pregnancy)</li> <li>-- <b>postpartum</b> (up to six months after the birth of the infant or the end of the pregnancy, not breastfeeding)</li> <li>-- <b>breastfeeding</b> (after the birth of the infant and up to the infant's first birthday)</li> <li>-- <b>adolescent</b> (women, ages 14-19)</li> </ul> <p><u>Infant</u>: from birth up to infant's first birthday</p> <p><u>Children</u>: from the child's first birthday up to child's fifth birthday</p>
<p>2. Completes anthropometric measurements accurately for <b>women</b> clients according to State agency policy.</p>	<p>CPA asks client to remove heavy clothing and shoes prior to weighing and measuring height. CPA has woman stand with head, shoulders and buttocks against the measuring surface for height measurement and removes ornaments in the hair that may result in inaccurate height measurement. Height is measured to the nearest 1/8 inch and weight is measured to the nearest 1 lb. or ¼ lb, according to State agency policy. CPA performs anthropometric measurement techniques with WIC clients utilizing State agency policy and procedure guidelines.</p> <p>Accurate measurements have three components: a standardized measurement, technique, and quality. Equipment used is regularly calibrated and accurate. Measurers are trained, reliable, and accurate.</p> <p><u>Anthropometrics</u>: measurement of the size and proportions of the human body</p> <p><u>Women</u>: Includes the following:</p> <ul style="list-style-type: none"> <li>-- <b>pregnant</b> (during pregnancy and up to 6 weeks after the birth of an infant or the end of the pregnancy)</li> <li>-- <b>postpartum</b> (up to six months after the birth of the infant or the end of the pregnancy, not breastfeeding)</li> <li>-- <b>breastfeeding</b> (after the birth of the infant and up to the infant's first birthday)</li> </ul>

	-- <b>adolescent</b> (women, ages 14-19)
3. Completes anthropometric measurements accurately for <b>infants</b> according to State agency policy.	<p>CPA removes outer clothing down to a diaper, or according to State agency policy and positions infant's head at the fixed end of the length board. CPA holds both legs straight with feet flexed at 90 degrees to measure length to the nearest 1/8 inch and weighs to the nearest ounce, or according to State agency policy. CPA performs anthropometric measurement techniques with WIC clients utilizing State agency policy and procedure guidelines.</p> <p><u>Anthropometrics</u>: measurement of the size and proportions of the human body</p> <p><u>Infant</u>: from birth up to infant's first birthday</p>
4. Complete anthropometric measurements accurately for <b>children</b> according to State agency policy.	<p>CPA measures recumbent length for 1 year olds and standing height for 2 years of age and older. For 2 year olds that are shorter than 31 ½ inches the CPA measures again using recumbent length. CPA performs anthropometric measurement techniques with WIC clients utilizing State agency policy and procedure guidelines.</p> <p>Measurements include charts for infants and children with special health care needs.</p> <p><u>Anthropometrics</u>: measurement of the size and proportions of the human body</p> <p><u>Children</u>: from the child's first birthday up to child's fifth birthday</p>
5. Uses the appropriate growth chart for <b>infants</b> and <b>children</b> based on age, gender, and linear measurement.	<p>Computer plotted growth charts are common with most agencies today. At times, though, manually plotting growth data on a chart is required. CPA describes how to select a growth chart and can decide what stature measurement is used such as height or length.</p> <p>Growth charts are a graphic presentation of body measurements that aid in the assessment of body size and shape and in the observation of trends in growth performance. Growth charts should be appropriate for age and gender.</p> <p><u>Children</u>: from the child's first birthday up to child's fifth birthday</p> <p><u>Infant</u>: from birth up to infant's first birthday</p>
6. Reads, records, and plots anthropometric measurements accurately for <b>women, infants, and children</b> according to State agency policy.	<p>CPA accurately utilizes the Digital Scale Conversion Table. CPA accurately reads client's measurements of weight to the nearest lb, ¼ lb or according to State agency policy and height/length to nearest 1/8 inch or according to State agency policy, inputs data into WIC software, including documentation of reasons for</p>

	<p>inaccurate measurements according to WIC State agency policy.</p> <p>Using a growth chart, appropriate for age and gender, a child's measurements should be recorded in the data table of the chart and then plotted to identify any disturbances in height or weight gain.</p> <p><u>Anthropometrics</u>: measurement of the size and proportions of the human body</p> <p><u>Women</u>: Includes the following:</p> <ul style="list-style-type: none"> <li>-- <b>pregnant</b> (during pregnancy and up to 6 weeks after the birth of an infant or the end of the pregnancy)</li> <li>-- <b>postpartum</b> (up to six months after the birth of the infant or the end of the pregnancy, not breastfeeding)</li> <li>-- <b>breastfeeding</b> (after the birth of the infant and up to the infant's first birthday)</li> <li>-- <b>adolescent</b> (women, ages 14-19)</li> </ul> <p><u>Infant</u>: from birth up to infant's first birthday</p> <p><u>Children</u>: from the child's first birthday up to child's fifth birthday</p>
<p>7. Interprets growth patterns appropriately for <b>infants</b>.</p>	<p>After analyzing growth chart, CPA interprets chart for client and counsels accordingly. CPA considers growth pattern and not just single measurements in isolation. CPA can describe the growth pattern to parents using everyday language, explains what percentiles mean, considers parental height and physique in interpretation of growth data, and repeats measurements as needed to rule out inaccurate techniques.</p> <p><u>Infant</u>: from birth up to infant's first birthday</p>
<p>8. Interprets growth patterns appropriately for <b>children</b>.</p>	<p>After analyzing growth chart, CPA interprets chart for client and counsels accordingly. CPA considers growth pattern and not just single measurements in isolation. CPA can describe the growth pattern to parents using everyday language, explains what percentiles mean, recognizes that BMI varies by age and gender for children, considers parental height and physique in interpretation of growth data and repeats measurements as needed to rule out inaccurate techniques.</p> <p>Growth assessment is the single most useful tool for defining health and nutritional status in children at both the individual and population levels. Proper growth monitoring consists of several assessments of both weight and height measurements over time so that growth velocity can be assessed.</p> <p><u>Children</u>: from the child's first birthday up to child's fifth birthday</p> <p><u>Body Mass Index</u>: abbrev: (BMI) A measurement of body fat</p>

	<p>based on height and weight that applies to both men and women. The calculation is performed using weight in kilograms divided by height in meters squared (<math>\text{kg/m}^2</math> or <math>703 \times \text{lb/in}^2</math>)</p>
<p>9. Calculates Body Mass Index (BMI) accurately for <b>women</b> and <b>children</b>.</p>	<p>CPA can manually calculate BMI and use a computer to calculate BMI.</p> <p><u>Body Mass Index</u>: abbrev: (BMI) A measurement of body fat based on height and weight that applies to both men and women. The calculation is performed using weight in kilograms divided by height in meters squared (<math>\text{kg/m}^2</math> or <math>703 \times \text{lb/in}^2</math>)</p> <p><u>Children</u>: from the child's first birthday up to child's fifth birthday</p> <p><u>Women</u>: Includes the following:</p> <ul style="list-style-type: none"> <li>-- <b>pregnant</b> (during pregnancy and up to 6 weeks after the birth of an infant or the end of the pregnancy)</li> <li>-- <b>postpartum</b> (up to six months after the birth of the infant or the end of the pregnancy, not breastfeeding)</li> <li>-- <b>breastfeeding</b> (after the birth of the infant and up to the infant's first birthday)</li> <li>-- <b>adolescent</b> (women, ages 14-19)</li> </ul>
<p>10. Interprets weight gain or loss accurately for all <b>women</b>.</p>	<p>After analyzing maternal weight gain (or loss) including prenatal weight gain charts, CPA interprets weight pattern for client and counsels accordingly. CPA considers weight pattern and not just single measurements in isolation. CPA can describe the weight pattern using everyday language and repeats measurements as needed to rule out inaccurate techniques.</p> <p><u>Women</u>: Includes the following:</p> <ul style="list-style-type: none"> <li>-- <b>pregnant</b> (during pregnancy and up to 6 weeks after the birth of an infant or the end of the pregnancy)</li> <li>-- <b>postpartum</b> (up to six months after the birth of the infant or the end of the pregnancy, not breastfeeding)</li> <li>-- <b>breastfeeding</b> (after the birth of the infant and up to the infant's first birthday)</li> <li>-- <b>adolescent</b> (women, ages 14-19)</li> </ul>
<p>11. Incorporates anthropometric data in assessing health and nutritional status.</p>	<p>CPA states knowledge of age-appropriate growth patterns and weight gain patterns of a client with a healthy nutritional status. CPA compares the individual growth pattern and weight gain pattern to the above norms or standards. CPA asks open-ended questions pertaining to physical, mental and dental health status since last WIC appointment. CPA assesses measurements relating to nutrition status, looks at historical data for trends or red flags, and looks at previous data rather than just isolated measurements to determine health status. A plan is made based on the anthropometric results. All data is analyzed prior to goal</p>

	<p>setting and creating a care plan.</p> <p>For more information and a Health Outcome Presentation visit:  <a href="http://www.nal.usda.gov/wicworks/Learning_Center/Training_HealthOutcomes.html">http://www.nal.usda.gov/wicworks/Learning_Center/Training_HealthOutcomes.html</a></p> <p><u>Anthropometrics</u>: measurement of the size and proportions of the human body</p>
<p>12. Maintains hematological equipment appropriately according to State agency policy.</p>	<p>CPA understands routine cleaning/upkeep procedures, routine cleaning tracking process, and use of control cuvettes and other quality control measures and documentation</p> <p><u>Hematological</u>: tests completed through the use of blood draws from the client</p>
<p>13. Completes hemoglobin and hematocrit assessments according to State agency policy.</p>	<p>CPA uses universal precautions, chooses appropriate puncture sites based on age, cleans the puncture site according to State agency policy, and draws the sample according to State agency policy (i.e. the number of drops of blood wiped away before drawing the sample varies with the test and equipment). CPA disposes of sharps appropriately. Hematocrit and hemoglobin assessments are collected according to periodicity schedule.</p> <p><u>Universal precautions</u>: a set of guidelines to follow when handling blood to reduce the risk of transmitting or contracting blood borne pathogens</p>
<p>14. Evaluates hematological results according to State agency policies for unusual and inconsistent measures.</p>	<p>CPA evaluates blood work results according to State agency policy. CPA cites the risks associated with anemia for infants, children, and women and shares the results with the client. CPA also explains to the client that the WIC guidelines may be different than their health care provider's guidelines.</p> <p><u>Hematological</u>: tests completed through the use of blood draws from the client</p> <p><u>Women</u>: Includes the following:</p> <ul style="list-style-type: none"> <li>-- <b>pregnant</b> (during pregnancy and up to 6 weeks after the birth of an infant or the end of the pregnancy)</li> <li>-- <b>postpartum</b> (up to six months after the birth of the infant or the end of the pregnancy, not breastfeeding)</li> <li>-- <b>breastfeeding</b> (after the birth of the infant and up to the infant's first birthday)</li> <li>-- <b>adolescent</b> (women, ages 14-19)</li> </ul> <p><u>Infant</u>: from birth up to infant's first birthday</p> <p><u>Children</u>: from the child's first birthday up to child's fifth birthday</p>
<p>15. Incorporates hematological data in</p>	<p>CPA evaluates blood work results according to State agency</p>

<p>assessing health and nutritional status.</p>	<p>policy. CPA cites the risks associated with anemia for infants, children, and women and shares the results with the client. CPA also explains to the client that the WIC guidelines may be different than their health care provider's guidelines. CPA knows when the participant is taking prescribed iron supplements and appropriately integrates that information into analysis presented to caregiver/endorser. CPA looks at historical data for trends or red flags and looks at previous data rather than just isolated measurements to determine health status. A plan is made based on the hematological results. All data is analyzed prior to goal setting and creating a care plan.</p> <p><u>For more information and a Health Outcome Presentation visit:</u>  <a href="http://www.nal.usda.gov/wicworks/Learning_Center/Training_HealthOutcomes.html">http://www.nal.usda.gov/wicworks/Learning_Center/Training_HealthOutcomes.html</a></p> <p><u>Hematological:</u> tests completed through the use of blood draws from the client</p> <p><u>Women:</u> Includes the following:</p> <ul style="list-style-type: none"> <li>-- <b>pregnant</b> (during pregnancy and up to 6 weeks after the birth of an infant or the end of the pregnancy)</li> <li>-- <b>postpartum</b> (up to six months after the birth of the infant or the end of the pregnancy, not breastfeeding)</li> <li>-- <b>breastfeeding</b> (after the birth of the infant and up to the infant's first birthday)</li> <li>-- <b>adolescent</b> (women, ages 14-19)</li> </ul> <p><u>Infant:</u> from birth up to infant's first birthday</p> <p><u>Children:</u> from the child's first birthday up to child's fifth birthday</p>
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Communication	More Information for Users
<p>1. Interacts with each client in a respectful and sensitive manner.</p>	
<p>2. Uses verbal and non-verbal communication techniques to create an environment that engages clients in conversation.</p>	<p>CPA introduces self to client and welcomes the client. CPA builds a positive sense of rapport before beginning the interview with the client. CPA maintains a comfortable level of eye contact with the client. CPA respects the client's personal space.</p> <p><u>Rapport:</u> sympathetic relation, especially one of mutual trust or emotional affinity</p> <p><u>For more information and a Rapport Building Presentation visit:</u>  <a href="http://www.nal.usda.gov/wicworks/Learning_Center/Training_RapportBuilding.html">http://www.nal.usda.gov/wicworks/Learning_Center/Training_RapportBuilding.html</a></p>
<p>3. Selects appropriate communication techniques based on assessment of</p>	<p>If there is disconnect between the verbal and nonverbal cues, the CPA asks appropriate questions or shares their observation that</p>

<p>client's verbal and nonverbal cues.</p>	<p>the client appears to be nervous or anxious. CPA lets the client know in an unthreatening way that the client can share their true feelings or concerns. CPA applies interpersonal skills such as negotiation, team work, motivation, conflict resolution and problem solving skills.</p>
<p>4. Uses communication resources to address language barriers and special needs of clients.</p>	<p>Special needs of clients include hearing impairments, English as a second language, low health literacy, and/or low reading literacy levels. Communication resources include language interpreters, translation services and visual aids.</p>
<p>5. Demonstrates active listening skills.</p>	<p>CPA maintains eye contact with the client and does not perform other tasks while the client is speaking. CPA observes client's behavior and determines client's sense of comfort. CPA uses a variety of types of questions, responds to the client's concerns, and does not interrupt the client when speaking. CPA completes data entry and/or documentation in a manner that does not impair rapport building. CPA properly uses communication techniques to refocus the conversation if needed.</p> <p><u>Rapport</u>: sympathetic relation, especially one of mutual trust or emotional affinity</p> <p>For more information and a Rapport Building Presentation visit: <a href="http://www.nal.usda.gov/wicworks/Learning_Center/Training_RapportBuilding.html">http://www.nal.usda.gov/wicworks/Learning_Center/Training_RapportBuilding.html</a></p> <p><u>Active listening</u>: intentional focus on who you are listening to, you should then be able to repeat back in your own words what they have said to their satisfaction</p>
<p>6. Uses paraphrasing and/or reflecting skills to confirm understanding of client's statements.</p>	<p>CPA repeats back to client what the client has said for a clearer understanding. CPA asks client for clarification on certain points when necessary.</p> <p><u>Active listening</u>: intentional focus on who you are listening to, you should then be able to repeat back in your own words what they have said to their satisfaction</p> <p><u>Paraphrasing</u>: your own rendition of essential information and ideas expressed by someone else, presented in a new form; more detailed restatement than a summary, which focuses concisely on a single main idea</p> <p><u>Reflecting</u>: linking past experiences together and thinking about them as a whole</p>
<p>7. Utilizes open- and closed-ended questions to elicit and clarify information.</p>	<p><u>Open-ended questions</u>: questions that do not elicit a yes or no answer</p> <p><u>Closed-ended questions</u>: questions that elicit yes or no answers</p>

<p>8. Demonstrates professional discretion when client's concerns indicate the need to deviate from the standard nutrition assessment process.</p>	<p>There are times when there appears to be a priority or “emergency” for education or referral. The CPA should be able to determine when to interrupt the nutrition assessment process to provide education, support or a referral. The standard nutrition assessment process is to gather all information and evaluate it before providing education</p>
<p>9. Uses communication techniques to defuse a situation and to work with angry or resistant clients.</p>	<p>Use of innovative or alternative communication techniques can help build rapport, decrease resistance, improve cooperation, and facilitate collaborative relationships.</p> <p>These techniques can help minimize the risk to ourselves and to others, deescalating a situation and not making it worse.</p> <ul style="list-style-type: none"> <li>• Avoid name-calling and put-downs</li> <li>• Soften your tone</li> <li>• Take a time-out (“Let’s take a break and cool down”)</li> <li>• Acknowledge the other person’s point of view (agreement is not necessary)</li> <li>• Avoid defensive or hostile body language (rolling eyes, crossing arms in front of body, tapping foot)</li> <li>• Be aware of triggers and respond to them when you notice them</li> </ul>
<p>10. Adheres to State agency policies concerning client confidentiality.</p>	<p>CPA understands what information is confidential and avoids sharing client information, both verbal and written, with staff, participants, and other individuals external to the work environment through e-mail, speakerphone, or public areas. CPA understands confidentiality procedures and how to explain them in an easily understandable way to clients. The CPA knows both USDA and State agency policies regarding confidentiality and actively implements the policies. CPA has the client sign a release of information and shares release of information with appropriate parties. CPA documents in client’s record that release of information has been signed and sent.</p>
<p>11. Completes nutrition assessment tasks before providing nutrition counseling.</p>	<p>CPA looks at the big picture and realizes that counseling generally should happen after all information has been gathered and not at the same time as assessment. If counseling is constantly happening through the assessment it can be very confusing and perhaps overwhelming to the client as they are continuing to receive information. Providing education too early may be inappropriate when all assessment information has not yet been gathered.</p> <p><u>Nutrition assessment</u>: A dynamic process involving the in-depth review and analysis of a person’s medical and diet history, laboratory values, and anthropometric measurements to verify nutritional risk or malnutrition and identify underlying causes so that appropriate nutrition intervention, tailored to the needs of the individual, can be planned and initiated.</p> <p><u>Nutrition education</u>: Individual and group sessions and the</p>

	<p>provision of materials that are designed to improve health status and achieve positive change in dietary and physical activity habits and that emphasize the relationship between nutrition, physical activity and health, all in keeping with the personal and cultural preferences of the individual.</p> <p>For more information on Nutrition Education visit:  <a href="http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#education">http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#education</a></p>
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<b>Critical Thinking</b>	<b>More Information for Users</b>
<p>1. Considers the client's ability to obtain, process, and understand basic health information and services needed to make health decisions.</p>	<p>CPA uses resources to promote client success and their readiness to learn by facilitating the combined efforts of the WIC program, family members and the community to address the needs of the client.</p> <p>For more information and a Critical Thinking Presentation visit:  <a href="http://www.nal.usda.gov/wicworks/Learning_Center/Training_CriticalThinking.html">http://www.nal.usda.gov/wicworks/Learning_Center/Training_CriticalThinking.html</a></p>
<p>2. Recognizes own personal world view and separates it from the assessment.</p>	<p>CPA evaluates if their thinking is good, fair and just and open to new information.</p>
<p>3. Recognizes health and dietary factors that contribute to nutrition risk factors.</p>	<p>CPA considers all factors of the client including lifestyle, environment, and socio-economic, not simply just the information required by the WIC data system. CPA asks client about food security, condition and use of appliances, who is involved in feeding children, and health and dental conditions. CPA evaluates barriers for nutritional health and assesses client's compliance to health providers' recommendations.</p> <p>For more information on Dietary Risk Assessment visit:  <a href="http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#recall">http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#recall</a></p>
<p>4. Recognizes inconsistent, inaccurate, or unusual information and referral data.</p>	<p>CPA takes appropriate action regarding inaccurate measurements and follows State agency policy when data is inconsistent, such as rechecking measurements and documenting factors that interfere with measurements. CPA collects additional details to clarify inconsistencies.</p>
<p>5. Verifies inconsistent and unusual measurements according to State agency policy.</p>	<p>CPA repeats the unusual or inconsistent measurement. CPA documents known factors that result in inaccurate measurements (e.g. cast on leg, uncooperative child, etc.). CPA asks additional questions to clarify information or gather more details.</p>
<p>6. Verifies inconsistent referral data according to State agency policy.</p>	<p>CPA follows up with the referral provider and documents concern about suspected inaccurate measurements according to State agency policy. CPA takes appropriate action regarding inaccurate</p>

	<p>measurements and follows State agency policy when data is inconsistent (e.g. rechecks measurements, documents factors that interfere with measurements). CPA collects additional details to clarify inconsistencies.</p>
<p>7. Identifies interrelationships between client's current behaviors and nutrition risk factors.</p>	<p>CPA looks for interrelationships between behaviors, practices, and risks to determine appropriate intervention. CPA has the ability to identify how lifestyle behaviors and practices impact nutritional risk.</p> <p><u>For more information on Dietary Risk Assessment visit:</u>  <a href="http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#recall">http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#recall</a></p> <p><u>Interrelationship:</u> how two different topics that may interact with one another, such as the behavior/risk relationship</p>
<p>8. Incorporates the client's point of view about nutrition and health priorities, needs and concerns into the nutrition assessment.</p>	<p>CPA assesses the client's needs, health concerns, and nutrition priorities. CPA demonstrates ability to ask appropriate questions. During interaction with the client, CPA talks through options for handling nutrition concerns based on the client's input and feedback. CPA asks the client what they are interested in or concerned about, and their opinion regarding their nutrition and health priorities.</p> <p><u>Nutrition assessment:</u> A dynamic process involving the in-depth review and analysis of a person's medical and diet history, laboratory values, and anthropometric measurements to verify nutritional risk or malnutrition and identify underlying causes so that appropriate nutrition intervention, tailored to the needs of the individual, can be planned and initiated.</p>
<p>9. Incorporates information from current and previous assessments into decisions about health and nutritional status.</p>	<p>CPA looks at all current and historical health and nutrition data and information. CPA asks clarifying questions to make final assessment before counseling.</p> <p><u>Nutrition assessment:</u> A dynamic process involving the in-depth review and analysis of a person's medical and diet history, laboratory values, and anthropometric measurements to verify nutritional risk or malnutrition and identify underlying causes so that appropriate nutrition intervention, tailored to the needs of the individual, can be planned and initiated.</p> <p><u>Anthropometrics:</u> measurement of the size and proportions of the human body</p> <p><u>Hematological:</u> tests completed through the use of blood draws from the client</p>
<p>10. Evaluates previously obtained</p>	<p>CPA evaluates nutrition assessment information to determine</p>

<p>nutrition assessment information and documentation of previous intervention strategies to determine the effectiveness of services.</p>	<p>whether a different intervention is needed.</p> <p><u>Nutrition assessment</u>: A dynamic process involving the in-depth review and analysis of a person's medical and diet history, laboratory values, and anthropometric measurements to verify nutritional risk or malnutrition and identify underlying causes so that appropriate nutrition intervention, tailored to the needs of the individual, can be planned and initiated.</p>
<p>11. Draws conclusions about health and nutritional status supported by perspectives and strengths of client and data, observations, and reasoning.</p>	<p>CPA draws conclusions about nutritional status supported by client data and the CPA's own observations, reasoning and experience. CPA disregards irrelevant information. CPA asks additional questions to clarify information and to support initial conclusions.</p> <p><u>For more information and a Health Outcome Presentation visit:</u>  <a href="http://www.nal.usda.gov/wicworks/Learning_Center/Training_HealthOutcomes.html">http://www.nal.usda.gov/wicworks/Learning_Center/Training_HealthOutcomes.html</a></p> <p><u>Nutrition education</u>: Individual and group sessions and the provision of materials that are designed to improve health status and achieve positive change in dietary and physical activity habits and that emphasize the relationship between nutrition, physical activity and health, all in keeping with the personal and cultural preferences of the individual.</p> <p><u>For more information on Nutrition Education visit:</u>  <a href="http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#education">http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#education</a></p>
<p>12. Applies creative problem solving and flexible thinking in partnership with the client to identify solutions for nutrition issues.</p>	<p>CPA looks "outside of the box" to find solutions for nutrition issues. CPA asks the client how they felt problems that were identified at the previous visit were being addressed by the nutrition plan to determine if modifications were necessary. Also, CPA analyzes newly obtained data.</p>
<p>13. Prioritizes the client's nutrition risks and concerns to be addressed.</p>	<p>CPA lists all nutrition issues but deals with most immediate needs first. CPA evaluates client's nutritional needs to provide nutrition education. CPA addresses the problems that most impact the client's nutritional status. CPA compiles information to prioritize risks through various approaches and makes decisions effectively using analytical, critical thinking, and problem solving.</p> <p><u>For more information on Client Counseling visit:</u>  <a href="http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#counsel">http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#counsel</a></p>
<p>14. Analyzes all information (including: anthropometric, biochemical, clinical, dietary, family and social environment) to determine the</p>	<p>CPA collects and analyzes all data before providing education or counseling. CPA looks for interrelationships between different pieces of data and information (i.e. anthropometric and dietary practices, medical history and dietary supplements). CPA</p>

<p>course of action.</p>	<p>includes the client in developing the intervention plan including nutrition education topics.</p> <p><u>Nutrition education</u>: Individual and group sessions and the provision of materials that are designed to improve health status and achieve positive change in dietary and physical activity habits and that emphasize the relationship between nutrition, physical activity and health, all in keeping with the personal and cultural preferences of the individual.</p> <p>For more information on Nutrition Education visit:  <a href="http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#education">http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#education</a></p> <p><u>Anthropometrics</u>: measurement of the size and proportions of the human body</p> <p><u>Biochemical information</u>: information received from the client via blood tests and procedures</p> <p><u>Clinical information</u>: information about the client's health history including current medical conditions, medications (prescription and over-the-counter), oral health status, and substance use patterns.</p> <p><u>Dietary information</u>: information about the client's usual eating patterns including meal patterns, food choices, food safety practices and use of dietary supplements.</p> <p><u>Family and social environment information</u>: information about the client including homelessness, migrant status, foster care status, number of caregivers, food security, access to health care and oral health care, ability to make appropriate decisions and/or prepare food, recipient of abuse or neglect.</p>
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<b>Multi-Cultural Awareness</b>	<b>More Information for Users</b>
<p>1. Recognizes target population based upon race, ethnicity, culture, socioeconomic, education and professional backgrounds, age, religious affiliation, mental and physical abilities, and sexual orientation.</p>	<p><u>Cultural competence</u>: Awareness of self and one's own value system, an understanding of the concept of culture (including income, education, socioeconomic status) and its role as a factor in health and health care, a sensitivity to cultural issues for each patient, and an understanding and ability to use specific methods to deal effectively with cultural issues in interacting with individual patients, their families, members of the health care team, and the wider community.</p>
<p>2. Respects the beliefs and health practices of clients when conducting a nutrition assessment.</p>	<p>CPA considers issues such as blood work, immunizations, dietary supplements, alternative medicine, and traditional healers. CPA remains nonjudgmental and demonstrates respect while gathering nutrition assessment data.</p> <p><u>Nutrition assessment</u>: A dynamic process involving the in-depth review and analysis of a person's medical and diet history,</p>

	<p>laboratory values, and anthropometric measurements to verify nutritional risk or malnutrition and identify underlying causes so that appropriate nutrition intervention, tailored to the needs of the individual, can be planned and initiated.</p>
<p>3. Recognizes how a client's cultural communication style may affect the nutrition assessment.</p>	<p>CPA uses communication skills to effectively address barriers caused by differences in communication styles between cultural groups. CPA recognizes differences in communication styles and chooses effective techniques for unbiased communication. CPA adjusts personal communication style to address differences between cultural groups.</p> <p>Takes into consideration the age of the client and applies cultural sensitivity and information on the relevance of program services to adolescents.</p> <p><u>Nutrition assessment</u>: A dynamic process involving the in-depth review and analysis of a person's medical and diet history, laboratory values, and anthropometric measurements to verify nutritional risk or malnutrition and identify underlying causes so that appropriate nutrition intervention, tailored to the needs of the individual, can be planned and initiated.</p>
<p>4. Uses culturally appropriate communication styles to collect nutrition assessment information.</p>	<p>"Styles" may include discussion and open-ended types of questions. CPA uses interpreters when necessary and respects the client's personal space. CPA asks the client's permission before touching the client or the client's child. CPA respects differences in comfort levels for direct eye contact. CPA accesses language line, interpreter, and TDD for hearing impaired. CPA conducts the interview with the culturally appropriate person.</p> <p>Takes into consideration the age of the client and applies cultural sensitivity and information on the relevance of program services to adolescents.</p> <p><u>Nutrition assessment</u>: A dynamic process involving the in-depth review and analysis of a person's medical and diet history, laboratory values, and anthropometric measurements to verify nutritional risk or malnutrition and identify underlying causes so that appropriate nutrition intervention, tailored to the needs of the individual, can be planned and initiated.</p>
<p>5. Describes the values and belief systems of cultural groups in the target population.</p>	<p>CPA identifies cultural groups in their service area and the characteristics that are common to the population. CPA understands how culture may affect nutrition-related health problems and lists the cultural groups served. CPA understands multi-cultural awareness.</p> <p>Takes into consideration the age of the client and applies cultural sensitivity and information on the relevance of program services to adolescents.</p>

	<p><u>Multi-Cultural Awareness</u>: a greater understanding, sensitivity, and appreciation of the history, values, experiences, and lifestyles of groups that include, but, are not limited to: race, ethnicity, gender, sexual orientation, religious affiliation, socio-economic status, mental/physical abilities, and other factors.</p> <p><u>Target population</u>: the group of people the program is intending to serve or provide benefits to</p>
6. Uses a variety of strategies to learn more about a client’s cultural eating patterns and traditions.	CPA learns about different cultures practices including core foods, traditional celebrations and fasting. CPA understands what cultural practices are common within the population served (including religious practices and superstitious beliefs on eating patterns), food preparation and food selection.
7. Assesses cultural practices for potential harm to client’s health or nutritional status.	CPA assesses the needs of the client, if the client is at-risk for potential harm then action is taken, education is given and referrals are made. Recommendations to change cultural practices are made only when they have the potential to cause harm. Explanations are given when changes to cultural practices are being made. CPA distinguishes between cultural practices that are helpful, harmless and harmful.
8. Evaluates food preparation practices within a cultural context.	CPA determines degree of acculturation in relationship to food preparation practices. CPA is familiar with traditional food preparation practices or asks questions and uses other resources to learn more about traditional food preparation practices.
9. Uses culturally appropriate strategies to assess pregnant <b>women’s</b> eating practices and beliefs.	CPA determines degree of acculturation in relationship to maternal diet and weight gain during pregnancy. CPA asks about foods that are encouraged or discouraged during pregnancy.
10. Uses culturally appropriate strategies to assess <b>infant</b> feeding practices and beliefs.	<p>CPA determines degree of acculturation in relationship to infant feeding beliefs and attitudes. CPA assesses beliefs and attitudes about breastfeeding in public including in the presence of extended family members. CPA asks breastfeeding mothers for their ideas about the acceptable age for weaning and about their beliefs related to giving babies colostrum.</p> <p>CPA asks questions to determine the parent/caregiver’s perspective about what a healthy infant looks like and how a healthy infant eats. CPA uses this information to determine additional questions to ask to assess the infant’s feeding and eating practices.</p> <p><u>For more information visit:</u>  <a href="http://kidshealth.org/parent/pregnancy_newborn/breastfeed/breastfeed_starting.html">http://kidshealth.org/parent/pregnancy_newborn/breastfeed/breastfeed_starting.html</a></p> <p><u>Infant</u>: from birth up to infant’s first birthday</p>
11. Uses culturally appropriate strategies to assess <b>child’s</b> feeding/eating	CPA asks questions to determine the parent/caregiver’s perspective about what a healthy child looks like and how a

practices and beliefs.	<p>healthy child eats. CPA uses this information to determine additional questions to ask to assess the child's feeding and eating practices.</p> <p><u>Children:</u> from the child's first birthday up to child's fifth birthday</p>
12. Identifies culturally appropriate referral resources that may be used by the client.	CPA identifies appropriate resources for the culture being served, and provides guidance and educational materials.

Nutrition Assessment Process	More Information for Users
<p>1. Describes the purpose of nutrition assessment in the WIC program.</p>	<p>CPA understands the purpose of nutrition assessment in the WIC program and can explain it to others.</p> <p>VENA is an initiative, developed jointly by the Food and Nutrition Service (FNS) and the National WIC Association (NWA), to improve nutrition services in the WIC Program by establishing standards for the assessment process used to determine WIC eligibility and to individualize nutrition education, referrals, and food package tailoring. VENA is part of the larger process known as Revitalizing Quality Nutrition Services (RQNS) in WIC. (Source: Value Enhanced Nutrition Assessment (VENA) in WIC Executive Summary)</p> <p><u>For more information visit:</u>  <a href="http://www.nal.usda.gov/wicworks/Learning_Center/VENA_exec.pdf">http://www.nal.usda.gov/wicworks/Learning_Center/VENA_exec.pdf</a></p> <p><u>Health Outcome Presentation visit:</u>  <a href="http://www.nal.usda.gov/wicworks/Learning_Center/Training_HealthOutcomes.html">http://www.nal.usda.gov/wicworks/Learning_Center/Training_HealthOutcomes.html</a></p> <p><u>Nutrition assessment:</u> A dynamic process involving the in-depth review and analysis of a person's medical and diet history, laboratory values, and anthropometric measurements to verify nutritional risk or malnutrition and identify underlying causes so that appropriate nutrition intervention, tailored to the needs of the individual, can be planned and initiated.</p> <p><u>For more information on Nutrition Assessment and Risk visit:</u>  <a href="http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#impact">http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#impact</a></p>
<p>2. Uses a systematic approach to complete nutrition assessments.</p>	<p>CPA demonstrates use of standardized nutrition assessment data collection tools and/or procedures according to State agency policies. CPA is familiar with State agency policy and uses the appropriate tools to perform the assessment.</p> <p><u>Nutrition assessment:</u> A dynamic process involving the in-depth review and analysis of a person's medical and diet history,</p>

	<p>laboratory values, and anthropometric measurements to verify nutritional risk or malnutrition and identify underlying causes so that appropriate nutrition intervention, tailored to the needs of the individual, can be planned and initiated.</p>
<p>3. Completes nutrition assessment using a client centered approach.</p>	<p>CPA uses an interactive, participatory approach to collect nutrition assessment information. CPA uses best judgment according to each client, taking into account each client's health, social situation and needs, including special nutritional need. CPA is able to talk with the client and not at the client about best practices for nutrition. CPA creates a healthy goal with the client.</p> <p><u>Nutrition assessment:</u> A dynamic process involving the in-depth review and analysis of a person's medical and diet history, laboratory values, and anthropometric measurements to verify nutritional risk or malnutrition and identify underlying causes so that appropriate nutrition intervention, tailored to the needs of the individual, can be planned and initiated.</p> <p><u>Client Centered Approach:</u> The origin is client centered therapy (CCT), developed by the psychotherapist Dr. Carl Rogers. CCT assumes that all persons have an internal drive for growth and healing and, in a supportive environment, can solve their own problems. A CCT therapist does not diagnose, analyze or offer treatment. Instead, the therapist offers an environment of empathy and acceptance. He listens and provides advice only when asked.</p>
<p>4. Describes the importance of documenting the nutrition assessment results to provide continuity in WIC services.</p>	<p>CPA maintains documentation of contact with clients including clinic visits and phone calls in the client's care plans, for continuity of care, best practices, and according to State agency policy. CPA provides complete and accurate documentation so all staff is able to provide continuity in services and education.</p> <p><u>For more information and a Health Outcome Presentation visit:</u>  <a href="http://www.nal.usda.gov/wicworks/Learning_Center/Training_HealthOutcomes.html">http://www.nal.usda.gov/wicworks/Learning_Center/Training_HealthOutcomes.html</a></p> <p><u>Nutrition assessment:</u> A dynamic process involving the in-depth review and analysis of a person's medical and diet history, laboratory values, and anthropometric measurements to verify nutritional risk or malnutrition and identify underlying causes so that appropriate nutrition intervention, tailored to the needs of the individual, can be planned and initiated.</p>
<p>5. Obtains relevant assessment information (including: anthropometric, biochemical, clinical, dietary, family and social environment) according to State agency policy.</p>	<p>CPA uses best judgment according to each client, taking into account each client's age, health, developmental stage, reproductive status, social situation and personal needs including special nutritional needs.</p> <p><u>Anthropometrics:</u> measurement of the size and proportions of the human body</p>

	<p><u>Biochemical information</u>: information received from the client via blood tests and procedures</p> <p><u>Clinical information</u>: information about the client's health history including current medical conditions, medications (prescription and over-the-counter), oral health status, and substance use patterns.</p> <p><u>Dietary information</u>: information about the client's usual eating patterns including meal patterns, food choices, food safety practices and use of dietary supplements.</p> <p><u>Family and social environment information</u>: information about the client including homelessness, migrant status, foster care status, number of caregivers, food security, access to health care and oral health care, ability to make appropriate decisions and/or prepare food, recipient of abuse or neglect.</p>
<p>6. Obtains medical documentation for health assessment information according to State agency policy.</p>	<p>CPA obtains medical documentation from client's health care provider for diagnosed medical conditions according to State agency policy.</p>
<p>7. Applies WIC nutrition criteria definitions correctly when assigning nutrition risks.</p>	<p>CPA applies risk criteria definitions correctly such as cut-off values in BMI measurements and hemoglobin levels.</p> <p>For more information on Dietary Risk Assessment visit:  <a href="http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#recall">http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#recall</a></p> <p><u>Risk Criteria</u>: Risk criteria are used to assign a priority level to women, infants, and children. Risk criteria include anthropometric, biochemical, clinical, dietary, family and social environment.</p> <p><u>Body Mass Index</u>: abbrev: (BMI) A measurement of body fat based on height and weight that applies to both men and women. The calculation is performed using weight in kilograms divided by height in meters squared (<math>\text{kg/m}^2</math> or <math>703 \times \text{lb/in}^2</math>)</p>
<p>8. Applies current nutrition recommendations, such as <i>Dietary Guidelines for Americans</i>, when completing the nutrition assessment.</p>	<p>Other nutrition recommendation sources identified by VENA include publication from professional organizations and federal agencies such as: <i>American Dietetic Association Pocket Guide to Nutrition Assessment</i>; <i>The American Dietetic Association's complete food and nutrition guide</i>; <i>Pediatric Nutrition in Chronic Diseases and Developmental Disorders: Prevention, Assessment, and Treatment</i>; <i>Bright Futures: Guidelines for Health Supervision of Infants, Children and Adolescents</i>; <i>Pediatric Nutrition Handbook</i>; <i>Nutrition care process and model</i>" <i>ADA adopts road map to quality care and outcomes management</i>; <i>WIC nutrition risk criteria: A scientific assessment</i>; <i>Dietary Risk Assessment in the WIC Program</i>; <i>Krause's Food, Nutrition and Diet Therapy</i>; <i>Bright Futures in Practice Nutrition-Pocket Guide</i>; <i>How Should I Feed My Child? From Pregnancy to Preschool</i>; <i>Handbook of Pediatric Nutrition</i>; <i>Child of Mine</i>:</p>

	<p><i>Feeding with Love and Good Sense; How to Get your Kid to Eat but Not Too Much; Secrets of Feeding a Healthy Family; Healthy People 2010: Understanding and Improving Health; Clinical nutrition and dietetics; WIC Sharing Center</i></p>
<p>9. Documents WIC nutrition risk criteria for each client according to State agency policy.</p>	<p>CPA provides complete and accurate documentation so all staff is able to provide continuity in services and education.</p> <p>Client must have a nutritional risk as determined by a health professional. The nutrition evaluation is based on:</p> <ul style="list-style-type: none"> <li>• Height, weight, growth assessment</li> <li>• Hematocrit or hemoglobin tests to screen for anemia</li> <li>• Health history and diet assessment</li> </ul> <p>For more information and a Health Outcome Presentation visit:  <a href="http://www.nal.usda.gov/wicworks/Learning_Center/Training_HealthOutcomes.html">http://www.nal.usda.gov/wicworks/Learning_Center/Training_HealthOutcomes.html</a></p> <p>For more information on Dietary Risk Assessment visit:  <a href="http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#recall">http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#recall</a></p> <p><b>Risk Criteria:</b> Risk criteria are used to assign a priority level to women, infants, and children. Risk criteria include anthropometric, biochemical, clinical, dietary, family and social environment.</p>
<p>10. Incorporates referral data into the nutrition assessment process.</p>	<p>CPA uses referral data to complete the nutrition assessment as well as incorporates referral data into nutrition assessment process.</p> <p><b>Nutrition assessment:</b> A dynamic process involving the in-depth review and analysis of a person’s medical and diet history, laboratory values, and anthropometric measurements to verify nutritional risk or malnutrition and identify underlying causes so that appropriate nutrition intervention, tailored to the needs of the individual, can be planned and initiated.</p>
<p>11. Documents nutrition assessment results in care plans according to State agency policy.</p>	<p>CPA provides complete and accurate documentation so all staff is able to provide continuity in services and education. CPA creates and records a complete nutrition care plan in the client’s chart.</p> <p>For more information and a Health Outcome Presentation visit:  <a href="http://www.nal.usda.gov/wicworks/Learning_Center/Training_HealthOutcomes.html">http://www.nal.usda.gov/wicworks/Learning_Center/Training_HealthOutcomes.html</a></p> <p><b>Nutrition assessment:</b> A dynamic process involving the in-depth review and analysis of a person’s medical and diet history, laboratory values, and anthropometric measurements to verify nutritional risk or malnutrition and identify underlying causes so that appropriate nutrition intervention, tailored to the needs of the individual, can be planned and initiated.</p>

<p>12. Communicates nutrition assessment results to each client/caregiver.</p>	<p>CPA discusses the nutrition assessment results with the client. CPA obtains feedback from the client/caregiver about the results that is used to determine the intervention.</p> <p><u>Nutrition assessment:</u> A dynamic process involving the in-depth review and analysis of a person's medical and diet history, laboratory values, and anthropometric measurements to verify nutritional risk or malnutrition and identify underlying causes so that appropriate nutrition intervention, tailored to the needs of the individual, can be planned and initiated.</p>
<p>13. Develops a plan for referrals based on analysis of nutrition assessment information.</p>	<p>CPA makes referrals based on the data that is gathered during the nutrition assessment.</p> <p><u>Nutrition assessment:</u> A dynamic process involving the in-depth review and analysis of a person's medical and diet history, laboratory values, and anthropometric measurements to verify nutritional risk or malnutrition and identify underlying causes so that appropriate nutrition intervention, tailored to the needs of the individual, can be planned and initiated.</p>
<p>14. Applies nutrition assessment information when determining food packages.</p>	<p>CPA uses the nutrition assessment to provide the appropriate food package based on nutrition needs of the client.</p> <p><u>Nutrition assessment:</u> A dynamic process involving the in-depth review and analysis of a person's medical and diet history, laboratory values, and anthropometric measurements to verify nutritional risk or malnutrition and identify underlying causes so that appropriate nutrition intervention, tailored to the needs of the individual, can be planned and initiated.</p>
<p>15. Develops a plan for nutrition education based on analysis of nutrition assessment information.</p>	<p>Once done gathering the data the CPA appropriately interprets the results to provide the best education.</p> <p><u>Nutrition assessment:</u> A dynamic process involving the in-depth review and analysis of a person's medical and diet history, laboratory values, and anthropometric measurements to verify nutritional risk or malnutrition and identify underlying causes so that appropriate nutrition intervention, tailored to the needs of the individual, can be planned and initiated.</p> <p><u>Nutrition education:</u> Individual and group sessions and the provision of materials that are designed to improve health status and achieve positive change in dietary and physical activity habits and that emphasize the relationship between nutrition, physical activity and health, all in keeping with the personal and cultural preferences of the individual.</p> <p>For more information on Nutrition Education visit:  <a href="http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#education">http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#education</a></p>

Principles of Life Cycle Nutrition	More Information for Users
<p>1. Applies knowledge about current nutrition requirements for <b>women</b> when assessing health and nutritional status.</p>	<p>CPA applies knowledge of evidence-based dietary recommendations for women of childbearing age when evaluating nutrition status. CPA compares nutrition assessment findings to these requirements when reaching conclusions and determining a service plan.</p> <p><u>Nutrition assessment</u>: A dynamic process involving the in-depth review and analysis of a person’s medical and diet history, laboratory values, and anthropometric measurements to verify nutritional risk or malnutrition and identify underlying causes so that appropriate nutrition intervention, tailored to the needs of the individual, can be planned and initiated.</p> <p><u>Women</u>: Includes the following:</p> <ul style="list-style-type: none"> <li>-- <b>pregnant</b> (during pregnancy and up to 6 weeks after the birth of an infant or the end of the pregnancy)</li> <li>-- <b>postpartum</b> (up to six months after the birth of the infant or the end of the pregnancy, not breastfeeding)</li> <li>-- <b>breastfeeding</b> (after the birth of the infant and up to the infant's first birthday)</li> <li>-- <b>adolescent</b> (women, ages 14-19)</li> </ul>
<p>2. Applies knowledge about current nutrition requirements for <b>infants</b> when assessing health and nutritional status.</p>	<p>CPA knows the nutrition requirements for infants and applies them appropriately to complete a nutrition assessment and nutrition education for the client.</p> <p><u>Nutrition assessment</u>: A dynamic process involving the in-depth review and analysis of a person’s medical and diet history, laboratory values, and anthropometric measurements to verify nutritional risk or malnutrition and identify underlying causes so that appropriate nutrition intervention, tailored to the needs of the individual, can be planned and initiated.</p> <p><u>Nutrition education</u>: Individual and group sessions and the provision of materials that are designed to improve health status and achieve positive change in dietary and physical activity habits and that emphasize the relationship between nutrition, physical activity and health, all in keeping with the personal and cultural preferences of the individual.</p> <p><u>For more information on Nutrition Education visit:</u>  <a href="http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#education">http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#education</a></p> <p><u>Infant</u>: from birth up to infant’s first birthday</p>
<p>3. Applies knowledge about current nutrition requirements for <b>children</b></p>	<p>CPA knows the nutrition requirements for children and applies</p>

<p>when assessing health and nutritional status.</p>	<p>them appropriately to complete a nutrition assessment and nutrition education for the client.</p> <p><u>Nutrition assessment</u>: A dynamic process involving the in-depth review and analysis of a person’s medical and diet history, laboratory values, and anthropometric measurements to verify nutritional risk or malnutrition and identify underlying causes so that appropriate nutrition intervention, tailored to the needs of the individual, can be planned and initiated.</p> <p><u>Nutrition education</u>: Individual and group sessions and the provision of materials that are designed to improve health status and achieve positive change in dietary and physical activity habits and that emphasize the relationship between nutrition, physical activity and health, all in keeping with the personal and cultural preferences of the individual.</p> <p>For more information on Nutrition Education visit:  <a href="http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#education">http://www.nal.usda.gov/wicworks/Learning_Center/Assessment_VENA.html#education</a></p> <p><u>Children</u>: from the child’s first birthday up to child’s fifth birthday</p>
<p>4. Applies knowledge of <b>infant/child</b> developmental milestones when assessing feeding.</p>	<p><u>Infant</u>: from birth up to infant’s first birthday</p> <p><u>Children</u>: from the child’s first birthday up to child’s fifth birthday</p> <p><u>Infant/Child Developmental Milestones</u>: Key events in the infant’s or child’s life that demonstrate a new learning or developmental skill, such as motor skills</p>
<p>5. Compares the nutrition practices of <b>women</b> to current recommendations when assessing health and nutritional status.</p>	<p>CPA compares data obtained from the client during the assessment, compares it to the recommendations, and then counsels accordingly. CPA describes and explains the current recommendations published by American Academy of Pediatrics, American Dietetics Association, American College of Obstetricians and Gynecologists, and International Lactation Consultant Association, and others as relevant for each client.</p> <p><u>Women</u>: Includes the following:</p> <ul style="list-style-type: none"> <li>-- <b>pregnant</b> (during pregnancy and up to 6 weeks after the birth of an infant or the end of the pregnancy)</li> <li>-- <b>postpartum</b> (up to six months after the birth of the infant or the end of the pregnancy, not breastfeeding)</li> <li>-- <b>breastfeeding</b> (after the birth of the infant and up to the infant’s first birthday)</li> <li>-- <b>adolescent</b> (women, ages 14-19)</li> </ul> <p><u>Nutrition assessment</u>: A dynamic process involving the in-depth review and analysis of a person’s medical and diet history, laboratory values, and anthropometric measurements to verify</p>

	<p>nutritional risk or malnutrition and identify underlying causes so that appropriate nutrition intervention, tailored to the needs of the individual, can be planned and initiated.</p>
<p>6. Compares the <b>infant's</b> nutrition intake/practices (eating patterns) to current recommendations when assessing health and nutritional status.</p>	<p>CPA compares data obtained from the client during the nutrition assessment to the recommendations and then counsels accordingly. CPA describes and explains the current recommendations published by American Academy of Pediatrics, American Dietetics Association, and International Lactation Consultant Association, and others to the parent/caregiver.</p> <p><u>Infant</u>: from birth up to infant's first birthday</p> <p><u>Nutrition assessment</u>: A dynamic process involving the in-depth review and analysis of a person's medical and diet history, laboratory values, and anthropometric measurements to verify nutritional risk or malnutrition and identify underlying causes so that appropriate nutrition intervention, tailored to the needs of the individual, can be planned and initiated.</p>
<p>7. Compares the <b>child's</b> nutrition intake/practices (eating patterns) to current recommendations when assessing health and nutritional status.</p>	<p>CPA compares data obtained from the client during the nutrition assessment to the recommendations and then counsels accordingly. CPA describes and explains the current recommendations published by American Academy of Pediatrics, American Dietetics Association, and others to the parent/caregiver.</p> <p><u>Children</u>: from the child's first birthday up to child's fifth birthday</p> <p><u>Nutrition assessment</u>: A dynamic process involving the in-depth review and analysis of a person's medical and diet history, laboratory values, and anthropometric measurements to verify nutritional risk or malnutrition and identify underlying causes so that appropriate nutrition intervention, tailored to the needs of the individual, can be planned and initiated.</p>
<p>8. Determines the safety implications of the <b>women's</b> dietary practices.</p>	<p>CPA assesses practices such as dietary supplements, pica, potentially contaminated foods, and food handling practices.</p> <p><u>Women</u>: Includes the following:</p> <ul style="list-style-type: none"> <li>-- <b>pregnant</b> (during pregnancy and up to 6 weeks after the birth of an infant or the end of the pregnancy)</li> <li>-- <b>postpartum</b> (up to six months after the birth of the infant or the end of the pregnancy, not breastfeeding)</li> <li>-- <b>breastfeeding</b> (after the birth of the infant and up to the infant's first birthday)</li> <li>-- <b>adolescent</b> (women, ages 14-19)</li> </ul>
<p>9. Determines the safety implications of parents'/caregivers' feeding practices</p>	<p>CPA assesses practices such as dietary supplements, food/formula handling practices, potentially contaminated foods,</p>

<p>impacting <b>infants</b>.</p>	<p>and food that is not developmentally appropriate because it may cause choking.</p> <p><u>Infant</u>: from birth up to infant's first birthday</p>
<p>10. Determines the safety implications of parents'/caregivers' feeding practices impacting <b>children</b>.</p>	<p>CPA informs client about safe and appropriate dietary practices for children. Dietary practices include: harmful food handling practices, contaminated food, and food that is not appropriate because it may cause choking.</p> <p><u>Children</u>: from the child's first birthday up to child's fifth birthday</p>
<p>11. Recognizes the nutrition implications of health history information based on client's lifecycle stage.</p>	<p>CPA gathers the appropriate health history based on the client's lifecycle stage and interprets the information. CPA knows which pieces of data are particularly relevant to each lifecycle stage and why the information is collected.</p>
<p>12. Collaborates with the prenatal client to identify the most appropriate <b>infant</b> feeding plan.</p>	<p>CPA uses open-ended questions to explore the mother's infant feeding plans and to identify potential myths or misinformation. CPA provides targeted education messages addressing myths or misinformation so that the client can make an informed infant feeding decision. CPA supports each client's decision and provides information and education for successful infant feeding.</p> <p><u>Infant</u>: from birth up to infant's first birthday</p>
<p>13. Applies knowledge of lactation management techniques.</p>	<p>CPA uses knowledge about the basic physiology of lactation (breast anatomy, the hormones involved in milk production and establishing milk supply, the potential impact of breast surgery and trauma, inverted nipples, feeding frequency in the early days, etc.) in the nutrition assessment of breastfeeding mothers and infants. CPA is able to describe the process of lactation and discuss key components in the lactation process.</p>
<p>14. Evaluates the impact of feeding interactions on <b>infant/child</b> growth and development.</p>	<p>CPA asks questions about the number of caregivers involved in feeding the infant/child and collects information about the feeding dynamics in the settings where the infant/child is fed (e.g., home, child care, etc.). CPA considers the impact of these feeding interactions on the infant/child's nutritional status.</p> <p><u>Infant</u>: from birth up to infant's first birthday</p> <p><u>Children</u>: from the child's first birthday up to child's fifth birthday</p>
<p>15. Identifies the mother's and/or <b>infant</b> strengths and challenges to successful breastfeeding.</p>	<p>CPA interviews thoroughly and gathers information about the breastfeeding goals and myths based on each situation. CPA uses this information to determine possible barriers to breastfeeding and educates on overcoming the breastfeeding barriers identified. CPA asks open-ended questions to find out how the client feels about breastfeeding, whether the client has heard about breastfeeding, or the client already knows about</p>

	<p>breastfeeding.</p> <p><u>Infant:</u> from birth up to infant's first birthday</p>
<p>16. Recognizes legitimate contraindications to breastfeeding based on current recommendations.</p>	<p>CPA identifies and explains to a client any potential response when breastfeeding would not be warranted or safe (e.g.; women is taking a medication that is not safe for the infant while breastfeeding). CPA recognizes maternal circumstances and behaviors and incorporates breastfeeding information from the client into plans for intervention.</p>
<p>17. Recognizes the critical nature of early postpartum assessment to successful breastfeeding.</p>	<p>CPA understands that successful breastfeeding is a confidence game and the women need support in the early days and weeks of breastfeeding in order to be successful. CPAs identify community-based sources of early breastfeeding support including WIC peer counseling programs and make referrals as needed. CPAs assess how breastfeeding is going at each client contact and provides information and support as needed.</p>
<p>18. Evaluates breastfeeding practices to identify effective support strategies for continued breastfeeding.</p>	<p>CPA understands the impact of early formula supplementation, mother/infant separation, and pacifier use on milk supply and applies the information during the nutrition assessment. CPA assesses the mother's breastfeeding plan and provides counseling related to her specific situation.</p>

## Completing Skills Surveys for WIC Nutrition Assessment Competencies

### Overview

**Introduction** The WIC Nutrition Assessment Competencies model can be used by CPAs to assess their level of competence on key nutrition assessment skills. This information can be used by CPAs, local agency WIC Coordinators and the state WIC program for staff development and training plans. The self-assessment surveys are housed in the Prepare Iowa Learning Management System (PILMS).

**First time users for this model** The process is outlined in the table below for two groups of CPAs:

- CPAs who do not have a PILMS account, and
- CPAs with an account but who have not assigned this competency model.

Step	Action
1	Create a PILMS account (skip this step if you already have an account related to other job responsibilities).
2	Change preferences for number of records per page.
3	Assign the competency model to your development plan.
4	Send the skills survey to your email account.
5	Complete the skills surveys.
6	Verify the surveys are complete.
7	Print a copy of the surveys (optional).

**Repeat users for this model** The process is outlined in the table below for CPAs who completed skills surveys for the nutrition assessment competency model in the past.

Step	Action
1	Edit your profile to complete new required data fields marked with an asterisk. The profile will automatically appear when you log in. Record responses in these fields related to your work location.
2	Send the skills survey to your email account.
3	Complete the skills surveys.
4	Verify the surveys are complete.
5	Print a copy of the surveys (optional).

*Continued on next page*

## Overview, Continued

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### More about PILMS

PILMS is an Internet-based learning management system for public health that serves as an important resource for workforce development. PILMS allows users to assess their level of competence on a variety of key professional or topical competencies (core public health, emergency preparedness, etc.), and provides access to competency-based training and courses to fulfill professional development needs.

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### Contacting the help desk

If you send an email to the PILMS administrator from the login screen, or attempt to retrieve your password using the Password Help feature, and do not receive a response within 24 hours, please contact one of the project staff members directly.

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### Project staff

Brenda Dobson, WIC Nutrition Services Coordinator [bdobson@idph.state.ia.us](mailto:bdobson@idph.state.ia.us)  
Tim Beachy- Learning Management System Coordinator [tim-beachy@uiowa.edu](mailto:tim-beachy@uiowa.edu)  
Jay Cooper [jay-cooper@uiowa.edu](mailto:jay-cooper@uiowa.edu)

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### In this document

This document provides information and instructions for completing the skills surveys for WIC nutrition assessment.

Topic	See Page
PILMS Navigation Tips	3
Creating a PILMS Account	4
Changing Preferences for Records Per Page	5
Assigning a Competency Model to Your Individual Development Plan (IDP)	6
Sending the Skills Survey to Your Email Account	7
Completing a Skills Survey in One Session	8
Completing a Skills Survey over Multiple Sessions	9
Verifying Your Skills Survey is Complete	11
Printing a Copy for Your Records (optional)	12

---

## PILMS Navigation Tips

---

### **Introduction**

This section provides key tips for successfully navigating in PILMS.

---

### **Log in screen help**

On the PILMS log in screen, you will find several resources to help you log in, create a new account and recover a lost password of login ID. These resources include video demonstrations, PDF documents, and Microsoft Word Documents.

---

### **Moving “back” within the PILMS system**

To move “back” to the previous screen within the PILMS system, DO NOT use the Back button in the browser (e.g., Internet Explorer, Mozilla Firefox). Use the orange “Return” button instead, provided within the system in places where applicable.

---

### **Searching within PILMS**

Always use your mouse to click on buttons. Avoid just hitting the enter key on your keyboard to click buttons as this can sometimes yield unexpected results.

---

### **More Information**

At each screen in PILMS, a small blue circle with a question mark () appears in the top right corner. Clicking this icon will open up another window and provide you with page-level help or useful information.

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# Creating a PILMS Account

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**Introduction** The first step is to create a PILMS account. If you already have an account, skip this step. *Please do not create multiple or duplicate accounts.*

---

**Procedure** The table below describes the steps for creating an account.

Step	Action
1	Go to <a href="http://www.prepareiowa.com">www.prepareiowa.com</a> .
2	Click on <b>Create New Account</b> underneath the announcements box in the middle of the page.
3	In the Create New Account window, enter a Login ID, password, your name, and email address. Enter your country (United States is the first option). Then enter your work city, work state, work postal code, and work county.  <u>Note:</u> Keep your login ID and password safe and accessible, and be sure to use an active email account that you have access to.
4	Select the appropriate language, region and time zone. Click <b>Next</b> .
5	To choose your organization, <ul style="list-style-type: none"><li>• Click + next to “Prepare Iowa LMS at <a href="http://www.prepareiowa.com">www.prepareiowa.com</a>”,</li><li>• Click + next to “Iowa WIC Agencies”,</li><li>• Select the box next to your local agency, and</li><li>• Click <b>Next</b>.</li></ul>
6	Click the <b>Search</b> button to get a list of all Job Titles available in your Organization
7	Select your job title from the resulting list, then click <b>Create</b> .

Note: You can edit your profile or account information at any time.

---

# Change Preferences for Records Per Page

---

**Introduction** This section describes how to set your preferences for 20 competency statements per page.

---

**Procedure** Follow the steps in the table below.

<b>Step</b>	<b>Action</b>
1	In the blue left hand column of the homepage, under <i>My Workspace</i> , click on <b>My Account</b> .
2	Click <b>Edit Profile</b> .
3	There are six buttons across the top of the Edit Contact Information Page. Click on the one labeled <b>Preferences</b> .
4	In the Edit Preferences screen, the last drop down menus sets the number of records (i.e., competency statements) that appear on a page when you're working online. Change this preference to 20.  If you request help online and do not get a reply from a person or the system within 24 hours, contact a project staff person for assistance.
5	Click <b>Save</b> .

---

# Assigning a Competency Model to Your Individual Development Plan (IDP)

---

## Introduction

This section describes how to add the Nutrition Assessment for WIC competency model to your individual development plan (IDP). This is the first step in making the skills survey available to you.

Note: If you completed skills surveys for this competency model in the past, you should not do this again and can skip this step.

---

## Procedure

Follow the steps in the table below.

Step	Action
1	On the homepage, go to the blue left hand column under <i>My Workspace</i> and select <b>My Competencies (Career)</b> .
2	Click on <b>Individual Development Plan</b> .
3	Choose <b>Current IDP</b> .
4	Select <b>Edit Local IDP</b> from the drop down box on the right hand side of the page (should be already selected), then click <b>Go</b> .
5	Select <b>Add Local Models/Competencies</b> from the drop down box on the right hand side of the page, then click <b>Go</b> .
6	Type “ <b>nawic</b> ” in the Search Text space
7	Choose the Item Type <b>Model</b> from the drop down box, then click <b>Search</b> .
8	Select the model, <b>Nutrition Assessment for WIC</b> , by clicking in the box to the left of the model name, then click <b>Add</b> .
9	When “The local model(s)/competency(ies) was added” appears in green text at the top of the page, select <b>Current IDP</b> again from the left hand column.
10	Nutrition Assessment for WIC and the competencies in that model should be listed in your Current IDP.

---

# Sending the Skills Survey to Your Email Account

---

## Introduction

This section describes how to send a link to the skills survey to your email account. This allows you to complete the survey without logging in to PILMS.

Note: You must complete this step every time you want to complete the skills surveys for a competency model.

---

## Procedure

Follow the steps in the table below.

Step	Action
1	On the homepage, go in the blue left hand column under <i>My Workspace</i> and select <b>My Competencies (Career)</b> .
2	Select <b>My Skills Survey</b> .
3	Select <b>Send Skills Surveys</b> .
4	In the box labeled Survey Recipients, <b>mark the checkbox in front of your name</b> .
5	In the box labeled Local IDP, mark the check box in front of the <b>Nutrition Assessment for WIC</b> model
6	Select all 6 of the domains under the model by marking the check box in front of each domain title (Anthropometric and Hematological Data Collection, Communication, Critical Thinking, Multi-Cultural Awareness, Nutrition Assessment Process, Principles of Life-Cycle Nutrition).
7	Scroll to the bottom of the page and click on <b>Send Survey</b> .
8	Select <b>Pending Skills Surveys</b> , located under <i>My Workspace</i> and <i>My Skills Surveys</i> in the left hand column of the page.
9	You should see one pending survey with the date you send it to yourself. The title of the survey is your job title; the date sent is the day you completed the steps listed above.

Note: This sends the entire model at one time in one survey (85 statements).

---

# Completing the Skills Survey in One Session

---

## Introduction

This section describes how to complete the survey in one session (one point in time).

---

## Opening a survey

Follow the steps in the table below.

Step	Action
1	On the homepage, in the blue left hand column under <i>My Workspace</i> , select <b>My Competencies (Career)</b> .
2	Select <b>My Skills Surveys</b> .
3	Select <b>Pending Skills Surveys</b> .
4	Click on the title of the survey (it is your job title) and the survey will open.

Note: You can also open the skills survey by following the link provided in the email you received from PILMS noting that a survey had been sent.

---

## Completing the survey

Follow the steps in the table below:

Step	Action
1	Read each statement, and consider your confidence level for each one. <b>Choose your confidence level (1-5)</b> in the drop down menu to the right of each statement under the heading <b>Skills Rating</b> .
2	Click <b>Submit</b> at the bottom of the first page. <u>Note:</u> Do not click page 2 before submitting!
3	The text, "The survey was submitted" will appear in green type at the top of the page. This means that the first page of the survey has been submitted.
4	Scroll back down to the bottom of the page and click on <b>2</b> in the bottom left hand corner (under the Submit button) to continue to page 2 of the survey.
5	Continue with steps 1-4 until you have completed the entire survey. Remember to submit each page before moving to the next one.
6	When you have clicked <b>Submit</b> for the final page of the survey, click the <b>Close Window</b> link at the top of the page or close the browser window.

---

# Completing the Skills Survey over Multiple Sessions

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**Introduction** This section describes how to complete a survey over several sessions (e.g., several different dates/times because you are unable to schedule time to complete the survey – assessment at one point in time).

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**Opening and completing a survey** Please see the directions on the previous page about opening and completing pages in the survey.

---

**Closing a partial survey** Once you have clicked Submit for a page (at the bottom of the screen) and you decide to stop working on the survey, click the Close Window link at the top of the page or simply close the browser window. Your skills survey will now be available in the Archived Skills Surveys section in your PILMS account.

All competency statements on one page must be answered before you hit “submit”. The system does not save answers if you have not completed all on the page.

Note: Consider blocking time in your schedule to complete the survey so that you don’t forget about it.

---

**Opening a partial survey** Follow the steps in the table below:

Step	Action
1	On the homepage, in the blue left hand column under <i>My Workspace</i> , select <b>My Competencies (Career)</b> .
2	Select <b>My Skills Surveys</b> .
3	Select <b>Archived Skills Surveys</b> . The partially completed survey will list your name as the Survey Recipient with the date you last entered any data listed as the Date Taken.
4	Click on your name to open the survey.

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*Continued on next page*

## Completing a Skills Survey over Multiple Sessions, Continued

### Completing the survey

Follow the directions in the table below.

Step	Action
1	Go to your Archived Skills Survey to access the survey that you started previously. Select the survey with the date that is the most recent.
2	The survey will open to the first page where you will see “This survey has already been completed and submitted” in green text at the top of page. This message may be confusing as the entire survey is most likely not completely finished.
3	Scroll down to the bottom of the page and click on 2 to go to the next page.  <u>Note:</u> If a page has already been completed, you will see “Below is the completed survey that was submitted” at the top of the page. However, the data appears to be editable. Do not change your answers! You do not need to click Submit for any pages you previously completed.
4	Continue clicking on the page numbers until you find the first page that you need to complete.
5	Read each statement and consider your confidence level for each one. <b>Choose your confidence level (1-5)</b> in the drop down menu to the right of each statement under the heading Skills Rating.
6	Click <b>Submit</b> at the bottom of each page before proceeding to the next page.
7	The text, “The survey was submitted” will appear in green type at the top of the page. This means that the page of the survey has been submitted.
8	Scroll down to the bottom of the page and click on the numeral in the bottom left hand corner (under the Submit button) to continue to the next page of the survey.
9	Continue with steps 4-8 until you have completed as much of the survey as you have time for during this session.
19	Once you have clicked Submit for the page where you plan to stop, click the <b>Close Window</b> link at the top of the page or close the browser window (e.g., Internet Explorer, Mozilla Firefox).

# Verifying Your Skills Survey is Complete

---

**Introduction** This section describes how you can check that your survey is complete (all 85 statements have a response from you).

---

**Procedure** Follow the steps in the table below to open and review the survey.

Step	Action
1	On the homepage, in the blue left hand column under <i>My Workspace</i> , select <b>My Competencies (Career)</b> .
2	Select <b>My Skills Surveys</b> .
3	Select <b>Archived Skills Surveys</b> . At the top of the list, you will see your name. Underneath your name there is a column labeled Job Title. Below your job title you will Survey Recipient and your name will be listed there as a blue hyperlink. In this same row, the most recent date you entered data (your responses) will be listed under Date Taken.
4	Click on your name hyperlink and a new window will open. This new window will be your archived skills survey for the date you selected. You will notice that the drop down menu for ratings on the first page is disabled (you cannot change your ratings).
5	Scroll down the first page to verify that all statements are rated.
6	Click on <b>2</b> in the bottom left corner to move to the next page. You will notice that the drop down menu for ratings appears to be enabled on page 2.  <u>Note:</u> Do not change your ratings!
7	Verify that all statements are rated on this page, then move to the next page by clicking on 3.  <u>Note:</u> If all statements are rated, do <u>not</u> click Submit or Cancel at the bottom of the page.
8	Continue to verify completed ratings for each statement for the remaining pages of the survey.  <u>Note:</u> If you notice any gaps or missing information in your list, please choose your Confidence level rating for that item and click the <b>Submit</b> button at the bottom of that page.
9	When finished, click the <b>Close Window</b> link at the top of the page or close the browser window (e.g., Internet Explorer, Mozilla Firefox).

---

# Printing a Copy for Your Records (optional)

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## Introduction

This section describes how to print a copy for your records. You can print the entire survey or only selected pages.

---

## Printing a survey

Follow the steps in the table below.

Step	Action
1	Open the completed skills survey from the homepage by going to these areas of the learning management system: <ul style="list-style-type: none"><li>• <i>My Workspace</i></li><li>• <b>My Competencies (Career)</b></li><li>• <b>My Skills Surveys</b></li><li>• <b>Archived Surveys</b></li><li>• Click on your name (which appears as a hyperlink) to open the desired survey</li></ul>
2	Click <b>Print</b> at the top of the page to print the first page.
3	Click on the <b>2</b> in the bottom left corner to move to the next page.
4	Click <b>Print</b> at the top of the page to print the second page.
5	Continue to next pages to print them.
6	When finished, click the <b>Close Window</b> link at the top of the page or close the browser window.

Note: Printing the entire survey with preferences for records set at 20 will generate a 26-page document.

---

**Appendix F. Phase 1 CPA Self-Assessments: Aggregate Results Sorted by Domain**

<b>Domain</b>	<b>Competency Statement</b>	<b>Phase 1 Skills Gap</b>
<b>Anthro &amp; Blood</b>	NAWIC-1-001<h2>Maintains anthropometric equipment according to State agency policy.</h2>	0.68
	NAWIC-1-002<h2>Completes anthropometric measurements accurately for women clients according to State agency policy.</H2>	0.63
	NAWIC-1-003<h2>Completes anthropometric measurements accurately for infants according to State agency policy. </h2>	0.66
	NAWIC-1-004<h2>Complete anthropometric measurements accurately for children according to State agency policy.</h2>	0.64
	NAWIC-1-005<h2>Uses the appropriate growth chart for infants and children based on age, gender, and linear measurement.</h2>	0.50
	NAWIC-1-006<h2>Reads, records, and plots anthropometric measurements accurately for women, infants, and children according to State agency policy.</h2>	0.54
	NAWIC-1-007<h2>Interprets growth patterns appropriately for infants.</h2>	0.55
	NAWIC-1-008<h2>Interprets growth patterns appropriately for children.</h2>	0.58
	NAWIC-1-009<h2>Calculates Body Mass Index (BMI) accurately for women and children.</h2>	0.60
	NAWIC-1-010<h2>Interprets weight gain or loss accurately for all women.</h2>	0.69
	NAWIC-1-011<h2>Incorporates anthropometric data in assessing health and nutritional status.</h2>	0.67
	NAWIC-1-012<h2>Maintains hematological equipment appropriately according to State agency policy.</h2>	1.23
	NAWIC-1-013<h2>Completes hemoglobin and hematocrit assessments according to State agency policy. </h2>	1.20
	NAWIC-1-014<h2>Evaluates hematological results according to State agency policies for unusual and inconsistent measures.</h2>	0.65
	NAWIC-1-015<h2>Incorporates hematological data in assessing health and nutritional status.</h2>	0.57
<b>Communication</b>	NAWIC-2-001<h2> Interacts with each client in a respectful and sensitive manner.</H2>	0.32
	NAWIC-2-002<h2>Uses verbal and non-verbal communication techniques to create an environment that engages clients in conversation.</h2>	0.50
	NAWIC-2-003<h2>Selects appropriate communication techniques based on assessment of client's verbal and nonverbal cues.</h2>	0.78
	NAWIC-2-004<h2>Uses communication resources to address language barriers and special needs of clients.</h2>	0.88
	NAWIC-2-005<h2>Demonstrates active listening skills.</h2>	0.65
	NAWIC-2-006<h2>Uses paraphrasing and/or reflecting skills to confirm understanding of client's statements.</h2>	0.91
	NAWIC-2-007<h2>Utilizes open- and closed-ended questions to elicit and clarify information.</h2>	0.76
	NAWIC-2-008<h2>Demonstrates professional discretion when client's concerns indicate the need to deviate from the standard nutrition assessment process.</h2>	0.69
	NAWIC-2-009<h2>Uses communication techniques to defuse a situation and to work with angry or resistant clients. </h2>	0.92
	NAWIC-2-010<h2>Adheres to State agency policies concerning client confidentiality.</h2>	0.34
NAWIC-2-011<h2>Completes nutrition assessment tasks before providing nutrition counseling.</h2>	0.96	
<b>Critical Thinking</b>	NAWIC-3-001<h2>Considers the client's ability to obtain, process, and understand basic health information and services needed to make health decisions.</h2>	0.74
	NAWIC-3-002<h2>Recognizes own personal world view and separates it from the assessment.</h2>	0.65

**Appendix F. Phase 1 CPA Self-Assessments: Aggregate Results Sorted by Domain**

<b>Domain</b>	<b>Competency Statement</b>	<b>Phase 1 Skills Gap</b>
	NAWIC-3-003<h2>Recognizes health and dietary factors that contribute to nutrition risk factors.</h2>	0.92
	NAWIC-3-004<h2>Recognizes inconsistent, inaccurate, or unusual information and referral data.</h2>	0.66
	NAWIC-3-005<h2>Verifies inconsistent and unusual measurements according to State agency policy.</h2>	0.55
	NAWIC-3-006<h2>Verifies inconsistent referral data according to State agency policy.</h2>	0.86
	NAWIC-3-007<h2>Identifies interrelationships between client's current behaviors and nutrition risk factors.</h2>	0.85
	NAWIC-3-008<h2> Incorporates the client's point of view about nutrition and health priorities, needs and concerns into the nutrition assessment.</h2>	0.96
	NAWIC-3-009<h2>Incorporates information from current and previous assessments into decisions about health and nutritional status. </h2>	0.96
	NAWIC-3-010<h2>Evaluates previously obtained nutrition assessment information and documentation of previous intervention strategies to determine the effectiveness of services.</h2>	1.02
	NAWIC-3-011<h2>Draws conclusions about health and nutritional status supported by perspectives and strengths of client and data, observations, and reasoning.</h2>	0.99
	NAWIC-3-012<h2>Applies creative problem solving and flexible thinking in partnership with the client to identify solutions for nutrition issues.</h2>	1.26
	NAWIC-3-013<h2>Prioritizes the client's nutrition risks and concerns to be addressed. </h2>	0.87
	NAWIC-3-014<h2>Analyzes all information (including: anthropometric, biochemical, clinical, dietary, family and social environment) to determine the course of action.</h2>	0.89
<b>Multicultural</b>	NAWIC-4-001<h2>Recognizes target population based upon race, ethnicity, culture, socioeconomic, education and professional backgrounds, age, religious affiliation, mental and physical abilities, and sexual orientation. </h2>	0.88
	NAWIC-4-002<h2>Respects the beliefs and health practices of clients when conducting a nutrition assessment. </h2>	0.59
	NAWIC-4-003<h2>Recognizes how a client's cultural communication style may affect the nutrition assessment. </h2>	1.03
	NAWIC-4-004<h2>Uses culturally appropriate communication styles to collect nutrition assessment information.</h2>	1.20
	NAWIC-4-005<h2>Describes the values and belief systems of cultural groups in the target population.</h2>	1.33
	NAWIC-4-006<h2>Uses a variety of strategies to learn more about a client's cultural eating patterns and traditions.</h2>	1.56
	NAWIC-4-007<h2>Assesses cultural practices for potential harm to client's health or nutritional status.</h2>	1.28
	NAWIC-4-008<h2>Evaluates food preparation practices within a cultural context.</h2>	1.55
	NAWIC-4-009<h2>Uses culturally appropriate strategies to assess pregnant women's eating practices and beliefs.</h2>	1.36
	NAWIC-4-010<h2>Uses culturally appropriate strategies to assess infant feeding practices and beliefs.</h2>	1.33
	NAWIC-4-011<h2>Uses culturally appropriate strategies to assess child's feeding/eating practices and beliefs.</h2>	1.24
	NAWIC-4-012<h2>Identifies culturally appropriate referral resources that may be used by the client.</h2>	1.46
<b>Nutr Assmt Proces</b>	NAWIC-5-001<h2>Describes the purpose of nutrition assessment in the WIC program. </h2>	0.81
	NAWIC-5-002<h2> Uses a systematic approach to complete nutrition assessments.</h2>	0.75

**Appendix F. Phase 1 CPA Self-Assessments: Aggregate Results Sorted by Domain**

<b>Domain</b>	<b>Competency Statement</b>	<b>Phase 1 Skills Gap</b>
	NAWIC-5-003<h2>Completes nutrition assessment using a client centered approach.</h2>	1.00
	NAWIC-5-004<h2>Describes the importance of documenting the nutrition assessment results to provide continuity in WIC services.</h2>	0.84
	NAWIC-5-005<h2>Obtains relevant assessment information (including: anthropometric, biochemical, clinical, dietary, family and social environment) according to State agency policy.</h2>	0.65
	NAWIC-5-006<h2>Obtains medical documentation for health assessment information according to State agency policy.</h2>	0.87
	NAWIC-5-007<h2>Applies WIC nutrition criteria definitions correctly when assigning nutrition risks.</h2>	0.79
	NAWIC-5-008<h2>Applies current nutrition recommendations, such as Dietary Guidelines for Americans, when completing the nutrition assessment.</h2>	1.08
	NAWIC-5-009<h2>Documents WIC nutrition risk criteria for each client according to State agency policy.</h2>	0.71
	NAWIC-5-010<h2>Incorporates referral data into the nutrition assessment process.</h2>	1.00
	NAWIC-5-011<h2>Documents nutrition assessment results in care plans according to State agency policy.</h2>	0.90
	NAWIC-5-012<h2>Communicates nutrition assessment results to each client/caregiver.</h2>	1.03
	NAWIC-5-013<h2>Develops a plan for referrals based on analysis of nutrition assessment information.</h2>	1.19
	NAWIC-5-014<h2>Applies nutrition assessment information when determining food packages. </h2>	0.89
	NAWIC-5-015<h2>Develops a plan for nutrition education based on analysis of nutrition assessment information.</h2>	0.92
<b>Lifecycle Nutr</b>	NAWIC-6-001<h2>Applies knowledge about current nutrition requirements for women when assessing health and nutritional status.</h2>	0.97
	NAWIC-6-002<h2>Applies knowledge about current nutrition requirements for infants when assessing health and nutritional status.</h2>	0.99
	NAWIC-6-003<h2>Applies knowledge about current nutrition requirements for children when assessing health and nutritional status.</h2>	0.94
	NAWIC-6-004<h2>Applies knowledge of infant/child developmental milestones when assessing feeding.</h2>	0.76
	NAWIC-6-005<h2>Compares the nutrition practices of women to current recommendations when assessing health and nutritional status.</h2>	1.11
	NAWIC-6-006<h2>Compares the infant's nutrition intake/practices (eating patterns) to current recommendations when assessing health and nutritional status. </h2>	0.97
	NAWIC-6-007<h2>Compares the child's nutrition intake/practices (eating patterns) to current recommendations when assessing health and nutritional status. </h2>	0.96
	NAWIC-6-008<h2>Determines the safety implications of the women's dietary practices.</h2>	0.96
	NAWIC-6-009<h2>Determines the safety implications of parents'/caregivers' feeding practices impacting infants.</h2>	0.75
	NAWIC-6-010<h2>Determines the safety implications of parents'/caregivers' feeding practices impacting children.</h2>	0.71
	NAWIC-6-011<h2> Recognizes the nutrition implications of health history information based on client's lifecycle stage.</h2>	0.86
	NAWIC-6-012<h2> Collaborates with the prenatal client to identify the most appropriate infant feeding plan.</h2>	0.96
	NAWIC-6-013<h2>Applies knowledge of lactation management techniques.</h2>	1.22
	NAWIC-6-014<h2> Evaluates the impact of feeding interactions on infant/child growth and development.</h2>	1.02

**Appendix F. Phase 1 CPA Self-Assessments: Aggregate Results Sorted by Domain**

<b>Domain</b>	<b>Competency Statement</b> <span style="float: right;">☐</span>	<b>Phase 1 Skills Gap</b>
	NAWIC-6-015<h2> Identifies the mother's and/or infant strengths and challenges to successful breastfeeding.</h2>	1.08
	NAWIC-6-016<h2> Recognizes legitimate contraindications to breastfeeding based on current recommendations.</h2>	1.11
	NAWIC-6-017<h2> Recognizes the critical nature of early postpartum assessment to successful breastfeeding.</h2>	0.80
	NAWIC-6-018<h2> Evaluates breastfeeding practices to identify effective support strategies for continued breastfeeding.</h2>	0.95

**Appendix G. Phases 1 and 2 CPA Self-Assessments: Aggregate Results Sorted by Domain**

<b>Domain</b>	<b>Competency Statement</b>	<b>Phase 1 Skills Gap</b>	<b>Phase 2 Skills Gap</b>
<b>Anthro &amp; Blood</b>	NAWIC-1-001<h2>Maintains anthropometric equipment according to State agency policy.</h2>	0.68	0.6
	NAWIC-1-002<h2>Completes anthropometric measurements accurately for women clients according to State agency policy.</H2>	0.63	0.38
	NAWIC-1-003<h2>Completes anthropometric measurements accurately for infants according to State agency policy. </h2>	0.66	0.5
	NAWIC-1-004<h2>Complete anthropometric measurements accurately for children according to State agency policy.</h2>	0.64	0.44
	NAWIC-1-005<h2>Uses the appropriate growth chart for infants and children based on age, gender, and linear measurement.</h2>	0.50	0.36
	NAWIC-1-006<h2>Reads, records, and plots anthropometric measurements accurately for women, infants, and children according to State agency policy.</h2>	0.54	0.34
	NAWIC-1-007<h2>Interprets growth patterns appropriately for infants.</h2>	0.55	0.28
	NAWIC-1-008<h2>Interprets growth patterns appropriately for children.</h2>	0.58	0.33
	NAWIC-1-009<h2>Calculates Body Mass Index (BMI) accurately for women and children.</h2>	0.60	0.5
	NAWIC-1-010<h2>Interprets weight gain or loss accurately for all women.</h2>	0.69	0.41
	NAWIC-1-011<h2>Incorporates anthropometric data in assessing health and nutritional status.</h2>	0.67	0.39
	NAWIC-1-012<h2>Maintains hematological equipment appropriately according to State agency policy.</h2>	1.23	1
	NAWIC-1-013<h2>Completes hemoglobin and hematocrit assessments according to State agency policy. </h2>	1.20	0.96
	NAWIC-1-014<h2>Evaluates hematological results according to State agency policies for unusual and inconsistent measures.</h2>	0.65	0.43
	NAWIC-1-015<h2>Incorporates hematological data in assessing health and nutritional status.</h2>	0.57	0.39
<b>Communication</b>	NAWIC-2-001<h2> Interacts with each client in a respectful and sensitive manner.</H2>	0.32	0.14
	NAWIC-2-002<h2>Uses verbal and non-verbal communication techniques to create an environment that engages clients in conversation.</h2>	0.50	0.32
	NAWIC-2-003<h2>Selects appropriate communication techniques based on assessment of client's verbal and nonverbal cues.</h2>	0.78	0.54
	NAWIC-2-004<h2>Uses communication resources to address language barriers and special needs of clients.</h2>	0.88	0.71
	NAWIC-2-005<h2>Demonstrates active listening skills.</h2>	0.65	0.4
	NAWIC-2-006<h2>Uses paraphrasing and/or reflecting skills to confirm understanding of client's statements.</h2>	0.91	0.68
	NAWIC-2-007<h2>Utilizes open- and closed-ended questions to elicit and clarify information.</h2>	0.76	0.65
	NAWIC-2-008<h2>Demonstrates professional discretion when client's concerns indicate the need to deviate from the standard nutrition assessment process.</h2>	0.69	0.52
	NAWIC-2-009<h2>Uses communication techniques to defuse a situation and to work with angry or resistant clients. </h2>	0.92	0.73
	NAWIC-2-010<h2>Adheres to State agency policies concerning client confidentiality.</h2>	0.34	0.27
	NAWIC-2-011<h2>Completes nutrition assessment tasks before providing nutrition counseling.</h2>	0.96	0.68

**Appendix G. Phases 1 and 2 CPA Self-Assessments: Aggregate Results Sorted by Domain**

<b>Domain</b>	<b>Competency Statement</b>	<b>Phase 1 Skills Gap</b>	<b>Phase 2 Skills Gap</b>
<b>Critical Thinking</b>	NAWIC-3-001<h2>Considers the client's ability to obtain, process, and understand basic health information and services needed to make health decisions. </h2>	0.74	0.5
	NAWIC-3-002<h2>Recognizes own personal world view and separates it from the assessment. </h2>	0.65	0.45
	NAWIC-3-003<h2>Recognizes health and dietary factors that contribute to nutrition risk factors. </h2>	0.92	0.53
	NAWIC-3-004<h2>Recognizes inconsistent, inaccurate, or unusual information and referral data. </h2>	0.66	0.41
	NAWIC-3-005<h2>Verifies inconsistent and unusual measurements according to State agency policy. </h2>	0.55	0.41
	NAWIC-3-006<h2>Verifies inconsistent referral data according to State agency policy. </h2>	0.86	0.67
	NAWIC-3-007<h2>Identifies interrelationships between client's current behaviors and nutrition risk factors. </h2>	0.85	0.53
	NAWIC-3-008<h2> Incorporates the client's point of view about nutrition and health priorities, needs and concerns into the nutrition assessment. </h2>	0.96	0.67
	NAWIC-3-009<h2> Incorporates information from current and previous assessments into decisions about health and nutritional status. </h2>	0.96	0.61
	NAWIC-3-010<h2>Evaluates previously obtained nutrition assessment information and documentation of previous intervention strategies to determine the effectiveness of services. </h2>	1.02	0.66
	NAWIC-3-011<h2>Draws conclusions about health and nutritional status supported by perspectives and strengths of client and data, observations, and reasoning. </h2>	0.99	0.6
	NAWIC-3-012<h2>Applies creative problem solving and flexible thinking in partnership with the client to identify solutions for nutrition issues. </h2>	1.26	0.81
	NAWIC-3-013<h2>Prioritizes the client's nutrition risks and concerns to be addressed. </h2>	0.87	0.49
	NAWIC-3-014<h2>Analyzes all information (including: anthropometric, biochemical, clinical, dietary, family and social environment) to determine the course of action. </h2>	0.89	0.61
<b>Multicultural</b>	NAWIC-4-001<h2>Recognizes target population based upon race, ethnicity, culture, socioeconomic, education and professional backgrounds, age, religious affiliation, mental and physical abilities, and sexual orientation. </h2>	0.88	0.75
	NAWIC-4-002<h2>Respects the beliefs and health practices of clients when conducting a nutrition assessment. </h2>	0.59	0.47
	NAWIC-4-003<h2>Recognizes how a client's cultural communication style may affect the nutrition assessment. </h2>	1.03	0.83
	NAWIC-4-004<h2>Uses culturally appropriate communication styles to collect nutrition assessment information. </h2>	1.20	1
	NAWIC-4-005<h2>Describes the values and belief systems of cultural groups in the target population. </h2>	1.33	1.19
	NAWIC-4-006<h2>Uses a variety of strategies to learn more about a client's cultural eating patterns and traditions. </h2>	1.56	1.4
	NAWIC-4-007<h2>Assesses cultural practices for potential harm to client's health or nutritional status. </h2>	1.28	1.05
	NAWIC-4-008<h2>Evaluates food preparation practices within a cultural context. </h2>	1.55	1.49
	NAWIC-4-009<h2>Uses culturally appropriate strategies to assess pregnant women's eating practices and beliefs. </h2>	1.36	1.26
	NAWIC-4-010<h2>Uses culturally appropriate strategies to assess infant feeding practices and beliefs. </h2>	1.33	1.12

**Appendix G. Phases 1 and 2 CPA Self-Assessments: Aggregate Results Sorted by Domain**

<b>Domain</b>	<b>Competency Statement</b>	<b>Phase 1 Skills Gap</b>	<b>Phase 2 Skills Gap</b>
	NAWIC-4-011<h2>Uses culturally appropriate strategies to assess child's feeding/eating practices and beliefs.</h2>	1.24	1.27
	NAWIC-4-012<h2>Identifies culturally appropriate referral resources that may be used by the client.</h2>	1.46	1.36
<b>Nutr Assmt Proces</b>	NAWIC-5-001<h2>Describes the purpose of nutrition assessment in the WIC program. </h2>	0.81	0.53
	NAWIC-5-002<h2> Uses a systematic approach to complete nutrition assessments. </h2>	0.75	0.53
	NAWIC-5-003<h2>Completes nutrition assessment using a client centered approach.</h2>	1.00	0.74
	NAWIC-5-004<h2>Describes the importance of documenting the nutrition assessment results to provide continuity in WIC services.</h2>	0.84	0.57
	NAWIC-5-005<h2>Obtains relevant assessment information (including: anthropometric, biochemical, clinical, dietary, family and social environment) according to State agency policy.</h2>	0.65	0.31
	NAWIC-5-006<h2>Obtains medical documentation for health assessment information according to State agency policy.</h2>	0.87	0.6
	NAWIC-5-007<h2>Applies WIC nutrition criteria definitions correctly when assigning nutrition risks.</h2>	0.79	0.69
	NAWIC-5-008<h2>Applies current nutrition recommendations, such as Dietary Guidelines for Americans, when completing the nutrition assessment.</h2>	1.08	0.73
	NAWIC-5-009<h2>Documents WIC nutrition risk criteria for each client according to State agency policy.</h2>	0.71	0.48
	NAWIC-5-010<h2>Incorporates referral data into the nutrition assessment process.</h2>	1.00	0.63
	NAWIC-5-011<h2>Documents nutrition assessment results in care plans according to State agency policy.</h2>	0.90	0.56
	NAWIC-5-012<h2>Communicates nutrition assessment results to each client/caregiver.</h2>	1.03	0.63
	NAWIC-5-013<h2>Develops a plan for referrals based on analysis of nutrition assessment information.</h2>	1.19	0.71
	NAWIC-5-014<h2>Applies nutrition assessment information when determining food packages. </h2>	0.89	0.77
	NAWIC-5-015<h2>Develops a plan for nutrition education based on analysis of nutrition assessment information.</h2>	0.92	0.67
<b>Lifecycle Nutr</b>	NAWIC-6-001<h2>Applies knowledge about current nutrition requirements for women when assessing health and nutritional status.</h2>	0.97	0.78
	NAWIC-6-002<h2>Applies knowledge about current nutrition requirements for infants when assessing health and nutritional status.</h2>	0.99	0.67
	NAWIC-6-003<h2>Applies knowledge about current nutrition requirements for children when assessing health and nutritional status.</h2>	0.94	0.64
	NAWIC-6-004<h2>Applies knowledge of infant/child developmental milestones when assessing feeding.</h2>	0.76	0.59
	NAWIC-6-005<h2>Compares the nutrition practices of women to current recommendations when assessing health and nutritional status.</h2>	1.11	0.71
	NAWIC-6-006<h2>Compares the infant's nutrition intake/practices (eating patterns) to current recommendations when assessing health and nutritional status. </h2>	0.97	0.62
	NAWIC-6-007<h2>Compares the child's nutrition intake/practices (eating patterns) to current recommendations when assessing health and nutritional status. </h2>	0.96	0.63

## Appendix G. Phases 1 and 2 CPA Self-Assessments: Aggregate Results Sorted by Domain

Domain	Competency Statement	Phase 1 Skills Gap	Phase 2 Skills Gap
	NAWIC-6-008<h2>Determines the safety implications of the women's dietary practices.</h2>	0.96	0.62
	NAWIC-6-009<h2>Determines the safety implications of parents'/caregivers' feeding practices impacting infants.</h2>	0.75	0.42
	NAWIC-6-010<h2>Determines the safety implications of parents'/caregivers' feeding practices impacting children.</h2>	0.71	0.44
	NAWIC-6-011<h2> Recognizes the nutrition implications of health history information based on client's lifecycle stage.</h2>	0.86	0.65
	NAWIC-6-012<h2> Collaborates with the prenatal client to identify the most appropriate infant feeding plan.</h2>	0.96	0.67
	NAWIC-6-013<h2>Applies knowledge of lactation management techniques.</h2>	1.22	0.86
	NAWIC-6-014<h2> Evaluates the impact of feeding interactions on infant/child growth and development.</h2>	1.02	0.72
	NAWIC-6-015<h2> Identifies the mother's and/or infant strengths and challenges to successful breastfeeding.</h2>	1.08	0.86
	NAWIC-6-016<h2> Recognizes legitimate contraindications to breastfeeding based on current recommendations.</h2>	1.11	0.79
	NAWIC-6-017<h2> Recognizes the critical nature of early postpartum assessment to successful breastfeeding.</h2>	0.80	0.66
	NAWIC-6-018<h2> Evaluates breastfeeding practices to identify effective support strategies for continued breastfeeding.</h2>	0.95	0.71

**Appendix H. All Three Phases CPA Self-Assessments: Aggregate Results Sorted by Domain**

<b>Domain</b>	<b>Competency Statement</b>	<b>Phase 1 Skills Gap</b>	<b>Phase 2 Skills Gap</b>	<b>Phase 3 Skills Gap</b>
<b>Anthro &amp; Blood</b>	NAWIC-1-001<h2>Maintains anthropometric equipment according to State agency policy.</h2>	0.68	0.6	0.65
	NAWIC-1-002<h2>Completes anthropometric measurements accurately for women clients according to State agency policy.</h2>	0.63	0.38	0.51
	NAWIC-1-003<h2>Completes anthropometric measurements accurately for infants according to State agency policy. </h2>	0.66	0.5	0.62
	NAWIC-1-004<h2>Complete anthropometric measurements accurately for children according to State agency policy.</h2>	0.64	0.44	0.58
	NAWIC-1-005<h2>Uses the appropriate growth chart for infants and children based on age, gender, and linear measurement.</h2>	0.50	0.36	0.32
	NAWIC-1-006<h2>Reads, records, and plots anthropometric measurements accurately for women, infants, and children according to State agency policy.</h2>	0.54	0.34	0.35
	NAWIC-1-007<h2>Interprets growth patterns appropriately for infants.</h2>	0.55	0.28	0.35
	NAWIC-1-008<h2>Interprets growth patterns appropriately for children.</h2>	0.58	0.33	0.31
	NAWIC-1-009<h2>Calculates Body Mass Index (BMI) accurately for women and children.</h2>	0.60	0.5	0.50
	NAWIC-1-010<h2>Interprets weight gain or loss accurately for all women.</h2>	0.69	0.41	0.45
	NAWIC-1-011<h2>Incorporates anthropometric data in assessing health and nutritional status.</h2>	0.67	0.39	0.48
	NAWIC-1-012<h2>Maintains hematological equipment appropriately according to State agency policy.</h2>	1.23	1	1.03
	NAWIC-1-013<h2>Completes hemoglobin and hematocrit assessments according to State agency policy. </h2>	1.20	0.96	0.90
	NAWIC-1-014<h2>Evaluates hematological results according to State agency policies for unusual and inconsistent measures.</h2>	0.65	0.43	0.48
	NAWIC-1-015<h2>Incorporates hematological data in assessing health and nutritional status.</h2>	0.57	0.39	0.42
<b>Communication</b>	NAWIC-2-001<h2> Interacts with each client in a respectful and sensitive manner.</H2>	0.32	0.14	0.22
	NAWIC-2-002<h2>Uses verbal and non-verbal communication techniques to create an environment that engages clients in conversation.</h2>	0.50	0.32	0.42
	NAWIC-2-003<h2>Selects appropriate communication techniques based on assessment of client's verbal and nonverbal cues.</h2>	0.78	0.54	0.71
	NAWIC-2-004<h2>Uses communication resources to address language barriers and special needs of clients.</h2>	0.88	0.71	0.81
	NAWIC-2-005<h2>Demonstrates active listening skills.</h2>	0.65	0.4	0.59
	NAWIC-2-006<h2>Uses paraphrasing and/or reflecting skills to confirm understanding of client's statements.</h2>	0.91	0.68	0.86
	NAWIC-2-007<h2>Utilizes open- and closed-ended questions to elicit and clarify information.</h2>	0.76	0.65	0.68
	NAWIC-2-008<h2>Demonstrates professional discretion when client's concerns indicate the need to deviate from the standard nutrition assessment process.</h2>	0.69	0.52	0.64
	NAWIC-2-009<h2>Uses communication techniques to defuse a situation and to work with angry or resistant clients. </h2>	0.92	0.73	0.86

**Appendix H. All Three Phases CPA Self-Assessments: Aggregate Results Sorted by Domain**

<b>Domain</b>	<b>Competency Statement</b>	<b>Phase 1 Skills Gap</b>	<b>Phase 2 Skills Gap</b>	<b>Phase 3 Skills Gap</b>
	NAWIC-2-010<h2>Adheres to State agency policies concerning client confidentiality.</h2>	0.34	0.27	0.29
	NAWIC-2-011<h2>Completes nutrition assessment tasks before providing nutrition counseling.</h2>	0.96	0.68	0.80
<b>Critical Thinking</b>	NAWIC-3-001<h2>Considers the client's ability to obtain, process, and understand basic health information and services needed to make health decisions.</h2>	0.74	0.5	0.72
	NAWIC-3-002<h2>Recognizes own personal world view and separates it from the assessment.</h2>	0.65	0.45	0.49
	NAWIC-3-003<h2>Recognizes health and dietary factors that contribute to nutrition risk factors.</h2>	0.92	0.53	0.60
	NAWIC-3-004<h2>Recognizes inconsistent, inaccurate, or unusual information and referral data.</h2>	0.66	0.41	0.59
	NAWIC-3-005<h2>Verifies inconsistent and unusual measurements according to State agency policy.</h2>	0.55	0.41	0.57
	NAWIC-3-006<h2>Verifies inconsistent referral data according to State agency policy.</h2>	0.86	0.67	0.77
	NAWIC-3-007<h2>Identifies interrelationships between client's current behaviors and nutrition risk factors.</h2>	0.85	0.53	0.66
	NAWIC-3-008<h2> Incorporates the client's point of view about nutrition and health priorities, needs and concerns into the nutrition assessment.</h2>	0.96	0.67	0.78
	NAWIC-3-009<h2>Incorporates information from current and previous assessments into decisions about health and nutritional status. </h2>	0.96	0.61	0.77
	NAWIC-3-010<h2>Evaluates previously obtained nutrition assessment information and documentation of previous intervention strategies to determine the effectiveness of services.</h2>	1.02	0.66	0.85
	NAWIC-3-011<h2>Draws conclusions about health and nutritional status supported by perspectives and strengths of client and data, observations, and reasoning.</h2>	0.99	0.6	0.83
	NAWIC-3-012<h2>Applies creative problem solving and flexible thinking in partnership with the client to identify solutions for nutrition issues.</h2>	1.26	0.81	1.09
	NAWIC-3-013<h2>Prioritizes the client's nutrition risks and concerns to be addressed. </h2>	0.87	0.49	0.63
	NAWIC-3-014<h2>Analyzes all information (including: anthropometric, biochemical, clinical, dietary, family and social environment) to determine the course of action.</h2>	0.89	0.61	0.71
<b>Multicultural</b>	NAWIC-4-001<h2>Recognizes target population based upon race, ethnicity, culture, socioeconomic, education and professional backgrounds, age, religious affiliation, mental and physical abilities, and sexual orientation. </h2>	0.88	0.75	0.98
	NAWIC-4-002<h2>Respects the beliefs and health practices of clients when conducting a nutrition assessment. </h2>	0.59	0.47	0.62
	NAWIC-4-003<h2>Recognizes how a client's cultural communication style may affect the nutrition assessment.</h2>	1.03	0.83	0.98
	NAWIC-4-004<h2>Uses culturally appropriate communication styles to collect nutrition assessment information.</h2>	1.20	1	1.08
	NAWIC-4-005<h2>Describes the values and belief systems of cultural groups in the target population.</h2>	1.33	1.19	1.28

**Appendix H. All Three Phases CPA Self-Assessments: Aggregate Results Sorted by Domain**

<b>Domain</b>	<b>Competency Statement</b>	<b>Phase 1 Skills Gap</b>	<b>Phase 2 Skills Gap</b>	<b>Phase 3 Skills Gap</b>
	NAWIC-4-006<h2>Uses a variety of strategies to learn more about a client's cultural eating patterns and traditions.</h2>	1.56	1.4	1.40
	NAWIC-4-007<h2>Assesses cultural practices for potential harm to client's health or nutritional status.</h2>	1.28	1.05	1.26
	NAWIC-4-008<h2>Evaluates food preparation practices within a cultural context. </h2>	1.55	1.49	1.51
	NAWIC-4-009<h2>Uses culturally appropriate strategies to assess pregnant women's eating practices and beliefs.</h2>	1.36	1.26	1.38
	NAWIC-4-010<h2>Uses culturally appropriate strategies to assess infant feeding practices and beliefs.</h2>	1.33	1.12	1.25
	NAWIC-4-011<h2>Uses culturally appropriate strategies to assess child's feeding/eating practices and beliefs.</h2>	1.24	1.27	1.22
	NAWIC-4-012<h2>Identifies culturally appropriate referral resources that may be used by the client.</h2>	1.46	1.36	1.34
<b>Nutr Assmt Proce</b>	NAWIC-5-001<h2>Describes the purpose of nutrition assessment in the WIC program. </h2>	0.81	0.53	0.58
	NAWIC-5-002<h2> Uses a systematic approach to complete nutrition assessments. </h2>	0.75	0.53	0.65
	NAWIC-5-003<h2>Completes nutrition assessment using a client centered approach.</h2>	1.00	0.74	0.88
	NAWIC-5-004<h2>Describes the importance of documenting the nutrition assessment results to provide continuity in WIC services.</h2>	0.84	0.57	0.55
	NAWIC-5-005<h2>Obtains relevant assessment information (including: anthropometric, biochemical, clinical, dietary, family and social environment) according to State agency policy.</h2>	0.65	0.31	0.58
	NAWIC-5-006<h2>Obtains medical documentation for health assessment information according to State agency policy.</h2>	0.87	0.6	0.65
	NAWIC-5-007<h2>Applies WIC nutrition criteria definitions correctly when assigning nutrition risks.</h2>	0.79	0.69	0.74
	NAWIC-5-008<h2>Applies current nutrition recommendations, such as Dietary Guidelines for Americans, when completing the nutrition assessment.</h2>	1.08	0.73	0.75
	NAWIC-5-009<h2>Documents WIC nutrition risk criteria for each client according to State agency policy.</h2>	0.71	0.48	0.65
	NAWIC-5-010<h2>Incorporates referral data into the nutrition assessment process.</h2>	1.00	0.63	0.83
	NAWIC-5-011<h2>Documents nutrition assessment results in care plans according to State agency policy.</h2>	0.90	0.56	0.60
	NAWIC-5-012<h2>Communicates nutrition assessment results to each client/caregiver.</h2>	1.03	0.63	0.86
	NAWIC-5-013<h2>Develops a plan for referrals based on analysis of nutrition assessment information.</h2>	1.19	0.71	0.92
	NAWIC-5-014<h2>Applies nutrition assessment information when determining food packages. </h2>	0.89	0.77	0.69
	NAWIC-5-015<h2>Develops a plan for nutrition education based on analysis of nutrition assessment information.</h2>	0.92	0.67	0.74
<b>Lifecycle Nutr</b>	NAWIC-6-001<h2>Applies knowledge about current nutrition requirements for women when assessing health and nutritional status.</h2>	0.97	0.78	0.78

**Appendix H. All Three Phases CPA Self-Assessments: Aggregate Results Sorted by Domain**

<b>Domain</b>	<b>Competency Statement</b>	<b>Phase 1 Skills Gap</b>	<b>Phase 2 Skills Gap</b>	<b>Phase 3 Skills Gap</b>
	NAWIC-6-002<h2>Applies knowledge about current nutrition requirements for infants when assessing health and nutritional status.</h2>	0.99	0.67	0.69
	NAWIC-6-003<h2>Applies knowledge about current nutrition requirements for children when assessing health and nutritional status.</h2>	0.94	0.64	0.68
	NAWIC-6-004<h2>Applies knowledge of infant/child developmental milestones when assessing feeding.</h2>	0.76	0.59	0.60
	NAWIC-6-005<h2>Compares the nutrition practices of women to current recommendations when assessing health and nutritional status.</h2>	1.11	0.71	0.83
	NAWIC-6-006<h2>Compares the infant's nutrition intake/practices (eating patterns) to current recommendations when assessing health and nutritional status. </h2>	0.97	0.62	0.66
	NAWIC-6-007<h2>Compares the child's nutrition intake/practices (eating patterns) to current recommendations when assessing health and nutritional status. </h2>	0.96	0.63	0.66
	NAWIC-6-008<h2>Determines the safety implications of the women's dietary practices.</h2>	0.96	0.62	0.62
	NAWIC-6-009<h2>Determines the safety implications of parents'/caregivers' feeding practices impacting infants.</h2>	0.75	0.42	0.51
	NAWIC-6-010<h2>Determines the safety implications of parents'/caregivers' feeding practices impacting children.</h2>	0.71	0.44	0.51
	NAWIC-6-011<h2> Recognizes the nutrition implications of health history information based on client's lifecycle stage.</h2>	0.86	0.65	0.66
	NAWIC-6-012<h2> Collaborates with the prenatal client to identify the most appropriate infant feeding plan.</h2>	0.96	0.67	0.71
	NAWIC-6-013<h2>Applies knowledge of lactation management techniques.</h2>	1.22	0.86	1.03
	NAWIC-6-014<h2> Evaluates the impact of feeding interactions on infant/child growth and development.</h2>	1.02	0.72	0.77
	NAWIC-6-015<h2> Identifies the mother's and/or infant strengths and challenges to successful breastfeeding.</h2>	1.08	0.86	0.86
	NAWIC-6-016<h2> Recognizes legitimate contraindications to breastfeeding based on current recommendations.</h2>	1.11	0.79	0.80
	NAWIC-6-017<h2> Recognizes the critical nature of early postpartum assessment to successful breastfeeding.</h2>	0.80	0.66	0.52
	NAWIC-6-018<h2> Evaluates breastfeeding practices to identify effective support strategies for continued breastfeeding.</h2>	0.95	0.71	0.73

## Cross-Cultural Communication & Nutrition Assessment Course

### Goal

This course is designed for WIC personnel and other health care providers who complete nutrition assessments. Awareness of cross-cultural communication strategies allows WIC personnel to create a more rich and enhanced assessment and counseling experiences with clients. The goals of the course are to:

- Define cross-cultural communication and potential outcomes of effective cross-cultural communication.
- Provide examples of effective cross-cultural communication techniques when completing nutrition assessments and providing quality nutrition services.
- Identify appropriate strategies for communicating with clients with language differences.

### Intended Audience

The intended audience for this course is WIC CPAs (competent professional authorities) who perform nutrition assessments for WIC participants.

### Length

The length of time for participants to take this course is estimated to be 2 hours.

### Course Content

There are three sections in this course:

- **Section 1:** Cross Cultural & Communication Techniques
- **Section 2:** Communicating with Language Differences
- **Section 3:** Scenarios

### Pilot Test

Pilot testers can complete the course in one sitting or over several shorter sessions (the same will be true for the final course). Testers can access the course from any computer with Internet access with their personal Prepare Iowa Learning Management System (PILMS) account password.

The purpose of this pilot test is to make sure the content of the course is appropriate, helpful and informative. The pilot test period will be August 15, 2010 to August 31, 2010. Project staff will register any testers who have not yet created a PILMS account. Directions about how to access the course will be provided via email. All pilot testers who successfully complete the course (review the course, pass the post-test, and complete the evaluation) on or before August 31<sup>st</sup> will receive a flash drive in appreciation for their participation.

Please contact Brenda Dobson at [Bdobson@idph.state.ia.us](mailto:Bdobson@idph.state.ia.us) or 515/ 281-7769 by close of business on Monday, August 09, 2010 if you are interested in participating in the pilot test. ***Please provide your first and last name, a valid email address and phone number, agency name and your position (nurse or dietitian).***





**Appendix K. Phase 1 Supervisor Assessment Data: Average Skills Gaps from Supervisors and CPAs**

<b>Domain and Competency Statements</b>	<b>Supervisors</b>	<b>CPAs</b>
<b>Anthropometric and Hematological</b>		
Maintains anthropometric equipment according to State agency policy.	1.71	1.43
Completes anthropometric measurements accurately for women clients according to State agency policy.	1.29	1.14
Completes anthropometric measurements accurately for infants according to State agency policy.	1.71	1.43
Complete anthropometric measurements accurately for children according to State agency policy.	1.57	1.43
Uses the appropriate growth chart for infants and children based on age, gender, and linear measurement.	0.71	0.86
Reads, records, and plots anthropometric measurements accurately for women, infants, and children according to State agency policy.	1.29	1.00
Interprets growth patterns appropriately for infants.	0.43	0.71
Interprets growth patterns appropriately for children.	0.43	0.71
Calculates Body Mass Index (BMI) accurately for women and children.	1.00	0.57
Interprets weight gain or loss accurately for all women.	0.71	0.86
Incorporates anthropometric data in assessing health and nutritional status.	0.43	1.00
Maintains hematological equipment appropriately according to State agency policy.	3.14	2.29
Completes hemoglobin and hematocrit assessments according to State agency policy.	3.43	2.57
Evaluates hematological results according to State agency policies for unusual and inconsistent measures.	0.86	1.29
Incorporates hematological data in assessing health and nutritional status.	0.43	1.14
<b>Communication</b>		
Interacts with each client in a respectful and sensitive manner.	0.00	0.86
Uses verbal and non-verbal communication techniques to create an environment that engages clients in conversation.	0.14	0.86
Selects appropriate communication techniques based on assessment of client's verbal and nonverbal cues.	0.29	1.29
Uses communication resources to address language barriers and special needs of clients.	0.71	1.14
Demonstrates active listening skills.	0.14	1.57
Uses paraphrasing and/or reflecting skills to confirm understanding of client's statements.	0.43	1.00
Utilizes open- and closed-ended questions to elicit and clarify information.	0.14	1.00
Demonstrates professional discretion when client's concerns indicate the need to deviate from the standard nutrition assessment process.	0.14	0.86
Uses communication techniques to defuse a situation and to work with angry or resistant clients.	1.00	1.14
Adheres to State agency policies concerning client confidentiality.	0.00	0.43
Completes nutrition assessment tasks before providing nutrition counseling.	0.86	1.00

Domain and Competency Statements	Supervisors	CPAs
<b>Critical Thinking</b>		
Considers the client's ability to obtain, process, and understand basic health information and services needed to make health decisions.	0.43	1.14
Recognizes own personal world view and separates it from the assessment.	0.14	0.86
Recognizes health and dietary factors that contribute to nutrition risk factors.	0.43	1.14
Recognizes inconsistent, inaccurate, or unusual information and referral data.	0.86	1.00
Verifies inconsistent and unusual measurements according to State agency policy.	1.29	1.14
Verifies inconsistent referral data according to State agency policy.	1.00	1.57
Identifies interrelationships between client's current behaviors and nutrition risk factors.	0.43	1.14
Incorporates the client's point of view about nutrition and health priorities, needs and concerns into the nutrition assessment.	0.29	1.14
Incorporates information from current and previous assessments into decisions about health and nutritional status.	0.57	1.14
Evaluates previously obtained nutrition assessment information and documentation of previous intervention strategies to determine the effectiveness of services.	0.57	1.29
Draws conclusions about health and nutritional status supported by perspectives and strengths of client and data, observations, and reasoning.	0.29	1.43
Applies creative problem solving and flexible thinking in partnership with the client to identify solutions for nutrition issues.	0.43	1.71
Prioritizes the client's nutrition risks and concerns to be addressed.	0.29	1.14
Analyzes all information (including: anthropometric, biochemical, clinical, dietary, family and social environment) to determine the course of action.	0.86	1.57
<b>Multi-Cultural Awareness</b>		
Recognizes target population based upon race, ethnicity, culture, socioeconomic, education and professional backgrounds, age, religious affiliation, mental and physical abilities, and sexual orientation.	0.29	1.57
Respects the beliefs and health practices of clients when conducting a nutrition assessment.	0.00	0.71
Recognizes how a client's cultural communication style may affect the nutrition assessment.	0.57	1.57
Uses culturally appropriate communication styles to collect nutrition assessment information.	1.00	1.29
Describes the values and belief systems of cultural groups in the target population.	0.71	1.86
Uses a variety of strategies to learn more about a client's cultural eating patterns and traditions.	1.14	1.86
Assesses cultural practices for potential harm to client's health or nutritional status.	1.14	2.00
Evaluates food preparation practices within a cultural context.	1.86	2.00
Uses culturally appropriate strategies to assess pregnant <b>women's</b> eating practices	1.29	1.57
Uses culturally appropriate strategies to assess <b>infant</b> feeding practices and beliefs.	0.86	2.00
Uses culturally appropriate strategies to assess <b>child's</b> feeding/eating practices and beliefs.	1.00	1.43
Identifies culturally appropriate referral resources that may be used by the client.	1.14	1.57

<b>Domain and Competency Statements</b>	<b>Supervisors</b>	<b>CPAs</b>
<b>Nutrition Assessment Process</b>		
Describes the purpose of nutrition assessment in the WIC program.	0.00	1.29
Uses a systematic approach to complete nutrition assessments.	0.43	0.71
Completes nutrition assessment using a client centered approach.	0.14	1.57
Describes the importance of documenting the nutrition assessment results to provide continuity in WIC services.	0.29	0.57
Obtains relevant assessment information (including: anthropometric, biochemical, clinical, dietary, family and social environment) according to State agency policy.	0.71	0.71
Obtains medical documentation for health assessment information according to State agency policy.	0.29	1.29
Applies WIC nutrition criteria definitions correctly when assigning nutrition risks.	0.86	1.00
Applies current nutrition recommendations, such as <i>Dietary Guidelines for Americans</i> , when completing the nutrition assessment.	0.29	1.29
Documents WIC nutrition risk criteria for each client according to State agency policy.	0.71	0.71
Incorporates referral data into the nutrition assessment process.	0.57	1.29
Documents nutrition assessment results in care plans according to State agency policy.	0.29	1.14
Communicates nutrition assessment results to each client/caregiver.	0.29	1.29
Develops a plan for referrals based on analysis of nutrition assessment information.	0.71	1.57
Applies nutrition assessment information when determining food packages.	0.71	1.00
Develops a plan for nutrition education based on analysis of nutrition assessment information.	0.43	1.29
<b>Principles of Life Cycle Nutrition</b>		
Applies knowledge about current nutrition requirements for women when assessing health and nutritional status.	0.29	1.43
Applies knowledge about current nutrition requirements for infants when assessing health and nutritional status.	0.43	1.57
Applies knowledge about current nutrition requirements for children when assessing health and nutritional status.	0.29	1.57
Applies knowledge of infant/child developmental milestones when assessing feeding.	1.00	1.14
Compares the nutrition practices of women to current recommendations when assessing health and nutritional status.	1.00	1.57
Compares the infant's nutrition intake/practices (eating patterns) to current recommendations when assessing health and nutritional status.	0.57	1.43
Compares the child's nutrition intake/practices (eating patterns) to current recommendations when assessing health and nutritional status.	0.57	1.43
Determines the safety implications of the women's dietary practices.	1.00	1.14
Determines the safety implications of parents'/caregivers' feeding practices impacting infants.	0.43	0.86
Determines the safety implications of parents'/caregivers' feeding practices impacting children.	0.57	1.14
Recognizes the nutrition implications of health history information based on client's lifecycle stage.	1.14	1.14

Domain and Competency Statements	Supervisors	CPAs
<b>Principles of Life Cycle Nutrition (continued)</b>		
Collaborates with the prenatal client to identify the most appropriate infant feeding plan.	0.43	1.29
Applies knowledge of lactation management techniques.	0.57	1.57
Evaluates the impact of feeding interactions on infant/child growth and development.	1.14	1.29
Identifies the mother's and/or infant strengths and challenges to successful breastfeeding.	0.43	1.43
Recognizes legitimate contraindications to breastfeeding based on current recommendations.	0.33	1.67
Recognizes the critical nature of early postpartum assessment to successful breastfeeding.	0.17	1.33
Evaluates breastfeeding practices to identify effective support strategies for continued breastfeeding.	0.67	1.50

Based on surveys completed by 1 WIC Coordinator for 7 CPAs

**Appendix L. Phase 2 Supervisor Assessment Data: Average Skills Gaps from Supervisors and CPAs**

<b>Domain and Competency Statements</b>	<b>Supervisors</b>	<b>CPAs</b>
<b>Anthropometric and Hematological</b>		
Maintains anthropometric equipment according to State agency policy.	0.00	0.71
Completes anthropometric measurements accurately for women clients according to State agency policy.	0.00	0.14
Completes anthropometric measurements accurately for infants according to State agency policy.	0.28	0.28
Complete anthropometric measurements accurately for children according to State agency policy.	0.43	0.28
Uses the appropriate growth chart for infants and children based on age, gender, and linear measurement.	0.43	0.14
Reads, records, and plots anthropometric measurements accurately for women, infants, and children according to State agency policy.	0.14	0.14
Interprets growth patterns appropriately for infants.	0.43	0.28
Interprets growth patterns appropriately for children.	0.57	0.28
Calculates Body Mass Index (BMI) accurately for women and children.	0.28	0.57
Interprets weight gain or loss accurately for all women.	0.43	0.43
Incorporates anthropometric data in assessing health and nutritional status.	0.28	0.14
Maintains hematological equipment appropriately according to State agency policy.	0.28	0.71
Completes hemoglobin and hematocrit assessments according to State agency policy.	0.43	0.43
Evaluates hematological results according to State agency policies for unusual and inconsistent measures.	0.28	0.57
Incorporates hematological data in assessing health and nutritional status.	0.43	0.57
<b>Communication</b>		
Interacts with each client in a respectful and sensitive manner.	0.14	0.00
Uses verbal and non-verbal communication techniques to create an environment that engages clients in conversation.	0.28	0.43
Selects appropriate communication techniques based on assessment of client's verbal and nonverbal cues.	0.43	0.86
Uses communication resources to address language barriers and special needs of clients.	0.00	0.57
Demonstrates active listening skills.	0.28	0.57
Uses paraphrasing and/or reflecting skills to confirm understanding of client's statements.	1.14	0.57
Utilizes open- and closed-ended questions to elicit and clarify information.	0.71	1.00
Demonstrates professional discretion when client's concerns indicate the need to deviate from the standard nutrition assessment process.	0.43	0.57
Uses communication techniques to defuse a situation and to work with angry or resistant clients.	0.57	1.00
Adheres to State agency policies concerning client confidentiality.	0.28	0.57
Completes nutrition assessment tasks before providing nutrition counseling.	1.14	0.57

<b>Domain and Competency Statements</b>	<b>Supervisors</b>	<b>CPAs</b>
<b>Critical Thinking</b>		
Considers the client's ability to obtain, process, and understand basic health information and services needed to make health decisions.	0.86	0.57
Recognizes own personal world view and separates it from the assessment.	0.86	0.43
Recognizes health and dietary factors that contribute to nutrition risk factors.	0.71	0.71
Recognizes inconsistent, inaccurate, or unusual information and referral data.	0.00	0.28
Verifies inconsistent and unusual measurements according to State agency policy.	0.43	0.43
Verifies inconsistent referral data according to State agency policy.	0.43	0.86
Identifies interrelationships between client's current behaviors and nutrition risk factors.	0.57	0.57
Incorporates the client's point of view about nutrition and health priorities, needs and concerns into the nutrition assessment.	0.71	1.14
Incorporates information from current and previous assessments into decisions about health and nutritional status.	1.14	0.71
Evaluates previously obtained nutrition assessment information and documentation of previous intervention strategies to determine the effectiveness of services.	1.14	0.86
Draws conclusions about health and nutritional status supported by perspectives and strengths of client and data, observations, and reasoning.	1.00	0.57
Applies creative problem solving and flexible thinking in partnership with the client to identify solutions for nutrition issues.	0.86	0.86
Prioritizes the client's nutrition risks and concerns to be addressed.	0.43	0.43
Analyzes all information (including: anthropometric, biochemical, clinical, dietary, family and social environment) to determine the course of action.	0.43	0.71
<b>Multi-Cultural Awareness</b>		
Recognizes target population based upon race, ethnicity, culture, socioeconomic, education and professional backgrounds, age, religious affiliation, mental and physical abilities, and sexual orientation.	1.14	1.00
Respects the beliefs and health practices of clients when conducting a nutrition assessment.	0.71	0.86
Recognizes how a client's cultural communication style may affect the nutrition assessment.	1.14	1.14
Uses culturally appropriate communication styles to collect nutrition assessment information.	1.14	1.29
Describes the values and belief systems of cultural groups in the target population.	1.57	1.43
Uses a variety of strategies to learn more about a client's cultural eating patterns and traditions.	1.43	1.29
Assesses cultural practices for potential harm to client's health or nutritional status.	1.14	1.29
Evaluates food preparation practices within a cultural context.	1.71	1.71
Uses culturally appropriate strategies to assess pregnant women's eating practices	1.29	1.43
Uses culturally appropriate strategies to assess infant feeding practices and beliefs.	1.14	1.14
Uses culturally appropriate strategies to assess child's feeding/eating practices and beliefs.	1.00	1.43
Identifies culturally appropriate referral resources that may be used by the client.	1.29	1.57

Domain and Competency Statements	Supervisors	CPAs
<b>Nutrition Assessment Process</b>		
Describes the purpose of nutrition assessment in the WIC program.	0.43	0.28
Uses a systematic approach to complete nutrition assessments.	0.14	0.00
Completes nutrition assessment using a client centered approach.	0.57	0.71
Describes the importance of documenting the nutrition assessment results to provide continuity in WIC services.	0.86	0.57
Obtains relevant assessment information (including: anthropometric, biochemical, clinical, dietary, family and social environment) according to State agency policy.	0.43	0.57
Obtains medical documentation for health assessment information according to State agency policy.	1.29	1.29
Applies WIC nutrition criteria definitions correctly when assigning nutrition risks.	1.00	0.28
Applies current nutrition recommendations, such as <i>Dietary Guidelines for Americans</i> , when completing the nutrition assessment.	0.43	0.57
Documents WIC nutrition risk criteria for each client according to State agency policy.	1.29	0.28
Incorporates referral data into the nutrition assessment process.	1.14	1.00
Documents nutrition assessment results in care plans according to State agency policy.	0.86	0.86
Communicates nutrition assessment results to each client/caregiver.	0.71	0.71
Develops a plan for referrals based on analysis of nutrition assessment information.	1.14	0.86
Applies nutrition assessment information when determining food packages.	0.86	0.43
Develops a plan for nutrition education based on analysis of nutrition assessment information.	1.00	0.43
<b>Principles of Life Cycle Nutrition</b>		
Applies knowledge about current nutrition requirements for women when assessing health and nutritional status.	0.57	0.86
Applies knowledge about current nutrition requirements for infants when assessing health and nutritional status.	0.57	0.86
Applies knowledge about current nutrition requirements for children when assessing health and nutritional status.	0.57	0.57
Applies knowledge of infant/child developmental milestones when assessing feeding.	0.86	0.43
Compares the nutrition practices of women to current recommendations when assessing health and nutritional status.	0.86	0.71
Compares the infant's nutrition intake/practices (eating patterns) to current recommendations when assessing health and nutritional status.	0.57	0.43
Compares the child's nutrition intake/practices (eating patterns) to current recommendations when assessing health and nutritional status.	0.57	0.57
Determines the safety implications of the women's dietary practices.	0.71	0.86
Determines the safety implications of parents'/caregivers' feeding practices impacting infants.	0.43	0.43
Determines the safety implications of parents'/caregivers' feeding practices impacting children.	0.43	0.57
Recognizes the nutrition implications of health history information based on client's lifecycle stage.	0.57	0.43

Domain and Competency Statements	Supervisors	CPAs
Principles of Life Cycle Nutrition (continued)		
Collaborates with the prenatal client to identify the most appropriate infant feeding plan.	0.28	0.71
Applies knowledge of lactation management techniques.	0.57	0.57
Evaluates the impact of feeding interactions on infant/child growth and development.	0.71	0.86
Identifies the mother's and/or infant strengths and challenges to successful breastfeeding.	0.43	0.57
Recognizes legitimate contraindications to breastfeeding based on current recommendations.	0.43	0.71
Recognizes the critical nature of early postpartum assessment to successful breastfeeding.	0.28	0.43
Evaluates breastfeeding practices to identify effective support strategies for continued breastfeeding.	0.43	0.28

Based on surveys completed by 3 WIC supervisors for 7 CPAs

## **Appendix M. FAQs: WIC Nutrition Assessment Competency Model**

### **What is a competency?**

- A competency is an individual's demonstrated knowledge, skills, or abilities performed to a specific standard. Competencies are observable, behavioral acts that are demonstrated in a job context and, as such, are influenced by an organization's culture and work environment.
- A competency can also be described as "a cluster of related knowledge, skills and attitudes that affect a major part of one's job (a role or responsibility) that correlates with performance on the job, can be measured against well accepted standards, and that can be improved via training and development." (Lucia and Lepsinger, 1999.)

#### Competencies:

- Can be acquired through education, experience, and on-the-job training
- Should be included in WIC/nutrition and public health workforce development efforts
- Intersect with agency and program performance standards or measures
- May apply to all WIC employees, public health workers or be specific to a small subset, i.e. nutrition assessment employees in WIC, maternal child health, environmental or preparedness
- Express a standardized level of worker performance
- Need to be routinely updated

### **What are the benefits of implementing a competency based approach to developing professionals?**

#### For the WIC employee, competency-based practices:

- Identify the success criteria (i.e., behavioral standards of performance excellence) required to be successful in their role.
- Provide a more specific and objective assessment of their strengths and specify targeted areas for professional development.
- Provide development tools and methods for enhancing their skills.
- Provide the basis for a more objective dialogue with their manager or team about performance, development, and career related issues.

#### For the WIC Agency, competency-based practices:

- Reinforce WIC program purpose, strategy, culture, and vision.
- Establish expectations for performance excellence, resulting in a systematic approach to professional development, improved job satisfaction, and better employee retention.
- Increase the effectiveness of training and professional development programs by linking them to the success criteria (i.e., behavioral standards of excellence).
- Provide data on development needs that emerge from group and/or organizational composites that are an outcome of multi-rater assessments.
- Provide a common framework and language for discussing how to implement and communicate key strategies.
- Provide a common understanding of the scope and requirements of a specific role

- Provide common, organization-wide standards for career levels that enable employees to move across business boundaries.

For WIC Managers, competency-based practices:

- Identify performance criteria to improve the accuracy and ease of the hiring and selection process.
- Provide more objective performance standards.
- Clarify standards of excellence for easier communication of performance expectations to direct reports.
- Provide a clear foundation for dialogue to occur between the manager and employee about performance, development, and career-related issues.

For the WIC state Program, competency-based practices:

- Reinforce WIC program purpose, strategy, culture, and vision.
- Increase the effectiveness of training and professional development programs by linking them to the success criteria (i.e., behavioral standards of excellence).
- Provide data on development needs that emerge from group and/or organizational composites that are an outcome of multi-rater assessments.
- Foster employee self-assessment within WIC agencies
- Provide ongoing training to WIC employees to reinforce initial training, continue skill development, and to increase nutrition knowledge and understanding of human behavior

### **What are the advantages of using a self-assessment tool?**

- Identify the success criteria (i.e., behavioral standards of performance excellence) required to be successful in their role.
- Provide a more specific and objective assessment of their strengths and specify targeted areas for professional development.
- Provide development tools and methods for enhancing their skills.
- Provide the basis for a more objective dialogue with their manager or team about performance, development, and career related issues.

### **Why do I need a competency set when I have a job description?**

In contrast to a job description, which typically lists the tasks or functions and responsibilities for a particular role, a set of competencies lists the abilities needed to conduct those tasks or functions.

Too often job descriptions are not worded in a manner that enables an employee's performance to be effectively measured. Competencies on the other hand are described in terms such that they can be observed, measured and rated against criteria that are standardized and required to do the job effectively.

### **How is competency linked to training and development?**

Reconciliation between the Required Competency Level and your Current Competency Level will determine whether there are gaps to be addressed. The gaps will allow the employees to focus on the training and development programs necessary. There is no longer a need for employees to wonder what training is necessary.

### **What are nutrition assessment competencies?**

Nutrition assessment competencies are statements that help the individual assess their performance of the nutrition assessment process. As a component of the Value Enhanced Nutrition Assessment (VENA) policy guidance, the nutrition assessment competency set helps to ensure the workforce is trained and knowledgeable in the area.

### **Who developed the nutrition assessment competencies?**

The competency set was developed through the WIC Special Project grant funded in part with Federal funds from the U.S. Department of Agriculture, Food and Nutrition Service. ***Strengthening WIC Nutrition Assessment Skills: Establishing A Competency-To-Training Framework In A Learning Management System*** was awarded to the Iowa State WIC program October 2007. The project staff established two competency work groups. The first group was composed of state and local WIC agency personnel from Iowa who reviewed the VENA statements and edited them to create competencies for the WIC Nutrition Assessment. The second group consisted of state WIC personnel outside of Iowa, a regional nutritionist, and state and local WIC personnel from Iowa. This group reviewed the competency set created by the first work group and provided further edits and additions. The Project Advisory Council also had the liberty of providing edits and additions to the competency set after the two work groups had provided their feedback.

### **Who will use the nutrition assessment competencies?**

The competencies are for use by WIC agency personnel, specifically WIC CPAs who complete all or part of the nutrition assessment process with clients. This self-assessment tool will be used for ongoing training within the WIC agencies to reinforce initial training, continue skill development, and to increase nutrition knowledge and understanding of human behavior. It will also be used to train new personnel on core knowledge and skills. The WIC agency will also use the competency set to revise job descriptions and evaluate personnel performance, ultimately ensuring quality WIC nutrition services from well-trained personnel.

### **How are the competencies organized?**

The competencies are organized in a manner that enhances the individual's ability to follow the progression of the nutrition assessment process. There are six domains that group the competencies into logical areas: Anthropometric and Hematological Data Collection Techniques, Communication, Critical Thinking, Multi-Cultural Awareness, Nutrition Assessment Process, and Principles of Life Cycle Nutrition.

### **What is a WIC nutrition assessment?**

A WIC nutrition assessment is the process of obtaining and synthesizing relevant and accurate information in order to:

- Assess an applicant's nutrition status and risk;
- Design appropriate nutrition education and counseling;
- Tailor the food package to address nutrition needs; and
- Make appropriate referrals

### **Why nutrition assessment competencies?**

The group that created the Nutrition Assessment competency set saw the need to strengthen the local agency training in the Iowa WIC Program related to nutrition assessment tasks. The WIC Nutrition Assessment competencies and related training activities foster self-assessment and maximize limited training resources at the state and local levels.

### **When will the competencies be finished?**

The competency set was developed by two work groups and a Project Advisory Council starting in January 2008 through July 2008. This competency set served as the pilot version of the set. Upon completion of the pilot project in fall 2008, changes will be made to the set before being promoted to Iowa WIC clinics in late fall 2008. Local WIC clinic personnel will be encouraged to take the self-assessment during November and December 2008. Following a review of the aggregate assessment results, the Iowa WIC program will promote the competency set nationwide for use by any/all local WIC clinic/program. Once the competency set is being utilized nationwide, review of the competencies will take place every 3-5 years, as the Nutrition Assessment Process is dynamic and the competency set would continually reflect any changes within the process.

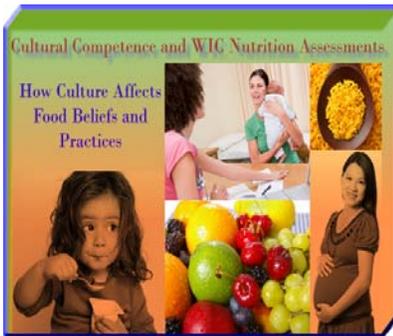
## Appendix N. New WIC Courses in the Prepare Iowa Learning Management System

### Cross-Cultural Communication and Nutrition Assessment



This course is designed for WIC personnel and other health care providers who complete nutrition assessments. The goals of this course are to define cross cultural communication and why it is necessary in practice, provide examples of effective communication techniques when completing nutrition assessments, and identify appropriate communication strategies when working with clients that have a language difference. Course length: 2 hours. CEUs approved for nurses and dietitians.

### Cultural Competence & WIC Nutrition Assessments: How Culture Affects Food Beliefs & Practices



This course is designed for WIC personnel and other health care providers who complete nutrition assessments. This course defines cultural competence and why it is necessary in practice. It provides examples of eating practices from various cultures and increases awareness of resources at the local and national levels that enable health care personnel to improve services to diverse participants. Course length: 2.75 hours. CEUs approved for nurses and dietitians.

### Hematological Data Collection, Assessment and Critical Thinking Application



This course is designed for WIC personnel and other health care providers participating in hematological data collection and assessment. It is designed to increase awareness of policy issues, reinforce appropriate hematological data collection technique, and enhance ability to critically think about hematological data assessment. The course provides basic information for hemoglobin testing. Course length: 2 hours. CEUs approved for nurses and dietitians.

Go to [www.prepareiowa.com](http://www.prepareiowa.com) to create your free user account then search the catalog using WIC as the key word. All three courses are free. You will also find links to over a dozen external courses related to nutrition assessment competencies.

Developed by the Iowa WIC Program in collaboration with the Institute for Public Health Practice, University of Iowa College of Public Health