

***Survey of the Public Health Nutrition Workforce:  
2006-07***

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to the  
Association of State and Territorial Public Health Nutrition Directors

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# **Survey of the Public Health Nutrition Workforce: 2006-07**

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## Table of Contents

Executive Summary .....	1
Background .....	4
Goals .....	8
Study Methods .....	9
Study Findings .....	13
WIC’s Presence in the Public Health Nutrition Workforce .....	13
Agency of Employment and Primary Work Location of the Public Health Nutrition Workforce .....	13
Job Classification of the Public Health Nutrition Workforce .....	15
Years of Practice in Nutrition/Dietetics, Public Health Nutrition, and WIC .....	19
WIC and Non-WIC Workforce .....	19
WIC Workforce .....	19
Non-WIC Workforce .....	21
Personnel Management and Budget Responsibilities of the Workforce .....	22
Major Areas of Practice .....	31
Employment Status .....	36
Salaries .....	38
Sources of Funding for the Public Health Nutrition Workforce .....	41
Academic Preparation, Credentials, Training, and Training Needs .....	45
Academic Preparation .....	45
Core Public Health Course Work .....	46
Credentials of Workforce .....	53
Attendance in Continuing Education Courses .....	58
Training Needs .....	59
Affiliation with Professional Organizations .....	69
Geographical Distribution of the WIC Workforce Respondents .....	71
Diversity .....	73
The Aging Public Health Nutrition Workforce .....	81
Evaluation of Web-Based Survey Administration .....	83
Limitations of the Study .....	87
Conclusions .....	89
Appendices .....	92
Appendix A – ASTPHND Data and Epidemiology Committee and Project Team .....	93

Appendix B – Training Materials .....	95
Appendix C – Survey Instruments: Print for Filled and Vacant Positions .....	117
Appendix D – Study Design .....	144

## List of Tables

Table 1. Core Data Elements Recommended in <i>Enumerating the Public Health Workforce</i> Compared to Data Collected in the ASTPHND Survey .....	7
Table 2. Response Rates Reported by States for Filled Positions .....	12
Table 3. WIC and Non-WIC Job Functions (Question 7) .....	13
Table 4. Agency of Employment (Question 1).....	14
Table 5. Primary Work Location (Question 2).....	15
Table 6. Titles and Descriptions of Public Health Nutrition Job Classifications From “Personnel in Public Nutrition for the 1990s” .....	16
Table 7. Job Classifications (Question 4) .....	18
Table 8. Years of Practice in Nutrition and Public Health Nutrition (Questions 5).....	20
Table 9. Years of Practice in Nutrition and Public Health Nutrition (Questions 5 and 6)—Comparison of WIC Professionals and WIC Paraprofessionals.....	20
Table 10. Years of WIC Experience (Question 8)—A Comparison of WIC Professionals and Paraprofessionals .....	21
Table 11. Total FTEs (including nutrition and non-nutrition positions) Directly Supervised by Professional Job Classifications of Filled Positions (Question 9) .....	24
Table 12. Nutrition FTEs Supervised by Professional Job Classifications of Filled Positions (Question 10) .....	25
Table 13. Health Professional FTEs Supervised by Professional Job Classifications of Filled Positions (Question 11).....	26
Table 14. Support Staff FTEs Supervised by Professional Job Classifications of Filled Positions (Question 12) .....	27
Table 15. Paraprofessional FTEs Supervised by Professional Job Classifications of Filled Positions (Question 13).....	28
Table 16. Total FTEs Directly and Indirectly Supervised by Professional Job Classifications of Filled Positions (Question 14).....	29
Table 17. Budget Responsibility by Job Classification (Question 15).....	30
Table 18. Primary Area of Public Health Practice According to Category of Core Public Health Functions--Number of Respondents in Filled Positions (Question 25) .....	32
Table 19. Estimated Time Spent in Direct Services Per Month for Filled Positions (Question 16) .....	33
Table 20. Percent of Time Spent in Direct Services for Filled Positions (Question 16).....	34
Table 21. Percent of Time in Direct Services by WIC Professionals for Filled Positions (Question 16) .....	35
Table 22. Client Population Seen by Workforce (Filled Positions) Whose Primary Area of Practice is Direct Service (Question 26).....	35
Table 23. Employment Status of Filled Positions (Question 19).....	36
Table 24. Proportion of Workforce in Full-Time and Part-Time Positions (Questions 17 and 18) .....	36
Table 25. Method of Payment for Contract Workers in Filled Positions (Question 20) .....	37
Table 26. Employee Benefits of Contracted and Employed Workforce (Question 23) .....	37
Table 27. 2006 Annual Median Salary for Filled Positions (Question 21) .....	39
Table 28. Minimum Annual Median Salary for Filled and Vacant Positions (Question 22) .....	40

Table 29. Maximum Annual Median Salary for Vacant Positions (Question 21).....	41
Table 30. Full-time Equivalents Per Funding Source—A Comparison of 1994, 1999-2000, and 2006-07 (Question 24) .....	42
Table 31. Full-Time Equivalents Per Funding Source (Question 24) .....	44
Table 32. Academic Preparation of the Public Health Nutrition Workforce (Question 27) .....	48
Table 33. Academic Preparation of WIC Professionals and Paraprofessionals (Question 27) ..	49
Table 34. Highest Academic Degree Reported by WIC Workers (Question 27).....	50
Table 35. Core Public Health Course Work Among Personnel Without a Public Health Degree (Question 28).....	51
Table 36. Core Public Health Course Work at Schooling Level Among Personnel Without a Public Health Degree (Question 28).....	52
Table 37. Certifications and Credentials (Question 29).....	53
Table 38. Certifications and Credentials of the WIC Nutrition Workforce (Question 29) .....	56
Table 39. Steps Taken to Become Registered Dietitians by Non-RDs (Question 31) .....	57
Table 40. Steps Taken to Become Dietetic Technicians, Registered by Non-DTRs (Question 32).....	57
Table 41. Agency of Employment of Staff in Nutrition Courses (Question 33).....	61
Table 42. Proportion of Each Job Classification that Attended Nutrition Courses (Question 33).....	62
Table 43. Number of Respondents Indicating Attendance at Each of the Nutrition Courses for Filled Positions (Question 33).....	64
Table 44. Perceived Training Needs of the WIC Workforce—Top 10 Choices (Question 34) ..	66
Table 45. Perceived Training Needs of the Non-WIC Workforce—Top 10 Choices (Question 34) .....	67
Table 46. Membership in Professional Organizations for WIC and Non-WIC Workers (Question 35).....	70
Table 47. Membership in Professional Organizations for WIC Professionals and Paraprofessionals (Question 35) .....	71
Table 48. Distribution of WIC Workforce Respondents and WIC Participants by State (Question 7) .....	72
Table 49. Gender of the Workforce (Question 37).....	75
Table 50. Ethnicity of the Workforce (Question 40) .....	75
Table 51. Racial Background of the Workforce as One Race or Two or More Races Reported (Question 41).....	75
Table 52. Racial Background of the Workforce (Question 41).....	77
Table 53. Diversity of the US Population. PH Nutrition Workforce, and WIC Participants .....	78
Table 54. Primary and Secondary Languages Reported by WIC and Non-WIC Respondents (Question 42) .....	80
Table 55. Intend to Retire Within the Next 10 Years (Question 39).....	82

## Executive Summary

The Association of State and Territorial Public Health Nutrition Directors (ASTPHND) with support from a cooperative agreement with the U.S. Department of Agriculture, Food and Nutrition Service's (USDA, FNS) Special Supplemental Nutrition Program for Women, Infants and Children (WIC) and with assistance from the Public Health Nutrition Program at The University of Tennessee, Knoxville conducted a national enumeration census of the public health nutrition workforce (including territories). The 2006-07 workforce survey was the latest in a series of survey administrations ASTPHND has conducted since 1985. State/territorial public health nutrition directors and/or ASTPHND designees conducted the census reported on in this document from 2006-07; the previous survey was administered in 1999-2000. For the first time, the survey was administered primarily in an on-line format.

The goals of the workforce survey were:

- To identify trends in the public health nutrition workforce.
- To determine the capacity of the public health nutrition workforce in accomplishing program goals and meeting priority needs
- To identify training needs of WIC personnel in relation to their job responsibility, credentials, education, and longevity
- To measure qualifications of WIC nutrition staff in all states and territories.
- To evaluate use of a Web-based survey strategy to collect and analyze personnel data.
- To assist USDA and state public health agencies in planning and evaluating their recruitment and retention efforts.

Full and part-time public health nutrition professionals and paraprofessionals employed or contracted by public health nutrition programs or services under the purview of the official state/territorial health agency were included in the census. As in previous survey administrations, there was variation between programs administered by each state's health agency. Therefore, the personnel included in the census in each state may have varied according to which programs were administered by the state health agency. As a result, generalizations across states and overall conclusions must be made with caution.

The census was developed with leadership of a Project Team that included members of ASTPHND and The University of Tennessee, and guidance from the ASTPHND Data and Epidemiology Committee. A 42-item, fixed response survey instrument was developed, pilot-tested and implemented for the 2006-07 census, designed in large part from the 1999-2000 survey instrument to enable comparisons of the two workforces. The survey instrument was converted to an on-line format that required approximately 20 minutes to complete (compared to 26 minutes to complete the print version). The survey instrument included items on agency and location of job practice, job classification, years of practice, supervisory and fiscal responsibility, time in direct client services, salary and funding source, area of practice, education, certifications or credentials, training and perceived training needs, participation in professional organizations, and personal characteristics (gender, race and ethnicity, and primary and secondary languages). For the first time, the 2006-07 survey instrument contained items on benefits, year born, and

retirement intentions within the next 10 years. The survey instrument was pilot-tested in April 2005; data collection was initiated in August 2006 and completed in March 2007.

Data were collected on 10,683 positions, including 371 positions vacant at the time of data collection. The estimated response rate for filled positions, based on the reports of State Contacts responsible for survey administration within their states, was 80% (10,312/12,886). All 50 states, the District of Columbia and Guam participated in the survey. State-specific response rates ranged from a high of 100% (Delaware) to a low of 29.8% (Minnesota). In addition, response rates could not be determined for Ohio and Rhode Island because the number of position identifiers administered was not reported. The most significant improvement in response rate for this survey administration compared to 1999-2000 was participation of Idaho, the only state that did not participate then.

## Highlights

This information is described in greater detail in the study findings section.

- **The majority of public health nutrition workers were employed (or contracted) by the government.** Almost 70% of public health nutrition positions were employed or contracted by state or local government health agencies. Most of the WIC workforce was employed at the local level (43.5%), while most of the non-WIC workforce was employed at the state level (35.0%). Employment by private non-profit organizations decreased for the WIC workforce from 1999-2000. More than half of positions overall (53.4%) and within WIC (53.0%) were located at central offices of state, district/regional, and local health agencies or field office/clinics of government health agencies
- **WIC remained the primary funding source for the public health nutrition workforce.** Nearly 90% (88.6%) of the workforce worked within WIC, which was a slight decrease from 1999-2000 (90.4%). WIC also funded 79.3% of all full-time equivalents (FTEs), which was also a slight decrease from 1999-2000 (81.0% and 81.7% in 1994). USDA as a whole funded 83.4% of workforce FTEs, while the U.S. Department of Health and Human Services (DHHS) accounted for 4.7% and state funding for 4.75% (an increase from 1999-2000).
- **The public health nutrition workforce increasingly was contracted, rather than employed, and/or part-time.** While the majority remained employed (93.6%), 6.4% of the workforce was contracted, an increase from 1999-2000 (3.7%). Also, most positions (77.9%) were full-time, but the proportion of full-time WIC employees decreased from 1999-2000 (78.0% vs. 81.5%).
- **The workforce remained predominantly professional, with 71.4% of public health nutrition positions classified as professional, 24.1% classified as paraprofessional, and 4.5% classified as “other.”** Paraprofessionals represented 26.4% of the WIC workforce, compared to only 6.7% of the non-WIC workforce. At the request of USDA, FNS, an additional position class, “Breastfeeding Peer Counselor”, was added to the 2006-07 survey instrument. Over 11% (11.4%) of the overall workforce and 12.6% of the WIC workforce was classified as “Breastfeeding Peer Counselor.”

- **The public health nutrition workforce remained very experienced.** Over half (51.8%) of the workforce had at least 10 years of dietetics/nutrition experience and 42.7% had at least 10 years of public health nutrition experience. While 51.6% of the WIC workforce had at least 10 years of dietetics/nutrition experience, 29.6% had less than 5 years of experience in dietetics/nutrition. This indicates a workforce that was both relatively “young” and “seasoned,” in terms of experience. The proportion of WIC nutrition personnel with 1-9 years of dietetics/nutrition experience decreased compared to 1999-2000, suggesting that retention remained a concern for the public health nutrition workforce infrastructure, particularly as leadership.
- **The proportion of Registered Dietitians (RDs) and Dietetic Technicians, Registered (DTRs) decreased from 1999-2000.** While 41.2% of the workforce surveyed in 1999-2000 reported being an RD, only 36.8% of the 2006-07 workforce reported similarly. This continued the downward trend from 1994, when 42.1% of the workforce was an RD. Only 4.1% of the workforce was dietetic registration-eligible. DTRs comprised only 1.6% of the workforce.
- **The public health nutrition workforce was more diverse than the general U.S. population, but less so than WIC participants.** Almost 95% of the workforce was female, 70.0% was not Hispanic/Latino, and 69.9% was white. The WIC workforce was more diverse with 20.9% reporting being Hispanic/Latino and almost one-quarter (23.4%) being of a single or two or more races other than white (compared to 18.1% of the non-WIC workforce). Over 11% of WIC personnel compared to 6.5% of non-WIC personnel were black or African-American.
- **Nearly one-quarter of the public health nutrition workforce intended to retire within the next 10 years.** The mean age for the workforce was 42.2 years old (42.1 years old, WIC; 43.3 years old, non-WIC). Almost one-quarter (23.9%) of the workforce reported intending to retire within the next 10 years and within 6.57 years on average. Non-WIC personnel reported a slightly greater intention to retire than did WIC personnel (28.5% vs. 23.3%). Approximately 31.2% of professionals and 19.2% of paraprofessionals intended to retire within the next 10 years. The greatest rates of retirement intention were for Public Health Nutrition Directors (44.6%) and Public Health Nutrition Assistant Directors (37.8%). Because the proportion of WIC nutrition personnel with 1-9 years of experience decreased and 24% reported intending to retire within 10 years, both retention and future leadership are important concerns.

## **Background**

The Association of State and Territorial Public Health Nutrition Directors (ASTPHND) in association with its federal partners, including the United States Department of Agriculture, Food and Nutrition Service (USDA, FNS) and the Maternal and Child Health Bureau of the United States Department of Health and Human Services (DHHS), has had a long-standing interest in the public health nutrition workforce. This document reports the results of the most recent census survey of the public health nutrition workforce conducted in 2006-07 by ASTPHND in collaboration with the Public Health Nutrition Program at The University of Tennessee, Knoxville. It was funded with partial support from USDA, FNS that was complemented by funding from ASTPHND and the University.

### **The Collaborating Partners in the Census Enumeration**

ASTPHND was founded in 1952 as a 501 (c)(3) non-profit membership organization to provide national and state leadership on food and nutrition policy, programs, and services to achieve optimal health through optimal nutrition for everyone in the United States. The Association is affiliated with the Association of State and Territorial Health Officials, as well as its family of state director organizations. ASTPHND members include the nutrition director or designee appointed by the chief health official of each U.S. state, territory, possession, and the District of Columbia. Nutrition directors are nutrition professionals who are functionally responsible for directing the nutrition programs of their state health agencies. Other members include state health agency employees responsible for administration and/or consultation for part of the agency's nutrition program(s). ASTPHND's 2004-2009 Strategic Plan includes three priorities directly related to enumerating the public health nutrition workforce. These are:

- Developing a multi-disciplinary, culturally competent workforce to address public health nutrition issues.
- Developing resources and programs that enable State Health Agencies to provide effective, visible leadership for healthy eating and physical activity.
- Providing a strong, proactive voice to advance national policies, initiatives, resources and programs that help states and localities effectively address issues related to nutrition and physical activity.

State and territorial public health nutrition directors are responsible for assessing the public health nutrition workforce within their states/territories. In addition, they must coordinate variously funded nutrition programs, services and policies. They also serve as the link between local, state and national nutrition programs, most notably the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). Data from this survey are useful to state/territorial nutrition directors in evaluation of current recruitment and retention methods, developing training to meet identified needs, and advising policymakers. Consistent with the results of previous ASTPHND workforce surveys, WIC employed nearly 90% of the workforce; therefore, state/territorial directors often work with WIC officials in program implementation, as well.

The USDA, FNS is responsible for the administration of the WIC program. An area of improvement identified by FNS is improved diversity of its workforce. The 2006-07 public health nutrition workforce survey enumerates the workforce, including its age, gender, race, ethnicity, and languages spoken. In addition, to ensure a well-trained, high-quality workforce, FNS has targeted recruitment and retention of WIC personnel since 1992. Data from this survey include training, education, salaries, and years of experience, which aid in evaluation of existing recruitment and retention strategies.

The WIC Program is a federally funded nutrition assistance program created by Congress in 1972 to serve nutritionally at risk low-and moderate-income pregnant, breastfeeding, and postpartum women, infants, and children up to age five. WIC Program participants receive healthy supplemental foods, nutrition education, breastfeeding information and support, and referrals to health care. Funding for the WIC Program has increased from \$20.6 million in fiscal year (FY) 1974 to \$5.3 billion in FY 2006. The ASTPHND public health nutrition workforce survey provides the only comprehensive source of workforce data on the public health nutrition workforce in WIC. WIC is the predominant funding source for the workforce overall.

The Public Health Nutrition Program in the Department of Nutrition at the University of Tennessee, Knoxville, was a collaborator in this project. The Department of Nutrition previously collaborated with ASTPHND to describe the results of the 1994 workforce study. In the current census, the Department of Nutrition's specific roles were to: 1) oversee all aspects of developing, piloting, and collecting census data using the web-based survey instrument; 2) provide technical support and assistance to ASTPHND, State agency staff and survey respondents; 3) coordinate research and data analysis; and complete interim and project final reports for submission to the ASTPHND Data and Epidemiology Committee and USDA. The Department of Nutrition also filed application for approval of the project for human subject research, which was granted by the University's Institutional Review Board. The Public Health Nutrition Program has been active in the education and training of future public health nutrition personnel since 1943. This collaboration is an example of its commitment to the public health nutrition workforce infrastructure.

### **Past Experience in Public Health Nutrition Workforce Enumeration and Special Interests**

ASTPHND has profiled the public health nutrition workforce since 1985. The last survey conducted was in 1999-2000. The report, *Survey of the Public Health Nutrition Workforce: 1999-2000* was released in January 2003. It is the only comprehensive source of workforce data on nutritionists in state and local public health agencies. Data were collected through ASTPHND from state public health nutrition directors for the surveys administered from 1985 through 1994. The workforces described in 1985 and 1987 were limited to personnel in full-time budgeted positions employed in governmental health agencies, who provided predominantly population-based services. In 1991 ASTPHND members requested that the profile expand in scope to include more information for planning personnel training, advocating for additional personnel resources, developing recruitment and retention plans, and assessing ability to achieve program goals. As a result, questions were added to collect information on training needs, years of experience, racial-ethnic background, job classification, and funding source. Demographic

information on race, ethnicity and language were added to the survey instrument in 1994. In 1994 and 1999-2000 the personnel surveyed also broadened and included those in both full-time and part-time positions, who were employed in or funded by governmental health agencies, and who provided both direct care and population-based services.

From 1985 through 1991, the University of North Carolina at Chapel Hill School of Public Health worked with ASTPHND to collect and analyze data. In 1991 and 1994, the U.S. DHHS, Health Resources and Services Administration, Maternal and Child Health Bureau provided support to ASTPHND to administer the survey. Results from the 1994 workforce survey were described in a peer-reviewed publication by collaborators from The University of Tennessee, Knoxville, University of Minnesota, and ASTPHND. In 1999-2000 and again in 2006-07, USDA, FNS and ASTPHND developed cooperative agreements to support survey administration.

### **USDA's Objectives**

USDA, FNS requires workforce information to provide technical assistance to improve state agency administrative systems, including recruitment and retention of qualified nutrition staff. To that end, USDA, FNS provided support to ASTPHND to monitor trends in the workforce. The resulting profile of the public health nutrition workforce will be useful to USDA, FNS in determining the extent to which personnel possess the necessary qualifications to fulfill the mission of the WIC Program. In addition, FNS, WIC was interested in the characteristics of Breastfeeding Peer Counselors. The WIC Program has historically promoted breastfeeding, but has emphasized it since it developed the "*Loving Support* Model for a Successful Peer Counseling Program" in 2003. Therefore, "Breastfeeding Peer Counselor" was added to the list of position classifications used in previous survey administrations.

### **Nutrition Objectives and Healthy People 2010**

"Healthy People 2010" outlines national health objectives for the United States in an effort to identify and reduce the most significant preventable threats to health. Public health nutrition professionals and paraprofessionals have a special role in ensuring that the U.S. population reaches these health objectives. They include both professionals and paraprofessionals with unique expertise important for primary and secondary prevention, including nutrition screening, assessment, and intervention. Some public health nutrition personnel, particularly those with dietetic registration credentialing, are involved in tertiary prevention, especially for those with special health care needs. The work of public health nutrition personnel focuses on population/system-based interventions and direct client programs and services. Public health nutritionists are leaders at national, state and community levels in ensuring people in the United States achieve healthy diets and physically active lifestyles.

One goal of "Healthy People 2010" is to ensure that Federal, Tribal, State and local health agencies have the infrastructure necessary to provide effective essential public health services. This includes a well-trained, educated, skilled public health nutrition workforce. The data reported in this document provide information on the extent to which the current workforce possesses these attributes.

The current enumeration of the public health nutrition workforce was modeled on the 1999-2000 enumeration. With the addition of “year born” to the survey items, the survey instrument now contains each of the core data elements recommended in *Enumerating the Public Health Workforce*, prepared by the Public Health Society and the Center for Health Leadership and Practice for the U.S. Department of Health and Human Services Health Resources and Services Administration (Table 1)<sup>1</sup>.

Recommendations from <i>Enumerating the Public Health Workforce</i>	Data Elements in ASTPHND’s Survey
Total number of staff	Yes, by state, agency, job class and other variables
FTEs	Yes, by funding source
Occupation class	Yes, 10-category scheme
Job function	Yes, 14 categories of practice, percent time in direct service, type of client population, budget responsibilities, FTEs supervised or line responsibility
Location	Yes, state, type of agency of employment, type of work setting
Age	Yes, year born
Education level	Yes, degrees completed, public health degrees completed, degrees working toward, completion of 5 core public health courses at undergraduate or graduate level
Credentials	Yes, 12 certifications relevant to nutrition, steps toward RD or DTR
Experience	Yes, years in nutrition, public health nutrition, WIC programs
Salary range	Yes, by job classification as annual earned salary and minimum and maximum position salary; some improbably low annual salaries
Ethnicity	Yes, Latino
Race	Yes, OMB <sup>2</sup> approved categories
Gender	Yes
Language	Yes, primary and any secondary, sufficient fluency to do job

° Similar to Table 1 in *Survey of the Public Health Nutrition Workforce 1999-2000*, 2003.

<sup>1</sup> Atchinson C, Gebbie K, Thielen L, Woltring C. *Enumerating the Public Health Workforce*. Health Resources and Services Administration, U.S. Dept. of Health and Human Services. April 2001

<sup>2</sup> The Federal Office of Management and Budget at [www.whitehouse.gov/omb/fedreg/directive\\_15.html](http://www.whitehouse.gov/omb/fedreg/directive_15.html)

## Goals

The goals of ASTPHND's workforce study were:

- To identify trends in the public health nutrition workforce.
- To determine the capacity of the public health nutrition workforce in accomplishing program goals and meeting priority needs
- To identify training needs of WIC personnel in relation to their job responsibility, credentials, education, and longevity
- To measure qualifications of WIC nutrition staff in all states and territories.
- To evaluate use of a Web-based survey strategy to collect and analyze personnel data.
- To assist USDA and state public health agencies in planning and evaluating their recruitment and retention efforts.

## Study Methods

The 2006-07 public health nutrition workforce survey was a census of all public health nutrition personnel in the US states, its territories, and Tribal organizations in a public health nutrition program or service under the purview of the state or territory's official health agency. All worked as either nutrition professionals or paraprofessionals. This target population was consistent with the 1994 and 1999-2000 public health nutrition workforce surveys conducted by ASTPHND. All personnel in this target population were asked to complete the survey instrument in partial fulfillment of their job responsibilities. Support personnel in other professions and individuals trained in nutrition but not functioning in nutrition-related positions were not included. Both contracted workers and full- and part-time employees at the state, regional, and local levels were included in the survey. In addition, information was provided on any vacant positions meeting the target population definition by state or local directors.

The survey Project Team consisted of ASTPHND's Executive Director, the Chair of ASTPHND's Data and Epidemiology Committee, and two public health nutrition researchers from The University of Tennessee, Knoxville. The Project Team was responsible for survey development and implementation, data collection, data management and cleaning, and reporting results. Members of the ASTPHND Data and Epidemiology Committee provided feedback and guidance on both survey development and implementation. A Nutrition Specialist with the Food and Nutrition Service of the US Department of Agriculture facilitated project movement through the federal approval processes of *Federal Register* and Office of Management and Budget reviews.

The Project Team developed a 42-item, fixed response survey instrument for the 2006-07 census. The 2006-07 survey instrument was designed in large part from the 1999-2000 survey instrument to enable comparisons of the two workforces. The Project Team also considered how the instrument could be developed and administered to minimize respondent burden and to be applicable across states and territories. Where possible, survey items in the 2006-07 and 1999-2000 instruments were the same. In cases where items in the previous instrument proved problematic for respondents, the items were reviewed and revised to address the problems. In some cases new items were proposed in response to trends in the field or for more detailed information. For example, this survey included new items on employee benefits, year born, and retirement intention. Items on salary compensation were revised to reflect broadbanding of salaries in some states.

To expedite survey implementation, decrease respondent burden, and improve the data collection and analysis process, the 2006-07 survey was administered primarily in a Web-based, online format. Survey design, conversion of the print survey format to Web-based format, and implementation were guided by members of ASTPHND'S Data and Epidemiology Committee (See Appendix A for a list of the committee members). Pilot testing indicated that the print survey required 26.2 minutes to complete, while the Web-based version required 20.6 minutes.

Though intended to be administered primarily on-line, a print version of the survey (Appendix C) was available for personnel without Internet access or for whom there were concerns about their ability to understand items or interact with computers. Arrangements were made with the

Project Team for data entry of completed print surveys into the Web-based format by designated state personnel. Some agencies requested permission to administer the survey in a group format to minimize any potential language barriers. Careful instructions were provided by the Project Team to prevent any breach of confidentiality and to maintain human subjects protection. The survey instructions and then each individual survey item were read orally by a group leader to nutrition personnel who were seated so that their responses entered onto their own print copies of the survey were not visible to anyone else in the room. Following this oral administration of the survey, respondents sealed their completed surveys in blank envelopes and provided them to the group leader. The group leader then submitted all sealed surveys to the state designee for data-entry of the individual completed surveys.

An abbreviated, 11-item version of the 42-item survey was developed to capture data about vacant positions and completed by state personnel or local agency directors. This vacant position survey could be completed on-line or in print formats. If they were completed in print format, then, like the print versions of the 42-item survey, these completed surveys were returned to each state's designee, where arrangements were made for data entry.

Survey items for the filled position and vacant position surveys collected three categories of information: position information, regardless of whether the position was filled or vacant; more detailed information for filled positions; and information on the individual responding to the survey, except for those completing the vacant position survey. Because an individual could work in multiple positions, a shortened 28-item version of the 42-item survey that captured position-specific data only was developed. This reduced the respondent burden, because personnel holding multiple positions did not need to complete the full 42-item survey for each position. Instead they could answer the complete 42-item version for one position and then the shorter 28-item position survey for the other positions held. .

Because of the on-line format, data collection did not require state-level entry, as in the past, except for those surveys completed in print format. As in previous survey administrations, State Contacts reviewed responses to pre-selected items as part of data cleaning. These included items on salary and source of funding, because they had required the most data cleaning in the past. However, unlike previous administrations when state personnel reviewed and edited completed print surveys, in this survey administration State Contacts used electronic monthly reports generated by The University of Tennessee researchers that included individuals' responses to the pre-selected items. State Contacts cleaned these data files as appropriate and returned them to the University, where the overall data base was revised. State contacts also maintained a master file of the monthly reports to assist in monitoring, promoting, and reporting state response rates.

Training materials for state and territorial directors/designees regarding survey administration within states were available on-line ([www.astphnd.org](http://www.astphnd.org)) in July 2006, prior to a series of 10 training conference calls held August through September. Training materials consisted of:

- Workforce Survey Orientation (PowerPoint file)
- Workforce Survey Instructions for Data Collection (MS WORD file)
- Sample Communications with Nutrition Staff Members (MS Word file)
- Sample Communications with Local Agency Directors file (MS Word file)
- Filled Position Survey (pdf)

- Filled Position Master File (Excel file)
- Sample State Monthly Report (Excel file)
- Vacant Position Survey (pdf)
- Vacant Position Master File (Excel file)

State directors/designees were instructed to designate a State Contact responsible for survey administration and survey-related communication with ASTPHND within their state. The survey was available on-line from September 2006-March 2007. Data collected during the survey were housed on The University of Tennessee, Knoxville server using the mrInterview on-line survey program (mrInterview ver. 4.0, 2002-2006, SPSS Ltd., Chicago, IL) and edited in SPSS version 15.0 (SPSS 15.0 for Windows, ver. 15.0.1, November 22, 2006, SPSS Inc., Chicago, IL).

All 50 states and 6 territories were asked to participate. Unlike the 1999-2000 workforce survey, Indian Tribal Organizations were captured within the state in which they were located. Each state/territory-specific response rate was calculated as the proportion of filled positions surveyed that were completed. Vacant positions were not included in response rate calculations. The overall response rate was 80.0% (10,312/12,886 positions) (Table 2); state/territory response rates ranged from 29.8% to 100%. All 50 states and 1 territory participated. The only state not participating in the 1999-2000 survey, Idaho, participated in this census.

Data were analyzed using SPSS (SPSS 15.0 for Windows, Release 15.0.1, SPSS Inc., November 22, 2006). Descriptive, univariate and bivariate analyses were performed to be consistent with the 1999-2000 survey. Because of the large presence of workers in the WIC program, results are reported for the public health nutrition workforce overall and for the WIC and non-WIC workforces. The survey instruments for filled and vacant positions should be used in conjunction with reported results in all interpretations of the survey findings. Readers are advised also to note the denominator used in the analysis of each survey item. Analyses for some items were based on responses about both filled and vacant positions (n=10,683), while others were based only on responses about filled positions (n=10,312 filled positions; n=371 vacant position). In addition, some items referred to person characteristics (such as education and demographics), while others referred to position characteristics (such as supervisory or fiscal responsibilities). Because there were some individuals who held multiple positions, the number of persons is less than the number of positions. A total of 119 persons worked in multiple positions and completed the survey once for each survey; 10,193 persons worked in 10,312 positions.

An advantage to the on-line format was that responses to items could be required for forward movement in the survey instrument, thus limiting item non-response. However, to limit respondent burden not all items required responses. This included, for example, the items on ethnicity and race, in part because they were viewed as sensitive items and with high item non-response rates in the previous survey administration. Items that did not require responses for forward movement in the on-line survey were analyzed to include non-responses. Therefore, results in tables include non-responses for these items.

The study design is described in greater detail in Appendix D.

State	Responses	Total Positions	Response Rate	State	Responses	Total Positions	Response Rate
Alaska	71	90	78.9%	Mississippi	184	198	92.9%
Alabama	104	105	99.0%	Montana	57	94	60.6%
Arkansas	50	55	90.9%	North Carolina	450	495	90.9%
Arizona	489	620	78.9%	North Dakota	67	79	84.8%
California	1670	2234	74.8%	Nebraska	129	135	95.6%
Colorado	288	397	72.5%	New Hampshire	53	76	69.7%
Connecticut	41	62	66.1%	New Jersey	189	209	90.4%
District of Columbia	53	70	75.7%	New Mexico	102	108	94.4%
Delaware	28	28	100.0%	Nevada	78	172	45.3%
Florida	620	620	99.4%	New York	583	755	77.2%
Georgia	137	142	96.5%	Ohio	240	NAv	---
Guam***	21	24	87.5%	Oklahoma	81	146	55.5%
Hawaii	71	107	66.4%	Oregon	226	242	93.4%
Iowa	115	123	93.5%	Pennsylvania	585	602	97.2%
Idaho	127	172	73.8%	Rhode Island	48	NAv	---
Illinois	198	304	65.1%	South Carolina	151	162	93.2%
Indiana	138	145	95.2%	South Dakota	38	49	77.6%
Kansas	106	108	98.1%	Tennessee	199	224	88.8%
Kentucky	150	161	93.2%	Texas	583	900	64.8%
Louisiana	85	132	64.4%	Utah	35	76	46.1%
Massachusetts	456	524	87.0%	Virginia	219	302	72.5%
Maryland	146	232	62.9%	Vermont	56	68	82.4%
Maine	52	61	85.2%	Washington	37	81	45.7%
Michigan	66	131	50.4%	Wisconsin	228	282	80.9%
Minnesota	117	392	29.8%	West Virginia	106	109	97.2%
Missouri	158	234	67.5%	Wyoming	35	49	71.4%
				Total*	10312	12886	80.0%

° Similar to Table 2 in *Survey of the Public Health Nutrition Workforce 1999-2000*, 2003.

\* Total is based on filled public health nutrition positions.

## Study Findings

The purpose of this section is to describe the 2006-07 public health nutrition workforce overall and with comparisons of the WIC and non-WIC workforces. The 2006-07 survey was designed in part to describe how the workforce had changed since the previous survey in 1999-2000. To this end, many of the survey items were the same for the two time periods. Therefore, each table in these Study Findings that is similar to one from the 1999-2000 Study Findings references the corresponding table number from that report. It is important to remember, however, that the two surveys were administered in very different modes (print in 1999-2000 and on-line in 2006-07) and the overall response rates differed (88.0% in 1999-2000 and 80.0% in 2006-07). Therefore, all comparisons presented in the following findings must be used with caution. They are informative, however, given the large number of respondents in both surveys and the relatively high response rates.

### WIC's Presence in the Public Health Nutrition Workforce

Almost 90% (88.6%) of all of the reporting positions, including full-time, part-time and vacant positions, worked in WIC at the time of the survey (Table 3). This represents a decrease from 1999-2000, when 90.4% of the positions were in WIC, but an increase from 1994 when 85.4% of respondents reported WIC as their area of practice. Despite the current decrease, WIC remains the overwhelming program of work for the workforce.

WIC and Non-WIC Job Functions	N	%
WIC*	9467	88.6%
Non-WIC	1216	11.4%
Total**	10683	100.0%

° Similar to Table 3 in *Survey of the Public Health Nutrition Workforce 1999-2000*, 2003.

\* Includes non-WIC funded persons and positions.

\*\* Total is based on filled and vacant public health nutrition positions.

### Agency of Employment and Primary Work Location of the Public Health Nutrition Workforce

As shown in Table 4, more than two-thirds of workforce positions (69.0%) were employed (or contracted) by official health agencies at the state and local levels, consistent with the 1999-2000 workforce. Most of these (41.9%) were employed by local health agencies. Similarly, most of the WIC positions (43.5%) were employed at the local level rather than the state level (26.0%). In contrast most non-WIC positions were employed at the state level (35.0%) compared to the local level (29.2%). The other primary agency that employed nutrition personnel was non-profit organizations, which employed or contracted about one-quarter of positions overall (25.1%) and of WIC (25.5%) and non-WIC (21.9%) positions. Compared to 1999-2000, proportionately more positions were employed by state health agencies (27.1% vs. 19.9%), while less were employed by local health agencies (41.9% vs. 47.9%) and non-profit organizations (25.1% vs. 28.4%). These changes mirrored the changes for WIC positions, but contrasted with the changes

for non-WIC positions, where state health agencies employed slightly less (35.0% vs. 36.6%) and non-profit organizations employed more (21.9% vs. 18.5%) positions. Respondents had the option to select “other” for employment agency and, although this was a small percent of positions (3.8%), this was an increase from 1.4% in 1999-2000. Primary work location of the WIC and non-WIC workforces, therefore, differed with proportionately more WIC positions at the local level and more non-WIC positions at the state level.

**Table 4°. Agency of Employment (Question 1)**

Agency type	WIC/Non-WIC					
	WIC		Non-WIC		Total	
	N	%	N	%	N	%
State government health agency	2465	26.0%	426	35.0%	2891	27.1%
Local government (city, county) health agency	4122	43.5%	355	29.2%	4477	41.9%
Indian Health Services, tribal agency or tribal health center	140	1.5%	48	3.9%	188	1.8%
Non-profit organization	2412	25.5%	266	21.9%	2678	25.1%
For-profit organization	34	0.4%	8	0.7%	42	0.4%
Other	294	3.1%	113	9.3%	407	3.8%
Total*	9467	100.0%	1216	100.0%	10683	100.0%

° Similar to Table 4 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\* Total is based on filled and vacant public health nutrition positions.

Although public health nutrition personnel may be employed by a particular type of agency, their place of employment can differ. For example, personnel may work at a county-level health agency, but be employed by the state health agency. Table 5 describes the primary location or physical site where personnel work. More than half (53.4%) of positions overall and within WIC (53%) were located at central offices of state, district/regional, and local health agencies or field office/clinics of government health agencies. Over one-quarter (26.5%) of positions overall and within WIC (28.7%) were located at community/rural/migrant health centers or clinics. These proportions were similar for non-WIC positions, although the distributions within these location categories differed with more non-WIC compared to WIC positions located at the central office of a state government health agency (21.9% vs. 5.6%) and fewer positions located at the central office of a local government health agency (22.5% vs 30.1%), field office or clinic of a government health agency (7.2% vs 14.5%), and community/rural/migrant health centers or clinics (8.6% vs. 28.7%).

**Table 5°. Primary Work Location (Question 2)**

Primary location	WIC/Non-WIC					
	WIC		Non-WIC		Total	
	N	%	N	%	N	%
Central office of state government health agency.	534	5.6%	266	21.9%	800	7.5%
Central office of district or regional (sub-state) government	268	2.8%	55	4.5%	323	3.0%
Central office of local (county, city or multi-county) government	2847	30.1%	274	22.5%	3121	29.2%
Community/rural/migrant health center or clinic	2721	28.7%	105	8.6%	2826	26.5%
Field office or clinic of a government health agency	1375	14.5%	88	7.2%	1463	13.7%
HMO* or other managed care setting	10	0.1%	0	0.0%	10	0.1%
Hospital	325	3.4%	67	5.5%	392	3.7%
Indian Health Services, tribal agency or tribal health center	114	1.2%	38	3.1%	152	1.4%
Other private/independent entity/office	705	7.4%	83	6.8%	788	7.4%
Other	568	6.0%	240	19.7%	808	7.6%
Total**	9467	100.0%	1216	100.0%	10683	100.0%

° Similar to Table 5 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\* Health Maintenance Organization

\*\*Total is based on filled and vacant public health nutrition positions.

### Job Classification of the Public Health Nutrition Workforce

Respondents were asked to classify their job from a list of position descriptions, but without any designation of a particular job classification. These position descriptions corresponded with 9 job classifications described in *Personnel in Public Health Nutrition for the 1990's*<sup>3</sup> and a single job classification (Breastfeeding Peer Counselor) used by the Food and Nutrition Service, USDA (Table 6). Respondents also had the option to select “Other” and then to describe the job performed.

<sup>3</sup> Prior to survey administration these job classifications were still considered relevant and appropriate by the Data and Epidemiology Committee. During survey administration a national committee was convened to review and update *Personnel in Public Health Nutrition for the 1990's*. At the time of writing the survey's final report, the revision was not completed. However, the committee Chair, Dr. Janice Dodds, University of North Carolina, confirmed that minor revisions in the position descriptions would be in the final and revised document. Therefore, the position descriptions and classifications were not considered time-limited for the purposes of the current survey administration.

The primary focus of the job classifications differed. The job classifications with “Public Health Nutrition” in the title had more population/system-focused responsibilities, while the other job classifications had more direct care/client-focused responsibilities. Each can be categorized within a job series, including Management Series (Public Health Nutrition Director, Assistant, and Supervisor), Professional Series (Public Health Nutrition Consultant, Public Health Nutritionist, Clinical Nutritionist, and Nutritionist), or Technical/Support Series (Nutrition Technician and Nutrition Assistant). To allow comparisons between professionals and paraprofessionals, jobs classified within the Management and Professional Series were collapsed into a Professional classification and jobs classified within the Technical/Support Series and also the Breastfeeding Peer Counselor job classification were collapsed into a Paraprofessional classification.

Title of job classification	Description
Public Health Nutrition Director	The highest-level nutrition position in a state, large city, county or voluntary public health agency. Major functions of this position are policy-making, planning/evaluation, fiscal control, management and supervision. The position is usually the head of a nutrition program unit, where the director is responsible for conducting a needs assessment, developing a comprehensive plan and budget for the nutrition services of the agency and has line authority over staff.
Assistant Public Health Nutrition Director	The second highest administrative and policy-making public health nutrition position in a state, large city, county or voluntary public health agency. The assistant director may participate in several delegated functions or be assigned primary responsibility for managing the nutrition component of one or more major program areas. The person in this position serves as Acting Director in the director's absence.
Public Health Nutrition Supervisor	Supervises the work of an assigned number of other nutritionists, nutrition technicians, and nutrition assistants that deliver nutrition services and nutritional care in the public health agency. Supervision includes training, delegating, directing, coordinating, evaluating and reporting the work of subordinates.
Public Health Nutrition Consultant	Includes both generalized and specialized nutrition consultants who provide expert technical assistance, professional guidance, and in-service education in program development or case management. Consultation may be given to the administrator, other nutritionists or other health professionals. Consultants include those who work out of a central headquarters office or in the health agency's regional or district offices.
Public Health Nutritionist	A nutrition professional with academic training in public health who is employed by the state or local public health agency to assess the community's nutrition needs and to plan, direct and evaluate community nutrition intervention programs that meet these needs. Interventions promote health and prevent disease among the population at large.

Title of job classification	Description
Clinical Nutritionist	A professional with expertise in the complex nutritional management of medically high risk individuals requiring physician-prescribed dietary and nutrition regimens including enteral and parenteral nutrition support. In public health agencies, clinical nutritionists work as case managers and/or care coordinators and nutrition counselors. They also may work as educators in programs where more in-depth expertise in therapeutic nutrition is required, including high-risk pregnancy, neonatal and pediatric clinics; children's special services; AIDS; and home health and home hospice services.
Nutritionist	Nutritionist A nutrition professional employed in a public health agency primarily to provide nutrition education to the public and to coordinate and provide direct nutritional care to agency clients in health and disease throughout the life span.
Nutrition Technician	A paraprofessional who works under the close supervision of a nutritionist to provide routine technical support services in public health agency clinics. This work includes normal nutrition education, screening using prescribed protocols, record keeping, and outreach.
Nutrition Assistant/Aide	An auxiliary nutrition worker from the indigenous community who is trained on-the-job to work under the close supervision of nutrition professionals to provide routine nutrition education, including interpretation for clients who do not speak English. Assistants and aides also carry out assigned tasks in client outreach and screening.
Breastfeeding Peer Counselor	A paraprofessional support person who provides basic breastfeeding information, encouragement and counseling to WIC pregnant and breastfeeding mothers in WIC clinics, by telephone, home visits, and/or hospital visits at scheduled intervals, and is available outside usual 8 to 5 working hours. Breastfeeding peer counselors inform new mothers about breastfeeding benefits and how to prevent and handle common breastfeeding problems.

° Similar to Table 6 in *Survey of the Public Health Nutrition Workforce 1999-2000*, 2003.

The majority of positions were professional (71.4%), including those in WIC (71.3%) and non-WIC (73.8%) (Table 7). Within WIC, paraprofessionals represented 26.4% of the workforce. Only 2.5% of the WIC workforce could not be classified as professional or paraprofessional, because “Other” was selected as a job classification. The most frequently selected job classifications within WIC were Nutritionist (44.0%), Breastfeeding Peer Counselor (12.6%) and Public Health Nutrition Supervisor (11.6%). These 3 positions accounted for over two-thirds (68.2%) of the WIC workforce. Of these 3 positions, only the Public Health Nutrition Supervisor position typically is considered beyond entry-level.

Within non-WIC positions, the 4 most frequently selected job classifications (56.9%) were “Public Health Nutrition Consultant,” “Public Health Nutritionist,” “Clinical Nutritionist,” and “Nutritionist.” Of these four positions, only the “Nutritionist” position is typically considered

entry-level. Also in contrast to the WIC workforce, paraprofessionals represented only 6.7% of the non-WIC positions. However, 19.4% of non-WIC positions were selected as “Other.” There was no consistent description of “Other” position detected to enable post-hoc assignment to one

<b>Table 7°. Job Classifications (Question 4)</b>						
Job Classification	WIC/Non-WIC					
	WIC		Non-WIC		Total	
	N	%	N	%	N	%
<i>Management Series</i>						
PH Nutrition Director	361	3.8%	60	4.9%	421	3.9%
PH Nutrition Assistant Director	232	2.5%	66	5.4%	298	2.8%
PH Nutrition Supervisor	1095	11.6%	80	6.6%	1175	11.0%
<i>Professional Series</i>						
PH Nutrition Consultant	404	4.3%	218	17.9%	622	5.8%
PH Nutritionist	290	3.1%	173	14.2%	463	4.3%
Clinical Nutritionist	187	2.0%	142	11.7%	329	3.1%
Nutritionist	4165	44.0%	159	13.1%	4324	40.5%
<i>Technical/ Support Series</i>						
Nutrition Technician	934	9.9%	37	3.0%	971	9.1%
Nutrition Assistant	365	3.9%	18	1.5%	383	3.6%
Breastfeeding Peer Counselor	1194	12.6%	27	2.2%	1221	11.4%
<i>Other (Unknown Series)</i>						
Other	240	2.5%	236	19.4%	476	4.5%
Total*	9467	100.0%	1216	100.0%	10683	100.0%

° Similar to Table 7 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\* Total is based on filled and vacant public health nutrition positions.

of the other job classifications or a new one. Therefore, because of the high proportion of non-WIC positions that could not be classified into the pre-determined job classifications, proportional representation within the non-WIC workforce must be viewed with caution. Similarly, direct comparisons of the WIC and non-WIC workforces are inappropriate.

Direct comparisons to results from the 1999-2000 survey may be inappropriate, because following administration of that survey the job classification of “Breastfeeding Counselor” was created from the “Other” job classification. Therefore, as noted in that report, positions within this classification may be under-reported. Given this limitation, compared to 1999-2000 it is interesting to note that within WIC there were proportionately more Breastfeeding Peer Counselors (12.6% vs. 0.4%), and Nutritionists (44.0% vs. 33.7%) with direct client responsibilities and more Public Health Nutrition Supervisors (11.6% vs. 10.3%) and Public Health Nutrition Assistant Directors (2.5% vs. 1.2%) with population/system-focused responsibilities. The job classifications that decreased within WIC were Public Health Nutrition Director (3.8% vs. 4.1%), Public Health Nutritionist (3.1% vs. 9.3%) and Clinical Nutritionist (2.0% vs. 4.9%, the latter two of which have dual population/system-focused and direct/client care responsibilities. Unlike WIC Directors, the other job classifications in the Management

Series increased, including Public Health Nutrition Assistant Directors (2.5% vs 1.2%) and Public Health Nutrition Supervisors (11.6% vs. 10.3%).

### **Years of Practice in Nutrition/Dietetics, Public Health Nutrition, and WIC**

WIC and Non-WIC Workforces. The public health nutrition workforce was very experienced, with over half (51.8%) having at least 10 years of dietetics/nutrition experience and 42.7% having at least 10 years of public health nutrition experience more specifically (Table 8). Similarly, for the WIC workforce overall, over half (51.6%) and 43.5% had at least 10 years of dietetics/nutrition and public health nutrition experience, respectively. While the non-WIC and WIC workforces were similar for the proportion of personnel with at least 10 years of dietetics/nutrition experience (52.4% and 51.6%, respectively), the non-WIC workforce had fewer personnel with at least 10 years of public health nutrition experience (36.1% vs. 43.5%). Fewer than 30% of both workforces had personnel with less than 5 years of experience in dietetics/nutrition. However, 35.1% of the WIC workforce and 44.2% of the non-WIC workforce had less than 5 years of public health nutrition experience. These findings all suggest that the WIC and non-WIC workforces had similar years of dietetics/nutrition experience. However, the non-WIC workforce had fewer years of public health nutrition experience.

WIC Workforce. Years of experience were compared for WIC professionals and paraprofessionals. As was true in 1999-2000 WIC professionals were more experienced than WIC paraprofessionals: 58.5% of professionals compared to 33.9% of paraprofessionals had at least 10 years of dietetics/nutrition experience, and 47.8% compared to 32.4% had at least 10 years of public health nutrition experience (Table 9). While about half of the WIC workforce was very experienced, another large proportion was relatively inexperienced. This was particularly true for paraprofessionals, where about half had less than 5 years of both dietetics/nutrition and public health nutrition experience (45.7% and 47.2%, respectively). This compared to WIC professionals, where 23.2% and 30.3% had less than 5 years of experience in these respective areas.

The difference in years of experience between these two groups was somewhat blunted when experience working in the WIC program was compared (Table 10). Almost 45% (44.7%) of WIC professionals and 34.2% of WIC paraprofessionals had more than 10 years of experience working in WIC. Proportionately more paraprofessionals (21.9%) compared to professionals (13.8%) had less than 1 year of experience working in WIC.

The proportions of WIC personnel who were either very experienced or less experienced both increased since 1999-2000. The 1999-2000 WIC workforce had only 47.3% and 33.7% with less than 10 years of dietetics/nutrition and public health nutrition experience. Only 3.6% (compared to 7.3%) had less than 1 year of dietetics/nutrition experience and 5.5% (compared to 16.6%) had less than 1 year of public health nutrition experience. Of concern is that the WIC workforce with 1-9 years of experience decreased from 1999-2000 from 48.3% to 41.1% with dietetics/nutrition experience and from 59.8% to 39.9% with public health nutrition experience. This suggests that while recruitment of the new and less experienced increased, retention except for the most

**Table 8°. Years of Practice in Nutrition and Public Health Nutrition (Questions 5 and 6)—A Comparison of WIC and Non-WIC Persons**

Years	WIC/Non-WIC											
	WIC				Non-WIC				Total			
	Nutrition		PHN		Nutrition		PHN		Nutrition		PHN	
	N	%	N	%	N	%	N	%	N	%	N	%
<1	658	7.3%	1501	16.6%	98	8.7%	278	24.6%	756	7.4%	1779	17.5%
1-4	2018	22.3%	1679	18.5%	230	20.4%	221	19.6%	2248	22.1%	1900	18.6%
5-9	1707	18.8%	1939	21.4%	210	18.6%	222	19.7%	1917	18.8%	2161	21.2%
10-19	2576	28.4%	2774	30.6%	222	19.7%	253	22.4%	2798	27.5%	3027	29.7%
≥20	2105	23.2%	1171	12.9%	369	32.7%	155	13.7%	2474	24.3%	1326	13.0%
Total*	9064	100.0%	9064	100.0	1129	100.0	1129	100.0	10193	100.0	10193	100.0

° Similar to Table 8 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\* Total is based on individual persons.

**Table 9°. Years of Practice in Nutrition and Public Health Nutrition (Questions 5 and 6)—Comparison of WIC Professionals and WIC Paraprofessionals**

Years	WIC Professionals				WIC Paraprofessionals				Other				Total			
	Nutrition		PHN		Nutrition		PHN		Nutrition		PHN		Nutrition		PHN	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
<1	259	4.0%	807	12.5%	372	15.5%	644	26.9%	27	11.9%	50	22.1%	658	7.3%	1501	16.6%
1-4	1237	19.2%	1148	17.8%	725	30.2%	486	20.3%	56	24.8%	45	19.9%	2018	22.3%	1679	18.5%
5-9	1174	18.2%	1401	21.8%	488	20.4%	491	20.5%	45	19.9%	47	20.8%	1707	18.8%	1939	21.4%
10-14	1906	29.6%	2102	32.6%	606	25.3%	609	25.4%	64	28.3%	63	27.9%	2576	28.4%	2774	30.6%
≥20	1864	28.9%	982	15.2%	207	8.6%	168	7.0%	34	15.0%	21	9.3%	2105	23.2%	1171	12.9%
Total	6440	100%	6440	100%	2398	100%	2398	100%	226	100%	226	100%	9064	100%	9064	100%

° Similar to Table 9 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\* Total is based on individual persons.

experienced decreased, leading to a workforce that is both relatively “young” and “seasoned,” in terms of experience.

Some of this can be explained by the composition of the WIC workforce, where 4.0% of professionals compared to 15.5% of paraprofessionals had less than 1 year of dietetics/nutrition experience; 12.5% of professionals and 26.9% of paraprofessionals had less than 1 year of public health nutrition experience (Table 9). Since 1999-2000, there was an important increase in the proportion of paraprofessionals with less than 1 year of experience in dietetics/nutrition (from 4.9% to 15.5%) and public health nutrition (from 5.5% to 26.9%). However, the proportion of WIC professionals and paraprofessionals with at least 10 years of experience also increased. Among professionals, those more experienced in dietetics/nutrition increased from 55.4% to 58.5% and those more experienced in public health nutrition increased from 37.1% to 47.8%. Similarly, WIC paraprofessionals with at least 10 years of dietetics/nutrition experience increased from 31.2% to 33.9% and of public health nutrition experience from 26.8% to 32.4%. As with the WIC workforce overall, the proportion of WIC professionals and paraprofessionals with 1-9 years of dietetics/nutrition and public health nutrition experience decreased. This suggests that retention is an issue for both WIC professionals and paraprofessionals.

**Table 10°. Years of WIC Experience (Question 8)—A Comparison of WIC Professionals and Paraprofessionals**

Years in WIC	Professional or paraprofessional							
	Professional		Paraprofessional		Other		Total	
	N	%	N	%	N	%	N	%
<1	891	13.8%	525	21.9%	39	17.3%	1455	16.1%
1-4	1263	19.6%	537	22.4%	54	23.9%	1854	20.5%
5-9	1396	21.7%	507	21.1%	45	19.9%	1948	21.5%
10-19	2046	31.8%	644	26.9%	69	30.5%	2759	30.4%
≥20	831	12.9%	174	7.3%	19	8.4%	1024	11.3%
No Response	13	0.2%	11	0.5%	0	0.0%	24	0.3%
Total*	6440	100.0%	2398	100.0%	226	100.0%	9064	100.0%

° Similar to Table 10 in *Survey of the Public Health Nutrition Workforce 1999-2000*, 2003.

\* Total is based on respondents to the survey

Non-WIC Workforce. While the non-WIC workforce appeared to have less public health nutrition experience compared to the WIC workforce, it, too, may have some problems with its “aging” and retention, particularly among those who are more experienced. Compared to the 1999-2000 non-WIC workforce, there were proportionately fewer of the workforce with at least 10 years of nutrition/dietetics (52.4% vs. 67.7%) and of public health nutrition (36.1% vs. 38.4%) experience. Of these, those with 10-19 years of experience decreased proportionately from 36.9% to 19.7% for dietetics/nutrition experience and from 28.2% to 22.4% for public health nutrition experience. However, almost one-third (32.7%) had at least 20 years of dietetics/nutrition experience.

## Personnel Management and Budget Responsibilities of the Workforce

According to *Personnel in Public Health Nutrition for the 1990's* the 3 job classifications that have management and fiscal responsibilities are those in the Management Series, or the Public Health Nutrition Director, Assistant Director, and Supervisor. Among these job classifications, 91.5%, 71.1% and 76.7%, respectively, had direct supervision responsibility for both nutrition and non-nutrition FTE positions, ranging from 1 to 20 or more (Table 11). Respondents reported the types of personnel for whom they had direct supervisory responsibility. Over 80% (83.2%) of Public Health Nutrition Directors, 59.0% of Public Health Nutrition Assistant Directors, and 62.9% of Public Health Nutrition Supervisors directly supervised at least 1 nutrition FTE (Table 12). Non-nutrition personnel directly supervised were other health professionals, support staff and paraprofessionals (Tables 13-15). More Public Health Nutrition Directors (40%), Assistant Directors (23.5%), and Supervisors (17.2%) compared to other nutrition personnel had direct supervisory responsibility of other health professionals (Table 13). The majority of Public Health Nutrition Directors (76.8%) also directly supervised support staff (Table 14). This contrasted with Assistant Directors and Supervisors, of which only 46.2 % and 49.4%, respectively, directly supervised support staff. Supervision of paraprofessionals was similar for Directors and Supervisors, with about 45% (45.6% and 46.3%, respectively) compared to only 29.3% of Assistant Directors supervising this group (Table 15). These findings reveal a significant proportion of personnel in the Public Health Nutrition Management Series have direct supervisory responsibility, including not only nutrition FTEs, but also others. Proportionately more Public Health Nutrition Directors directly supervise other health professionals and support staff, while more Directors and Supervisors directly supervise paraprofessionals.

While *Personnel in Public Health Nutrition for the 1990's* does not delineate management and fiscal responsibilities for those in the Professional Series, between 5.7% and 17.1% of positions reported direct supervision of both nutrition and non-nutrition FTE positions (Table 11). Only between 2.7% to 9.8% of these positions reported direct supervision of at least 1 nutrition FTE position. Among this group, proportionately Public Health Nutrition Consultants directly supervised other personnel, including health professionals (5.3%), support staff (6.2%), and paraprofessionals (7.1%). Overall findings of supervision support the job classification responsibilities as delineated in *Personnel in Public Health Nutrition for the 1990's* with those in the Management Series have primary responsibility for management and supervision compared to those within the Professional Series. .

The current survey administration also asked personnel to report the number of total FTEs for which they had both direct responsibility for hiring, managing, promoting, and firing, and indirect responsibility for oversight, technical assistance or consultation. Almost 95% (93.6%) of Public Health Nutrition Directors, 83.2% of Assistant Public Health Nutrition Directors, and 84.3% of Public Nutrition Supervisors reported having both direct and indirect supervisory responsibility (Table 16). For all 3 job classifications the proportion with both direct and indirect supervisory responsibility was higher than the proportion with only direct responsibility. For example, for Directors, 93.6% and 91.5% had both direct and indirect or only direct supervisory responsibility, respectively. Similarly, for Assistant Directors, 83.2% had both direct and indirect responsibility and only 71.1% had direct responsibility. The proportion of Public Health Nutrition Supervisors with both direct and indirect responsibility also was higher (84.3%)

compared to those with only direct responsibility (76.7%). These findings suggest a significant level of indirect responsibility as technical assistance, consultation, and oversight.

Both direct and indirect supervisory responsibility of FTEs was reported by other professional personnel. Interestingly, 35.3% of Public Health Nutrition Consultants, 20.2% of Public Health Nutritionists, 13.0% of Clinical Nutritionists, and 15.5% of Nutritionists reported both direct and indirect supervisory responsibility. Again, because these proportions are much higher than the proportion with direct supervisory responsibility, these Professional Series personnel seem to have significant responsibility for technical assistance, consultation, and oversight. .

Management responsibilities also include fiscal management of agency and program budgets. Public Health Nutrition Directors had the most fiscal and budgetary responsibility: 62.0% had responsibility and control for the entire agency's nutrition program budget and 32.4% had responsibility for a specific budget (Table 17). Responsibility for a specific budget, as opposed to the entire agency's nutrition budget, tended to be shared among a number of job classifications. For example, 46.4% of Public Health Nutrition Assistant Directors had responsibility for a specific budget. Between 20.1%-46.4% of personnel with population/system-focused responsibilities, signified by "Public Health Nutrition" in their job classification, had responsibility for a specific budget.

**Table 11°. Total FTEs (including nutrition and non-nutrition positions) Directly Supervised by Professional Job Classifications of Filled Positions (Question 9)**

Job Classification	Direct Supervision of FTEs											
	None		1-4		5-9		10-19		≥20		Total*	
	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %
<i>Management Series</i>												
PHN Director	32	8.5%	78	20.8%	139	37.1%	70	18.7%	56	14.9%	375	100.0%
PHN Assistant Director	79	28.9%	60	22.0%	76	27.8%	42	15.4%	16	5.9%	273	100.0%
PHN Supervisor	240	23.3%	252	24.5%	308	29.9%	180	17.5%	49	4.8%	1029	100.0%
<i>Professional Series</i>												
PHN Consultant	479	82.9%	61	10.6%	24	4.2%	11	1.9%	3	0.5%	578	100.0%
PH Nutritionist	353	88.0%	35	8.7%	9	2.2%	4	1.0%	0	0.0%	401	100.0%
Clinical Nutritionist	282	94.3%	11	3.7%	5	1.7%	1	0.3%	0	0.0%	299	100.0%
Nutritionist	3789	92.3%	216	5.3%	77	1.9%	21	0.5%	1	0.0%	4104	100.0%
<i>Other (Unknown Series)</i>												
Other	374	84.0%	46	10.3%	17	3.8%	5	1.1%	3	0.7%	445	100.0%
Total**	5628	75%	759	10.1%	655	8.7%	334	4.5%	128	1.7%	7504	100.0%

° Similar to Table 11 in *Survey of the Public Health Nutrition Workforce 1999-2000*, 2003.

\* Improbable responses were excluded from analysis because total for indirect and direct positions supervised was less than total for direct positions supervised.

\*\* Total is based on all filled public health nutrition positions.

<b>Table 12°. Nutrition FTEs Supervised by Professional Job Classifications of Filled Positions (Question 10)</b>														
Job Classification	Supervision of nutrition FTEs													
	None		1-4		5-9		10-19		≥20		No Response*		Total**	
	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %
<i>Management Series</i>														
PHN Director	31	8.3%	201	53.6%	77	20.5%	26	6.9%	8	2.1%	32	8.5%	375	100.0%
PHN Assistant Director	33	12.1%	92	33.7%	54	19.8%	10	3.7%	5	1.8%	79	28.9%	273	100.0%
PHN Supervisor	143	13.9%	447	43.4%	154	15.0%	37	3.6%	9	0.9%	239	23.2%	1029	100.0%
<i>Professional Series</i>														
PHN Consultant	42	7.3%	37	6.4%	14	2.4%	4	0.7%	2	0.3%	479	82.9%	578	100.0%
PH Nutritionist	22	5.5%	24	6.0%	2	0.5%	0	0.0%	0	0.0%	353	88.0%	401	100.0%
Clinical Nutritionist	9	3.0%	7	2.3%	0	0.0%	1	0.3%	0	0.0%	282	94.3%	299	100.0%
Nutritionist	181	4.4%	118	2.9%	13	0.3%	1	0.0%	2	0.0%	3789	92.3%	4104	100.0%
<i>Other (Unknown Series)</i>														
Other	41	9.2%	25	5.6%	3	0.7%	2	0.4%	0	0.0%	374	84.0%	445	100.0%
<b>Total***</b>	<b>502</b>	<b>6.7%</b>	<b>951</b>	<b>12.7%</b>	<b>317</b>	<b>4.2%</b>	<b>81</b>	<b>1.1%</b>	<b>26</b>	<b>0.3%</b>	<b>5627</b>	<b>75%</b>	<b>7504</b>	<b>100.0%</b>

° Similar to Table 12 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\* Non-response to nutrition FTEs includes those reporting no direct supervision of FTEs

\*\* Improbable responses were excluded from analysis because total for indirect and direct positions supervised was less than total for direct positions supervised.

\*\*\* Total is based on filled public health nutrition positions.

**Table 13. Health Professional FTEs Supervised by Professional Job Classifications of Filled Positions (Question 11)**

Job Classification	Health Professional FTEs													
	None		1-4		5-9		10-19		≥20		No Response*		Total**	
	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %
<i>Management Series</i>														
PHN Director	193	51.5%	128	34.1%	15	4.0%	3	0.8%	4	1.1%	32	8.5%	375	100.0%
PHN Assistant Director	130	47.6%	48	17.6%	13	4.8%	2	0.7%	1	0.4%	79	28.9%	273	100.0%
PHN Supervisor	613	59.6%	156	15.2%	15	1.5%	6	0.6%	0	0.0%	239	23.2%	1029	100.0%
<i>Professional Series</i>														
PHN Consultant	68	11.8%	27	4.7%	4	0.7%	0	0.0%	0	0.0%	479	82.9%	578	100.0%
PH Nutritionist	28	7.0%	18	4.5%	1	0.2%	1	0.2%	0	0.0%	353	88.0%	401	100.0%
Clinical Nutritionist	15	5.0%	2	0.7%	0	0.0%	0	0.0%	0	0.0%	282	94.3%	299	100.0%
Nutritionist	254	6.2%	53	1.3%	2	0.0%	3	0.1%	3	0.1%	3789	92.3%	4104	100.0%
<i>Other (Unknown Series)</i>														
Other	50	11.2%	17	3.8%	1	0.2%	3	0.7%	0	0.0%	374	84.0%	445	100.0%
Total***	1351	18.0%	449	6.0%	51	0.7%	18	0.2%	8	0.1%	5627	75.0%	7504	100.0%

\* Nonresponse to health professional FTEs includes those reporting no direct supervision of any FTEs

\*\* Improbable responses were excluded from analysis because total for indirect and direct positions supervised was less than total for direct positions supervised.

\*\*\* Total is based on filled public health nutrition positions.

**Table 14. Support Staff FTEs Supervised by Professional Job Classifications of Filled Positions (Question 12)**

Job Classification	Support FTEs													
	None		1-4		5-9		10-19		>20		No Response*		Total**	
	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %
<i>Management Series</i>														
PHN Director	55	14.7%	194	51.7%	52	13.9%	26	6.9%	16	4.3%	32	8.5%	375	100.0%
PHN Assistant Director	68	24.9%	81	29.7%	31	11.4%	10	3.7%	4	1.5%	79	28.9%	273	100.0%
PHN Supervisor	281	27.3%	367	35.7%	96	9.3%	35	3.4%	11	1.1%	239	23.2%	1029	100.0%
<i>Professional Series</i>														
PHN Consultant	63	10.9%	27	4.7%	5	0.9%	2	0.3%	2	0.3%	479	82.9%	578	100.0%
PH Nutritionist	24	6.0%	20	5.0%	4	1.0%	0	0.0%	0	0.0%	353	88.0%	401	100.0%
Clinical Nutritionist	11	3.7%	5	1.7%	1	0.3%	0	0.0%	0	0.0%	282	94.3%	299	100.0%
Nutritionist	126	3.1%	144	3.5%	37	0.9%	5	0.1%	3	0.1%	3789	92.3%	4104	100.0%
<i>Other (Unknown Series)</i>														
Other	37	8.3%	28	6.3%	4	0.9%	1	0.2%	1	0.2%	374	84.0%	445	100.0%
Total***	665	8.9%	866	11.5%	230	3.1%	79	1.1%	37	0.5%	5627	75.0%	7504	100.0%

\* Nonresponse to professional FTEs includes those reporting no direct supervision of any FTEs

\*\* Improbable responses were excluded from analysis because total for indirect and direct positions supervised was less than total for direct positions supervised.

\*\*\* Total is based on filled public health nutrition positions.

**Table 15. Paraprofessional FTEs Supervised by Professional Job Classifications of Filled Positions (Question 13)**

Job Classification	Paraprofessional FTEs													
	None		1-4		5-9		10-19		>20		No Response*		Total**	
	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %
<i>Management Series</i>														
PHN Director	172	45.9%	116	30.9%	32	8.5%	15	4.0%	8	2.1%	32	8.5%	375	100.0%
PHN Assistant Director	114	41.8%	58	21.2%	15	5.5%	5	1.8%	2	0.7%	79	28.9%	273	100.0%
PHN Supervisor	314	30.5%	339	32.9%	104	10.1%	24	2.3%	9	0.9%	239	23.2%	1029	100.0%
<i>Professional Series</i>														
PHN Consultant	58	10.0%	29	5.0%	8	1.4%	4	0.7%	0	0.0%	479	82.9%	578	100.0%
PH Nutritionist	31	7.7%	14	3.5%	3	0.7%	0	0.0%	0	0.0%	353	88.0%	401	100.0%
Clinical Nutritionist	7	2.3%	7	2.3%	3	1.0%	0	0.0%	0	0.0%	282	94.3%	299	100.0%
Nutritionist	148	3.6%	140	3.4%	24	0.6%	2	0.0%	1	0.0%	3789	92.3%	4104	100.0%
<i>Other (Unknown Series)</i>														
Other	34	7.6%	34	7.6%	2	0.4%	0	0.0%	1	0.2%	374	84.0%	445	100.0%
Total***	878	11.7%	737	9.8%	191	2.5%	50	0.7%	21	0.3%	5627	75.0%	7504	100.0%

\* Nonresponse to paraprofessional FTEs includes those reporting no direct supervision of any FTEs

\*\* Improbable responses were excluded from analysis because total for indirect and direct positions supervised was less than total for direct positions supervised.

\*\*\* Total is based on filled public health nutrition positions.

<b>Table 16. Total FTEs Directly and Indirectly Supervised by Professional Job Classifications of Filled Positions (Question 14)</b>												
Job Classification	Total FTEs directly and indirectly supervised											
	None		1-4		5-9		10-19		≥20		Total*	
	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %
<i>Management Series</i>												
PHN Director	24	6.4%	49	13.1%	85	22.7%	84	22.4%	133	35.5%	375	100.0%
PHN Assistant Director	46	16.8%	44	16.1%	50	18.3%	54	19.8%	79	28.9%	273	100.0%
PHN Supervisor	162	15.7%	210	20.4%	285	27.7%	239	23.2%	133	12.9%	1029	100.0%
<i>Professional Series</i>												
PHN Consultant	374	64.7%	74	12.8%	40	6.9%	36	6.2%	54	9.3%	578	100.0%
PH Nutritionist	320	79.8%	44	11.0%	18	4.5%	13	3.2%	6	1.5%	401	100.0%
Clinical Nutritionist	260	87.0%	18	6.0%	14	4.7%	6	2.0%	1	0.3%	299	100.0%
Nutritionist	3469	84.5%	376	9.2%	172	4.2%	66	1.6%	21	0.5%	4104	100.0%
<i>Other (Unknown Series)</i>												
Other	330	74.2%	64	14.4%	20	4.5%	15	3.4%	16	3.6%	445	100.0%
Total**	4985	66.4%	879	11.7%	684	9.1%	513	6.8%	443	5.9%	7504	100.0%

\* Improbable responses were excluded from analysis because total for indirect and direct positions supervised was less than total for direct positions.

\*\* Total is based on all filled public health nutrition positions.

<b>Table 17°. Budget Responsibility by Job Classification (Question 15)</b>								
Job Classification	Fiscal and budgetary responsibility							
	None		Responsible for a specific budget		Responsible for entire agency nutrition program budget		Total	
	N	Row %	N	Row %	N	Row %	N	Row %
<i>Management Series</i>								
PHN Director	23	5.6%	133	32.4%	254	62.0%	410	100.0%
PHN Assistant Director	135	46.4%	135	46.4%	21	7.2%	291	100.0%
PHN Supervisor	734	63.6%	302	26.2%	118	10.2%	1154	100.0%
<i>Professional Series</i>								
PHN Consultant	411	69.4%	170	28.7%	11	1.9%	592	100.0%
PH Nutritionist	324	77.7%	84	20.1%	9	2.2%	417	100.0%
Clinical Nutritionist	284	93.1%	18	5.9%	3	1.0%	305	100.0%
Nutritionist	3907	93.4%	223	5.3%	53	1.3%	4183	100.0%
<i>Technical/Support Series</i>								
Nutrition Technician	918	96.8%	23	2.4%	7	0.7%	948	100.0%
Nutrition Assistant	370	97.9%	6	1.6%	2	0.5%	378	100.0%
BF Peer Counselor	1142	98.0%	15	1.3%	8	0.7%	1165	100.0%
<i>Other (Unknown Series)</i>								
Other	365	77.8%	81	17.3%	23	4.9%	469	100.0%
Total*	8613	83.5%	1190	11.5%	509	4.9%	10312	100.0%

° Similar to Table 13 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\* Total is based on filled public health nutrition positions.

## Major Areas of Practice

Respondents were asked to describe their primary area of practice, or where they spent the majority of their time, from a list of 12 practice areas. These 12 practice areas provided information on the public health core functions of assessment, policy development (including population-based services and management and administration), and assurance.

Two-thirds of the workforce (66.6%) reported assurance as their primary area of practice, including direct client services (Table 18). Assurance practice was followed by assessment and management and administration (both reported by 10.5% of the workforce). Population-based interventions were primarily performed by 5.9% of the workforce. The 1999-2000 workforce survey was the first to describe public health nutrition practice using these dimensions, because, as stated in its final report, many states had moved from direct care services to more population-based services. This follow-up survey seems to confirm this trend, as a higher proportion practiced in assessment (10.5% vs. 5.4%) and population-based interventions (5.9% vs. 2.4%). Practice in assurance decreased as a primary area of practice from 78.7% to 66.6%.

For Public Health Nutrition Directors and Assistant Directors the primary area of practice was management and administration, followed by assurance (Table 18) (68.8% and 14.6% of Directors for management and administration, and for assurance, respectively; 51.2% and 25.1% of Assistant Directors, similarly). For Public Health Nutrition Supervisors and Consultants, this ordering of primary practice was reversed: 51.5% and 32.8% of Supervisors for assurance and management and administration, respectively; 43.6% and 18.4% of Consultants, similarly. Another primary responsibility of Consultants was assessment, with 18.2% indicating this as their primary area of practice. For all other staff, assurance was the primary area of practice, ranging from 42.2% for Public Health Nutritionists to 87.0% for Breastfeeding Peer Counselors.

Respondents also estimated the time spent in direct services. As was true of the 1999-2000 workforce, more than 60% (63.2%) of Public Health Nutrition Directors reported spending at least some time in direct client services (Table 19). Among professional staff, Public Health Nutrition Consultants spent the least amount of time in direct services, with 51.5% spending no time in direct services per month. While *Personnel in Public Health Nutrition for the 1990's* does not indicate direct client responsibilities for those in the Management Series, including Public Health Nutrition Directors, Assistant Directors, and Supervisors, as noted in the 1999-2000 workforce final report, local level directors frequently perform both management and direct client responsibilities. On the other hand, according to *Personnel in Public Health Nutrition for the 1990's*, Public Health Nutrition Consultants may provide direct client services on a limited basis to demonstrate counseling for complex nutrition care or assisting other professionals on how to plan, manage, and provide care coordination/case management. This may explain their reduced level of direct client care compared to other professionals.

**Table 18°. Primary Area of Public Health Practice According to Category of Core Public Health Functions--Number of Respondents in Filled Positions (Question 25)**

Job Classification	Primary area of public health nutrition practice													
	Assessment		Population Based Interventions		Management and Administration		Assurance		Other		No Response		Total	
	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %
<i>Management Series</i>														
PHN Director	46	11.2%	13	3.2%	282	68.8%	60	14.6%	4	1.0%	5	1.2%	410	100.0%
PHN Assistant Director	44	15.1%	17	5.8%	149	51.2%	73	25.1%	4	1.4%	4	1.4%	291	100.0%
PHN Supervisor	95	8.2%	50	4.3%	379	32.8%	594	51.5%	21	1.8%	15	1.3%	1154	100.0%
<i>Professional Series</i>														
PHN Consultant	108	18.2%	64	10.8%	109	18.4%	258	43.6%	43	7.3%	10	1.7%	592	100.0%
PH Nutritionist	136	32.6%	52	12.5%	16	3.8%	176	42.2%	24	5.8%	13	3.1%	417	100.0%
Clinical Nutritionist	21	6.9%	9	3.0%	4	1.3%	252	82.6%	14	4.6%	5	1.6%	305	100.0%
Nutritionist	435	10.4%	243	5.8%	61	1.5%	3195	76.4%	181	4.3%	68	1.6%	4183	100.0%
<i>Technical/Support Series</i>														
Nutrition Technician	77	8.1%	69	7.3%	19	2.0%	712	75.1%	32	3.4%	39	4.1%	948	100.0%
Nutrition Assistant	30	7.9%	15	4.0%	5	1.3%	297	78.6%	19	5.0%	12	3.2%	378	100.0%
BF Peer Counselor	50	4.3%	30	2.6%	5	0.4%	1014	87.0%	36	3.1%	30	2.6%	1165	100.0%
<i>Other (Unknown Series)</i>														
Other	41	8.7%	42	9.0%	52	11.1%	240	51.2%	65	13.9%	29	6.2%	469	100.0%
Total*	1083	10.5%	604	5.9%	1081	10.5%	6871	66.6%	443	4.3%	230	2.2%	10312	100.0%

° Similar to Table 14 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\* Total is based on filled public health nutrition positions.

**Table 19°. Estimated Time Spent in Direct Services Per Month for Filled Positions (Question 16)**

Job Classification	Time spent in direct client services													
	None		≤25%		25-49%		50-74%		75-99%		100%		Total	
	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %
<i>Management Series</i>														
PHN Director	151	36.8%	135	32.9%	47	11.5%	38	9.3%	28	6.8%	11	2.7%	410	100.0%
PHN Assistant Director	127	43.6%	68	23.4%	30	10.3%	33	11.3%	29	10.0%	4	1.4%	291	100.0%
<i>Professional Series</i>														
PHN Supervisor	104	9.0%	256	22.2%	165	14.3%	218	18.9%	368	31.9%	43	3.7%	1154	100.0%
PHN Consultant	305	51.5%	114	19.3%	39	6.6%	43	7.3%	70	11.8%	21	3.5%	592	100.0%
PH Nutritionist	67	16.1%	56	13.4%	25	6.0%	56	13.4%	144	34.5%	69	16.5%	417	100.0%
Clinical Nutritionist	1	0.3%	15	4.9%	20	6.6%	50	16.4%	158	51.8%	61	20.0%	305	100.0%
Nutritionist	24	0.6%	134	3.2%	176	4.2%	412	9.9%	2294	54.9%	1143	27.3%	4183	100.0%
<i>Technical/Support Series</i>														
Nutrition Technician	23	2.4%	34	3.6%	40	4.2%	86	9.1%	415	43.8%	350	36.9%	948	100.0%
Nutrition Assistant	7	1.8%	17	4.5%	15	4.0%	30	7.9%	153	40.4%	156	41.4%	378	100.0%
BF Peer Counselor	24	2.1%	76	6.5%	51	4.4%	124	10.6%	559	48.0%	331	28.4%	1165	100.0%
<i>Other (Unknown Series)</i>														
Other	102	21.7%	93	19.8%	37	7.9%	68	14.5%	125	26.7%	44	9.4%	469	100.0%
Total*	935	9.1%	998	9.7%	645	6.3%	1158	11.2%	4343	42.1%	2233	21.7%	10312	100.0%

° Similar to Table 15 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\* Total is based on filled public health nutrition positions.

Because a high proportion of the workforce works within WIC and WIC is a primary provider of direct client services, including nutritional assessments, individual counseling, group education, and development of care plans, the percent time spent in direct services was compared to the non-WIC workforce (Table 20). Almost 95% (93.8%) of the WIC workforce spent some time in direct client services compared to 68.2% of the non-WIC workforce. Over two-thirds of the WIC workforce (68.4%) spent at least 75% of their time in this manner. This contrasted with the non-WIC workforce where the majority (52%) spent either none or 25% or less of their time in direct client services. This suggests that how the two public health nutrition workforces practice is very different with the WIC workforce focusing on direct client services and the non-WIC workforce focusing on other areas of practice.

**Table 20°. Percent of Time Spent in Direct Services for Filled Positions (Question 16)\***

Time	WIC/Non-WIC					
	WIC		Non-WIC		Total	
	N	%	N	%	N	%
None	570	6.2%	365	31.8%	935	9.1%
<25%	766	8.4%	232	20.2%	998	9.7%
25-49%	557	6.1%	88	7.7%	645	6.3%
50-74%	1005	11.0%	153	13.3%	1158	11.2%
75-99%	4132	45.1%	211	18.4%	4343	42.1%
100%	2135	23.3%	98	8.5%	2233	21.7%
Total**	9165	100.0%	1147	100.0%	10312	100.0%

° Similar to Table 16 in *Survey of the Public Health Nutrition Workforce 1999-2000*, 2003.

\*Unit of analysis is position's "current percent time" and includes part-time workers. A part-time worker who reported spending 100% time in direct services and a full-time worker who reported spending 100% time in direct services are both included in the "100%" category.

\*\* Total is based on filled public health nutrition positions.

How personnel within the WIC program distributed their time in direct services can be described by comparing WIC professionals and paraprofessionals (Table 21). Almost 90% of paraprofessionals compared to 76.2% of professionals spent at least 50% of their time in direct services. Only 7.4% of professionals and 2.1% of paraprofessionals spent no time in direct services.

The primary targets of these direct client services can be seen in Table 22. For the overall workforce, the primary client population is "general women, infants, and children." Because of the overwhelming numbers of personnel associated with the WIC program, this is not surprising. Indeed, 91.3% of the WIC workforce compared to only 7.7% of the non-WIC workforce had "general women, infants, and children" as their primary client population. For the non-WIC workforce the primary client population was "children with special health care needs, developmental disabilities" (39.2%), followed by "general/comprehensive nutrition" (13.5%), "adult health promotion, chronic disease prevention or health" (10.9%). The fixed-response choices for this question were the same as those used in the 1999-2000 workforce survey. "General women, infants and children" as a primary client population for the WIC workforce appeared to increase somewhat from 86.9% to 91.3% between the two survey administration

time periods. “Children with special health care needs” appeared to increase as the primary population for the non-WIC workforce from 28.2% to 39.2%.

**Table 21°. Percent of Time in Direct Services by WIC Professionals for Filled Positions (Question 16)\***

Time	Professional or Paraprofessional							
	Professional		Paraprofessional		Other		Total	
	N	%	N	%	N	%	N	%
None	483	7.4%	51	2.1%	36	15.3%	570	6.2%
<25%	626	9.6%	114	4.7%	26	11.0%	766	8.4%
25-49%	438	6.7%	101	4.2%	18	7.6%	557	6.1%
50-74%	736	11.3%	231	9.6%	38	16.1%	1005	11.0%
75-99%	2941	45.1%	1108	45.9%	83	35.2%	4132	45.1%
100%	1290	19.8%	810	33.5%	35	14.8%	2135	23.3%
Total**	6514	100.0%	2415	100.0%	236	100.0%	9165	100.0%

° Similar to Table 17 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\*Unit of analysis is position’s “current percent time” and includes part-time workers. A part-time worker who reported spending 100% time in direct services and a full-time worker who reported spending 100% time in direct services are both included in the “100%” category.

\*\* Total is based on filled public health nutrition positions.

**Table 22°. Client Population Seen by Workforce (Filled Positions) Whose Primary Area of Practice is Direct Service (Question 26)**

Primary Client Caseload	WIC/Non-WIC					
	WIC		Non-WIC		Total	
	N	%	N	%	N	%
No response	23	0.5%	2	0.6%	25	0.5%
General/comprehensive nutrition	76	1.5%	42	13.5%	118	2.2%
General women, infants and children	4632	91.3%	24	7.7%	4656	86.5%
General women’s nutrition and health	80	1.6%	23	7.4%	103	1.9%
General infant nutrition	24	0.5%	2	0.6%	26	0.5%
General child health or pediatric nutrition	54	1.1%	17	5.5%	71	1.3%
School and/or adolescent health	6	0.1%	18	5.8%	24	0.4%
Children with special health care needs, developmental disabilities	115	2.3%	122	39.2%	237	4.4%
Breastfeeding	33	0.7%	1	0.3%	34	0.6%
Adult health promotion, chronic disease prevention or health	15	0.3%	34	10.9%	49	0.9%
Seniors, geriatrics, adult disabilities, or adult chronic disease	15	0.3%	26	8.4%	41	0.8%
Total*	5073	100.0%	311	100.0%	5384	100.0%

° Similar to Table 18 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\* Total is based on filled public health nutrition positions.

## Employment Status

The majority of the workforce positions were budgeted (93.6%) as opposed to contracted (6.4%), which appeared to be a slight increase since 1999-2000 in the percentage of positions contracted (3.7%) (Table 23). Most positions (77.9%) were full-time. Almost 95% (94.4%) and 90% (87.1%) of WIC and non-WIC positions, respectively, were employed. However, less than 80% (78% WIC; 77.1% non-WIC) of either workforce was full-time (Table 24). This represented a slight decrease in full-time WIC employees compared to 1999-2000 (81.5% vs. 78.0%), but increase in full-time non-WIC employees (72.2% vs. 77.1). Contracting of both WIC and non-WIC employees appeared to increase from 1999-2000 (WIC: 3.1% to 5.6%; non-WIC: 8.9% to 12.9%).

**Table 23°. Employment Status of Filled Positions (Question 19)**

Contracted or Employed	WIC/Non-WIC					
	WIC		Non-WIC		Total	
	N	%	N	%	N	%
Contracted	513	5.6%	148	12.9%	661	6.4%
Employed	8652	94.4%	999	87.1%	9651	93.6%
Total*	9165	100.0%	1147	100.0%	10312	100.0%

° Similar to Table 19 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\* Total is based on filled public health nutrition positions.

**Table 24°. Proportion of Workforce in Full-Time and Part-Time Positions (Questions 17 and 18)**

Percent time	WIC/Non-WIC					
	WIC		Non-WIC		Total	
	N	%	N	%	N	%
100%	7387	78.0%	937	77.1%	8324	77.9%
80-99%	334	3.5%	46	3.8%	380	3.6%
60-79%	486	5.1%	57	4.7%	543	5.1%
40-59%	553	5.8%	79	6.5%	632	5.9%
20-39%	444	4.7%	53	4.4%	497	4.7%
≤20%	241	2.5%	39	3.2%	280	2.6%
No Response	22	0.2%	5	0.4%	27	0.3%
Total*	9467	100.0%	1216	100.0%	10683	100.0%

° Similar to Table 20 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\* Total is based on filled and vacant public health nutrition positions.

Contracting of employees raises important questions, such as method of payment and employee benefits. Almost 85% of the contracted workforce was paid at an hourly rate, although 12.1% was paid at an annual rate (Table 25). Overall, at least 89.4% of the workforce had employee benefits such as health insurance, retirement, sick leave, and/or vacation time (Table 26).

However, 10.6% had no benefits at all. There were differences in employee benefits for employed and contracted personnel also. For all types of benefits, at least 93.4% of employed personnel had at least some type of benefit. This contrasted with contracted personnel where no more than 31.0% had some type of benefit. Almost 70% of the contracted workforce had no benefits compared to 6.6% of the employed workforce. Retirement and health insurance were the benefits employees overall were least likely to have, whether employed or contracted. These may be the most expensive components of benefit packages from an employer perspective. However, they are some of the most desirable components from an employee recruitment and retention perspective.

**Table 25°. Method of Payment for Contract Workers in Filled Positions (Question 20)**

Pay Rate	N	%
Hourly	552	83.5%
Daily	0	.0%
Annually	80	12.1%
For specific services or products	26	3.9%
Retainer	3	0.5%
Total*	661	100.0%

° Similar to Table 21 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\* Total is based on filled public health nutrition positions.

**Table 26. Employee Benefits of Contracted and Employed Workforce (Question 23)**

Benefits		Contracted or Employed					
		Contracted		Employed		Total	
		N	%	N	%	N	%
Health insurance	No	514	77.8%	1728	17.9%	2242	21.7%
	Yes	147	22.2%	7923	82.1%	8070	78.3%
Retirement	No	524	79.3%	2146	22.2%	2670	25.9%
	Yes	137	20.7%	7505	77.8%	7642	74.1%
Sick leave	No	480	72.6%	1014	10.5%	1494	14.5%
	Yes	181	27.4%	8637	89.5%	8818	85.5%
Vacation time	No	474	71.7%	842	8.7%	1316	12.8%
	Yes	187	28.3%	8809	91.3%	8996	87.2%
No benefits	No	205	31.0%	9016	93.4%	9221	89.4%
	Yes	456	69.0%	635	6.6%	1091	10.6%
Total*		661	100.0%	9651	100.0%	10312	100.0%

\* Total is based on filled public health nutrition positions.

## Salaries

Because salaries tend to be skewed, consistent with the 1999-2000 workforce survey, the median was used to describe “average” salaries of the workforce. Questions on salary were asked differently than in 1999-2000 also, because of concern that implementation of salary broad banding in some states would not adequately describe nutrition salaries. Broad banding is consolidation of narrow pay ranges into fewer, broader pay ranges or bands. Therefore, to ask personnel the minimum and maximum salary range for their positions might artificially inflate what nutrition personnel actually make, because their salary ranges would be combined with a variety of other non-nutrition personnel. Consequently, in this survey administration personnel were asked to report their annual salary, which was subsequently adjusted during data analysis to accommodate full-time and part-time positions. They also reported the minimum or first step salary for their job classification as established by their agency’s personnel system.

Tables 27-29 list annual median salary by job classification as salary earned, and as minimum and maximum salary for the position. An important note about these tables is that although data on salary were verified and cleaned by state contacts, review of the data revealed some improbable values. For example, although earned salaries were reported as annual full-time salaries or reported as part-time salary and then adjusted for full-time status, there were some salaries less than the minimum federal wage of \$5.15 per hour, or \$10,712 per year. Therefore, these salaries were excluded from the earned salary analysis and an equal number of salaries were excluded from the upper end of the salary range to maintain the appropriate central tendency measure for the median. Also, percent time employed was not a required survey item in the on-line survey. Therefore, the table also includes data only from employees for whom full-time/part-time status could be determined.

In general, personnel within the Management Series had higher earned salaries compared to those within the Professional Series, who in turn had higher earned salaries compared to those within the Technical Support Series (Table 27). This might be expected given the differing responsibilities, education and training required of personnel in the respective series. The highest median salaries were earned by Public Health Nutrition Directors and Assistant Directors within the Management Series. However, Public Health Nutrition Consultants in the Professional Series earned more than Public Health Nutrition Supervisors in the Management Series. As noted in the 1999-2000 workforce report, the technical nature of Public Health Nutrition Consultant positions may explain their salaries being greater than those of Public Health Nutrition Supervisors in the Management Series and other professionals. Consultants tend to have specialized expertise and provide technical assistance and consultation to other professionals. They also may be involved for planning, implementing and development programs at the state or local levels. However, unlike the previous findings, the salaries earned by Assistant Directors were greater than those of Public Health Nutrition Consultants.

Among professionals, the lowest earned median salaries were those of Nutritionists. This position contrasts with the others in that it is typically entry-level, does not require a graduate degree and may not require dietetic registration status. Personnel in these positions typically focus on diet client care for low-risk education and counseling. Somewhat surprisingly, the next

lowest earned median salary among professionals was that of Public Health Nutritionists. These positions typically require a graduate degree with public health preparation, dietetic registration credentialing. They may require experience, although in some states a graduate degree can substitute for years of experience.

The lowest paid personnel were those within the Technical/Support Series, including Nutrition Technicians, Assistants and Breastfeeding Peer Counselors. Breastfeeding Peer Counselors were the lowest paid within this series and across all series.

Job Classification	Annual Salary	
	N	Median*
<i>Management Series</i>		
PHN Director	251	50000.00
PHN Assistant Director	213	48693.00
PHN Supervisor	1017	44000.00
<i>Professional Series</i>		
PHN Consultant	446	46696.13
PH Nutritionist	356	37489.50
Clinical Nutritionist	240	41584.00
Nutritionist	3737	35000.00
<i>Technical/Support Series</i>		
Nutrition Technician	888	28525.00
Nutrition Assistant	354	27000.00
BF Peer Counselor	855	24960.00
<i>Other (Unknown Series)</i>		
Other	349	34673.00
<b>Total**</b>	<b>8706</b>	<b>35314.67</b>

° Similar to Table 22 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\*Adjusted for percent part-time.

\*\* Total is based on filled public health nutrition positions. Excludes vacant positions (n=371) and non-respondents for part-time percent (n=30). Excludes salaries less than minimum wage (n=788) and equal number from top of salary range to maintain median.

Tables 28 and 29 list the minimum and maximum annual median salaries for personnel. Whereas Public Health Nutrition Directors and Assistant Directors earned more than other personnel, the starting salaries for these positions were less than those of Public Health Nutrition Consultants, who had the highest minimum annual median salary. All positions within the Management Series had the same minimum salary, suggesting that these positions may all be broad banded into a single salary range. This cannot be confirmed by the maximum annual median salaries for these positions, because data on maximum salary were only collected on vacant positions to avoid any potential influence of broad banding. Therefore, the maximum annual median salary must be viewed with considerable caution, because it was only based on 189 vacant positions.

Unlike positions within the Management Series which all had the same minimum annual median salaries, all minimum annual median salaries within the other Series' differed. Excluding Public Health Nutrition Consultants who had the highest starting salary of all position classifications, the highest starting salary within the Professional Series was for Clinical Nutritionists. Public Health Nutritionists and Nutritionists had very similar starting salaries, which again is somewhat surprising given the different responsibilities and qualifications of the positions. This may suggest that for population/system-focused positions, the entry-level position is that of Public Health Nutritionist, while that for client-focused positions is Nutritionist. Despite the differences in position focus or qualifications, the determining factor in salary may be designation as entry-level.

The lowest minimum median salaries were for all personnel within the Technical/Support Series. Again, Breastfeeding Peer Counselors had the lowest minimum salary for all job classifications.

<b>Table 28°. Minimum Annual Median Salary for Filled and Vacant Positions (Question 22)</b>		
Job Classification	Annual minimum salary	
	N	Median
<i>Management Series</i>		
PHN Director	153	32722
PHN Assistant Director	122	32722
PHN Supervisor	641	32722
<i>Professional Series</i>		
PHN Consultant	251	33241
PH Nutritionist	281	28045
Clinical Nutritionist	195	31868
Nutritionist	3210	28460
<i>Technical/Support Series</i>		
Nutrition Technician	839	23000
Nutrition Assistant	341	22425
BF Peer Counselor	659	20880
<i>Other (Unknown Series)</i>		
Other	257	25000
Total*	6949	27664

° Similar to Table 22 in *Survey of the Public Health Nutrition Workforce 1999-2000*, 2003.

\* Total is based on filled and vacant public health nutrition positions. Excludes salaries less than minimum wage (n=1867) and equal number from top of salary range to maintain median.

<b>Table 29°. Maximum Annual Median Salary for Vacant Positions (Question 21)</b>		
Job Classification	Annual Salary	
	N	Median
<i>Management Series</i>		
PHN Director	9	68381.00
PHN Assistant Director	6	66237.50
PHN Supervisor	11	58261.00
<i>Professional Series</i>		
PHN Consultant	18	67467.00
PH Nutritionist	24	56000.00
Clinical Nutritionist	19	53846.00
Nutritionist	73	47888.00
<i>Technical/Support Series</i>		
Nutrition Technician	13	32000.00
Nutrition Assistant	3	31595.00
BF Peer Counselor	10	32923.00
<i>Other (Unknown Series)</i>		
Other	3	60552.00
<b>Total*</b>	<b>189</b>	<b>51280.00</b>

° Similar to Table 22 in *Survey of the Public Health Nutrition Workforce 1999-2000*, 2003.

\* Total is based on vacant positions. Excludes non-responders to salary (n=178), salaries less than minimum wage (n=2) and equal number from top of salary range to maintain median.

### Sources of Funding for the Public Health Nutrition Workforce

Since 1994 the public health nutrition workforce has reported on funding sources for all full-time equivalents (FTEs) (Tables 30 and 31). As in the 1999-2000 workforce survey's data analysis, all full-time and part-time positions were combined according to funding source into FTEs. Unlike the other survey administrations, this survey instrument required respondents to answer funding source for their position (Question 24) or this was provided by the state contact after survey administration as part of the data cleaning process. Therefore, there were no missing responses for source of funding for full-time equivalents (compared to 4.1% in 1999-2000).

USDA funded more FTEs than any other funding source (Table 30), or 83.42% of total FTEs. Of these FTEs, WIC funded 79.3%, while Food Stamp Nutrition Education funded 2.6% FTEs (Table 31). Although USDA continued to fund the majority of the public health nutrition workforce, FTEs funded by WIC decreased below the levels of 81.7% in 1994 and 81.0% in 1999-2000. Again, data from 1999-2000 must be viewed with caution because of missing responses in the previous survey administrations. However, it is noteworthy that funding of FTEs from Food Stamp Nutrition Education increased from 0.4% in 1999-2000 to the current level of 2.60%.

**Table 30°. Full-time Equivalents Per Funding Source—A Comparison of 1994, 1999-2000, and 2006-07 (Question 24)**

Funding	2006-07		1999-2000		1994	
	FTEs	%	FTEs	%	FTEs	%
USDA	7889.36	83.42%	8189.22	82.3%	5345.46	82.7%
State	449.40	4.75%	420.16	4.2%	331.54	5.1%
DHHS	441.84	4.67%	470.73	4.7%	423.49	6.6%
Local	375.13	3.97%	256.87	2.6%	143.42	2.2%
Other	244.69	2.59%	186.27	1.9%	211.33	3.3%
Department of Education	57.50	0.61%	19.67	0.2%	9.20	0.1%
Not specified	*	*	408.58	4.1%	0.00	0.0%
Total**	9457.92	100.00%	9951.5	100.0%	6464.44	100.0%

° Similar to Table 30 in *Survey of the Public Health Nutrition Workforce 1999-2000*, 2003.

\* “Not specified” was not an option for the 2006-07 survey.

\*\* Total is based on filled and vacant public health nutrition positions. Excludes non-responders to percent part-time. Idaho did not participate in the 1999-2000 survey and California did not participate in the 1994 survey.

While DHHS funding of FTEs remained stable, state funding increased from a low in 1999-2000 of 4.2% to 4.75% FTEs. Local funding and that from other sources continued to increase the percent FTEs funded, albeit less than 4% (3.97% and 2.59% FTEs, respectively). Department of Education funding continued to increase from the low in 1994 of 0.1% to 0.61%.

The concern expressed in the 1999-2000 workforce report remains about the continued decrease in funding of nutrition FTEs from the US DHHS, Maternal and Child Health Block Grant (Title V). In 1994 it funded 3.5% of FTEs, which decreased to 1.9% in 1999-2000 and to 1.6% in the current survey administration. Similarly, funding from the Preventive Health and Health Services Block Grant has continued to decrease (0.9% to 0.6% and now to 0.3%). The impact of overweight and obesity impacted funding streams, as evidenced by the 0.5% FTEs funded by CDC by Nutrition and Physical Activity Grants to Prevent Obesity and Other Chronic Diseases and the slight increase in funding by Diabetes Prevention and Control grants (from 0.2% in the previous workforce surveys to 0.3% currently).

Department of Education funding and specifically that for Early Childhood Intervention (IDEA) increased to 0.3% FTEs from 0.1% FTEs in the previous reporting periods. Similarly, other federal government education funding increased to 0.3% from 0.1% in 1999-2000.

Local level funding increased each of the workforce survey’s reporting years from a low of 2.2% in 1994 to the current 4.0%. Similarly, foundation or corporate grant funding of FTEs increased from 0.3% to 0.8%.

These findings all represent proportional funding of the workforce for the respective years. However, implications for numbers of personnel must be considered. For example, while WIC continued to fund 83.42% of FTEs, the number of FTEs funded decreased from 1999-2000 to 2006-07 from 8189.22 to 7889.36, representing a 3.7% decrease in FTEs funded. Overall, the total workforce FTEs funded decreased from 9951.50 in 1999-2000 to 9457.92, or 5.0%. This

difference may be a reflection of the difference in response rates between these two survey administrations (88.0% in 1999-2000 and 80.0% in 2006-07). Therefore, the potential decrease in FTEs funded must be interpreted with caution.

<b>Table 31°. Full-Time Equivalents Per Funding Source (Question 24)</b>						
Funding Source	2006-07		1999-2000		1994	
	FTEs	%	FTEs	%	FTEs	%
<b>State/Tribal</b>						
State/Tribal--Non-specified funds	201.46	2.1%	326.28	3.3%	238.38	3.7%
State/Tribal--Funds earmarked for nutrition	164.26	1.7%	90.85	0.9%	93.16	1.4%
State/Tribal--Tobacco settlement monies	11.21	0.1%	3.03	<0.1%	--	--
State/Tribal--Other state/tribal government funding	72.47	0.8%	--	--	--	--
<b>United States Department of Agriculture</b>						
USDA—WIC	7496.37	79.3%	8060.14	81.0%	5284.52	81.7%
USDA--Food Stamp Nutrition Education	245.55	2.6%	43.25	0.4%	--	--
USDA--Child and Adult Care Food Program and/or NET	85.72	0.9%	47.32	0.5%	--	--
USDA--Other	61.73	0.7%	38.51	0.4%	60.94	0.9%
<b>Department of Health and Human Services</b>						
US DHHS--Bioterrorism and Public Health Preparedness (CDC)	6.61	0.1%	--	--	--	--
US DHHS-- Cancer Control Program (CDC)	4.71	0.1%	--	--	--	--
US DHHS--Cardiovascular Health Grant (CDC)	6.16	0.1%	--	--	--	--
US DHHS--Diabetes Prevention and Control (CDC)	28.05	0.3%	18.96	0.2%	14.23	0.2%
US DHHS-- Nutrition and Physical Activity Grant to Prevent Obesity and Other Chronic Diseases (CDC)	48.29	0.5%	--	--	--	--
US DHHS-- Preventive Health and Health Services Block Grant (CDC)	31.44	0.3%	61.34	0.6%	60.60	0.9%
US DHHS--Tobacco Information and Prevention (CDC)	3.84	<0.1%	--	--	--	--
US DHHS--WISEWOMAN (CDC)	8.30	0.1%	--	--	--	--
US DHHS--Steps to a Healthier US (DHHS)	4.74	0.1%	--	--	--	--
US DHHS--Older Americans Act (Title III)	12.39	0.1%	18.21	0.2%	7.82	0.1%

**Table 31°. Full-Time Equivalents Per Funding Source (Question 24)**

Funding Source	2006-07		1999-2000		1994	
	FTEs	%	FTEs	%	FTEs	%
US DHHS--Maternal and Child Health Block Grant (Title V)	147.35	1.6%	185.85	1.9%	226.07	3.5%
US DHHS--Family Planning (Title X and Title XX)	16.28	0.2%	14.37	0.1%	9.59	0.1%
US DHHS--Medicaid non-EPSDT (Title XIX)	32.52	0.3%	40.44	0.4%	45.81	0.7%
US DHHS--Medicaid EPSDT	20.62	0.2%	17.78	0.2%	11.80	0.2%
US DHHS--Indian Health Services	32.16	0.3%	41.72	0.4%	--	--
US DHHS--National Institutes of Health	2.20	<0.1%	4.30	<0.1%	4.55	0.1%
US DHHS--Ryan White Comprehensive AIDS Resource Emergency Act (HRSA)	3.26	<0.1%	11.65	0.1%	--	--
US DHHS--Other	32.93	0.4%	56.11	0.6%	43.02	0.7%
<b>Department of Education</b>						
Federal Education--Early Childhood Intervention, Individuals with Disabilities Education Act (IDEA)(PL105-17)'	28.98	0.3%	8.12	0.1%	9.20	0.1%
Federal Education--Other federal government education funding	28.52	0.3%	11.55	0.1%	--	--
<b>Local</b>						
Local--Local funds (city/county general revenue)	375.13	4.0%	256.87	2.6%	143.42	2.2%
<b>Other</b>						
Other--Fees, patient charges or third-party reimbursement'	37.23	0.4%	76.69	0.8%	18.34	0.3%
Other--Foundation or corporate grants	73.41	0.8%	31.11	0.3%	--	--
Other	134.05	1.4%	78.47	0.8%	192.99	3.0%
<b>Did not specify funding source</b>	--	--	408.58	4.1%	0.0	0.0%
<b>Total*</b>	<b>9457.94</b>	<b>100%</b>	<b>9951.50</b>	<b>100%</b>	<b>6464.44</b>	<b>100%</b>

° Similar to Table 26 in *Survey of the Public Health Nutrition Workforce 1999-2000*, 2003.

\* Total is based on filled and vacant public health nutrition positions. Excludes non-respondents to percent part-time. Idaho did not participate in 1999-2000 survey. California did not participate in 1994 survey. Although the large number of respondents in 1999-2000 from California may have affected comparability between the two surveys, California's responses were included in the comparison in order to provide the most complete information about sources of funding.

## Academic Preparation, Credentials, Training, and Training Needs

**Academic Preparation.** Academic preparation of the workforce has implications for recruitment, retention, continuing education, and career progression. Consistent with the 1999-2000 survey, personnel were provided a list of academic levels and concentrations for which they were to indicate whether they had earned or were working toward each degree. Therefore, multiple responses were possible. The only addition to this list in the current survey administration was that of high school diploma/General Educational Development (GED), because of interest in the paraprofessional workforce and, particularly, Breastfeeding Peer Counselors. Also, in the previous survey administration, respondents only checked all degree options that they had earned or were working toward. Non-response to this item was assumed to indicate that a degree option had not been earned or that the respondent was not working toward it. The 2006-07 survey asked this question in a similar manner, but with the additional response option of “not applicable.” A response to each degree option was not required for forward movement in the survey. Because only about 90% of respondents (89.4% WIC; 88.3% non-WIC) indicated they had a high school degree, the dataset was reviewed to see if there were respondents who had not indicated “earned,” “working toward,” or “not applicable” for each degree type. Because there were respondents who did appear to skip degree types, the 1999-2000 assumption is inappropriate, at least for this dataset. Therefore, all data on academic preparation must be viewed cautiously, particularly with comparisons to 1999-2000 because of differences in response options.

About 90% of the workforce reported they had a high school or GED (Table 32). Almost half of the WIC workforce (48.9%) and almost 60% of the non-WIC workforce (57.6%) reported having a bachelor’s degree in nutrition or dietetics. In contrast to 1999-2000, slightly more non-WIC personnel had a bachelor’s in public health nutrition or community nutrition (4.9%) compared to WIC personnel (4.2%). Interestingly, the proportion of both WIC and non-WIC bachelor’s degrees in areas other than nutrition/dietetics, public health nutrition/community nutrition, home economics, and health education, increased to 9.7% and 19.8%, respectively. This may reflect entrance into the field of personnel from other baccalaureate disciplines than would be traditionally associated with nutrition or dietetics.

At the Master’s-level 10.5% of WIC personnel and 21.4% of non-WIC personnel reported having a degree in nutrition/dietetics (Table 32). According to *Personnel in Public Health Nutrition for the 1990’s*, all personnel with population/system-focused responsibilities require a graduate degree in Public Health Nutrition or graduate course work in public health. Within the non-WIC workforce, which appeared to practice more at this level (Table 20), 17.5% reported having earned a Master’s or doctoral degree in public health nutrition/community nutrition or public health (other concentration). This contrasted with the WIC workforce, which practiced more with a direct client focus, and where only 5.3% had any of these public health degrees.

Academic differences between professionals and paraprofessionals in WIC were more dramatic (Table 33). Approximately 65% of professionals compared to 8.1% of paraprofessionals reported having earned a bachelor’s in nutrition/dietetics, while 14.3% compared to 1.0% reported having earned a Master’s in nutrition/dietetics. Of note, however, is that 2.5% and 4.8% of paraprofessionals in WIC are working on an Associate’s degree in either nutrition/dietetics or

some other area, respectively. Completion of these degrees while employed may provide an opportunity for career advancement within the Technical/Support Series described in *Personnel in Public Health Nutrition for the 1990's*. However, as noted in the 1999-2000 workforce report, the high percentage of WIC paraprofessionals without any type of college degree (46.7%) raises concern for this group's potential for career advancement through either more specialized academic training in nutrition or dietetics or credentialing (Table 34). The positive change since 1999-2000 was that this percentage decreased from 69.1%. However, limited ability for career advancement may have implications for retention.

In contrast, 54.1% of WIC professionals reported having earned a Bachelor's degree and, therefore, may have the opportunity for career advancement through advanced academic preparation. Interestingly this percent is less than that in 1999-2000, when 66.0% had earned a Bachelor's degree. This may in part be explained by the increase from 29.6% to 31.3% who reported having an earned Master's degree. However, it is unclear whether there were changes in hiring patterns to include more personnel hired at the Master's level or more personnel who were working on the degree in 1999-2000, but completed it by the current survey administration.

Working toward an academic degree while employed was not observed for a large percentage of the workforce. Less than 3% of either the WIC or non-WIC workforces were working on a degree. The degrees most frequently in progress were Master's degrees in nutrition/dietetics (both WIC and non-WIC) and Associate's degrees in something other than nutrition/dietetics. What is unknown from these data is the degree to which further academic preparation is required of or desired by personnel, and the barriers, if any, that impede academic advancement while employed. The data do suggest, however, the importance of continuing education opportunities through the workplace to maintain and enhance workforce preparation.

Core Public Health Course Work. There has been long-standing concern for a public health workforce without public health academic preparation and training. In fact, schools of public health, accredited public health programs, and official health agencies have explored distance-based options for completion of degrees and certificates. Whereas in 1999-2000 less than 10% of the workforce reported having a public health-related degree, only 9.5% of the current WIC workforce, but 22.4% of the non-WIC workforce reported having this advanced degree preparation.

Therefore, consistent with the previous survey administration, all personnel who did not report having completed a public health degree of some type at any post-secondary level, were asked to report all undergraduate or graduate courses that they had completed in the core public health areas (environmental health sciences, epidemiology, health services administration, social and behavioral sciences, and statistics) (Tables 35 and 36). The 1999-2000 workforce survey asked a similar question, but not with designation of each course taken as at the undergraduate or graduate level.

The majority of the workforce had completed a course in social and behavioral sciences and education, although the proportion was higher for the non-WIC workforce (70.7%) compared to the WIC workforce (51.8%). A large percentage also had completed a statistics course (70.5% non-WIC workforce; 48.1% WIC workforce). The courses least likely to have been completed

by either workforce were epidemiology (only 24.2% non-WIC and 15.7% WIC) and health services administration (24.6% non-WIC and 17.4% WIC). These latter courses are ones most specific to public health, while the former two courses are more general to a wide variety of academic disciplines. Proportionately more professionals compared to paraprofessionals had completed any of the public health core courses.

These findings are surprising compared to those of the 1999-2000 workforce study where only 42.1% and 28.1% of the non-WIC and WIC workforces had completed a course in behavioral sciences and only 41.4% and 24.0% had completed a course in statistics. Similarly, very small proportions had completed courses in epidemiology (8.8% non-WIC and 4.9% WIC workforces) and health services administration (8.6% non-WIC and 5.4% WIC).

This workforce study also provided insight into the academic level of these public health courses completed by asking respondents to designate whether they had completed each at the undergraduate or graduate level. For all courses a greater proportion of all personnel had completed an undergraduate courses compared to a graduate course. As found for the courses in general, a greater proportion of the non-WIC workforce compared to the WIC workforce had completed each of the courses. This provides evidence that the public health preparation of the WIC and non-WIC workforces differs, at least for completion of core public health course work. This would be consistent with academic preparation for population/system-focused work as opposed to direct client care work. However, these findings also suggest a continuing need for public health academic preparation, which could be addressed through not only degree-based work, but also continuing education as certificate programs.

Table 32°. Academic Preparation of the Public Health Nutrition Workforce (Question 27) *								
Degree	WIC				Non-WIC			
	Earned		Working On		Earned		Working On	
	N	%	N	%	N	%	N	%
<b>Secondary</b>								
High School/GED	8100	89.4%	26	0.3%	997	88.3%	0	0.0%
<b>Associate's</b>								
Nutrition/dietetics	522	5.8%	100	1.1%	36	3.2%	8	0.7%
Other	1010	11.1%	170	1.9%	130	11.5%	8	0.7%
<b>Bachelor's</b>								
Nutrition/dietetics	4435	48.9%	59	0.7%	650	57.6%	4	0.4%
Public health nutrition/community nutrition	383	4.2%	19	0.2%	55	4.9%	3	0.3%
Home economics/family consumer science/human ecology	751	8.3%	13	0.1%	79	7.0%	0	0.0%
Health education	127	1.4%	26	0.3%	36	3.2%	2	0.2%
Other	881	9.7%	126	1.4%	224	19.8%	10	0.9%
<b>Master's</b>								
Nutrition/dietetics	954	10.5%	183	2.0%	245	21.4%	33	2.9%
Public health nutrition/community nutrition	355	3.9%	84	0.9%	140	12.4%	10	0.9%
Home economics/family consumer science/human ecology	113	1.2%	18	0.2%	22	1.9%	1	0.1%
Public health – other concentration	112	1.2%	47	0.5%	51	4.5%	10	0.9%
Health education	64	0.7%	27	0.3%	25	2.2%	7	0.6%
Other	324	3.6%	114	1.3%	111	9.8%	16	1.4%
<b>Doctoral</b>								
Nutrition/dietetics	22	0.2%	7	0.1%	13	1.2%	3	0.3%
Public health nutrition/community nutrition	10	0.1%	8	0.1%	4	0.4%	0	0.0%
Home economics/family consumer science/human ecology	6	0.1%	3	0.0%	1	0.1%	1	0.1%
Public health – other concentration	6	0.1%	8	0.1%	2	0.2%	2	0.2%
Health education	6	0.1%	5	0.1%	0	0.0%	1	0.1%
Other	32	0.4%	16	0.2%	5	0.4%	4	0.4%
Total**	9064				1129			

° Similar to Table 27 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\* Individual respondents may have marked multiple responses (i.e., all degrees earned and/or were working toward) or skipped other responses.

\*\* Total is based on individual persons.

Degree	Professionals				Paraprofessionals				Other			
	Earned		Working On		Earned		Working On		Earned		Working On	
	N	%	N	%	N	%	N	%	N	%	N	%
<b>Secondary</b>												
High School/GED	5664	88.0%	5	0.1%	2228	92.4%	19	0.8%	208	92.0%	2	0.9%
<b>Associate's</b>												
Nutrition/dietetics	408	6.3%	34	0.5%	110	4.6%	60	2.5%	4	1.8%	6	2.7%
Other	642	10.0%	50	0.8%	329	13.7%	115	4.8%	39	17.3%	5	2.2%
<b>Bachelor's</b>												
Nutrition/dietetics	4186	65.0%	27	0.4%	194	8.1%	30	1.3%	55	24.3%	2	0.9%
Public health nutrition/community nutrition	348	5.4%	7	0.1%	34	1.4%	11	0.5%	1	0.4%	1	0.4%
Home economics/family consumer science/human ecology	678	10.5%	3	0.0%	64	2.7%	9	0.4%	9	4.0%	1	0.4%
Health education	90	1.4%	12	0.2%	32	1.3%	12	0.5%	5	2.2%	2	0.9%
Other	583	9.1%	44	0.7%	254	10.6%	77	3.2%	44	19.5%	5	2.2%
<b>Master's</b>												
Nutrition/dietetics	922	14.3%	169	2.6%	23	1.0%	13	0.5%	9	4.0%	1	0.4%
Public health nutrition/community nutrition	342	5.3%	76	1.2%	7	0.3%	7	0.3%	6	2.7%	1	0.4%
Home economics/family consumer science/human ecology	105	1.6%	15	0.2%	6	0.3%	1	0.0%	2	0.9%	2	0.9%
Public health	102	1.6%	40	0.6%	5	0.2%	4	0.2%	5	2.2%	3	1.3%
Health education	57	0.9%	25	0.4%	7	0.3%	2	0.1%	0	0.0%	0	0.0%
Other	283	4.4%	95	1.5%	31	1.3%	15	0.6%	10	4.4%	4	1.8%
<b>Doctoral</b>												
Nutrition/dietetics	19	0.3%	6	0.1%	3	0.1%	1	0.0%	0	0.0%	0	0.0%
Public health nutrition/community nutrition	7	0.1%	5	0.1%	3	0.1%	1	0.0%	0	0.0%	2	0.9%

Degree	Professionals				Paraprofessionals				Other			
	Earned		Working On		Earned		Working On		Earned		Working On	
	N	%	N	%	N	%	N	%	N	%	N	%
Home economics/family consumer science/human ecology	2	0.0%	1	0.0%	4	0.2%	1	0.0%	0	0.0%	1	0.4%
Public health	3	0.0%	5	0.1%	3	0.1%	1	0.0%	0	0.0%	2	0.9%
Health education	2	0.0%	3	0.0%	3	0.1%	1	0.0%	1	0.4%	1	0.4%
Other	18	0.3%	10	0.2%	12	0.5%	5	0.2%	2	0.9%	1	0.4%
<b>Total**</b>	6440				2398				226			

° Similar to Table 28 in *Survey of the Public Health Nutrition Workforce 1999-2000*, 2003.

\* Individual respondents may have marked multiple responses (i.e., all degrees earned and/or were working toward) or skipped other responses.

\*\* Total is based on individual persons.

Highest degree earned	Professional or paraprofessional					
	Professional		Paraprofessional		Other	
	N	%	N	%	N	%
High School	586	9.1%	1279	53.3%	69	30.5%
Associates	268	4.2%	404	16.8%	28	12.4%
Bachelors	3485	54.1%	554	23.1%	81	35.8%
Masters	2013	31.3%	92	3.8%	41	18.1%
Doctorate	66	1.0%	18	0.8%	6	2.7%
None or No Response	22	0.3%	51	2.1%	1	0.4%
<b>Total*</b>	6440	100.0%	2398	100.0%	226	100.0%

° Similar to Table 29 in *Survey of the Public Health Nutrition Workforce 1999-2000*, 2003.

\* Individual respondents may have marked multiple responses but were counted in the highest degree they indicated having earned or were working toward.

\*\* Total is based on individual persons.

**Table 35°. Core Public Health Course Work Among Personnel Without a Public Health Degree (Question 28)**

Courses	WIC/Non-WIC															
	WIC								Non-WIC							
	Professional or paraprofessional								Professional or paraprofessional							
	Professional		Paraprofes- sional		Other		Total		Professional		Paraprofes- sional		Other		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Environmental health sciences	1654	31.1%	266	11.4%	32	15.0%	1952	24.8%	206	35.9%	10	13.5%	44	22.9%	260	31.0%
Epidemiology	1060	19.9%	148	6.4%	25	11.7%	1233	15.7%	166	28.9%	4	5.4%	33	17.2%	203	24.2%
Health services administration	1172	22.0%	165	7.1%	29	13.6%	1366	17.4%	168	29.3%	6	8.1%	33	17.2%	207	24.6%
Social and behavioral sciences	3423	64.3%	564	24.2%	88	41.3%	4075	51.8%	458	79.8%	19	25.7%	117	60.9%	594	70.7%
Statistics	3283	61.7%	423	18.2%	79	37.1%	3785	48.1%	465	81.0%	13	17.6%	114	59.4%	592	70.5%
Total*	5321		2330		213		7864		574		74		192		840	

° Similar to Table 30 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\* Total is based on individual persons who reported not having earned a public health degree.

**Table 36. Core Public Health Course Work at Schooling Level Among Personnel Without a Public Health Degree (Question 28)**

Courses		WIC/Non-WIC															
		WIC								Non-WIC							
		Professional or paraprofessional								Professional or paraprofessional							
		Professional		Paraprofessional		Other		Total		Professional		Paraprofessional		Other		Total	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Environmental health	Undergraduate	1509	28.4%	256	11.0%	25	11.7%	1790	22.8%	175	30.5%	9	12.2%	35	18.2%	219	26.1%
	Graduate	213	4.0%	15	0.6%	7	3.3%	235	3.0%	40	7.0%	1	1.4%	13	6.8%	54	6.4%
Epidemiology	Undergraduate	774	14.5%	137	5.9%	14	6.6%	925	11.8%	86	15.0%	3	4.1%	17	8.9%	106	12.6%
	Graduate	330	6.2%	11	0.5%	12	5.6%	353	4.5%	88	15.3%	1	1.4%	20	10.4%	109	13.0%
Health services administration	Undergraduate	887	16.7%	147	6.3%	21	9.9%	1055	13.4%	106	18.5%	5	6.8%	15	7.8%	126	15.0%
	Graduate	340	6.4%	23	1.0%	8	3.8%	371	4.7%	73	12.7%	1	1.4%	20	10.4%	94	11.2%
Social and behavioral sciences	Undergraduate	3229	60.7%	540	23.2%	80	37.6%	3849	48.9%	410	71.4%	18	24.3%	108	56.3%	536	63.8%
	Graduate	496	9.3%	40	1.7%	13	6.1%	549	7.0%	138	24.0%	2	2.7%	33	17.2%	173	20.6%
Statistics	Undergraduate	2778	52.2%	395	17.0%	68	31.9%	3241	41.2%	334	58.2%	12	16.2%	93	48.4%	439	52.3%
	Graduate	879	16.5%	42	1.8%	18	8.5%	939	11.9%	211	36.8%	3	4.1%	48	25.0%	262	31.2%
Total*		5321		2330		213		7864		574		74		192		840	

\* Total is based on individual persons who reported not having earned a public health degree.

**Credentials of Workforce.** The certifications and credentials earned by those in the workforce and within WIC are shown in Tables 37 and 38. A little over one-third (36.8%) of the workforce reported being a Registered Dietitian (RD) (Table 37), the primary credentialing mode of the Commission on Dietetic Registration used by many states for licensure. Fewer personnel in WIC were RDs (33.5%) compared to non-WIC (63.7%). Eligibility to take the dietetic registration examination as verified by receipt of a letter from the Commission on Dietetic Registration is one measure of the potential to increase RDs in the workforce. Only 4.1% of the workforce overall, or 4.1% of the WIC and 3.4% of the non-WIC workforces, were dietetic registration-eligible (Table 39).

**Table 37°. Certifications and Credentials (Question 29)\***

Certifications/Credentials	WIC/Non-WIC					
	WIC		Non-WIC		Total	
	N	%	N	%	N	%
RD	3037	33.5%	719	63.7%	3756	36.8%
DTR	158	1.7%	3	0.3%	161	1.6%
Licensed/certified dietitian	2511	27.7%	498	44.1%	3009	29.5%
Certified diabetes educator (CDE) with American Association of Diabetes Education	71	0.8%	79	7.0%	150	1.5%
International board certified lactation consultant (IBCLC)	349	3.9%	19	1.7%	368	3.6%
Other certification in lactation or breastfeeding	2328	25.7%	91	8.1%	2419	23.7%
Board certification as a specialist in pediatric nutrition (CSP) with CDR	13	0.1%	12	1.1%	25	0.2%
Certified health education specialist (CHES)	57	0.6%	19	1.7%	76	0.7%
Registered nurse (RN)	191	2.1%	23	2.0%	214	2.1%
Licensed practical nurse (LPN)	82	0.9%	0	0.0%	82	0.8%
State certified teacher	187	2.1%	29	2.6%	216	2.1%
Certified in Family & Consumer Sciences (CFCS) with American Association for Family & Consumer Sciences	68	0.8%	9	0.8%	77	0.8%
Other certification	844	9.3%	91	8.1%	935	9.2%
None reported	3122	34.4%	265	23.5%	3387	33.2%
Total**	9064	100.0%	1129	100.0%	10193	100.0%

° Similar to Table 31 in *Survey of the Public Health Nutrition Workforce 1999-2000*, 2003.

\*Respondents may have reported multiple certifications/credentials, or no certifications/credentials.

\*\* Total is based on individual persons.

Since 1994 there was a continued decrease in the proportion of public health nutrition personnel who are Registered Dietitians. In 1994 42.1% of the entire workforce were RDs, compared to 41.2% in 1999-2000, and 36.8% in 2007-07. Within WIC the proportion also decreased from 38.4% in 1994 to 37.6% in 1999-2000, and 33.5% in 2007-07. Successful completion of the dietetic registration examination is the last step to become a RD. Therefore, RD-eligibility can be viewed as a “pipeline” to RD status. The proportion of those who were RD-eligible decreased within WIC from 6.3% in 1994 to a low of 1.6% in 1999-2000 and a mid-level of 4.1% in the current study. Because the definitions of RD-eligibility were the same in 1999-2000 and the current study, these data do suggest that the pipeline of those becoming RDs improved within WIC. This reinforces the importance of retaining personnel, who progress from RD-eligibility to RD credentialing.

The other primary certification of the workforce was state licensure or certification as a dietitian. Changes from 1999-2000 to the current workforce were contrary to those observed for RDs. While the percent of RDs decreased, the percent of state licensed/certified dietitians increased from 27.0% for the workforce overall to 29.5%, and from 25.2% of the WIC workforce to 27.7%. In contrast, state licensure/certification decreased for the non-WIC workforce from 45.4% in 1999-2000 to 44.1%. The difference in trends for RDs and state licensure/certification is interesting. Although in many states licensure/certification is predicated on dietetic registration status, this is not universal. Therefore, it is possible that the increasing trend in state licensure/credentialing is in part explained by those who are not RDs or RD-eligible seeking alternative means of dietetics/nutrition credentialing.

Increasing the proportion of RDs and state-licensed/credentialed dietitians within the WIC program is consistent with the *Nutrition Services Standards* of Re-Vitalizing Quality Nutrition Services (RQNW), where staffing qualifications of nutrition and other program personnel are delineated. Staffing qualifications for the state WIC nutrition coordinator, local agency nutritionist, and local agency nutritionist overseeing the WIC program specifically identify dietetic registration status or state licensure/credentialing as a personnel qualification. The importance of staff well-qualified to perform nutrition assessment is underscored in Value Enhanced Nutrition Assessment (VENA) in WIC also. Data from the workforce survey suggests the need to monitor both hiring and retaining of personnel that have or are in the process of obtaining the requisite credentialing status.

Another category signifying credentialing related to dietetics and nutrition is Dietetic Technician, Registered (DTR). Only 1.6% of the workforce was DTRs, comprising 1.7% and 0.3% of the WIC and non-WIC workforces, respectively. Similarly, only about 1.4% of the workforces were DTR-eligible as signified by receipt of a letter from the Commission on Dietetic Registration verifying eligibility to take the credentialing examination (Table 40). *Personnel in Public Health Nutrition for the 1990's* identifies the DTR credential as a staff qualification for Nutrition Technicians in the Technical/Support Series. However, recently the American Dietetic Association has been exploring the roles and qualifications of RDs and DTRs. Part of this discussion has included elimination of the DTR credential, although at the time of this report there was no decision. DTRs were clearly a small proportion of the public health nutrition workforce, which decreased since 1999-2000. The 1999-2000 workforce study reported informal verbal reports that some state WIC programs were using paraprofessionals instead of

professionals, because of limited funding and recruitment issues. Although the data from the current study do not necessarily support these reports, paraprofessionals indeed perform an important role within the WIC Program as noted in the 1999-2000 workforce report, particularly related to cultural and linguistic competence and effectiveness as breastfeeding peer counselors. DTR status could be a viable credential for some public health nutrition personnel, including some paraprofessionals.

Two other areas of credentialing are important to note: lactation or breastfeeding and diabetes education. Breastfeeding certification, whether as an International Board Certified Lactation Consultant (IBCLC) or other means of certification, was maintained by 3.9% and 25.7% of the WIC workforce, respectively. These proportions were higher than those in 1999-2000 when only 1.7% and 14.0% of WIC personnel had these credentials. This reflects not only the importance of breastfeeding promotion within the WIC program, but also perhaps staff recruitment, retention, and training of WIC professionals who are breastfeeding coordinators, and WIC paraprofessionals who are breastfeeding peer counselors.

Within the non-WIC workforce there was an increase in the proportion of personnel who were Certified Diabetes Educators (CDE) with the American Association of Diabetes Education. In 1999-2000 4.8% were CDEs, while in 2006-07 7.0% were CDEs. This may reflect not only the growing prevalence of diabetes due to overweight and obesity and the increased focus of non-WIC personnel on general child health, school and/or adolescent health, and children with special health care needs (Table 22).

Of significance is that although there were a variety of credentials held by the public health nutrition workforce, one-third reported no credentialing at all (33.2% overall; 34.4% WIC; 23.5% non-WIC). Within WIC the disparity of credentialing was even more significant, where over 50% of WIC paraprofessionals reported no credentialing (Table 38). This proportion was much less than the 70.1% of WIC paraprofessionals reporting no credentialing in 1999-2000. This decrease may be explained in part by the increased proportion of WIC paraprofessionals who acquired IBCLC status (1.0% to 2.8%) or other breastfeeding certification (11.5% to 27.4%). This underscores the importance of these credentials, particularly for paraprofessionals who have more limited opportunities for national credentialing compared to professionals.

**Table 38°. Certifications and Credentials of the WIC Nutrition Workforce (Question 29)\***

Certifications/Credentials	Professional or paraprofessional					
	Professional		Paraprofessional		Other	
	N	%	N	%	N	%
RD	2267	45.8%	49	2.3%	51	15.5%
DTR	101	1.8%	32	1.8%	1	0.4%
Licensed/certified dietitian	1837	37.9%	43	2.0%	39	11.1%
Certified diabetes educator (CDE) with American Association of Diabetes Education	67	1.0%	2	0.1%	4	0.9%
International board certified lactation consultant (IBCLC)	206	3.8%	57	2.8%	27	16.4%
Other certification in lactation or breastfeeding	1295	25.2%	527	27.4%	41	20.4%
Board certification as a specialist in pediatric nutrition (CSP) with CDR	7	0.2%	2	0.1%	1	0.0%
Certified health education specialist (CHES)	34	0.7%	8	0.5%	2	1.3%
Registered nurse (RN)	136	2.5%	12	0.6%	14	7.5%
Licensed practical nurse (LPN)	44	0.7%	19	1.0%	10	4.4%
State certified teacher	122	2.3%	27	1.5%	3	2.2%
Certified in Family & Consumer Sciences (CFCS) with American Association for Family & Consumer Sciences	55	0.9%	5	0.3%	2	0.9%
Other certification	383	6.9%	301	15.3%	28	12.8%
None reported	1505	27.2%	1018	53.6%	90	37.2%
Total**	6440	100.0%	2398	100.0%	226	100.0%

° Similar to Table 32 in *Survey of the Public Health Nutrition Workforce 1999-2000*, 2003.

\*Respondents may have reported multiple certifications/credentials, or no certifications/credentials.

\*\* Total is based on individual persons.

**Table 39°. Steps Taken to Become Registered Dietitians by Non-RDs (Question 31)**

Steps to RD	WIC/Non-WIC					
	WIC		Non-WIC		Total	
	N	%	N	%	N	%
Completed at least a baccalaureate degree	1728	28.7%	89	21.7%	1817	28.2%
Completed a didactic program approved by the Commission on Accreditation Approval for Dietetic Education (CAADE)	572	9.5%	22	5.4%	594	9.2%
Completed a supervised practice program accredited by CAADE	173	2.9%	12	2.9%	185	2.9%
Received a letter from CDR verifying eligibility to take exam	247	4.1%	14	3.4%	261	4.1%
None of the above	4114	68.3%	312	76.1%	4426	68.8%
Total Non-RDs*	6027	100.0%	410	100.0%	6437	100.0%

° Similar to Table 33 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\* Total is based on individual persons not reporting being an RD.

**Table 40°. Steps Taken to Become Dietetic Technicians, Registered by Non-DTRs (Question 32)**

Steps to DTR	WIC/Non-WIC					
	WIC		Non-WIC		Total	
	N	%	N	%	N	%
Completed at least an associate degree	337	5.7%	16	3.9%	353	5.6%
Completed a didactic program approved by CAADE	250	4.3%	7	1.7%	257	4.1%
Completed a Dietetic Technician Program approved by CAADE	43	0.7%	0	0.0%	43	0.7%
Completed a Dietetic Technician Program supervised practice program accredited by CAADE	34	0.6%	0	0.0%	34	0.5%
Received a letter from CDR verifying eligibility to take exam	82	1.4%	6	1.5%	88	1.4%
None of the above	5305	90.3%	383	94.1%	5688	90.5%
Total Non-RDs and -DTRs*	5875	100.0%	407	100.0%	6282	100.0%

° Similar to Table 34 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\* Total is based on individual persons not reporting being an RD or DTR. Six WIC workers are both an RD and DTR; they are reflected in the column total in Table 31.

**Attendance in Continuing Education Courses** – Continuing education of personnel is important for maintenance of a qualified workforce. “Nutrition education and WIC” courses, “pediatric nutrition” courses, and “maternal, neonatal and infant nutrition” courses had the most registrants among the workforce, numbering 3,945, 992, and 916, respectively. Among those within the workforce who attended continuing education nutrition courses, most were from state and local health agencies (Table 41). The distribution of course attendees differed, however, for those employed by state compared to local health agencies. Courses whose primary attendees were state health agency personnel were “children with special health care needs nutrition” (47.8% of workforce registrants/attendees), “maternal, neonatal and infant nutrition” (44.3%), and “pediatric nutrition” (42.4%). Alternatively, courses whose primary attendees were local health agency personnel were “public health and leadership” courses (45.9%), “other courses” (43.0%), “nutrition education and WIC” (41.6%), and “chronic disease prevention, including overweight and obesity” courses (36.8%). Overall, there was an increased tendency for state health agency employees, who represented a smaller proportion of the workforce compared to local health agency employees, to attend continuing education courses. This is consistent with roles of state health personnel for technical assistance, consultant, and training, particularly to those at the regional and local levels. It also has implications for marketing of continuing education programs in relation to agency of employment. Therefore, for example, maternal and child nutrition courses may be most sought by state-level nutrition personnel, while nutrition education and WIC courses may be most sought by local-level personnel. It is important to remember, however, that these data were only for members of the workforce who attended these continuing education courses. They did not represent all attendees at these courses.

The distribution of courses completed by each job classification (Table 42) revealed that for most job classifications, personnel were more likely to complete a course on “nutrition education and WIC.” 48.8% of Public Health Nutrition Directors, 50.7% of Assistant Directors, 48.2% of Supervisors, 41.1% of Public Health Nutrition Consultants, 34.2% of Public Health Nutritionists, 40.4% of Nutritionists, 34.4% of Nutrition Technicians, 27.8% of Nutrition Assistants and 36% of Breastfeeding Peer Counselors. In contrast, Clinical Nutritionists were more likely to complete a course in “pediatric nutrition” (23.9% of Clinical Nutritionists). Nutrition courses on children with special health care needs were least often completed by most job classifications, except Clinical Nutritionists and Public Health Nutrition Consultants, 8.1% and 3.9% of whom completed these courses. Paraprofessionals also were least likely to take nutrition courses in “pediatric nutrition” (0.5% of Nutrition Assistants), and public health leadership (0.6% of Breastfeeding Peer Counselors).

These findings are likely a reflection of both interest in attending and course availability. For example, breastfeeding, prenatal nutrition, infant and preschool age nutrition, and childhood nutrition were the top 4 perceived training needs of the workforce (Table 44). This would be consistent with courses in “nutrition education and WIC,” “pediatric nutrition,” and “maternal, neonatal and infant nutrition” as leading courses completed by workforce registrants (Table 41). “Children with special health care needs” was the 7<sup>th</sup> highest perceived training need of the total workforce (Table 44). However, these are very technical courses, for which there may be fewer course offerings or in more limited modes of offering. In this regard, the number of respondents who attended the listed courses is revealing (Table 43). Except for the on-site Nutrition and Breastfeeding Conference of the National WIC Association with 2,603 respondents attending,

the courses attended by the most workforce respondents were those offered via distance education technologies (WIC Learning Online with 2,150 workforce attendees; Intensive Course in Maternal Nutrition, University of Minnesota with 868 workforce attendees; and Pediatric Update Teleconference, University of Alabama, Birmingham with 646 workforce attendees. These findings all suggest that continuing education opportunities may need to be tailored and marketed not only in relation to perceived training needs, but also agency of employment and job classification. Distance education offerings may facilitate attendance. What these data do not reveal is the degree to which perceived training needs corresponded with supervisor- or job-perceived training needs or how participation in continuing education related to improved job performance.

**Training Needs.** Respondents were asked to review a list of 44 training areas categorized as client and population groups, assessment skills, policy development, and assurance. For each training area they indicated whether they needed basic training, advanced training, or had no need for additional training. This was in contrast to the 2000 workforce survey where respondents identified their top 3 training needs and identified their need as either basic or advanced.

Table 44 lists the top 10 perceived training needs of the overall and WIC workforces and for WIC professionals and paraprofessionals. The comparable data for the non-WIC workforce are found in Table 45. The top five perceived needs of the entire workforce were “breastfeeding,” “prenatal nutrition,” “infant and preschool age nutrition,” “childhood nutrition,” and “nutrition counseling, behavior change, and client education.” Comparisons to the 1999-2000 ranking of perceived training needs must be viewed cautiously, because the list of training needs options differed, with some revised and new options offered in 2006-07. Despite these differences, the current ranking of perceived needs was similar to that in 1999-2000, except that “nutrition with special health care needs, developmental disabilities or high risk” was not among the top 5, and was replaced by “childhood nutrition.” Within the top 10 perceived training needs, “women’s health,” “assessment of nutritional status,” and “communicating with low-literacy populations,” replaced “high risk clients, including HIV positive, addictions,” “eating disorders,” and “supplemental and alternative dietary therapies.”

The top perceived training needs of the WIC workforce mimicked that of the total workforce and the top 10 perceived training needs of WIC professionals and paraprofessionals were similar. Only “communicating with low-literacy populations” was not a top 10 perceived need of WIC professionals and was replaced by “community nutrition assessment.” For WIC paraprofessionals only “nutrition for children with special health care needs, developmental disabilities or high risk” was not among the top 10 perceived needs. It was replaced by” cultural competency “among the top 10.

The top perceived training needs of the non-WIC workforce differed from the workforce overall, WIC overall, and WIC professionals. The top 5 perceived needs were: “use of information technology, including computers;” “development of nutrition education materials;” “program evaluation;” “community nutrition assessment;” and “communicating with low-literacy populations.” Only 3 of the top 10 perceived training needs for the non-WIC workforce were the same as for the workforce overall and WIC overall: “use of current information technology,

including computers;” “communicating with low-literacy populations;” and “childhood nutrition.” While perceived training needs of WIC professionals and paraprofessionals were similar, there were sharp differences for non-WIC professionals and paraprofessionals. Indeed, there were only 4 perceived needs that were common among the top 10 of both groups: “use of current information technology;” “communicating with low-literacy populations;” “community nutrition assessment;” and “target population risk assessment.” Top training needs of non-WIC paraprofessionals, in contrast to non-WIC professionals, tended to be related to direct client services and nutrition-focused. For example, they related to breastfeeding, prenatal nutrition, infant and preschool age nutrition, and childhood nutrition. In contrast non-WIC professionals tended to have higher perceived training needs in population-focused areas of assurance, assessment skills and policy development, including, for example: program evaluation, community nutrition assessment, data collection, management, surveillance, and monitoring systems, program planning, and leadership and team building.

These findings suggest that there was a great deal of similarity for perceived training needs for the workforce overall, WIC workforce, including professionals and paraprofessionals, and the non-WIC workforce, including paraprofessionals. Priority training needs primarily were in the category of client and population groups. In contrast, non-WIC professionals perceived higher training needs in the population-based categories of assessment skills and policy development. This was consistent with the direct client services focus of the WIC workforce (93.8% spending some time in direct services) compared to the non-WIC workforce (Table 20). Moreover, there seemed to be a small proportion of the overall workforce that may have shifted since 1999-2000 from assurance to assessment and population-based interventions as their primary area of practice (Table 17). This shift in practice may be reflected in the differential training needs of non-WIC professionals to focus more on assessment skills and policy development.

Type of Agency	Maternal, neonatal and infant nutrition courses		Pediatric nutrition courses		Children with special health care needs' nutrition courses		Nutrition education and WIC		Chronic disease prevention, including overweight and obesity, courses		Public health and leadership courses		Other course	
	N	%	N	%	N	%	N	%	N	Column %	N	%	N	%
SHA (27.1%)	406	44.3%	421	42.4%	88	47.8%	1126	28.5%	216	36.6%	94	42.3%	245	30.0%
LHA (41.9%)	354	38.6%	394	39.7%	66	35.9%	1642	41.6%	217	36.8%	102	45.9%	351	43.0%
ITO (1.8%)	16	1.7%	19	1.9%	2	1.1%	90	2.3%	15	2.5%	4	1.8%	12	1.5%
Non-profit organization (25.1%)	120	13.1%	129	13.0%	23	12.5%	927	23.5%	118	20.0%	18	8.1%	173	21.2%
For-profit organization (0.4%)	2	0.2%	1	0.1%	1	0.5%	17	0.4%	2	0.3%	0	0.0%	1	0.1%
Other (3.8%)	18	2.0%	28	2.8%	4	2.2%	143	3.6%	22	3.7%	4	1.8%	35	4.3%
Total* (100%)	916	100.0%	992	100.0%	184	100.0%	3945	100.0%	590	100.0%	222	100.0%	817	100.0%

<sup>o</sup> Similar to Table 35 in *Survey of the Public Health Nutrition Workforce 1999-2000*, 2003.

\*Denominator indicates total number of registrations/attendees reported by individual persons. Numbers in parentheses represent percent of total respondents

<b>Table 42°. Proportion of Each Job Classification that Attended Nutrition Courses (Question 33)</b>														
Job classification	Maternal, neonatal and infant nutrition courses		Pediatric nutrition courses		Children with special health care needs' nutrition courses		Nutrition education and WIC		Chronic disease prevention, including overweight and obesity, courses		Public health and leadership courses		Other course	
	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %
<i>Management Series</i>														
PHN Director (n=408)	57	14.0%	90	22.1%	14	3.4%	199	48.8%	50	12.3%	42	10.3%	50	6.1%
PHN Assistant Director (n=288)	56	19.4%	71	24.7%	6	2.1%	146	50.7%	42	14.6%	17	5.9%	39	13.5%
PHN Supervisor (n=1143)	172	15.0%	206	18.0%	32	2.8%	551	48.2%	113	9.9%	46	4.0%	107	9.4%
<i>Professional Series</i>														
PHN Consultant (n=587)	105	17.9%	144	24.5%	23	3.9%	241	41.1%	64	10.9%	30	5.1%	73	12.4%
PH Nutritionist (n=409)	23	5.6%	27	6.6%	6	1.5%	140	34.2%	35	8.6%	8	2.0%	17	4.2%
Clinical Nutritionist (n=297)	30	10.1%	71	23.9%	24	8.1%	63	21.2%	28	9.4%	6	2.0%	35	4.3%
Nutritionist (n= 4131)	403	9.8%	334	8.1%	62	1.5%	1668	40.4%	210	5.1%	45	1.1%	281	6.8%
<i>Technical/Support Series</i>														
Nutrition Technician	25	2.7%	14	1.5%	2	0.2%	324	34.4%	9	1.0%	10	1.1%	55	5.8%

Job classification	Maternal, neonatal and infant nutrition courses		Pediatric nutrition courses		Children with special health care needs' nutrition courses		Nutrition education and WIC		Chronic disease prevention, including overweight and obesity, courses		Public health and leadership courses		Other course	
	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %
(n=943)														
Nutrition Assistant (n=374)	4	1.1%	2	0.5%	2	0.5%	104	27.8%	3	0.8%	3	0.8%	11	2.9%
BF Peer Counselor (n=1157)	22	1.9%	11	1.0%	8	0.7%	417	36%	11	1%	7	0.6%	104	9%
<i>Other (Unknown Series)</i>														
Other (n=456)	19	4.2%	22	4.8%	5	1.1%	92	20.2%	25	5.5%	8	1.8%	45	9.9%
Total*	916		992		184		3945		590		222		817	

° Similar to Table 36 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\* Denominator indicates total number of registrations/attendees reported by individual persons.

**Table 43°. Number of Respondents Indicating Attendance at Each of the Nutrition Courses for Filled Positions (Question 33)\***

Nutrition Courses	N
<b>Maternal, Neonatal and Infant Nutrition</b>	
Intensive Course in Maternal Nutrition, University of Minnesota, Minneapolis (workshop or Web-based)	868
Neonatal Nutrition Training, Baylor College of Medicine, Houston, Texas	35
Neonatal Nutrition and Leadership Education in Pediatric Nutrition, Indiana University School of Health and Rehabilitative Sciences, Indianapolis, Indiana	13
Early Steps to Lasting Health: A Self-Study Curriculum on Infant Feeding and Assessment, Arizona Department of Public Health and University of Tennessee, Knoxville (Web-based)	18
Summer Institute in Maternal and Child Health, Rocky Mountain Public Health Education Consortium, Salt Lake City, UT	13
<b>Pediatric Nutrition</b>	
Intensive Course in Pediatric Nutrition, University of Iowa, Iowa City	324
Intensive Course in Nutrition for Infants, Children and Adolescents, University of Alabama, Birmingham, Alabama	212
Pediatric Update Teleconferences, University of Alabama, Birmingham	646
<b>Children with Special Health Care Needs' Nutrition</b>	
Nutrition Update: Children with Special Health Care Needs, Kennedy Krieger Institute and Virginia Commonwealth University, Washington, DC	41
Interdisciplinary Leadership Training in Overweight Prevention and Intervention for Children with Special Health Care Needs, University of Tennessee, Memphis; Knoxville, TN; Rochester, NY; Portland, OR	36
Interdisciplinary Leadership Training in Feeding Children with Special Health Care Needs, University of Tennessee, Memphis	33
Nutrition Makes a Difference: The Team Approach to Feeding, University of California, Los Angeles, CA	31
Beyond Assessment: Series, University of California, Los Angeles, CA	13
Nutrition for Children with Special Health Care Needs, University of California, Los Angeles, CA (CD-ROM and Web-based modules)	80
<b>Nutrition Education and WIC</b>	
Nutrition and Breastfeeding Conference, National WIC Association	2603
WIC Learning Online	2150
National Nutrition Education Conference, USDA Food and Nutrition Service	735
<b>Chronic Disease Prevention, Including Overweight and Obesity</b>	
ADA Certificate of Training in Childhood and Adolescent Weight Management	243
ADA Certificate of Training in Adult Weight Management Program	242

**Table 43°. Number of Respondents Indicating Attendance at Each of the Nutrition Courses for Filled Positions (Question 33)\***

<b>Nutrition Courses</b>	<b>N</b>
Maximizing Resources for Results! Extending Bright Futures through Community Based Nutrition Planning, University of Tennessee, Knoxville and University of North Carolina (workshop or Web-based)	99
Moving People and Communities: Extending Bright Futures through Physical Activity, University of Tennessee, Knoxville and University of North Carolina (workshop or Web-based)	137
<b>Public Health and Leadership Courses</b>	
CDC Public Health Preparedness Conference	100
Regional or National Public Health Leadership Institute	121
Cooper Institute, Dallas, TX	18
<b>Other</b>	
Other course	817

° Similar to Table 37 in *Survey of the Public Health Nutrition Workforce 1999-2000*, 2003.

\* Total =9628 is based on individual respondents and includes duplicate attendees.

Topic	Total Workforce		WIC Nutrition Workforce							
			All	Professional	Paraprofessional	Others				
Breastfeeding	(1)	77.5% 7898	(1)	81.6% 7397	(1)	81% 5218	(1)	84.1% 2016	(1)	72.1% 163
Prenatal nutrition	(2)	72.6% 7400	(2)	76.3% 6920	(2)	79.3% 5109	(2)	69.7% 1671	(2)	61.9% 140
Infant and preschool age nutrition	(3)	72.2% 7363	(3)	74.3% 6735	(3)	77.5% 4989	(3)	67% 1607	(3)	61.5% 139
Childhood nutrition	(4)	69.8% 7113	(5)	70.4% 6377	(6)	74.3% 4785	(4)	61.1% 1464	(5)	56.6% 128
Nutrition counseling, behavioral change, client education	(5)	68.4% 7079	(4)	70.4% 6377	(4)	77% 4958	(5)	54.3% 1303	(6)	52.7% 119
Use of current information technology, including computers	(6)	66.4% 6767	(7)	66.0% 5985	(7)	71.2% 4587	(7)	52.9% 1268	(4)	57.5% 130
Nutrition for children with special health care needs, developmental disabilities or high risk	(7)	64.8% 6606	(6)	66.5% 6024	(5)	76.9% 4952				
Women's health	(8)	64.1% 6529	(8)	65.7% 5951	(9)	70.4% 4535	(6)	54.1% 1297	(6)	52.7% 119
Assessment of nutritional status	(9)	62.5% 6372	(9)	63.9% 5788	(8)	70.9% 4563	(8)	46.9% 1124		
Communicating with low-literacy populations	(10)	60.9% 6208	(10)	60.2% 5454			(9)	44.6% 1070	(9)	46.5% 105
Community nutrition assessment					(10)	68.2% 4393				
Cultural competency							(10)	43.7% 1047		
Staff training programs									(8)	49.6% 112
Consultation skills									(9)	46.5% 105
No response or missing		0.2% 25		0.3% 23		0.2% 15		0.3% 6		0.9% 2
<b>Total*</b>		<b>10193</b>		<b>9064</b>		<b>6440</b>		<b>2398</b>		<b>226</b>

° Similar to Table 38 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\* Total is based on individual persons.

Topic	Total Workforce		Non-WIC Nutrition Workforce							
			All		Professional		Paraprofessional		Others	
Breastfeeding	(1)	77.5% 7898					(4)	60.5% 46		
Prenatal nutrition	(2)	72.6% 7400					(9)	52.6% 40		
Infant and preschool age nutrition	(3)	72.2% 7363					(7)	56.6% 43		
Childhood nutrition	(4)	69.8% 7113	(6)	65.2% 736			(1)	65.8% 50	(1)	66.5% 153
Nutrition counseling, behavioral change, client education	(5)	68.4% 7079					(6)	57.9% 44		
Use of current information technology, including computers	(6)	66.4% 6767	(1)	69.3% 782	(2)	74.1% 610	(1)	65.8% 50	(5)	53% 122
Nutrition for children with special health care needs, developmental disabilities or high risk	(7)	64.8% 6606							(4)	54.8% 126
Women's health	(8)	64.1% 6529					(8)	55.3% 42		
Assessment of nutritional status	(9)	62.5% 6372					(5)	59.2% 45		
Communicating with low-literacy populations	(10)	60.9% 6208	(5)	66.8% 754	(4)	72.8% 599	(10)	48.7% 37	(6)	51.3% 118
Cultural competency			(7)	64.5% 728	(7)	70.8% 583				
Development of nutrition education materials			(2)	68.6% 774	(3)	73.8% 607			(2)	57% 131
Program evaluation			(3)	67.7% 764	(1)	75.7% 623			(8)	50% 115
Community nutrition assessment			(4)	67.4% 761	(4)	72.8% 599	(3)	61.8% 47	(8)	50% 115

Topic	Total Workforce		Non-WIC Nutrition Workforce							
			Total		Professionals		Paraprofessionals		Others	
Data collection, management; surveillance and monitoring systems			(7)	64.5% 728	(6)	72.3% 595				
Target population risk assessment			(9)	62.9% 710	(8)	70.1% 577	(10)	48.7% 37		
Program planning			(10)	62.7% 708	(9)	69.7% 574				
Leadership and team building					(10)	67% 551			(7)	50.4% 116
Adolescent nutrition									(2)	57% 131
Environmental health and/or food safety									(10)	49.6% 114
No response or missing		0.2% 25		0.2% 2		0.2% 2		0		0
<b>Total*</b>	10193		1129		823		76		230	

° Similar to Table 38 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\* Total is based on individual persons.

## Affiliation with Professional Organizations

Membership in professional organizations affords opportunities for continuing education, mentoring, leadership, and advocacy. The primary professional organization selected by the WIC and non-WIC workforces was the American Dietetic Association, with 26.6% and 49.5% of respondents, respectively (Table 46). The proportion who were members of the American Dietetic Association was less than the combined proportion of Registered Dietitians and Dietetic Technicians, Registered for either workforce (Table 37). The second most frequently selected membership organization differed for the WIC and non-WIC workforces. Almost 20% (19.1% of the WIC workforce was a member of the National WIC Association (NWA) in contrast to only 1.8% of the non-WIC workforce. This is not surprising given the common emphasis of the WIC workforce and NWA. For non-WIC respondents, “other professional organization” was selected the second most frequently (13.6%). Membership in the American Public Health Association was the third most frequent association for non-WIC respondents (7.3%). Compared to 1999-2000, membership in a number of associations decreased, including the American Dietetic Association for both WIC and non-WIC personnel. Membership in the National WIC Association increased from 7.7% in 1999-2000 to 19.1% in 1999-2000 for WIC personnel. This increase is a reflection of NWA expanding its membership to go beyond WIC directors alone. Membership in the International Lactation Consultant Association also increased from 2.3% of the WIC workforce to 3.9%. Membership in the Association of State and Territorial Public Health Nutrition Directors and in the Society for Nutrition Education increased for the non-WIC workforce from 4.4% to 5.5% and from 5.7% to 6.6%, respectively.

A comparison of WIC professionals and paraprofessionals revealed that, consistent with 1999-2000, professionals were more likely to be members of professional associations compared to paraprofessionals (Table 47). While 35.9% of WIC professionals were members of the American Dietetic Association and 20.9% were members of NWA, only 3.0% and 14.5% of paraprofessionals were members of the respective organizations. These levels of membership were decreases since 1999-2000 for both WIC workforces for the American Dietetic Association and increases for NWA. The third most frequently named organization, the International Lactation Consultant Association, had similar levels of membership with 3.7% of WIC professionals and 3.2% of WIC paraprofessionals; both levels were increases from 1999-2000.

Membership in professional associations often requires dues payment and sometimes requires a particular level of academic preparation, work responsibility, or credentialing. For example, membership in the American Dietetic Association requires being credentialed or having met various requirements toward credentialing by the Commission on the Accreditation of Dietetics Education, being a member of Dietitians of Canada, or having earned a graduate degree from an accredited college or university in one of six specified areas. Alternatively, membership in the International Lactation Consultant Association requires an interest in caring for breastfeeding families. Many professional associations have struggled with membership recruitment and retention at a time when there are more associations competing for members. National organizations are targeted to professionals and paraprofessionals have lower salaries than professionals (Table 27). Therefore, the opportunity for membership in national organizations may be limited for paraprofessionals in terms of both availability and access. The results from this workforce survey also indicated that a large proportion the workforce was not a member of

any professional organization (almost 55% of WIC personnel and about 34% of non-WIC personnel; Table 46). Therefore, the opportunities afforded by professional organizations, including continuing education, mentoring, leadership, and advocacy, may be limited for a large proportion of the workforce. Barriers and disincentives to professional organization membership should be considered by both employers of the public health nutrition workforce and member organizations.

**Table 46°. Membership in Professional Organizations for WIC and Non-WIC Workers (Question 35)\***

Organization	WIC/Non-WIC			
	WIC		Non-WIC	
	N	%	N	%
American Association of Diabetes Educators	114	1.3%	75	6.6%
American Association of Family and Consumer Sciences	52	0.6%	13	1.2%
American Dietetic Association	2408	26.6%	559	49.5%
American Public Health Association	216	2.4%	82	7.3%
American Public Human Services Association	17	0.2%	1	0.1%
Association of State and Territorial Public Health Nutrition Directors	56	0.6%	62	5.5%
International Lactation Consultant Association	350	3.9%	14	1.2%
International Society for Behavioral Nutrition and Physical Activity	8	0.1%	2	0.2%
National WIC Association	1727	19.1%	20	1.8%
National Association of Child and Adult Care Food Program Professionals	21	0.2%	31	2.7%
School Nutrition Association (formerly American School Food Service Association)	37	0.4%	33	2.9%
Society for Nutrition Education	116	1.3%	74	6.6%
Society of Public Health Educators	30	0.3%	15	1.3%
Other Professional Organization	599	6.6%	154	13.6%
None indicated	4940	54.5%	388	34.4%
Total**	9064		1129	

° Similar to Table 39 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\* Respondents may have indicated membership in multiple organizations.

\*\* Total is based on individual persons.

**Table 47°. Membership in Professional Organizations for WIC Professionals and Paraprofessionals (Question 35)\***

	Professional or paraprofessional					
	Professional		Paraprofessional		Other	
	N	%	N	%	N	%
American Association of Diabetes Educators	102	1.6%	10	0.4%	2	0.9%
American Association of Family and Consumer Sciences	47	0.7%	4	0.2%	1	0.4%
American Dietetic Association	2311	35.9%	72	3.0%	25	11.1%
American Public Health Association	190	3.0%	18	0.8%	8	3.5%
American Public Human Services Association	8	0.1%	9	0.4%	0	0.0%
Association of State and Territorial Public Health Nutrition Directors	53	0.8%	3	0.1%	0	0.0%
International Lactation Consultant Association	239	3.7%	77	3.2%	34	15.0%
International Society for Behavioral Nutrition and Physical Activity	4	0.1%	4	0.2%	0	0.0%
National WIC Association	1343	20.9%	348	14.5%	36	15.9%
National Association of Child and Adult Care Food Program Professionals	10	0.2%	11	0.5%	0	0.0%
School Nutrition Association (formerly American School Food Service Association)	30	0.5%	7	0.3%	0	0.0%
Society for Nutrition Education	104	1.6%	10	0.4%	2	0.9%
Society of Public Health Educators	20	0.3%	10	0.4%	0	0.0%
Other Professional Organization	472	7.3%	105	4.4%	22	9.7%
None indicated	2973	46.2%	1835	76.5%	132	58.4%
Total**	6440		2398		226	

° Similar to Table 40 in *Survey of the Public Health Nutrition Workforce 1999-2000*, 2003.

\* Respondents may have indicated membership in multiple organizations.

\*\* Total is based on individual persons.

### Geographical Distribution of the WIC Workforce Respondents

Because WIC employs the largest proportion of the public health nutrition workforce and is involved in direct client services, a state comparison was made for the distributions of WIC respondents to the 2006-07 survey and WIC participants. Consistent with the 1999-2000 workforce study, California had the largest proportion of both WIC workforce respondents (14.6%) and participants (17.1%) (Table 48). The Florida WIC workforce constituted 7.2% of respondents, but only 4.9% of WIC participants. The next most heavily represented state for WIC personnel was Pennsylvania, with 6.2% of respondents and 3.1% of WIC participants. Any conclusions to be drawn from these findings must be tempered with recognition of the

differential response rates by states and, specifically with Florida and Pennsylvania having higher survey response rates compared to California (99.4%, Florida; 97.2%, Pennsylvania; and 74.8%, California)

State	WIC Workforce		WIC Participants <sup>4</sup>
	WIC	Total	
	N	%	%
AK	47	0.5%	0.3%
AL	102	1.1%	1.5%
AR	52	0.6%	1.1%
AZ	384	4.1%	2.2%
CA	1378	14.6%	17.1%
CO	271	2.9%	1.1%
CT	32	0.3%	0.7%
DC	36	0.4%	0.2%
DE	24	0.3%	0.3%
FL	677	7.2%	4.9%
GA	140	1.5%	3.5%
GU	23	0.2%	0.1%
HI	64	0.7%	0.4%
IA	109	1.2%	0.8%
ID	114	1.2%	0.5%
IL	187	2.0%	3.5%
IN	130	1.4%	1.7%
KS	105	1.1%	0.9%
KY	117	1.2%	1.6%
LA	83	0.9%	1.6%
MA	388	4.1%	1.5%
MD	134	1.4%	1.5%
ME	37	0.4%	0.3%
MI	47	0.5%	2.9%
MN	112	1.2%	1.6%
MO	141	1.5%	1.7%
MS	194	2.1%	1.2%
MT	46	0.5%	0.3%
NC	399	4.2%	3.0%
ND	60	0.6%	0.2%
NE	126	1.3%	0.5%
NH	40	0.4%	0.2%
NJ	184	1.9%	1.9%

<sup>4</sup> WIC Program Data, Annual Level State Data, Total Participation FY 2002-2006. USDA, FNS. <http://www.fns.usda.gov/pd/wicmain.htm>

**Table 48°. Distribution of WIC Workforce Respondents and WIC Participants by State (Question 7)**

State	WIC Workforce		WIC
	WIC	Total	Participants <sup>4</sup>
	N	%	%
NM	96	1.0%	0.8%
NV	62	0.7%	0.7%
NY	519	5.5%	6.1%
OH	246	2.6%	3.5%
OK	80	0.9%	1.5%
OR	224	2.4%	1.3%
PA	588	6.2%	3.1%
RI	47	0.5%	0.3%
SC	143	1.5%	1.4%
SD	30	0.3%	0.3%
TN	200	2.1%	2.0%
TX	577	6.1%	11.3%
UT	20	0.2%	0.8%
VA	223	2.4%	1.8%
VT	42	0.4%	0.2%
WA	29	0.3%	2.0%
WI	213	2.3%	1.4%
WV	108	1.1%	0.6%
WY	35	0.4%	0.2%
Unknown*	2	<0.1%	--
Total**	9467	100.00%	7874827

° Similar to Table 41 in *Survey of the Public Health Nutrition Workforce 1999-2000*, 2003.

\* Two respondents for vacant positions reported a unique ID without a valid state code.

\*\* Total is based on filled and vacant WIC positions. Response rates varied across states as described in Table 2.

## Diversity

One of the two *Healthy People 2010* goals is elimination of health disparities. This is in part accomplished through recruitment and retention of a diverse health care workforce that is also culturally competent. The importance of both workforce diversity and cultural competence is highlighted in number of national reports, including at least three Institute of Medicine committee reports: 1) *The Right Thing to Do, The Smart Thing to Do: Enhancing Diversity in Health Professions*; 2) *Unequal Treatment. Confronting Racial and Ethnic Disparities in Healthcare*; and 3) *In the Nation's Compelling Interest: Ensuring Diversity in the Health-Care Workforce*. *Healthy People 2010* addresses both diversity and cultural competence of the health care workforce through two objectives. Objective 1.8 focuses on workforce diversity by targeting an increase in the proportion of health care-related degrees awarded to those from

underrepresented populations as one route to increasing workforce diversity. Objective 23-8 focuses on cultural competence by targeting incorporation of public health competences in the essential public health services into official health agency personnel systems. Cultural competence includes not only that of personnel, but also of the health care organizations within which they work, which is an emphasis of the National Standards on Culturally and Linguistically Appropriate Services (CLAS) developed by the Office of Minority Health, US DHHS. WIC has had important initiatives to promote staff diversity and cultural competence for some years. Also, the 2003-07 strategic plan for the Maternal and Child Health Bureau of US DHHS includes goals and key strategies directly related to diversity and cultural competence.

The importance of cultural competence is recognized also by the public health nutrition workforce. “Communicating with low literacy populations” was among the top 10 perceived training needs for all of the public health nutrition workforce categories, except WIC professionals. “Cultural competence” was among the top 10 perceived training needs for WIC paraprofessionals, the overall non-WIC workforce, and non-WIC professionals (Tables 44-45). It may have been a lower perceived training need for the WIC workforce overall and professionals, because it has been a training emphasis at the federal, state, and local levels. Since the 1994 and 1999-2000 workforce surveys, both “communicating with low literacy populations” and “cultural competence” increased in ranking as top perceived training needs.

Race, ethnicity, geographic location, gender, disability status, and other characteristics are all aspects of diversity. This workforce survey collected information on the following characteristics related to diversity: gender, race, ethnicity, linguistic competence as primary and secondary languages spoken, age, and retirement plans. The latter two areas, age and retirement, were collected not only to describe the workforce in terms of age diversity, but also in terms of potential workforce concerns related to aging.

The workforce was predominantly female and appeared to be not Hispanic/Latino, and white. Almost 95% of the WIC and non-WIC workforces were female (96.1% and 94.0%, respectively) (Table 49). The overall workforce was 70.0% not Hispanic/Latino (Table 50) and 69.9% white (Table 51). The WIC workforce was more ethnically and racially diverse compared to the non-WIC workforce. Almost 21% (20.9%) of WIC respondents compared to 9.1% of non-WIC respondents reported being Hispanic/Latino (Table 50). Almost one-quarter (23.4%) compared to 18.1% of WIC and non-WIC respondents, respectively, identified being of a single or two or more races other than white (Table 52). Over 11% (11.3%) of WIC personnel compared to 6.5% of non-WIC personnel reported being black or African American. Similarly 5.5% of WIC personnel compared to 4.3% of non-WIC personnel reported being Asian.

For the survey item on race, respondents were asked to select all races that applied to them. Table 52 shows the distribution of all races selected by respondents, whether they selected one race or a combination of races. Table 51 shows the distribution of all races, but categorized as those who selected only one race and those who selected 2 or more races.

**Table 49°. Gender of the Workforce (Question 37)**

Gender	WIC/Non-WIC			
	WIC		Non-WIC	
	N	%	N	%
Female	8707	96.1%	1061	94.0%
Male	308	3.4%	63	5.6%
No Response	49	0.5%	5	0.4%
Total*	9064	100.0%	1129	100.0%

° Similar to Table 42 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\* Total is based on individual persons.

**Table 50°. Ethnicity of the Workforce (Question 40)**

Ethnicity	WIC/Non-WIC					
	WIC		Non-WIC		Total	
	N	%	N	%	N	%
Hispanic/Latino	1891	20.9%	103	9.1%	1994	19.6%
NOT Hispanic/Latino	6254	69.0%	881	78.0%	7135	70.0%
No Response	919	10.1%	145	12.8%	1064	10.4%
Total*	9064	100.0%	1129	100.0%	10193	100.0%

° Similar to Table 43 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\* Total is based on individual persons.

**Table 51°. Racial Background of the Workforce as One Race or Two or More Races Reported (Question 41)**

Race	WIC/Non-WIC					
	WIC		Non-WIC		Total	
	N	%	N	%	N	%
American Indian or Alaska Native	311	3.4%	55	4.9%	366	3.6%
Asian	495	5.5%	49	4.3%	544	5.3%
Black or African American	1051	11.6%	75	6.5%	1126	11.0%
Native Hawaiian or Other Pacific Islander	64	0.7%	5	0.4%	69	0.7%
White	6275	69.2%	847	75.0%	7122	69.9%
Two or more races reported	201	2.2%	20	1.8%	221	2.2%
No Response	668	7.4%	78	6.9%	746	7.3%
Total*	9064	100.0%	1129	100.0%	10193	100.0%

° Similar to Table 44 in *Survey of the Public Health Nutrition Workforce 1999-2000, 2003*.

\* Total is based on individual persons.

There was a relatively high non-response rate for the questions on ethnicity (Table 50) and race (Tables 51 and 52). The non-response rate for ethnicity was about 10%, with a higher non-response rate among non-WIC personnel compared to WIC personnel (Table 50). The non-response rate for race was about 7% and with a higher non-response rate among WIC personnel compared to non-WIC personnel (Tables 51 and 52). These non-response rates for the questions on ethnicity and race were significantly better than in 1999-2000, when non-response rates ranging from a low of 4.4% for non-WIC personnel for race to a high of 30.1% for ethnicity by WIC personnel. Nevertheless, conclusions about the racial and ethnic composition of the workforce must be tempered with caution and comparisons to the 1999-2000 workforce, except for gender where there were high response rates, are inappropriate.

Another way that diversity can be considered is in relation to the populations served. Comparisons of the US population, public health nutrition and WIC workforces, and WIC participants must be done cautiously, because data on race and ethnicity can be impacted by not only differing response rates, but also differing fixed response categories. It appears, however, that the overall and WIC workforces may be more diverse than the US population, because while 97.6% of the 2000 population reported being of a single race, only 90.5% and 90.4% of the respective workforces did so (Table 53). Among those reporting a single race, 75.4% of the US population reported being white compared to 69.9% and 69.2% of the WIC workforces. All categories of "one race reported" were higher for the overall and WIC workforces compared to the US population, except for black or African American, suggesting similar diversity, except for this group. About 11% of the overall workforce (11.0%) and WIC workforce (11.6% reported being black or African American compared to 12.3% of the US population. In terms of ethnicity, proportionately more of the overall and WIC workforces reported being Latino/Hispanic compared to the US population (19.6% overall and 20.9% WIC workforces; 12.5% US population). These data suggest that the public health nutrition workforce may mirror the overall population somewhat. However, they do not reveal the degree the US population described by these data is served by these workforces.

In this regard, a comparison of the WIC workforce to WIC participants is perhaps more revealing. Only 11.6% of the WIC workforce reported being black or African American compared to 20.2% of WIC participants in 2002, who reported being black or African American/Non-Hispanic. Similarly, only 20.9% of the WIC workforce compared to 38.1% of WIC participants reported being Latino/Hispanic. These data reveal a workforce that indeed does not mirror the participants served. A key initiative in WIC has been to increase workforce diversity in part to increase access to services by those from under-represented groups. Many paraprofessionals are hired to help improve this access. What these data do not reveal is the distribution of professionals and paraprofessionals by race and ethnicity, although under-representation of minorities in health professions is a national problem.

**Table 52°. Racial Background of the Workforce (Question 41)**

Race alone or in combination with one or more races*	WIC/Non-WIC			
	WIC		Non-WIC	
	N	%	N	%
American Indian or Alaskan Native	456	4.9%	71	6.1%
Asian	523	5.6%	52	4.5%
Black or African American	1123	12.1%	83	7.2%
Native Hawaiian or Other Pacific Islander	84	0.9%	6	0.5%
White	6453	69.3%	865	74.9%
No Answer	668	7.2%	78	6.8%
Total**	9307	100.0%	1155	100.0%

° Similar to Table 45 in *Survey of the Public Health Nutrition Workforce 1999-2000*, 2003.

\*Respondents may have selected more than one race.

\*\* Total is based on individual persons. The categories in this table are not mutually exclusive. Respondents selecting two or more racial categories are included in each of the categories selected; therefore, column totals are greater than the total number of persons.

**Table 53°. Diversity of the US Population, PH Nutrition Workforce, and WIC Participants**

	US Population 2000 <sup>5</sup>	PH Nutrition Workforce	WIC Workforce	WIC Participants 2002 <sup>6</sup>
<b>Race</b>				
<b>One race reported</b>	97.6%	90.5%	90.4%	
American Indian or Alaska Native	0.9%	3.6%	3.4%	1.4%
Asian	3.6%	5.3%	5.5%	3.5%*
Black or African American	12.3%	11.0%	11.6%	20.2% Non-Hispanic
Native Hawaiian or Other Pacific Islander	0.1%	0.7%	0.7%	Not reported
White	75.4%	69.9%	69.2%	35.9% Non-Hispanic
Other	5.5%	**	**	
<b>Two or more races reported</b>	2.4%	2.2%	2.2%	Not collected for this time period
No response race	Not shown	7.3%	7.4%	1.0%
<b>Ethnicity</b>				
Latino/Hispanic	12.5%	19.6%	20.9%	38.1%

<sup>o</sup> Similar to Table 46 in *Survey of the Public Health Nutrition Workforce 1999-2000*, 2003.

\* Includes Pacific Islanders.

\*\* Question did not include “other race” response choice.

Linguistic competency is related to diversity and cultural competency. Personnel whose primary language is not English bring diversity to the workforce, while personnel who have a secondary language other than English may bring an aspect of cultural competence, particularly related to communication abilities. Almost 90% (89.0%) of the workforce overall reported English as their primary language in contrast to 83.2% of the 1999-2000 workforce (Table 54). The second most common primary language for the overall workforce was Spanish, with only 6.6% compared to 8.8% of the 1999-2000 workforce. This suggests that indeed the workforce overall was less ethnically diverse (Table 50) compared to 1999-2000. Although a wide variety of primary languages were spoken by personnel, none were spoken by more than 1% of the workforce overall.

The majority of the WIC and non-WIC workforces also reported English as their primary language (88.5% and 93.3%, respectively). Again, Spanish was followed as the most frequently

<sup>5</sup> US Census Bureau, Census 2000, Table DP 1. Profile of General Demographic Characteristics. See <http://www.census.gov/>

<sup>6</sup> WIC Participants and Program Characteristics PC2002, Kresge J, USDA, FNS, OANE, Report No. WIC-03-PC, September 2003 <http://www.fns.usda.gov/oane/MENU/Published/WIC/FILES/PC2002Tables.pdf>

selected primary language, with 7.2% and 1.6% of WIC and non-WIC personnel reporting this. This suggests that the WIC workforce may be more diverse ethnically compared to the non-WIC workforce, ethnic diversity. However, compared to 1999-2000, both WIC and non-WIC workforces may be less ethnically diverse as evidenced by only 7.2% compared to 9.4% of WIC personnel and 1.6% and 2.8% of non-WIC personnel selecting Spanish as a primary language.

Linguistic competence with a secondary language is an important aspect of cultural competence. While almost 20% (18.5%) of the workforce reported Spanish as a secondary language, two-thirds (66.5%) did not report having a secondary language. It is unclear whether this lack of reporting was because respondents had no secondary language or the respondents did not answer the survey item. Nevertheless, the proportion of personnel speaking Spanish as a second language was about the same compared to 1999-2000 (18.5% compared to 18.8% in 1999-2000). As with primary languages, there were no other specified secondary languages spoken by more than 1% of the workforce.

These findings all raise questions about diversity and linguistic competence of the public health nutrition workforce. There appeared to be less ethnic and racial diversity and less linguistic competence. This comes at a time when elimination of health disparities through access provided by a diverse and culturally competence workforce is a high priority. Competition for diverse personnel with linguistic competence in multiple languages may be a problem for public health employers, where salaries may be lower than other sectors, particularly for public health nutrition personnel. The problem, however, may be far more entrenched as other disciplines, such as engineering, medicine, and business, compete for more racially and ethnically diverse personnel through targeted recruitment strategies beginning as early as the secondary education level. Long term recruitment and retention of a diverse and culturally competent public health nutrition workforce may need to begin long before personnel receive their high school or GED diplomas. It is something that the public health nutrition workforce must consider, perhaps in association with other professional organizations, such as the National WIC Association and American Dietetic Association.

Language	WIC/Non-WIC											
	WIC				Non-WIC				Total			
	Primary		Secondary		Primary		Secondary		Primary		Secondary	
	N	%	N	%	N	%	N	%	N	%	N	%
English	8020	88.5%	901	9.9%	1053	93.3%	61	5.4%	9073	89.0%	962	9.4%
African language, please specify below	19	0.2%	38	0.4%	3	0.3%	2	0.2%	22	0.2%	40	0.4%
Cambodian/Khmer	15	0.2%	8	0.1%	0	0.0%	1	0.1%	15	0.1%	9	0.1%
Chinese, please specify dialect below	42	0.5%	41	0.5%	4	0.4%	9	0.8%	46	0.5%	50	0.5%
Eastern European language, please specify below	3	0.0%	14	0.2%	0	0.0%	0	0.0%	3	0.0%	14	0.1%
French	19	0.2%	52	0.6%	2	0.2%	7	0.6%	21	0.2%	59	0.6%
Haitian/Creole	14	0.2%	21	0.2%	1	0.1%	3	0.3%	15	0.1%	24	0.2%
Hmong	22	0.2%	7	0.1%	2	0.2%	1	0.1%	24	0.2%	8	0.1%
Korean	4	0.0%	3	0.0%	0	0.0%	1	0.1%	4	0.0%	4	0.0%
Laotian	4	0.0%	3	0.0%	0	0.0%	0	0.0%	4	0.0%	3	0.0%
Native American or American Indian language, please specify	11	0.1%	22	0.2%	21	1.9%	9	0.8%	32	0.3%	31	0.3%
Portuguese	25	0.3%	18	0.2%	1	0.1%	0	0.0%	26	0.3%	18	0.2%
Russian	8	0.1%	14	0.2%	0	0.0%	1	0.1%	8	0.1%	15	0.1%
Sign language	6	0.1%	18	0.2%	0	0.0%	3	0.3%	6	0.1%	21	0.2%
Spanish	654	7.2%	1754	19.4%	18	1.6%	131	11.6%	672	6.6%	1885	18.5%
Tagalog—Filipino language	50	0.6%	75	0.8%	2	0.2%	6	0.5%	52	0.5%	81	0.8%
Thai	2	0.0%	10	0.1%	0	0.0%	0	0.0%	2	0.0%	10	0.1%
Vietnamese	26	0.3%	22	0.2%	0	0.0%	1	0.1%	26	0.3%	23	0.2%
Other, please specify below	64	0.7%	136	1.5%	16	1.4%	24	2.1%	80	0.8%	160	1.6%
No Answer	56	0.6%	5907	65.2%	6	0.5%	869	77.0%	62	0.6%	6776	66.5%
Total*	9064	100.0%	9064	100.0%	1129	100.0%	1129	100.0%	10193	100.0%	10193	100.0%

° Similar to Table 47 in *Survey of the Public Health Nutrition Workforce 1999-2000*, 2003.

\* Total is based on individual persons.

### The Aging Public Health Nutrition Workforce

An important aspect of monitoring workforce composition is the ability to forecast needs and anticipate gaps in the workforce. The graying of the workforce as Baby Boomers retire poses a threat to many fields, including public health, though it has not been monitored consistently. Therefore, the 2006-07 survey contained additional questions to identify respondents' intention to retire within the next 10 years. As shown in Table 55, 23.9% of the total workforce reported intending to retire within the next 10 years. Of those who intended to retire, they expected to do so within 6.57 years on average. Non-WIC personnel reported a slightly greater intention to retire than did WIC personnel (28.5% vs. 23.3%). When analyzed by job classification, the rate of personnel who anticipated retiring within 10 years was highest in the Professional Series. Approximately 31.2% of those in the Management and Professional Series reported intending to retire compared to 19.2% of the Technical/Support series. The highest rate occurred in the Public Health Nutrition Directors (44.6%), followed by Public Health Nutrition Assistant Directors (37.8%), while the lowest rate was reported by Breastfeeding Peer Counselors (11.5%). This finding may not be surprising, because individuals in the highest position classes likely had the most experience and therefore were closest to retirement. It does indicate, however, that the public health nutrition workforce may lose its most experienced workers within the next 10 years. Therefore, it is important for workforce planning and monitoring to ensure trained workers are available to replace those nearing retirement.

**Table 55. Intend to Retire Within the Next 10 Years (Question 39)**

		Retirement							
		No		Yes		No Response		Total	
		N	Row N %	N	Row N %	N	Row N %	N	Row N %
WIC/Non-WIC	WIC	6902	76.1%	2113	23.3%	49	0.5%	9064	100.0%
	Non-WIC	802	71.0%	322	28.5%	5	0.4%	1129	100.0%
	Total*	7704	75.6%	2435	23.9%	54	0.5%	10193	100.0%
Job Classification	<i>Management Series</i>								
	PHN Director	226	55.4%	182	44.6%	0	0.0%	408	100.0%
	PHN Assistant Director	177	61.5%	109	37.8%	2	0.7%	288	100.0%
	PHN Supervisor	794	69.5%	344	30.1%	5	0.4%	1143	100.0%
	<i>Professional Series</i>								
	PHN Consultant	400	68.1%	186	31.7%	1	0.2%	587	100.0%
	PH Nutritionist	320	78.2%	85	20.8%	4	1.0%	409	100.0%
	Clinical Nutritionist	200	67.3%	96	32.3%	1	0.3%	297	100.0%
	Nutritionist	3247	78.6%	860	20.8%	24	0.6%	4131	100.0%
	<i>Technical/Support Series</i>								
	Nutrition Technician	668	70.8%	270	28.6%	5	0.5%	943	100.0%
	Nutrition Assistant	305	81.6%	66	17.6%	3	0.8%	374	100.0%
	BF Peer Counselor	1019	88.1%	133	11.5%	5	0.4%	1157	100.0%
	<i>Other (Unknown Series)</i>								
	Other	348	76.3%	104	22.8%	4	0.9%	456	100.0%
Total*	7704	75.6%	2435	23.9%	54	0.5%	10193	100.0%	

\* Total is based on individual persons.

## Evaluation of Web-Based Survey Administration

A new goal for the 2006-07 survey administration was to evaluate use of a Web-based survey strategy to collect and analyze data about the public health nutrition workforce. Prior administrations of the survey instrument had all been through print format only. Movement to an on-line platform is consistent with the trend within government to comply with the E-Government Act of 2005. As anticipated, the different format yielded benefits and raised new issues for survey administration and data collection.

On-line survey administration greatly decreased the survey burden at the state and territorial level. In the past and with this survey administration, state- and territorial personnel were responsible for identifying who to survey. However, in contrast to prior administrations, these personnel were not responsible for print survey distribution including the cost of duplicating and mailing the print instrument, and, most importantly, data entry. On-line survey administration virtually eliminated these steps. Instead, state/territorial directors/designees and State Contacts were responsible for creating state-specific unique position identifiers and then assigning these and University-generated passwords to positions to be surveyed. Once these survey administration management procedures were in place, State Contacts were responsible also for distributing instructions on how to access the on-line survey instrument. Because of the decreased time burden at the state level for the on-line survey, anecdotal reports from State Contacts was that they had time to increase their response rates through direct telephone and email contacts. See Appendix E for these anecdotal reports.

Determining which personnel should participate in the survey was one of the most problematic issues raised during survey administration, but this was not new for the 2006-07 survey and was therefore not impacted by the new format. When respondents completed the survey instrument, it was submitted directly to the University's computer server. This eliminated the need for state/territorial-level data entry. This helped to protect respondents' confidentiality and most likely minimized data entry errors. In the previous administration of the survey, state/territorial directors/designees were contacted about variable inconsistencies in data entry and were provided with a document of 13 variables that were to be flagged and corrected, as appropriate. As explained in the Study Design section, in the 2006-07 survey administration State Contacts received state-specific electronic monthly reports containing the University-generated position passwords, state-generated unique position identifiers, and respondents' responses for three pre-selected survey items for respondents during the prior month. Salary, minimum salary and funding source were determined most problematic in the 1999-2000 survey. State Contacts were to clean the electronic files and submit revised versions to the University. The reports were also to be used by the State Contacts to follow-up with non-respondents to the survey and encourage their participation. This process may have helped to increase the response rate, because State Contacts were constantly aware of which positions had completed the survey instrument within his/her state. For example, when survey administration was extended in December 2006 the response rate was only 59.4% and by March 2007 it had increased to 80%.

The use of University-generated passwords and state-generated position-specific passwords offered a number of benefits. The University-generated passwords enabled secure access to the

on-line survey and without inclusion of any identifying information about respondents. These passwords also gave respondents the ability to enter and exit the survey instrument prior to completion, and then to return at a later time to complete the survey instrument, accessing only the new survey items that had not yet been completed. The state-specific unique position identifiers provided State Contacts a management information system to use in contacting personnel for data cleaning and follow-up with non-respondents.

On-line administration addressed one of the limitations of the previous survey administration by requiring responses to some survey items for forward movement in the survey. If a respondent did not answer a required survey item, then s/he viewed a message to please respond. This virtually eliminated non-response for required items and may have decreased item non-response for not required items, because respondents may have been cued to respond to previous missed items.

It was anticipated that offering the survey instrument primarily on-line would pose some problems for agencies without Internet access. The Project Team provided multiple suggestions, such as providing work time for personnel to use the Internet at home, the library or area colleges and universities. Anecdotal reports suggested that personnel working in large metropolitan areas may have had the most limited Internet access. Also, there were some anecdotal reports that contract employees may not have email addresses. This may have been problematic since email was the primary means of requesting participation. For those agencies or personnel who could not access the on-line survey, a print option was available. In addition, some states requested the ability to administer the survey in print format and in a group setting for personnel for whom English was not the primary language. It is possible that the new on-line format created a greater burden for some personnel without Internet access or those unfamiliar with using the Internet. This may have impacted the response rate, although measures were put in place to provide the print option as needed. For other personnel who had access to and were more comfortable using the Internet, the on-line format may have decreased the respondent burden. As demonstrated in the pilot, the completion time for the on-line survey instrument was less than for the print survey instrument (20.6 minutes versus 26.2 minutes). Respondents could access the survey instrument at any time, from any location, and on multiple occasions.

One unanticipated potential barrier was that of powerful spam blockers within agencies, where the sent email was filed as junk email. Similarly, some personnel may have been reluctant to open emails from senders whose name they did not recognize. The degree to which this increased the type of contact needed from State Contacts or decreased the response rate is unknown.

The respondent burden was decreased by specific features of the on-line survey format and the software program used to generate it. Internal programming rules were used to permit different types of response options according to how the item was asked. Rules were created also with logic edits to force respondents to answer required items for forward movement within the survey instrument. In addition, logic edits were used to prevent respondents from viewing survey items that did not apply, based on their previous responses. Thus, the programming rules minimized unintended response errors as well as outliers. Finally, response options were limited using rules which helped ensure data entered were consistent with the response options offered

and were clean, at least as the respondent entered the information. The combination of logic edits and rules limited the amount of missing and outlying data in the data set.

Because data were entered directly into the on-line program and then downloaded directly into a statistical analysis software program, the time from data collection to data analysis was dramatically reduced. Moreover, because data were entered into a single program, unlike prior survey administrations, there were no potential problems of combining state-specific data sets into a single complete data set. This enabled quality-control features important for large scale surveys.

The new format was not without problems, however. Technical computer server difficulties arose on a few occasions during data collection when certain passwords became locked or frozen when personnel accessed the survey instrument. Some respondents had difficulty re-accessing the survey, despite the software program's password protection, which was to enable respondents to enter-and-exit the program at any point and to return to the instrument where they left. The ASTPHND Project Co-Director and University researchers worked quickly to resolve any technical problems that occurred. They also were available via email and telephone for any trouble-shooting required. It is possible, though, that the response rate was negatively impacted, because potential respondents were not able to access or re-access the survey and did not try again. This impact may have been minimal, however, because of the monthly opportunities for State Contacts to contact non-respondents and encourage their participation.

Coding rules in the on-line software program were input to prevent a respondent from viewing inapplicable survey items, based on his/her previous responses. However, if a respondent used the "Back" button on his/her computer multiple times, the software program occasionally directed the respondent to a survey item that was not applicable based on a prior response and, therefore, should not have been viewed. Another software program-specific problem was some desired logic and coding rules were not possible. For example, a coding rule for a particular item could not be placed on a survey item located on a different Web page within the survey instrument. Therefore, some internal logic rules were not used that would have aided in a cleaner data set.

Because the responses were entered directly into the University's computer server, it was anticipated that the data set would be more reliable. Forcing responses to required items also helped ensure a clean data set. It was not anticipated, however, that internal faults within the survey platform would impact data reliability. During data analysis, it was found that some responses for 119 respondents were missing. Because these respondents completed the survey, they were included in the data set. Only one required response, credentialing as a RD and DTR, was missing from these respondents. According to SPSS, the company responsible for the online software program, this was a very rare issue. At the time of submitting this report, the company was still investigating the problem to determine the cause.

Despite these problems, however, it was found that on-line survey administration was beneficial and positive. The decreased state/territorial burden, decreased respondent burden, and internal logic rules all helped to make data collection easier, faster, and more efficient. Because responses were directly entered into the University server, data cleaning and analysis were not only less problematic, but also considerably faster compared to print administration. Some of the

technical difficulties encountered were program-specific, although the value of the software program used was its ability to handle complex data sets from a large number of users. What was learned in this regard is that selection of an on-line survey instrument software program is important. It needs to be one that includes skip and coding rules, secure access, and the ability to download a complete data set into a statistical software program easily. Moreover, the computer server requirements need to be sufficient to handle the data set, suggesting that an academic or corporate collaboration is important. As use of the Internet continues to become more commonplace, completion of the survey in an on-line format will become easier. It is likely that the respondent burden will decrease as individuals become more familiar and comfortable with the Internet. Therefore, future survey administrations would benefit from an on-line format.

## Limitations of the Study

Many of the limitations of the current survey administration were discussed in the Study Design and Evaluation of Web-Based Survey Administration sections. To promote comparability, efforts were made to maintain the survey instrument as close as possible to the 1999-2000 instrument. Though modifications were made to the most problematic survey items (such as training needs, salary, position classification), it is possible that some remained.

A consistent limitation of this and previous survey administrations is the question of which personnel to include in the survey. This was often state-specific, making training more difficult. The Project Co-Director was available for questions and consultation, but the issue of comparability across states remains.

Because the survey instrument was administered on-line, it addressed some of the quality control issues raised with the 1999-2000 survey. For example, data entry was directly by respondents into the on-line software program and did not require data entry at the state level and subsequent merger of state data sets into a single data set. However, one quality control measure, common to some large scale surveys, that was not included in this survey or the 1999-2000 survey was a second administration of the survey instrument with a sample of respondents for test-retest reliability. Another limitation of the 1999-2000 survey was lack of a process for assuring that print instruments were actually distributed and completed as intended. The 2006-07 survey administration had a similar limitation in that there was no process to assure that University-generated passwords and state-generated unique identifiers were actually assigned. However, monthly electronic management reports likely addressed some of this limitation, because State Contacts were informed monthly via electronic monthly reports about which positions had completed the survey. This enabled the University to have a record of the number of passwords distributed to each state, which could be compared to the number of associated positions that used the passwords to access and complete the survey instrument. Similarly, the State Contacts could use the monthly reports to compare to the state-generated passwords assigned. This enabled a record to monitor response rates. However, because two states did not report response rates, it is unclear the degree to which states used the instructions provided for estimating state-specific response rates.

The new format for survey administration was a limitation because of its unfamiliarity. It is possible that the respondent burden was greater for some personnel who did not have access to or were unfamiliar with the Internet. For this reason the print format option was available, upon request. The time burden for State Contacts of instructing personnel on how to complete the survey instrument may have been underestimated also, because of the new on-line format. However, their time burden for data entry was negligible, except for those states that did require print survey administration.

It is not known to what extent technical computer server issues impacted the overall response rate. Attempts were made to resolve quickly any problems that arose. However, it is possible that some personnel did not complete the survey because of experiencing technical problems.

Though State Contacts were instructed to clean salary and funding source data, it also is not clear to what extent this was done properly. For example, there were some improbable annual earned salaries reported that were below the federal minimum wage. This suggests problems in data cleaning, although it is unclear how much of this related to problems with data cleaning instructions or their proper use. One survey that was not required for forward movement in the survey was what percent time a part-time position was. This was because of a technical difficulty associated with placement of some items within the on-line format. Requiring this item would be one way in part to address problems with data cleaning of salary.

Finally, one limitation of the 1999-2000 workforce survey was the probable underestimation of the burden of response required of both state-level personnel for survey administration and all personnel for survey completion. The on-line format likely addressed some of this limitation, because all states participated and the time frame for data collection was considerably less than the previous survey administration. However, only one territory participated. Overall, another limitation is that the response rate was 80.0% compared to 88.0% in 2006-07.

## Conclusions

While all comparisons to the 1999-2000 workforce must be made cautiously, because of the differences in response rates and mode of survey administration, it seems that the public health nutrition workforce as full-time equivalents (FTES) decreased by 5.0% from 9951.50 to 9457.92. The decrease in FTEs may be partially explained by the decrease in full-time WIC positions from 1999-2000 (81.5% vs. 78.0%). Also, less than 80% of the public health nutrition workforce overall and its component WIC and non-WIC workforces worked in full-time positions. The proportion of contracted positions increased to 6.4% from 3.7% in 1999-2000. This has implications for employee benefits received by the workforce. While 89% of the workforce overall received some employee benefits, this was sharply split by type of position. Over 90% (93.4%) of employed positions received an employee benefit compared to only 31.0% of contracted positions. The most commonly received employee benefits, vacation and sick time, are also the least expensive to employers.

The majority of the positions worked in WIC (88.6%), which was a decrease from 1999-2000 (90.4%). USDA continued to fund the bulk of the overall workforce (83.4% FTEs) through the WIC program (79.3% FTEs). This represented a continued decrease in WIC FTE funding observed since 1994 (81.7% in 1994 to 81.0% in 1999-2000). While the U.S. Department of Health and Human Services (DHHS) funding remained stable, state funding slightly increased from 1999-2000.

Approximately 70% of the workforce were professionals, which represented an increase from 1999-2000. Paraprofessionals composed 26.4% of the workforce, including those who classified themselves as a new position class in the 2006-07 survey administration, or that of Breastfeeding Peer Counselor. Over 10% (12.6%) of WIC positions were Breastfeeding Peer Counselors. Because of this additional position class, direct comparisons to the 1999-2000 workforce are inappropriate.

The workforce in general continued to be very experienced. Over half (51.8%) had at least 10 years of experience in dietetics/nutrition compared to less than half (47.3%) in 1999-2000. Almost 30% of the workforce, on the other hand, had less than 5 years of dietetics/nutrition experience, which also was an increase from 1999-2000. Within WIC, these differences in categories of years of experience were notable. The proportions of personnel with more than 10 years and with less than 1 year of experience both increased, while the proportion with 1-9 years of experience decreased. This suggests that while retention of more experienced personnel and recruitment of new personnel increased, retention of those with mid-level experience decreased.

Almost 70% of the workforce was employed or contracted by state or local health agencies, with more of the WIC workforce employed at the local level (43.5%) and more of the non-WIC workforce employed at the state level (35.0%). More than half (53.4%) of positions overall and within WIC (53%) were located at central offices of state, district/regional, and local health agencies or field office/clinics of government health agencies. Over one-quarter (26.5%) of all positions and within WIC (28.7%) were located at community/rural/migrant health centers or clinics. Almost 95% (93.8%) of the WIC workforce spent some time in direct client services,

compared to 68.2% of the non-WIC workforce. Moreover, while more than two-thirds (68.4%) of the WIC workforce spent at least 75% of their time in direct services, in contrast over half (52%) of the non-WIC workforce spent 25% or less of their time in direct services.

Consistent with the high proportion of WIC positions, the primary area of practice for most positions (66.6%) was assurance, including direct client services. As a primary area of practice, this was a decrease from 78.7% in 1999-2000. The other primary areas of practice were assessment and management and administration (10.5% each). A higher proportion of the workforce (5.9%) selected population-based services as their primary area of practice than in 1999-2000 (2.4%). “General women, infants, and children” was the primary target population for those within the overall workforce whose primary area of practice was assurance. However, the primary target population differed for the WIC and non-WIC workforces. Over 90% (91.3%) of the WIC workforce primarily served “general women, infants, and children” compared to only 7.7% of the non-WIC workforce. “Children with special health care needs, developmental disabilities” was the primary client population served by the non-WIC workforce (39.2% vs. 28.2% in 1999-2000).

Salaries differed by job classification with those in the Management Series having higher earned annual salaries than those in the Professional and Technical/Support Series. Those with population/system-focused responsibilities as described by their position descriptions tended to have higher earned salaries than those with direct client service responsibilities. Earned salaries for personnel within the Technical/Support Series were lower than all other personnel. Breastfeeding Peer Counselors had the lowest earned salaries. Interestingly, Public Health Nutritionist positions, with population/system-focused responsibilities, and Nutritionist positions, with direct client service responsibilities, had comparable minimum annual salaries.

Academic preparation of the public health nutrition workforce continued to be a concern in terms of public health training. Over half of all nutrition personnel had a bachelor’s degree in nutrition or dietetics, and slightly more non-WIC personnel had a bachelor’s in public health nutrition or community nutrition than did WIC personnel. Almost 20% (17.5%) of the non-WIC workforce had a Master’s or doctoral degree in public health nutrition/community nutrition or public health, compared to only 5.3% of those in WIC. Among those without any type of public health degree, the majority had completed a public health core course in social and behavioral sciences, although this was true for almost 70.7% of non-WIC personnel compared to 51.8% of WIC personnel. Epidemiology and health services administration were the public health core courses least frequently completed by personnel.

The proportion of public health nutrition personnel who were Registered Dietitians continued to decrease (42.1% in 1994, 41.2% in 1999-2000, 36.8% in 2006-07), as did those who were RD-eligible (6.3% in 1994 to 4.1% in 2006-07). The proportion of RDs in WIC also continued to decrease (38.4% in 1994 to 33.5% in 2006-07). In contrast, the proportion of personnel who were state licensed/certified in dietetics/nutrition increased from 1999-2000. Credentialing in lactation or breastfeeding and diabetes education also increased.

The top perceived training needs were clustered around direct services: “breastfeeding,” “prenatal nutrition,” “infant and preschool age nutrition,” “childhood nutrition,” and “nutrition

counseling, behavior change, and client education.” The perceived needs were similar to those of the 1999-2000 workforce, although comparisons should be tempered, because the list of perceived training needs options differed. The training needs of non-WIC professionals differed from the rest of the workforce and were more population-focused.

As in 1999-2000, the public health nutrition workforce was more ethnically and racially diverse than the general U.S. population, but less so than WIC participants. It also appears that the workforce was slightly less diverse than in 1999-2000, in terms of race and language spoken. Almost 90% spoke English as a primary language, compared to 83.2% in 1999-2000. Spanish as a primary language decreased from 8.8% to 6.6%. Almost 20% (18.5%) of the workforce spoke Spanish as a secondary language.

Almost one-quarter (23.9%) of the public health nutrition workforce intended to retire within the next ten years and in an average 6.57 years. The intended rate of retirement was slightly greater in the non-WIC workforce (28.5%) than in the WIC workforce (23.3%). Greater rates of intended retirement also existed among professionals (31.2%) as compared to paraprofessionals (19.2%). The highest rate among all job classifications was in Public Health Nutrition Directors, with 44.6% indicating an intention to retire within the next ten years. Because this could indicate that the public health nutrition workforce could lose its most experienced workers within the next 10 years, workforce planning and monitoring must be in place to ensure trained personnel are available to replace those nearing retirement and those especially in leadership positions.

## **APPENDICES**

## **Appendix A**

### **ASTPHND Data and Epidemiology Committee and Project Team**

## **ASTPHND's Data and Epidemiology Committee and Project Team**

### **Data and Epidemiology Committee**

Denise Ferris, Chair, West Virginia

Kristin Biskeborn, South Dakota

Linda Peterson, Wisconsin

Sharon Sugerman, California

Sue Wilson, Florida

### **Project Team**

Susanne Gregory, Project Co-Director

Betsy Haughton, Project Co-Director

Denise Ferris, Chair, Data and Epidemiology Committee

Alexa George, Project Coordinator

# **Appendix B**

## **Training Materials**

## ASTPHND Public Health Nutrition Workforce Survey Instructions for Data Collection

### Instructions for State Contacts

ASTPHND has received support from USDA to conduct a census of the public health nutrition workforce. Since 1989, ASTPHND has conducted several nationwide workforce surveys. As in past years, the survey is designed for administration and editing to be conducted at the state level. However, **data collection for this 2006 survey will be via a web-based survey with direct entry by each respondent.**

**The on-line survey questionnaire is a fixed response format that can easily be completed in 15 minutes by most respondents.** Data analysis and report preparation will be completed by the University of Tennessee in coordination with the ASTPHND Data & Epidemiology Committee.

**STEP 1 – Review the Survey Orientation documents posted on [www.astphnd.org](http://www.astphnd.org) and participate in an orientation conference call.**

We have scheduled a choice of 10 conference call times on various dates in August and September to orient you to conducting the survey in your state. You and other representatives from your state are welcome to join any of the scheduled calls. Here is the **schedule of orientation conference calls**:

### Orientation Conference Call Schedule

Toll-free Call-in Line: 1-800-750-4065 Participant Code: 46844664	
Date	Time
<b>Tues, AUG 15</b>	1:00-2:30 Eastern (12:00-1:30 Central; 11:00-12:30 Mountain; 10:00-11:30 Pacific)
<b>Thurs, AUG 17</b>	3:00-4:30 Eastern (2:00-3:30 Central; 1:00-2:30 Mountain; 12:00-1:30 Pacific)
<b>Mon, AUG 21</b>	3:30-5:00 Eastern (2:30-4:00 Central; 1:30-3:00 Mountain; 12:30-2:00 Pacific)
<b>Wed, AUG 23</b>	2:00-3:30 Eastern (1:00-2:30 Central; 12:00-1:30 Mountain; 11:00-12:30 Pacific)
<b>Fri, AUG 25</b>	11:30-1:00 Eastern (10:30-12:00 Central; 9:30-11:00 Mountain; 8:30-10:00 Pacific)
<b>Tues, AUG 29</b>	4:00-5:30 Eastern (3:00-4:30 Central; 2:00-3:30 Mountain; 1:00-2:30 Pacific)
<b>Wed, AUG 30</b>	12:30-2 Eastern (11:30-1 Central; 10:30-12 Mountain; 9:30-11 Pacific)
<b>Thurs, SEP 7</b>	1:00-2:30 Eastern (12:00-1:30 Central; 11:00-12:30 Mountain; 10:00-11:30 Pacific)
<b>Wed, SEP 13</b>	3:30-5:00 Eastern (2:30-4:00 Central; 1:30-3:00 Mountain; 12:30-2:00 Pacific)
<b>Fri, SEP 15</b>	4:00-5:30 Eastern (3:00-4:30 Central; 2:00-3:30 Mountain; 1:00-2:30 Pacific)

If you or a representative from your state cannot participate in one of these scheduled calls, you can contact the co-project director, Susanne Gregory at [Susanne@astphnd.org](mailto:Susanne@astphnd.org) to arrange an alternative time for orientation.

During the conference call, these instructions will be reviewed and your questions answered. It is important that you or the person organizing the survey on your behalf participate in the call and that there is consistent management throughout the survey process. Within one week of participating in an orientation conference call, we ask each state to identify a **PRIMARY STATE CONTACT** who will serve as the communications link between your state, ASTPHND and the University of Tennessee for all survey-related emails and phone calls. We are doing this so we can establish a consistent mechanism of communication with your state.

Please review all of the materials posted on the ASTPHND website ([www.astphnd.org](http://www.astphnd.org)) under the Workforce Survey resources. If you have immediate questions, you can contact Susanne Gregory at [Susanne@astphnd.org](mailto:Susanne@astphnd.org)

The complete Workforce Survey Orientation Packet includes:

1. *Workforce Survey Orientation (PowerPoint file)*
2. *Workforce Survey Instructions for Data Collection (MS WORD file)*
3. *Sample Communications with Nutrition Staff Members (MS Word file)*
4. *Sample Communications with Local Agency Directors file (MS Word file)*
5. *Filled Position Survey (pdf)*
6. *Filled Position Master File(Excel file)*
7. *Sample State Monthly Report (Excel file)*
8. *Vacant Position Survey(pdf)*
9. *Vacant Position Master File(Excel file)*

## **STEP 2 – Decide which program/nutrition workers to survey.**

**This is a census of the public health nutrition workforce at the state, regional and local levels in your state. Include all persons who work as nutrition/dietetics professionals or nutrition paraprofessionals (including WIC breastfeeding peer counselors) in public health nutrition programs and services that come under the under the purview of the state health agency.**

The programs and services may be delivered through for-profit and non-profit organizations, local health agencies, local hospitals and/or educational institutions that carry out public health nutrition activities under a contractual or grantee relationship with the state health agency.

Include all individuals who work as full-time or part-time contractors, consultants or employees in ANY professional or paraprofessional nutrition position at the STATE AND LOCAL levels.

DO NOT INCLUDE persons who work in a support capacity or in another profession (i.e. an accountant, nurse, physician, clerk, teacher, health educator) in a public health nutrition program. For example, this survey should NOT be administered to nurses who function as certifying officials in WIC clinics – even if they provide counseling and education to WIC participants.

Persons who are nutritionists or dietitians by education or training, but who are in non-nutrition related positions are NOT to be included. An example would be an RD in a sanitarian or health inspector position. They should NOT be included since they are not in a nutrition-related position.

### **The Rule of Thumb...**

**Include the individual in the survey if they meet BOTH of the following:**

- 1) **Part or all of the funding for their position comes from public health funding sources (see page 14-15 of this document for funding sources from Survey Question #24)**

### **AND**

- 2) **They are in a nutrition-related position (includes full-time, part-time, permanent, contractual, consultant)**

### **A FEW EXAMPLES – INCLUDE:**

- Registered Dietitian in a community health center providing nutrition services for children with special health care needs when funding is provided through the state PH agency.
- A Nutritionist who works part-time as a nutritionist at a non-profit Community Action Agency with Food Stamp Nutrition Education funding through the state PH agency.
- A local agency Nutrition Director who oversees the nutrition programs in a County PH agency funded by state WIC and MCH.
- A nutritionist and/or registered dietitian employed by the local health department who provides consulting nutrition services to the Head Start Program.
- A nutritionist and/or registered dietitian who is contracted with multiple public and private funding sources to provide nutrition expertise and planning skills for a community health assessment and to work with a local coalition to develop community interventions to address chronic disease prevention and health promotion.
- A breastfeeding peer counselor funded through the WIC program and the local community hospital.
- A nutritionist who is employed by a state university where the state health agency has contracted with the institution to provide PH nutrition-related services and deliverables.
- A nutritionist who is contracted by a non-profit foundation to provide nutrition training and development services and the funding for these services comes from the state health agency.

### **A FEW EXAMPLES – DO NOT INCLUDE:**

- Local school teachers providing nutrition education with funding from Food Stamp Nutrition Education funds provided through the state health agency.
- A nurse providing WIC nutrition certification and education services at a local community health center or local health department.
- A clerk or receptionist in a local WIC program.
- An outpatient dietitian at a local hospital who is reimbursed for services and without any funding from any public funding sources coming through the state PH agency.
- Cooperative Extension nutritionists and paraprofessionals who do not receive funding from the state PH agency.

ASTPHND is working with the National WIC Association and the Indian Tribal Organizations to share this survey information. IT IS STRONGLY RECOMMENDED that individuals employed through Indian Tribal Organizations are included in the state-wide survey audience.

If there are other public health nutrition professionals or paraprofessionals working with Indian Health Service programs in your state, please coordinate with those contacts in your state to ensure that all persons in nutrition positions are included in the survey.

The scope of public health nutrition services varies considerably from state to state, making it impossible to explicitly define or list each position that should be included in your state. Each state will need to decide based upon the knowledge of your programs and position classification schemes. To resolve issues on inclusion, including which tribal organizations have been surveyed, contact Susanne Gregory at [Susanne@astphnd.org](mailto:Susanne@astphnd.org)

**STEP 3 – Communicate in advance with the public health nutrition programs and prospective respondents in your state about the upcoming survey.**

Advance notification of and request for participation in a survey is known to boost response rates. Use whatever communication mechanisms you have – newsletters, staff meetings, list serves, web sites, e-mail and bulletins – to inform people of the upcoming survey. When you publicize the survey, you can include a few sentences about its purpose and how it will be used. Afterwards, you can thank them for their participation and give them information on the responses and summary findings. For your convenience, there is a *Sample Communications with Nutrition Staff Members* file and a *Sample Communications with Local Agency Directors* file that you can adapt to your own situation.

**WAIT UNTIL AFTER YOU HAVE COMPLETED THE ORIENTATION CONFERENCE CALL TO COMPLETE THE REMAINING STEPS.**

**STEP 4 – Establish your list of respondents, assign Unique IDs and Passwords and provide respondents with this information and the web address for the survey.**

Each person in a position classified or functioning as a nutritionist or paraprofessional in a public health program will complete the *Filled Position Survey*.

The survey is on the University of Tennessee (UT) website, accessible with a UT-provided password and state-created unique ID. The password allows individuals to start, exit and re-enter the survey from where they left off in the event that they cannot complete the survey in one sitting. The Unique ID provides confidentiality for all respondents.

After each state participates in an Orientation Conference Call, ASTPHND will send an Excel file with a list of passwords to the **PRIMARY STATE CONTACT**. You will assign each person completing the survey a password and a unique ID. Each person will complete his/her own survey on-line.

As surveys are completed, the **PRIMARY STATE CONTACT** will receive monthly email reports from UT, which will contain an Excel spreadsheet with the responses to selected questions answered by that month's respondents. This will allow you to identify those who have not yet completed the survey and to clean the data submitted by those who completed the survey that month. When you have identified those who have not yet completed the survey, you will be able to follow-up with non-respondents and encourage their participation. If you have corrected data, you will send the cleaned data back to UT where it will be added to the database.

The web survey will be available to states who participate in an Orientation Conference Call. **The survey will be OPEN and AVAILABLE until DECEMBER 15, 2006. All surveys must be completed by the DECEMBER 15, 2006 cutoff date.**

The success of this survey depends upon all respondents completing the survey on-line. The advantages of the on-line survey include reduced data entry, fewer skipped questions and reduced time to complete the survey. The management of on-line surveys for state administrators will also be much less than for administration of a print-version of the survey. **PLEASE MAKE EVERY ATTEMPT TO HAVE EACH RESPONDENT COMPLETE THE SURVEY ON-LINE.** The on-line survey can be accessed from ANY computer with internet access. If respondents do not have access to the web from a computer in their work area, consider the follow options:

- Make a computer with web access available to respondents in their worksite.
- Allow nutrition staff members to take 20 minutes to complete their surveys on their home computers if they have internet access.
- Allow nutrition staff members to take 20 minutes to complete their surveys at the local library that provides free, public internet access.

In rare instances when web access is not available, a print format of the survey can be used by staff. For more information about print format survey procedures, please contact Susanne Gregory at [Susanne@astphnd.org](mailto:Susanne@astphnd.org)

## Instructions for the Filled Position Survey

### UT Passwords and State-Generated Unique IDs

To gain access to the survey, each individual will be assigned a UT password linked with a unique ID created by his/her state. UT generated a list of passwords to password-protect the website and survey. Each state will be provided a list of passwords to be assigned to individuals who should complete the survey. The passwords will be provided in an Excel file. This file is labeled: Filled Position Master File XX (XX=State Code). Each password may only be used by one individual. If you need additional passwords, contact UT using the contact information provided at the end of this document.

In addition to the UT-generated password, each individual completing the survey will need to be assigned a unique ID generated by your state. The unique ID will be in the format of:

— — —	— —	— — — —
Region	State	Individual

### ***Region Code***

You will need to determine the most appropriate way to divide your state into smaller regions, local areas or counties. You can even use program codes or other unit designations for the “Region” code. Just be sure that you use some designation that is meaningful within your state, is 3-digits in length, and will allow each individual to have a unique identifier. For the “Region” code, you can use any range of numbers from 001-999.

### ***State Code***

The two-letter abbreviation for your state should be used for the state code (see page 16 of this document for state/territory abbreviations).

### ***Individual Code***

Finally, you can assign individuals any number in the range of 0001-9999. Each state should maintain the ***Filled Position Master File*** of passwords, unique IDs and contact information for follow-up with non-respondents. The ***Filled Position Master File*** will also be used for data management purposes, as explained later.

### ***Giving Instructions to Individual Respondents***

When instructing individuals to complete the survey, provide them with the survey web link and their UT password and unique ID. You may designate a block of unique passwords and unique IDs to local directors, who in turn will assign these to individual personnel. When you assign a block of linked passwords and unique IDs to local directors, be sure to note this on the ***Filled Position Master File***. Request that the local directors provide you the names and contact information for each individual linked with his/her unique password and identifier. Update this ***Filled Position Master File*** with the individuals’ names and contact information provided by

local directors. This will allow you to have a complete file of all personnel linked with their unique ID and password, so that non-respondents can be contacted and encouraged to participate.

### ***Individuals Working in Multiple Positions***

Some individuals work in multiple positions that will require them to complete the survey for each position. They should complete the survey with the first password/unique ID combination they are given. When their other position(s) assigns them another password/unique ID combination, they will access the site as before, using the new password/unique ID. The second time, though, they will only need to answer selected position-specific questions. Therefore, when you provide training within your state on how to complete the survey, instruct individuals to keep all assigned unique IDs if they will need to complete the survey multiple times. Otherwise, they will have to complete the entire survey again.

### ***Accessing the Survey***

**Once a nutrition staff member has their password and unique ID, they can go on-line to complete their survey. A link to the survey can be found on the homepage of the ASTPHND website – [www.astphnd.org](http://www.astphnd.org)**

**They can also reach to survey by using the direct URL:**

**<http://survey.utk.edu/mrIWeb/mrIWeb.dll?I.Project=PUBLICHEALTH6>**

The first page of the survey will instruct respondents to enter their password— this is from the UT-generated list and allows them to enter the secured site. The second page contains human subjects' information and instructs respondents to enter their unique ID— this is the one created by the state for each individual. Individuals then begin the survey. The final page of the survey requests respondents to release their data for research purposes. Individuals are encouraged, but not required, to do this. When the individual presses the 'submit' button on the final page, his/her responses will be sent to UT and the individual can no longer access or change his/her responses.

Individuals will be able to exit and re-enter the survey until they are able to complete it, but once the survey has been submitted, individuals will not be able to re-access or change their responses.

**STEP 5 – Manage the Filled Position Master File, follow-up with non-respondents, and clean data as needed.**

### **Respondents and Non-Respondents**

Upon completion of the Orientation Conference Call, you will use the ***Filled Position Master File*** to assign Passwords and Unique IDs and begin implementation of the survey. Within 30 days, in accordance with the reporting schedule below, you will receive emailed reports from UT with the responses to selected questions from all individuals who have completed the survey that month (See Appendix). Then, the following month, you will receive another report from UT containing the responses to selected questions from individuals who have completed the survey since the previous UT report.

<i>State Names Beginning with:</i>	<i>Dates Receiving Monthly Report from UT</i>	<i>Deadline to Return Cleaned Data to UT</i>
A-M	1 <sup>st</sup>	30 <sup>th</sup>
N-W	15 <sup>th</sup>	14 <sup>th</sup> of following month

You will be able to compare the UT report with your ***Filled Position Master File*** to determine who has and has not completed the survey. Update your ***Filled Position Master File*** by recording who has completed the survey. Then, follow-up with non-respondents to encourage their participation or to determine why they have not responded. This could be, for example, because the person is no longer in the position and that the position is vacant. Determine within your state how often and how you will follow-up with non-respondents and do so accordingly.

### **Data Cleaning**

As explained above, once a month, you will receive an email report from UT with an Excel spreadsheet attached that contains information about who has responded to the survey that month. The spreadsheet will have each respondent's password, unique ID and responses to selected questions, which you will need to scan for accuracy and changes, if appropriate. These questions are about salary level and source of funding for the position (see Pages 14-15 of this document). You can see a sample of this Excel file by opening the file ***Sample State Monthly Report***. If there are any inaccuracies, then you will update the State Monthly Report and send it back to UT as an email attachment within one month of receiving the report. A-M states/territories will receive an email from UT on the 1st of each month. N-W states/territories will receive a report on the 15th.

The monthly UT email report will have the subject line labeled using the following naming format:

State Raw Date Sent (naming format)  
 XX Raw mo da yr  
**TN Raw 09 01 06 (sample)**

The attached Excel file will be named the same way.

You will have one month to clean the data and identify any changes that need to be made. To report any changes to UT, save the original Excel file. Then, rename this original Excel file using the following naming format:

State Change Date Returned (naming format)  
 XX Change mo da yr  
**TN Change 09 08 06 (sample)**

Delete data for each respondent whose information on salary and funding source is accurate. Change data for each respondent whose information on salary and funding source is inaccurate.

Send this updated file to UT attached to an email with the subject line labeled the same as the Excel file.

Only return changed data. If you are waiting for clarification on data for individuals or the data are correct as entered, then remove these entries from the file before returning it to UT. UT will then make the changes to its own master file of data for all states. You will repeat the process each month until the survey is completed.

It is possible that an individual will be assigned a unique ID and instructed to complete the survey, but is not eligible to participate. The individual has 2 options: 1) not access the web site at all; or 2) access the website. You will need to keep track of individuals assigned unique IDs, but who decide they are ineligible to participate. If the individual decides not to access the web site at all (option 1), you will need to follow-up with him/her to be sure that s/he does not have any nutrition responsibilities and then update the **Filled Position Master** File accordingly.

If the individual accesses the web site and responds that s/he has no nutrition responsibilities (option 2), then this individual will be included on the UT monthly report with only his/her password and unique ID columns completed. There will be no data for salary or funding sources to clean. As in option 1, this will allow you to update your Filled Master File accordingly. The Filled Master File has a column for "Individual Ineligible: No Nutrition Duties" where you input Y or N for individuals who do not access the web site and you confirm they are ineligible or for individuals who do access the web site, but have no responses for salary or funding source on your monthly report.

To help you keep track of this data management, use the **Filled Position Master File** to record when you have reviewed an individual's responses, whether the entry needs to be changed, and whether any change(s) are submitted to UT; you also have the option of recording the date when you submitted the changes to UT. It is important that you maintain and update the **Filled Position Master File** because at the conclusion of the survey, a version of this file without personal identifiers will be submitted to UT. Based on this final submitted **Filled Position Master File**, UT will create a final state report. This report, the State Transmittal of Respondent Information, will provide the following information:

- The number of public health nutrition workers who were assigned a password/unique identifier
- The number of public health nutrition workers who completed a survey
- The number of individuals who were ineligible to complete the survey because they did not work in public health nutrition
- The number of non-respondents
- The number of open position surveys completed

This will be very important for documenting how thorough ASTPHND was in collecting data.

**STEP 6 – Planning data collection for vacant positions.**

State personnel or local agency directors will complete a *Vacant Position Survey* for all vacant positions.

It is likely that your state will have vacant positions that would have personnel complete the survey, if they were filled. Information related to those positions must still be collected, even though the positions are open. You will need to decide within your state that should complete these open position surveys.

**The URL to access the *VACANT POSITION SURVEY* is  
<http://survey.utk.edu/mrIWeb/mrIWeb.dll?I.Project=OPENPOSITIONS&i.test=1>  
**TEST.****

This survey is shorter than the filled position survey and is not password protected. Therefore, to access it, you will not need a UT generated password. However, each open position will need a unique state-generated ID. Because of the short length of the survey and the fact that it is not password protected, the survey must be completed during one computer session. Any partial survey data submitted in a single computer session will be lost, if the browser is closed. You will need to maintain another Excel file, the *Vacant Position Master File*, to record the unique IDs created for open positions. You will also include the local agency director/contact where the open position exists, the work address of the person assigned to complete the open position survey(s), and whether a survey has been completed for each assigned unique ID.

You will receive a monthly report for the open position survey. You will use this to compare with your *Vacant Position Master File* to determine who has and has not completed the survey for open positions. Update your *Vacant Position Master File* by recording who has completed an open position survey and for which assigned unique IDs. Then, if there are any assigned unique IDs for which surveys have not been completed, follow-up with the individual assigned the unique IDs to encourage them to complete the open position survey for their vacant positions or to confirm that they have completed surveys for each of the open positions. Determine within your state how often and how you will follow-up with non-respondents and do so accordingly.

**KEY POINTS:**

- Participate in one of the Orientation Conference Calls.
- The Survey will be open to your state after you participate on an Orientation Call.
- The Survey closes on December 15, 2006. All respondents must complete the on-line survey by December 15, 2006.
- Go to [www.astphnd.org](http://www.astphnd.org) for the Survey link, updates and answers to frequently asked questions.

- Determine who will be your **Primary State Contact** and email Susanne Gregory with this information at [susanne@astphnd.org](mailto:susanne@astphnd.org) within one week of participating on an Orientation call.
- Verify that you can receive and open EXCEL 2003 files.
- If you have any questions, please contact Susanne Gregory at [Susanne@astphnd.org](mailto:Susanne@astphnd.org) or by phone at 814-255-2829 X 1017
- If you think you need to use a paper-pencil format of the survey for some of the respondents in your state, PLEASE CONTACT Susanne Gregory as soon as possible to receive instructions for data collection using print survey format.

## Survey Questions Which Require Data Cleaning

For individuals who respond “Employed” to Question 19, which is whether or not employed or contracted by his/her agency:

21. Please record your **ANNUAL** salary. Round to the nearest dollar.  
\$ \_\_\_\_\_ per year
22. Please record the **ANNUAL** minimum or first step salary for your job classification as established by your agency’s personnel system. Round to the nearest dollar.  
\$ \_\_\_\_\_ per year
24. Identify ALL sources of funding for your position. If your position is funded from more than one source, write in the percent of your time from each funding source. If you are not sure about sources of funds for your position, ask your program manager or the contact person. Your answers should add up to 100%.

**First example:** You work half time (50%) and you are funded completely by WIC. Check “WIC” and write in “100.”

**Second example:** You work halftime. You are funded half by WIC and half by the Maternal and Child Health Block Grant. Enter “50” for both WIC and MCH Block Grant.

**Third example:** You work full time. Your position is paid for by a grant from a local foundation. Write “100” in Foundation or corporate grants.

### State or Tribal Government Funding

- \_\_\_\_ % Non-specified funds  
 \_\_\_\_ % Funds legislatively earmarked for nutrition  
 \_\_\_\_ % Tobacco settlement monies  
 \_\_\_\_ % Other If other, please describe: \_\_\_\_\_

### Federal Government Funding—Department of Agriculture (USDA)

- \_\_\_\_ % WIC  
 \_\_\_\_ % Food Stamp Nutrition Education  
 \_\_\_\_ % Child and Adult Care Food Program and/or NET  
 \_\_\_\_ % Other USDA, e.g., Commodity Supplemental Food Program

### Federal Government Funding—Department of Health and Human Services (US DHHS)

- \_\_\_\_ % Bioterrorism and Public Health Preparedness (CDC)  
 \_\_\_\_ % Cancer Control Program (CDC)

- % Cardiovascular Health Grant (CDC)  
 % Diabetes Prevention and Control (CDC)  
 % Nutrition and Physical Activity Grant to Prevent Obesity and Other Chronic Diseases (CDC)  
 % Preventive Health and Health Services Block Grant (CDC)  
 % Tobacco Information and Prevention (CDC)  
 % WISEWOMAN (CDC)  
 % Steps to a Healthier US (DHHS)  
 % Older Americans Act (Title III)  
 % Maternal and Child Health Block Grant (Title V)  
 % Family Planning (Title X and Title XX)  
 % Medicaid non-EPSDT (Title XIX)  
 % Medicaid EPSDT  
 % Indian Health Services  
 % National Institutes of Health  
 % Ryan White Comprehensive AIDS Resource Emergency Act (HRSA)  
 % Other If other, please describe: \_\_\_\_\_

**Federal Government Funding—Education**

- % Early Childhood Intervention, Individuals with Disabilities Education Act (IDEA)(PL105-17)  
 % Other  
 If other, please describe: \_\_\_\_\_

**Local Government Funding**

- % Local funds (city/county general revenue)

**Other revenue, funding sources**

- % Fees, patient charges, or third party reimbursement  
 % Foundation or corporate grants  
 % Other  
 If other, please describe: \_\_\_\_\_

### State and Territory Abbreviations

American Samoa	AS	Idaho	ID	Nebraska	NE	South Dakota	SD
Alaska	AK	Illinois	IL	Nevada	NV	Tennessee	TN
Alabama	AL	Indiana	IN	New Hampshire	NH	Texas	TX
Arizona	AZ	Iowa	IA	New Jersey	NJ	Utah	UT
Arkansas	AR	Kansas	KA	New Mexico	NM	Vermont	VT
California	CA	Kentucky	KY	New York	NY	Virginia	VA
Canal Zone	CZ	Louisiana	LA	North Carolina	NC	Virgin Island	VI
Colorado	CO	Maine	ME	North Dakota	ND	Washington	WA
Connecticut	CT	Maryland	MD	Ohio	OH	West Virginia	WV
Delaware	DE	Massachusetts	MA	Oklahoma	OK	Wisconsin	WI
District of Columbia	DC	Michigan	MI	Oregon	OR	Wyoming	WY
Florida	FL	Minnesota	MN	Pennsylvania	PA		
Georgia	GA	Mississippi	MS	Puerto Rico	PR		
Guam	GU	Missouri	MO	Rhode Island	RI		
Hawaii	HI	Montana	MT	South Carolina	SC		

## ASTPHND 2006 Public Health Nutrition Workforce Survey

### ORIENTATION Conference Call

### Agenda 1.5 hour call

- 5 minutes – Welcome
- 10 minutes – Overview
- 30 minutes – Review of Instructions & Materials – STEPS 1-5 for Filled Positions
- 15 minutes – Q&A
- 10 minutes – STEP 6 for Vacant Positions
- 5 minutes – Q&A
- 5 minutes – Review Key Points

### Purpose

- Workforce enumeration
  - Only comprehensive source of workforce data on nutritionists in state & local PH agencies
  - 6 Previous surveys completed from 1985-2000
  - In 2000: 10,904 positions surveyed (88% response rate)
- *Healthy People 2010* Goal 23:
  - Ensure that Federal, Tribal, State, and local health agencies have the infrastructure to provide essential public health services effectively.

### Outcomes

- Track trends in PH Nutrition workforce over time.
- Provide recruitment and retention indicators.
- Justification for class and compensation initiatives.
- Salary comparisons.
- Training and development initiatives.
- Trends in degrees & credentialing.
- 2006 survey will provide data on anticipated retirement.

### Survey Administration

- 2006 is On-line administration
  - Individuals access the survey with a 9-digit unique ID and a password.
  - On-line access available from any computer with internet (worksite, home, library)
- Print administration only as default when all options for on-line are explored.

### ASTPHND Data & Epi Committee Members

Committee advises on survey development and implementation.

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>■ Denise Ferris, Chair               <ul style="list-style-type: none"> <li>■ Director Nutrition Services<br/>Charleston, WV</li> </ul> </li> <li>■ Kristin Biskeborn               <ul style="list-style-type: none"> <li>■ State Nutritionist South<br/>Dakota Department of<br/>Health</li> </ul> </li> <li>■ Linda Peterson               <ul style="list-style-type: none"> <li>■ PH Nutrition Consultant<br/>Wisconsin Division of Public<br/>Health</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>■ Sharon Sugerman               <ul style="list-style-type: none"> <li>■ Research Scientist Public<br/>Health Institute—<br/>Sacramento, CA</li> </ul> </li> <li>■ Sue Wilson               <ul style="list-style-type: none"> <li>■ Nutrition Program Manager<br/>Department of Health WIC<br/>and Nutrition Services—<br/>Tallahassee, FL</li> </ul> </li> </ul> |
|--|---|

## USDA-FNS

- Provides partial funding for project.
- Provide project oversight & work with Office of Management and Budget (OMB)
- Provide guidance on survey questions & revisions
- Project Officer: Stephanie Cooks

## Project Leadership Team

- Members:
  - Susanne Gregory, Executive Director ASTPHND
  - Denise Ferris, Chair, Data & Epi Committee
  - Betsy Haughton, Professor
  - Alexa George, Graduate Research Assistant, The University of Tennessee, Knoxville
- Responsibilities:
  - Survey design and data analysis
  - Provide Orientation for State Contacts who will be coordinating the survey in their states.
  - Final report and articles for publication.

## Project Timeframe

- August and September 2006 – Orientation Conference Calls
- Survey open to states once they participate in an Orientation
- Survey open until DECEMBER 15, 2006
- September – December monthly reports from University of Tennessee to each state to follow-up with non-respondents and to check/clean selected data.
- January – May 2006: Data analysis
- June 2007: Preliminary data reporting

## State Leads

- Participate in one of the training conference calls (more than one representative from a state may join training calls)
- Identify a "Primary State Contact" to coordinate communications with ASTPHND and University of Tennessee. Send the Primary State Contact name, email and phone number to [susanne@astphnd.org](mailto:susanne@astphnd.org) as soon as possible after the Orientation Conference Call.
- Confirm that you can open and use EXCEL 2003 files.

## Primary State Contact

- Work with leaders in state to assign unique identifiers to all individuals in survey audience.
- Communicate and plan with appropriate representatives at state and local levels to determine which positions to survey in state.

## Primary State Contact

- Maintain master file of respondents & unique identifiers to:
  - follow-up with non-respondents
  - verify responses to selected questions
- Protect confidentiality & privacy
- Submit final transmittal form for state survey administration

## Orientation Materials

- *Workforce Survey Instructions for Data Collection (MS WORD file)*
- *Sample Communications with Nutrition Staff Members (MS WORD file)*
- *Sample Communications with Local Directors (MS WORD file)*
- *Filled Position Survey (pdf)*
- *Filled Position Master File (Excel file)*
- *Sample State Monthly Report (Excel file)*
- *Vacant Position Survey(pdf)*
- *Vacant Position Master File(Excel file)*

## KEY POINTS:

- Participate in one of the Orientation Conference Calls.
- They Survey will be open to your state after you participate on an Orientation Call.
- The Survey closes on December 15, 2006. All respondents must complete the on-line survey by December 15, 2006.
- Go to [www.astphnd.org](http://www.astphnd.org) for the Survey Link, updates and answers to frequently asked questions.

## KEY POINTS:

- Determine who will be your **Primary State Contact** and email Susanne Gregory with this information at [susanne@astphnd.org](mailto:susanne@astphnd.org) within one week of participation on an Orientation call.
- If you have any questions, please contact Susanne Gregory at [Susanne@astphnd.org](mailto:Susanne@astphnd.org) or by phone at 814-255-2829 X 1017
- If you think you need to use a paper-pencil format of the survey for some of the respondents in your state, PLEASE CONTACT Susanne Gregory as soon as possible to receive instructions for data collection using print survey format.

## For Guidance and Technical Assistance Contact...

- For Technical Assistance or Questions about the survey, contact:
  - Susanne Gregory
    - [susanne@astphnd.org](mailto:susanne@astphnd.org)
    - 814-255-2829 X1017

## Sample Communications with Local Directors

We are pleased to announce that The Association of State and Territorial Public Health Nutrition Directors (ASTPHND) has received OMB clearance to launch the 2006 Public Health Nutrition Workforce Survey. This national survey is funded, in part, by the USDA-FNS. For the past 20 years, ASTPHND has conducted periodic workforce surveys as a way to obtain comprehensive workforce data on nutritionists in state and local public health agencies. Since 1985, ASTPHND has conducted six such surveys. The most recent survey completed in 2000, included 10,904 professionals and paraprofessionals in 50 states and territories. Please note that this ASTPHND survey is not connected in any way to the recent National WIC Program initiative to enumerate the WIC workforce.

**The 2006 Public Health Nutrition Workforce Survey is web-based to make it quick and easy for you and your nutrition staff members to participate.** Data will be collected for each public health nutrition position funded with state and local public health dollars. The results of this national survey will be used by state agencies to support decisions related to staffing, workforce capacity, personnel upgrades, and recruitment and retention initiatives. In addition, states have used the results on credentialing and training needs to plan future staff development activities. We hope you and your nutrition staff members will participate.

We will be seeking your assistance in identifying all professional and paraprofessional (including breastfeeding peer counselors) staff members in your program. We will work with you to assign a Unique ID and a Password for each nutrition staff member. Once they have been assigned a Unique ID and Password, you can direct them to the on-line survey so they can complete the questionnaire. It will take about 15 minutes to complete the on-line questionnaire. It is possible for respondents to leave and reenter the survey but it is much better for staff members to have 15-20 minutes of dedicated time to fully complete the survey in one sitting.

To complete the survey, go to the URL:

<http://survey.utk.edu/mrIWeb/mrIWeb.dll?I.Project=PUBLICHEALTH6>

OR

Staff members can go to the ASTPHND website – [www.astphnd.org](http://www.astphnd.org) and click on the SURVEY LINK from the home page.

The on-line survey will prompt the respondent to enter their Password and Unique ID.

Using the on-line survey saves time and decreases data entry errors. **It is very important to make every effort to have all nutrition staff members complete the on-line survey by providing internet access. Once a staff member has their Password and Unique ID, they can access the on-line survey from ANY computer with internet access, including home computers, computers in the public library or any work computer with internet access. If you have any difficulty in arranging internet access for your nutrition staff members, please contact \_\_\_\_\_ (Primary State Contact) immediately.**

**The deadline for completing the survey is DECEMBER 15, 2006.** Periodically, between September and December 2006, we will send you a report with information on who has completed the survey to date. We will ask you to assist in follow-up with any non-respondents in your program and we will also have you scan selected results for “source of funding” and “salary” to make sure this information is accurate.

**FOR LOCAL AGENCY DIRECTORS ONLY.....**

If you need to complete surveys for VACANT POSITIONS, assign a password and Unique ID for every vacant position and then go to the following website to access the VACANT POSITION SURVEY:

**The URL to access the VACANT POSITION SURVEY is**

**<http://survey.utk.edu/mrIWeb/mrIWeb.dll?I.Project=OPENPOSITIONS&i.test=1>**  
**TEST.**

See page 9-10 of the Workforce Survey Instruction document for more details on how to complete the survey for Vacant Positions.

Please contact \_\_\_\_\_ (Primary State Contact) if you have any questions about the survey.

THANK you for your participation.

## Sample Communications with Nutrition Staff Members

We are pleased to announce that The Association of State and Territorial Public Health Nutrition Directors (ASTPHND) has received OMB clearance to launch the 2006 Public Health Nutrition Workforce Survey. This national survey is funded, in part, by the USDA, FNS. For the past 20 years, ASTPHND has conducted periodic workforce surveys as a way to obtain comprehensive workforce data on nutritionists in state and local public health agencies. Since 1985, ASTPHND has conducted six such surveys. The most recent survey completed in 2000, included 10,904 professionals and paraprofessionals in 50 states and territories. Please note that this ASTPHND survey is not connected in any way to the recent National WIC Program initiative to enumerate the WIC workforce.

The 2006 Public Health Nutrition Workforce Survey is web-based to make it quick and easy for you to participate. Data will be collected for each public health nutrition position funded with state and local public health dollars. The results of this national survey will be used by state agencies to support decisions related to staffing, workforce capacity, personnel upgrades, and recruitment and retention initiatives. In addition, states have used the results on credentialing and training needs to plan future staff development activities. We hope you will participate.

To complete the survey, go to the URL:

<http://survey.utk.edu/mrIWeb/mrIWeb.dll?I.Project=PUBLICHEALTH6>

You can also access the survey by going to [www.astphnd.org](http://www.astphnd.org) for a link to the UT Website.

Once you are at the survey, you will need to enter your 9 digit Unique ID: XXX/XX/XXXX and your password: XXXXXXXXXXX

Please contact \_\_\_\_\_ if you have any questions about the survey.

THANK you for your participation.

## **Paper-Pencil Administration of the Workforce Survey**

1. Identify the point person at the local agency responsible for administering the survey.
2. Identify the positions to be included in the survey.
3. Assign a unique ID and password for each individual in a survey position.
4. Make copies of the paper-pencil version of the survey.
5. For each individual, provide a copy of the survey, an envelope and their Unique ID and password.
6. Instruct them to write their password and Unique ID in the appropriate spaces on the survey.
7. If the survey is administered to a group, the room needs to be large enough so that someone cannot see how others are answering questions. This is particularly important for the "sensitive" questions on salary and retirement intentions.
8. The point person providing TA/consultation can answer questions. However, it is important that they do not tell individuals how to answer or coerce them into answering in any particular way.
9. Once the individual completes the survey, they place their completed survey in an envelope and seal it. To maintain confidentiality in compliance with Human Subject approval, each person needs to seal their completed questionnaire in an envelope.
10. Each individual gives their sealed envelope to the point person.
11. Once the point person has collected ALL the envelopes from the survey audience, they put all of these in one package and send the surveys to:

Betsy Haughton, EdD, RD, LDN  
Director, Public Health Nutrition  
Department of Nutrition  
College of Education, Health and Human Sciences  
1215 Cumberland Avenue  
Knoxville, TN 37996-1920

## **Appendix C**

### **Survey Instruments: Print for Filled and Vacant Positions**

*According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0584-0536. The time required to complete this information collection is estimated to average 0.46 hours per response, including the time to review instructions, search existing data resources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Expires 7/31/2009.*

**Please print your password to access the Public Health Nutrition Workforce Survey. Your password is 5-6 characters in length, beginning with a 2 letter state abbreviation.**

**Password** \_\_\_\_\_

**Please enter your unique 9-digit identifier provided by your nutrition director:**

\_\_\_\_\_

## **WELCOME TO THE PUBLIC HEALTH NUTRITION WORKFORCE SURVEY**

**WHY?** The Association of State and Territorial Public Health Nutrition Directors with support from the United States Department of Agriculture is conducting a survey of public health nutrition personnel, including WIC staff, in all US states, territories, and Tribal organizations. The survey's purpose is to have current information on work responsibilities, areas of practice, training, and compensation and to use the information to support recruitment and retention. Several similar surveys were conducted from 1989 through 2000.

**WHO SHOULD COMPLETE THE SURVEY?** – Every person classified or functioning as a nutritionist or paraprofessional in a public health program, which includes WIC, should answer each question as completely as possible. Please complete the questionnaire if you work in a nutrition position, even if your job currently encompasses additional responsibilities.

Persons who are nutritionists or dietitians by education or training, but who are in non-nutrition related positions should not complete the questionnaire. If you work in a support capacity or in another specialty (e.g. accountant, computer specialist, nurse, physician or receptionist), do not complete the questionnaire. Because the questions are being asked of more than 10,000 nutrition personnel throughout the US and territories, the job titles, names of programs and examples may be somewhat different from your own work experience. Nevertheless, choose the answer that is closest to your own situation.

**HELP?** It will take 15-20 minutes at most to respond to the items. If you have questions about this survey or how to answer specific questions, contact your supervisor or \_\_\_\_\_. Please mail your completed survey to:

ASTPHND Workforce Survey  
 Department of Nutrition  
 University of Tennessee  
 1215 Cumberland Avenue  
 Knoxville, TN 37996-1920

**USE OF INFORMATION?** You have been assigned a unique identifier by your nutrition director, so that you can access the survey and input your responses. The purpose of the unique identifier is to ensure that the on-line database does not contain any information to identify you. It will also be used if your state nutrition director needs to contact you to follow up on any incomplete items or to clarify some answers related to salary, source of funding, and your position description. Only your responses to these questions on salary and source of funding will be reviewed by your state nutrition director to ensure that we have complete information. Your name and contact information is separate from the on-line database and will **NOT** be entered at any time into the database. Answers to the questions will be summarized, aggregated and published in a report which will be sent to your state nutrition director. No individual answers, persons or specific agencies will be identified in the report.

The Association of State and Territorial Public Health Nutrition Directors thanks you for your participation.

**PUBLIC HEALTH NUTRITION WORKFORCE SURVEY**  
**Current Public Health Nutrition Practice**

1. Check the type of agency where you are **employed** (or contracted). **Blacken only one.**
  - ① State government health agency
  - ② Local government (city, county) health agency
  - ③ Indian Health Services, tribal agency or tribal health center
  - ④ Non-profit organization
  - ⑤ For-profit organization
  - ⑥ Other, please specify \_\_\_\_\_
  
2. Check the **primary location** where you work. **Blacken only one.**
  - ① Central office of state government health agency
  - ② Central office of district or regional (sub-state) government health agency
  - ③ Central office of local (county, city or multi-county) government health agency
  - ④ Community/rural/migrant health center or clinic
  - ⑤ Field office or clinic of a government health agency
  - ⑥ HMO or other managed care setting
  - ⑦ Hospital
  - ⑧ Indian Health Services, tribal agency or tribal health center
  - ⑨ Other private/independent entity/office
  - ⑩ Other, please specify \_\_\_\_\_
  
3. Write in the blank your current position or job classification title. \_\_\_\_\_
  
4. Read each of the following position descriptions. Blacken the **one** position description that is **most similar** to your position.
  - ① No public health nutrition responsibilities. **STOP HERE.** Return the questionnaire
  - ② This is the highest-level nutrition position in a state, large city, county or voluntary public health agency. Major functions of this position are policy making, planning/evaluation, fiscal control, management and supervision. The position is usually the head of a nutrition program unit, where this position is responsible for conducting a needs assessment, developing a comprehensive plan and budget for the nutrition services of the agency and has line authority over staff.
  - ③ This is the second highest administrative and policy making public health nutrition position in a state, large city, county or voluntary public health agency. This position may participate in several delegated functions or be assigned primary responsibility for managing the nutrition component of one or more major program areas. Major functions of this position include assisting the director in policy making, planning/evaluation, fiscal control, management, and supervision. The person in this position serves as Acting Director in the director's absence.

*Continued on next page*

- ④ This position supervises the work of an assigned number of other nutritionists, nutrition technicians, and nutrition assistants that deliver nutrition services and nutritional care in the public health agency. Supervision includes training, delegating, directing, coordinating, evaluating and reporting the work of subordinates.
- ⑤ This position provides expert technical assistance, professional guidance, and in service education for staff in program development or case management. Consultation may be given to the administrator, other nutritionists or other health professionals. Staff in this position have both generalized and specialized knowledge and expertise and include those who work out of a central headquarters office or in the health agency's regional or district offices.
- ⑥ This position is employed by the state, city, county or voluntary public health agency to assess the community's nutrition needs, and to plan, direct and evaluate community nutrition intervention programs that meet these needs. Interventions promote health and prevent disease among the population at large.
- ⑦ This position works as a case manager and/or care coordinator, and nutrition counselor for medically high risk clients requiring physician prescribed complex dietary and nutrition regimens, including enteral and parenteral nutrition support. This position also may work as an educator in programs where more in-depth expertise in therapeutic nutrition is required, including high-risk pregnancy, neonatal and pediatric clinics; children's special services; AIDS; and home health and home hospice services.
- ⑧ This position is employed in a city, county or voluntary public health agency primarily to provide nutrition education to the public, and to coordinate and provide direct nutritional care to agency clients in health and disease throughout the life span. In public health agencies, this position works primarily in maternal and child health clinics, WIC programs and family health or adult health primary care clinics.
- ⑨ This position is paraprofessional in a city, county, or voluntary public health agency and works under the close supervision of a nutritionist to provide routine technical support services in public health agency clinics. This work includes normal nutrition education; screening using prescribed protocols; record keeping; and outreach.
- ⑩ This position is for auxiliary nutrition workers in a city, county, or voluntary public health agency from the local or indigenous community who are trained on-the-job to work under the close supervision of nutrition professionals to provide routine nutrition education, including interpretation for clients who do not speak English. This position also carries out assigned tasks in client outreach and screening.
- ⓪ This position is a paraprofessional support person who provides basic breastfeeding information, encouragement and counseling to WIC pregnant and breastfeeding mothers in WIC clinics, by telephone, home visits and/or hospital visits at scheduled intervals, and is available outside usual 8 to 5 working hours. This position informs new mothers about breastfeeding benefits and how to prevent and handle common breastfeeding problems.
- ⓫ Other, please specify \_\_\_\_\_

5. How many years, including part-time employment, have you practiced/been employed in the field of dietetics and/or nutrition? Write the total number of years, rounding to the nearest year. If less than 6 months, write "0."  
 \_\_\_\_years
6. Of the total number of years reported in question 5, for how many years have you practiced public health nutrition, including WIC? Write the total number of years, rounding to the nearest year. If less than 6 months, write "0."  
 \_\_\_\_years
7. Are you currently working in a WIC program?  
 ① No. **Skip to #9**  
 ② Yes
8. If yes, how many years have you been working in the WIC program?  
 \_\_\_\_ years
9. For how many full time equivalent employees (FTEs), positions, and/or consultants do you have **direct** responsibility for hiring, firing, promoting, and performance reviews? Include any positions that are currently vacant. Write in the number converted to full time equivalents. If you do **not** have these responsibilities, enter "0" and **skip to #14**.  
 \_\_\_\_ FTEs
10. Of these, how many are nutrition professionals? \_\_\_\_ FTEs
11. How many are other health related professionals (such as biostatisticians, epidemiologists, evaluators, health educators, nurses, physical education professionals, or social workers)? \_\_\_\_ FTEs
12. How many are management or program support staff (such as clerical/issuance/eligibility determination staff, commodity foods/NET staff, information technology staff, fiscal staff, other managers or vendors)? \_\_\_\_ FTEs
13. How many of these FTEs are paraprofessionals (such as diet technicians, health aides, health screeners, LPNs, peer counselors, or translators)? \_\_\_\_ FTEs
14. For how many full time equivalent employees (FTEs), positions, and/or consultants are you responsible? This includes employees for whom you have **both direct** responsibility for hiring, managing, promoting, and firing, **and indirect** responsibility for oversight, technical assistance, or consultation. If you do **not** have these responsibilities, enter "0."  
 \_\_\_\_ FTEs

15. How much fiscal and budgetary responsibility and control do you have in your current position? **Check only one.**
- ① None
  - ② Responsible for a specific budget
  - ③ Responsible for entire agency nutrition program budget
16. In a typical month, what percent of your time do you spend in direct client services, such as nutritional assessments, individual counseling, group education, or developing care plans? (Do not include working with health professionals or other organizations.)  
 \_\_\_\_ Percent
17. Do you work full time or part time? (Full time equals the number of hours per week defined by your personnel system.)
- ① Full time—100%
  - ② Part time
    - ↳ 18. If part time, write in the current percent time \_\_\_\_ %
19. Are you currently contracted to your agency or employed by your agency?
- ① Contracted
    - ↳ 20. If contracted or a consultant, at what rate are you paid?
      - ① Hourly
      - ② Daily
      - ③ Annually
      - ④ For specific services or products
      - ⑤ Retainer

\_\_\_\_\_

\_\_\_\_\_

**Skip to #23**
  - ② Employed
    - ↳ 21. Please record your **ANNUAL** salary. Round to the nearest dollar.  
 \$ \_\_\_\_\_ per year
    - 22. Please record the **ANNUAL** minimum or first step salary for your job classification as established by your agency's personnel system. Round to the nearest dollar.  
 \$ \_\_\_\_\_ per year
23. Do you receive any of the following benefits? Mark all that apply.
- ① Health insurance
  - ② Retirement
  - ③ Sick leave
  - ④ Vacation time
  - ⑤ None of the above

24. Identify ALL sources of funding for your position. If your position is funded from more than one source, write in the percent of your time from each funding source. If you are not sure about sources of funds for your position, ask your program manager or the contact person. Your answers should add up to 100%.

**First example:** You work half time (50%) and you are funded completely by WIC. Check "WIC" and write in "100."

**Second example:** You work halftime. You are funded half by WIC and half by the Maternal and Child Health Block Grant. Enter "50" for both WIC and MCH Block Grant.

**Third example:** You work full time. Your position is paid for by a grant from a local foundation. Write "100" in Foundation or corporate grants.

### State or Tribal Government Funding

- \_\_\_\_ % Non-specified funds  
 \_\_\_\_ % Funds legislatively earmarked for nutrition  
 \_\_\_\_ % Tobacco settlement monies  
 \_\_\_\_ % Other → If other, please describe: \_\_\_\_\_

### Federal Government Funding--Department of Agriculture (USDA)

- \_\_\_\_ % WIC  
 \_\_\_\_ % Food Stamp Nutrition Education  
 \_\_\_\_ % Child and Adult Care Food Program and/or NET  
 \_\_\_\_ % Other USDA, e.g., Commodity Supplemental Food Program

### Federal Government Funding--Department of Health and Human Services (US DHHS)

- \_\_\_\_ % Bioterrorism and Public Health Preparedness (CDC)  
 \_\_\_\_ % Cancer Control Program (CDC)  
 \_\_\_\_ % Cardiovascular Health Grant (CDC)  
 \_\_\_\_ % Diabetes Prevention and Control (CDC)  
 \_\_\_\_ % Nutrition and Physical Activity Grant to Prevent Obesity and Other Chronic Diseases (CDC)  
 \_\_\_\_ % Preventive Health and Health Services Block Grant (CDC)  
 \_\_\_\_ % Tobacco Information and Prevention (CDC)  
 \_\_\_\_ % WISEWOMAN (CDC)  
 \_\_\_\_ % Steps to a Healthier US (DHHS)  
 \_\_\_\_ % Older Americans Act (Title III)  
 \_\_\_\_ % Maternal and Child Health Block Grant (Title V)  
 \_\_\_\_ % Family Planning (Title X and Title XX)  
 \_\_\_\_ % Medicaid non-EPSDT (Title XIX)  
 \_\_\_\_ % Medicaid EPSDT  
 \_\_\_\_ % Indian Health Services  
 \_\_\_\_ % National Institutes of Health  
 \_\_\_\_ % Ryan White Comprehensive AIDS Resource Emergency Act (HRSA)  
 \_\_\_\_ % Other → If other, please describe: \_\_\_\_\_

*Continued on next page*

**Federal Government Funding--Education**

\_\_\_\_\_ % Early Childhood Intervention, Individuals with Disabilities Education Act (IDEA)(PL105-17)

\_\_\_\_\_ % Other

↳ If other, please describe: \_\_\_\_\_

**Local Government Funding**

\_\_\_\_\_ % Local funds (city/county general revenue)

**Other revenue, funding sources**

\_\_\_\_\_ % Fees, patient charges, or third party reimbursement

\_\_\_\_\_ % Foundation or corporate grants

\_\_\_\_\_ % Other

↳ If other, please describe: \_\_\_\_\_

25. Put “1” in the area of **public health nutrition practice** listed below where you spend the **majority** of your time. If you have **2 areas of practice** place a “1” next to the primary area and a “2” next to the secondary area. If you have **3 areas** of practice, place a “1” next to the 1<sup>st</sup>, a “2” next to the 2<sup>nd</sup>, and a “3” next to the 3<sup>rd</sup> area. **Do not mark more than 3.**

**Assessment**

\_\_\_\_\_ Data management, nutrition surveillance or research

\_\_\_\_\_ Community assessments, program planning or evaluation

**Population-based interventions**

\_\_\_\_\_ Community organization, advocacy or policy development

\_\_\_\_\_ Communication, mass media or social marketing

\_\_\_\_\_ Emergency food, hunger, food security, Commodity Supplemental Foods Program

**Management and administration**

\_\_\_\_\_ General management and administration

**Assurance**

\_\_\_\_\_ Health facilities regulation

\_\_\_\_\_ Environmental health and/or food safety

\_\_\_\_\_ Program monitoring and/or quality assurance

\_\_\_\_\_ Breastfeeding peer counselor

\_\_\_\_\_ **Direct client services (Please answer #26)**

**Other**

\_\_\_\_\_ Please specify: \_\_\_\_\_

26. If you selected **Direct client services** as a major area of your practice, which category below best describes the **majority** of your client work? Place a “1” by that category. If the majority of your client caseload is mixed, put a “1” by those you see the most, a “2” for second and “3” for third. **Do not mark more than 3.**

- General/comprehensive nutrition  
 General women, infants and children  
 General women’s nutrition and health  
 General infant nutrition  
 General child health or pediatric nutrition  
 School and/or adolescent health  
 Children with special health care needs, developmental disabilities, chronic illnesses, or high-risk infants and children  
 Breastfeeding  
 Adult health promotion, chronic disease prevention or healthy aging  
 Seniors, geriatrics, adult disabilities, or adult chronic disease control

27. Please check **ALL** degrees and related majors and concentrations you have earned. Also check any degree(s) and related majors and concentrations you are currently working toward.

Type of Degree/Concentration	Earned	Working Toward
<i>High School Diploma/General Education Development (GED)</i>	①	②
<i>Associate Degree</i>		
Nutrition/dietetics	①	②
Other _____	①	②
<i>Bachelor’s Degree</i>		
Nutrition/dietetics	①	②
Public health nutrition/community nutrition	①	②
Home economics/family consumer science/human ecology	①	②
Health education	①	②
Other _____	①	②
<i>Master’s Degree</i>		
Nutrition/dietetics	①	②
Public health nutrition/community nutrition	①	②
Home economics/family consumer science/human ecology	①	②
Public health, concentration	①	②
Health education	①	②
Other _____	①	②
<i>Doctoral Degree</i>		
Nutrition/dietetics	①	②
Public health nutrition/community nutrition	①	②
Home economics/family consumer science/human ecology	①	②
Public health, concentration	①	②
Health education	①	②
Other _____	①	②

28. Which of these five courses have you completed? Check **all** that you have completed and whether they were at the undergraduate or graduate level. If you have a degree in public health, public health nutrition or community nutrition **skip to Question #29**.

**Undergraduate**

- ① Environmental health sciences
- ② Epidemiology
- ③ Health services administration
- ④ Social and behavioral sciences
- ⑤ Statistics

**Graduate**

- ① Environmental health sciences
- ② Epidemiology
- ③ Health services administration
- ④ Social and behavioral sciences
- ⑤ Statistics

29. Please check **ALL** certifications that apply to you.
- ① Registered dietitian (RD) with Commission on Dietetic Registration (CDR)
  - ② Licensed or certified dietitian in your state
  - ③ Dietetic technician registered (DTR) with CDR
  - ④ Certified diabetes educator (CDE) with American Association of Diabetes Education
  - ⑤ International board certified lactation consultant (IBCLC)
  - ⑥ Other certification in lactation or breastfeeding
  - ⑦ Board certification as a specialist in pediatric nutrition (CSP) with CDR
  - ⑧ Certified health education specialist (CHES)
  - ⑨ Registered nurse (RN)
  - ⑩ Licensed practical nurse (LPN)
  - ⑪ State certified teacher
  - ⑫ Certified in Family & Consumer Sciences (CFCS) with American Association for Family & Consumer Sciences
  - ⑬ Other, please specify: \_\_\_\_\_

30. If you are **NOT** a RD or DTR, have you taken steps towards becoming a registered dietitian or dietetic technician?

① No, neither *skip to #33*

② Yes, RD

→ 31. If you are **NOT a RD** and have taken steps to become a registered dietitian, which of the following steps have you taken? Check **all** that apply.

① Completed at least a baccalaureate degree

② Completed a didactic program approved by the Commission on Accreditation Approval for Dietetic Education (CAADE)

③ Completed a supervised practice program accredited by CAADE

④ Received a letter from CDR verifying eligibility to take exam

*skip to #33*

② Yes, DTR

→ 32. If you are **NOT a RD OR DTR** and have taken steps to become a dietetic technician, which of the following steps have you taken? Check **all** that apply.

① Completed at least an associate degree

② Completed a didactic program approved by CAADE

③ Completed a Dietetic Technician Program approved by CAADE

④ Completed a Dietetic Technician Program supervised practice program accredited by CAADE

⑤ Received a letter from CDR verifying eligibility to take exam

33. Which of these national courses have you completed? Check all completed **after January 2000**.

Maternal, Neonatal and Infant Nutrition

① *Intensive Course in Maternal Nutrition*, University of Minnesota, Minneapolis (workshop or Web-based)

② *Neonatal Nutrition Training*, Baylor College of Medicine, Houston, Texas

③ *Neonatal Nutrition and Leadership Education in Pediatric Nutrition*, Indiana University School of Health and Rehabilitative Sciences, Indianapolis, Indiana

④ *Early Steps to Lasting Health: A Self-Study Curriculum on Infant Feeding and Assessment*, Arizona Department of Public Health and University of Tennessee, Knoxville (Web-based)

⑤ *Summer Institute in Maternal and Child Health*, Rocky Mountain Public Health Education Consortium, Salt Lake City, UT

Pediatric Nutrition

⑥ *Intensive Course in Pediatric Nutrition*, University of Iowa, Iowa City

⑦ *Intensive Course in Nutrition for Infants, Children and Adolescents*, University of Alabama, Birmingham, Alabama

⑧ *Pediatric Update Teleconferences*, University of Alabama, Birmingham

*Continued on next page*

### Children with Special Health Care Needs' Nutrition

- ⑨ *Nutrition Update: Children with Special Health Care Needs*, Kennedy Krieger Institute and Virginia Commonwealth University, Washington, DC
- ⑩ *Interdisciplinary Leadership Training in Overweight Prevention and Intervention for Children with Special Health Care Needs*, University of Tennessee, Memphis; Knoxville, TN; Rochester, NY; Portland, OR
- ⑩ *Interdisciplinary Leadership Training in Feeding Children with Special Health Care Needs*, University of Tennessee, Memphis
- ⑩ *Nutrition Makes a Difference: The Team Approach to Feeding*, University of California, Los Angeles, CA
- ⑩ *Beyond Assessment: Series*, University of California, Los Angeles, CA
- ⑩ *Nutrition for Children with Special Health Care Needs*, University of California, Los Angeles, CA (CD-ROM and Web-based modules)

### Nutrition Education and WIC

- ⑩ *Nutrition and Breastfeeding Conference*, National WIC Association
- ⑩ WIC Learning Online
- ⑩ *National Nutrition Education Conference*, USDA Food and Nutrition Service

### Chronic Disease Prevention, Including Overweight and Obesity

- ⑩ ADA Certificate of Training in Childhood and Adolescent Weight Management
- ⑩ ADA Certificate of Training in Adult Weight Management Program
- ⑩ *Maximizing Resources for Results! Extending Bright Futures through Community Based Nutrition Planning*, University of Tennessee, Knoxville and University of North Carolina (workshop or Web-based)
- ⑩ *Moving People and Communities: Extending Bright Futures through Physical Activity*, University of Tennessee, Knoxville and University of North Carolina (workshop or Web-based)

### Public Health and Leadership Courses

- ⑩ CDC Public Health Preparedness Conference
- ⑩ Regional or National Public Health Leadership Institute
- ⑩ Cooper Institute, Dallas, TX

### Other

- ⑩ Others, please provide title and national sponsor/program of courses completed:
-

34. Indicate what level of training you need for your current work. Mark “None” if you do not work in that area or do not have additional training needs at this time; “Basic” if you need basic training, and “Advanced” if you have had basic training and now need advanced or more in-depth training.

<b>Training Areas</b>	<b>None</b>	<b>Basic</b>	<b>Advanced</b>
<b>Client and Population Groups</b>			
Infant and pre-school age nutrition	①	②	③
Childhood nutrition	①	②	③
Adolescent nutrition	①	②	③
Nutrition for children with special needs, developmental disabilities or high risk	①	②	③
Prenatal nutrition	①	②	③
Breastfeeding	①	②	③
Women’s health	①	②	③
Adult health promotion, chronic disease control, or healthy aging	①	②	③
Seniors, geriatric nutrition	①	②	③
High risk clients, including HIV positive, addictions	①	②	③
Assessment of nutritional status	①	②	③
Case management/care coordination	①	②	③
Communicating with low literacy populations	①	②	③
Cultural competency	①	②	③
Eating disorders	①	②	③
Nutrition counseling, behavioral change, client education	①	②	③
Supplemental and alternative dietary therapies	①	②	③
Environmental health and/or food safety	①	②	③
Hunger and food security	①	②	③
<b>Assessment skills</b>			
Community nutrition assessment	①	②	③
Target population risk assessment	①	②	③
Data collection, management, surveillance and monitoring systems	①	②	③
<b>Policy Development</b>			
Policy development	①	②	③
Advocacy	①	②	③
Working with policy makers	①	②	③
Program planning	①	②	③
Mass media and communication	①	②	③
Social marketing	①	②	③
Environmental and policy changes to support nutrition	①	②	③
<b>Please continue to read on next page</b>			

<b>Training Areas</b>	<b>None</b>	<b>Basic</b>	<b>Advanced</b>
Leadership and team building	①	②	③
Coalitions and partnership-building	①	②	③
Cost effectiveness/benefit analysis	①	②	③
Financial management	①	②	③
Fund raising, proposals and grant writing	①	②	③
General management	①	②	③
1. Assurance			
2. Program evaluation	①	②	③
3. Development of nutrition education materials	①	②	③
4. Development of practice guidelines	①	②	③
5. Using practice guidelines	①	②	③
6. Applied research and evaluation	①	②	③
7. Consultation skills	①	②	③
8. Staff training programs	①	②	③
9. Use of current information technology, including computers	①	②	③
Other, please specify _____	①	②	③

35. Blacken all of the following professional organizations to which you belong.

- ① American Association of Diabetes Educators
- ② American Association of Family and Consumer Sciences
- ③ American Dietetic Association
- ④ American Public Health Association
- ⑤ American Public Human Services Association
- ⑥ Association of State and Territorial Public Health Nutrition Directors
- ⑦ International Lactation Consultant Association
- ⑧ International Society for Behavioral Nutrition and Physical Activity
- ⑨ National WIC Association
- ⑩ National Association of Child and Adult Care Food Program Professionals
- ⑪ School Nutrition Association (formerly American School Food Service Association)
- ⑫ Society for Nutrition Education
- ⑬ Society of Public Health Educators
- ⑭ Others, please specify: \_\_\_\_\_

36. Read each of the following job classification descriptions. Blacken the job classification that is **most similar** to your position. Blacken only **one**.

Job Classification Description	Job Classification	Your choice (Choose one)
No public health nutrition responsibilities.		①
This is the highest-level nutrition position in a state, large city, county or voluntary public health agency. Major functions are policy making, planning/ evaluation, fiscal control, management and supervision. The position usually heads a nutrition program, with responsibility for conducting a needs assessment, developing a comprehensive plan and budget for nutrition services of the agency and having line authority over staff.	Public health nutrition director	②
This is the second highest administrative and policy making public health nutrition position in a state, large city, county or voluntary public health agency. This position may participate in delegated functions or be assigned primary responsibility for managing the component of one or more major program areas. Major functions include assisting the director in policy making, planning/ evaluation, fiscal control, management, and supervision. The person in this position serves as Acting Director in the director's absence.	Assistant public health nutrition director	③
This position supervises the work of an assigned number of other nutritionists, nutrition technicians, and nutrition assistants that deliver nutrition services and nutritional care in the public health agency. Supervision includes training, delegating, directing, coordinating, evaluating and reporting the work of subordinates.	Public health nutrition supervisor	④
<b>PLEASE CONTINUE TO READ ON NEXT PAGE</b>		

Job Classification Description	Job Classification	Your choice (Choose one)
<p>This position provides expert technical assistance, professional guidance, and in-service education for staff in program development or case management. Consultation may be given to the administrator, other nutritionists or other health professionals. Staff in this position have both generalized and specialized knowledge and expertise and include those who work out of a central headquarters office or in the health agency's regional or district offices.</p>	<p>Public health nutrition consultant</p>	<p>⑤</p>
<p>This position is employed by the state, city, county or voluntary public health agency to assess the community's nutrition needs, and to plan, direct and evaluate community nutrition intervention programs that meet these needs. Interventions promote health and prevent disease among the population at large.</p>	<p>Public health nutritionist</p>	<p>⑥</p>
<p>This position works as a case manager and/or care coordinator, and nutrition counselor for medically high risk clients requiring physician prescribed complex dietary and nutrition regimens, including enteral and parenteral nutrition support. This position also may work as an educator in programs where more in-depth expertise in therapeutic nutrition is required, including high-risk pregnancy, neonatal pediatric clinics; children's special services; AIDS; and home health and home hospice services.</p>	<p>Clinical nutritionist</p>	<p>⑦</p>
<p><b>PLEASE CONTINUE TO READ ON NEXT PAGE</b></p>		

Job Classification Description	Job Classification	Your choice (Choose one)
<p>This position is employed in a city, county or voluntary public health agency primarily to provide nutrition education to the public, and to coordinate and provide direct nutritional care to agency clients in health and throughout the life span. In public health agencies, this position works primarily in maternal and child health clinics, WIC programs and family health or adult health primary care clinics.</p>	Nutritionist	⑧
<p>This position is a paraprofessional in a city, county, or voluntary public health agency and works under the close supervision of a nutritionist to provide routine technical support services in public health agency clinics. This work includes normal nutrition education; screening using prescribed protocols; record keeping; and outreach.</p>	Nutritionist technician	⑨
<p>This position is for auxiliary nutrition workers in a city, county, or voluntary public health agency from the local or indigenous community who are trained on-the-job to work under the close supervision of nutrition professionals to provide routine nutrition education, including interpretation for clients who do not speak English. This position also carries out assigned tasks in client outreach and screening.</p>	Nutrition assistant/aide	⑩
<p>This position is a paraprofessional support person who provides basic breastfeeding information, encouragement and counseling to WIC pregnant and breastfeeding mothers in WIC clinics, by telephone, home visits and/or hospital visits at scheduled intervals, and is available outside usual 8 to 5 working hours. This position informs new mothers about breastfeeding benefits and how to prevent and handle common breastfeeding problems.</p>	Breastfeeding peer counselor	⑪
<p>Other, please describe below.</p>		⑫

## 37. Gender

- ① Female
- ② Male

## 38. In what year were you born?

\_\_\_\_\_

## 39. Do you intend to retire in the next 10 years?

- ① No
- ② Yes
  - ↳ If yes, in how many years do you intend to retire? \_\_\_\_\_ years

## 40. Ethnicity

- ① Hispanic/Latino
- ② **not** Hispanic/Latino

## 41. Race (choose all that apply)

- ① American Indian or Alaskan Native
- ② Asian
- ③ Black or African American
- ④ Native Hawaiian or Other Pacific Islander
- ⑤ White

42. From the list below, blacken a “1” for your **primary** language. In addition to your primary language, are you sufficiently fluent to use any other language(s) in your work in nutrition? Blacken **that secondary language or languages with a “2.”**PrimarySecondary

- |   |   |
|---|---|
| ① | ② African language, specify which: _____                      |
| ① | ② Cambodian/Khmer   |
| ① | ② Chinese, specify dialect: _____                             |
| ① | ② Eastern European language, specify which: _____             |
| ① | ② English   |
| ① | ② French  |
| ① | ② Haitian/Creole  |
| ① | ② Hmong   |
| ① | ② Korean  |
| ① | ② Laotian   |
| ① | ② Native American or American Indian language, specify: _____ |
| ① | ② Portuguese  |
| ① | ② Russian   |
| ① | ② Sign language   |
| ① | ② Spanish   |
| ① | ② Tagalog—Filipino language                                   |
| ① | ② Thai  |
| ① | ② Vietnamese  |
| ① | ② Other, please specify: _____                                |

Thank you for completing the survey, but we request that you release your data for research purposes.

**RELEASE OF DATA FOR RESEARCH PURPOSES?** We would appreciate if you would help us to learn about trends in the public health nutrition workforce that impact nutrition services for the public. To release your data for research purposes, please answer “yes” to the question below. If you agree to participate, your survey responses will be included in a new research database where your unique identifier will be eliminated and a new one will be assigned based only on the state, territory or Tribal organization where you work. There will be no way to link your responses to your identity. Participation is strictly voluntary and there are no risks to participants or penalty to non-participants. Your response as “yes” will constitute informed consent to release your data for research.

Do you agree to release your responses to the survey for research purposes?

- ① Yes
- ② No

The Association of State and Territorial Public Health Nutrition Directors thanks you for your participation.

*According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0584-0536. The time required to complete this information collection is estimated to average 0.46 hours per response, including the time to review instructions, search existing data resources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Expires 7/31/2009.*

## **PUBLIC HEALTH NUTRITION WORKFORCE SURVEY FORM FOR EACH VACANT PUBLIC HEALTH NUTRITION POSITION**

**WHY?** The Association of State and Territorial Public Health Nutrition Directors with support from the United States Department of Agriculture is conducting a survey of public health nutrition personnel, including WIC staff, in all US states, territories, and Tribal organizations. The survey's purpose is to have current information on work responsibilities, areas of practice, training, and compensation and to use the information to support recruitment and retention. Several similar surveys were conducted from 1989 through 2000.

**WHO SHOULD COMPLETE THE SURVEY?** – This survey is to be completed by state or regional/metropolitan/district directors or managers for any open or vacant position classified as a nutritionist or paraprofessional in a public health program, which includes WIC. The director or manager should answer each question as completely as possible and should complete the survey for each open or vacant position.

Consider a position currently vacant or open even if an offer has been made or if an individual has been hired, but that person has not yet started work. If your agency currently has one or more vacancies for a professional or paraprofessional public health nutritionist, please complete the survey one time for each open or vacant public health nutrition position.

Because the questions are being asked of more than 10,000 nutrition personnel throughout the US and territories, the job titles, names of programs and examples may be somewhat different from the work experience at your location. Nevertheless, choose the answer that is closest to your own situation.

**HELP?** It will take about 10 minutes at most to respond to the items. If you have questions about this survey or how to answer specific questions, contact your supervisor.

**USE OF INFORMATION?** A unique identifier for each open or vacant position was assigned by the state or regional/metropolitan/local nutrition director or manager. The purpose of the unique identifier is to allow your state nutrition director to follow-up with non-respondents. Your name and contact information is separate from the database and will NOT be entered at any time. Answers to the questions will be summarized and aggregated and then published in a report, which will be sent to your state nutrition director. No individual answers, persons or specific agencies will be identified in the report.

### **TO BEGIN THE SURVEY:**

Please enter your unique 9-digit identifier provided by your nutrition director:

\_\_\_\_\_

The Association of State and Territorial Public Health Nutrition Directors thanks you for your participation.

1. Check the type of agency with the vacant position. **Blacken only one.**
  - ① State government health agency
  - ② Local government (city, county) health agency
  - ③ Indian Health Services, tribal agency or tribal health center
  - ④ Non-profit organization
  - ⑤ For-profit organization
  - ⑥ Other, please specify \_\_\_\_\_
  
2. Check the **primary location** of the vacant position. **Blacken only one.**
  - ① Central office of state government health agency
  - ② Central office of district or regional (sub-state) government health agency
  - ③ Central office of local (county, city or multi-county) government health agency
  - ④ Community/rural/migrant health center or clinic
  - ⑤ Field office or clinic of a government health agency
  - ⑥ HMO or other managed care setting
  - ⑦ Hospital
  - ⑧ Indian Health Services, tribal agency or tribal health center
  - ⑨ Other private/independent entity/office
  - ⑩ Other, please specify \_\_\_\_\_
  
3. Read each of the following position descriptions. Blacken the **one** position description that best describes the vacant position.
  - ① No public health nutrition responsibilities. **STOP HERE.** Return the questionnaire
  - ② This is the highest-level nutrition position in a state, large city, county or voluntary public health agency. Major functions of this position are policy making, planning/evaluation, fiscal control, management and supervision. The position is usually the head of a nutrition program unit, where this position is responsible for conducting a needs assessment, developing a comprehensive plan and budget for the nutrition services of the agency and has line authority over staff.
  - ③ This is the second highest administrative and policy making public health nutrition position in a state, large city, county or voluntary public health agency. This position may participate in several delegated functions or be assigned primary responsibility for managing the nutrition component of one or more major program areas. Major functions of this position include assisting the director in policy making, planning/evaluation, fiscal control, management, and supervision. The person in this position serves as Acting Director in the director's absence.
  - ④ This position supervises the work of an assigned number of other nutritionists, nutrition technicians, and nutrition assistants that deliver nutrition services and nutritional care in the public health agency. Supervision includes training, delegating, directing, coordinating, evaluating and reporting the work of subordinates.

*Continued on next page*

- ⑤ This position provides expert technical assistance, professional guidance, and in service education for staff in program development or case management. Consultation may be given to the administrator, other nutritionists or other health professionals. Staff in this position have both generalized and specialized knowledge and expertise and include those who work out of a central headquarters office or in the health agency's regional or district offices.
- ⑥ This position is employed by the state, city, county or voluntary public health agency to assess the community's nutrition needs, and to plan, direct and evaluate community nutrition intervention programs that meet these needs. Interventions promote health and prevent disease among the population at large.
- ⑦ This position works as a case manager and/or care coordinator, and nutrition counselor for medically high risk clients requiring physician prescribed complex dietary and nutrition regimens, including enteral and parenteral nutrition support. This position also may work as an educator in programs where more in-depth expertise in therapeutic nutrition is required, including high-risk pregnancy, neonatal and pediatric clinics; children's special services; AIDS; and home health and home hospice services.
- ⑧ This position is employed in a city, county or voluntary public health agency primarily to provide nutrition education to the public, and to coordinate and provide direct nutritional care to agency clients in health and disease throughout the life span. In public health agencies, this position works primarily in maternal and child health clinics, WIC programs and family health or adult health primary care clinics.
- ⑨ This position is paraprofessional in a city, county, or voluntary public health agency and works under the close supervision of a nutritionist to provide routine technical support services in public health agency clinics. This work includes normal nutrition education; screening using prescribed protocols; record keeping; and outreach.
- ⑩ This position is for auxiliary nutrition workers in a city, county, or voluntary public health agency from the local or indigenous community who are trained on-the-job to work under the close supervision of nutrition professionals to provide routine nutrition education, including interpretation for clients who do not speak English. This position also carries out assigned tasks in client outreach and screening.
- ⑪ This position is a paraprofessional support person who provides basic breastfeeding information, encouragement and counseling to WIC pregnant and breastfeeding mothers in WIC clinics, by telephone, home visits and/or hospital visits at scheduled intervals, and is available outside usual 8 to 5 working hours. This position informs new mothers about breastfeeding benefits and how to prevent and handle common breastfeeding problems.
- ⑫ Other, please specify \_\_\_\_\_

4. Is the vacancy in the WIC program?

- ① Yes
- ② No

3. Is the vacant position full time or part-time? (Full time equals the number of hours per week defined by your personnel system.)

① Full time—100%

- ↳ 6. Please record the **ANNUAL** salary for the job classification as established by the agency's personnel system. Round to the nearest dollar. If the employer does not have or disclose an established salary range for the position, enter "not disclosed."

Minimum or first step: \$ \_\_\_\_\_ per year

Maximum or highest step: \$ \_\_\_\_\_ per year

② Part-time

- ↳ 7. If part-time, write in the current percent time \_\_\_\_ %

8. Does the vacant position provide any of the following benefits? Mark all that apply.

- ① Health insurance
- ② Retirement
- ③ Sick leave
- ④ Vacation time
- ⑤ None of the above

9. Identify ALL sources of funding for the vacant position. If the position is funded from more than one source, write in the percent of time from each funding source. If you are not sure about sources of funds for the position, ask your program manager or the contact person. The answer should add up to 100%.

**First example:** The position is half time (50%) and funded completely by WIC. Check "WIC" and write in "100."

**Second example:** The position is halftime. It is funded half by WIC and half by the Maternal and Child Health Block Grant. Enter "50" for both WIC and MCH Block Grant.

**Third example:** The position is full time. It is paid for by a grant from a local foundation. Write "100" in Foundation or corporate grants.

**State or Tribal Government Funding**

\_\_\_\_\_ % Non-specified funds

\_\_\_\_\_ % Funds legislatively earmarked for nutrition

\_\_\_\_\_ % Tobacco settlement monies

\_\_\_\_\_ % Other —————> If other, please describe: \_\_\_\_\_

*Continued on next page*

**Federal Government Funding--Department of Agriculture (USDA)**

- % WIC  
 % Food Stamp Nutrition Education  
 % Child and Adult Care Food Program and/or NET  
 % Other USDA, e.g., Commodity Supplemental Food Program

**Federal Government Funding--Department of Health and Human Services (US DHHS)**

- % Bioterrorism and Public Health Preparedness (CDC)  
 % Cancer Control Program (CDC)  
 % Cardiovascular Health Grant (CDC)  
 % Diabetes Prevention and Control (CDC)  
 % Nutrition and Physical Activity Grant to Prevent Obesity and Other Chronic Diseases (CDC)  
 % Preventive Health and Health Services Block Grant (CDC)  
 % Tobacco Information and Prevention (CDC)  
 % WISEWOMAN (CDC)  
 % Steps to a Healthier US (DHHS)  
 % Older Americans Act (Title III)  
 % Maternal and Child Health Block Grant (Title V)  
 % Family Planning (Title X and Title XX)  
 % Medicaid non-EPSDT (Title XIX)  
 % Medicaid EPSDT  
 % Indian Health Services  
 % National Institutes of Health  
 % Ryan White Comprehensive AIDS Resource Emergency Act (HRSA)  
 % Other → If other, please describe: \_\_\_\_\_

**Federal Government Funding--Education**

- % Early Childhood Intervention, Individuals with Disabilities Education Act (IDEA)(PL105-17)  
 % Other  
 → If other, please describe: \_\_\_\_\_

**Local Government Funding**

- % Local funds (city/county general revenue)

**Other revenue, funding sources**

- % Fees, patient charges, or third party reimbursement  
 % Foundation or corporate grants  
 % Other  
 → If other, please describe: \_\_\_\_\_

10. Put “1” in the area of **public health nutrition practice** listed below in which the person in the position will spend the **majority** of his/her time. If the person in the position will have **2 areas of practice** place a “1” next to the primary area and a “2” next to the secondary area. If the person will have **3 areas** of practice, place a “1” next to the 1<sup>st</sup>, a “2” next to the 2<sup>nd</sup>, and a “3” next to the 3<sup>rd</sup> area. **Do not mark more than 3.**

**Assessment**

\_\_\_ Data management, nutrition surveillance or research

\_\_\_ Community assessments, program planning or evaluation

**Population-based interventions**

\_\_\_ Community organization, advocacy or policy development

\_\_\_ Communication, mass media or social marketing

\_\_\_ Emergency food, hunger, food security, Commodity Supplemental Foods Program

**Management and administration**

\_\_\_ General management and administration

**Assurance**

\_\_\_ Health facilities regulation

\_\_\_ Environmental health and/or food safety

\_\_\_ Program monitoring and/or quality assurance

\_\_\_ Breastfeeding peer counselor

\_\_\_ **Direct client services (Please answer #11)**

**Other**

\_\_\_ Please specify: \_\_\_\_\_

11. If you selected **Direct client services** as a major area of the vacant position’s practice, which category below best describes the **majority** of the position’s client work? Place a “1” by that category. If the majority of the position’s client caseload is mixed, put a “1” by those you see the most, a “2” for second and “3” for third. **Do not mark more than 3.**

\_\_\_ General/comprehensive nutrition

\_\_\_ General women, infants and children

\_\_\_ General women’s nutrition and health

\_\_\_ General infant nutrition

\_\_\_ General child health or pediatric nutrition

\_\_\_ School and/or adolescent health

\_\_\_ Children with special health care needs, developmental disabilities, chronic illnesses, or high-risk infants and children

\_\_\_ Breastfeeding

\_\_\_ Adult health promotion, chronic disease prevention or healthy aging

\_\_\_ Seniors, geriatrics, adult disabilities, or adult chronic disease control

**RELEASE OF DATA FOR RESEARCH PURPOSES?** We would appreciate if you would help us to learn about trends in the public health nutrition workforce that impact nutrition services for the public. To release your data for research purposes, please answer “yes” to the question below. If you agree to participate, your survey responses will be included in a new research database where your unique identifier will be eliminated and a new one will be assigned based only on the state, territory or Tribal organization where you work. There will be no way to link your responses to your identity. Participation is strictly voluntary and there are no risks to participants or penalty to non-participants. Your response as “yes” will constitute informed consent to release your data for research.

Do you agree to release your responses to the survey for research purposes?

- ① Yes
- ② No

The Association of State and Territorial Public Health Nutrition Directors thanks you for your participation.

**Appendix D**  
**Study Design**

## Study Design

For the first time, the 2006-07 survey of the state public health nutrition workforce was administered primarily in a Web-based, on-line rather than print format. As in previous administrations in 1994 and 1999-2000, state and territorial public health nutrition directors were responsible for determining the appropriate personnel to complete the survey instrument. Rather than completing a print copy of the survey instrument, personnel were instructed how to access a password-protected website, provided a unique position password and identifier, and given instructions on how to complete the survey instrument. Offering the survey on-line significantly decreased the state/territory-level burden, because directors were no longer responsible for data entry. Instead, respondents' data were downloaded to The University of Tennessee, Knoxville's computer server via mrInterview, (mrInterview ver. 4.0, 2002-2006, SPSS Ltd., Chicago, IL) then exported directly into SPSS version 15.0 (SPSS 15.0 for Windows, ver. 15.0.1, November 22, 2006, SPSS Inc., Chicago, IL) for data analysis and reporting. The survey and its analysis were intended to mirror the 1999-2000 survey as closely as possible to aid in comparisons of the workforce and detection of any workforce trends.

### **The Population—Public Health Nutrition Workers**

To be consistent with previous surveys, ASTPHND and the Project Team gave great attention to defining the target population. Full and part-time public health nutrition professionals and paraprofessionals employed or contracted by public health nutrition programs or services under the purview of the official state health agency were to be included in the census. Personnel with public health nutrition training but not functioning in public health nutrition were not to be included. For example, a former state nutrition director functioning at the time of the survey as a chronic disease director was not included in the survey, despite having nutrition training and experience. Support personnel and those in other professions working in a public health nutrition program also were not to be surveyed. To be consistent across states and with previous survey administrations, attention was given to clarifying who to include during development of survey implementation instructions, training of state personnel for survey implementation, and trouble-shooting questions as they arose during survey implementation. Explanations of who to include and examples of both who to include and not to include were provided (See Appendix B for the guidance provided in the Training Materials). State Contacts were instructed to consider which positions were met the target population definition and, therefore, were truly part of the public health nutrition workforce. Because job titles differ across states, this determination was state-specific, making general instructions difficult. As additional questions about which positions to include were raised by State Contacts, the ASTPHND Project Co-Director created a list of "Frequently Asked Questions" that was distributed to State Contacts.

### **The Survey Instrument**

The Project team developed a 42-item fixed response survey instrument, following as closely as possible the 1999-2000 version. Consistent with previous survey administrations, it was intended to collect information about not only positions and how personnel functioned in these positions, but also characteristics of the personnel themselves. Therefore, data were collected on positions, such as where and how personnel practiced and functioned, their job classifications,

level of budget responsibility and supervisory control, how positions were funded, and position-specific salary. Data also were collected about personnel themselves, such as their perceived training needs, education and certifications, and demographic characteristics.

For the first time, questions also were asked regarding employee benefits received, year born, and intention to retire within the next 10 years. Items on employee ‘benefits’ associated with positions were included, because of concern that full-time positions were being converted to part-time positions and with reductions in employee benefits. An item on year born, asked as ‘date of birth,’ was the only data element not previously asked that was suggested in *Enumerating the Public Health Workforce* by the Public Health Society and the Center for Health Leadership and Practice for the U.S. DHHS, Health Resources and Services Administration. Two questions on ‘intention to retire’ in the next 10 years were added to help track trends in the workforce and predict any potential future personnel shortages, similar to what was being done in the field of nursing<sup>7,8</sup>.

Some items from the 1999-2000 survey were modified based on past experience with data analysis or trends within the field. The most notable modification was the addition of a new job classification: Breastfeeding Peer Counselor. This was a common “other” response to this item in the 1999-2000 survey, and USDA, FNS expressed interest in collecting information about personnel with this new job classification. In addition, ‘Breastfeeding Peer Counselor’ was included as a response option for area of public health nutrition practice related to Assurance.

Another modification in how an item was asked related to job classification. In the previous survey administration personnel were provided a list of job classifications and instructed to read position descriptions for each, which were located as an attachment at the end of the print survey instrument. Because it was unclear the degree to which personnel actually used the position descriptions to select the job classification that best described their position, personnel in the current survey administration were asked about their position in two ways and at two different points in the survey itself. First, one of the initial items in the survey instrument asked personnel to read position descriptions and select the one that was most similar to their position; no designation of job classification associated with each position description was provided. Second, one of the last items in the survey instrument asked personnel to read the same position descriptions that they had read earlier in the survey paired with the appropriate job classifications. Comparison of responses to these same items with and without job classifications associated with the position description was intended to test the validity of job classification analyses. McNemar’s test for non-parametric, nominal data was used to determine whether the paired responses to these two items agreed<sup>9</sup>. A statistically significant result of 0.00 ( $\alpha=0.05$ ) indicated that the responses were not homogenous and did not agree. Therefore, a follow-up Kappa statistic was calculated to determine the level of agreement between the two

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<sup>7</sup> Buerhaus PI, Staiger DO, Auerbach DI. Implications of an aging registered nurse workforce. *JAMA*. 2000; 283: 2948-2954.

<sup>8</sup> Spratley E, Johnson A, Sochalski J, Fritz M, Spencer W. The Registered Nurse population. US DHHS, HRSA, Bureau of Health Professions. March 2000.

<sup>9</sup> McNemar Q. Note on the sampling error of the difference between correlated proportions or percentages. *Psychometrika*, 1947, 12, 153-157.

survey items<sup>10</sup>. The Kappa coefficient was 0.55, which indicated moderate agreement between the two survey items. Because there was only moderate agreement, results are reported in the Study Findings based on respondents' answer to the item on job description only to eliminate any potential bias associated with job classifications that may not match state-specific job titles. Nevertheless, results for job classification should be interpreted cautiously and with attention to the job description associated with each job classification.

An additional set of survey items was added to complement those of the 1999-2000 survey instrument about supervisory responsibility for full-time equivalent (FTE) positions and/or consultants. Previously, personnel reported the number of FTEs and nutrition FTEs they supervised or for whom they had line authority. The current survey instrument clarified these items by asking the number of FTEs for which the respondent had direct responsibility for hiring, firing, promoting, and/or performance reviews. They were asked also the number of FTEs for which they had both direct responsibility for hiring, managing, promoting, and firing, and indirect responsibility for oversight, technical assistance, or consultation. In addition to nutrition FTEs directly supervised, individual items were added to determine the number of FTES of other health related professionals, management or program support staff, and paraprofessionals directly supervised.

To clarify data on salary, the category of "annual" pay rate was added to the 1999-2000 item that asked the rate at which contracted workers were paid. Salary was modified to ask the annual salary the respondent received and the annual minimum or first-step for his/her position. In the past, respondents were asked to report the annual salary range for their position. The Data and Epidemiology Committee expressed concern about the impact of broadbanding in some states. This practice combines salary grades into a smaller number of broader ranges. The question was revised to prevent the illusion of either exceptionally low or inflated salaries that would be included in the broadband ranges. During data analysis, the reported annual salary was adjusted for part-time positions to reflect the full-time equivalent salary for the position. The reported salary was divided by the percent time the respondent worked. Therefore, as noted in the tables included in the Study Findings, respondents who did not respond to percent part-time were excluded from the annual salary analysis.

Finally, "high school diploma/General Education Development" was added as a response option for types of degrees/concentrations an individual had earned or was working towards. Greater specification on public health courses completed at both the undergraduate and graduate levels was asked also.

The Executive Director of ASTPHND acted as the grantee administrator and Project Co-Director, in conjunction with the Chair of ASTPHND'S Data and Epidemiology Committee. ASTPHND contracted with The University of Tennessee, Knoxville for survey development and implementation, hosting and maintaining the on-line survey, data cleaning and analysis, and report writing. Together, with guidance from ASTPHND'S Data and Epidemiology Committee, the Project Team began work on survey development in August 2004; the Project Team and Data and Epidemiology Committee met for the first time in November, 2004. In addition, the Project

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<sup>10</sup> Cohen J. A coefficient of agreement for nominal scales. *Educational and Psychological Measurement*, 1960:37-46, 1960.

Team met with USDA, FNS in November, 2004. After reviewing and revising the 1999-2000 survey instrument and making revisions to address problems and current workforce concerns, a new survey instrument was developed in print and Web-based format in MRInterview. In February 2005, both print and on-line versions were pilot tested with eight respondents, the maximum allowed without clearance from the Office of Management and Budget (OMB). Pilot testers were recommended by the Data and Epidemiology Committee and were selected to be as representative a sample of the target workforce as possible. Individuals were selected from small and large states, and who were full- and part-time and contracted and employed workers, and worked in a variety of job classifications. Of special concern was whether completing the survey on-line would increase the time required to complete the survey instrument, and thus the respondent burden. To test this, half of the pilot-test group completed the on-line instrument first and then the print instrument. The other half of the pilot-test group completed the print instrument first and then the on-line instrument. The average time to complete the pilot survey was 23.4 minutes; the average time to respond to the print format was 26.2 minutes, while the average time to respond to the web-based version was 20.6 minutes. After minor editing of the survey items based on pilot testing, the Data and Epidemiology Committee approved the survey instrument. An additional on-line and print survey instrument was designed to collect information on vacant positions. As in the 1999-2000 survey, the vacant position survey instrument was adapted from the filled position survey instrument, and included appropriate position-specific items.

#### **Clearance from the Office of Management and Budget and the University of Tennessee, Knoxville's Institutional Review Board**

ASTPHND was required to comply with the Paperwork Reduction Act of 1995, which requires a valid OMB control number for information collection. The project was submitted to USDA, FNS for review on May 17, 2005. The Office of Analysis, Nutrition and Evaluation requested clarification on August 11 and a revised draft was returned on August 15. After receiving internal FNS clearance, notice of the survey was published in the Federal Register October 13, 2005 for sixty days to collect public comments; none were received. FNS submitted the package to OMB January 10, 2006. OMB requested clarification on statistical procedures March 20, 2006 and the Project Team submitted revisions March 31, 2006. The project received final OMB approval on July 7, 2006.

As an enhancement to previous survey administrations, the project was submitted for human subjects approval by the Institutional Review Board (IRB) of The University of Tennessee, Knoxville and using Form A submissions for on-line, print, and group administration of the 42-item filled position survey instruments. Participation in the survey was voluntary, but respondents were given work time to complete the survey. IRB approval was sought so that the University researchers could use data collected for subsequent research publications. IRB approval was given for print and on-line survey administration of the filled and vacant position surveys, and for individual and group administration, should it be necessary, if specific procedures were followed. In particular, appropriate human subject consent was requested as a final item in the survey instrument. Respondents had the option to agree or not agree to release their data for research purposes. Data from all respondents were used in data analyses and findings included in this Project Report and for state-specific tables of results submitted to

individual states/territories. Only data from the sub-set of respondents who agreed to release their data for research purposes will be included in research publications (Table 56).

Agreement to Release Data	WIC/Non-WIC					
	WIC		Non-WIC		Total	
	Number	Percent	Number	Percent	Number	Percent
Yes	8784	92.8%	1139	93.7%	9923	92.9%
No	619	6.5%	70	5.8%	689	6.4%
No response	64	0.7%	7	0.6%	71	0.7%
Total	9467	100.0%	1216	100.0%	10683	100.0%

### **Preparation of the ASTPHND Membership to Conduct the Study**

Approval of and participation by the state and territorial nutrition directors was key to the success of the survey. Because of the new on-line survey administration format, directors were expected to require more guidance than in the past. They were first informed of the survey July 2004 and it was introduced to ASTPHND designees at their 2005 Annual Meeting to give states adequate time to prepare for survey implementation. Members were kept notified of the project's progress and its movement toward receipt of OMB clearance.

The reduced burden at the state-level for data collection and data entry was anticipated to be an incentive to participate. The ASTPHND Project Co-Director made multiple contacts with state/territorial directors/designees to encourage participation.

### **Schedule and Process of Data Collection**

After receiving OMB approval, training resources for the survey were made available in July 2006 on ASTPHND'S website. These materials consisted of:

- Workforce Survey Orientation (PowerPoint file)
- Workforce Survey Instructions for Data Collection (MS WORD file)
- Sample Communications with Nutrition Staff Members (MS Word file)
- Sample Communications with Local Agency Directors file (MS Word file)
- Filled Position Survey (pdf)
- Filled Position Master File (Excel file)
- Sample State Monthly Report (Excel file)
- Vacant Position Survey (pdf)
- Vacant Position Master File (Excel file)

State designees/directors were instructed to identify a State Contact who would be responsible for managing the survey within his/her state, as well as for all survey-related communications with ASTPHND. The Project Team encouraged all State Contacts to participate in a training conference call. The training information found in Appendix B instructed state designees/directors and State Contacts on how to identify and contact individuals to participate in the survey, create and distribute unique position identifiers, review and edit the monthly electronic reports as necessary for data cleaning, and encourage participation by non-respondents. Designees/directors and State Contacts were encouraged to provide pre-emptive guidance to participants on problematic questions, such as source of funding for position and salary. An electronic database file (Filled Position Master File and Vacant Position Master File) was used by the State Contacts for tracking respondents and would later be used in calculating response rates. Sample communications were provided, and State Contacts were encouraged to personalize their communications with regional and local directors and staff members to bolster participation.

In cases where individuals were not able to complete the on-line version of the survey, the State Contact obtained the print survey instrument from the ASTPHND Project Co-Director. In most instances, data entry was handled internally, with personnel identified by the State Contact to enter the completed print surveys into the on-line survey. A few specific locations arranged with the Project Co-Director to mail the print surveys to the collaborating university researchers, without any identifying information, where data were entered into the on-line survey. Surveys that contained incomplete or problematic responses were marked to indicate the incorrect responses and returned to the State Contact, along with a UT-addressed, stamped envelope. The State Contact then returned the surveys to the respondent's work location. Corrected surveys were mailed back to UT where the changes were made to the overall data set.

### **Development of the On-line Instrument**

To ease the burden of administration and aid data collection and survey completion, the survey instrument was developed for completion in a Web-based, on-line format primarily. When modifications to the 1999-2000 survey instrument were agreed upon by the Project Team and Data and Epidemiology Committee, the collaborating university researchers adapted it to an on-line format, following survey guidelines in *Mail and Internet Surveys*<sup>11</sup>. Converting the survey to on-line administration yielded multiple benefits. First, the survey website was password-protected, requiring that an individual possess a unique University-generated password to access the survey. This also allowed respondents to access the survey instrument as many times as desired, returning to the portion of the instrument at which they stopped, until they submitted their results. Individuals also could be required to respond to survey items for movement forward within the instrument, thus addressing the high non-response to items that occurred with previous versions of the survey. Skip rules were utilized to prevent respondents from seeing items that were not applicable to them, based on their previous responses. Rules also were coded within the on-line survey instrument for particular items to minimize improbable responses. For example, a rule was placed on the survey item about source of funding for the position that automatically pre-filled all responses as zero, and required that each respondent's response(s) to

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<sup>11</sup> Dillman DA. *Mail and Internet Surveys: The tailored design method*. 2<sup>nd</sup> ed. New York: John Wiley & Sons; 1999.

the item summed to 100 before s/he could continue forward in the survey. Data entry errors were minimized, because individuals' responses were entered directly into an on-line server in mrInterview and exported directly into SPSS, rather than at the state level. Individuals who worked in multiple positions also benefited from the on-line format. As respondents re-entered the website with a new position identifier, they were prompted to report whether they had completed the survey instrument for another position. If they answered affirmatively, then the on-line program presented them with an abbreviated version of the survey instrument that contained only position-specific items. .

Because the survey instrument was on-line, additional preparation and guidance at all levels of survey administration was necessary. To maintain confidentiality of respondents, survey responses were not linked to any identifying information in the University-housed server. To accomplish this State Contacts assigned position-specific passwords generated by the University researchers to access the survey website and also state-generated unique identifiers to use internally for follow-up purposes. ASTPHND state directors/designees were initially given guidance on how to create unique position identifiers at the June 2005 ASTPHND Annual Meeting. After participating in a training conference call, State Contacts were provided with an Excel spreadsheet (Filled Position Master File and Vacant Position Master File) from the University researchers with a list of University-generated position-specific passwords to be used by personnel when accessing the on-line survey instrument. State Contacts were instructed to link these position-specific passwords with state-generated unique position identifiers, the latter of which were linked with contact information for the individuals to whom the position identifiers were assigned. If an individual had one position, then s/he had one position-specific identifier. If an individual had more than one position, then s/he had a position-specific identifier for each position. States were given leeway how to generate their position identifiers, but were to follow the format of a 3-digit region code, followed by a 2-letter state abbreviation, and then a 4-digit individual position code. This allowed each State Contact to determine the most appropriate way to divide the state into local areas, regions or counties using any range of numbers from 001-999. After entering the password-protected website using the University-generated position-specific password, individuals next entered their state-generated unique position identifier, rather than any identifying information. This resulted in a database that contained no information to link respondents with identifying information. However, it enabled the University researchers to create monthly reports sent to State Contacts that listed the unique position identifiers of respondents, thereby enabling data cleaning and follow-up with any non-respondents.

Each month, the University researchers created for State Contacts state-specific electronic reports as Excel database files that listed respondents who had completed the survey instrument during that month. The report contained each respondent's position-specific password, unique position identifier, and responses to 3 pre-selected items to be reviewed as part of data cleaning. These 3 items were earned annual salary, annual minimum salary for the job classification, and source(s) of funding for the position, all of which were found to be the most problematic items in previous survey administrations. As part of data cleaning, State Contacts were instructed to edit each monthly Excel database file for any incorrect responses and then to return the cleaned electronic file to the University researchers, who then edited the overall database on the computer server. State Contacts were instructed not to convert responses for part-time workers

to the full-time equivalent, because this would be done during data analysis. State Contacts also used the monthly reports for follow-up with non-respondents. By comparing monthly reports of respondents' position identifiers with the assigned position identifiers, they could determine who had not yet responded to the survey and could initiate follow-up. Appendix B contains specific guidance provided to State Contacts for survey administration.

### **Training in Conducting the Survey**

Following OMB approval in July 2006, the Project Team held a series of 10 training conference calls for state/territorial directors/designees throughout August and September. The 1.5 hour calls led by the Project Co-Director were to be completed prior to states implementing procedures for survey administration. The schedule for training conference calls and all necessary training materials needed were posted on the ASTPHND website. Each state/territorial director/designee and any other desired personnel were asked to participate in at least one call. Directors/designees identified a State Contact responsible for survey-related communication between ASTPHND and the director and other state personnel. When State Contacts were identified, the Project Team encouraged them to participate in a training call as well

Training calls were held August 15, 17, 21, 23, 24, 29 and 30 and September 7, 13 and 15. Eventually, 52 states and territories participated in training sessions. Additional training was provided for those State Contacts who did not complete a conference call. The training focused on identification of appropriate personnel to participate, how to create unique position identifiers, and methods for on-line survey administration, data cleaning procedures, and follow-up with non-respondents.

### **Participation and Response Rate**

The ASTPHND Project Co-director remained in close and frequent electronic and telephone communication with State Contacts. Monthly reports generated by the University were e-mailed to State Contacts by the Project Co-Director, along with personalized encouragement to bolster participation. States that were slow to participate were e-mailed and telephoned to identify any action that ASTPHND could take to help encourage their participation. The National WIC Association (NWA) disseminated training information to all state WIC Directors and State WIC Nutrition Coordinators requesting their participation in the survey. Members of NWA staff participated in the survey training sessions. In addition, the NWA provided key contact information WIC Directors in states and territories that were slow to participate. The NWA ran periodic announcements in their electronic Monday Morning Reports to encourage continued support for the survey.

The Project Co-Director reported the status of the survey and level of survey participation to ASTPHND's Executive Committee each month. The Project Co-Director and University provided trouble-shooting and survey administration guidance throughout the data collection period.

Multiple methods were employed to encourage target population participation and increase response rates. State Contacts were provided sample communications to staff and local directors. Personalized contact with the ASTPHND Project Co-Director provided peer support and pressure to encourage increased participation. Initially scheduled to end on December 15, 2006, data collection was extended into March 2007 to help boost the response rate, which was 59.4% on December 12, 2005 (7657/12886). In addition, in January 2007 the ASTPHND Board approved use of funds to purchase ten \$50 gift cards to be used for an incentive drawing; all individuals who completed the survey instrument since August and were not ineligible because of state requirements were eligible for the drawing. Another drawing for a \$200 gift card was held for State Contacts who had state participation rates of 80% or greater. Feedback from State Contacts indicated that the incentive drawing was very useful in increasing participation in the survey.

State response rates are found in Table 2 in the Study Methods section. Response rates were calculated for positions included in the Master File completed by each State Contact. This allowed State Contacts to determine how many unique position identifiers were distributed to personnel and how many survey instruments for positions were completed. The overall response rate for the survey was 80% (10,312/12,886 positions). State-specific response rates ranged from a high of 100% (Delaware) to a low of 29.8% (Minnesota). In addition, response rates were unable to be determined for Ohio and Rhode Island, because the number of position identifiers administered was not reported. The most significant improvement in response rate for this survey administration compared to 1999-2000 was participation of Idaho, the only state that did not participate then. Positions (rather than individual respondents) were used in calculation of response rates; vacant positions were not included.

### **Data Entry**

Unlike previous administrations of the survey, state directors or their designees were not responsible for data entry. When respondents completed the on-line survey instrument, their responses were submitted to an on-line database housed at the University. The University researchers then used SPSS to edit and analyze the data. Responses from individuals who did not complete the entire survey were included in survey analysis, if there were responses to a pre-determined set of items also required in the 1999-2000 survey: whether or not the position was in a WIC program, agency of employment, budget responsibility, job classification and credentialing as an RD or DTR. In all, 70 respondents who partially-completed the survey were included in the final data set.

### **Completion of Data Analysis**

The University researchers were responsible for maintaining and analyzing survey data. The data set was cleaned for items on salary and source of position funding according to the monthly electronic reports returned by State Contacts. Because of the benefits of the on-line format, item non-response was minimized. Following procedures outlined in the 1999-2000 survey report, "other" and "write-in" responses were retained as submitted, rather than recoded into the existing categories in items.

As indicated in the tables, some analyses were based on both filled and vacant positions, while others were based only on filled positions. Other analyses related to characteristics of the individual respondents were based on persons. These latter analyses, therefore, did not include information on vacant positions and individuals who held multiple positions were only included once.

The WIC workforce is compared to the non-WIC workforce, or those positions not associated or involved with the WIC program. In some of the data analyses of the 1999-2000 survey, results were reported for professional and paraprofessional job classifications. Some analyses kept “other” job classification either as a unique category or collapsed within the paraprofessional category, while other analyses excluded “other” job classification. To be consistent across all results, in the current survey’s analyses “other” job classification was included as a unique category in all analyses.

Data were analyzed as univariate or bivariate and descriptive analyses and consistent with the 1999-2000 survey report. Findings are reported as counts, percentages and some measures of central tendency. Although states were responsible for cleaning selected respondent data entries, analysis of the data revealed some problems related to salary. Specifically, there were some improbably high and low earned annual salaries. For example, when some reported part-time salaries were converted to full-time salaries during data analysis, they were found to be less than the federal minimum hourly wage of \$5.15 for the time period. Also, some of the improbably high salaries were associated with part-time positions, suggesting that respondents or State Contacts during data cleaning may have indicated full-time equivalent salaries for part-time positions. Because salary was analyzed as the median, a procedure was employed to delete the improbably low salaries (less than the federal minimum hourly wage) from the salary dataset and an equal number of the highest salaries. This maintained the median, although limited the number of respondents whose salary data was included in these analyses.

Preliminary results were presented to the Food and Nutrition Service, US Department of Agriculture in May 2007 and to ASTPHND in June 2007 at the Annual Meeting. Based on the preliminary results, the University prepared state-specific data tables for dissemination to individual states in August 2007. This final report was drafted by the University researchers and then reviewed and edited by the complete Project Team and Data and Epidemiology Committee, submitted as a draft to the Food and Nutrition Service and then, upon approval by the Food and Nutrition Service, submitted in final format.