U.S. Department of Health and Human Services
Assistant Secretary for Planning and Evaluation
Office of Disability, Aging and Long-Term Care Policy

AN INTRODUCTION TO THE NATIONAL NURSING ASSISTANT SURVEY

September 2006

Office of the Assistant Secretary for Planning and Evaluation

The Office of the Assistant Secretary for Planning and Evaluation (ASPE) is the principal advisor to the Secretary of the Department of Health and Human Services (HHS) on policy development issues, and is responsible for major activities in the areas of legislative and budget development, strategic planning, policy research and evaluation, and economic analysis.

ASPE develops or reviews issues from the viewpoint of the Secretary, providing a perspective that is broader in scope than the specific focus of the various operating agencies. ASPE also works closely with the HHS operating divisions. It assists these agencies in developing policies, and planning policy research, evaluation and data collection within broad HHS and administration initiatives. ASPE often serves a coordinating role for crosscutting policy and administrative activities.

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The Office of Disability, Aging and Long-Term Care Policy (DALTCP), within ASPE, is responsible for the development, coordination, analysis, research and evaluation of HHS policies and programs which support the independence, health and long-term care of persons with disabilities--children, working aging adults, and older persons. DALTCP is also responsible for policy coordination and research to promote the economic and social well-being of the elderly.

In particular, DALTCP addresses policies concerning: nursing home and community-based services, informal caregiving, the integration of acute and long-term care, Medicare post-acute services and home care, managed care for people with disabilities, long-term rehabilitation services, children's disability, and linkages between employment and health policies. These activities are carried out through policy planning, policy and program analysis, regulatory reviews, formulation of legislative proposals, policy research, evaluation and data planning.

This report was prepared under an interagency agreement between HHS's ASPE/DALTCP and the HHS National Center for Health Statistics. For additional information about this subject, you can visit the DALTCP home page at http://aspe.hhs.gov/_/office_specific/daltcp.cfm or contact the ASPE Project Officer, Marie Squillace, at HHS/ASPE/DALTCP, Room 424E, H.H. Humphrey Building, 200 Independence Avenue, S.W., Washington, D.C. 20201. Her e-mail address is: Marie.Squillace@hhs.gov.

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Marie R. Squillace, PhD
Robin E. Remsburg, PhD
Anita Bercovitz, PhD
Emily Rosenoff, MPA
Laura Branden, BA

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PREFACE AND ACKNOWLEDGMENTS

The National Nursing Assistant Survey (NNAS) represents a major advance in the data available about certified nursing assistants and has the potential for numerous studies to improve our understanding of the direct care workforce. As the first national survey of certified nursing assistants working in nursing homes, this survey provides a framework for future evidence-based policy, practice and applied research initiatives to address the long-term care direct care workforce shortage.

The NNAS is sponsored by the Office of the Assistant Secretary for Planning and Evaluation (ASPE); its design and fielding were made possible through collaborations with two independent research organizations and a sustained partnership with the National Center for Health Statistics (NCHS). As the first in a series of papers produced by ASPE and NCHS, this report highlights relevant research that led to federal interest in sponsoring this survey, provides a comprehensive overview of the procedures undertaken, describes the advantages of combining establishment and worker surveys, and highlights the potential uses of these data. Subsequent papers will report on survey findings to inform improved planning, decision-making and policy development.

The opinions expressed in this report are those of the authors and do not necessarily reflect the views of nor should they be construed as representing the official views of the U.S. Department of Health and Human Services.

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[1] Formerly with MPR.

I. INTRODUCTION TO THE NATIONAL NURSING ASSISTANT SURVEY

Since the 1990s, the Office of the Assistant Secretary for Planning and Evaluation (ASPE) in the U.S. Department of Health and Human Services (HHS) has made the long-term care workforce a major focal point of its policy research agenda. The largest and most visible of its research initiatives in this area is the National Nursing Assistant Survey (NNAS), the first national probability sample survey of nursing assistants employed in nursing homes. The NNAS was designed to provide an evidence base for understanding what draws individuals to careers as nursing assistants and to work in nursing homes, and what contributes to their satisfaction and likelihood of staying in their jobs. This report provides a historical perspective on the Federal Government's involvement in creating the NNAS as an example of the federal role in enhancing the direct service workforce availability and capability. Specifically, this report describes relevant research that led to federal interest in sponsoring this survey; introduces the NNAS, including the types of data collected, the methods undertaken, including the linkage between the NNAS and the 2004 National Nursing Home Survey (NNHS) the advantages of combining establishment and worker surveys, and the potential uses of these data; and highlights the expanded and improved NNHS.

The immediate antecedents of the NNAS can be found in Senate Report 107-84, Departments of Labor, Health and Human Services, and Education, and Related Agencies Appropriation Bill. In fiscal year 2002, Congress requested that the Secretaries of Health and Human Services and Labor identify the causes of labor force imbalances among frontline caregivers, including registered and licensed practical nurses, certified nurse aides and other direct care workers in long-term care settings such as nursing homes, assisted living and home health care. In addition, Congress requested that HHS and the Department of Labor (DOL) make comprehensive recommendations to the House and Senate Appropriations Committee to address the increasing demand of an aging population [Senate Report 107-84].

The report, *The Future Supply of Long-Term Care Workers in Relation to the Aging Baby Boom Generation: Report to Congress*, is a product of collaboration between HHS and DOL in response to the requests from the U.S. Congress. One recommendation from this report was to support research activities to inform policymakers at all levels of government on the quality and availability of the long-term care workforce, including such issues as wage and benefits trends among frontline caregivers, understanding the effect of training and workplace culture on worker retention, and understanding how worker characteristics relate to recruitment and job satisfaction (HHS & DOL, 2003).[2]

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[2] Although widely used in the research and policy literature, the concepts of recruitment and retention have not been measured in consistent ways making it difficult to compare the effects of interventions designed to improve retention (Castle & Engberg, 2005).

In 2003, ASPE contracted with an independent research organization to develop a series of design options for a national survey of paraprofessional workers in institutional and community-based settings. As work progressed, ASPE decided to fund one of the emerging design options, a National Survey of Certified Nursing Assistants in Nursing Homes. The objectives of the survey were to describe nursing assistants' work experience and reasons for entering the field; to find out what changes in working conditions, wages, benefits, and career growth for nursing assistants would make the job more attractive; and to provide a better understanding of why nursing assistants leave the field. The survey of nursing assistants was fielded as a supplement to the 2004 NNHS at a sub-sample of nursing homes participating the NNHS. Ultimately, survey results will strengthen federal, state and provider efforts aimed at recruiting a qualified and committed workforce. ASPE is the sponsor of the NNAS; its design and implementation were made possible through collaborations with two independent research organizations, a national advisory group, private consultants, and a sustained partnership with the National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC).

The Demand for Nursing Assistants

The total number of Americans in need of long-term care is projected to more than double from 13 million in 2000 to 27 million in 2050 (HHS, 2003). Long-term care providers face tremendous challenges each day trying to provide high-quality care to clients. One of the greatest challenges is staff retention among direct care workers -- nursing assistants, personal care attendants and home health aides -- who provide hands-on services to clients. These frontline caregivers provide the majority of paid assistance to persons with disabilities (of all ages) in the formal long-term care delivery system (Stone & Wiener, 2001). Nursing assistants working in nursing facilities make up an estimated 24.7% (593,490) of the over 2.4 million paraprofessional workers (AHCA, 2004; BLS, 2004). Since nursing assistants primarily provide hands-on assistance to clients with activities of daily living (ADLs), they are key players in determining the quality of paid long-term care.

Turnover among direct care workers is high and can reach rates of over 100% in some organizations (GAO, 2001; Decker, Dollard & Kraditor, 2001; Cohen-Mansfield, 1997).[3] The nursing home industry, in particular, has been plagued for decades by an inability to recruit and retain nursing assistants (GAO, 2001). Long-term care providers are reporting national average nursing assistant turnover rates at 71% and more than 52,000 vacant nursing assistant positions (AHCA, 2003). Gaps in staffing may disrupt the continuity of patient care (GAO, 2001), worker morale (Noelker & Ejaz, 2001); worker safety (U.S. Bureau of Labor Statistics, 2002), and quality of care (Castle & Engberg, 2006; Centers for Medicare & Medicaid Services, 2002; Kramer, Eilersten, Lin & Hutt, 2000; Harrington et al, 2000; Straker & Atchley, 1999; Kayser-Jones & Schell, 1997; Mercer, Heacock & Beck, 1994; Bowers & Becker, 1992).

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[3] A recent study clarifies that the definition of turnover can influence the relative difference in reported turnover rates by as much as 47% (Castle, 2006).

Turnover of direct care workers has other repercussions as well: it is costly to the provider and to the payer (Seavey, 2004; NGA, 2004; Stone, 2004b; Noelker & Ejaz, 2001; Straker & Atchley, 1999; Pillemer, 1996). Both direct costs (recruiting, training new employees, and hiring temporary staff) and indirect costs (reduced productivity, deterioration in organizational culture and morale) associated with turnover can compromise the quality and continuity of clients' care (Seavey, 2004; Noelker & Ejaz, 2001). Further, costs for recruiting and training new direct care workers may be reflected in the demand for higher government reimbursement rates in order to maintain adequate care quality.

Turnover and high vacancy rates of direct care workers have implications for family caregivers as well. The inability to recruit and retain direct care workers places more pressure on informal (unpaid) family caregivers to provide care and exacerbates the challenge of arranging for formal care (Stone, 2001a).

While the significance of the direct care worker's role in the provision of long-term care has become more recognized by long-term care professionals and researchers, these workers experience stressful working conditions, little career mobility and are among the lowest paid workers in the health care field (NGA, 2004; Bowers, Esmond & Jacobson, 2003; BLS, 2001; Stone & Wiener, 2001; Callahan, 2001). Long-term care organizations, therefore, face considerable difficulty in recruiting and retaining direct care staff. As the demographics shift toward a larger aging population and greater demand for direct care workers, the recruitment and retention problem is likely to intensify. If left unaddressed, this emerging care gap could severely restrict the ability of providers to deliver adequate long-term care (Friedland, 2004; Stone, 2001b).

The ability to understand and replicate programs that reduce turnover can improve continuity of care while reducing the need for higher levels of reimbursement, yet evidence on what long-term care organizations and federal, state and local policymakers can do to reduce job turnover is quite limited. While wage and benefit increases have been deemed as possible solutions to the direct care worker turnover problem (HHS, 2002), impending Medicaid cuts render these solutions unlikely (NGA & NASBO, 2005) and suggest the need for alternative solutions such as peer mentoring, career ladders, enhanced staff-family communication, alternative labor pools, multi-faceted initiatives (public awareness campaigns, career enhancements, quality improvement initiatives), and culture and managerial changes. These are the primary strategies currently being employed by providers and states (Harmuth & Dyson, 2005; Stone, 2004a; Harris-Kojetin et al, 2004; McGuire et al, 2003). Moreover, supporting data to demonstrate the efficacy of the wage pass-through as a tool to reduce worker vacancies and turnover are lacking (PHI & IFAS, 2002).[4]

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[4] In the 2002 study of 12 states that had implemented wage pass-through programs: three had no impact on recruitment and retention; three could not determine whether there was any measurable effect; and four either had a positive impact or "probably had some positive impact."

Adequate wage and benefit levels are important in recruiting and retaining committed and high-quality workers for direct care jobs (Howes, 2006); however, increased benefits cannot, solely, resolve recruitment and retention problems (HHS, 2002). Studies have shown that factors other than wages and benefits can have an impact on intent to stay on the job and worker satisfaction (Harris-Kojetin et al, 2004; McGuire et al, 2003).

Employees' attitudes about various aspects of their jobs, for example, affect their overall job satisfaction, their commitment and the likelihood that they will remain with their employer (Kuokkanen & Katajisto, 2003; Burke, 2003; Laschinger, Finegan, & Shamian, 2001). Survey research can reveal the most important drivers that positively or negatively impact job satisfaction, thereby informing targeted retention efforts in areas of supervision, skill development or advancement opportunities (Kiefer et al, 2005). While the U.S. Bureau of Labor Statistics (BLS) provides employment estimates to monitor the labor force, no nationally descriptive information is collected directly from the paraprofessional workforce to evaluate what motivates individuals to choose careers as direct care workers in long-term care settings, and what contributes to the likelihood that they will continue in these positions based on their job satisfaction, environment, training, and advancement opportunities. Studies have collected such data from these workers, but they are state or community-specific (Brannon, 2005; Wyoming Department of Health, 2002; Onondaga County Department of Long-Term Care, 2001; Kopiec, 2000; Salmon et al, 1999), or focused on a specific segment of the workforce, such as older workers (Hwelek, 2005).

The Move Toward Enhancing the Direct Service Workforce

With widespread current shortages that are likely to increase as the demand increases, industry and policy leaders recognize the urgency that direct service workforce development plays for staffing the continuum of care outlined in the President's New Freedom Initiative (H.Con.Res.94, 2003; S.Con.Res.21, 2003; HHS, 2002). The goal of providing consumers with choices that maximize their independence can only occur if there are enough capable caregivers to provide such services. The DOL projections continue to list these jobs among those with the highest growth rate. The number of nursing assistants, orderlies and attendants are expected to increase by 22.3% (from 1.455 million to 1.781 million); the number of personal and home care aides is expected to grow by 41% (from 701,000 to 988,000); and the number of home health aides is expected to grow by 56% (from 624,000 to 974,000) between 2004-2014 (BLS, 2004). The community-based approaches that are supported by the New Freedom Initiative require many more direct services workers than are currently in the field. It is, therefore, critical that industry and policy leaders have access to information that is useful in improving the attractiveness of caregiving jobs and in reducing turnover. The NNAS provides a framework for future evidence-based policy, practice and applied research initiatives to address the long-term care direct care workforce shortage.

Report Organization

The remainder of this report includes the following sections:

- **Study Methodology**, including study goals and objectives, participant inclusion/exclusion criteria, an overview of the study sample and response rate, and detailed sections on instrumentation, procedures and study limitations.

- **Combining Establishment and Worker Surveys**, including an overview of the expanded NNHS and advantages of combining establishment and worker surveys.

- **Uses of Survey Data and Publication**, including uses of the NNAS and the NNAS linked to the NNHS and other data sources, and guidelines for data access.

- **Summary and Future Directions**, including key issues and next steps.

II. STUDY METHODOLOGY

Research Goal and Objectives

The goal of the study is to provide industry and policy leaders with information that is useful for improving the attractiveness of long-term care paraprofessional caregiving jobs and in reducing turnover. In addition, the study sought to:

- Describe nursing assistants' work experience and reasons for entering the field.

- Determine what changes in working conditions, wages, benefits, and career growth will make nursing assistants' jobs more attractive.

- Provide a better understanding of why nursing assistants leave the field.

- Provide a framework for future evidenced-based policy, practice and applied research initiatives to address the long-term care direct care workforce shortage.

The survey was conducted as a supplement to the 2004 NNHS. The 2004 NNHS is one in a continuing series of nationally representative sample surveys of United States nursing homes, their services, their staff, and their residents. The NNHS was first conducted in 1973-1974 and repeated in 1977, 1985, 1995, 1997, 1999, and most recently in 2004. Although each survey has emphasized different topics, they all provide basic information about nursing homes, the services provided, their staff, and their residents. The nursing home survey was preceded by a series of surveys from 1963 through 1969, called the Resident Places Surveys.

Data for the NNHS are collected via on-site interviews with administrators and staff who are familiar with sampled residents and use facility and medical records to respond to the survey. For the NNAS nursing assistants were sampled from a subset of nursing homes participating in the NNHS.

Participant Inclusion Criteria

The target population for the NNAS is nursing assistants who work in nursing homes and assist residents with ADLs, including eating, transferring, toileting, dressing, and bathing. The nursing assistants must be paid to provide these services, must be certified by the state to provide Medicare/Medicaid reimbursable services (includes those currently in the process of certification and those who started working as a nurse

aide prior to 1987 when the certification process was implemented[5]), and must be an employee of the nursing home. The nursing assistant can be either employed full or part-time, but must be working at least 16 hours per week. The survey instrument was translated into Spanish for nursing assistants who were unable to participate in English.

Participant Exclusion Criteria

The NNAS specifically excludes nursing assistants who are not certified (unless they are currently in the process of certification or started working as a nurse aide prior to 1987 when the certification process was implemented), are employed through contractual arrangements, and only provide assistance with instrumental ADLs, such as transportation, shopping, housekeeping, meal preparation, or medication administration. Nursing assistants who did not speak English or Spanish were excluded because providing interpretive services for other languages was cost prohibitive. Nursing assistants who worked less than 16 hours per week were excluded from the survey to ensure that respondents would have had enough exposure and experience in the nursing home to accurately report on organizational culture and work policies. In addition, since the NNAS sample was selected from facilities participating in the NNHS, any workers in facilities excluded from the NNHS, were in turn excluded from the NNAS (those with fewer than three beds and not certified by Medicare or Medicaid or did not have a state license to operate as a nursing home).

Although the NNAS was designed to allow for a better understanding of organizational culture and how it relates to worker satisfaction, it is known that many nursing assistants hold down multiple jobs and may actually work in several nursing homes. To avoid potential confusion, contract workers and nursing assistants who worked less than 16 hours per week were excluded from the survey to ensure that respondents would have had enough exposure and experience in the nursing home to accurately report on organizational culture and work policies. Contract workers and those employed fewer than 16 hours per week may have different needs and work challenges than full-time employees. Moreover, facilities with a high percentage of these employees are likely to have a different work environment and organizational culture than those with fewer contract and part-time employees.

Only certified nursing assistants providing help with ADLs were eligible for the survey. Certified nursing assistants working in other roles, such as medication aides, or activity coordinators, and other non-certified direct care workers providing ADL assistance, such as feeding assistants, were ineligible for the survey. Undoubtedly, these workers face similar work challenges, yet the range of their workload, duties and

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[5] The passage of the Omnibus Budget Reconciliation Act (OBRA) of 1987 (P.L. 100-203), a legislative initiative aimed at improving the quality of nursing home care by improving staffing and training of caregivers, standardizing resident assessments, and ensuring that residents receive appropriate care -- resulted in expanded training requirements for nursing assistants working in Medicare and Medicaid certified facilities: completion of 75 hours of training and a written certification test.

responsibilities are fundamentally different than certified nursing assistants delivering help with ADLs.

Sample Design

The sample design for the nursing assistant survey was developed with the primary goal of preparing nationally representative and reliable estimates of nursing assistants. As such, the NNAS involved a stratified, multi-stage probability design in which nursing facilities were sampled and then nursing assistants were sampled within the facilities. The sample design allows for separate estimates to be calculated for workers by the Core Based Statistical Area (CBSA) geographical location of the nursing facility (metropolitan, micropolitan and neither), and for workers by tenure at the sampled facility (< 1 year working at the sampled facility or $\geq$ 1 year working at the sampled facility).

Sampling Frame for Selection of Nursing Homes

For the 2004 NNHS, 1,500 nursing facilities were selected from a sampling frame of nursing homes in the United States. The sampling frame for the NNHS was drawn from two sources: (1) the Centers for Medicare and Medicaid Services (CMS) Provider of Services (POS) file of nursing homes, and (2) state licensing lists compiled by a private organization. These two files contained approximately 17,000 nursing homes. The combined files were matched and unduplicated, resulting in a final sampling frame of 16,628 nursing homes.

Sample Selection

Selecting Nursing Facilities for the NNHS and NNAS

Each nursing facility was placed into a stratum comprised of bed-size category and CBSA status (metropolitan, micropolitan, neither). To permit implicit stratification within these broader sampling strata, nursing facilities were arrayed by certification status, hospital-based and non-hospital-based, ownership, geographic region, state, county, and zip code. Facilities were then selected using systematic sampling with probability proportional to their bed-size. 1,500 facilities were selected for the NNHS. A random sub-sample (n=790) of these selected facilities was then selected to participate in the NNAS.

Selecting Workers from Each Sampled Facility

At the time of the in-person interview with the facility administrator during data collection for the NNHS, the facility provided a list or lists of nursing assistants for sampling purposes. The interviewer cleaned and numbered the lists so that the nursing assistants were divided into the two tenure groups: (1) all nursing assistants employed

by the facility for less than one year and, (2) all nursing assistants employed by the facility for one year or more as of midnight the day before the interview.[6] The interviewer entered the total number of nursing assistants employed for less than one year into a computer assisted personal interview system (CAPI); the CAPI program randomly selected up to four nursing assistants. The process was repeated for the nursing assistants employed for one year or more.

Response Rate

The response rate for the NNAS is a function of the response rate for nursing homes and the response rate among nursing assistants. For the 2004 NNAS, a random sub-sample of 790 facilities was selected from the 1,500 nursing facilities selected for the 2004 NNHS. Of these, 21 facilities were determined to be out of scope.[7] Of the 769 eligible facilities, 164 did not participate in any aspect of the NNHS and 23 others elected not to participate in the NNAS portion of the survey. This resulted in a facility response rate of 75.7%. From the 582 eligible facilities that agreed to participate in the NNAS, 4,542 nursing assistants were sampled. Of these, 4,274 were eligible and 3,017 completed an interview, yielding a response rate of 70.6% among eligible nursing assistants, with an overall NNAS response rate of 53.4%[8] (Table 1).

Overall the major reason for non-response was inability to contact the nursing assistants. Although 74% of nursing homes provided contact information (e.g., home phone number and address), 22% of the eligible nursing assistants could not be located. Only 3% of contacted nursing assistants refused to participate in the NNAS. For refusals who returned their postcard,[9] the reason for refusal is unknown. Reasons for refusals among those contacted by phone included no time to do an interview, concern over confidentiality, compensation was not adequate, and/or poor English skills.

About 6% (n=268) of the cases were ineligible for the survey. Of the ineligible cases, 227 completed the screener questions and were determined to be ineligible for the NNAS; 41 were determined ineligible based on information obtained from the NNHS interviewer or the facility about a sampling error (i.e., were not nursing assistants or did not work at the facility at the time of the survey). The majority of those deemed ineligible were working less than 16 hours per week, a criterion for exclusion. Other

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[6] Interview work conducted between September 2004 and February 2005.

[7] Facilities were considered out of scope for one or more of the following reasons: (1) it had gone out of business; (2) it was a duplicate of another facility in the sample; or (3) it failed to meet the definition used in this survey by having either fewer than three beds, not being certified by Medicare or Medicaid, or licensed by the state to operate as a nursing home.

[8] Eligible nursing assistants (.71) x Facility response rate (.76).

[9] Postcards were provided to nursing assistants in *Information Packets*, designed to encourage participation. Nursing assistants indicated their willingness to participate in the survey and provided their name, address, phone number, and the best time and day to reach them to participate in the survey. See *Information Packets for Nursing Assistant* section for additional information.

nursing assistants were deemed ineligible because they had not completed a formal nursing assistant course and passed a test in nursing assistant training.

TABLE 1: National Nursing Assistant Survey Response Rate		
Category	Number	Percent
Total CNAs[a] in Responding Facilities	4,542	100
Ineligible[b]	268	6
Total eligible	4,274	94
Total Eligible	4,274	100
Non-response[c]	1,257	29
Refusal	143	3
Unable to contact	919	22
Other non-response	195	5
Complete Interviews[d]	3,017	71
SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, NNAS (2004). **NOTE**: The percent of completed interviews is calculated as the number of completed interviews divided by the total number eligible. a. Certified Nursing Assistants. b. CNAs who did not meet the eligibility criteria for inclusion in the study or were sampled in error. c. Totals do not add to 100 due to rounding. d. Approximately 50 interviews were completed in Spanish.		

Instrumentation

The survey instrument was designed with input from ASPE and members of the technical advisory panel, as well as representatives from the National Institute for Occupational Safety and Health, the Occupational Safety and Health Administration and CMS. The NNAS was designed to measure job satisfaction and organizational culture, as well as to provide basic information on job history, family life, and intention to continue to work as a nursing assistant.

The final survey instrument, designed to be administered by telephone, consisted of ten primary sections: recruitment (7 items); education, training, and licensure (19 items); job history (17 items); family life (17 items); management and supervision (10 items); client relations (8 items); organizational commitment and job satisfaction (14 items); workplace environment (8 items); work-related injuries (14 items), and demographics (10 items). Eligible nursing assistants who were no longer working at the facility when contacted were asked to complete a separate facility leaver section of the survey (11 items). Table 2 provides an overview of key subject areas on the NNAS questionnaire. A detailed listing of variables is located in Appendix A.

Content validity of the final instrument was established by means of a technical advisory panel with expertise in survey methodology and sample design, long-term care paraprofessional workforce issues, health policy, and evaluation. Question formats that allowed for the survey to be conducted as expeditiously as possible were used (i.e., closed-ended questions, checklists).

The instrument was tested using a convenience sample of nursing assistants in English (n=9) and Spanish (n=8) for timing, basic comprehension and flow, and was refined based on the results. The interviews were completed in stages, with a few interviews being completed, followed by changes being applied for the next group of interviews. Telephone interviewers conducted these preliminary interviews.

TABLE 2: Key Subject Areas on the NNAS Questionnaire	
B. Recruitment	How nursing assistant found out about the job. Reasons for working in field, source of job.
C. Education, Training, Licensure	Circumstances of training, nature of initial training. Continuing education, on-the-job training.
D. Job History	Current and previous jobs, current job benefits.
E. Family Life	Transportation. Family size and makeup, family care needs. Public assistance.
F. Management, Supervision	Job title of supervisor, quality of supervision.
G. Client Relations	Distribution of work time, acknowledgement of work.
H. Organizational Commitment, Job Satisfaction	Reasons for continuing job. Opportunity to perform different types of work. Satisfaction. Problems on the job. Future prospects in the field.
I. Workplace Environment	Attitude toward management/supervision. Cooperation among workers. Job related problems.
J. Work-Related Injuries	Nature of injuries, needle sticks, facility prevention.
K. Demographics	Age, race, marital status, income, education, citizenship status, language, gender.
L. Facility Leavers	Why separated. Current working arrangements. Likelihood of working again. Likelihood of recommending facility to family/friend.
SOURCE: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation, NNAS (2004).	

The approach used for translating and testing the Spanish-language version of the questionnaire utilized guidelines from the U.S. Census Bureau. Rather than back-translating, the Spanish instrument was *adapted* from English. This process of *adaptation* allowed for parts of a question to be altered from the source document in order to capture cross-cultural differences across languages. The translation team included translators, translation reviewers and translation adjudicators. Since this is a national survey, the translation was targeted to the general Spanish-speaking population of the United States, rather than to dialects from specific regions, such as Mexico, Puerto Rico, or South America. The final translation captured all items from the source document; no new or extraneous items were added (DesRoches, Santos & Stapulonis, 2004).

Overall, both the English and Spanish interviews with nursing assistants were conducted with few problems. Respondents were able to understand the intent of the questions, and there were very few instances of item non-response due to question

sensitivity. Interviewers displayed little difficulty in administering the questionnaire due to skip patterns or question wording; as a result, there was a limited number of missed skips and interviewer errors.

Pilot Test

A pilot was conducted from March through April 2004, to assess the effectiveness of advance materials and contact procedures; procedures for selecting the sample; instrument administration time and question wording, and the collection, quality and processing of contact information. The NNAS pilot test consisted of two phases: field interviewer training and data collection, and telephone interviewer training and data collection.[10] Nursing assistants for the pilot were defined in the same way they were defined for the national sample, and the pilot sample was also stratified by tenure (< 1 year, $\geq$ 1 year). A sample of 63 nursing assistants was selected from eight facilities from a sample of 12 facilities which had also participated in the NNHS pilot test. While the nursing facilities used on the pilot test for the NNAS had also participated in the NNHS pilot test, the pilot data collection for the NNHS and the NNAS were not conducted at the same time. Of these eight facilities, only one nursing home administrator (12.5%) provided contact information for the sampled nursing assistants. Since the majority of nursing home administrators did not provide contact information for nursing assistants, improvements were made in the advance materials and a decision was made to create a stand-alone recruitment packet. To assist in developing these materials, two focus groups and two cognitive interview sessions were held in June 2004 with nursing assistants to elicit feedback on the various versions of advance materials proposed for the NNAS. Final advance materials were developed based on the feedback provided by the nursing assistants.

Procedures

This section describes the procedures used for to the NNAS data collection including those used for informing the facilities about the NNAS, selecting the sample, contacting the selected nursing assistants, and follow-up procedures to increase response rates. This section concludes with an overview of study limitations.

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[10] Field interviewers made in-person visits to the facility to gather contact information, while telephone interviewers conducted the NNAS.

Advance Materials for Facilities

The NNHS facilities selected for the NNAS were informed about the survey as part of the advance contact materials sent to the nursing home administrator that included an advance letter, appointment call, appointment confirmation letter, and an appointment confirmation call. The appointment confirmation letter explained that up to eight nursing assistants would be selected in the facility and that contact information would also be collected. Facilities were asked to provide a list of nursing assistants employed by the facility with an indicator of whether their tenure was less than one year or one year or more at the time of the in-person interview at the facility.

In the appointment confirmation packet, the facility administrator received a copy of letters provided by three professional nursing assistant organizations endorsing the NNAS, including the National Association of Geriatric Nursing Assistants, the National Network of Career Nursing Assistants, and the Paraprofessional Healthcare Institute. The appointment confirmation packet also included a NNAS flyer (Exhibit 1) and an advance letter (Exhibit 2) for the administrator to present to all nursing assistants employed by the facility to provide information about the survey. The NNAS flyer was designed to be posted in an area of the facility where nursing assistants would most likely see it. It alerted the nursing assistants that the NNAS was coming and that they might be chosen to participate. The flyer incorporated the NNAS logo and color theme and addressed the purpose of the survey, the $35 incentive payment, the voluntary nature of the survey, that the interviews would be conducted by telephone, and assurance of the confidential nature of the survey. It also included HHS and CDC logos, the NNHS web site address, and the NNAS toll-free number. Each facility received two copies of the flyer. The NNAS advance letter contained similar information to the flyer. It was printed on NNAS letterhead designed to be distributed to all of the nursing assistants in the facility either with their paycheck or in a mailbox at work or whatever manner the administrator decided to use to distribute the letters.

Activities to Contact Nursing Assistants

Contact Information

During the on-site interviews for the NNHS, eight nursing assistants were selected to participate in the NNAS. The NNHS field interviewers then prepared packets (described below) for distribution by the facility. The interviewers also asked facility administrators to provide contact information for each of the selected nursing assistants. Contact information requested included the nursing assistant's first and last name, home address, home phone number and other number (if available), and shift the nursing assistant usually worked. NNAS pilot test results indicated that fewer than 15% of the nursing homes provided contact information for the selected nursing assistants, therefore the primary strategy planned for contacting nursing assistants was through information packets distributed by the facility. These packets (described in more detail below) included a postcard nursing assistants could complete if they wanted to

participate in the survey. The information packets were personalized by the NNHS field interviewers during the on-site interviews and distributed by a facility contact person designated by the facility administrator (e.g., the administrator, director of nursing, or staff from the human resource office). This individual signed a receipt form acknowledging receipt of the packets and was usually the person who was contacted later for follow-up activities.

Although the pilot test indicated that most facilities would not provide nursing assistant contact information, approximately 74% of facilities participating in the NNAS did provide contact information for the sampled nursing assistants. Having contact information proved extremely important. Telephone interviewers used this information as an additional means to contact nursing assistants to solicit participation in the survey.

Information Packets for Nursing Assistants

The NNAS information packets were designed to provide information about the survey in a variety of formats, and to encourage the nursing assistants to open the packet and explore the materials (i.e., bright colorful logo on a large envelope that obviously contained more than just sheets of paper) (Table 3).

TABLE 3: Contents of Information Packets	
Introductory Letter (English/Spanish)	Described the survey and frequently asked questions, signed by the Director of the National Center for Health Statistics (NCHS) (Exhibit 3).
$5 Bill Clipped to Informed Consent Letter	Bill attached to the informed consent letter signed by the Director of NCHS with a large, colorful plastic paper clip.
Welcome Letter	From NCHS project officer on NNAS letterhead (Exhibit 4) with the Spanish version printed on the back of the letter.
Fact Sheet	1-page, colorful (Exhibit 5).
Pen	Gift pen with the survey name, survey sponsors, the NNAS 800 number, and website embossed on the pen barrel.
Return Postcard	Used for the nursing assistant to indicate their willingness to participate in the survey and to provide their name, address, phone number, and the best time and day to reach them. The postcard also had a box to check for the nursing assistant to request a report on the results of the NNAS (Exhibit 6).
Postage Paid Return Envelope	To return the NNAS postcard.
DVD	A 5-minute DVD explained the survey and the importance of participation.
SOURCE: U.S. Department of Health and Human Services, National Center for Health Statistics and the Office of the Assistant Secretary for Planning and Evaluation, NNAS (2004).	

The advance materials detailed the purpose of the survey and its voluntary and confidential nature. Respondents were informed that the telephone interview would take about 40 minutes and would collect information on topics including training, supervision, job history, work setting, wages, education and benefits. In addition to the $5 prepaid incentive included in the NNAS information packet, nursing assistants were told they would receive a $30 check mailed after the interview was completed.

Telephone Interviewer Training

Survey staff involved in data collection for the NNAS participated in formal training sessions. Telephone Research Center (TRC) team leader, support staff and supervisor training included an introduction to the NNAS, an overview of the advance contacting procedures and materials for the NNAS, and detailed information on telephone contact procedures for the nursing assistants. Interviewers and TRC staff were shown the DVD which was included in the nursing assistant information packet to provide an overview of the importance of the survey. Interviewers participated in formal in-person training sessions on collecting the NNAS data using the computer-assisted telephone interview (CATI). In addition, two Spanish bilingual interviewers and team leaders were trained and participated in data collection using a Spanish version of the CATI.

The training program included a detailed overview of the NNAS, the survey purpose and importance, and the advance materials sent to nursing assistants. In addition, training sessions included lectures, interactive sessions and role-play. The interactive exercises were designed to familiarize interviewers with the screening process, the different interview pattern for nursing assistants who were no longer working at the sample facility, and how to record the nursing assistant's job history. Interviewers were trained to read all questions verbatim to the respondent. Supervisors and team leaders also participated in the interviewer training sessions, providing coaching on interviewer telephone skills and use of the CATI. Team leaders monitored the interviewers throughout the field period for quality assurance (Edwards, Tourangeau, Branden, Lohr, & Vincent, 2005).

Nursing Assistant Data Collection Activities

The telephone interviews began in September 2004, about one month after the NNHS data collection began and ended February 2005, approximately one month after data collection for the NNHS ended. To participate in the NNAS interview, nursing assistants either called in on the NNAS 800 toll-free line or were contacted by a TRC interviewer using the telephone number provided by the facility or information provided on the postcard nursing assistants completed and mailed. Some nursing assistants returned the postcard and called the toll-free number. If the nursing assistant could not complete the interview at the time they called the toll-free number or when the telephone interviewer contacted them, an appointment was set to complete the interview at a later time.

The telephone interviewers read a consent statement as part of the introductory script and at the beginning of the CATI interview to which NNAS respondents had to respond affirmatively to before the interview could continue. This consent statement adhered to the informed consent principles of the NCHS Institutional Review Board (IRB). To meet IRB guidelines for this project, the English version of the informed

consent was written at an eighth-grade reading level.[11] Since the survey was judged to involve minimal risk, signed informed consent was not obtained.

Telephone interviews were conducted using a CATI instrument. Most of the TRC staff selected to conduct the NNAS interviews had previous CATI experience. Interviewers, reading from a computer screen, asked each question as it appeared on the screen. Interviewers entered responses directly into the CATI system. This process eliminated the need for separate data entry and automatically guided the interviewer through questionnaire skip patterns. The interviews were conducted during nonworking hours (Edwards et al, 2005).

Supervisors monitored approximately 10% of all interviewers' work for adherence to the study protocol. Clarification of issues and problems identified during monitoring was provided to the interviewers and team leaders in memos. TRC supervisors were also available throughout the data collection to respond to interviewer questions or other issues that arose.

Follow-up Activities

There were three types of follow-up activities for participating NNAS nursing home facilities. The first, about one week after the NNHS visit, the NNAS facility contact was sent a cover letter and reminder letters to be distributed to the selected nursing assistants. The purpose of the reminder letters was two-fold: it served as a reminder for the nursing assistants to participate in the survey, and it served as a reminder to the NNAS facility contact to distribute the NNAS consent packets if he or she had not done so already. At this time, a few of the NNAS facility contacts reported that they were unable to deliver the NNAS information packets to a selected nursing assistant or reported a problem with the selection of a particular nursing assistant (i.e., a nursing assistant selected was not eligible for the survey).

The second follow-up activity was a call to the NNAS facility contact if none of the selected nursing assistants returned a postcard or called the NNAS toll-free number to participate in the survey within three weeks of when the facility interview was completed. The third follow-up activity was a call to the NNAS facility to get additional contact information for nursing assistants who were difficult to reach. This follow-up activity was implemented approximately two months after the survey began. Both TRC interviewers and field interviewers contacted facilities that had provided contact information for the selected nursing assistants to get additional contact information. If the facility could not provide any additional contact information for a nursing assistant, the interviewer requested that the NNAS facility contact nursing assistants to remind them about the survey and provide the toll-free number for the nursing assistant to call to participate.

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[11] This was verified by the Grammatik feature in Word which uses the Flesch method. There is less certainty in the literature on verifying Spanish readability.

Tracing Activities

Cases for which there was contact information, but either no telephone number or the telephone number provided was wrong, not in service, or no answer were traced by six specially trained NNAS TRC interviewers, supervised by an experienced TRC tracing specialist. Tracing activities were limited attempts to contact the selected nursing assistant or relatives of the selected nursing assistant and involved calling directory assistance and searching Internet databases. Cases that the TRC had difficulty reaching after eight call attempts or cases for which there was no viable telephone number were sent a letter if a mailing address was available.

Two months after the survey began, follow-up for pending tracing cases was initiated with facilities that provided contact information for the selected nursing assistants. If the facility was unable to provide new or additional contact information for the selected nursing assistant, the standard tracing activities were implemented for the case.

Data Processing, Weighting and Survey Estimates

Data Processing (Coding and Editing)

Data processing for the NNAS included coding of "other specify" text strings, open-ended items and self-reported occupational information; reconciling interviewer remarks, and calls to the telephone hotline from NNHS field interviewers regarding the NNAS; and periodic reviews of the database to identify skip pattern, valid range violations, and any other coding or keying anomalies. Data were verified and de-duplicated (as needed) so that each verbatim response coded was unique (coded only once).

- Other specify responses were coded by assigning a code for one of the established response categories when appropriate and by adding additional codes for responses that did not fit into an established category.

- Open-ended items were coded by applying new codes (categories) to the extracted responses. An electronic Classification Table was established for each item, consisting of the pre-codes from the original interview questions and any new categories established by the coding supervisor. Coding was verified in monthly batches and reviewed in frequency tables.

- Self-reported occupation information was coded using standard industry and occupation codes. The job's industry was coded using the North American Industry Classification System industry coding classification, assigning the full six digits, as published by BLS (BLS, http://www.bls.gov/ces/cesnaics.htm, last accessed 3/14/06). For occupation coding the BLS Standard Occupational Classification, October 2000, ISBN 0-934213-77-1 was used (BLS,

http://www.bls.gov/soc/home.htm, last accessed 3/14/06). The structure of this code is also six digits.

- Remarks are comments, questions, and additional data keyed as text into the CATI instrument by interviewers during the interview. These entries were reviewed by coding staff, trained in the flow and content of the NNAS, to determine if data entered in various fields required editing.

For many of the NNAS items, editing occurred during data collection. Hard and soft range checks were built into the CATI system, as well as hard and soft consistency checks between multiple variables. Hard edits required the interviewer to fix the discrepant data before the interview could continue. Soft edits resulted in a prompt for the interviewer who could either correct the data or suppress the edit. All items were reviewed extensively to insure that individual responses were accurate, consistent, logical and complete. When necessary, records were reviewed to resolve inconsistencies, and in some cases responses were recoded (Edwards et al, 2005).

Survey Weighting Procedures

Because the NNAS is designed to produce national estimates for nursing assistants, the data must have weights to inflate the sample numbers to the national estimates. Each record on the data file has a weight for this purpose. By aggregating these weights, counts for national data can be obtained.

In order to create unbiased national estimates, statistics for nursing assistants are computed using a weight associated with each sampled nursing assistant. The weight is constructed to reflect the design of the sample: a multi-stage, probability proportional to size, systematic random design. The following are components to the weight:

1. Inverse of the Probability of Selecting the Nursing Assistant

   The probability of selection of a nursing assistant is a product of the three selection probabilities: the probability of selecting a facility to the NNHS sample; the probability a facility was sampled in the NNAS; and the probability the nursing assistant was selected within the sample NNAS facility. The inverse of the product of these probabilities is used in weighting.

2. Adjustment for Non-Response

   The second component for calculating the weight is adjustment for non-response. There are three types of non-response. The first two types are facility level and the third is person level. The first type occurs when in-scope facilities did not respond to the NNHS. The second type occurs when an in-scope facility does not provide the number of nursing assistants employed. The third type occurs when the individual nursing assistants sampled fail to respond.

3.   Ratio Adjustment and Weight Smoothing

The final components of calculating weights involve ratio adjustment and smoothing. Ratio adjustments are made within each of the groups defined by region to adjust for over- or under-sampling of facilities reported in the sampling frame. This adjustment is a multiplicative factor whose numerator was the number of facilities in the sampling frame within each region and whose denominator was the estimated number of facilities for that same group. Ratio adjusted weights are smoothed only if there are disproportionally large weights. In smoothing, totals are preserved.

Survey Estimates

Since data are based on a sample, they will differ somewhat from data that would have been obtained if a complete census had been taken using the same instruments, instructions, and procedures. The standard error is primarily a measure of the variability that occurs by chance because only a sample, rather than the entire universe, is surveyed. The standard error also reflects part of the measurement error, but it does not measure any systematic biases in the data or other non-sampling errors. The chances are about 95 in 100 that an estimate from the sample differs from the value that would be obtained from a complete census by less than twice the standard error. Standard errors for this survey need to be computed using statistical software programs that take into account the complex survey design (e.g. SUDAAN and SAS and STATA) (RTI, 2005; SAS Institute, 2003; StataCorp, 2005).

Confidentiality of Data

Participation in surveys conducted by the NCHS is voluntary, and information on individuals and/or facilities is confidential. Strict procedures are utilized to prevent disclosure of confidential data in survey operations and data dissemination. The NNAS, was conducted as a supplement of the NNHS, which is authorized by Congress in Section 306 of the Public Health Service Act (42 USC 242K). In accordance with Section 308(d) (42 U.S.C. 242m) of the Public Health Service Act, no information collected in this survey may be used for any purpose other than the purpose for which it is collected. Such information may not be published or released in any form if the individual or establishment is identifiable unless the individual or establishment has consented to such release. The information provided by nursing homes and nursing assistants is used solely for statistical research and reporting purposes.

Survey Limitations

Insufficient sample sizes for items with low prevalence in the population is a limitation common to all sample surveys. For example, making accurate estimates of responses to many survey items for male nursing assistants may not be possible since

the prevalence of male nursing assistants working in nursing homes is about 8%. Another limitation of the survey is the use of "other specify" response options for many of the questionnaire items. Although many of these open-ended responses could be back coded to established response categories or new response categories could be created when a sufficient number of nursing assistants provided the similar responses, many of the responses could not be coded into a meaningful category or were of low prevalence and hence will not produce reliable estimates. Although some information (e.g., demographic information and reason for termination) was collected on nursing assistants who reported that they terminated employment between the time they were sampled and the time they completed the survey (*Facility Leavers*),[12] use of this information is limited. First the sample size is small (n=120) limiting many analyses. Second, the cohort of facility leavers may not be representative of all leavers. The NNAS was designed to select a national probability sample of current workers and not of facility leavers. Collecting some information on facility leavers was judged as useful for future research efforts to understand nursing assistant turnover.

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[12] The *Facility Leaver* section of the NNAS (11 items) was designed to capture: whether nursing assistants were still working as a nursing assistants; whether they were working in long-term care or the health care field, reasons for leaving, and what, if anything, would have encouraged them to stay at their job.

III. COMBINING ESTABLISHMENT AND WORKER SURVEYS

This section focuses on the methodological benefits of combining the NNAS and NNHS. First the methodological benefits of combining establishment and worker surveys in general is presented, with specific examples from combining the NNHS and NNAS. Next an overview of the 2004 NNHS, including new content areas and data collection methods is presented.

Advantages of Combining Establishment and Worker Surveys

Developing a list or sampling frame of all eligible direct care workers is impractical and costly. Although some workers are self-employed, the vast majority are employed by nursing facilities, home and hospice care agencies and other alternative residential care facilities such as board and care homes or assisted living facilities. Surveying workers in various long-term care settings through the establishments where they work is an efficient way to construct a sampling frame and select a sample of workers. Moreover, combining the surveys increases the likelihood of getting contact information on the workers. In this case, contact information was secured from 74% of the facilities in a national survey where the two surveys were combined versus 12.5% in the pilot survey where the two surveys were not combined. Using an established survey like the NNHS, reduces the time, effort and costs involved in reaching nursing assistants and soliciting their participation in the survey.

The direct care workforce consists largely of low-income workers. Low-income populations are among the most difficult groups to locate and interview, and they may be less motivated to participate in surveys compared to other income groups (Singer & Kulka, 2002). They are extremely mobile. Many are suspicious of attempts to interview them because they associate the interview process with government and authority. They are more likely than most populations to be without a telephone; less likely to have established credit histories; and are seldom included in mailing lists and other databases that provide information to commercial locating databases. Hence, these populations are difficult to trace using conventional methods (Sinclair et al, 2003). Contacting workers through their employers could provide additional legitimacy for the survey and a way to follow-up with non-responders and workers who initially may be reluctant to participate.

Other advantages to combining a telephone survey of workers with an establishment survey of their employers include the ability to reduce field costs, reduce respondent burden, improve response rates, and increase the analytic potential of both surveys. The costs of contacting the nursing homes, recruitment activities, and travel to the facility to collect data could be covered by the establishment survey. Nursing home administrators would only be asked to participate in one survey. Many facilities are

already working under constrained staffing conditions and are regularly expected to respond to extensive federal and state regulatory requirements. Pairing a survey of nursing homes and a survey of their workers could reduce respondent burden and improve response rates. Combining the two surveys eliminates potential data collection duplication that occurs if the surveys were conducted independently. Finally, by linking data collected from the workers to data collected on the establishment, the analytic potential of both surveys is enhanced. Linked data sets enable researchers to explore the relationship between facility practices, worker characteristics and perceptions, and resident outcomes.

Expanded 2004 National Nursing Home Survey

Like its predecessor surveys conducted periodically since 1973, the 2004 NNHS uses a national probability sample of nursing homes to collect data on facility characteristics, including information about staffing and their residents. All nursing homes included in 2004, the most recent survey, had at least three beds and were either certified by Medicare or Medicaid or had a state license to operate as a nursing home. Based on interviews with the administrators and staff, the survey collects data on facility bedsize, ownership, staffing, number of residents, certification status, services provided, and basic charges. For residents, data are obtained on demographic characteristics, functional and health status, diagnoses, services received, and sources of payment.

The 2004 NNHS was redesigned and expanded to better meet the data needs of researchers and health care planners working to ensure that quality long-term care will be available for the nation's growing senior population. New content areas include:

- Medications.

- Medical, mental health, and dental services offered or provided.

- End-of-life care and advance directives.

- Education, specialty credentials, and length of service of key staff.

- Turnover and stability of nursing staff, use of contract/agency staff, overtime shifts worked, wages and benefits.

- Facility practices for immunization, dining, and use of mechanical lifting devices.

For the first time, the survey was conducted using CAPI. The CAPI system makes it easier for respondents to participate in the survey and speeds the processing of data so that information can be released on a timely basis. The 2004 NNHS also included a self-administered questionnaire sent to the facility prior to the on-site interview to obtain more in depth information on staffing characteristics. The NNHS currently provides

information on nursing homes from two perspectives: the POS and the care recipient. The addition of the NNAS to the 2004 NNHS provides a new perspective, that of the direct care worker.

IV. USES OF SURVEY DATA AND DATA PUBLICATION

Potential Uses of the National Nursing Assistant Survey

The NNAS represents a major advance in the data available about nursing assistants and has the potential for numerous studies to improve our understanding of the direct care workforce. One of the many benefits of the NNAS is that it allows researchers to focus on nursing assistants as a subset of the larger, broader group of long-term care direct care workers. Findings from this survey will be of great interest to a range of stakeholders, including federal and state policymakers, federal agencies, provider organizations, workforce experts and researchers, professional worker associations and labor market analysts. There are several topics addressed in the NNAS that will inform policy and practice (Table 4).

TABLE 4: Important Policy and Practice Issues Associated with Paraprofessional Workers	
How workers are recruited.	Compensation.
Use of public benefits.	Benefits: health insurance access/coverage.
Reasons for turnover (separation).	Reasons for becoming a nursing assistant.
Citizenship status.	Contributors of satisfaction.
Extent and type of occupational injuries.	Contributors of likelihood of staying in job.
Working conditions.	Role of initial and continuing education and training.
Finding new sources of workers.	Advancement.
SOURCE: U.S. Department of Health and Human Services and Department of Labor (2003).	

The NNAS will provide the first estimates of the nursing assistant population based on a national probability sample of a cross section of certified nursing assistants employed in nursing homes. Results from this survey will create a framework for future evidence-based policy, practice and applied research initiatives to address long-term care direct care workforce shortages. Although the major focus of the NNAS is to provide descriptive data, the survey also has exploratory, confirmatory, and developmental aspects. Specifically, the NNAS is designed to:

1. Support descriptive analyses of individual and workplace characteristics of nursing assistants working in nursing homes;

2. Support analyses of relationships that exist between why individuals enter or leave direct care work and what contributes to job satisfaction and retention;

3. Examine patterns and effects of various independent variables[13] on recruitment, retention, job satisfaction and turnover;

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[13] For example, wage and benefit levels, training, management practices, organizational characteristics, and career advancement opportunities.

4.   Correlate facility characteristics with key policy and practice issues of interest;

5.   Identify where the nursing home industry has been successful in addressing certain labor issues; and

6.   Identify methods that are likely to be effective in reducing turnover and increasing staff retention.

Empirical research on nursing assistants has revealed associations between job satisfaction and turnover (Feldman, Sapienza & Kane, 1990) and intent to leave (Parsons, Simmons, Penn & Furlough, 2003); established linkages between job satisfaction and quality of care (Chou, Boldy, & Lee, 2002); staff turnover and quality (Castle & Engberg, 2006 & 2005); and human resource management and quality of care (Eaton, 2000).[14] Research has also revealed predictors of job satisfaction and turnover (Waxman, Carner & Berkenstock, 1984); established linkages between inadequate training and satisfaction and retention (Pillemer et al, 1998); and clarified the nature of working conditions (Tellis-Nayak & Tellis-Nayak, 1989). Yet few seminal research studies have had large enough samples to sufficiently examine the recruitment, retention, job satisfaction and turnover of certified nursing assistants in greater detail.

The NNAS, in contrast, allows for testing of various assertions through both simple and complex analyses using a large sample of nursing assistants (n= 3,017, which when weighted, represents 702,500 nursing assistants) (Table 5). The survey allows for an in-depth description of nursing assistant characteristics and attitudes. Additionally, the sample size permits stratification by variables that may be confounders, thereby clarifying possible differences between subgroups of nursing assistants. For example, because both nursing assistants who have completed the OBRA[15] mandated training and nursing assistants who were grandfathered in were included in the survey, responses for both types of nursing assistants can be analyzed. In addition, separate estimates can be calculated by the CBSA location (formerly MSA status) of the nursing facility or by tenure (< 1 year, $\geq$ 1 year).[16] It is also possible to examine factors associated with specific response categories, for example, the environmental characteristics that are associated with intent to leave, while controlling for other potential confounders such as wages.

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[14] Evidence documenting the causal link between the quality of workers and the quality of care/life for consumers is limited, yet anecdotal evidence suggests that the quality of the worker has a significant effect on various outcomes (Stone, 2004).

[15] The OBRA of 1987 (P.L. 100-203) was a legislative initiative aimed at improving the quality of nursing home care by improving staffing and training of caregivers, standardizing resident assessments, and ensuring that residents receive appropriate care. OBRA resulted in expanded training requirements (completion of 75 hours of training and a written certification test) for nursing assistants working in Medicare and Medicaid certified facilities.

[16] Researchers have speculated that average direct care worker tenure in long-term care settings is bimodal, with a portion of the workforce that turns over frequently and a portion of workers with a long tenure (Brannon et al, 2005). One design objective of the NNAS included selecting enough short and long stayers to be able to sufficiently compare these groups.

Following are a few specific examples of how these data can be used. In many cases, the availability of linked data (detailed later in this section) will enhance the usefulness of the information highlighted here (Table 5).

TABLE 5: Example Research Questions that May Be Addressed by the NNAS
Characteristics of Certified Nursing Assistants in Nursing Homes
• What are the motivations or key characteristics of nursing assistants recruited into their job?
• What are the motivations or key characteristics of nursing assistants who stay in their job?
• What level of interest and desire do nursing assistants have towards additional training and education, as well as career advancement?
• What family/lifestyle demands are related to a nursing assistant's ability to work?
• What is the nature and prevalence of worker injuries?
• What is the likelihood that nursing assistants will continue in their present positions and what are the factors that affect those decisions?
• What reasons do nursing assistants give for leaving the industry?
• What factors or motivations most contribute to nursing assistant job satisfaction?
• What are the key characteristics of nursing assistants who experience more or less job satisfaction?
Characteristics of Certified Nursing Assistants' Employment Status
• What is the relationship between employee benefits and job satisfaction?
• What effect does training approaches and workplace culture have on job satisfaction and retention?
• What effects do supervisor-worker relationships have on job quality and turnover?
Framework for Evidence-Based Policy, Practice and Applied Research
• How do results compare to existing research? Do results support, contradict, or advance contemporary thinking? What are the policy implications?
• What strategies might be pursued to enhance the recruitment and retention of nursing assistants in nursing homes?
• What strategies might be pursued to enhance job satisfaction and retention of nursing assistants in nursing homes?

Potential Uses of the NNAS Data Linked with the NNHS and Other Data Sources

A major advantage of using the NNHS as a vehicle to conduct a survey of nursing assistants is the ability to combine data from both surveys. Both surveys obtain data from probability samples, which means the data provide a comprehensive picture of United States nursing homes, residents, and the nursing assistant workforce. Combining data from the NNAS with data from the NNHS enables three types of analyses:

1. Measures of association between the characteristics of nursing facilities and nursing assistants' perceptions and outcomes;

2. Measures of association between the characteristics of nursing facilities, nursing assistant perceptions and outcomes, and resident outcomes; and

3. Measures of association between facility and nursing assistant responses on similar experiences (Table 6).

The two surveys include measures of structure and process for the facility and outcome measures for nursing assistants and residents.[17] Thus it is possible to look at relationships between facility characteristics and nursing assistant outcomes, and facility and nursing assistant characteristics and resident outcomes. For the purpose of the following description we broadened the definition of outcomes to include outcomes pertinent to nursing assistants, such as job satisfaction.

TABLE 6. Potential Analysis of the NNAS with the NNHS and Other Data Sources		
Structural Variables	**Process/Interviewing Variables**	**Outcomes**
NNAS Availability of and training for use of mechanical lifts. NNHS Ownership. Facility size. Number of mechanical lifts. Benefits. Wages. Retention strategies. Tenure of key personnel. Vacancy rates. Advance practice nurses. Nurses with specialty certification.	NNAS Adequacy of training. Perceived need for continuing education. CNA satisfaction. Perceptions of supervisor. Perceptions of the nursing home. Intent to stay/leave job. Working multiple jobs. NNHS Permanent assignments. Staff to resident ratios. Turnover/stability rates. Overtime shifts. Temporary/agency staff use.	NNAS CNA[a] satisfaction. Intention to stay/leave job. CNA injuries. CNA immunizations. NNHS (Resident Component) Emergency department visits. Hospitalizations. Medication use. Pain management. Accidents. Weight change. Pressure ulcers. Restraints. MDS[b] (Facility Quality Indicators[c,d]) Prevalence of pressure ulcers. Prevalence of daily physical restraint use. Prevalence of urinary tract infection. Incidence in decline in late loss ADL.[e]
SOURCE: The U.S. Department of Health and Human Services, National Center for Health Statistics, NNHS (2004) and the Office of the Assistant Secretary for Planning and Evaluation, NNAS (2004). a. Certified Nursing Assistant. b. Minimum Data Set. c. Selected MDS Facility Quality Indicators. The Center or Health Systems Research and Analysis (CHSRA). http://www.chsra.wisc.edu/chsra/qi/matrix.htm. Accessed March 9, 2006. d. MDS Version 2.0, Center for Medicare and Medicaid Services, http://www.health.state.ok.us/program/qies/mds/mds0900b.pdf. Accessed April 3, 2006. e. Activities of daily living.		

Table 6 illustrates various measures of structure, process and outcomes available from combined analyses of the NNHS, NNAS and other data sources. Some variables

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[17] The structure/process/outcome framework is based on the work by Avedis Donabedian on quality of care. Structural measures are "attributes of the settings in which care occurs;" process "denotes what is actually done in giving and receiving care" and outcomes are "the effects of care on the health status of the population" (September 1988).

are listed as both process and outcome variables, for example, CNA satisfaction and turnover. These two variables may be considered outcomes when the unit of analysis is the CNA. They may also be considered process variables when the unit of analysis is the resident's quality of care. These variables affect the interpersonal process of care, which may in turn affect the resident's quality of care or outcome. Empirical studies have established linkages between these variables and quality of care (Chou, Boldy, & Lee, 2002; Castle & Engberg, 2006 & 2005). Use of the linked NNAS/NNHS data sets will allow researchers to determine the role of these variables while controlling for other structural and process variables.

Because both surveys collect identical information from two perspectives, that of the facility administrator and that of the nursing assistant, such things as wages and benefits and the congruence of facility and nursing assistant responses can be compared as well.

Additional analyses are also possible, as the 2004 NNHS can be linked to other data sources such as the CMS's Minimum Data Set (MDS), facility quality indicator reports, the Online Survey and Certification Automated Record system, and Medicare claims files. These data sources provide additional information on clinical status and outcomes for residents, facility quality measures, facility characteristics, health services utilization and care costs. NNHS data can also be linked to the Area Resource File to provide information on market characteristics that can affect how nursing homes operate and the care they provide.

Survey data and administrative data can be useful by themselves in answering many policy questions. However, a much wider range of questions can be addressed by linking multiple data sets. For example, the use of large data sets in long-term care has the potential to be used to improve quality of care, both directly and indirectly. As Ryan and colleagues point out "there is a critical need to design new methods and longitudinal experiments that bring together clinical and organizational (administrative) databases…[large datasets offer the potential] to develop, test and explicate theory about the causal relationships between structure and process variables and related outcomes of long-term care" (Ryan, Stone, & Raynor, 2004, p.44).

Nursing Facility Characteristics, Nursing Assistant Perceptions, Outcomes

Previous research demonstrates that various nursing home structural and process characteristics such as facility ownership and chain membership, staffing levels, top management and registered nurse turnover, staffing patterns, resident case mix, and Medicaid census influence nursing assistant perceptions of job satisfaction as well as nursing assistant turnover and retention (Castle & Engberg, 2006; Burgio, Fisher, Fairchild, Scilley & Hardin, 2004; Harrington & Swan, 2003; Brannon, Zinn, Mor & Davis, 2002). Linking data from the NNHS and the NNAS can provide additional insight into how these and other structural and process variables such as membership in a union, benefits, use of advance practice nurses, use of contract/temporary staff, and

overtime shifts may affect nursing assistants' perceptions of their jobs, supervisors, work environment, and their intention to continue employment.

Nursing facility structural and process measures in the NNHS include ownership, certification, chain membership, facility size, and payer mix. The NNHS also contains numerous structural and process measures related to staffing, including wages, benefits and retention strategies for nursing assistants, nursing staff mix, use and percentage of staff who are contract workers, turnover, stability, specialty certification and specialization of the director of nursing and nursing staff, and use of mid-level practitioners. The NNHS includes measures of facility practices such as nursing assistant involvement in resident care planning, use of permanent assignments and the number of overtime shifts worked that provide additional information on nursing assistant work environment. By linking facility data to information from nursing assistants researchers will be able to identify structural and process characteristics that affect nursing assistant satisfaction, perceptions of their supervisors, adequacy of continuing education and their perception of their initial and ongoing training, for example.

Facility and Nursing Assistant Characteristics, Resident Outcomes, Quality of Care

Analysis of the linked surveys can also be useful in examining the association of facility and nursing assistant characteristics with resident outcomes and quality of care in nursing homes (Harrington, 2005; Ryan, Stone & Raynor, 2004). Comparisons across important provider structural characteristics can be used to address issues that are of key concern to policymakers and providers, such as care outcomes and quality of care provided by nursing homes (Krichmaun, Pearson, Savik & Mueller, 2005; Swagerty, Lee, Smitt & Taunton, 2005; Adams-Wendling & Lee, 2005; Burgio, Fisher, Fairchild, Scilley & Hardin, 2004; Intrator, Zinn, & Mor, 2004; Zimmerman, Gruber-Baldini, Hebel, Sloane & Magaziner, 2002; Castle, 2001; Dellefield, 1999). Although previous studies have explored how nursing home structural and process characteristics affect resident outcomes and quality of care provided by nursing homes, these data sets have not included information from *the workers* who are providing care in the facility. The combination of information on the facility, their residents, and the characteristics and perceptions of the nursing assistants who provide care presents a unique opportunity to understand the role paraprofessional workers play in resident outcomes.

Resident outcome measures in the NNHS include the number of emergency department visits, hospitalizations, and pain management. Data from residents from the survey can be linked to MDS information to expand the range of outcomes available and to create episodes of care. Additional resident outcome information available by linking to the MDS includes restraint use, number of falls, weight changes and pressure sores. Descriptive information on residents can also be obtained from the MDS, including broader measures of cognitive functioning and disruptive behaviors which can be used to further understand how level of impairment affects caregivers and outcomes

of care. In addition, linkages to other data sources such as Medicare claims data and the Area Resource File will allow exploration of how care costs, resource allocation, and local area market factors such as hospital bed supply affect care outcomes (Decker, in press; Konetzka, Norton, Sloane, Kilpatrick & Stearns, 2006; Weech-Maldonado, Shea & Mor, 2006; Castle, 2005).

Nursing Facility and Nursing Assistant Responses

Linking nursing facility characteristics to nursing assistant responses about the facility provides a unique opportunity to explore the extent to which employer and employee experiences are similar. Data on staff turnover, immunization practices, wages and benefits, and availability of patient lifting devices were collected from both the facility participating in the NNHS and nursing assistants participating in the NNAS. Staff turnover in the nursing home can be compared to nursing assistants' perceptions of high or low turnover and whether turnover is perceived as disruptive to caregiving. The extent to which nursing assistants are knowledgeable regarding the availability of benefits provided by the facility can be assessed as well. These types of analyses, for example, can inform providers on employee knowledge of benefits and reasons nursing assistants do or do not subscribe to various benefits.

Finally, the evidence on the use of mechanical patient-lifting devices indicates many lifting-related injuries in health care workers can be prevented (Engst, Chhokar, Miller, Tate & Yassi, 2005; Chhokar, Engst, Miller, Robinson, Tate & Yassi, 2005; Edlich, Hudson, Buschbacher, Winters, Britt et al, 2005; Hudson, 2005; Pellino, Owen, Knapp & Noack, 2006). Although many nursing homes make these devices available to workers, the extent to which nursing assistants use them is largely unknown. Analyses in this area can reveal the extent to which nursing assistants experience injuries related to lifting residents.

Data Publication and Availability

Data from the NNAS will be available through public use files and analytical reports published by ASPE and NCHS. Publications and public use data files will be available on the ASPE (http://www.aspe.hhs.gov) and NCHS (http://www.cdc.gov/nchs) websites. Information will also be made available in journal articles and in papers presented at professional meetings.

The public use files will contain information from the NNAS, edited to ensure protection of confidentiality, and will include some variables on nursing home characteristics. Researchers who wish to link data from the NNAS to the facility or patient questionnaires of the NNHS will need to work through the NCHS Research Data Center (RDC). The RDC allows researchers meeting certain qualifications, and under strict supervision, to access confidential statistical micro data files. To qualify,

researchers must submit a proposal for review and approval. Researchers can use one of three access methods:

1.   direct on-site access;

2.   a remote program submission system through which researchers can submit work to be done in the RDC with the output returned by e-mail; or

3.   programming services for outside researchers provided by RDC staff.

For additional information on the NCHS RDC and procedures for access to linked data files go to: http://www.cdc.gov/nchs/data/GuidelinesRDC11-8-05.pdf.

NNAS Public Use File Release

If you are interested in receiving notification of the release of the NNAS public use file, we encourage you to join our Listserv at:

- U.S. Department of Health and Human Services
  Office of the Assistant Secretary for Planning and Evaluation
  http://aspe.hhs.gov/info/maillist.shtml.

- U.S. Department of Health and Human Services
  Office of Disability, Aging and Long-Term Care Policy (DALTCP)
  http://aspe.hhs.gov/daltcp/contact.shtml.

- U.S. Department of Health and Human Services
  Centers for Disease Control and Prevention, National Center for Health Statistics
  http://www.cdc.gov/nchs/nnhs.htm.

V. SUMMARY AND FUTURE DIRECTIONS

DOL projections continue to list direct care worker positions among those with the highest growth rate. While it is clear that turnover of formal (paid) caregivers is costly to the care recipient, the payer and the provider, evidence to date has been limited on what can be done to stabilize and improve the workforce within the reimbursement constraints that are likely to continue. It is critical that industry and policy leaders have access to information that is useful in improving the attractiveness of caregiving jobs and in reducing turnover. The NNAS represents a major advance in the data available about nursing assistants working in nursing homes and provides a framework for future evidence-based policy, practice and applied research initiatives to address the long-term care workforce shortages.

ASPE is currently building on the work of the NNAS to improve our understanding of another segment of the direct care workforce -- home health aides. ASPE's National Home Health Aide Survey (NHHAS) will provide the first national estimates of this population based on a national probability sample of a cross section of workers. The NHHAS will be fielded as a supplement to the 2007 National Home and Hospice Care Survey in partnership with the NCHS, CDC. Like the NNAS, the NHHAS has numerous benefits. Among these, the potential for future comparisons of worker characteristics, skills and training across settings to see if workers are similar and could be affected by similar initiatives in the future.

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EXHIBITS

In the appointment confirmation packet the facility administrator received a copy of letters provided by three professional nursing assistant organizations endorsing the NNAS.[19] The appointment confirmation packet also included a NNAS flyer (Exhibit 1) and an advance letter (Exhibit 2) for the administrator to present to all nursing assistants employed by the facility to provide information about the survey. The NNAS information packets, given to all sampled nursing assistants, provide information about the survey in a variety of formats and encourage nursing assistants to open the packet and to explore the materials (Exhibits 3-6).[20]

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[19] The National Association of Geriatric Nursing Assistants, the National Network of Career Nursing Assistants, and the Paraprofessional Healthcare Institute.

[20] Each information packet also included a $5 bill clipped to the Informed Consent Letter and a 5-minute DVD that explained the survey and the importance of participation (not displayed).

Nursing Assistants

The National Nursing Assistant Survey is coming!

You may be chosen to tell us what it's like to be a nursing assistant

The U.S. Department of Health and Human Services (DHHS) is conducting a national survey of nursing assistants to learn ways to attract and keep people working in this important field.

- If you are selected and complete a telephone survey, you will receive a total of $35 to thank you for participating.

- Taking part in the survey is voluntary.

- Telephone interviews will be done at home during nonworking hours.

- All answers will be kept private and no personal information will be shared with anyone for any other use.

National Nursing Assistant Survey

Help us help you!
Be part of the National Nursing Assistant Survey!

U.S. Department of Health and Human Services
National Center for Health Statistics
Centers for Disease Control and Prevention
Conducted by Westat

For more information: NNHS web site:
www.cdc.gov/NCHS/about/major/nnhsd/nnhsd.htm
NNAS toll-free number: 1-800-872-8056

National Nursing Assistant Survey

Dear Nursing Assistant:

The National Nursing Assistant Survey (NNAS) is coming to your nursing home in the next several weeks.

Sponsored by

U.S. Department of Health and Human Services

Centers for Disease Control and Prevention National Center for Health Statistics

The U.S. Department of Health and Human Services (DHHS) is conducting a national survey of nursing assistants to learn ways to attract and keep people working in this important field.

You may be chosen to answer questions about what it is like to be a nursing assistant.

- If you are selected and complete a telephone survey, you will receive a total of $35 to thank you for taking part.

Endorsing Organizations

National Association of Geriatric Nursing Assistants

National Network of Career Nursing Assistants

Paraprofessional Healthcare Institute

American Association of Homes and Services for the Aging

American College of Health Care Administrators

American Health Care Association

- Telephone interviews will be done during non-working hours.

- Taking part in the study is voluntary.

- All answers will be kept private. No information will be given to your facility or supervisor, and taking part will not affect your job or certification in any way.

Thank you for your help in this important survey.

Sincerely,

Robin Remsburg, Ph.D., APRN, BC
Chief Long-term Care Statistics
Division of Health Care Statistics

Be part of the National Nursing Assistant Survey!

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES

Centers for Disease Control and Prevention

National Center for Health Statistics
3311 Toledo Road
Hyattsville, Maryland 20782

Dear _____ :

The need for nursing assistants is growing. Many nursing homes have a hard time filling these important positions. I am writing to ask for your help with an important new survey, *The National Nursing Assistant Survey*. Please share your experiences and ideas so we can learn how to keep qualified people like you working in this important field. This research is authorized by the U.S. Public Health Service Act, Volume 42 of the US Code, Section 242k. The collection of information in this survey is authorized by Section 306 of this Act. This survey is sponsored by the Department of Health and Human Services. It is part of the National Nursing Home Survey that will be conducted by the National Center for Health Statistics all across the country.

You have been selected from a list of nursing assistants at your facility to take part in this survey along with thousands of nursing assistants working in nursing homes throughout the United States. Westat, a social science research firm, has been hired to collect the data in the survey. **Included with this letter is $5, and if you complete the survey, you will receive a check for $30 as a token of appreciation.** Your participation in this survey is voluntary. You may take part in the survey or not, but we want your experiences included so public leaders can learn what it is like to be a nursing assistant. No penalties or loss of benefits will come from refusing to participate. You may choose not to answer any question and can stop at any time. The survey will take about 40 minutes, but the amount of time is likely to vary from person to person.

The confidentiality of your responses is assured by Section 308(d) of the Public Health Service Act. Everything you tell us will be kept strictly private. Nothing about you personally will be reported, including your name and the facility where you work. Nothing you tell us will be given to your facility or supervisor. *Taking part will not affect your job or certification in any way.* Your name will not be given to any other organization outside of those collaborating on this survey. Your data will be combined with data from other nursing assistants and used for statistical research and reporting purposes only. Unless you agree, Federal law does not allow us to release information that could identify you or the nursing facility where you work.

Please help us by filling out and returning the enclosed postcard in the postage-paid return envelope. Or call the toll free number listed below. You can call us to do the interview now or to set up an appointment for a later time. The survey is done over the phone with a trained interviewer. Please ask us any questions you have about the survey. *The toll-free number at Westat is* 1-800-872-8056. Please refer to the NNAS ID number on the postcard when you call the toll-free 800 number.

Sincerely,

Edward J. Sondik, Ph.D.
Director, National Center for Health Statistics

If you would like to take part in this survey, you must return the enclosed postcard or call 1-800-872-8056.

You may want to ask about your rights as a participant in this survey. If so, please call the office set up to oversee research, toll-free, at 1-800-223-8118. Please leave a brief message with your name and phone number. Say you are calling about Protocol # 2002-11. Your call will be returned promptly. You can learn more about the National

EXHIBIT 3 (*continued*)

National Nursing Assistant Survey
Frequently Asked Questions

WHY ARE YOU DOING THIS SURVEY?
The Department of Health and Human Services is doing this survey to gain a better understanding of why nursing assistants leave the field and what changes in working conditions, wages, and career advancement opportunities might make the job more attractive.

DO I HAVE TO TAKE THE SURVEY?
No. Taking the survey is up to you and will not affect your job or certification. But this research is an important way for people to understand what being a nursing assistant is like. We want your experiences to be included and will provide a total of $35 to thank you for your help.

WHAT KINDS OF QUESTIONS WILL YOU ASK?
We will ask you about different topics like your past schooling, your career path, jobs you have had, training and the management and supervision at your facility.

WILL THE DATA BE CONFIDENTIAL?
Your name and the facility where you work will be kept private. None of your answers will be reported in any way that identifies you personally.

All information collected in this survey will be held in strict confidence according to law [Section 308 (d) of the Public Health Service Act (42 United States Code 242m)]. By law we cannot release information that could identify you to anyone else without your consent. If any federal employee or contractor gives out confidential information not authorized by law, he or she can be fired and fined and/or imprisoned.

Only NCHS research staff and our contractor, WESTAT, hired to help conduct this survey, will receive information that would directly identify you. Other collaborators, such as the Office of the Assistant Secretary for Planning and Evaluation (ASPE) and the Department of Veterans Affairs (VA), assisted NCHS in developing the survey and will be assisting us in data preparation, analysis, and research. In assisting us, the information collected is handled with strict NCHS requirements to protect your confidentiality. We remove names and facility locations and never reveal other facts that could directly identify you.

WILL MY ANSWERS BE SHARED WITH MY EMPLOYER?
WILL THIS AFFECT MY JOB?
No. Your answers will not be given to your employer or anyone at the facility. Whether or not you decide to take part in the survey will not affect your employment or certification in any way.

WHY CAN'T YOU CALL SOMEONE ELSE? I DON'T HAVE TIME TO DO THIS.
We can only speak with a small number of nursing assistants at different types of nursing homes. Since you were selected for this survey, it is important that we speak with you to make sure the experiences at your type of facility are represented. We understand your time is important. We can do the survey in more than one call if we need to. We can begin and do as much as we can. Then, if you need to stop, we can call you back at another time to finish.

I AM NOT A NURSING ASSISTANT ANYMORE. I'M NOT WORKING RIGHT NOW.
We are speaking with current and former nursing assistants. It is important that our research includes everyone's experiences, including people who are no longer working as nursing assistants.

WHEN WILL I GET MY CHECK?
Once you complete the interview, your name will be given to our Accounting Department. You should receive your check in about 2 weeks.

National Nursing Assistant Survey

Sponsored by

U.S. Department of Health and Human Services

Centers for Disease Control and Prevention National Center for Health Statistics

Endorsing Organizations

National Association of Geriatric Nursing Assistants

National Network of Career Nursing Assistants

Paraprofessional Healthcare Institute

American Association of Homes and Services for the Aging

American College of Health Care Administrators

American Health Care Association

Dear _____:

Welcome to the National Nursing Assistant Survey (NNAS). You are one of 6,000 nursing assistants selected to participate in this important new survey. NNAS is the first national study of nursing assistants in this country, and your participation is vital to the success of this study.

You were selected because your facility is part of the National Nursing Home Survey conducted by the U.S. Department of Health and Human Services (DHHS) Centers for Disease Control and Prevention's National Center for Health Statistics.

The purpose of this survey is to hear – *directly from you* – ways that nursing homes can improve the job and working conditions for nursing assistants in this country. Your participation will help us better understand what changes to make in the wages, benefits, and career advancement opportunities of this critical health care job. This information will also help us to attract more dedicated people like you

We need your help to make this survey a success. Please return the enclosed postcard today or call 1-800-872-8056 to schedule a convenient time to do the telephone interview. We will mail you a check for $30 after you complete the telephone interview.

Thank you, in advance, for your help in this important survey.

Sincerely,

Robin E. Remsburg, PhD, APRN, BC
Chief, Long-term Care Statistics Branch,
Division of Health Care Statistics

Be part of the National Nursing Assistant Survey!

National Nursing Assistant Survey

What is the National Nursing Assistant Survey?

The National Nursing Assistant Survey (NNAS) is the first national survey of nursing assistants working in nursing home facilities in the United States. The U.S. Department of Health and Human Services is sponsoring the survey. About 6,000 nursing assistants will be chosen for the NNAS from 800 nursing homes across the country. The NNAS will look at the critical role of nursing assistants in providing long-term care services for the growing elderly and infirm population.

What is the purpose of the NNAS?

- To describe nursing assistants' work experience and reasons for entering the field;
- To find out what changes in working conditions, wages, benefits, and career growth for nursing assistants will make the job more attractive; and
- To provide a better understanding of why nursing assistants leave the field.

Why was I chosen for this survey?

You were chosen at random as one of the nursing assistants who work in a nursing home.

You are one of about 600,000 nursing assistants who provide care to the 1.6 million residents in the more than 18,000 long-term care facilities in the United States.

What do I have to do if I agree to be part of the NNAS?

Fill out and return the enclosed postcard. Keep the enclosed $5. A trained interviewer will call you and ask some questions at a time that is best for you.

The telephone interview will include questions about your

- Training
- Supervision
- Job history
- Work setting
- Wages
- Education
- Benefits

After the interview, you will be mailed a $30 check.

How confidential is the information I give you?

The information you give is kept private by Federal law. No information will be given to your supervisor or facility. Your answers will be grouped with answers given by other nursing assistants who work in other nursing homes in the United States. The survey results will be released in summary form in tables and reports only.

Be part of the National Nursing Assistant Survey!

U.S. Department of Health and Human Services
National Center for Health Statistics
Centers for Disease Control and Prevention
Conducted by Westat

For more information: NNHS web site:
www.cdc.gov/NCHS/about/major/nnhsd/nnhsd.htm

NNAS toll-free number: 1-800-872-8056

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National Center for Health Statistics
c/o WESTAT — Survey 7703.02.06.03 (NNAS)
9274 Gaither Road, G9 Room 250f
Gaithersburg, MD 20877-1420

To be part of the National Nursing Assistant Survey (NNAS), check the "Yes" box, fill in information to the right, and return this card in the enclosed postage-paid envelope. If you don't want to be part of the survey, check the "No" box and return this card in the enclosed postage-paid envelope.

☐ **YES**, I want to be part of the NNAS and receive $30.

☐ **NO**, I don't want to be part of the NNAS.

☐ Send me the NNAS report when it's available.

NNAS ID #
affix sticker here

Best time and day to reach you:

TIME   AM / PM   DAY OF WEEK

PHONE NUMBER

OTHER PHONE/CELL PHONE NUMBER

Please print:

YOUR NAME

STREET ADDRESS   APARTMENT NUMBER

CITY   STATE   ZIP CODE

APPENDIX A. LIST OF SURVEY ITEMS

Section A was completed by all nursing assistants contacted and was used to establish eligibility. Eligible nursing assistants who were working at the facility on the date of the interview also completed Sections B through K. Sections D through D6d, K through K7a and Section L were completed by eligible nursing assistants who were sampled for the survey but were no longer working at the facility when contacted.

Response values are indicated in parentheses after or under each variable description. Variables with multiple sub-questions under one stem are indicated in bold; other sub-questions are identified by letters. Open-ended responses are italicized; and underlined multiple response variables are labeled "check all that apply." Some variables were recoded for ease of analysis or due to low sample frequencies for item or category responses. Changes are noted in footnotes to the variables.

The final instrument is available at http://aspe.hhs.gov. It may also be accessed in the following ASPE publication: *Measuring Long-Term Care Work: A Guide to Selected Instruments to Examine Direct Care Worker Experiences and Outcomes.* [http://aspe.hhs.gov/daltcp/reports/dcwguide.htm]

Question Item Number	Variable Description
A. Screening	
A1	Is NA currently working at NH facility (yes/no)
A2	Was NA working there on the date sample list was generated (yes/no)
A2a	Was NA employed directly by the facility or through an agency (employed by facility/agency)
A3	Was NA working as a: Certified nursing assistant or CNA CNA II or CNA supervisor Certified nurse aide Licensed nursing assistant State tested nursing assistant Geriatric nursing assistant Nurse aide Something else
A4	Did NA become an NA (was job training received) before 1987 (yes/no)
A5	Did NA complete nursing assistant training or a course on becoming a nursing assistant or nurse aide (yes/no)
A6	Is NA in the process of going through nursing assistant or nurse aide training (yes/no)
A7	When NA completed the training course, did NA take a final test or competency evaluation (yes/no)
A8	Did NA work 16 hours a week or more (yes, 16 hours or more/no, less than 16 hours)
B. Recruitment[1]	
B1	**Reason(s) for becoming a nursing assistant: (yes/no)**
a	Like helping other people
b	Family/friend also an NA

Question Item Number	Variable Description
B. Recruitment (*continued*)	
c	Wanted to work in health care
d	Job security
e	Job readily available
f	Job close to home
g	Work hours fit schedule
h	Some other reason
B2	Most important reason for becoming a NA (responses from B1)
B3	How learned about a NA as a possible job (check all that apply) Newspaper advertisement/article Family/friend was one or recommended it School or job training program TANF[2] or Work First Agency Job fair Internet/online employment service Interested after providing care for family/friend Other
B4	Total time worked as a NA 6 months or less More than 6 months but less than one year 1 year but less than 2 years 2 to 5 years 6 to 10 years 11-20 years More than 20 years
B5	What mainly doing before becoming a NA Working at another job Going to school Staying home with children Unemployed Doing something else
B5a,b	*If working, type of occupation*[3,4] (open-ended)
B6	*If working, type of industry*[5,6] (open-ended)
B7	Likelihood of choosing to become a NA again (definitely/probably/probably not/definitely not)
C. Education/Training/Licensure[7]	
C1	Where did NA receive initial training At a nursing facility At a community college In high school Somewhere else
C2	How much of training costs did NA pay (all/part/none)
C3	Who else paid for training costs (employer/someone else)[8]
C4	Did employer reimburse NA for any of the money they spent for initial training (yes/no)
C5	**How well did initial NA training prepare you to: (excellent/good/fair/poor/not offered)**
a	Perform resident care skills, such as, bathing, eating, dressing and moving (Activities of Daily Living -- ADLs)
b	Talk with residents
c	Work with co-workers
d	Discuss resident's care with family members
e	Work with supervisors

Question Item Number	Variable Description
C. Education/Training/Licensure (*continued*)	
f	Straighten out of deal with problems at work
g	Record residents' information
h	Organize work tasks to complete them on time
i	Dementia care
j	Work with abusive residents
k	Prevent work injuries
C6	How well did initial training prepare NA for working in a nursing home (well prepared/somewhat/not at all)
C7	Were any topics not covered in training that would help when starting work as a NA (yes/no)
C8	What topics should have been covered in initial NA training[9]: (check all that apply) 　Resident care skills, such as bathing, eating, dressing and moving (Activities of Daily Living -- ADLs) 　Dementia care 　Working with abusive residents 　Talking with residents 　Talking with family about resident's care 　Working with co-workers 　Working with supervisors 　Dealing with problems at work 　Preventing work injuries 　Organizing work tasks to get everything done on time 　Recording residents' information 　Other
C9	Was NA's initial nursing assistant training: 　Mostly doing or observing hands-on working with residents 　Evenly split between hands-on work and classroom study 　Mostly spent doing classroom study
C10	Was NA assigned a mentor or buddy for first job (yes/no)
C10a	Was having a mentor or buddy helpful[10] (yes/no)
C11a	Did NA take any continuing education classes in past 2 years[11] (yes/no)
C12	**Did continuing education classes cover: (yes/no)**[12]
a	Resident care skills, such as bathing, eating, dressing and moving (ADLs)
b	Talking with residents
c	Working with co-workers
d	Discussing resident's care with family members
e	Working with supervisors
f	Straightening out of dealing with problems at work
g	Recording residents' information
h	Organizing work tasks to complete on time
i	Training to mentor other NAs
j	Dementia care
k	Working with abusive residents
l	Preventing work injuries
m	Other
C13	Where did NA take continuing education classes (check all that apply) 　At a nursing facility 　At a community college 　In high school 　Somewhere else

Question Item Number	Variable Description
C. Education/Training/Licensure (*continued*)	
C14	How useful were continuing education classes (very useful/somewhat useful/not at all useful)
C15	Does facility pay for or offer any training or continuing education classes/training (yes/no)
C16	How much say does NA have in topics covered in classes paid/offered by employer[13] (a lot/some/a little/none)
C17	What topics should be covered in classes at current job (check all that apply) Medication management Pain management Dementia care Residents with mental illness Moving/lifting residents Communicating with residents Working with residents' family members End of life issues/coping with grief Working with supervisors Dealing with problems at work Time management/organizing work tasks Workplace injury prevention Other None/no topics
C18	Could facility do anything to encourage NA to take more training (yes/no/maybe-depends)
C19	What would encourage NA to take more training[14] (check all that apply) Tuition reimbursement/free training/paid to attend training Increase in salary/hourly wage One-time bonus New/better benefits Promotion Change in job title Additional job responsibilities Convenience of training (time/location) Other
D. Job History	
D1a	Number of jobs NA had in past 5 years (1/2-4/5-7/8-10/more than 10)
D1b	*Number of jobs NA had in past 2 years* (open-ended)
	JOB 1: Sampled facility[15,16]
D3a1	Month NA started working for sampled facility
D3a2	Year NA started working for sampled facility
D3b1	Month NA stopped working for sampled facility[17]
D3b2	Year NA stopped working for sampled facility[18]
D4a2; 4b	JOB 2: *Type of occupation*[19] (open-ended)
D5	*Type of industry*[20] (open-ended)
D3a1	Month NA started working at JOB 2
D3a2	Year NA started working at JOB 2
D3b1	Month NA started working at JOB 2
D3b2	Year NA started working at JOB 2
D4a2; 4b	JOB 3: *Type of occupation* (open-ended)
D5	*Type of industry* (open-ended)
D3a1	Month NA started working at JOB 3
D3a2	Year NA started working at JOB 3
D3b1	Month NA started working at JOB 3

Question Item Number	Variable Description
	D. Job History (*continued*)
D3b2	Year NA started working at JOB 3
D4a2; 4b	JOB 4: *Type of occupation* (open-ended)
D5	*Type of industry* (open-ended)
D3a1	Month NA started working at JOB 4
D3a2	Year NA started working at JOB 4
D3b1	Month NA started working at JOB 4
D3b2	Year NA started working at JOB 4
D4a2; 4b	JOB 5: *Type of occupation* (open-ended)
D5	*Type of industry* (open-ended)
D3a1	Month NA started working at JOB 5
D3a2	Year NA started working at JOB 5
D3b1	Month NA started working at JOB 5
D3b2	Year NA started working at JOB 5
	JOB 1: Sampled facility[21]
D6	*Hours usually worked per week* (open-ended)
D6a	Is NA paid by the hour (yes/no)
D6a2	*Hourly rate of pay* (open-ended)
D6b1	*Amount of wages per week/month*[22] (open-ended)
D6b2	Wage unit (per day/per week/once every 2 weeks/twice a month/per month/per year/other)
D6b2a	Wage unit -- other
D6d	Reason NA stopped working at this job[23] (laid off or job ended/quit/fired)
D6	JOB 2: *Hours usually worked per week* (open-ended)
D6a	Is NA paid by the hour (yes/no)
D6a2	*Hourly rate of pay* (open-ended)
D6b1	*Amount of wages per week/month* (open-ended)
D6b2	Wage unit (per day/per week/once every 2 weeks/twice a month/per month/per year/other)
D6b2a	Wage unit -- other
D6d	Reason NA stopped working at this job (laid off or job ended/quit/fired)
D6	JOB 3: *Hours usually worked per week* (open-ended)
D6a	Is NA paid by the hour (yes/no)
D6a2	*Hourly rate of pay* (open-ended)
D6b1	*Amount of wages per week/month* (open-ended)
D6b2	Wage unit (per day/per week/once every 2 weeks/twice a month/per month/per year/other)
D6b2a	Wage unit -- other
D6d	Reason NA stopped working at this job (laid off or job ended/quit/fired)
D6	JOB 4: *Hours usually worked per week* (open-ended)
D6a	Is NA paid by the hour (yes/no)
D6a2	*Hourly rate of pay* (open-ended)
D6b1	*Amount of wages per week/month* (open-ended)
D6b2	Wage unit (per day/per week/once every 2 weeks/twice a month/per month/per year/other)
D6b2a	Wage unit -- other
D6d	Reason NA stopped working at this job (laid off or job ended/quit/fired)
D6	JOB 5: *Hours usually worked per week* (open-ended)
D6a	Is NA paid by the hour (yes/no)
D6a2	*Hourly rate of pay* (open-ended)
D6b1	*Amount of wages per week/month* (open-ended)

Question Item Number	Variable Description
D. Job History (*continued*)	
D6b2	Wage unit (per day/per week/once every 2 weeks/twice a month/per month/per year/other)
D6b2a	Wage unit -- other
D6d	Reason NA stopped working at this job (laid off or job ended/quit/fired)
D7	How NA found job at sampled facility[24] (check all that apply) Newspaper Phonebook Family/friend was one or recommended it Facility was part of training program School or job training program Job fair Internet/online employment service TANF[25]/Work first agency Other
D8	**Benefits offered to NA at sampled facility (yes/no)**
a	Paid sick leave
b	Paid holidays off
c	Other paid time off, vacation/personal days
d	Extra pay for working holidays
e	Retirement or pension plan
f	Paid child care, subsidies, or assistance
g	Paid transportation, subsidies or assistance
D8a	Is health insurance available to NA at current job (yes/no)
D8b	Is NA currently participating in health insurance plan (yes/no)
D8c	Why not participating in health insurance plan[26] Can't afford it; too expensive Already covered by another private health insurance plan Covered by Medicaid; Medicare Haven't worked long enough to be eligible for health insurance Don't need health insurance Other
D8d	Is health insurance coverage available for other family members (yes/no)
D9	Does NA participate in any government programs that pay for medical care (such as Medicaid) (yes/no)
D9a	Does NA (also) have any health insurance coverage through spouse/partner's employer or purchased on their own (yes/no)[27]
D10	Would NA prefer to work more/fewer hours or is work hours about right (more/fewer/about right)
D10a	Reasons NA cannot work more hours at current job[28] (check all that apply) Facility has enough employees/does not require more hours/no overtime Child care or family issues Health issues Other reason
D11	Is NA ever required to work mandatory overtime even if does not want to (yes/no)
D12	Number of times in past month required to work mandatory overtime[29] (none/1-2 times/3-5 times/over 5 times)
D13a	Has NA had a pay increase in past 12 months (since starting job if worked less than 12 months) (yes/no)
D14	**Does current employer offer: (yes/no)**
a	Bonuses
b	Time off for good work
c	Tuition reimbursement/subsidy

Question Item Number	Variable Description
D. Job History (*continued*)	
d	Anything else
D15	If had to decide whether to take current job again, would NA take it (definitely take it/probably/probably not/definitely not take it)
<u>D16a</u>	<u>Reason(s) NA has more than one job</u>[30] (check all that apply) 　　Needs the money 　　Likes the variety of jobs 　　Can't get enough hours at any one job 　　Can get health benefits 　　Other reason
D17	Would NA prefer only ONE job if it had same money/hours as several jobs did[31] (yes/no)
E. Family Life[32]	
E1	Main means of transportation to/from work over past month 　　Drive self 　　Car pool/get a ride from others 　　Public transportation 　　Walks/Bicycle 　　Taxi 　　Other
	Time NA take to commute to work
E1a1	Unit (hours/hours and minutes/minutes)
E1a2	*Number of hours* (open-ended)
E1a3	*Number of minutes* (open-ended)
E2	Did NA miss any work in past month because of transportation problems (yes/no)
	Amount of time missed from work in past month because of transportation problems[33]
E3a	*Number of hours/days* (open-ended)
E3b	Unit (days/hours)
E4	*Number of other adults living in NA's household* (open-ended)
E5	Are any of these adults working full or part-time[34] (yes/no)
E6	*Number of children age 17 or younger living in NA's household* (open-ended)[35]
E6a, E6c	Number of children in household that are NA's or NA is responsible for[36]
E6b, E6d	Number of children requiring child care while NA works[37]
E7	Did NA miss time from work in past month because of child care arrangements (yes/no)
	Amount of time missed from work in past month because of child care problems[38]
E8a	*Number of days/hours* (open-ended)
E8b	Unit (days/hours)
E9	Is NA caring for family/relative/friend with a disability or health problem (yes/no)
E10	Did NA miss time from work in past month to care for family/friend[39] (yes/no)
	Amount of time missed from work in past month to care for family/friend[40]
E11a	*Number of days/hours* (open-ended)
E11b	Unit (days/hours)
E12	Has NA <u>ever</u> received cash welfare for families and children (i.e., TANF or AFDC)[41] (yes/no)
E13	Is NA currently receiving TANF (yes/no)[42]
E14	Has NA <u>ever</u> received Food Vouchers or food items from WIC[43] (yes/no)
E14b	Is NA currently receiving Food Vouchers or food items from WIC[44] (yes/no)
E15a	Has NA or NA's child <u>ever</u> received disability insurance, such as SSI[45] (yes/no)
E15b	Is NA currently receiving disability insurance[46] (yes/no)

Question Item Number	Variable Description
E. Family Life (*continued*)	
E16a	Has NA <u>ever</u> received food stamp benefits (yes/no)
E16b	Is NA currently receiving food stamp benefits[47] (yes/no)
E17	Does NA live in public housing, get rent subsidy or lower rent because government contributes to cost (yes/no)
F. Management/Supervision[48]	
F1	**How strongly does NA agree/disagree with the following statements about their supervisor** (strongly agree/somewhat agree/somewhat disagree/strongly disagree)
a	Provides clear instructions when assigning work
b	Treats al NAs equally
c	Deals with NAs' complaints and concerns
d	Is open to new and different ideas
e	Is supportive of progress in NA's career
f	Helps NA with job tasks when needed
g	Listens when NA is worried about resident's care
h	Supports NAs working in teams with other health care workers
i	Disciplines/removes NAs not performing well
j	Tells NA when doing a good job
G. Client Relations[49]	
G1	How much time does NA have to provide ADLs to residents in a typical work week[50] (more than enough time/enough time/not enough time)
G2	How much time does NA have to complete duties not related to residents (more than enough time/enough time/not enough time)
G3	Does supervisor encourage NA to discuss residents care and well-being with families (yes/no)
G4	Is NA assigned to care for the same residents (same residents/residents change/combination)
G5	Is NA respected by residents as part of their health care team (a great deal/somewhat/not at all/not applicable)
G6	Is NA respected by residents' families as part of the health care team (a great deal/somewhat/not at all/residents' families don't know me)
G7	Is NA respected by supervisors as part of the health care team (a great deal/somewhat/not at all)
G8	How often do residents let NA know doing a good job (always or most of the time/sometimes/that never happens)
H. Organizational Commitment -- Job Satisfaction[51]	
H1	How satisfied is NA with current job (extremely satisfied/somewhat satisfied/somewhat dissatisfied/extremely dissatisfied)
H2	**Reasons NA continues to work in current position** (yes/no/NA)
a	Caring for others
b	Flexible schedule or hours
c	Salary or pay is good
d	Benefits
e	Likes co-workers
f	NA's supervisor
g	Opportunity for overtime
h	Feeling good about the work NA does
i	Work location
j	Career advancement
k	Other reason

Question Item Number	Variable Description
H. Organizational Commitment -- Job Satisfaction (*continued*)	
H3a	Main reason NA continues to work at current job (same response categories as H2)
H4	**How satisfied with following aspects of current job** (extremely satisfied/somewhat satisfied/somewhat dissatisfied/extremely dissatisfied)
a	Workplace morale
b	Doing challenging work
c	Benefits
d	Salary
e	Learning new skills
H5	Types of problems at work makes it difficult to work there or causes NA to dislike job (check all that apply) Problems with supervisor/nurses Problems with co-workers Lack of respect/appreciation for work Pay or benefits Problems with schedule New rules/procedures Workload Health or personal issues Nature of job Nothing/no complaints Other
H6	Would NA recommend family/friend stay at this facility, if needed care (definitely recommend/probably recommend/probably not recommend/definitely not recommend)
H6a	Would NA recommend family/friend work as NA at this facility (definitely recommend/probably recommend/probably not recommend/definitely not recommend)
H7	Would NA recommend family/friend become a NA (definitely recommend/probably recommend/probably not recomment/definitely not recommend)
H8	How much turnover of NAs is there at facility (a lot/some/a little/none)
H9	How much does turnover interfere with NAs ability to do job[52] a lot/some/a little/none)
H10	Reason(s) turnover interferes with NA's job[53] (check all that apply) Workload Must spend time training other NAs Affects workplace morale Other reason
H11	Is NA currently looking for different job, either as a NA or something else (yes/no/no, but thinking about it)
H12	How likely will NA leave current job in next year (very likely/somewhat likely/not at all likely)

Question Item Number	Variable Description
H. Organizational Commitment -- Job Satisfaction (*continued*)	
H13	Main reasons NA may leave current job (check all that apply)[54] Poor pay Poor benefits Problems with supervisor Problems with co-workers Problems with working conditions, policies Problems with residents' families Problems dealing with dying residents Too many residents to care for Ill health Child care issues Care for elderly family member Moving to different area Found a new/better job Other reason
H14	Will NA's next job be as a nursing assistant (nursing assistant/something else)
I. Workplace Environment[55]	
I1	**How strongly does NA agree/disagree with the following statements about their facility** (strongly agree/somewhat agree/somewhat disagree/strongly disagree)
a	NA is respected/rewarded for their work
b	NA can decide how to do their work
c	NA is involved in challenging work
d	NA can gain new skills/knowledge on the job
e	NA is trusted to make resident care decisions
f	NA has opportunity to work in teams
g	NA is confident in their ability to do their job
I2	How much does society value their work as a NA (very much/somewhat/not at all)
I3	How much does supervisor value their NA work (very much/somewhat/not at all)
I4	How much does organization at their facility value their NA work (very much/somewhat/not at all)
I5	How important does NA think their work is (very important/somewhat important/not important at all)
I6	How often NA asks other NAs for help with job-related problems (frequently/sometimes/once in awhile/never)
I7	How often NA asks employees (besides NAs) for help with job-related problems (frequently/sometimes/once in awhile/never)
I8	Has NA ever been discriminated against on current job because of race/ethnicity (yes/no)
J. Work-Related Injuries[56]	
J2	**Types of injuries received at current facility in past year:**[57,58] (yes/no)
a	Back injuries
b	Other strains/pulled muscles
c	Human bites
d	Scratches, open wounds, cuts
e	Black eyes, other bruising
f	Other injuries
J3	*Number of times NA injured at facility* (open-ended)

Question Item Number	Variable Description
J. Work-Related Injuries (*continued*)	

J4	How injuries happened (check all that apply)
	    Lifting, bathing, handling residents
	    Slips, trips, falls
	    Aggression by residents
	    Bumping, hitting equipment
	    Concern with residents health, loss of life
	    Other

J5	*Total days unable to work because of injuries* (open-ended)
J6	Did NA get restricted duties or other job because of injury (yes/no)
J7	*Total days NA had other duties because of injury*[59] (open-ended)
J8b	*Number of times stuck with needle at work in past year*[60] (open-ended)[61]
J9	How often does NA use lifting devices with residents unable to move on their own (always/sometimes/never)
J10	How often lifting devices available, when needed[62] (always/sometimes/almost never/never)
J11	Has NA received training to use lifting devices (yes/no)
J12	Is other equipment needed in facility to make job safer (yes/no)

J13	Types of equipment needed[63] (check all that apply)
	    Bathing aids
	    Toilet seat risers
	    Electric beds
	    Trapeze bars
	    Belts -- walking/gait belts
	    Belts -- back
	    Wheelchairs
	    Sliding boards
	    Sheets
	    Scales
	    Other

J14	Does facility provide training to reduce workplace injuries (yes/no)
K. Demographics	
K1aa,ab,ac,1a	Age[64]
K1b	Gender (female/male)
K2	Hispanic or Latino/Latina (yes/no)

K3	Race(s) (check all that apply)[65]
	    White
	    African American or Black
	    American Indian or Alaska Native
	    Asian
	    Native Hawaiian or Pacific Islander
	    Other

K4	Marital Status (married/living with partner/separated/divorced/widowed/never married)
K5	Did NA receive a high school diploma or a GED (high school diploma/GED/neither, no)
K6	Highest year completed in school[66] (none/1st grade/2nd/3rd/4th/5th/6th/7th/8th/9th/10th/11th/12th/1 year of college or trade school/2 years of college or trade school/3 years of college or trade school/college graduate/post college)
K7	Total household income in past year (less than $10,000/10,000 to under 20,000/20,000 to under 30,000/30,000 to under 40,000/40,000 to under 50,000/50,000 to under 60,000/60,000 to under 70,000/70,000 to under 80,000/80,000 or over)

Question Item Number	Variable Description
K. Demographics (*continued*)	
K7a[67]	Did NA receive a flu shot in past year (yes/no)
K8	Is NA a citizen of the US (yes/no)
K8a	Born US citizen, or citizen through naturalization[68] (born, naturalized)
K9	*Country where NA is currently a citizen*[69] (open-ended)
K9aa	*"Other country" where NA is currently a citizen*[70] (open-ended)
K9a	Trained as a NA/health professional outside US[71] Yes, trained as MD (medical doctor) Yes, trained as RN/LPN (nurse) Yes, trained as nursing assistant Yes, other No
K9b	Languages NA speaks (check all that apply) Cambodian Cantonese/Mandarin Czech English French Haitian Creole Hindi Korean Polish Portuguese Russian Spanish Tagalog Urdu Vietnamese Other
K9e	Primary language[72] (same response categories as K9b)[73]
K9f	How often NA uses languages other than English on job[74] (always/sometimes/never)
K10	How often has difficulty communicating with residents because they speak a different language (always/sometimes/never)
K10a	How often has difficulty communicating with NAs/nurses because they speak different language (always/sometimes/never)
L. Facility Leavers[75]	
L1	Is NA still working as a nursing assistant (yes/no)
L1a	How likely will work as a NA again some day[76] (very likely/somewhat likely/somewhat unlikely/extremely unlikely)
L1b	Does NA work in:[77] (check all that apply) Long-term care, such as a nursing home Acute care Ambulatory care Home care
L2	Total length of time worked as a NA (6 months or less/more than 6 months but less than 1 year/1year but less than 2 years/2-5 years/6-10 years/11-20 years/more than 20 years)
L3	If had to decide again, how likely is it that NA would become one (definitely become one/probably/probably not/definitely not)
L4	If family/friend asked, how likely is it NA would recommend becoming one (definitely recommend/probably recommend/probably not recommend/definitely not recommend)

Question Item Number	Variable Description
L. Facility Leavers (*continue*)	
L7	Reasons NA quit/got fired/left facility[78] (check all that apply)
	Problems with supervisor/management
	Problems with co-workers
	Low pay/poor benefits
	Scheduling problem
	Workload
	Family conflicts
	No opportunity for advancement
	Nature of job
	Ill health
	NA/NA's family moved
	Took another job
	To go back to school
	Other reason
L8a	What would have made NA stay at facility[79] (check all that apply)
	Different supervisor/management
	Different/better co-workers
	Better working conditions/lighter workload
	Better pay/benefits
	Better hours
	Help with child/elder care
	Opportunities for advancement
	More staff appreciation activities
	More training/education offered
	Nothing would make NA stay
	Other
L9	Was NA discriminated against at job because of race or ethnicity (yes/no)
L10	How much did discrimination contribute to NA's leaving this job[80] (main reason/one of a number of different reasons/not a reason at all)
L11	Would NA recommend family/friend work at this facility as a NA (definitely recommend/probably/probably not/definitely not)

NOTES

1. Section B was not asked of NAs no longer working at the sampled agency.
2. TANF is Temporary Assistance for Needy Families.
3. Asked if response to B5 was 'working at another job'.
4. Census occupation codes.
5. Asked if response to B5 was 'working at another job'.
6. Census industry codes.
7. Section C was not asked of NAs no longer working at the sampled agency.
8. Asked if response to C2 was 'part' or 'none'.
9. Asked if response to C7 was 'yes'.
10. Asked if response to question C10 was 'yes'.
11. Questions C11a though C14 asked only of NAs who have been a nursing assistant for 2 or more years.
12. Questions C12 through C14 were only asked if response to C11a was 'yes'.
13. Question only asked if response to C15 was 'yes'.
14. Question not asked if response to C18 was 'no'.

15. Footnotes for Job 1 also apply to Jobs 2 to 5 in this section.
16. The month and year the NA started and stopped working for a facility are recoded to create a composite variable representing the total time the nursing assistant worked at the nursing home facility (in months). The variable is coded as continuous from 0 to 300 months and an additional category for 301 or more months.
17. If NA no longer works at sampled facility.
18. If NA no longer works at sampled facility.
19. Census occupation codes.
20. Census industry codes.
21. Footnotes for Job 1 also apply to Jobs 2 to 5 in this section.
22. Asked if not paid by the hour.
23. Asked if NA no longer works at this job.
24. Remaining items in Section D not asked of NAs no longer working at sampled facility.
25. TANF is Temporary Assistance for Needy Families.
26. Asked if not participating.
27. Not asked if answer to D8c is 'already covered by another private health insurance plan'.
28. Asked for NAs that want more hours.
29. Not asked if response to D11 was 'no'.
30. Asked if NA has multiple jobs.
31. Asked if NA has multiple jobs.
32. Section E not asked of NAs no longer working at sampled facility.
33. Asked if response to E2 was 'yes'.
34. Asked if response to E4 is 1 or more.
35. If response is 0, questions E6a through E8 were not asked.
36. Recoded variable.
37. Recoded variable.
38. Asked if missed time from work because of child care problems.
39. Asked if response to E9 was 'yes'.
40. Asked if missed time from work in past month to care for family/friend.
41. TANF is Temporary Assistance for Needy Families, AFDC is Aid to Families with Dependent Children.
42. Asked if response to E12 was 'yes'.
43. WIC is the Women, Infants and Children Program.
44. Asked if response to E14 was 'yes'.
45. SSI is Supplemental Security Income.
46. Asked if response to E15a was 'yes'.
47. Asked if response to E16a was 'yes'.
48. Section F not asked of NAs no longer working at sampled facility.
49. Section G not asked of NAs no longer working at sampled facility.
50. ADLs are activities of daily living, such as dressing, bathing, getting in/out of bed, and using the toilet.
51. Section H not asked of NAs no longer working at sampled facility.
52. Questions H9 and H10 only asked if response to H8 was 'a lot' or 'some'.
53. Asked only if responses to H9 were 'a lot' or 'some'.
54. Not asked if response to H12 was 'not at all likely'.

55. Section I not asked of NAs no longer working at sampled facility.

56. Section J not asked of NAs no longer working at sampled facility.

57. If NA worked less than 1 year, injuries since started job.

58. If all responses to J2 were 'no' then questions J3 through J8b were not asked.

59. Asked only if response to J6 was 'yes'.

60. This question reads "…since started job" if NA worked less than 1 year.

61. Due to low frequencies in the sample, this item is not included in the Public Use file.

62. Not asked if response to J9 was 'always'.

63. Asked only if response to J12 was 'yes'.

64. Recoded variable:range 16-65, 66+.

65. Due to low frequencies in the sample of some categories this variable is recoded as: White; African-American or Black; Asian; Other.

66. For NAs with GEDs, this is highest grade completed before getting GED.

67. Remaining questions in Section K were not asked if NA was no longer working at the sampled facility.

68. Not asked if response to K8 was 'no'.

69. Not asked if answer to K8 was 'yes'.

70. Not asked if answer to K8 was 'yes'.

71. Due to low frequencies in the sample of some response categories the category 'Yes, other' was dropped and the other categories combined and recoded as Yes/No (Yes -- trained outside the US/No -- not trained outside the US).

72. Asked if NA speaks 2 or more languages.

73. Due to low frequencies in the sample, this variable is recoded to English; Spanish; Other.

74. Asked if NA speaks other languages besides English.

75. Section L is only completed for NAs no longer working at the sampled facility.

76. Asked if not still working as a NA.

77. Asked if still working as a NA.

78. Not asked if reason for no longer working was 'laid off or job ended'.

79. Asked if NA quit or left facility, not asked if NA was fired, laid off or job ended.

80. Asked if discriminated against.

AN INTRODUCTION TO THE NATIONAL NURSING ASSISTANT SURVEY

National Nursing Assistant Survey Documents and Data:

An Introduction to the National Nursing Assistant Survey
http://aspe.hhs.gov/daltcp/reports/2006/NNASintro.htm

National Nursing Assistant Survey
http://www.cdc.gov/nchs/nnas2004.htm

What is the National Nursing Assistant Survey?
http://www.cdc.gov/nchs/nnaspart.htm

National Nursing Assistant Survey Instrument (Questionnaire)
http://www.cdc.gov/nchs/data/nnhsd/2004NNAS_Questionnaire_072506tags.pdf

Sample Design, Data Collection and Estimation Procedures
http://www.cdc.gov/nchs/data/nnhsd/2004NNHS_DesignCollectionEstimates_072706tags.pdf

National Nursing Assistant Survey Public Use Files
ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Datasets/NNAS/2004/publicuse/

National Nursing Assistant Survey Public Use File Documentation
ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NNAS/2004/