Nursing Aides, Home Health Aides, and Related Health Care Occupations -- National and Local Workforce Shortages and Associated Data Needs

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Preface

Nursing aides and home health aides are two of the major occupations responsible for providing patient care of a paraprofessional nature to chronically ill, disabled, and elderly persons in nursing homes and other institutional or community-based settings as well as at home. The challenges faced by long-term care facilities in recruiting and retaining these workers have been increasing in recent years, resulting reduced services for many Americans.

Recognizing the importance of this segment of the health workforce in meeting the care needs of an increasing percentage of the population, the National Center for Health Workforce Analysis (NCHWA) in the Health Resources and Services Administration's (HRSA) Bureau of Health Professions (BHPr) has commissioned and directed this study. The study concludes that informed workforce planning is needed to document the extent of existing shortages in these occupations and thereby assist states and institutions in addressing them, as well as to assess the impact of present and future initiatives to balance supply and demand.

The comprehensive assessment presented in this report was based on a review of eight key Federal datasets, certified nursing aide registries in 45 states, and fieldwork in four states (California, Illinois, New York, and Wyoming). The fieldwork included interviews and focus groups with long-term care providers and State officials to assess both their current data collection activities and the data needed for future program and policy development. The project was guided by an expert advisory panel and interviews with leaders in the long-term care field. These efforts, along with a review of the literature, resulted in (a) confirmation that there exists a widespread shortage of long-term care paraprofessionals and (b) affirmation that the shortage is likely to be far more severe in the future. The report concludes with a series of suggested strategies for improving data collection relating to these occupations, building on existing datasets and data collection activities.

Executive Summary

Introduction

This report focuses on nursing aides and home health aides, two of the major occupations responsible for providing patient care of a paraprofessional nature to chronically ill, disabled, and elderly persons in nursing homes and other institutional or community-based settings as well as at home. Faced with an aging population and a material shift of patient care to non-hospital venues, the Nation is experiencing an unprecedented demand for individuals with the training and experience needed to provide such care. There is a high turnover rate associated with these occupations, the result of a variety of factors relating to job satisfaction, such as low pay, lack of a career ladder, and occasional less than ideal treatment by supervisors. As a consequence, the supply of these individuals, while continuing to grow, has been slipping relative to demand, a situation likely to continue well into the future.

Because of the importance of this segment of the health workforce in meeting the care needs of an increasing percentage of the population, the National Center for Health Workforce Analysis (NCHWA) in the Health Resources and Services Administration's (HRSA) Bureau of Health Professions (BHPr) has commissioned and directed this study. The study concludes that informed workforce planning is needed to document the extent of existing shortages in these occupations and thereby assist states and institutions in addressing them, as well as to assess the impact of present and future initiatives to balance supply and demand. Current data systems were found to be limited in their ability to assist in such planning efforts. They do not, for the most part, accurately estimate the supply of individuals working in these occupations, including their numbers, locations, characteristics, and qualifications.

The comprehensive assessment presented in this report was based on a review of eight key Federal datasets, certified nursing aide registries in 45 states, and fieldwork in four states (California, Illinois, New York, and Wyoming). The fieldwork included interviews and focus groups with long-term care providers and State officials to assess both their current data collection activities and the data needed for future program and policy development. The project was guided by an expert advisory panel and interviews with leaders in the long-term care field. These efforts, along with a review of the literature, resulted in (a) confirmation that there exists a

widespread shortage of long-term care paraprofessionals and (b) affirmation that the shortage is likely to be far more severe in the future. The report concludes with a series of suggested strategies for improving data collection relating to these occupations, building on existing datasets and data collection activities.

Nature of the Problem

Across the United States, there is growing concern about current and projected shortages of frontline, direct care workers who provide care and services to the elderly, chronically ill, and disabled. National studies cite annual turnover rates in nursing homes ranging from 45 to 105 percent (Stone, 2001). In 1999, Ohio's nursing assistant turnover rate ranged from 88 to 137 percent while in Florida, only 53 percent of the state's certified nursing aides (CNAs) were working in a health-related field one year after certification. Long-term care provider organizations have either reduced services due to shortages of permanent staff or, alternatively, hired temporary replacement staff at significantly higher hourly rates (Forschner et al., 2001). In areas where levels of service have been reduced, elderly or chronically ill persons deprived of access to care must either remain in more restrictive, more costly environments (notwithstanding the Supreme Court Olmstead decision affirming the right of nursing-home-eligible people to live in the "least restrictive" setting) or seek care from family or friends. Both quality of care and quality of life suffer as people are denied services, or services are provided by persons less qualified or experienced.

Over the next several decades, as population aging and advances in medicine increase the number of persons living with chronic medical conditions, the need for long-term care workers will continue to grow. The Bureau of Labor Statistics (BLS) projects that between 2000 and 2010, an additional 1.2 million nursing aides, home health aides, and persons in similar occupations will be needed to (a) cover the projected growth in long-term care positions and (b) replace departing workers. This rapid increase in demand -- over half the year 2000 supply -- can be expected, for similar reasons, to continue well beyond 2010. The pool, however, from which such workers have traditionally been drawn -- largely women between 25 and 50 without post-secondary education -- continues to shrink. It is questionable, therefore, whether the Nation will have an adequate supply of workers in these occupations to meet the expected increase in demand.

Nursing aides and home health aides provide much of the care in long-term care settings, both in nursing homes and in the community. Policymakers and the health care community have sought to understand the problems in maintaining an adequate supply of such healthcare workers. While some studies have led to an improved understanding of these occupations and the causes of the shortages, they have tended to rely on case studies, focus groups, and data that are incomplete. The lack of system-wide data has weakened efforts to understand the scope of the problem and to develop programs and policies that could address it.

Characteristics of Long-Term Care in the United States

Recipients

Long-term care recipients in the United States numbered about 12.1 million in 1995 (Kaiser Commission on Medicaid and the Uninsured, 1999). A diverse population with a wide age range and variety of service needs, the common element linking these individuals is their need for assistance with activities of daily living (ADL). Most received services at home or in

community-based settings such as adult day care facilities, although about 12 percent (1.5 million) were cared for in nursing homes or other institutional residential facilities (ibid.).

As shown in Table ES-1, persons 65 or older constituted slightly over half (6.4 million) of the estimated 12.1 million long-term care recipients in 1995. Within that group, 1.3 million (20 percent) received care in nursing homes; the rest were cared for at home or in community settings. Of those receiving care at home or in the community, about two-thirds relied exclusively on unpaid caregivers, i.e., family and friends (Stone, 2001).

Table ES-1. Recipients of Long-Term Care in the U.S., 1995

Age Group	Setting in Which Care Was Received		All Settings Combined
	Nursing Home	Home or Community	
65 or Older	1.3 million	5.1 milion	6.4 million
Under 65	0.2 million	5.5 million	5.7 million
All Ages	1.5 million	10.6 million	12.1 million

Source: Kaiser Commission on Medicaid and the Uninsured, 1999

The dichotomy between nursing home and community-based care is even more pronounced for persons under 65. Of the nation's long-term care recipients below the age of 65, well over 95 percent -- all but about 0.2 million -- received care at home or in community settings. Of these, roughly three-fourths relied exclusively on family and friends for care. Long-term care recipients below the age of 65 include persons with mental retardation and serious mental illness, as well as adults living with AIDS or other chronic disorders and children with developmental disabilities.

Providers

The three major categories in the latest (1998) Standard Occupational Classification (SOC) system whose members provide long-term care of a paraprofessional nature are as follows:

Nursing aides, orderlies, and attendants (SOC 31-1012)	Provide basic patient care under the direction of nursing staff. Perform duties such as feeding, bathing, dressing, grooming, moving patients or changing linens.
Home health aides (SOC 31-1011)	Provide routine personal health care such as bathing, dressing, or grooming, to elderly, convalescent, or disabled persons at patient's home or residential care facilities.

Personal and home care aides (SOC 39-9021)	Assist elderly or disabled adults with daily living activities at person's home or daytime non-residential facilities. Duties may include keeping house and preparing meals. May also provide meals and perform supervised activities at non-residential care facilities.

The number of individuals employed in these categories, based on year 2000 BLS data, are as follows:

Nursing aides, orderlies, and attendants	1,262,000
Home health aides	577,700
Personal and home care aides	366,600
Total	2,206,300

Table ES-2 shows their percentage distribution by industry group in which employed.

Table ES-2. Paraprofessional Workers by Industry Group: 2000

Occupational Category	Industry Group				
	Home Health Care	Nursing and Personal Care	Residential Care	Other	Total
Home Health Aides	32.9%	5.4%	22.3%	39.4%	100%
Nursing Aides, Orderlies, and Attendants	2.7%	51.9%	4.5%	40.9%	100%
Personal and Home Care Aides	30.8%	3.5%	24.1%	41.6%	100%

Source: BLS Occupational Employment Survey

Approximately 60 percent of the workers in each occupational category are seen to be employed in the three industry groups most clearly associated with the delivery of long-term care (home health care, nursing and personal care, residential care). In addition, a significant portion of those in industries classified as "Other" may also be assumed to have been engaged in the delivery of long-term care. For example:

- A substantial percentage of nursing aides, orderlies, and attendants in industries classified as "Other" work in specialty hospitals that provide long-term care for the chronically ill or rehabilitation/restorative/adjustive services to physically challenged or disabled persons.
- One of every five home health aides in industry groups classified as "Other", as well as one of every ten nursing aides, orderlies, and attendants in that category, work for Personnel Supply Services, i.e., temporary agencies. When employed in that capacity, they too may provide long-term direct care.

There also exists a substantial "gray market" of individuals hired directly by individuals and families, who do not show up as employed in either BLS or other government data systems. One national study found that 29 percent of workers providing assistance to the Medicare population in the home were self-employed (Leon and Franco, 1998a).

Workers in the described occupational categories earn relatively meager wages. In 2000, the median wage for each of these categories was less than $9 an hour, an annualized salary of less than $19,000 for a full work-year of 2,080 hours (BLS, National Occupational and Wage Estimates for 2000). Many of these individuals work only part-time. Long-term care paraprofessionals are reported to work only about 30 hours a week on average, reducing their annualized earnings to well below $15,000. A high percentage (28 percent) live in poverty, and are more likely than other workers to rely on public benefits to supplement their wages (Himmelstein et al., 1996). Among single-parent nursing home and home health aides, 30 to 35 percent receive food stamps (General Accounting Office, 2001). Many also rely on publicly funded health care.

Data from the BLS Current Population Survey (CPS) March Supplement indicate that over 90 percent of the two specific occupations "nursing home aide" and "home care aide" are female, with the vast majority falling between the ages of 25 and 54. A significant percentage of these individuals (12 to 23 percent) are foreign-born, of whom only about a third are naturalized. Contrary perhaps to public perception, a substantial proportion (28 to 35 percent) reported at least some college education.

Provider Organizations

Organizations that draw upon long-term care paraprofessionals to provide needed services include:

- Nursing facilities
- Intermediate care facilities for the mentally retarded
- Residential facilities for adults or aged
- Residential facilities for non-aged
- Adult day care centers
- Home health agencies (certified or licensed)
- Hospice organizations (certified or licensed)

There were approximately 120,000 such organizations in the United States in 1998 (Harrington et al., 1999), of which roughly 43 percent (51,200) were residential facilities for adults or the aged and another 20 percent (23,300) were home health care agencies. Nursing facilities accounted for 15 percent (17,500) and residential facilities for the non-aged for 11 percent (13,300).

In addition to these types of organizations, there are a growing number of alternative organizational and service configurations as consumers and providers seek to expand the options for both health services and housing arrangements for the elderly and chronically ill. Many states have developed Home and Community Based Services (HCBS) options, with a sharp increase in assisted living arrangements and options. In addition, many states are promoting approaches to giving individuals more control over the selection of caregivers under programs generally referred to as "consumer-directed care".

Shortage Issues

Factors affecting supply

The high turnover and vacancy rates associated with these occupations are consistently found to be the result of job dissatisfaction stemming from the following:

- Jobs are physically and emotionally demanding. Many nursing home injuries consist of back problems resulting from lifting or transferring residents, a high rate of injury corroborated by data from the BLS Survey of Occupational Injuries and Illnesses (BLS, 1999). Patient load in many nursing homes is excessive; the consequent pressure to "speed up" results in increased job stress (Wilner, 1994; Foner, 1994; Diamond, 1992).
- Wages and benefits are generally not competitive with other available jobs (Case et al., 2002; Himmelstein et al., 1996).
- Jobs are often not well designed or supervised (Kopiec, 2000), with few or no opportunities for advancement. Workers perceive a general lack of respect from management.

Factors affecting demand

Factors responsible for the increased demand for long-term care include:

- Aging of the population as baby boomers advance to the ranks of the elderly.
- Technological advances that extend the lives of those with chronic ailments.
- The greater availability of services in less restrictive, less costly community settings.

Population aging, in and of itself, might present less of a problem if the supply of care providers were growing at approximately the same rate. Unfortunately, it is not. It is growing at a significantly lower rate -- not only are providers leaving the field for reasons of job dissatisfaction but the pool from which such providers have typically been drawn in the past has been dwindling compared to the growth in demand due to aging. In 2000, there were 1.74 females between the ages of 25 and 54 for every person 65 and older; by 2030, that ratio is projected to drop to 0.92 (calculations based on Census Bureau National Population Projections). Since women provide the majority of both paid and family-provided long-term care, this "care gap" will increase. Families unable to care for their loved ones by themselves will find, when they turn to the formal system for assistance, relatively fewer paid staff available.

Data Issues

Need for Data

Data that are clear, comprehensive, current, and correct are needed in the case of long-term care paraprofessionals, as they are for any other health occupation. Such data are a valuable tool for meeting the following purposes:

- Workforce planning. - Providing planners and managers at all levels, especially State and local, with accurate, timely data to help them plan and effectively manage health care delivery.
- Policy formulation. - Informing the process by which public policies and programs that could influence workforce supply and demand are generated, e.g., setting reimbursement

policies and rates for Medicare and Medicaid, establishing licensure and regulation policies as well as policies involving employee benefits, upward mobility, etc.

- Patient safety. - Promoting patient safety by ensuring that individual workers are properly trained and have no record of inappropriate activities.
- Quality improvement. - Monitoring the performance of facilities and provider organizations for dissemination to patients and their families.
- Program evaluation. - Monitoring and assessing program performance over time and identifying best practices.
- Informing the marketplace. - Supplying education and training organizations, health providers, and the public with useful information to serve their individual needs.

Relevant Data Sources

As noted earlier, the data systems reviewed in this study, although helpful in many respects, were limited in their ability to present an accurate and timely picture of nursing aides, home health care aides, and related occupations in the United States. The datasets reviewed included six maintained by the Bureau of Labor Statistics, one on nursing homes maintained by the DHHS Centers for Medicare and Medicaid Services (CMS), one maintained by the Bureau of the Census, and 45 certified nursing aide (CNA) registries maintained at the State level. A brief summary of these datasets follows:

Bureau of Labor Statistics. - The six BLS datasets cover six separate aspects of the Bureau's data collection activities:

- Occupational Employment Statistics (OES). - A mail survey of 400,000 establishments per year, resulting in a total sample of 1.2 million establishments over three years.
- Current Population Survey (CPS). - A monthly survey of 50 to 60 thousand households, conducted on behalf of BLS by the Bureau of the Census (personal and/or telephone interview).
- CPS March Supplement. - A somewhat more detailed version of the CPS, conducted once a year on a slightly larger sample.
- National Compensation Survey (NCS). - An annual compilation of data on earnings, benefits, and work hours, based on visits to some 36,000 establishments.
- Employment Projections. - Projected labor force trends based on analysis of OES and CPS survey results.
- Survey of Occupational Injuries and Illnesses. - An annual survey of 250,000 private sector organizations with at least eleven employees to obtain data relevant to occupational safety.

Centers for Medicare and Medicaid Services. - The CMS dataset, labeled Online Survey Certification and Registration or OSCAR, consists of staffing data and associated facility characteristics for approximately 17,000 CMS-certified nursing homes. The data are self-reported and updated once a year as part of the CMS annual recertification process.

Bureau of the Census. - The decennial Census collects limited data on the occupation of residents of the United States. These data, updated every 10 years, provide estimates of the numbers of persons employed in different occupations by Census tract. The data are tabulated by place of residence rather than employment.

State CNA Registries. - Registries of this nature, mandated by the Omnibus Budget Reconciliation Act of 1987, are maintained by every State and the District of Columbia. Used for background checks and other relevant purposes, they contain information on certified, licensed, or registered nursing aides working in skilled nursing facilities (SNFs), although some states have gone beyond the legislative mandate to include other direct care paraprofessionals. Of the 45 State registries reviewed, nine include home health aides as well.

Data Limitations

The limitations presented by these data sources, in terms of meeting the purposes of this study, fall into three categories: data exclusions, inconsistency of definitions, and categorizations that are in some cases excessively broad.

Data exclusions. - Important data exclusions are as follows:

- **State CNA registries.** - As noted above, State CNA registries are required by legislation to cover nursing aides only; only a small percentage -- less than a fourth -- include health aides or other occupational categories as well. Moreover, these systems were designed -- and in most cases are being used -- to track eligibility (completion of mandatory training) rather than employment. While most State registries include some information of a demographic nature, about a fourth do not. Since most registries do not track the actual employment of eligible CNAs, they do not generally provide information on work setting or location.
- **Online Survey Certification and Registration (OSCAR).** - OSCAR covers staff in nursing homes only. Nursing aides, LPNs, and RNs are the only professions/occupations for which separate tabulations are available.
- **BLS Occupational Employment Statistics (OES)**. - OES data, while disaggregated to the State and metropolitan area level as well as to industry group, provide no detail on demographic characteristics, work conditions, or setting in which services are delivered. Also, the numbers do not include self-employed or unpaid family providers of care.
- **BLS Current Population Survey (CPS) March Supplement.** - Since the CPS March Supplement contains no State variable, the employment numbers cannot be disaggregated to the State level.

Inconsistency of definitions. - Occupational and industry classifications used have differed by dataset and varied over time. However, as announced in the Federal Register Notice of September 30, 1999, all Federal agencies that collect occupational data are now required to use the 1998 Standard Occupational Classification, the largest revision to the SOC in two decades. In addition, all State and local government agencies, as well as private sector organizations, that gather occupational data are strongly encouraged to use the 1998 SOC. In the words of the announcement, "This national system ... provides a common language for categorizing occupations in the field of work."

While the Federal government has attempted to standardize classifications through the SOC, inconsistencies among state-reported data remain; this includes differing definitions of workers and different methods used to quantify the number of workers.

Excessively broad categorizations. - The occupational category "nursing aides, orderlies, and attendants", retained in the 1998 SOC, includes three separate occupations, each with its own set of demographic characteristics, work settings, and job responsibilities. Similar problems exist with respect to the classification of industries: some industry codes contain work settings

irrelevant to the provision of direct care, e.g., medical laboratories, youth services, crisis centers, food banks, etc.

Making Workforce Data More Useful

The limitations noted above apply not only to the present study but also to future attempts to achieve a comprehensive assessment of the long-term care paraprofessional workforce at national, state, and local levels. To assure the accurate, comprehensive, timely data needed to support workforce planning in this area and offset possible future shortages, the following options are identified:

Upgrade and augment existing CNA registries.

Possible options in this area include:

- Expanding the occupational categories included in the registries beyond nursing aides to include home health aides and personal care aides, with agreed-upon definitions.
- Expanding the recorded data elements to include demographic characteristics, educational background, and current job status, among others.
- Maintaining data timeliness and accuracy by requesting employers to submit annual lists of individuals currently employed, including hours worked and other non-sensitive information.

Adopt and implement state-level workforce data collection systems for nursing aides, home health aides, and related health care occupations.

Such systems, using standard definitions and terminology, would permit useful totals and subtotals to be collected from facilities and agencies, to be shared and compared across states. A proposed data collection instrument of this form is shown in Appendix B of this report.

Involve long-term care provider organizations and professional associations in data collection efforts.

Such groups would be a valuable source of information. Organizations that collect and maintain informative workforce data report fewer recruitment and retention problems than their relatively data less counterparts.

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This chapter presents an overview of the project and includes the following sections:

- Problem Definition
- Paraprofessional Workforce
- Study Objectives
- Study Methodology
- Report Contents

Problem Definition

The U.S. health care system provides an incredibly wide array of health care services to millions of Americans every day. While this often involves highly complex and sophisticated medical interventions in some of the most advanced medical centers in the world, it also involves basic services provided by such frontline direct care paraprofessionals as nurse aides and home health aides, who provide hands-on care and services in health facilities and patients' homes.

Although direct care paraprofessionals have historically received little public policy attention, they are critical components in the health care system. In fact, according to the Bureau of Labor Statistics (BLS), there are more than 2.5 million aides and assistants employed in health care. More than a million of these workers are in skilled nursing facilities, home health agencies, and other settings.

Direct care paraprofessionals are at the heart of America's health care system. They assist millions of Americans who face physical and mental challenges brought on by chronic illness, age, or disability. Assistance can include such daily tasks as bathing, toileting, eating, and moving from bed to chair. Some aides monitor medications, assist in physical rehabilitation, or change the dressing on wounds. All provide comfort and companionship to individuals who may be isolated, depressed, disoriented, disabled or aged, offering a lifeline to the outside world.

Until recently, policymakers and long-term care providers largely ignored direct care paraprofessionals, despite their central role in both long-term and acute care. A seemingly infinite supply of poor women who had few other employment opportunities composed the labor pool, and though turnover was high, there were enough workers to fill vacancies.

Recently, however, the situation has changed drastically. Long-term care providers across the country report they are unable to attract and retain sufficient numbers of workers. Nursing home aides work "short"—i.e., with fewer workers on a unit than necessary—on a regular basis, while home health agencies are literally turning away clients in need of care. The shortage of direct care paraprofessionals is starting to receive as much attention as the more widely publicized shortage of nurses.

Paraprofessional Workforce

Table 1-1 identifies the types of workers and the broad types of services and health care settings that are the primary concerns of this study. The paraprofessionals in these settings hold titles like certified nurse aide (CNA), home health aide (HHA), personal care aide (PCA), personal care attendant, and psychiatric aide.

Table 1-1 Worker Types in Study

	Type of Service		
Setting	**Health Care**	**Personal Care**	**Other Support**
Hospital	S	S	S
Nursing Home	**P**	**P**	S
Home Health Agency	**P**	**P**	S
Other HCBS	**P**	**P**	S
Hospice	S	S	S
Assisted Living Facility	S	S	S
Other LTC Facility	S	S	S
Psychiatric Facility	S	S	S
MR/DD Facility	S	S	S

P = Primary Concern
S = Secondary Concern
HCBS = Home and Community Based Services
LTC = Long Term Care
MR/DD = Mental Retardation/Developmental Disability

Table 1-2 illustrates confusion surrounding the terminology used to classify different levels of these workers. Until terms are standardized across the different types and levels of organizations, there will continue to be difficulty reconciling different data systems.

Table 1-2. Alternative Types of Workers

Broad Category	Type of Facility	Job Title Often Used
NURSING AIDE		
Provides health care services to patients, help with **activities of daily living** (eating, bathing, dressing, getting around, etc.)	**Skilled Nursing Facilities**	Nurse Aide Nursing Assistant
	Assisted Living Facilities	Health Aide Medication Aide
	Residential Home Care	Health Aide Medication Aide
	Personal Residences	Home Health Aide Residential Medication Aide
	MR/DD Facilities	Health Aide
	Hospitals	Health Aide Patient Care Attendant
	Rehabilitation Facilities	Physical Therapy Aide Occupational Therapy Aide
	Hospice Facilities	Nursing Aide
	Psychiatric Hospitals	Psychiatric Aide
PERSONAL CARE AIDE		
Provide help with **instrumental activities of daily living** (household chores, personal business, shopping, getting around, and may provide some help the activities of daily living)	**Personal Residences**	Personal Care Attendant Developmental Disability Aide Residential Habilitation Specialist Home Care Attendant Housekeeper Respite Worker Homemaker Companion Dietary Aide
	Residential Home Care	Service Aide
	MR/DD Facilities	Developmental Disability Aide Residential Habilitation Specialist Behavioral Assistant
	Hospice Facilities	Hospice Worker Respite Worker
	Hospitals	Orderlies

Study Objectives

This study of the long-term care paraprofessional workforce had a number of objectives. They were to:

- Identify and assess current datasets and data collection activities related to long-term care paraprofessionals
- Identify the workforce data needed for effective program and policy development
- Identify model data collection practices
- Suggest possible initiatives for State and Federal agencies to improve paraprofessional data collection

Study Methodology

The study had several inter-related components. Each examined the collection and quality of long-term care paraprofessional data from a different perspective. They were:

- Review and assessment of Federal sources of data. The study identified and reviewed seven systems with data on the long-term care paraprofessional workforce.
- Compilation of illustrative data from several of the Federal sources. Because not all users of data have the same objectives, sample data was compiled from several of the sources to clarify the nature of the data they contain.
- Special inquiry about CNA registries in the 50 states. This inquiry was conducted to help assess the potential of the registries to serve as a basis for more effective data collection.
- Discussions with long-term care providers and workers in four states. These fieldwork discussions helped us confirm the nature of the issues facing the long-term care workforce planners and policymakers and gather first-hand insights about especially effective systems and practices.
- Interviews with national leaders in long-term care. These interviews provided important insights and perspectives on the broader issues related to the long-term care workforce.
- Expert advisory committee. The project advisory committee assembled for the study provided invaluable assistance in redefining the scope of the study as originally proposed. Committee members were an important source of contacts with other experts around the country.

Report Contents

This report addresses its objectives by focusing on data related to CNAs, HHAs, and comparable paraprofessionals across the U.S. It has several components that, taken together, provide a sound basis for understanding the scope and scale of the issues related to direct care paraprofessional data collection. The components are:

- Paraprofessional Workforce Supply and Demand
- Paraprofessional Data
- Existing National Data Sources

- Occupation and Industry Classification Systems
- Current Data Collection Practices: CNA Registries
- Conclusions
- Appendices

Paraprofessional Workforce Supply and Demand

Chapter 2 describes the supply of and demand for direct care paraprofessional workers in the U.S. and includes a variety of statistics that summarize the size and characteristics of the workforce. It provides a conceptual frame of reference that informs the rest of the study, linking the different factors and summarizing the various issues. The paraprofessional labor shortages that Chapter 2 describes underscore the need for accurate and timely data collection.

Paraprofessional Data

Chapter 3 summarizes fieldwork with the long-term care workforce with stakeholders in four states: California, Illinois, New York, and Wyoming. The focus of the fieldwork was on data sources and data initiatives, with an emphasis on existing State resources and programs. The availability, accuracy, and accessibility of data were of primary concern. This research confirmed that because existing systems are designed primarily to support other programs, the data they collect are not adequate to support policymaking related to direct care paraprofessionals.

Staff also contacted several other states to compare their situations with those from the four fieldwork states. The study identified a number of factors necessary for forecasting the supply of and demand for workers and defined the kinds of data necessary for effective workforce planning. It also helped identify several states that have systems and procedures that might serve as models for other states.

Existing National Data Sources

Chapter 4 describes the seven Federal systems that collect, compile, and develop data related to the direct care paraprofessional workforce. It details the strengths and limitations of each.

Occupation and Industry Classification Systems

Chapter 5 describes the Federal occupational and industry classification systems. This system is the basis for a number of different data systems related to the long-term care paraprofessional workforce.

Current Data Collection Practice: CNA Registries

Chapter 6 describes an analysis of the 50 State CNA registries. This effort involved reviewing the characteristics and capabilities of the registries and exploring the feasibility of using them as a foundation for more effective paraprofessional workforce data systems.

Conclusions

Chapter 7 describes proposals for improving direct care paraprofessional data collection.

Appendices

The report also has eight appendices. Appendix A lists the members of the advisory committee. Appendix B presents a possible State data collection instrument. Appendix C provides definitions of the occupational and industry categories used in Federal data systems. Appendix

D shows sample data compiled from the Federal data sources. Appendix E describes the issues and insights brought to light in the fieldwork in the four states. Appendix F includes details regarding the CNA registries. Appendix G is an annotated bibliography of important documents and articles related to the long-term care paraprofessional workforce. Appendix H lists references compiled during the project.

Chapter 2. Paraprofessional Workforce Supply and Demand

This chapter describes issues with the paraprofessional workforce supply and demand. It includes the following subsections:

- Introduction
- Long-Term Care Overview
- The Labor Shortage
- Dynamics of the Paraprofessional Labor Market

Introduction

Direct care paraprofessionals are often described as the "eyes and ears" of the long-term care system. They have intimate daily contact with the clients in their care. It is here that, as Genevieve Gipson of the National Network of Career Nurse Assistants has said, "the system touches the client" [Paraprofessional Healthcare Institute (PHI), 1998]. It is the quality of this relationship between the consumer and the caregiver that consumers most often cite as having the greatest impact on their quality of life.

Until recently, policymakers and long-term care providers have largely ignored the direct care paraprofessional workforce. Now, however, the situation has changed. Long-term care providers across the country report they are unable to attract and retain sufficient numbers of workers. In response, at least 40 states have begun to address the problem, either by passing legislation or creating taskforces to study the problem [PHI, 2000 and North Carolina Division of Facility Services, 2000].

Long-Term Care Overview

Stakeholders

The stakeholders in the U.S. long-term care system are those the system touches each day through contact with nursing homes, assisted living and residential-care facilities, and home care. They are:

- Paraprofessional Workers
- Long-Term Care Consumers and Families
- Provider Agencies
- Payers

Paraprofessional Workers

Although there is very little data available on paraprofessional workers, existing data sources provide basic information on their personal characteristics and work conditions. For more detailed data, see Appendix D.

Job Market

The number of health care paraprofessionals in the workforce grew 40% between 1988 and 1998, a rate of growth double that of the overall workforce [General Accounting Office (GAO), May 2001]. Currently, paraprofessionals in all formal health care sectors total approximately 2.2 million [GAO, May 2001]. According to BLS projections, the paraprofessional workforce is expected to grow by another 36% between 2000 and 2010, with the largest increase, 62%, in personal and home care aides.

As Table 2-1 shows, the majority are employed in long-term care settings, such as home health care agencies, nursing facilities, and residential care facilities. Other workers staff hospitals, adult day care centers, non-medical home care, and other settings. Currently BLS classifies paraprofessional workers in the three categories shown in Table 2-1. Appendix C provides definitions of each category.

Table 2-1. Employment of Paraprofessional Workers in the US, by Industry Group, 2000

		Nursing Aides, Orderlies, and Attendants		Home Health Aides		Personal and Home Care Aides		Total	
SIC	Industry (SIC) Title	Number	Percent	Number	Percent	Number	Percent	Number	Percent
736	Personnel Supply Services	53,430	4.2%	44,450	7.7%	1,730	0.5%	99,610	4.5%
805	Nursing and Personal Care Facilities	654,640	51.9%	31,250	5.4%	12,940	3.5%	698,830	31.7%
806	Hospitals	334,580	26.5%	27,110	4.7%	6,960	1.9%	368,650	16.7%
808	Home Health Care Services	33,980	2.7%	189,990	32.9%	113,010	30.8%	336,980	15.3%
832	Individual and Family Social Services	6,780	0.5%	74,040	12.8%	102,260	27.9%	183,080	8.3%
836	Residential Care	56,810	4.5%	128,770	22.3%	88,200	24.1%	273,780	12.4%
	Other	121,760	9.6%	82,090	14.2%	41,500	11.3%	245,350	11.1%
	Total	**1,261,980**	**100%**	**577,700**	**100%**	**366,600**	**100%**	**2,206,280**	**100%**

Source: BLS, OES

There is also a sizable gray market of direct care workforce who consumers hire directly. This workforce is significant, but not well documented. For example, Table 2-1 does not include workers in the employ of individual clients. One national study has found that of home care workers providing assistance to the Medicare population, 29% were self-employed [Leon and Franco, 1998a].

Personal Characteristics

Direct care paraprofessionals are predominantly female, and about 60 to 70% are Caucasian. A significant minority is foreign-born, particularly in home care settings. More than 30% have at least some college education, which seems contrary to the public perception of these workers. A little less than a half are married.

Age groups of paraprofessionals differ slightly by employment settings. The majority of paraprofessionals in institutional settings, e.g., nursing facilities, are younger than age 55. Many are also younger than 25. Their mean age is in mid- to late-thirties. On the other hand, most home care aides are between 25 and 64, with mean ages in the early forties. Additional details are provided in Table D-8 in Appendix D.

Work Conditions

As Table 2-2 shows, median wages for direct care paraprofessionals range from $7.50 to $8.89. It lists national median hourly and annualized wage estimates for three job categories for 2000. Annualized full-time employment is assumed to be 2080 hours per year.

Table 2-2. Median Wages of Direct Care Workers in U.S.
2000 Full-Time Earnings

Job Category	2000 Median Hourly Wage	Annualized Wage
Home Health Aides	$8.71	$18,110
Nursing Aides, Orderlies, and Attendants	$8.89	$19,100
Personal and Home Care Aides	$7.50	$15,960

Source: National median hourly and corresponding annualized wages from data from National Occupational Employment and Wage Estimates for 2000, as published by the U.S. Bureau of Labor Statistics.

However, 20 to 30%, regardless of job category, work only part-time. While about half of the part-time workers report a preference for part-time employment, more than 10% also report that they could only find part-time jobs. Paraprofessionals work about 30 hours a week on average. Table 2-3 shows the annualized wage for each job category, assuming the worker has 30 hours of work per week, which equates to 1,560 hours annually. Additional details are provided in Table D-9 in Appendix D.

Table 2-3. Median Wages of Direct Care Workers in U.S.
2000 Part-Time Earnings

Job Category	2000 Median Hourly Wage	Annualized Wage
Home Health Aides	$8.71	$13,588
Nursing Aides, Orderlies, and Attendants	$8.89	$13,868
Personal and Home Care Aides	$7.50	$11,700

Note: Annualized wages calculated by multiplying the median hourly wage times 30 hours per week times 52 weeks per year.

There are wage differences not only by job category but also by employment setting. As Table 2-4 shows, institutional settings tend to have higher wages than home care providers. Wage levels also vary by work level. For example, nursing aides can earn, depending on their work level, between $7.40 and $16.64 per hour. Note, however, that even the highest level of direct care worker can earn only a little more than $15 per hour. Additional details are provided in Table D-9 in Appendix D.

Table 2-4. Median Wages of Direct Care Workers by Employment Setting: 2000

Job Category	Home Health Care	Nursing Facilities	Residential Care
Home Health Aides	$8.14	$8.81	$8.36
Nursing Aides, Orderlies, and Attendants	$8.36	$8.86	$8.17
Personal and Home Care Aides	$6.82	$8.09	$8.20

Source: BLS Occupational Employment Statistics

Considering their low wages, it is not surprising that many direct care paraprofessionals are among the working poor. Almost 20% live below the poverty level, which is much higher than the national average of 12 to 13% [U.S. Census Bureau, 2000]. They are more likely than other workers to rely on public benefits to supplement their wages. Among single-parent nursing home and home health aides, 30% to 35% receive food stamps [GAO, May 2001].

As for benefits, less than half of paraprofessionals in long-term care settings receive health insurance through their employers. Many workers rely on publicly funded healthcare, either because their employers do not offer health insurance coverage or because they cannot afford the employee contribution. For example, more than 10% of paraprofessionals are Medicaid recipients. Some workers also receive health insurance through other government programs such as Medicare and CHAMPUS. [See Table D-9 in Appendix D for more details.] Pension plans are also available to less than half of paraprofessionals in long-term care settings. Availability of benefits is relatively poor for paraprofessionals relative to similar workers in hospitals.

Paraprofessionals are also more vulnerable to occupational injuries and illnesses than other occupations. In 1999, workers in nursing and personal care facilities had more than twice as many injuries and illnesses involving days away from work (448.7 per 10,000 full-time workers) as all private industries (188.3 per 10,000 full-time workers). Home health providers and hospitals also had significantly more injuries and illnesses involving days away from work (280.5 and 251.4 per 10,000 full-time workers). Nationally, nursing home aides experience 18.2 injuries per 100 workers–more than 200,000 injuries per year–more than some high-risk occupations like coal mining (6.2 per 100), construction (10.6 per 100), and warehousing/trucking (13.8 per 100) [Service Employees International Union, 1997]. A large portion of nursing home and home care injuries result from overexertion and falling. These data suggest problems related to lifting and/or transferring residents/patients without proper equipment, skills, or assistance. Tables D-19 and D-20 in Appendix D provide additional details.

For additional information, see the U.S. Census Bureau (2000) Poverty 1999 at http://www.census.gov/hhes/poverty/poverty99/pv99est1.html.

Long-Term Care Consumers and Families

The long-term care consumers in the U.S. currently number about 12 million [Kaiser Commission on Medicaid and the Uninsured, November 1999]. A diverse population with a wide age range and a variety of service needs, these individuals have in common the fact that

they require assistance with the personal activities of daily living, hygiene, and household maintenance. Most consumers receive care in home- or community-based settings such as adult day care facilities. About 12% of the long-term care population receives care in nursing homes or other institutional residential facilities [Kaiser Commission on Medicaid and the Uninsured, November 1999].

The elderly make up approximately half of the long-term care population and use a disproportionately greater share of long-term care services. They have varying levels of impairment, ranging from loss of physical mobility to Alzheimer's and related diseases.[1] Approximately 5.1 million elderly receive long-term care in their communities, while another 1.3 million live in nursing homes. Of those who receive care in their community, approximately 60% rely exclusively on unpaid caregivers, i.e., family and friends [Stone, January 2001].

Approximately 5.3 million non-elderly adults and an estimated 400,000 children also require long-term care [Kaiser Commission on Medicaid and the Uninsured, November 1999]. These individuals include persons with mental retardation and serious mental illness, as well as adults living with AIDS and children with developmental disabilities due to congenital HIV infection or maternal substance abuse. Of those 18 to 64, three-quarters rely exclusively on family and friends to provide care.

Other individuals require long-term care due to conditions like heart disease, multiple sclerosis, cerebral palsy, spinal cord injury, and stroke. In general, improved trauma care and medical technologies are extending the lives of those with life-threatening or debilitating illnesses or conditions, thus expanding and changing the composition of the long-term care population.

The need for direct care services is expected to grow substantially during the next 30 years. Some contributing factors are:

- The baby boom generation is aging, and the population of those requiring paraprofessional care is increasing, as are the acuity levels of those in need.[2]
- Technological advances are extending the lives of those who have high care needs.
- The preference for and ability to live in home- and community-based settings is increasing. Home- and community-based care settings require proportionately more paraprofessional-level staff than do facilities. The trend toward consumers choosing community-based care is likely to accelerate due to the Supreme Court's decision in Olmstead versus L.C., which confirmed the right of nursing-home-eligible people with disabilities to live in the least restrictive setting. To comply, public agencies have to provide more and better community-based services.

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1 Alzheimer's and related diseases affect approximately 11 percent of individuals 65 and older and nearly 48 percent of those over 85 years of age.

2 "Acuity" is a term used to quantify a patient's level of illness or disability and, thus, his or her intensity of need.

Provider Agencies

Agencies that provide long-term care services range from small, community-based nonprofit agencies to massive, for-profit chains. As Table 2-5 shows, they provide care in a range of institutional and home- and community-based settings.

Table 2-5. Providers of Long-Term Care in the U.S., 1998

Type of Provider	Number
Nursing facilities	17,458
Intermediate care facilities for the mentally retarded	6,553
Residential facilities for adults/aged	51,227
Residential facilities for non-aged	13,277
Adult day care centers	3,590
Home health care agencies {certified or licensed}	23,263
Hospice organizations {certified or licensed}	4,336
TOTAL	119,704

Source: Charlene Harrington, et al. (November 1999) 1998 State Data Book on Long-term Care Program and Market Characteristics (San Francisco, CA: Department of Social and Behavioral Sciences, University of California) http://www.hcfa.gov/medicaid/ltchomep.htm

One dominant trend throughout the long-term care industry in recent years has been a significant increase in the percentage of for-profit providers. For example, in home care, for-profit ownership increased from 6% in 1980 to 43% in 1995 [National Association of Home Care (NAHC), 1997]. Growth in for-profits has been greatest in the southern and western states.

Within the past three years, the long-term care industry has experienced the most chaotic public reimbursement environment of the past 30 years, threatening the financial viability of the entire industry.[3] In 1997, the U.S. Congress passed the Balanced Budget Act, which both restructured and significantly reduced reimbursements to home care agencies and nursing home facilities in the U.S. This disrupted the long-term care sector, closing more than 25% of all Medicare-funded home care agencies in the following three years [NAHC, 2000] and placing four of the ten largest for-profit nursing home chains into Chapter 11 bankruptcy proceedings by the year 2000 [Stoil, 1999 and Grassley, 2000].

Overall, the trade press and political and economic observers of the long-term care industry expect continued consolidation of provider agencies and growth in total services to meet increased long-term care demand. For example, Medicaid programs for home care services are

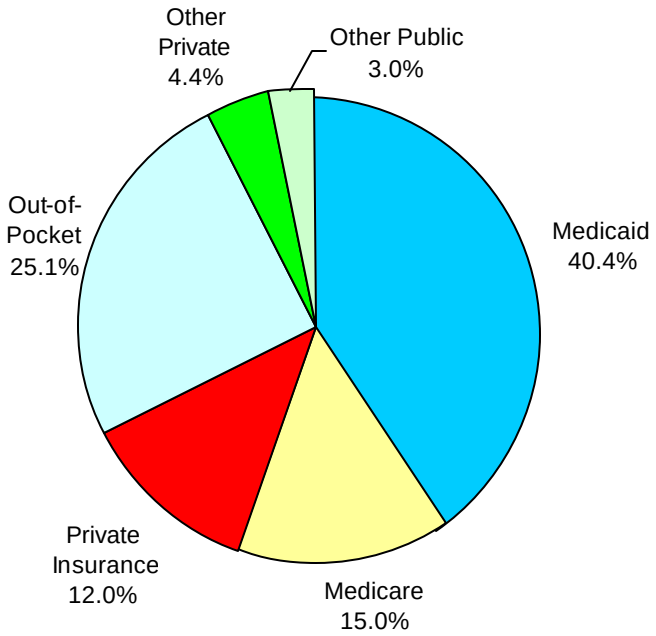
3 The HealthCare Market Groups of Houston reported that share prices of long-term care and assisted living providers dropped by more than 69 percent during 1999 (compared to the Dow Jones average increase of 25 percent). In January 2000, the Phoenix Lending Survey of Philadelphia revealed that 85 percent of commercial lenders surveyed would not invest in the health care industry, the highest negative rating any industry has received since the survey was first performed in 1995.

now expanding in many states in response to the disruption in Federal Medicare funding. Also, the U.S. Department of Health and Human Services has recently granted waivers to allow communities to use Medicaid funds for home- and community-based services.

Payers

As Figure 2-1 shows, three sources finance most of the Nation's long-term care system: public payers (primarily Medicaid and Medicare), private insurance, and individual "out-of pocket" payers. In 1999, expenditures for long-term care services totaled some $123 billion.

Figure 2-1. Long-Term Care Payers



These expenditures were divided among payers as follows:

- Medicaid: 40.4% ($49.7 billion)
- Medicare: 15.0% ($18.5 billion)
- Private insurance: 12.0% ($14.7 billion)
- Out-of-pocket: 25.1% ($30.9 billion)
- Other private payers: 4.4% ($5.4 billion)
- Other public payers: 3.0% ($3.7 billion)

[Source: Health Care Financing Administration (HCFA), 1999, http://www.hcfa.gov/stats/nhe%2Doact/tables/T9.htm]

For 2000, long-term care expenditures for the elderly alone were expected to reach $123 billion, according to the U.S. Congressional Budget Office (CBO). Sales of long-term care private insurance have increased somewhat in recent years and are projected to expand to about 18% of the total of all long-term care spending for the elderly by 2020 [CBO, March 1999]. This will likely reduce the percentage of out-of-pocket expenditures, while government sources, Medicare

and Medicaid, are expected to continue funding approximately 60% of elderly long-term care in 2020 [CBO, March 1999].

With public funds paying 60%, government health reimbursement policies are critical in shaping both consumer demand for services and the labor supply. Restricting the services that programs such as Medicaid or Medicare cover to a large extent constrains demand. For example, when Congress passed the Balanced Budget Act of 1997 and limited Medicare spending for home care, fewer consumers received home care because they couldn't afford to pay for the services privately. These programs also affect the labor supply in that, when reimbursement rates are low, providers can't raise wages to attract and retain workers.

The Labor Shortage

The Current Problem

Throughout the long-term care industry, providers report unprecedented turnover and vacancy rates. However, hard numbers are difficult to establish, because there is no standard formula for calculating turnover. One report identified national studies that cite anywhere from a 45 to 105% turnover rate in nursing homes. For home care, numbers range from 12% to 60% [Stone, January 2001].

Stone also compiled data reported from a number of State studies. California, for example, estimated an overall employee turnover rate in nursing homes of 67.8%, with the nursing assistant rate even higher. Between 1996 and 1998, New York's turnover rates for nursing assistants averaged 42%. In 1999, Ohio's nursing assistant turnover rate ranged from 88% to 137%. By contrast, home health aide turnover ranged from 40 to 76%. The North Carolina Division of Facility Services reports that nursing assistant turnover exceeded 100%. Notably, in North Carolina, the nurse aide registry showed more inactive than active nurse aides. Florida, similarly reported that only 53% of the state's trained CNAs are working in a health-related field one year after certification. New Hampshire reported that 11,000 CNAs have let their licenses lapse since 1993 [New Hampshire Community Loan Fund, February 2001]. As Diana Findley of the Iowa Caregivers Association has noted, the problem isn't necessarily "a shortage of certified workers; the problem is job satisfaction. People are leaving the profession at the same (or possibly faster) rate than new CNAs are being certified" [Direct Care Alliance, October 2000].

Nursing homes are not required to report vacancy rates, so few statistics are available. In Massachusetts, according to the Direct Care Workers Initiative, nursing homes are experiencing anywhere from 10 to 20% vacancy rates. Home health agencies are even less likely to report vacancies, not wanting to admit that they are being forced to turn away deserving clients. Nonetheless, the NAHC states, "In all geographic regions of this country, there is an ongoing inability to hire staff to provide the most fundamental care needed. The crisis for home care used to be lack of adequate business opportunities. Now agencies have to turn away requests for service for lack of competent, appropriately trained staff" [NAHC, February 2000].

Impact on Stakeholders

High rates of staff vacancies and turnover negatively affect all stakeholders.

Impact on Workers

In the short term, the labor shortage is causing job quality to deteriorate. The impacts include:

- Higher rates of injuries: Many nursing home injuries consist of back problems resulting from lifting or transferring residents without proper equipment or assistance. The high

risk of injury by healthcare workers is corroborated by data from the BLS Survey of Occupational Injuries and Illnesses [BLS, 1999].

- Higher levels of stress and frustration: Pressured by administrators to "speed up," direct care workers can't provide the level of care their clients require, making the job increasingly stressful and less personally satisfying [Wilner, 1994; Foner, 1994; Diamond, 1992].
- Less training and support: High turnover and vacancies leave new workers with fewer mentors for on-the-job learning, less time for training, and less support from supervisors who are themselves over-stretched.

Impact on Long-Term Care Consumers

In July 2000, CMS reported that understaffing severely affected the quality of care in 54% of the nation's nursing homes. Possible affects are:

- Inadequate, unsafe care: High turnover results in inexperienced staff, with fewer senior staff available as mentors. Remaining staff often serves more clients in a rushed or unsafe manner. For example, workers may be forced to feed residents too quickly leading to problems with choking or malnutrition, or they may try to transfer or lift residents without assistance from a colleague. This can lead to injuries to the resident and the worker.
- Care without continuity: Constant replacement of staff disrupts the care setting, precludes individualized care, and inhibits the development of strong relationships, which are centrally important to both the client and the caregiver.
- Denial of care: Clients are simply turned away or, for those clients who are admitted, underserved.

The National Citizens' Coalition for Nursing Home Reform (NCCNHR) selected staffing issues as the key focus of their September 1998 annual meeting, while thirteen State chapters of the national Alzheimer's Association made staffing issues their top priority in the year 2000. In addition, a recent report published by The Commonwealth Fund found that inadequate staffing, a lack of individualized care, and high nurse aide turnover are key causes of malnutrition and dehydration, affecting an estimated one-third of our nation's nursing home residents [Sarah Greene Burger et al., June 2000].

Impact on Providers

Staff vacancies and high turnover have become primary concerns for providers, while the industry copes with challenges ranging from mounting regulatory paper work to shrinking reimbursement rates. The impact of direct care staffing problems on providers includes:

- High recruitment and training costs: High turnover and competition for workers force providers to divert financial and managerial resources to additional advertising, hiring incentives, and orientation activities.
- High retention costs: Since providers are offering relatively unattractive jobs in a competitive environment, they are more likely to be selecting from a pool of candidates with greater barriers to employment within the health care field–low education, poor work histories, poor health, drug or alcohol abuse, inadequate child care or transportation–than was true just two or three years ago. This means, in turn, that providers have to devote more resources to oversight.

- High separation costs: As employee turnover reaches high levels, providers devote more resources to administrative functions related to terminations.
- High temporary replacement costs: Many facility-based providers fill slots with "temp" agency replacement staff at hourly costs of up to 100% more than that of regular employees [Forschner et al., 2001].
- Foregone income: Providers have more demand for their services than the workforce can meet. Subsequently, they turn away some of the demand, as well as the income that demand would have produced.

Causes of Vacancies and High Turnover

There are four primary causes of paraprofessional vacancies and high turnover:

- Nature of the job
- Lack of respect from management
- Better job alternatives
- Baby boom demographics

Nature of the Job

The nature of direct care jobs tends to be difficult. As noted above, wages are low, and benefits are few. Ironically, most direct care paraprofessionals do not receive employer-paid health insurance [Case et al., March 2002 and Himmelstein et al., April 1996]. Home care work typically offers only part-time hours and thus part-time pay, and aides in many nursing homes serve too many beds, creating unsafe conditions for both client and worker.

Lack of Respect from Management

Focus groups with paraprofessionals, conducted across the State of New Hampshire, document that supportive supervision at nursing homes is rare and that, in home care, supervision is nearly nonexistent [Kopiec, October 2000]. Though the aide has significant knowledge and insight concerning the client's condition, he or she is often ignored, treated as invisible by the rest of the health care system.

Better Job Alternatives

Though the economy has slowed since the late 1990s, unemployment is still low and vacancies continue throughout the service industry. Many entry-level positions in fast-food restaurants and retail venues offer jobs that are safer and less demanding than direct care positions, and they pay as well or better. Offered the alternative of stable and safe service-sector employment, many paraprofessionals are choosing to leave the health field.

Baby Boom Demographics

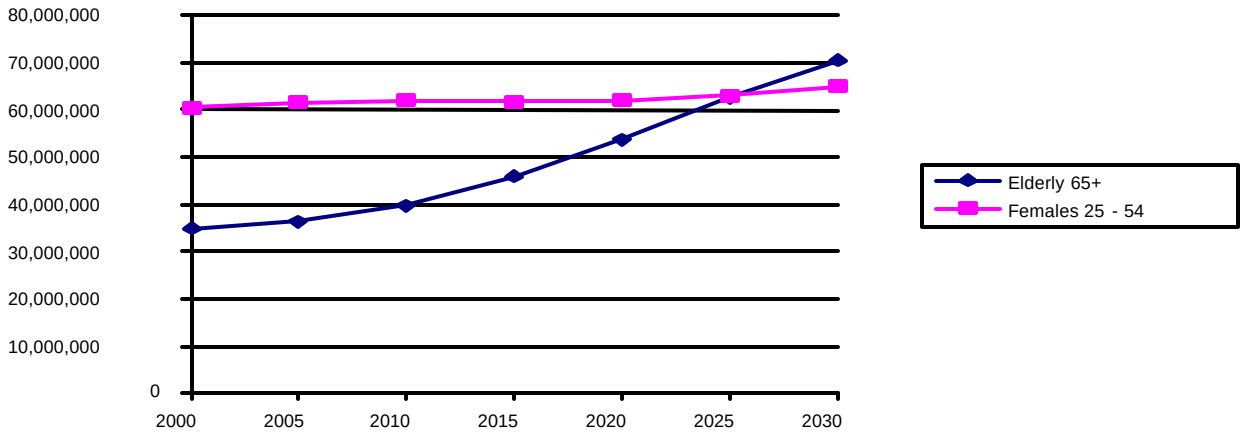
Baby boom demographics have created a care gap that will worsen over the next 30 years. The number of people who require paraprofessional care is growing, while the number of those who traditionally provide that care–primarily women between the ages of 25 and 54–is not.

The expanding demand for health and personal care services derives from several factors, including: medical advances that allow those with chronic illnesses and disabilities to live longer; technology that permits high-need individuals to live in home- and other community-based settings; and most of all, a growing elderly population. At the same time, a smaller

population cohort following the baby boom is now passing through the U.S. workforce, yielding relatively fewer workers available for care giving tasks.

Figure 2-2 shows that the U.S. elderly population is projected to double over the next 30 years, while the traditional female care giving population is projected to grow by only 7%.

Figure 2-2. The Care Gap: Women of Care-Giving Age and the Elderly in U.S., 2000-2030



(Females aged 25-54; individuals 65 and older)

Source: U.S. Census Bureau, National Population Projections, Summary Files, "Total Population by Age, Sex, Race, and Hispanic Origin"

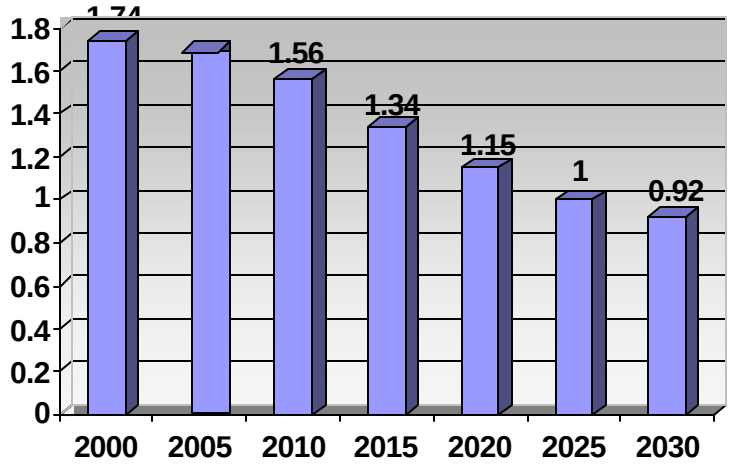
http://www.census.gov/population/www/projections/natsum-T3.html

In short, the demographic mismatch between the demand for and supply of direct care workers is a long-term structural problem that will persist, even if higher unemployment rates return. [4]

Viewed from a slightly different perspective, these data can help calculate an "elderly support ratio," comparing the relative availability of caregivers over time. As Figure 2-3 shows, the U.S. population currently includes 1.74 females between the ages of 25 and 54 per elderly person–at a time when the field is already experiencing a significant labor shortage. Yet this ratio will decline steadily over the next 30 years and, by 2030, reach a point where there will be fewer than one woman of care-giving age per elderly individual.

4 Given the very low population and labor force growth projected over the next several decades, a normal business cycle recession will likely result in only a modest increase in the number of unemployed. Dr. Richard Judy, director of the Hudson Center for Workforce Development, suggests that the United States over the next 20 years can expect unemployment rates to vary only within the narrow range of a low of 3.5 percent to a high of 6.5 percent. See testimony of Richard W. Judy to the Subcommittee on Oversight and Investigation, Committee on Education and the Workforce, U.S. House of Representatives, February 17, 2000. Hudson Institute, Indianapolis, Indiana. http://www.hudson.org

Figure 2-3. Elderly Support Ratio, 2000-2030
(Females aged 25-54 per individual aged 65 and older)



Source: Calculated from U.S. Census Bureau, National Population Projections, Summary Files, "Total Population by Age, Sex, Race, and Hispanic Origin,"

http://www.census.gov/population/www/projections/natsum-T3.html

Unfortunately, this shrinking ratio of support will place pressure not only on the formal, paid direct care paraprofessionals, but also on family caregivers. Since women provide the majority of both paid direct care services and family care, this "care gap" in the U.S. will increasingly become a double bind: families who cannot care for their loved ones by themselves will find, when they turn to the formal system for assistance, relatively fewer paid staff available.

Dynamics of the Paraprofessional Labor Market[5]

As is true for every sector of the economy, health care employers compete for workers within a dynamic labor market. However, if the health care labor market were functioning perfectly, direct care vacancies would not continue for long. That is, the supply of workers would expand to meet demand, as employers adjusted compensation upward to attract and retain more workers.

5 This section owes much to the analysis of Dr. Lynn C. Burbridge found in "The Labor Market for Home Care Workers: Demand, Supply and Institutional Barriers," The Gerontologist, Vol. 33, No. 1, 1993 and to the analysis of Dr. Dorie Seavey found in An Industry Study of Services for People with Mental Retardation and Severe Mental Illness in Massachusetts: The Client/Consumer, the Workforce, the Providers, and the State, Special Report CRW21, Wellesley, MA: Center for Research on Women, Wellesley College, March 1999.

Unfortunately, several factors prevent our health care system from achieving rapid labor-market equilibrium to fill all available positions. These factors include:

- Expanding pressures on the demand for health care services
- Limitations on the supply of additional workers
- Restrictions on the ability and/or willingness of employers to increase compensation sufficiently to attract an adequate supply of workers
- Limitations on public resources for improving services and wages

To understand the dynamics of the long-term care industry, it is helpful to sketch the key attributes of this imperfectly functioning labor market.

Demand for Paraprofessionals

Demand for health care workers is pushed by such factors as the aggregate number of consumers living with more complex health problems and the strong preference for consumers to receive services within their homes. As noted earlier, these demand factors are now creating pressure for increased direct care services.

However, while these factors increase the need for more labor, other market attributes suppress, or at least distort, the effective demand for labor, as determined by the level of services that payers are able or willing to fund. In particular, since much of the funding for health care comes from public and private third-party payers who have strong financial incentives to limit costs, effective demand as determined by third-party payers will typically be less than the need as perceived by either consumers or health service providers.

Federal and State third-party payers must fund an array of public services in addition to health care. Subsequently, they have an interest in containing costs. Similarly, private insurers–accountable to shareholders and corporate purchasers–control costs through capitation arrangements, utilization reviews, and rigorous definitions of what constitute medically necessary services. Completely independent of increased requests for health services, third-party payers may therefore choose to constrict, or perhaps even reduce, effective demand for long-term care services, which in turn suppresses effective demand for labor.

Therefore, the health care labor market can best be understood as driven by massive demographic and technological forces accelerating aggregate demand for services–while simultaneously, powerful third-party payers, both public and private, attempt to brake that demand through regulatory constraints and cost-containment measures. This reality makes forecasting difficult. For example, despite an absolute decline in home health aides nationwide during 1999 due to major cuts in Medicare funding, the BLS still predicts that home health aides and personal aides will increase by 47% and 62%, respectively, nationwide between 2000 and 2010, supposedly still one of the fastest-growing occupations in the Nation [Tables D-15 and D-16 in Appendix D]. In all, it is reasonable to expect a continued expansion of effective demand for health care-related labor, but an expansion that is likely to remain irregular and balky, depending largely on political and financial and not simply care-related factors.

Supply of Paraprofessionals

As noted earlier, the pool of traditional caregivers–women between the ages of 25 and 54–is predicted to increase by only 7% during the next 30 years. Even more stark: the pool of likely entry-level workers–women in the civilian workforce aged 25 to 44–is projected to decline by 1.4% during the next eight years.

This somewhat narrower age range is particularly crucial, since this is the cohort that provides the recruits for whom health care employers must compete. The current decline of these younger women in the civilian workforce follows three decades of significant expansion, nearly tripling from 1968 through 1998. Note that these were the decades during which our current long-term care system was designed.

The expansion of this female cohort during the past three decades was caused by two interacting factors: the increasing number of women from the baby boom generation coming of adult age and the increasing percentage of those women participating in the workforce (45.0% in 1968, rising to 76.7% in 1998).

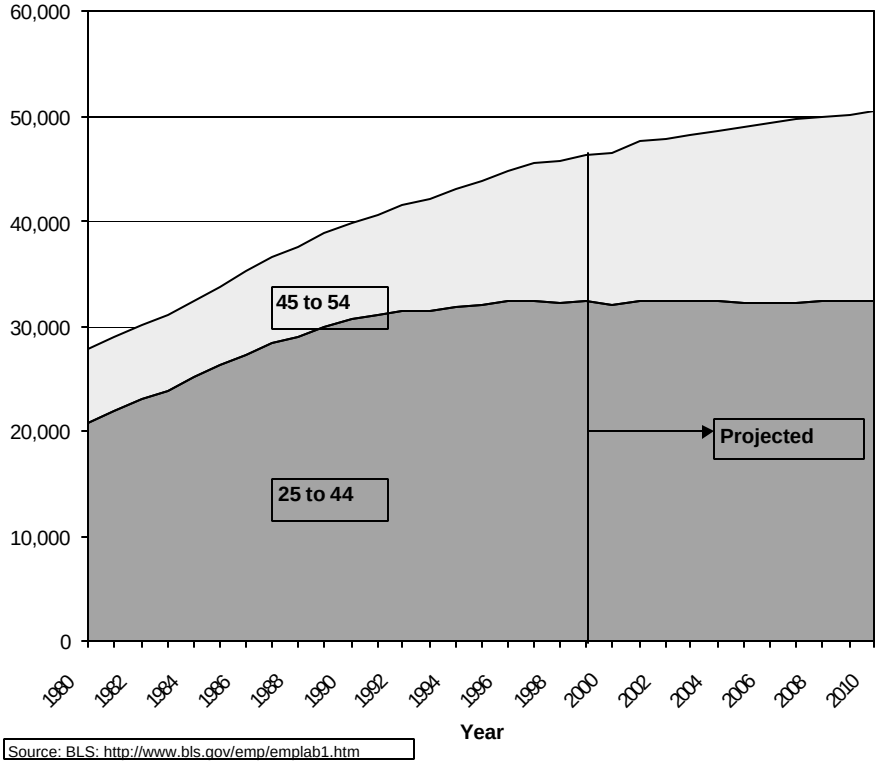
Now, however, the baby boom workforce has passed through this age range, leaving a smaller workforce to follow. Moreover, the rate of increased participation of women in the workforce is slowing considerably (from 76.7% in 1998 to only 79.5% projected for 2008). Figure 2-4 shows this progression from 1968 to 2008.

In addition to these demographic realities, changes in the educational level of women of color also impact the long-term care workforce. From 1990 to 1998, the proportion of black women over age 25 with a high school education increased from 51.3% to 76.7%, and those completing four or more years of college increased from 8.1% to 15.4% [Stone, January 2001]. These women will no longer be willing to accept the same low wage jobs that were the only option available to the generation before them.

These demographic projections of a smaller pool of potential direct care workers take into account welfare reform, which has already moved millions from the welfare rolls and into the workforce.[6] Many direct care workers live on incomes below the poverty level and rely on public support for their families. Thirty-six percent of nursing home and home health aides live in families with incomes below $20,000. These workers are more than twice as likely as other workers to receive food stamps and Medicaid and much more likely to lack health insurance [GAO, May 17, 2001].

6 Note also that those who remain on public assistance after welfare reform are now more likely to have multiple barriers to employment—e.g., substance abuse, physical or mental disabilities, or other barriers which may preclude their employment in direct care jobs.

Figure 2-4. Women Aged 25-44 in the Civilian Workforce (in Thousands)
1980 through 2000, projected 2010)
Thousands, 1980 through 2000, Projected 2010



Source: BLS: http://www.bls.gov/emp/emplab1.htm

These demographic projections also assume relatively high net international annual migration levels ranging between 780,000 and 950,000 now through the year 2030.[7] Congress sets U.S. immigration policy, and only a small portion of immigration visas (less than 13% over the past five years) are employment-related. Of employment-related immigrants, more than half are professionals or other high-skilled workers.

Therefore, only a substantial change in immigration policy would significantly expand the pool of potential direct care staff. Yet given the low wages and benefits associated with these

7The U.S. Census Bureau assumes that immigration will decrease slightly between 1999 and 2010, from 1.236 million to 1.036 million, while emigration will increase slightly, from 282,000 to 322,000, over the same period. The overall change is modest—from a net migration of 954,000 in 1999 to 713,000 in 2010—although important since a significant proportion of net population growth over the projected period will be attributable to international migration. See Frederick W. Hollmann, Tammy J, Mulder, and Jeffrey E. Kallan (January 2000) Methodology and Assumptions for the Population Projections of the United States: 1999 to 2100, Population Division Working Paper No. 38, Washington, DC: Population Division, Bureau of the Census, U.S. Dept. of Commerce.

positions, any major targeting of immigrants for paraprofessional jobs would have to address the political and economic realities of importing low-wage workers, individuals whose essential needs for food, housing, child care, and transportation would have to be subsidized, at least in part, by taxpayer dollars. If more immigrant workers enter a community, their needs for housing, schools, medical care, childcare, and transportation will affect existing resources.

Chapter 3. Important Data Issues

This chapter reviews state-level issues related to data on the paraprofessional health workforce. The chapter includes the following sections:

- Introduction
- Reasons for Collecting Data
- Criteria for Assessing Data Systems
- Conclusions

Introduction

Collection of accurate and timely data is an often under-attended item on the agendas of planners and policymakers. Sometimes this is simply a matter of limited resources. At other times policymakers may decide to skip data collection because the problem is so severe or widespread that data are not needed to trigger action.

In arenas like the long-term care system that are expected to continue in the future, good data are an essential element of a comprehensive, long-term management strategy. Accurate and timely data can:

- Define the scope and scale of problems and issues
- Permit evaluation for programs and initiatives to correct problems
- Facilitate comparisons that can help to identify appropriate interventions
- Support assessments of cost effectiveness and outcomes

Reasons for Collecting Workforce Data

Workforce planners and policy analysts need data systems that provide clear, accurate, concise, and timely information, using standard terminology and definitions to describe current workforce trends and emerging situations. Few existing systems meet these criteria, and some of these are based on employer samples that must be aggregated over several years to obtain reliable estimates for small areas, and sometimes even for states.

Inadequate information systems severely handicap managers, planners, and policymakers. Without accurate and timely counts of workers, it is impossible to understand the relative roles of different types of workers in the long-term care system. It is also impossible to monitor and track changes in the direct care workforce, let alone develop reliable forecasts on which to base plans and programs. Perhaps even more important, existing systems do not support reliable assessments of the impacts and effectiveness of programs and initiatives designed to address workforce issues.

When designing data systems to support planning and policymaking related to the long-term care workforce, it is important to have a clear idea about the intended use of the data. Data on the long-term care workforce is needed for several important purposes:

Consumer Protection: Many of the patients in the long-term care system are frail and dependent on others for their health and well-being. One of the key reasons for the CNA Registries is to help ensure that the individual workers are properly trained and will not harm or take advantage of the patients they are serving.

Operational Review: Just as the registries collect data on individuals to help protect consumers, Online Survey Certification and Reporting (OSCAR) and other monitoring systems collect data on the facilities and organizations that serve these people. These data systems also hold the promise, not often fulfilled, of helping administrators allocate and use their scarce resources more effectively by pointing out especially effective facilities and programs.

Program Evaluation: Over the past decade national, state, and local initiatives have been taken to address problems of substandard care and worker shortages. Unfortunately, careful evaluations of these programs have been possible in only a handful of cases where outside funding has been available to support systematic assessments of outcomes and costs. This study shows clearly that existing State and Federal data systems are not up to this task.

Program Planning and Budgeting. Program and facility managers need accurate timely data on the health workforce to be able to develop realistic plans and budgets for future operations. It is especially important to have information about possible shortages of different types of workers and about strategies for addressing and/or circumventing such shortages.

Workforce Planning: Careful planning and forecasting provide essential road maps to policymakers about the goals and objectives of the system, the obstacles that may be in the way, and the strategic and tactical options available to move forward. It is especially important to alert education programs about future trends so they can prepare appropriately.

Criteria for Assessing Data Systems

Anecdotes abound that current data systems do not provide information sufficient to meet the workforce planning needs of federal, state, and institutional planners and policymakers. Federal systems do not provide the accuracy, consistency over time, or timeliness necessary to monitor

or plan for provider organizational needs. In addition, they do not provide State and local detail sufficient to support effective planning and policymaking.

Although issues relating to paraprofessional workforce data have received local and national publicity in recent months, they are not well documented. In fact, the general sense of study informants is that the existing national and State data systems fall far short of what workforce planners and policymakers need. The data problems they cite are generally related to one or more of six broad criteria:

- Nomenclature, definitions, and taxonomies
- Accuracy
- Comparability over time
- Geographic detail
- Timeliness
- Access to data

Nomenclature, Definitions, and Taxonomies

One need only compare the estimates of the numbers of direct care paraprofessional workers from different sources to understand this concern. Due to different labels, definitions, categories, and collection processes, different information systems often provide markedly different estimates for what are nominally the same categories of workers. Unfortunately, it is often not possible to reconcile the differences or even to select the best estimate from among the alternatives.

Accuracy

One of the facts of life in developing and maintaining data systems is that not all figures in a database are necessarily100% accurate. The press of time or lack of resources on occasion leads a person completing a data questionnaire not to check a figure, or to omit a figure altogether. In cases where sampling is done, as in BLS/Occupational Employment Statistics (OES), the estimates are also subject to random error.

Comparability Over Time

A related problem involves discontinuities in data series within the same data sources. In recent years, there have been several changes in the category definitions of health care workers in Federal data systems. While these changes may improve the quality of data in the future, in the short run they make careful tracking of changes in the supply of workers over time impossible.

Geographic Detail

Labor markets for direct care paraprofessionals are generally local (i.e., in the local communities where facilities are located) or in some cases regional. State-level aggregations are too broad to be useful to most employers and policymakers. Current Federal and State data systems do not reflect the local patterns and trends critical for understanding the workforce environments in which employers actually operate.

Timeliness

By the time the data Federal agencies collect are available to planners and policymakers, they are often out of date. Time lags between data collection and availability of two or three years are not uncommon. During the lag time, major changes in supply and/or demand may have taken place.

Access to Data

Another criteria for evaluating data systems is access to the data. An otherwise effective system that no one can retrieve data from is not going to help planners and policymakers. Restricted access to data is generally related to issues of privacy and confidentiality. This means that appropriate aggregations of data by facility or geographic unit must be developed to make it possible to share the data without breaching any privacy requirements.

Conclusions

Fieldwork conducted as apart of this study has confirmed numerous anecdotes that, while there are a number of sources of data on the long-term care paraprofessional workforce, there are major gaps and shortcomings in the available data. Current data collection does not provide sufficient data to track the supply, demand, or use of the direct care workforce. Furthermore, the available data do not provide sufficient data to support assessments of the effectiveness of policies and programs intended to address or prevent workforce shortages or to assess the relationship between the workforce and outcomes of care.

The lack of good data on the workforce reflects a number of factors, some related to the nature of paraprofessional work and some related to a lack of resources to collect detailed data. One of the fundamental problems of data collection on direct care paraprofessionals is the lack of a clear definition of the workforce. In occupations with clear and specific educational requirements for entry and a clear scope of service, such as medicine or dentistry, it is relatively easy to define and measure the workforce. On the other hand, for most types of aides and assistants, there are few if any entry requirements and individuals can flow in and out of jobs relatively easily. Furthermore, because of the overlap in activities performed by personal care aides, health aides, and similar paraprofessionals, getting accurate and consistent counts are problematic.

The next two chapters examine Federal and State data systems in this general context. They clarify the nature and extent of the shortcomings of the various data collection and reporting systems, and they identify steps that could be taken to improve data systems to support workforce planning and policymaking.

Chapter 4. Existing National Data Sources

This chapter describes the national data sources and includes the following sections:

- Introduction
- Occupational Employment Statistics
- Current Population Survey
- Current Population Survey March Supplement
- National Compensation Survey
- Employment Projections
- BLS Survey of Occupational Injuries and Illnesses
- Online Survey Certification and Reporting System
- Decennial Census

Introduction

An important part of any assessment of data resources related to direct care paraprofessionals is a careful review of existing sources of data. Such a review helps planners and policymakers understand the strengths and limitations of current data resources. It also reveals appropriate ways to use existing data and suggests ways to improve data collection and analysis techniques, with the goal of creating databases that are more useful for workforce planning.

Several national surveys that collect general employment statistics also collect data relating to the direct care paraprofessional workforce. However, the data collection is not exclusive to direct care paraprofessionals, and the terminology and definitions the surveys use are not necessarily consistent from one to the next or with current workforce conditions. This chapter briefly describes the surveys and suggests improvements in data collection and analysis to provide better information for workforce planning.

Table 4-1 lists the surveys, summarizes their primary data characteristics, and notes their respective strengths and limitations. The surveys are:

- Occupational Employment Statistics (OES)
- Current Population Survey (CPS)
- CPS March Supplement
- National Compensation Survey (NCS)
- Employment Projection
- BLS Survey of Occupational Injuries and Illnesses
- US Decennial Census
- Online Survey Certification and Reporting System (OSCAR)

Subsequent sections describe each survey in more detail.

Table 4-1. Comparison of Direct Care Workforce Data Sources

	OES	CPS monthly	CPS March supplement	NCS	Employment Projection	Occupational Injuries & Illnesses	OSCAR	US Decennial Census
Sample size	400,000 establishments per year x 3 years to fully collect 1.2 million	about 50,000 - 60,000 households	about 62,500 households	36,000 establishments		250,000 units	about 15,100 certified nursing facilities	1 in 6 sample of the households in the U.S.
Data collection method	mail survey	personal & phone interview	personal & phone interview	personal visit	secondary data analysis (OES, CES, CPS)	mail survey	nursing home self-report (resident & facility characteristics, staffing levels), facility visit by state (deficiencies)	paper survey
Data collection frequency	annual	monthly	annual	annual	every 2 years	annual	annual (no less often than every 15 months)	every ten years
Geographic areas	national, state, and metropolitan areas	national, regional, state, metropolitan areas	national, regional	national, regional, & metropolitan areas	national (state data are available based on the national data)	national, state	national, state, county, individual facility	geographic areas down to census tracts and block groups
Sample include	wage and salary workers (full-time & part-time) in non-farm establishments, including federal, state, & local governments	civilian noninstitutional population age 15+, including unemployed	civilian noninstitutional population age 15+, including unemployed	civilian workers in private industry establishments & state and local governments	civilian noninstitutional population age 15+ (workers in private industries, governments, self-employed, household workers)	Employers with 11 employees or more in private industry	all (about 15,100) certified nursing facilities	people in households in the U.S.
Sample exclude	self-employed persons, owners and partners in unincorporated firms, household workers, and unpaid family workers	institutionalized (e.g., prisons, LTC hospitals, nursing homes) people, people in the armed forces	institutionalized (e.g., prisons, LTC hospitals, nursing homes) people	self-employed persons, owners and partners in unincorporated firms, household workers, and unpaid family workers, federal government		private household, small businesses		

continued

Table 4-1. Comparison of Direct Care Workforce Data Sources (Continued)

	OES	CPS monthly	CPS March supplement	NCS	Employment Projection	Occupational Injuries & Illnesses	OSCAR	US Decennial Census
Available data	# of people in each occupation by industry, wage (mean, median, 10th, 25th, 75th, & 90th percentiles)	employment status, earnings, work hours, demographic characteristics, occupation, industry	employment status, earnings, work hours, demographic characteristics, occupation, industry, benefits, income	wage (mean, median, 10th, 25th, 75th, & 90th percentiles) by geographic area & work level	# of occupation employment 10 year projections by industry & state	# of workplace injuries and illnesses by detailed industry, demographic characteristics, employment size, event or exposure, nature of injury, occupation, part of body affected, etc.	resident characteristics, facility characteristics, staffing levels, deficiencies	Estimates of numbers of people in different occupations and industries
Occupation code	SOC	1990 Census occupation code	1990 Census occupation code	OCSM	SOC	1990 Census occupation code	N/A	
Industry code	1987 SIC	1990 Census industry code	1990 Census industry code	N/A	1987 SIC	1987 SIC	N/A	
Web site	http://www.bls.gov/oeshome.htm	http://www.bls.census.gov/cps/cpsmain.htm	http://www.bls.census.gov/cps/cpsmain.htm	http://www.bls.gov/cmhome.htm	http://www.bls.gov/emphome.htm	http://www.bls.gov/oshhome.htm	N/A	http://www.census.gov/Press-Release/www/2002/sumfile3.html
Years of data available on web	1998 - most current	1989 - most current	1992 - most current	2000	2000 - 2010	1992 - most current	http://www.hcfa.gov/medicaid/nursingfac/nursfac99.pdf for 1993-1999 data in each state	1990 and 2000, in SF-3 Files
Contact info	Office of Employment and Unemployment Statistics, Occupational Employment Statistics, Suite 4840, 2 Massachusetts Avenue, NE, Washington, DC, 20212-0001; Phone: (202)691-6569			Bureau of Labor Statistics Division of Compensation Data Analysis and Planning, 2 Massachusetts Avenue., NE, Rm. 4175, Washington, DC, 20212-0001; Phone: (202)691-6199	Bureau of Labor Statistics Office of Employment Projections; Fax: (202) 691-5745	Division of Safety and Health Statistics, US Department of Labor, 2 Massachusetts Ave., NE, Washington, DC, 20212; Phone: (202) 691-6179; Fax: (202) 691-6196	Raw data can be purchased from Center for Medicaid and State Operations Data and Systems Group, Health Care Financing Administration, 7500 Security Blvd., Baltimore, MD, 21244-1850; Phone: (410) 786-3112; Fax: (410) 786-4005	Data can be downloaded from the web site for geographic areas down to census tracts and block groups.

continued

Table 4-1. Comparison of Direct Care Workforce Data Sources (Continued)

	OES	CPS monthly	CPS March supplement	NCS	Employment Projection	Occupational Injuries & Illnesses	OSCAR	US Decennial Census
Strengths	large sample, occupation & industry categories more in detail, occupation-industry matrix	some demographic data & work conditions, state-by-state analysis possible, include self-employed and unpaid workers in a family business, only minor definition changes over time	more demographic data & work conditions, include self-employed and unpaid workers in a family business, only minor definition changes over time	wage data more in detail (e.g., by work level, FT vs. PT, metropolitan vs. non-metropolitan)	employment projection by industry & state, including self-employed & household workers	detailed work safety information by industry and occupation	comprehensive quality data on certified nursing facilities	Data available for small areas. Data may provide useful reference points for some other files.
Limitations	no demographic data & work condition data, exclusion of household workers, definition of industries problematic, industry & occupation codes change overtime that make historical comparison difficult	limited demographic data & work condition data compared to March supplement, small sample size, occupation/industry definitions problematic	no state data variable, small sample size, occupation/industry definitions problematic	smaller sample, occupation codes not corresponding to CNA, HHA, & PCA; industry classification not available in detail	personal care and home health aides not separated, industry definitions problematic	no industry-occupation cross tabulation available, occupation codes problematic	not too much data on staffing, staffing data validity, quality measurement problematic, old data overwritten by new data	Geographic areas are for place of residence, not place of work. Data are neither timely, nor frequent. Occupation categories are too broad.

Occupational Employment Statistics

Overview

The OES program is an annual mail survey that supports estimating employment and wages for over 700 occupations in the United States. It is a cooperative program that includes the BLS and State Employment Security Agencies (SESAs). Its Internet address is http://www.bls.gov/oes/.

OES collects number and wage/salary data on both full-time and part-time wage and salary workers in non-farm establishments. It does not collect data on self-employed, household, or unpaid family workers. The program surveys approximately 400,000 establishments per year for three years. The data it collects fall into two primary categories: geographic area (national, state, metropolitan) and industry. Prior to 1996, OES produced only occupational employment estimates by industry. In 1996, it began collecting both occupational employment and wage data. In 1997, it began estimating cross-industry as well as industry-specific occupational employment and wages.

In 1999, the OES survey began using the new Office of Management and Budget (OMB) 2000 Standard Occupational Classification (SOC) system. Due to the transition to the SOC system, 1999 OES estimates are not directly comparable with previous OES estimates, the classifications of which are compatible with the 1980 SOC and the U.S. Bureau of the Census occupational classifications. OES uses definitions of industries from the Standard Industrial Classification (SIC) system. Chapter 6 provides an overview of these classification systems and definitions of relevant occupations/industries.

See Appendix D for sample OES data.

OES Strengths and Limitations

OES Strengths

OES's primary strength is its large sample size, which allows developing and comparing estimates by geographic area and industry. It also allows more detailed occupational classifications, which better describe the current direct care workforce.

OES Limitations

Unlike some other surveys, e.g., CPS, OES does not provide data on demographic characteristics and work conditions. In other words, OES tells how many people are in a particular occupation in a particular industry and how much they earn, but it does not describe them beyond their numbers and wages.

As stated earlier, OES does not collect data on self-employed, household, or unpaid family workers. This is a substantial limitation considering the potentially large number of home care workers who don't work through organizations but through contracts with patients and families.

Definitions of each occupation and industry are also problematic in that they do not reflect current conditions. Also, OES's data definitions have changed significantly through its history, which makes it difficult to conduct analyses over time.

Current Population Survey

Overview

The CPS is a fifty-year-old monthly survey of about 50,000 to 60,000 households the Bureau of the Census conducts for BLS. CPS is the primary source of information concerning U.S. labor force characteristics. Its sample represents the civilian, non-institutional population aged 15 years and over. Informants provide information about their employment status, earnings, hours of work, occupation, industry, and demographics. Data falls into three geographic areas: national, state, and sub-state. CPS occupational and industrial data classifications are based on the coding systems the 1990 census used.

The CPS Internet address is http://www.bls.census.gov/cps/cpsmain.htm.

See Appendix D for CPS sample data.

CPS Strengths and Limitations

CPS Strengths

Unlike other national surveys, CPS has demographic data on each respondent, which helps to understand which sectors of the population work in which occupation and industry groups. The CPS also includes self-employed workers, which is particularly important for the home care industry given that a number of direct care workers contract directly with individual patients/clients.

Relative to those of other surveys such as OES, CPS data definitions have not changed significantly, which makes it easier to conduct analyses over time.

The monthly survey also has a State variable (not available in the March supplement); however, due to the small sample size of direct care workers, it may be necessary to combine data from several months to conduct meaningful analyses by state.

In a few years, CPS will start using uniform classification systems that are consistent with other survey programs. Those classifications generally reflect current conditions better.

CPS Limitations

The CPS data's primary limitation relates to occupation and industry definitions. The welfare service aide's category (Code 465) includes individuals who are not necessarily direct care workers. Some industry codes also contain work settings irrelevant to the direct care workforce, e.g., medical laboratories, youth services, crisis center, food bank, etc. The lack of clear definitions makes it harder to draw accurate pictures of direct care workers.

The change to a uniform classification system will make it harder to conduct analyses of CPS data over time.

Current Population Survey March Supplement

Overview

The CPS March Supplement, also called the Annual Demographic Survey, is the primary source of detailed information on income and work experience in United States. Relative to the monthly survey, the CPS March Supplement contains more detailed data on individuals, including: geographic mobility, income and poverty status, and labor force and work experience. It also includes personal, family, and household data.

The CPS March Supplement's sample size is slightly larger than monthly surveys. For example, in 1995, it included the basic monthly CPS sample of 60,000 housing units and 2,500 housing units that had at least one Hispanic member the previous November. It also includes members of the U.S. Armed Forces, who are excluded from the monthly surveys. Like the monthly CPS survey, the CPS March Supplement uses occupational and industrial classifications based on the coding systems the 1990 census uses.

The CPS March Supplement's Internet address is http://www.bls.census.gov/cps/cpsmain.htm.

See Appendix D for CPS March Supplement sample data.

CPS March Supplement Strengths and Limitations

CPS March Supplement Strengths

Like the CPS monthly survey, the CPS March Supplement provides detailed data on each worker. It has even more detailed data such as availability of benefits, e.g., health insurance, pension, and recipients of public assistance, e.g., Medicaid, food stamps.

It has also benefited from consistent definitions of occupations and industries over time.

Like the monthly survey, the CPS March Supplement will start using uniform classification systems that are consistent with other survey programs.

CPS March Supplement Limitations

Unlike the monthly survey, the CPS March Supplement does not have a State variable. Although it contains a region variable, it is of very limited use for researchers who are interested in particular states or who would like to compare different states.

Like the monthly survey, the CPS March Supplement has limitations in occupation and industry category definitions.

Also like the monthly survey, the change to a uniform classification system will make it harder to conduct analyses of CPS data over time.

National Compensation Survey

Overview

NCS is a BLS survey that provides comprehensive measures of occupational earnings, compensation trends, benefit incidences, and detailed benefit provisions. It also includes average weekly work hours. It integrates three BLS programs: the Occupational Compensation Survey, the Employment Cost Index, and the Employee Benefits Survey. Participants respond via personal interviews that are conducted annually.

Like the OES, NCS also excludes self-employed, household, and unpaid family workers. In addition, while the OES includes Federal government employees, NCS includes only State and local government employees. It covers approximately 36,000 establishments per year and compares earnings and weekly work hours using several variables, including: full-time versus part-time, private industry versus government, level of work, and geographic areas (national, regional, and metropolitan).

NCS defines each occupation by using the Occupational Classification System Manual, which is based on the 1990 Census Index. Although NCS has wage data by industry, only major industry divisions are available. Therefore, researchers cannot analyze NCS data by detailed industry setting, e.g., home care, nursing homes, hospitals.

The NCS Internet address is http://www.bls.gov/ncs.

See Appendix D for sample NCS data.

NCS Strengths and Limitations

NCS Strengths

NCS provides detailed wage information for each occupation. Unique to NCS are the wage data by work level. NCS data show that the wages of aide workers differ depending on the worker's knowledge and responsibilities. NCS data are also consistent with OES data in a sense that the highest wage aide workers can make is about $13 and that the average wage is between $7.50 and $9.00. One can also see in NCS data that, despite the existence of several work levels, even the highest level is 8 out of 15 work levels, suggesting that the aide occupations are at the low end among different occupation groups.

NCS Limitations

Despite the detailed wage data, NCS has several limitations that make it harder to use the data to understand working conditions of direct care workers. Unlike OES data, NCS data do not use a detailed industry classification. Hence, NCS cannot distinguish direct care workers in different settings, e.g., nursing homes, hospitals, home health care, assisted living, etc. In addition, the occupation codes NCS uses do not seem to be consistent with current conditions.

Employment Projections

Overview

The BLS Office of Employment Projections develops ten-year estimates about the national labor market. Their work includes labor force trends by sex, race, national origin, and age; employment trends by industry and occupation; and the implications of these data for employment opportunities for specific groups in the labor force. BLS updates the projections every other year.

BLS develops the National Industry-Occupation Employment Matrix as part of its ongoing Occupational Employment Projection Program. The matrix provides information on the distribution of employment for an occupation across industries. The latest matrix gives information on occupational employment growth in different industries between 1998 and 2008. The 1998 matrix uses the Occupational Employment Statistics (OES), Current Employment Statistics (CES), and CPS surveys. Projections are by labor force, aggregate economy, final demand, industrial activity, employment by industry, and employment by occupation.

The projections use the occupational classification that reflects the OES survey. Data on self-employed workers and unpaid family workers are based on CPS data for equivalent occupations. A crosswalk, based on each survey's compatibility with the 1980 SOC, attributes CPS data to an equivalent occupation in the industry-occupation matrix. Industries covered in the matrix reflect the 1987 SIC. Self-employed, unpaid family workers, and workers who have a second job in private households are listed as separate industries to derive total employment.

The BLS employment projections Internet address is http://www.bls.gov/empover.htm.

See Appendix D for the latest projections, which show dramatic increases in CNAs, HHAs, and PCAs between 2000 and 2010.

BLS Employment Projections Strengths and Limitations

BLS Employment Projections Strengths

These data provide estimates and projections for each occupation by industry, as well as by state. Unlike the OES data, the projections also include self-employed and household workers, which apply to a number of direct care workers in community settings.

BLS Employment Projections Limitations

The projections make no distinction between PCAs and HHAs. Although those two occupations share a number of elements, some important factors seem to differ, including their wages, employers (industry), and some tasks. Also, like other data sources, the industry definitions seem to be problematic and may not reflect current realities. Chapter 5 discusses the issues regarding occupation and industry classifications in greater detail.

BLS Survey of Occupational Injuries and Illnesses

Overview

The current BLS survey of occupational injuries and illnesses evolved from annual BLS surveys first conducted in the 1940s. The older surveys had several limitations, including voluntary reporting and exclusion of injuries that did not involve lost work time. In 1970, the Occupational Safety and Health Act was enacted, and its implementation required that most private industry employers regularly maintain records and prepare reports on work-related injuries and illnesses. The current survey selects approximately 250,000 private sector organizations that have 11 employees or more. National data, as well as State data to a certain extent, are available on the web site. Data include incidence of occupational injuries and illnesses by industry, occupation, workers' demographic characteristics, employer size, event or exposure, nature of injury, and part of body affected. The survey uses 1990 census codes for occupations and 1987 standard industrial classifications.

The survey's Internet address is http://www.bls.gov/iif.

See Appendix D for sample data from the BLS Survey of Occupational Injuries and Illnesses.

BLS Survey Strengths and Limitations

BLS Survey Strengths

This survey provides valuable data on occupational safety. The literature points out a number of injuries (particularly back pain and falls) among direct care workers. The survey data not only confirm the literature but also show the severity of the problem.

BLS Survey Limitations

Although the survey contains both occupation and industry variables, the cross-tabulation of the two variables is not available on its web site. Because each industry contains different occupation groups, e.g., doctors, nurses, administrative staff, etc., this survey may have very limited use for comparing direct care workers in different settings. Also, as with other surveys, definitions of each occupation and industry are problematic because they do not reflect current labor situations and conditions.

Decennial Census

Decennial Census Strengths

The decennial census is an important source of information about the population of the U.S. The one-in-six sample used for the long form of the census questionnaire provides limited information about the employment status of members of households residing in the U.S. Perhaps its greatest strength is related to the fact that the file permits tabulations for small geographic areas (down to census tracts and for some questions down to block groups.

Decennial Census Limitations

The decennial census was not designed to support workforce planning. The several components of the long form of the census questionnaire that deal with occupations and industries are designed primarily to provide very basic information and insights about the kinds of jobs that U.S. residents hold. The key limitations of this file for understanding long term care paraprofessional workers include: the ten-year gap between successive collections, the delay in processing the long form questionnaires, the lack of appropriate detail about the occupational categories, and the fact that the geographic tabulations represent where people live rather than where they work.

Online Survey Certification And Reporting (OSCAR) System

Overview

OSCAR provides staffing data for all U.S. nursing homes that Medicare and/or Medicaid certifies. State survey and certification agencies collect the data, which are part of the annual nursing home certification and recertification process. Each facility completes a standardized form about the facility characteristics, e.g., number of beds, affiliation, etc., resident characteristics, e.g., limitations, chair bound, etc., and staffing levels. State surveyors review the form and enter the data into the OSCAR database. State surveyors also visit each facility and decide whether the facility meets each standard.

OSCAR staffing variables cover a small number of occupations, including registered nurses (RNs), licensed practical nurses (LPNs), and nurse aides. Each occupation breaks down into full-time (35 or more hours per week), part-time (less than 35 hours per week), and contractors. Staffing variables are reported in full time equivalency (FTE) based on a 35-hour workweek. To convert from FTEs to staff-hours per patient-day sum staff types within each staffing category.

Although OSCAR does not have an official web site from which to retrieve data, researchers can purchase raw data from CMS. CMS's Internet address is http://www.medicare.gov/NHCompare/home.asp. Using information on the site, consumers can compare different aspect of nursing homes, including staffing levels.

Harrington and colleagues [2000] also summarized OSCAR data from 1993 to 1999 by state. Their summary is available online at http://cms.hhs.gov/medicaid/services/nursfac99.pdf.

OSCAR Strengths and Limitations

OSCAR Strengths

OSCAR provides comprehensive information on certified U.S. nursing facilities. Although very limited staffing data are available, one can analyze the data to see the association between staff levels and facility characteristics, resident characteristics, and other quality indicators.

OSCAR Limitations

Validity analyses have shown considerable differences between staffing levels from OSCAR and payroll data for the same time period, suggesting that OSCAR staffing data for some facilities are unreliable. The data were even less consistent for nurse aides than for RNs and LPNs. Also, old OSCAR data were overwritten when a new survey was conducted, which makes it very difficult to conduct historical analyses.

A report by HCFA [2000] points out some data errors and inconsistency over time. A report by Harrington and colleagues [2000] excluded such data to maximize data validity and reliability. If a researcher obtains raw data and conducts analyses, he/she will need to exclude data for facilities with obvious data errors and inconsistencies over time.

Chapter 5. State-Level Data Issues

This chapter reviews state-level issues related to data on the paraprofessional health workforce, with special attention to findings from fieldwork conducted in California, Illinois, New York, and Wyoming. The fieldwork is described in more detail in Appendix H. The chapter includes the following sections:

- Introduction
- State-Level Data Issues
- Conclusions

Introduction

In the summer and fall of 2001, fieldwork was conducted in California, Illinois, New York, and Wyoming to gather insights about the direct care paraprofessional workforce. Although the discussions addressed a wide range of issues related to the long-term care paraprofessional workforce, the primary objective of the fieldwork was to better understand data sources and data initiatives from a State perspective. The availability, accuracy, and accessibility of data were of primary concern. The fieldwork informants described:

- Existing data sources
- Requirements for additional data resources to support planning and policymaking
- Use of data by providers and by professional associations
- Benefits of existing datasets
- Gaps in available data

To help insure comparability of results, interviewers were provided pre-scripted questions about paraprofessional workforce data, although the actual interview scripts varied across the states. The questions were framed to elicit responses about both the quality and quantity of available

data and their relationship to workforce recruitment and retention. Research staff from each of the four collaborating health workforce centers conducted the interviews.

The informants interviewed were identified in a variety of ways, including advice from the Project Advisory Committee and other stakeholders, and the use of Internet and published resources. Those interviewed included providers of direct care services, administrators of nursing facilities, representatives of State regulatory agencies, researchers, acknowledged experts in the field, and consumer advocacy representatives. The mix of informants varied across states.

State-Level Data Issues

The fieldwork in the four states confirmed anecdotes heard all during the study that State planners and policymakers do not have adequate data and information with which to assess the adequacy of the long-term care paraprofessional workforce. They are being pummeled with cries for help from nursing homes and home health agencies having difficulty recruiting workers. They hear horror stories of unscrupulous individuals taking advantage of frail senior citizens. They are beginning to realize that they do not have enough information either to design appropriate responses to these situations or to evaluate the ad hoc responses they have implemented to address these and other problems.

Beyond their respective State cooperative labor statistics systems, most states do not have systems that collect data on the paraprofessional workforce. Although the cooperative systems use standard terminology, definitions, and taxonomies, the nomenclature and definitions they use for direct care paraprofessionals suffer from the shortcoming mentioned above.

Some states have developed their own systems for compiling data on direct care paraprofessionals. These systems use local terminology, definitions, and taxonomies that, in general, do not permit ready comparisons with data from other states and linkages to other data systems.

All states have CNA registries, but as currently mandated by the Federal government, CNA registries do not provide an adequate basis for addressing the shortcomings of data systems like the CPS and BLS. Despite specific requirements dictating the kinds of information to include in the registries, the State systems are far from uniform. State nomenclature for workers varies considerably, and definitions of worker categories are inconsistent. Rules and protocols for accessing the data also vary significantly.

The handling of criminal background checks and other worker certifications is also quite different across the states. Some have integrated this function into the CNA registry, while others maintain totally separate data systems. Rules related to access (both registry data and background check data) and privacy also vary substantially.

Most State informants indicated they would be willing to expand existing CNA registries to include additional worker categories in support of paraprofessional workforce policymaking, <u>if</u> funds were provided to cover the additional costs.

State Data Systems

Informants in all four fieldwork states considered data fundamental to understanding the workforce and the demographic characteristics that affect the dynamic employment environment surrounding paraprofessional workers. Informants indicated that data was important to:

- Inform planning

- Yield insights about the extent of shortages and form strategies for addressing them
- Assess the supply of workers in relation to projected demand
- Understand the demographics of the workforce and how that affects supply

The four states have made significant efforts to collect, refine, and use data to address long-term care. The following sections summarize each of their existing paraprofessional databases.

California

The Aides and Technician Certification Section (ATCS) Registry lists nurse aides, home health aides, and hemodialysis technicians. The registry has an interactive voice response system that requires the user to have the social security number of a potential employee to process an inquiry. The system response indicates either active approved status or inactive status if it finds a disqualifier. California's registry listed 66,530 active CNAs, 42,178 dually qualified CNA/HHAs, and 889 HHAs as of September 2001.

The California Office of Statewide Health Planning and Development (OSHPD) compiles reports on long-term care facilities and produces an annual report on home health agencies that includes indicators of staffing in facilities but does not address actual counts of workers.

Illinois

The State Department of Public Health, through its Illinois Center for Health Statistics, collects a variety of data about paraprofessionals from several sources within State government. Long-term care facilities complete an annual survey for the State that includes staffing information about full and part-time counts of paraprofessionals. This information is submitted to the Illinois Health Facilities Planning Board. Additionally, home health agencies are required to complete an annual license renewal questionnaire that has a staffing component. The report requires a count of full- and part-time staff for the month of October for each business operated, total hours worked by employees, and total home health visits. The facility and business data are used for statewide health planning.

PCAs, CNAs, and HHAs are listed in the Illinois Nurse Aide Registry the Illinois Department of Public Health's Department of Education and Training maintains. The registry is not purged of inactive nurse aides, home health workers, or care attendants.

New York

New York collects data on its home health workers through the Department of Health Licensed Home Care Services Agency Annual Statistical Report, which surveys licensed agencies about patient referrals and discharges, cost of services provided, and staffing.

Nurse aides are the only registered paraprofessionals in the New York State Nurse Aide Registry. The Office of Continuing Care, Bureau of Professional Credentialing in the Department of Health, administers this registry. Assessment Systems Inc. maintains the registry and interfaces with the New York State Department of Health. The registry has both a 24-hour interactive voice response system available to providers to check eligibility of potential workers, as well as public web access to an enumerated list of disqualified employees.

Wyoming

The Board of Nursing (BON) Registry gathers data on CNAs and HHAs. It focuses on the number of positions, both filled and vacant.

The Nurse Aide Registry lists nursing assistants who have met the board qualifications and have passed a criminal conviction background search. Biennial updating is required.

The University of Wyoming and the Wyoming Health Resources Network have collaborated on a statewide health workforce registry that counts and tracks both licensed and allied health workers.

Critical Issues for States

Data Type Variations

The types of data providers and regulators use vary across the states. California informants indicated that the kinds of data stakeholders use are diverse, and familiarity with the data is limited by the user's needs and technical expertise. New York informants suggest that some of the larger datasets are difficult to manipulate with data dictionaries that are complex or not available. Changes in definition over time and time lags in processing also complicate data use. Researchers in California noted that user expertise or knowledge of datasets varied considerably by interviewee.

Data Inadequacies for Workforce Planning

Current systems for data collection are not designed to support workforce planning. For example, records contained in CNA registries include many inactive workers. In several states, the purging of names occurs only when an aide is disqualified from employment or fails to renew registration. This makes it very difficult to assess, document, or understand the dynamics of shortages.

In Wyoming, there are 12,000 CNAs listed in the Board of Nursing Registry, only 3,657 of whom carry current certification. Only 1,491 of these workers are presently working in a nursing home, a home health agency, or a hospital, filling 1,387 full-time positions. However, Wyoming lists 155 vacant positions in nursing homes, hospitals, or home health agencies despite the high number of registered CNAs. An additional impediment to data collection is that existing surveys and registries track only workers in the formal system in which Medicare, Medicaid, and other third-party payers support services. Anecdotal data suggests that workers in the informal system are numerous. However, counts of these workers are non-existent.

Data Collection Inconsistencies

Data are not comparable and are inconsistent across the range of data collection instruments. According to California and New York informants, a variety of factors make comparison of datasets difficult, including inconsistent definitions of workers, different methods for counting workers, i.e., full-time equivalencies (FTEs) or head counts, self-reporting of data by facilities, and different aggregations of data across categories of workers. There is no single data resource that provides reliable comprehensive information about this segment of the workforce in any of the four fieldwork states. No evidence was found to refute the claim that this lack of a common comprehensive data resource extends to all 50 states.

Untimely Datasets

Datasets are not always timely, inhibiting provider responsiveness in an ever-changing environment. According to New York informants, old data, although useful for understanding trends, are not helpful to local providers when assessing current, critical issues. Aggregate national data are not useful in planning responses to local market fluctuations.

Nomenclature Variation

One of the fundamental requirements for data collection integrity is common and consistent definition of terms. The fieldwork revealed that paraprofessional worker classifications differ across states. This problem is most evident when attempting a search for data about particular workers. In some states, workers are defined by the tasks that they perform. Workers are classified as nursing aides or medication aides regardless of the setting in which services are performed. In other states, workers are defined by the setting in which care occurs, e.g., psychiatric aides, home health aides, hospice workers. These definitions may also overlap by task and setting. In Maine, it is possible to be either a certified medication aide or a certified residential medication aide. In any case, it is apparent that there are numerous titles that address the same workforce.

Paraprofessional workers who are not certified or registered in a State present another example of these classification problems. Providers label workers variously according to the type of consumer they serve or service they provide. A personal care attendant might be called a developmental disability aide, a behavioral assistant, a housekeeper, a homemaker, a respite worker, or a residential habilitation specialist, among other titles. This variation significantly complicates any attempt at data collection.

Inconsistencies are particularly evident in State certification processes. Requirements affecting regulated workers vary according to the worker definitions each State uses. In Wyoming, CNA definition is comprehensive. All persons providing nursing assistance are required to have a minimum of 75 hours of training and qualify as a CNA regardless of the setting in which they provide services. It is necessary for workers in home health to complete an additional 16 hours of training. However, a CNA might work in a nursing home, a hospital, or a home health agency. All qualified CNAs appear on the registry without regard to the setting in which they work. In New York, the definition of a CNA is quite specific and includes only nursing assistants in skilled nursing facilities. CNAs are the only workers New York lists in its nurse aide registry.

State Concerns About Federal Data

The fieldwork in the states also identified a number of parallel concerns about Federal data systems that are summarized below.

Nomenclature and Definitions

The BLS OES survey classifies paraprofessionals in three places. They might be working in a health care support occupation (31-0000) as a "nursing aide, orderly, and attendant" (31-1012) or as a "home health aide"(31-1011). The paraprofessional might also be working in a personal care and service occupation (39-0000) as "a personal and home care aide"(39-9021).

Under Federal definition, nursing aides, orderlies and attendants "provide basic patient care under the direction of nursing staff. Perform duties, such as feed, bathe, dress, groom, or move patients, or change linens." This category of worker includes both direct care workers and those providing indirect services. It includes both certified and non-certified workers. Home health aides "provide routine, personal healthcare, such as bathing, dressing, or grooming to elderly, convalescent, or disabled persons in the home of patients or in a residential care facility." This category clearly focuses on care in community residential settings. These workers are generally certified only if they are working in a setting where Medicare is funding the services. Some states do require certification of all home health workers.

Personal and home care aides "assist elderly or disabled adults with daily living activities at the person's home or in a non-residential facility. Duties performed at a place of residence may include keeping house (making beds, doing laundry, washing dishes) and preparing meals. May provide meals and supervised activities at non-residential care facilities. May advise families, the elderly, and disabled on such things as nutrition, cleanliness, and household utilities." This category of worker provides non-health related personal services to consumers in any setting. In most states, these workers are not regulated, but some states do address these workers in occupational legislation.

The State labor departments use these definitions when collecting data on behalf of the Federal government and the BLS. Although these worker descriptions seem clear, grouping nursing aides, orderlies, and attendants makes it difficult to separate those providing direct care from those in support services. Counts of nursing aides are particularly hard to ascertain as a result of this alignment. It is also important to consider that existing data systems capture only those workers in the formal, regulated long-term care system. Workers who are self-employed and family members, church associates, and neighbors providing services to the elderly are not included.

Inconsistent Use of Data

Different constituents use different datasets. Those in State policy positions, for instance, may be interested in different benchmarks than businesses operating nursing homes. According to California and New York informants, technical expertise and the ability to use complex datasets also vary, and the purposes for which organizations and providers seek information differ. The kinds of data needed are wide ranging and must be considered when evaluating either existing or proposed new data sources and systems.

Broader Data Requirements

Informants indicated that additional data, beyond counts of workers, are necessary to support effective workforce planning. They were interested in data about:

- Training programs and career ladders
- Supply and demand
- Demographics of the workforce
- Staffing patterns
- Work distribution

They also considered data on wages, vacancies and turnover, workload, patient waiting lists, and trends in service utilization to be important for further evaluation of employment conditions. New York providers were particularly interested in local or regional data that would yield information about the supply of and demand for paraprofessionals. Other than data collected for the BLS, currently no data collection instruments focus exclusively on characteristics of the workforce. Most information collected on paraprofessionals is incidental to surveys about facilities that provide care or consumers who receive care.

Informants indicated that many different kinds of paraprofessional data are necessary to inform solutions to the problem of attracting and retaining workers. A variety of provider groups are positioned to be professional resources on various aspects of the issue, and collaboration is imperative. In California, key informants suggested government interagency collaboration, public-private agency collaboration, and industry-education program collaboration as ways to

develop and implement specific workforce data strategies, including specific data collection efforts.

According to California informants, a national certification database would allow states to provide reciprocal certification and conduct more thorough background checks. New York informants expressed concern about the movement of nurse aides from State to State, and the inability of providers to access information about the backgrounds of those workers from other states. By fostering consistent, uniform data collection efforts in registries, a national database could provide accurate counts of workers at several levels. It would also speed certifications by endorsement, that is, reciprocity in certification. This might eliminate retraining in a new State and would place aides in the workforce more quickly.

According to California and New York informants, aggregated national data may provide a relatively accurate picture of broad trends, but local or regional data is especially important to providers. Providers need data that reflects the markets in which they operate. Benchmarking is often done at the regional level, and detailed knowledge about competitors and peers is critical to these processes.

Data Inaccessibility

Comprehensive data on the workforce are not readily accessible. Anecdotal information is widely available that suggests major shortages of the paraprofessional workforce. This information is widely considered to be a valid reflection of the job market. However, informants are interested in information based on hard data about paraprofessionals. Such data is not currently available. Those interviewed are willing to participate in local data collection efforts by completing surveys as long as the instruments are direct, simple, and focused on workforce. According to New York and Wyoming informants, turnover rates in the workforce were considered to be an important indicator for inclusion on any survey. The definition of turnover should be clear and universally applied to any instrument by all informants.

Data Accessibility

Data about patients, especially regarding utilization, should be available to planners and policymakers. Currently, data on patient utilization is specific to particular functional "silos" in the system. For instance, there are data about individual patients in home care through OASIS or in nursing homes through OSCAR or in hospitals through CMS but no identification of patients who may receive multiple services from different types of provider organizations. A single patient may access care in various settings–hospital, home, and nursing facility–during different episodes of care in the trajectory of illness. That patient would, subsequently, be counted separately in different datasets. According to California informants, fully understanding utilization trends is important to effectively enumerating the future demand for and scope of required services. Such tracking is feasible should Federal planners implement the unique individual identifier presently under consideration.

Variations in Regulations

A feature that complicates collecting worker data is the variation in the nature of regulatory incentives across states. Several factors drive State legislation, none of which appears to be interest in accurate worker counts or characteristics. The primary drivers are usually facility and/or occupational regulation in the interests of public safety. In Oklahoma, occupational legislation requires all direct care workers to be registered and screened, with public safety concerns principally powering the process. In other locations, facility regulation controls State certification. As stated earlier, in New York, nurse aides working in nursing homes are the only

category of worker appearing on the registry. The rules that relate to these workers are a direct result of mandated Federal facility regulation of nursing homes from Omnibus Budget Reform Act (OBRA) 1987. Although home health aides working in certified agencies are also required to complete training in compliance with Federal regulations, they are not listed on the registry and remain a separately defined group of workers.

Conclusions

Informants in the four states agreed that data collection and analysis is currently inadequate for policy planning. Current data are fragmented. They are not readily available nor easily usable by analysts. There are no standard data collection instruments specific to collecting information on direct care paraprofessional workers. [An illustrative instrument is shown in Appendix B.] Presently, data for workforce planning are available on an incidental basis based on instruments serving other purposes.

Inconsistency in definitions complicates compiling and understanding existing datasets. The criteria for determining whether information is useful vary by user. For example, providers require data that is different from those policymakers require. However, worker supply and demand data are almost universally necessary at the local, state, and national levels. All informants agree that the most critical data requirement is an accurate estimate of the number of paraprofessionals in the workforce. These data would serve many purposes, including providing documentation in support of legislative initiatives and informing the design of State and local programs. There is an equally pressing need for information about the demographic characteristics of paraprofessional workers. Information about paraprofessionals' ages, ethnicity, and educational backgrounds would help stakeholders to understand the dynamics of the workforce, suggest viable solutions, and achieve valued outcomes.

Chapter 7. Occupation and Industry Classification Systems

This chapter describes the occupation and industry classification systems used to differentiate and categorize different components of the direct care paraprofessional workforce, and includes the following sections:

- Introduction
- Occupation Categories
- Industry Categories
- Bridging Different Data Sources

Introduction

The national surveys that collect and describe data related to long-term care paraprofessionals and other workers use several different occupation and industry classifications. This chapter describes them in detail. Appendix E lists detailed definitions of different occupation and industry codes in each data source.

Occupation Categories

Standard Occupational Classification

The SOC system was introduced in 1970 as a response to a growing need for a universal occupational classification system. It was revised in 1980 and in 1998. It covers all for-pay or for-profit occupations in the U.S. and reflects the current occupational structure.

While the original SOC consisted of 22 divisions in a 4-digit hierarchical structure, the latest SOC uses a 6-digit structure for its 822 occupational categories. The occupational categories are

across 23 major groups that are also called "job families." The latest SOC also classifies workers at four levels of aggregation as follows in Table 6-1.

Table 6-1. SOC Classifications

1998 SOC		Example	Home Health Aides
Major group	2-digit	31-0000	Healthcare support occupations
Minor group	3-digit	31-1000	Nursing, psychiatric, and home health aides
Broad occupation	5-digit	31-1010	Nursing, psychiatric, and home health aides
Detailed occupation	6-digit	31-1011	Home health aides

The next major review and revision of the SOC will most likely begin in 2005 in preparation for use in the 2010 Decennial Census. Because the latest revision rearranged the entire classification structure, analysis of SOC data across time will be very challenging.

Major classification changes occurred in the latest SOC division. First, there is now a separate, new code for home health aides. Previously, home health aides were part of the classification that included nursing aides, orderlies, and attendants (1980 SOC code 5233). The latest SOC also separates personal and home care aides from other welfare service aides such as case aides and outreach workers. Those new classifications will help identify direct care workers in the community settings more accurately.

However, nursing aides, orderlies, and attendants (1998 SOC code 31-1012) are still in one group. Orderlies tend to have different demographic characteristics, e.g., more male workers, and job responsibilities from direct care workers. Therefore, putting them in a separate category would allow describing direct care workers more accurately. The latest SOC also combined health aides (1980 SOC code 5236) and nursing aides, orderlies and attendants (1980 SOC code 5233) in one category (nursing aides, orderlies and attendants: 1998 SOC code 31-1012). As the definitions in Appendix C indicate, health aides seem to have more technical tasks, which would justify putting them in a separate occupation group.

Although the occupational classifications used to categorize the health workforce have differed by dataset and varied over time, an announcement in the Federal Register Notice of September 30, 1999, indicated that all Federal agencies that collect occupational data are now required to use the 1998 Standard Occupational Classification. In addition, all State and local government agencies, as well as private sector organizations that gather occupational data are strongly encouraged to use the 1998 SOC. In the words of the announcement, "This national system ... provides a common language for categorizing occupations in the field of work."

The SOC Internet address is http://www.bls.gov/soc/.

Census Occupation Classification

The latest census occupational classification system was developed to be consistent with the 1998 SOC. It has 509 separate categories across the 23 major groups of SOC. Since the census codes are consistent with the SOC, it is also difficult to analyze census occupation data over time. Crosswalk between the census occupation codes and the latest SOC is available on the following web site. Compared to the SOC, the census occupation codes for direct care workers

are not as detailed. For example, one code (2000 census occupation code 360) covers home health aides, nursing aides/orderlies/attendants, and psychiatric aides.

The census occupation classification's Internet address is http://factfinder.census.gov/maetadoc/occupation.pdf.

Occupational Classification System Manual

The Occupational Classification System Manual (OCSM) is based on the 1990 Census of Population and Housing Classified Index of Industries and Occupations. The census index classified occupations into about 500 occupation classifications within 13 major group categories, whereas the OCSM has 11 major occupation groups. Currently, the NCS, which uses the OCSM, uses 9 of the 11 groups. The OCSM uses nearly all census occupations. In addition, the OCSM includes at least one not elsewhere classified (NEC) occupation within each group. NCS also adds the corresponding major occupation group alpha code to a 3-digit occupation code to establish a 4-character occupation code. The numeric codes correspond to the census code. Because the OCSM codes are consistent with the census occupation classification, they share common problems, including the inability to separate nurse aides, orderlies, and home health aides.

The OCSM Internet address is http://www.bls.gov/ncs/ocs/ocsm/comuseocsm.htm.

Industry Categories

Standard Industrial Classification

The U.S. government established the SIC system in the 1930s to promote uniformity and comparability of data various levels of government, trade associations, and research organizations collected and published. Although the overall structure of the SIC remained essentially unchanged since the establishment, the government has revised the SIC periodically to reflect changes in the U.S. economic structure. Such revisions include adding new industries and deleting or combining small or declining industries. As of the last revision in 1987, the SIC had 1,004 industries, of which 416 were service-related.

SIC is a 4-digit system that is structured as follows. The OES and occupation projections use the 3-digit SIC to classify industries as follows in Table 6-2.

Table 6-2. SIC Classifications

SIC		Example	Skilled Nursing Care Facilities
Division	Letter	I	Services
Major group	2-digit	80	Health services
Industry group	3-digit	805	Nursing and personal care facilities
Industry	4-digit	8051	Skilled nursing care facilities

Although the SIC provides more detailed industry classifications than 1990 census codes, it still has several limitations, particularly in residential and community-based services. For instance, the SIC has a separate code for home health services while 1990 census does not. But for residential settings, the SIC only has one code (8361: residential care). This code includes not only residential care service providers for the people who need long-term care, e.g., assisted living, retirement homes, group homes for disabled, etc., but also places like boot camps, halfway group homes for juveniles, orphanages, and homes for unwed mothers. As for

community-based care, home care of the elderly (SIC 8322) is mixed with other senior services, as well as completely different fields. For example, it is included with senior centers and adult day care, as well as adoption agencies, youth services, counseling services, food banks, and soup kitchens. Although further classifications by occupation may prevent misclassification of direct care workers in each industry category, inclusion of different industries in one group will make it harder to provide accurate pictures of workers.

The SIC Internet address is http://www.osha.gov/cgi-bin/sic/sicser5.

North American Industry Classification System

On April 9, 1997, the OMB announced its decision to adopt the North American Industry Classification System (NAICS) as the industry classification system U.S. statistical agencies will use. The NAICS replaced the 1987 SIC, which data users and analysts had criticized as being outmoded and unreflective of the U.S. economy. The NAICS accommodates such new industries as information services, health care services, and high-tech manufacturing. It includes 1,170 industries, of which 565 are service-based industries. Although few government agencies currently use the NAICS, it will become the uniform industry classification system across the Federal government. It also allows government and business analysis to compare industrial production statistics collected and published in the U.S., Canada, and Mexico. Each participating country can individualize the system to meet its own needs by using the 6th digit, as long as data can be aggregated to standard NAICS industries (5-digit).

While the SIC has a 4-digit system, the NAICS uses a 6-digit system for greater flexibility and international comparability. The NAICS structure is shown in Table 6-3.

Table 6-3. NAICS Classifications

NAICS		Example	Homes for the Elderly
Sector	2-digit		
Subsector	3-digit	623	Nursing and residential care facilities
Industry group	4-digit	6233	Community care facilities for the elderly
NAICS industry	5-digit	62331	Community care facilities for the elderly
Specific to each country	6-digit	623312	Homes for the elderly

Compared to the SIC and the census industry classification, the NAICS has more detailed categories, particularly for residential and community settings. For residential settings, the NAICS has separate classifications by whether or not nursing care is involved, as well as by resident population groups, e.g., the elderly, people with mental retardation, psychiatric and substance abuse. For community settings, the NAICS also separates services for the elderly and disabled from other population groups such as children and substance abuse patients. The detailed classifications in the NAICS give a potential for accurate understanding of workers in particular industries. However, depending on how detailed each survey program wants to be, i.e., what digit the program uses for classification, the detailed NAICS classifications may not be effectively implemented. For instance, OES starts implementing the NAICS in 2002. If OES decides to use the 3-digit classification, home health care services (621610) will be put together with medical laboratories (621510) and other outpatient care centers (621490) as ambulatory health care services (621). For those who study workforce issues in home health industries, this

could become a problem. The NAICS Internet address is http://www.census.gov/epcd/www/naics.html.

Census Industry Classification

The 2000 census industrial classification system uses the NAICS structure. It consists of 265 categories in 20 sectors, which are the same as those in NAICS. The 1990 census industry classification uses the SIC structure.

A comparison of census industry classifications (1990 and 2000) and NAICS is available at http://www.census.gov/hhes/www/ioindex.html

In the latest census classification, there is a separate code for the home health care industry (2000 census code 817) that was not available in the 1990 classification. However, definitions of residential and other community based programs are still problematic, because they include irrelevant industry settings, e.g., child guidance agencies, food banks, boot camps, and juvenile halfway homes.

Bridging Different Data Sources

Bridging Implementation Plan

The existence of different occupation and industry data collection systems in different government organizations presents a serious problem for policy analysts. Comparisons across programs are limited due to different definitions and classifications. In response to this problem, Federal government agencies are now shifting to uniform occupation and industry classifications. For occupation classifications, all Federal government agencies will adopt the SOC over the next few years. For industry classifications, Federal government agencies, including the Census Bureau and BLS, will start using the NAICS. The implementation schedule for some relevant programs is as follows in Tables 6-4.

By using uniform classification systems, it will be much easier to obtain workforce data from different sources. For example, one can find detailed wage data for nurse aides in skilled nursing facilities from OES; meanwhile one can also obtain demographic characteristics and work conditions for workers in the same occupation and industry groups from CPS data without having difficulty identifying corresponding occupations and industries. However, until the uniform classifications are implemented, bridging different data sources and definitions will still be necessary, as it will when working with historical data.

Table 6-4. Bridging Schedule

	SOC		NAICS	
	Reference Date	**Publication Date**	**Reference Date**	**Publication Date**
Occupation Employment Statistics	4th Quarter 1999	December 2000	4th Quarter 2002	January 2004
Office of Employment Projections	2000-2010	November 2001	2004-2014	November 2005
Bureau of Census	2000 Census	2002		
Current Population Survey	January 2003	February 2003	January 2003	February 2003
Occupational Outlook Handbook		2004		
National Compensation Survey	March 2004	April - June 2004	2004	2004
Survey of Occupational Injuries & Illnesses	2003	April 2005	2003	December 2004

Bridging Definitions

As mentioned before, different occupation and industry classification systems have different definitions, and they do not always correspond to each other. The question becomes which occupation and industry codes should be used in each classification system to identify direct care workers most accurately?

Since most surveys will start using the SOC for occupation classifications and the NAICS for industrial classifications, it seems logical to use them as starting points. Tables 5-5 through 5-10 show occupation and industry codes in different classifications that correspond to the SOC and NAICS, although the match is not perfect. Depending on a researcher's interest, he/she can use these bridging tables differently. For instance, if researchers want to study nursing aides, regardless of settings, they can focus on codes that correspond to 1998 SOC 31-1012, e.g., 2000 census code 360, 1980 SOC code 5233, 1990 Census code 447, ignoring any industry codes. If they want to focus on nursing aides in nursing facilities, they can further narrow the data by industry codes that correspond to NAICS 623110, e.g., 1987 SIC code 805, 2000 census code 827, 1990 census code 832. In any case, researchers must be aware of irrelevant settings and occupation groups that are currently included in each classification system.

Ideally, it would be possible to adjust the detailed definitions so that the employment estimates do not include irrelevant components.

Tables 6-5 through 6-10 point clearly to the need for standardizing the terminology, definitions, and taxonomies used to collect, maintain, and share data on direct care paraprofessional workers and the organizations and settings in which they work. The inconsistencies in and across the current data systems make systematic comparisons and analyses impossible. Even obtaining reliable estimates of the numbers of these workers is difficult at best.

Table 6-5. Bridging Definitions of Different Data Sources: Occupation

1998 SOC		2000 Census		1990 Census		1980 SOC		OCSM	
Code	Title	Code	Title	Code	Title	Code	Title	Code	Title
31-1011	Home health aides	360	Home attendants, home health aides, nurse's companions	447	Nursing aides, orderlies, and attendants	5233	Nursing aides, orderlies, and attendants	K447	Nursing aides, orderlies, and attendants
31-1012	Nursing aides, orderlies, and attendants	360	Certified nursing assistants, nurse assistants, nursing assistants, operating room assistants, nurse attendants, baby nurses, birth attendants, CNAs, cart attendants, first aide attendants, first aide nurses, gericare aides, health aides, health care aides, ward helpers, hospice aides, hospice entrance attendants, hospital aides, hospital attendants, hospital corpsmans, hospital orderlys, infirmary attendants, institutional aides, medical aides, medical attendants, medication aides, midwives, new patient escorts, nurse sitters, nurse's aides, nursery attendants, nursing aides, operating room orderlies, orderlies, patient care except nursing, patient escorts, patient sitters, patient transporters, student nurses, surgical aides, aide technitians, certified medication technicians, technicians & nurses (less than associate degree), nursery technicians, transporters, ward aides, ward attendants	446	Health aides except nursing	5236	Health aides except nursing	K446	Health aides except nursing
31-1012	See above	360	See above	447	Nursing aides, orderlies, and attendants	5233	Nursing aides, orderlies, and attendants	K447	Nursing aides, orderlies, and attendants
39-9021	Personal and home care aides	461	Blind aides, blind escorts, caregivers, care takers (family members), companions, convalescent sitters, direct care staffers, geriatric aides, guardian family members, home care aides, homemakers, nutrition aides, personal attendants	465	Welfare service aides	5263	Welfare service aides	K465	Welfare service aides
31-1013	Psychiatric aides	360	Charge aides, charge attendants, mental health aides, mental retardation aides, neuropsychiatric aides, psychiatric aides, psychiatric attendants, psychiatric orderlies	447	Nursing aides, orderlies, and attendants	5233	Nursing aides, orderlies, and attendants	K447	Nursing aides, orderlies, and attendants
21-1093	Social and human service assistants	202	Welfare aides, clinical assistants, case aides, children's aides, community aides, counseling aides, field workers, group workers, home visitors, neighborhood coordinators, ourtreach workers	465	Welfare service aides	5263	Welfare service aides	K465	Welfare service aides

Table 6-6. Bridging Definitions of Different Data Sources in Hospital Settings

1. Hospital settings

1997 NAICS		1987 SIC		2000 Census		1990 Census	
Code	Title	Code	Title	Code	Title	Code	Title
622110	General medical and surgical hospitals	8062 & 8069	Children's hospitals (general), general medical & surgical hospitals, general pediatric hospitals, osteopathic hospitals	819	Children's hospitals, general hospitals, infirmaries, medical clinics (hospital), medical hospitals, osteopathic hospitals	831	Hospitals
622210	Psychiatric and substance abuse hospitals	8063 & 8069	Substance abuse rehabilitation hospitals, children's hospitals (psychiatric or substance abuse), detoxification hospitals, hospitals (addiction, psychiatric, substance abuse)	819	Alcoholism treatment centers (hospital), HMO hospitals, health clinics (hospital), mental/psychiatric hospitals,	831	Hospitals
622310	Specialty (except psychiatric and substance abuse) hospitals	8069	Cancer hospitals, childrens hospitals (specialty except psychiatric & substance abuse), chronic disease hospitals, extended care hospitals (except mental & substance abuse), hospitals (eye, ear, nose & throat), hospitals (specialty except psychiatric & substance abuse), leprosy hospitals, maternity hospitals, neurological hospitals, obstetrical hospitals, orthopedic hospitals, physical rehabilitation hospitals, rehabilitation hospitals (except alcoholism & drug addiction), TB & other respiratory illness hospitals	819	Orthopedic hospitals	831	Hospitals
Coming soon				819	City hospitals, college hospitals, community hospitals, dialysis centers (hospital), dispensaries (hospital), hospital clinics, hospital laundries, human resources (hospital), institutions (hospital), kidney dialysis centers (hospital), medical centers, nursing schools, private hospitals, state hospitals, state university hospitals, US indian affair bureau of hospital, US indian hospitals, US medical centers, NIH hospitals, US public health service hospitals, US VA hospitals, US base hospitals, US military hospitals	831	Hospitals

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Table 6-7. Bridging Definitions of Different Data Sources in Residential Settings

1997 NAICS		1987 SIC		2000 Census		1990 Census	
Code	Title	Code	Title	Code	Title	Code	Title
623110	Nursing care facilities	8051, 8052, & 8059	Convalescent homes/hospitals, group homes for the disabled w/ nursing care, homes for the aged/elderly w/ nursing care, hospices (inpatient), nursing care facilities, nursing homes, rest/retirement homes w/ nursing care, skilled nursing facilities	827	Assisted living facilities (w/ nursing care), children's convalescent homes, convalescent centers, convalescent homes, group homes with medical or nursing care, homes and institutions with medical/nursing care, hospice clinics, hospice laundries, convalescent hospitals, hospices except home care, nursing homes, old folks' homes w/ nursing care, residential institutions w/ nursing care, retirement homes w/ nursing care, skilled nursing facilities	832	Nursing and personal care facilities
Coming soon				827	Alcoholic sanitaria, sanitaria, epileptic colonies, geriatrics care (residential), retardation centers, long term health care (except home), US veterans domiciliary centers		
623210	Residential mental retardation facilities	8051, 8052, 8059 & 8361	MR hospitals, MR facilities (residential), MR intermediate care facilities, MR homes w/ or w/out health care, MR group homes, MR homes	829	Group homes w/out medical or nursing care, homes & institutions w/out medical or nursing care	870	Residential facilities w/o nursing
623220	Residential mental health & substance abuse facilities	8059 & 8361	Psychiatric convalescent homes/hospitals, substance abuse rehabilitation facilities (residential), halfway houses (mental health, substance abuse), mental health facilities (residential), residential group homes for the emotionally disturbed, substance abuse facilities (residential)	829	Alcoholism rehabilitation centers, halfway houses, drug and alcohol rehabilitation centers, drug rehabilitation, private convalescent homes, residential institutions w/out nursing care,	870	Residential facilities w/o nursing
623311	Continuing care retirement communities	8051, 8052 & 8059	Skilled nursing care facilities (CCRC), intermediate care facilities (CCRC), Nursing personal care facilities NEC (CCRC)	829	Continuing care retirement communities	870	Residential facilities w/o nursing
623312	Homes for the elderly	8361	Assisted living facilities w/out on-site nursing care facilities, homes for the aged/elderly w/out nursing care, old age homes w/out nursing care, old soldiers' homes w/out nursing care, rest/retirement homes w/out nursing care, senior citizens' homes w/out nursing care	829	After-care homes, assisted living facilities w/out nursing care, church homes for aged (non-nursing), homes for retired nuns (religious orders), homes for the aged or elderly, institutions w/out medical or nursing care, old folks' homes (non-nursing), rest homes, retirement homes (non-nursing), senior citizens' homes, US Soldiers' homes	870	Residential facilities w/o nursing
623990	Other residential care facilities	8361	Boot camps for delinquent youth, boys' and girls' residential facilities, child group foster homes, children's villages, delinquent youth halfway group homes, disabled group homes w/out nursing care, disciplinary camps for delinquent youth, group homes for the disabled w/o nursing care, homes for children w/ health care incidental, homes for unwed mothers, juvenile halfway group homes, orphanages	829	Boarding homes (children), boot camps (delinquent youth), boys' towns, children's communities/homes/villages, juvenile homes, delinquent youth halfway group homes, disabled group homes w/out nursing care, foster homes, homes for unwed mothers, orphanages	870	Residential facilities w/o nursing
Coming soon				829	Centers for homeless men, childvilles, city human resources (retardation center, residential)		

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Table 6-8. Bridging Definitions of Different Data Sources in Community Settings

3. Community settings

1997 NAICS		1987 SIC		2000 Census		1990 Census	
Code	Title	Code	Title	Code	Title	Code	Title
621610	Home health care services	8082	Home care of elderly (medical), home health agencies, home health care agencies, home nursing services (except private practices), hospice care services (in home), visiting nurse associations, nursing agencies (primarily providing home nursing services)	817	City visiting nurses, home care of elderly (medical), home care with medical care, home health care services, home visiting nurse services, hospice home nursing care, hospice home service, in-home hospice care services, long term health care (home), visiting nurse associations	840	Health services, nec.
Coming soon				817	Self-employed, w/ occ elderly care givers; self-employed, w/ occ patient sitters; self-employed, w/ occ senior citizen care givers		
624120	Services for the elderly and persons with disabilities	8322	Activity centers (disabled, elderly, MR), senior centers, community centers (adult), companion services (disabled, elderly, MR), adult day care, disability support groups, home care of elderly (nonmedical), homemaker's services for elderly or disabled (nonmedical), self-help organizations (disabled, elderly, MR)	837	Individual & family social services	871	Social services, nec.
624310	Vocational rehabilitation services	8331	Job counseling, vocational rehabilitation, sheltered workshops, vocational habilitation	839	Vocational rehabilitation services	861	Job training and vocational rehabilitation services
814110	Private households	8811	Private households	929	Baby-sitting (home of others), house sitting, patient sitting, private families, private homes, private residences	761	Private households
Coming soon				929	Child care (home of others), church rectories, domestic services, general housework, home care of elderly/disabled, private homes, households, parsonages, rectories, summer cottages		

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Table 6-9. Bridging Definitions of Different Data Sources in Community Settings Not Relevant to the Long-Term Care Workforce

1997 NAICS		1987 SIC		2000 Census		1990 Census	
Code	Title	Code	Title	Code	Title	Code	Title
621510	Medical and diagnostic laboratories	8071 & 8072	Medical and dental laboratories	818	Other health services (medical laboratories, X-ray laboratories, ultrasound imaging centers, SPECT, PET scanner centers)	840	Health services, nec.
621490	Other outpatient care centers	809	Miscellaneous health and allied services, nec.	812	Outpatient care centers	840	Health services, nec.
624110	Child and youth services	8322	Adoption agencies, AFDC, child guidance agencies, child welfare services, community center (youth), foster care placement, self-help organizations (youth), teen outreach services, youth services (except recreation only), youth guidance organizations, youth self-help organizations	837	Individual & family social services	871	Social services, nec.
624190	Other individual and family services	8322	Alcoholism & drug addiction self-help organizations, nonresidential alcoholism counseling (except medical), community action services, counseling services, crisis intervention centers, exoffender rehabilitation agencies, exoffender self-help organizations, family social service agencies, hotline centers, marriage counseling, neighborhood multiservice centers, parenting support services, rape crisis centers, referral services, suicide crisis centers, support group services, travelers' aid centers, welfare service centers	837	Individual & family social services	871	Social services, nec.
624210, 624220 & 624230	Community food and housing and emergency and other relief services	8322	Community meals, food banks, meal delivery programs, soup kitchens, shelters (battered women, emergency, homeless, runaway youth), temporary housings, home construction organizations, housing assistance agencies, housing repair organizations (volunteer), transitional housing, disaster relief services, emergency relief services, resettlement services (immigrant, refugee)	838	Community food and housing , and emergency services	871	Social services, nec.

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Table 6-10. Bridging Definitions of Different Data Sources in Personal Supply Settings

1997 NAICS		1987 SIC		2000 Census		1990 Census	
Code	Title	Code	Title	Code	Title	Code	Title
561310	Employment placement agencies	7361	Registries (employment, maid, model, nurse, ship crew, teachers, TV employment), employment job services	758	Employment agency, registries (baby-sitter, maid)	731	Personnel supply services
561320	Temporary help services	7363	Help supply services, labor contractors, manpower pools, temporary employment services	758	Labor contractors, manpower pools, temporary employment agencies	731	Personnel supply services
561330	Employee leasing services	7363	Employee/labor leasing services, professional employer organizations	758	Labor pool employment services	731	Personnel supply services

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Chapter 7. Current Data Collection Practice: CNA Registries

This chapter describes the CNA registries and includes the following sections:

- Introduction
- Characteristics of Registries
- Key Findings
- Best Practices
- Conclusions

Introduction

OBRA 87 mandated the training and registration of nurse aides working in nursing homes and the training of home health aides working for certified home care agencies as a condition for reimbursement under Medicare. As a result, all states and the District of Columbia register nurse aides who are eligible to work in nursing homes. Collectively, these registries represent the only source of names and data on CNAs across the country. For this reason, this study comprehensively assessed them to determine whether or not they contain data that would be helpful to policymakers and planners and whether or not they are a potential source for a national database on the direct care paraprofessional workforce. The assessment included a review of the structure, function, content, and operation of the registries from forty-five states and the District of Columbia.

The registries' primary purpose is to help nursing homes ensure that they hire only individuals who have completed an approved training program that meets Federal requirements. Before hiring a CNA, a nursing home must check with the registry to confirm that the individual has completed the required training.

The assessment found that many states have expanded their registries beyond the original Federal mandate to include additional paraprofessionals and, in some cases, additional information on each person in the database. A few states have even been able to use the data in their registries to inform policymaking and planning activities. While this variation would make it difficult simply to aggregate all of the registries into a single national database, it also provides a variety of models for developing a state-based direct care paraprofessional database.

Since the majority of direct care paraprofessionals do not work in nursing homes, many are not regulated in any systematic way, and many do not have any formal training, the expansion of the registries to include aides and other similar workers in settings other than nursing homes would offer additional protections to patients. They could also provide a valuable source of data on all direct care paraprofessionals.

Clearly, policymakers and the public would like to know more about this workforce in order to provide additional safeguards to protect the vulnerable populations whom they serve. While the primary goal of the registries is administrative not for planning, it would be relatively easy and cost effective to design the nurse aide registries to feed into a comprehensive database on the paraprofessional workforce.

Characteristics of Registries

The comprehensive assessment of the State registries focused on:

- Structural characteristics
- Information in the registries
- Use of the registries
- Access to the registries
- Funding for the registries
- Future plans for the registries

The following is a summary of the assessment's findings. Appendix F offers additional detail on a state-by-state basis.

Structural Characteristics

In most states, registries are operated and administered by agencies and departments of State government. In seven states and the District of Columbia, operation of the registries is outsourced to a private for-profit corporation that manages the technical aspects of registration while maintaining an interface with the State agency responsible for oversight.

Some states have established multiple registries within a variety of State agencies, depending on the type of worker. For instance, nurse aides are in one registry while medication aides are in another.

Information in the Registries

The information in the registries varies from State to State. It can include birth date, gender, race, training and certification information, employer information, and criminal background indicators or legal judgment information. Some registries include comprehensive demographic information; others contain only enough information to permit basic registrant identification. Table 7-1 presents the scope of the occupations and data included in each state's registry.

Worker types vary considerably across states. In some states, nurse aide is an exclusive category; in others it is inclusive. In one state, a nurse aide may be defined as simply a certified paraprofessional direct care worker who is employed in a skilled nursing setting. In another, a nurse aide may be defined as any direct care worker who performs health care tasks as delegated by a licensed or registered nurse in any setting where health services are provided.

Per OBRA 87 mandate, all registries include information about certified, licensed, or registered nurse aides working in skilled nursing facilities. However, some State registries have expanded registration to include a variety of other direct care paraprofessionals including medication aides, home health aides, and developmental disability aides.

This variation is a source of concern when attempting to aggregate data from registries or compare the workforce across states. The variation in who is included in each registry makes it difficult to use existing registry data to measure and compare the supply of workers, the demographic characteristics of the workforce, the settings in which they are providing services, and the training and certification requirements across states.

Another concern is that many registries only update information on a biennial basis, and others do not purge their systems at all. In some states, databases include information about all nurse aides registered since the establishment of the registry. Other states update information as frequently as yearly.

Some states efficiently tie registration to employment so that when a nurse aide leaves an employer, it is noted in the registry. This makes counts of nurse aides who are active in the workforce possible.

Use of the Registries

There is also significant variation in how the states use their registries. The registries' primary function is to track individuals' eligibility to work as nurse aides. Eligibility includes, at a minimum, completion of the required training. It also generally includes information regarding misconduct as an aide.

Many states use their registries as a clearinghouse for background checks. Some registries are actively involved in performing criminal background checks. Others only note the findings of other State agencies in the registry records.

In a few states, registries are functioning as data sources for long-term care planning. Some states have mandated in law the collection of data about the long-term care workforce.

Access to the Registries

Although registries contain "public" information, how public is defined differs across states. Public access to the information may be limited. Some registries contain sensitive information about criminal backgrounds. Some states consider the private nature of the information and feel the need to disseminate it only to those who require it for protection of their constituents. Some states require formal authorization to use their registries, while others make registry background information available only to those who pay a fee. Yet, other states permit universal access to information, though access may require a social security number or a certification number. However, access to some states' registries is possible simply by providing the name of the paraprofessional who is being checked.

Table 7-1. Type of Worker and Information in State Registries

State	CNA	HHA	Other Categories	Name	Current Address	Other Demographic Info	Date of Training	Last Registration	Status
Alabama	X			X				X	X
Alaska	X			X	X	X	X	X	X
Arizona	X			X	X	X	X	X	
Arkansas	X			X	X	X	X	X	X
California	X	X	X	X	X	X	X	X	X
Colorado	X			X	X				X
Connecticut	X			X	X	X		X	
Delaware	X			X	X	X	X	X	
District of Columbia	NA								
Florida	X			X	X	X	X	X	
Georgia	X			X	X		X		
Hawaii	X			X	X	X	X	X	X
Idaho	X			X	X	X	X	X	
Illinois	X		X	X	X	X	X		X
Indiana	NA								
Iowa	X			X	X	X	X		
Kansas	X	X	X	X	X	X	X	X	X
Kentucky	X	X*		X	X			X	
Louisiana	NA								
Maine	X	X		X	X	X	X	X	X
Maryland	X			X	X		X	X	
Massachusetts	X		X**	X	X	X	X	X	
Michigan	NA								
Minnesota	X			X	X	X	X	X	
Mississippi	X			X	X	X	X	X	X
Missouri	X		X***	X			X		
Montana	NA								
Nebraska	X		X***	X	X	X	X	X	X
Nevada	X			X	X		X		X
New Hampshire	X			X	X	X	X	X	X
New Jersey	NA								
New Mexico	X			X	X	X	X		
New York	X			X	X	X	X	X	X
North Carolina	X		X****	X	X	X	X	X	X
North Dakota	X			X	X	X	X	X	X
Ohio	X			X	X		X	X	X
Oklahoma	X	X	X	X	X	X		X	X
Oregon	X			X	X	X	X	X	
Pennsylvania	X			X	X	X	X	X	
Rhode Island	X	X	X*****	X	X		X	X	X
South Carolina	X			X	X	X	X	X	
South Dakota	X			X	X	X	X		X
Tennessee	X			X	X	X		X	X
Texas	X		X******	X	X	X		X	X
Utah	X	X		X	X		X	X	X
Vermont	X			X	X		X	X	
Virginia	X			X	X	X		X	
Washington	X			X	X	X		X	X
West Virginia	X			X	X		X	X	X
Wisconsin	X	X		X	X	X	X		
Wyoming	X	X		X	X	X	X	X	X

* Home Health Aides with documented findings of abuse are included in Kentucky CNA Registry.
** Unlicensed direct care providers with substantiated findings of abuse are included in the Massachusetts CNA Registry.
*** Missouri and Nebraska maintain separate medication aide registries.
**** North Carolina maintains a Health Care Personnel Registry which lists all aides with allegations or findings of abue.
***** Rhode Island lists all aides in healthcare facilities.
****** Texas maintains a separate abuse registry for direct care staff working in long term care facilities.

The information is available through diverse media, and content may be limited depending on how it is accessed. Some states provide information by telephone, some by Internet, and some by written request. Limited information may be available on-line, with expanded information available only through personal contact with registry personnel. For instance, an Internet inquiry might reveal that a particular worker has been disqualified for employment. However, further direct inquiry by telephone would be necessary to ascertain the details of that disqualification.

Funding for the Registries

All registries receive funding through a memorandum of agreement between the Federal government (CMS) and the appropriate State agency. Federal regulation limits the fees that registries can collect from nurse aides. However, many registries with expanded functions generate revenue from registration of those other than the federally mandated workers.

This study's assessment revealed that, due to budget restrictions, many registries are limited by a lack of resources for new or expanded technology that could improve registry data, data availability, and functionality. Providers suggest that reimbursement methodologies prevent them from assuming costs of registries. The registered workers, who are paid at or near minimum wage, are unable to assume higher registration costs.

Future Plans for the Registries

Many states are interested in creating a more comprehensive means of tracking the paraprofessional workforce and are considering expanding existing registries. Much of this is prompted by emerging concerns for accurate information about the background of workers who care for vulnerable populations. Additionally, some states are anticipating statewide long-term care planning that will require data from registries to support their understanding of the workforce.

Key Findings

Key findings were as follows:

- Nurse aide registries collect data on certified nurse aides in every state.
- There are great variations in the structure and content of registries across states.
- With some limited modifications, nurse aide registries could be an excellent source of data on the paraprofessional workforce. Key modifications that would increase the usefulness of the registries include:

  * More consistent, core data elements

  * Greater consistency in the types and definitions of workers included in the registries

  * Regular updates of the files on current activities

  * Maintenance of some historical data for active and inactive paraprofessionals
- Several states have registries that collect data on all direct care paraprofessionals in a manner that protects patients, assists providers, and contains valuable data for planning and policymaking. These states could be models for other states.

Best Practices

The comprehensive assessment of the State registries revealed several states with registries that protect patients, assist providers, and obtain valuable data that contribute to effective policies and programs for the direct care workforce.

Kansas' registry is a good example of a registry that meets regulatory needs and provides data for planning and policymaking. It includes information regarding all direct care paraprofessionals in facilities and organizations that provide health services. Per State requirement, all in-State health care employers must register their workers by a specific date each year. This allows annual background checks on all workers regardless of direct care provision. It also provides an accurate snapshot of the types of workers in health care settings since registration is linked to job codes. Kansas has also invested in new technology that permits an efficient interface between various State agencies, which has resulted in more efficient dissemination of appropriate workforce information to registry users.

Conclusions

This study's assessment of the registries suggests that they are an important potential resource upon which to build future data collection efforts. They provide an existing structure that, with expanded and more uniform data collection, could meet the data needs of local users, State regulators, and policymakers at all levels.

Establishing consistent criteria and core data elements would facilitate creating a national database that houses worker training and background information. Such a database would:

- Permit paraprofessionals to move across states more easily.
- Speed entry of experienced workers into the delivery system through certification by endorsement.
- Allow states to access comprehensive background information about abuse, inappropriate behavior, or any legal judgments on file.

Presently, many providers are limited to state-specific information, which technically allows a disqualified worker to move across State lines and obtain work in another jurisdiction. The great variation that now exists across states also makes cross-State comparisons inappropriate.

Developing more uniform and functional registries may evolve through the implementation of the Health Insurance Portability and Accountability Act (HIPAA) legislation that requires State enumerators to register health care providers and issue national provider identifiers. Although the HIPAA legislation's primary goal is to provide a consistent single identifier to those seeking or providing payment for health services, establishing a registry mechanism is critical to achieving its objective. Although their initial focus will be on meeting HIPAA standards, future planners should consider the HIPAA enumerators potential as registries for the paraprofessional workforce. They would provide a consistent platform for implementation of our recommendations.

Chapter 8. Conclusions

This chapter describes conclusions and includes the following sections:

- Need for Better Data
- Data Collection Proposals
- Factors Important for Projecting Future Supply and Demand

Need for Better Data

When workforce issues are as clearly framed and defined as they are in this case, there are often questions about whether investments in better data systems are necessary. The temptation is to rely on anecdotes and not worry about specific data. Some would argue that better data are not necessary to know that forceful and immediate action is required.

Unfortunately, the current situation is not that easy to correct. The obvious solution, significant increases in wages of workers, would cost billions of dollars every year and have major repercussions in other industries competing for the same entry-level workers. Other solutions—improving working conditions, introducing new technologies, increasing respect for workers, and restructuring the workplace—depend heavily on local agencies and managers.

A number of states have undertaken a variety of initiatives. However, there is a concern that these initiatives are not being systematically evaluated to gauge their effectiveness. Ultimately, better data will be needed to ensure that the long-term care system is addressing the problems anecdotal evidence has identified.

Better data will help:

- **Monitor patient safety and status.** This should be a bottom line goal for any comprehensive information system or network of systems. We must ensure that our most vulnerable citizens—the elderly and people with disabilities and chronic illnesses—are being treated effectively and with the respect they deserve.

- **Assess facility performance.** It is absolutely essential that data systems permit assessing facility performance. Broad external assessments will help consumers make important life choices for themselves and their loved ones. Detailed internal assessments will also help facilities focus their resources and attention on critical problems and issues.
- **Identify best practices.** A corollary to facility assessment is identifying best practices. This strategy will ultimately help the entire long-term care industry to upgrade its performance and improve its cost-effectiveness.
- **Estimate the supply of and demand and need for workers.** To address the workforce issue successfully, clearly defining and analyzing the workforce is imperative. Definition must start with simple counts and profiles of workers, including basic demographics, education, and certification and extend to information on why workers enter and leave the workforce. Demand for workers extends data requirements to third party reimbursement, population demographics, and basic workforce requirements for different types of facilities and services. Need for workers extends beyond this to include such topics as underserved populations and clinical problems not adequately addressed by current systems and facilities.
- **Support government oversight and regulation.** History has shown that some level of government regulation and oversight of the long-term care industry is necessary to protect the interests of the frail and elderly. Accurate, timely data will improve the effectiveness of such oversight. It is critical that timely assessments of the status and performance of long-term care facilities be available to federal, state, local, and facility policymakers so they can direct resources to issues requiring attention.
- **Evaluate policy initiatives.** When government agencies or facilities initiate new programs to address serious problems, they often do not devote resources to assessing the initiatives' effectiveness. When that happens, they and their counterparts in other jurisdictions are not able to determine whether the initiatives have sufficient merit to warrant broader implementation. Data systems provide the basis for careful program assessments that determine what works and what doesn't.
- **Support long-range planning.** Because underlying population demographics are a critical factor in the long-term care system, it is especially important to use long-range planning and forecasting to alert planners and administrators of changing situations.
- **Inform education programs.** Ultimately, education has to be a part of any long-term care workforce solution. It is critical to modify educational programs when quantitative or qualitative changes are necessary in workforce training. Complete and accurate data can help identify such trends in advance of actual need so the industry can respond in a timely manner.

This study has revealed that data inadequacies exist in all aspects of the long-term care industry. In fact, the problems are such that existing data systems—which were designed for other purposes—cannot support systematic assessments of any industry component: individual workers, individual facilities, classes of workers, classes of facilities, people receiving services, people needing services, organizations financing services, or policymakers overseeing the various systems. Collecting, structuring, and analyzing the data necessary for coherent planning and policymaking requires a very ambitious program to build a comprehensive database. Such an effort would represent a first step toward addressing the issues facing the long-term care industry.

Data Collection Proposals

While it is not possible, given today's data resources and technologies, to estimate with reasonable certainty the cumulative impact of these factors on the supply of and demand for paraprofessional workers, the best judgment of the authors is that there is unlikely to be any significant change in recruiting and retaining these workers over the next decade. Only if there is a crisis in access to care for elderly and subacute care patients—a real possibility if no changes occur in the current system—will there be the social and political will to resolve this problem.

There are a number of possible responses that could address the difficulty related to paraprofessional data collection, and as previous sections of this report have stated, better quality workforce data could considerably improve policy planning. The responses fall into four broad categories:

- New standards for direct care workforce terminology
- More timely data
- Federal initiatives
- State initiatives

New Standards for Direct Care Workforce Terminology

Regardless of the choice of data system or protocol, new standards, definitions, and taxonomies for terminology are an essential first phase for improved data systems. Several steps are critical to accomplish the desired changes:

- Reorganize the current occupation categories of workers into more homogeneous groups based on the kinds of tasks, roles, and functions they perform, e.g., aides, orderlies, and attendants, and not the settings in which they work.
- Establish standard definitions for important workforce terms like turnover rates, vacancy rates, and recruiting yield.
- Incorporate the new definitions into all Federal data systems, especially the ES-202, OES, and CPS.
- Encourage State agencies to adopt the terminology and definitions in State and local data systems.

More Timely Data

Timely data is important to planners and policymakers. New or existing systems must provide faster turnaround of workforce data to users and stakeholders. Significant improvements in turnaround times for existing systems may require substantial additional resources. A sufficiently streamlined system, i.e., with minimal numbers of data elements, could probably be designed to yield fast turnaround without adding dramatically to the costs of either design or operation.

In addition, consideration should be given to collecting the following data from employers about their direct care workers:

- Hourly pay
- Percentage of full time workers

- Average number of hours worked weekly/annually by part-time workers
- Eligibility criteria for health insurance
- Percentage using employer's health insurance
- Turnover rates
- Vacancy rates
- Other benefits offered and used
- Number of hours of initial and ongoing training
- Ratio of workers to direct supervisors
- Number of workers using public supports and of what kind
- Demographics of workers including:
  - Gender
  - Age
  - Education
  - Marital status
  - Number children at home
  - First language
  - Country of birth
  - Number of adults employed in household

Federal and State Initiatives

Because the quality and timeliness of workforce data is a national problem affecting every state, it is important that Federal and State responses be part of the solution. This is especially important to monitor the extent of problems and the impact of any initiatives undertaken to correct the problems. Several initiatives are possible:

Upgrade and Augment CNA Registries

Augmenting existing CNA registries to include additional types of facilities and workers is an important option for addressing the workforce data problems this study identified. Although this represents a major undertaking for all 50 states, if developed centrally under a federally funded initiative, development costs should be minimal. On a per patient/client basis, the operating costs should be relatively low. Part of this system should be the preparation of an annual snapshot of the long-term care paraprofessional workforce in each participating state. Improvements are possible in several broad areas:

- A minimum dataset required for effective workforce planning should be defined to serve as the basis of an ongoing master database.
- Additional categories of direct care paraprofessionals should be included in the registries, especially HHAs and PCAs.
- Additional types of long-term care facilities could be covered by the registry, especially home health agencies and assisted living facilities. It may also be appropriate to add hospices, staffing agencies, mental retardation and disability facilities, and adult residences.

- Functionality should allow developing accurate snapshot counts of all long-term care paraprofessionals in a State by type of worker and type of facility.
- Procedures should allow deleting people from the registries when they are no longer actively delivering services to clients in a nursing home or other long-term care organization.
- Periodic reports (at least annual) should document the numbers of different types of long-term care paraprofessionals working in each state, with selected demographic information, e.g., age and gender, and employment information, e.g., length of employment and number of jobs held on the census day.
- Processes for aggregating data at multiple levels should be established. The levels should include at least provider organization, state, and national totals.

This solution is even more attractive when considered in the context of the new HIPAA requirements for registering direct care workers. Implementing the corresponding HIPAA rules and regulations will require substantial resources, which could offset the costs of developing new workforce-related capabilities in existing CNA registries. At the very least, consideration should be given to workforce planning and policymaking when designing any new HIPAA registries.

There should also be consideration of coordinating databases across states to help track people with criminal backgrounds. This would greatly facilitate reciprocity agreements and mobility of workers. Perhaps more important, it would be a cornerstone in ensuring that suitable workers are employed in nursing homes, home health agencies, and other health care organizations.

Identify Best Practices

The problems identified in this study have existed in one form or other for a number of years. Although no uniform solutions have been developed for all 50 states, a number of states have developed responses, some of which deserve wider recognition and adoption. State and local programs and initiatives that have resulted in significant improvements should be sought out, identified, and shared with interested parties. Criteria should be developed with which to assess the value/performance of these procedures, and "best practices" should be identified and shared. This process would greatly speed the dissemination of effective practices, saving millions of dollars at the same time it improves practices and standardizes procedures across the 50 states.

Demonstration Projects

If there are questions about the best strategies for implementing the kinds of changes needed to improve registries and other data systems, consideration should be given to conducting one or more demonstration projects to test options and document effective state-level systems, procedures, and implementation protocols. Presentations should showcase practices and processes identified as especially effective.

Additional Workforce Components for Other Federal Systems

In general, it is important to keep workforce issues in mind when designing any modifications to Federal databases related to health care delivery. Definitions and taxonomies used for each type of facility/agency should be consistent so that workers of different types and levels can be aggregated across the entire long-term care system.

Fast Response Long-Term Care Workforce Data System

Although it is not the first choice for improving data on the long-term care paraprofessional workforce, a "Fast Response Long-Term Care Workforce Data System" could be a useful tool

for any state. By using relatively simple data collection instruments, e.g., the questionnaire proposed in Appendix B, it would be possible to collect useful data from facilities and agencies using standard definitions to permit sharing and comparing of data across states. An important component of the system would be a set of standard reports and tabulations to be shared quickly with policymakers and the public to clarify the nature and extent of any problems and to assess the impact of any initiatives to correct problems.

Adoption of Standard Terminology, Definitions, and Taxonomies

Standard terminology for the long-term care paraprofessional workforce is important for both State and Federal agencies. Ideally, this will be done as part of a broader mandate to facilitate state-to-state sharing and comparisons. This will facilitate comparisons among the facilities within the State and comparisons across states adopting the same terminology, definitions, and taxonomies.

Support from Provider Organizations and/or Professional Associations

Professional associations of long-term care provider organizations are an important source of information in most states. States should encourage these organizations to collect, process, analyze, and disseminate data on long-term care paraprofessionals using standard terminology and definitions in formats that inform policy discussions and debates.

Special attention should be given to improving systems for internal use of data and reporting to government agencies. Meetings with nursing homes and home health agencies in several states have revealed that access to relevant and timely internal workforce data often results in improved recruiting and retention performance. Agencies with accurate data generally understand better the nature of their workforce problems; workforce composition and performance; and the impact of different initiatives to improve retention and recruiting. These organizations often have lower attrition and better recruiting than their counterparts without the data.

This is an area where the identification of best practices would be especially helpful. A special project funded to identify especially effective systems, processes, and projects in individual long-term care facilities would be an appropriate initiative for a State to consider. All of this can help to strengthen these facilities, so they can better serve their clients.

Factors Important for Projecting Future Supply and Demand

The task of developing accurate and reliable projections for the supply of and demand for long-term care paraprofessionals is not a trivial one. Many factors affect this segment of the workforce, and their impact has not been studied carefully. Researchers interested in developing projection models should be aware of these factors and, where possible, take them into account when designing their models.

The reaction of most of this study's informants to the BLS projections for nurse aides and related occupations is that they need estimates of need and demand which take into account the availability of workers to fill positions. Most felt that it is highly unlikely that there will be enough workers available to come close to achieving the BLS projections for 2010. Another major concern about the BLS projections is that they are available for only large geographic units, i.e., entire states.

Given the difficulty of developing accurate projections for the future supply of and demand for long-term care paraprofessionals, it is interesting to consider some of the factors that can influence supply and demand. The discussion that follows identifies these factors and suggests the nature of their impact over the next decade or so. The factors fall into one of two categories:

exogenous factors over which policymakers have little or no control [E] and policy levers over which policymakers may have significant control [P].

The Economy and General Unemployment [E]

A strong economy with low unemployment generally leads to difficulty recruiting and retaining direct care paraprofessional workers who have more employment options. The strong economy in the late 1990s made it very difficult for many long-term care organizations, especially home health agencies, to recruit aides and assistants. Many hypothesize that the recent downturn in the economy will improve the ability of nursing homes, home health agencies, and other organizations to recruit workers. Early anecdotes suggest that some improvements in recruiting have already occurred.

Compensation of Workers [P]

Many informants have concluded that a major deterrent to recruiting new long-term care paraprofessionals is compensation. Salaries of long-term care paraprofessionals are low, often just over minimum wage, and fringe benefits are rare. Compounding the problem is that these workers are much more likely than those in most industries to be part-time/part-year workers. This also results in inflated annual wage estimates in situations where standardized estimates are based on multiplying hourly wages by 2080 hours per year. Thus policymakers often base decisions on inflated wage estimates from government agencies.

Generally speaking, respondents assumed higher wages and better fringe benefits result in easier recruiting and higher retention, but research has not been done to calibrate the impact of different wage and fringe benefits structures.

Treatment of Workers [P]

Several studies have shown that, as important as compensation is for attracting and retaining workers, many believe that mature treatment of workers by supervisors is even more important for a significant proportion of workers. Retention could be improved dramatically if managers did more to respect their subordinates, especially those in the lower income groups. This is clearly a factor driven by individual facilities and managers, so it is difficult to assign a numerical score.

Over the last decade there has been a movement toward patient-centered care, parallel to the movement toward worker-centered care. Evidence is mounting that patient-centered and worker-centered care reinforce each other and that a combination of the two is the best situation for both patients and workers.

Unionization [P]

Unions have traditionally provided recourse for workers seeking to improve working conditions and compensation in their respective workplaces. There are a growing number of examples of unions helping long-term care paraprofessionals to gain wage increases relative to their nonunion counterparts. The efforts of Local 1199 in New York City and the recent unionization of thousands of home- and community-based workers in California are two examples. To the extent that these and other unions are successful in improving working conditions and wages, one can expect them to expand their membership and influence.

Population Demographics [E]

The aging of the population now underway will almost certainly result in increased demand for long-term care services and programs. The real impact of these demographic changes will not occur until after 2010, when the baby boom generation begins to reach the age of 65. This

situation requires careful research to understand concurrent trends like the changing economic status of elderly, changing health status of the elderly, and effectiveness of new technologies and pharmaceuticals in diagnosing and treating illnesses and injuries.

The demographics of the long-term care workforce must also be taken into account. The groups that currently provide the largest share of services in nursing homes and home health agencies are women between 25 and 54, a population group projected to grow much more slowly than the populations they serve over the next two decades.

New Medical Technologies and Medications [E]

In the past, medical technologies and medications have been major engines for improving medical results, and they are expected to continue to be so in the future. Here, too, it is impossible to project with certainty the numerical impact of these factors on the paraprofessional supply and demand. The general expectation is that they will improve health care, which would delay the demand for some health care services. However, elderly people whose conditions improve from medical advances will eventually experience aging-related difficulties.

Reimbursement Rates and Criteria [P]

Government and third-party reimbursement is a critical driving force for the entire long-term care industry. Thus, reimbursement policies and rates are critical factors in determining both the supply of and demand for workers. On the supply side, reimbursement is based in part on, and supports the payment of, paraprofessional salaries and wages. On the demand side, reimbursement policies determine the sets of services patients and residents can receive for reduced out-of-pocket rates. It is important to keep in mind that, over time, demand for services is reduced by cost containment initiatives as both patients and their care providers stop seeking services for which adequate reimbursement is not provided.

Current government policies are driven in large part by the desire to reduce health care costs. If that trend continues, it is unlikely to have any significant impact on either the supply of or demand for workers.

Changing Illness Patterns [E]

As people live longer, the incidence and prevalence of disease can change, which can impact worker supply and demand. This is another area in which more research is necessary to estimate the impact numerically. Disease resistance to medications must also be considered. It is hard to predict the magnitude and sometimes even the direction of the impact of such epidemiological factors.

Worker Education and Training Programs [P]

Currently, direct care paraprofessionals are required to be formally trained in a variety of procedures and techniques prior to employment in a nursing home, home health agency, or other provider organization. Changes in the education requirement can have a significant impact on the availability of new workers. Increased education requirements will tend to discourage some workers from participating in the workforce. It will also add to the delay that already exists for adding new workers to the workforce, even if it improves the quality of services to the public.

Current discussions around the theme of developing better career tracks for these workers may help attract additional workers into the system. Unfortunately, without better data systems it will be difficult to test any hypotheses in this arena.

Government Regulation [P]

If the current trend toward increasing licensing and certification requirements for these workers continues, it could discourage some candidates from entering the direct care paraprofessional workforce, especially if appropriate funding is not available for additional education and record keeping requirements. On the other hand, clearer, more coordinated career tracks could attract more workers into the system. The attraction could be even greater if the new requirements increase portability of credentials and cross training of workers for different occupations.

In any case, it is not easy to quantify the likely impact of different regulatory changes on the supply of and demand for workers. This is another area that requires additional research.

New Models of Care and Service [P]

Patient-centered care is more and more common in nursing homes and home health agencies across the country. Generally speaking, the expectation is that this will make the long-term care workplace more humane for both patients and workers, which could promote increased success in recruiting and retaining workers.

Gray Market for Services [E]

The informal care system includes services provided by family members, volunteers, other unpaid workers, and paid workers outside the formal system. These gray market workers provide large amounts of service that is not well documented or understood. Two countervailing trends that will impact this situation are the smaller numbers of people positioned to help the elderly and the possibility of government reimbursement to unpaid workers in an attempt to provide incentives for greater participation in this kind of service. Neither of these situations is well understood, and both require more research.

Immigration Policies [P]

Immigrants, especially women, are an important source of paraprofessional workers in the long-term care industry. These individuals are often more acculturated to the demands of and needs for personal care services by parents than are most U.S. natives. They are also more willing to work for the relatively low wages currently paid for such services. Changes in immigration laws and rules could have a major impact on the supply of these workers.

The changes most often discussed involve relaxation of restrictions to permit easier immigration for people willing to work as long-term care paraprofessionals. It is important to keep in mind that looser immigration policies would add to the burdens on other social service programs, since immigrants tend to use these services more than U.S. natives.

Competition for Workers from Other Industries [E]

Several other industries compete directly with long-term care organizations for entry-level workers. They include fast food chains, retail stores, and financial institutions. As long as the skill and competency requirements for entry-level workers remain roughly the same or change in parallel, then this factor will probably have little impact on recruiting and retaining workers. However, should one industry decide to break from tradition by increasing wages significantly, it could have a significant impact on the workforce and the choices that recruits and workers make.

It is important to keep in mind that there is also competition for these workers within the health care industry. Hospitals, nursing homes, home health agencies, and other health care organizations are all recruiting from the same labor pool. There is also competition between for-profit and not-for-profit organizations in the same segments of the health care system.

Appendix A. Project Advisory Committee

This appendix lists the members of the project advisory committee and project staff.

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Appendix B. Proposed State Data Collection Instrument

This appendix shows the proposed state data collection instrument.

Draft Instrument: Numbers of Direct Care Workers on Staff, July 1, 2001

Please see definitions on next page. Please print titles/names for Other categories.

Responses to this survey will be anonymous. Only totals and averages will be provided in reports and tabulations.

Type of Organization (check the ones that apply)

- ☐ Hospital, Acute Care
- ☐ Hospital, Psychiatric
- ☐ Hospital, Rehabilitation
- ☐ Skilled Nursing Facility
- ☐ Assisted Living Facility/Adult Home
- ☐ Group Home
- ☐ Adult Day Care
- ☐ Hospice
- ☐ Certified Home Health Agency
- ☐ Licensed Home Health Agency
- ☐ Mental Health Agency
- ☐ Developmental Disability Agency
- ☐ Other: _____

Class of Direct Care Worker	Number Employed on 715/01			Vacancies on 7/15/01		Ave # Pts in 7/01	Pts Turned Away in July '01 Due to Worker Shortage
	Full Time	Part Time	FTE	Full Time	Part Time		
Licensed							
Registered Nurse							
Licensed Practical Nurse							
Other Licensed Worker: _____							
Unlicensed							
Certified Nurse Aide/Assistant							
Developmental Disability Aide							
Psychiatric Aide/Assistant							
Medication Aide/Assistant							
Geriatric Aide/Assistant							
Home Health Aide							
Personal Care Aide							
Attendant							
Orderly							
Homemaker							
Other Unlicensed Worker: _____							

Center for Health Workforce Studies, 9/01

NOTES:

This instrument will be offered as a "last resort" or "supplemental" option if desired changes in data collection do not occur at the national level. It offers a low-cost way of gathering data on the direct care workforce; and to the extent that states adopt the "standard definitions", it should be possible for them to compare data across state lines.

The definitions will be added later.

Appendix C. Occupational and Industry Definitions

This appendix presents official categories and definitions for occupations and industries relevant to the long-term care paraprofessional workforce used in different national data systems. Policy analysts interested in comparing data across these systems should understand the differences in categories and definitions that may be involved. Separate sections are presented for occupations and industries.

Occupations

2000 Standard Occupational Classification (SOC)

21-1093: Social and Human Service Assistants

This group assists professionals from a wide variety of fields, such as psychology, rehabilitation, or social work, to provide client services, as well as support for families. It may assist clients in identifying available benefits and social and community services and help clients obtain them. It may assist social workers with developing, organizing, and conducting programs to prevent and resolve problems relevant to substance abuse, human relationships, rehabilitation, or adult day care. It excludes "rehabilitation counselor", "personal and home care aide", eligibility interviewers, government programs", and "psychiatric technicians."

31-1011: Home Health Aides

This group provides routine, personal health care, such as bathing, dressing, or grooming, to elderly, convalescent, or disabled persons in the home of patients or in a residential care facility.

31-1012: Nursing Aides, Orderlies, and Attendants

This group provides basic patient care under direction of nursing staff. Perform duties, such as feed, bathe, dress, groom, or move patients, or change linens. It excludes home health aides (31-1011) and psychiatric aides (31-1013).

31-1013: Psychiatric Aides

This group assists mentally impaired or emotionally disturbed patients, working under direction of nursing and medical staff.

39-9021: Personal and Home Care Aides

This group assists elderly or disabled adults with daily living activities at the person's home or in a daytime non-residential facility. Duties this group performs at a place of residence may include keeping house (making beds, doing laundry, washing dishes) and preparing meals. It may provide meals and supervised activities at non-residential care facilities. It may also advise families, the elderly, and disabled on such things as nutrition, cleanliness, and household utilities.

Occupational Classification System Manual/1990 Census Occupation Classification

K446: Health Aides, Except Nursing

This group excludes physician's assistants. It is involved in performing various duties under the direction of trained medical practitioners, such as mixing pharmaceutical preparations, issuing medicines, labeling and storing supplies, assisting during physical examinations of patient, giving specified office treatments, keeping patients' records, preparing treatment room, maintaining inventory of supplies and instruments; and preparing, bottling, and sterilizing infant formulas. It may also assist in physical and other therapy. Workers may be designated as therapy aides, clinical laboratory aides, formula mixer, etc.

K447: Nursing Aides, Orderlies, and Attendants

This group excludes licensed practical nurses. It is involved in providing auxiliary services in the care of patients. It may bathe patients, record temperature and respiration rate. Other activities include answering patients' call bells, serving and collecting food trays, feeding patients and performing other routine tasks. Orderlies are primarily concerned with the care of male patients, setting up of equipment, and relieving of heavier work.

K465: Welfare Service Aides

This group excludes social workers and eligibility clerks. It includes workers in occupations involved in going to the home or other place of residence to perform tasks agreed upon by the family, the professional supervisor, and the aide. Duties may include keeping house, caring for children, the handicapped, the ill or the aged. Workers may be caseworker aides, community aide, blind aides, etc.

1980 Standard Occupational Classification

5233: Health Aides, Except Nursing

This group includes occupations involving performing various duties under the direction of trained medical practitioners, such as mixing pharmaceutical preparations, issuing medicines, labeling and storing supplies; assisting during physical examination of patients, giving specified office treatments, and keeping patients' records; preparing treatment room, inventory of supplies and instruments; preparing, bottling, and sterilizing infant formulas. It may also assist in physical and other therapy treatment.

5236: Nursing Aides, Orderlies, and Attendants

This group includes occupations involving providing auxiliary services in the care of patients. Activities include: answering patients' call-bells, serving and collecting food trays, feeding

patients, and performing other routine tasks. Orderlies are primarily concerned with the care of male patients, setting up of equipment, and relieving nurses of heavier work.

5263: Welfare Service Aides

This group includes occupations involving going into the home or other place of residence to perform tasks agreed to by the family, the professional supervisor and the aide. Duties may include keeping house; caring for children, the handicapped, the ill, or the aged. (Services required to help provide and maintain normal bodily and emotional comforts and to assist the patient toward independent living in a safe environment.)

Industries

North American Industry Classification System (NAICS)

Subsector 561: Administrative and Support Services

561310: Employment Placement Agencies

This industry comprises establishments primarily engaged in listing employment vacancies and in referring or placing applicants for employment. The individuals referred or placed are not employees of the employment agencies.

561320: Temporary Help Services

This industry comprises establishments primarily engaged in supplying workers to clients' businesses for limited periods of time to supplement the working force of the client. The individuals provided are employees of the temporary help service establishment. However, these establishments do not provide direct supervision of their employees at the clients' work sites.

561330: Employee Leasing Services

This industry comprises establishments primarily engaged in providing human resources and human resource management services to staff client businesses. Establishments in this industry operate in a co-employment relationship with client businesses or organizations and are specialized in performing a wide range of human resource and personnel management duties, such as payroll accounting, payroll tax return preparation, benefits administration, recruiting, and managing labor relations.

Subsector 621: Ambulatory Health Care Services

621490: Other Outpatient Care Centers

This industry comprises establishments with medical staff primarily engaged in providing general or specialized outpatient care (except family planning centers and outpatient mental health and substance abuse centers). Centers or clinics of health practitioners with different degrees from more than one industry practicing within the same establishment are included in this industry.

621510: Medical and Diagnostic Laboratories

This industry comprises establishments known as medical and diagnostic laboratories primarily engaged in providing analytic or diagnostic services, including body fluid analysis and diagnostic imaging, generally to the medical profession or to the patient on referral from a health practitioner.

621610: Home Health Care Services

This industry comprises establishments primarily engaged in providing skilled nursing services in the home, along with a range of the following: personal care services; homemaker and companion services; physical therapy; medical social services; medications; medical equipment and supplies; counseling; 24-hour home care; occupation and vocational therapy; dietary and nutritional services; speech therapy; audiology; and high-tech care, such as intravenous therapy.

Subsector 622: Hospitals

622110: General Medical and Surgical Hospitals

This industry comprises establishments known and licensed as general medical and surgical hospitals primarily engaged in providing diagnostic and medical treatment (both surgical and non-surgical) to inpatients with any of a wide variety of medical conditions. These establishments maintain inpatient beds and provide patients with food services that meet their nutritional requirements. These hospitals have an organized staff of physicians and other medical staff to provide patient care services. These establishments usually provide other services, such as outpatient services, anatomical pathology services, diagnostic X-ray services, clinical laboratory services, operating room services for a variety of procedures, and pharmacy services.

622210: Psychiatric and Substance Abuse Hospitals

This industry comprises establishments known and licensed as psychiatric and substance abuse hospitals primarily engaged in providing diagnostic, medical treatment, and monitoring services for inpatients who suffer from mental illness or substance abuse disorders. The treatment often requires an extended stay in the hospital. These establishments maintain inpatient beds and provide patients with food services that meet their nutritional requirements. They have an organized staff of physicians and other medical staff to provide patient care services. Psychiatric, psychological, and social work services are available at the facility. These hospitals usually provide other services, such as outpatient services, clinical laboratory services, diagnostic X-ray services, and electroencephalograph services.

622310: Specialty (Except Psychiatric and Substance Abuse) Hospitals

This industry consists of establishments known and licensed as specialty hospitals primarily engaged in providing diagnostic and medical treatment to inpatients with a specific type of disease or medical condition (except psychiatric or substance abuse). Hospitals providing long-term care for the chronically ill and hospitals providing rehabilitation, restorative, and adjustive services to physically challenged or disabled people are included in this industry. These establishments maintain inpatient beds and provide patients with food services that meet their nutritional requirements. They have an organized staff of physicians and other medical staff to provide patient care services. These hospitals may provide other services, such as outpatient services, diagnostic X-ray services, clinical laboratory services, operating room services, physical therapy services, educational and vocational services, and psychological and social work services.

Subsector 623: Nursing and Residential Care Facilities

623110: Nursing Care Facilities

This industry comprises establishments primarily engaged in providing inpatient nursing and rehabilitative services. The care is generally provided for an extended period of time to individuals requiring nursing care. These establishments have a permanent core staff of

registered or licensed practical nurses w ho, along with other staff, provide nursing and continuous personal care services.

623210: Residential Mental Retardation Facilities

This industry comprises establishments (e.g., group homes, hospitals, intermediate care facilities) primarily engaged in providing residential care services for persons diagnosed with mental retardation. These facilities may provide some health care, though the focus is room, board, protective supervision, and counseling.

623220: Residential Mental Health and Substance Abuse Facilities

This industry comprises establishments primarily engaged in providing residential care and treatment for patients with mental health and substance abuse illnesses. These establishments provide room, board, supervision, and counseling services. Although medical services may be available at these establishments, they are incidental to the counseling, mental rehabilitation, and support services offered. These establishments ge nerally provide a wide range of social services in addition to counseling.

623311: Continuing Care Retirement Community

This industry comprises establishments primarily engaged in providing a range of residential and personal care services with on-site nursing care facilities for (1) the elderly and other persons who are unable to fully care for themselves and/or (2) the elderly and other persons who do not desire to live independently. Individuals live in a variety of residential settings with meals, housekeeping, social, leisure, and other services available to assist residents in daily living. Assisted-living facilities with on-site nursing care facilities are included in this industry.

623312: Homes for the Elderly

This industry comprises establishments primarily engaged in providing residential and personal care services, i.e., without on-site nursing care facilities, for (1) the elderly or other persons who are unable to fully care for themselves and/or (2) the elderly or other persons who do not desire to live independently. The care typically includes room, board, supervision, and assistance in daily living, such as housekeeping services.

623990: Other Residential Care Facilities

This industry comprises establishments primarily engaged in providing residential care (except residential mental retardation facilities, residential health and substance abuse facilities, continuing care retirement communities, and homes for the elderly). These establishments also provide supervision and personal care services.

Subsector 624: Social Assistance

624110: Child and Youth Services

This industry comprises establishments primarily engaged in providing nonresidential social assistance services for children and youth. These establishments provide for the welfare of children in such areas as adoption and foster care, drug prevention, life skills training, and positive social development.

624120: Services for the Elderly and Persons with Disabilities

This industry comprises establishments primarily engaged in providing nonresidential social assistance services to improve the quality of life for the elderly, persons with mental retardation, or persons with disabilities. These establishments provide for the welfare of these of individuals

in such areas as day care, non-medical home care or homemaker services, social activities, group support, and companionship.

624190: Other Individual and Family Services

This industry comprises establishments primarily engaged in providing nonresidential individual and family social assistance services (except those specifically directed toward children, the elderly, persons diagnosed with mental retardation, or persons with disabilities).

624210: Community Food Services

This industry comprises establishments primarily engaged in the collection, preparation, and delivery of food for the needy. Establishments in this industry may also distribute clothing and blankets to the poor. These establishments may prepare and deliver meals to persons who by reason of age, disability, or illness are unable to prepare meals for themselves; collect and distribute salvageable or donated food; or prepare and provide meals at fixed or mobile location.

624220: Community Housing Services

This industry comprises establishments primarily engaged in providing one or more of the following community housing services: (1) short term emergency shelter for victims of domestic violence, sexual assault, or child abuse; (2) temporary residential shelter for the homeless, runaway youths, and patients and families caught in medical crises; (3) transitional housing for low-income individuals and families; (4) volunteer construction or repair of low cost housing, in partnership with the homeowner who may assist in construction or repair work; and (5) repair of homes for elderly or disabled homeowners. These establishments may operate their own shelter; or may subsidize housing using existing homes, apartments, hotels, or motels; or may require a low-cost mortgage or work (sweat) equity.

624230: Emergency and Other Relief Services

This industry comprises establishments primarily engaged in providing food, shelter, clothing, medical relief, resettlement, and counseling to victims of domestic or international disasters or conflicts.

624310: Vocational Rehabilitation Services

This industry comprises (1) establishments primarily engaged in providing vocational rehabilitation or habilitation services, such as job counseling, job training, and work experience, to unemployed and underemployed persons, persons with disabilities, and persons who have a job market disadvantage because of lack of education, job skill or experience and (2) establishments primarily engaged in providing training and employment to persons with disabilities.

Subsector 814: Private Households

814110: Private Households

This industry comprises private households primarily engaged in employing workers on or about the premises in activities primarily concerned with the operation of the household. These private households may employ individuals, such as cooks, maids, nannies, and butlers, and outside workers, such as gardeners, caretakers, and other maintenance workers.

Standard Industrial Classification (SIC)

Industry Group 736: Personnel Supply Services

7361: Employment Agencies

These are establishments primarily engaged in providing employment services, except theatrical employment agencies and motion picture casting bureaus. Establishments classified here may assist either employers or those seeking employment.

7363: Help Supply Services

These are establishments primarily engaged in supplying temporary or continuing help on a contract or fee basis. The help supplied is always on the payroll of the supplying establishments, but is under the direct or general supervision of the business to which the help is furnished. Establishments that provide both management and staff to operate a business are classified according to the type of activity of the business.

Industry Group 805: Nursing and Personal Care Facilities

8051: Skilled Nursing Care Facilities

These are establishments primarily engaged in providing inpatient nursing and rehabilitative services to patients who require continuous health care, but not hospital services. Care must be ordered by and under the direction of a physician. The staff must include a licensed nurse on duty continuously with a minimum one full-time registered nurse on duty during each day shift. Included are establishments certified to deliver skilled nursing care under the Medicare and Medicaid programs.

8052: Intermediate Care Facilities

These are establishments primarily engaged in providing inpatient nursing and rehabilitative services, but not on a continuous basis. Staffing must include 24-hour per day personnel with a licensed nurse on duty full-time during each day shift. At least once a week, consultation from a registered nurse on the delivery of care is required. Included are facilities certified to deliver intermediate care under the Medicaid program.

8059: Nursing and Personal Care Facilities, NEC.

These are establishments primarily engaged in providing some nursing and/or health-related care to patients who do not require the degree of care and treatment that a skilled or intermediate care facility is designed to provide. Patients in these facilities, because of their mental or physical condition, require some nursing care, including the administering of medications and treatments or the supervision of self-administered medications in accordance with a physician's orders.

Industry Group 806: Hospitals

8062: General Medical and Surgical Hospitals

These are establishments primarily engaged in providing general medical and surgical services and other hospital services.

8063: Psychiatric Hospitals

These are establishments primarily engaged in providing diagnostic medical services and inpatient treatment for the mentally ill.

8069: Specialty Hospitals, Except Psychiatric

These are establishments primarily engaged in providing diagnostic services, treatment, and other hospital services for specialized categories of patients, except mental.

Industry Group 807: Medical and Dental Laboratory

8071: Medical Laboratory

These are establishments primarily engaged in providing professional analytic or diagnostic services to the medical profession, or to the patient on prescription of a physician.

8072: Dental Laboratories

These are establishments primarily engaged in making dentures, artificial teeth, and orthodontic appliances to order for the dental profession.

Industry Group 808: Home Health Care Services

8082: Home Health Care Services

These are establishments primarily engaged in providing skilled nursing or medical care in the home, under supervision of a physician.

Industry Group 809: Miscellaneous Health And Allied Services, NEC.

8092: Kidney Dialysis Centers

These are establishments primarily engaged in providing kidney or renal dialysis services.

8093: Specialty Outpatient Facilities, NEC.

These are establishments primarily engaged in outpatient care of a specialized nature with permanent facilities and with medical staff to provide diagnosis, treatment, or both for patients who are ambulatory and do not require inpatient care.

8099: Health and Allied Services, NEC.

These are establishments primarily engaged in providing health and allied services, not elsewhere classified.

Industry Group 832: Individual and Family Social Services

8322: Individual and Family Social Services

These are establishments primarily engaged in providing one or more of a wide variety of individual and family social, counseling, welfare, or referral services, including refugee, disaster, and temporary relief services. This industry includes offices of specialists providing counseling, referral, and other social services. Government offices directly concerned with the delivery of social services to individuals and families, such as issuing of welfare aide, rent supplements, food stamps, and eligibility casework, are include here, but central office administration of these programs is classified in Public Administration (9441).

Industry Group 833: Job Training and Vocational Rehabilitation

8331: Job Training and Vocational Rehabilitation Services

These are establishments primarily engaged in providing manpower training and vocational rehabilitation and habilitation services for the unemployed, the underemployed, the handicapped, and to persons who have a job market disadvantage because of lack of education, job skill or experience.

Industry Group 836: Residential Care

8361: Residential Care

These are establishments primarily engaged in the provision of residential social and personal care for children, the aged, and special categories of persons with some limits on ability for self-care, but where medical care is not a major element.

Industry Group 881: Private Households

8811: Private Households

These are private households that employ workers who serve on or about the premises in occupations usually considered as domestic services.

1990 Census Industry Classification

731: Personnel Supply Services

This group includes employment agencies, executive placing services, headhunter services, labor pools, registries, and temporary employment agencies.

761: Private Households

This group includes baby-sitting, childcare, church rectory, domestic service, general housework, home care, house sitting, patient sitting, private family, summer estate, private yacht.

831: Hospitals

This group includes hospitals (children's, city, state, college, community, general, mental, psychiatric, HMO, clinic, laundry, orthopedic, osteopathic, military), infirmaries, and medical centers.

832: Nursing and Personal Care Facilities

This group includes alcoholic sanitaria, convalescent homes, curative baths, epileptic colonies, geriatric care facilities, health camps, nursing homes, hospices, institutions for mentally retarded, medical spas, rest homes, sanitaria, retirement homes, spastic homes, veterans domiciliary centers.

840: Health Services, NEC.

This group includes abortion clinics, behavior clinics, biological/medical laboratories, blood banks, cerebral palsy centers, dental laboratories, diagnostic imaging laboratories, dialysis centers, dietitian services, eye training clinics, health consulting organizations, home health care services, mental health clinics, occupational therapy providers, organ banks, out-patient clinics for substance abuse, physical therapy facilities, speech defect clinics, x-ray offices.

861: Job Training and Vocational Rehabilitation Services

This group includes vocational rehabilitation facilities, job corps, sheltered workshops, and training centers for retarded adults.

870: Residential Care Facilities, Without Nursing

This group includes after-care homes, boarding homes, boys' town facilities, homeless shelters, children's communities, detention homes, halfway houses, orphanages, drug rehabilitation centers, foster homes, homes and institutions without medical or nursing care, maternity homes, retirement homes without nursing, veterans homes.

871: Social Services, NEC.

This group includes adoption agencies, block associations, child welfare facilities, community centers, crisis hotlines, adult day care facilities, family services, homemaker services, philanthropic organizations, senior centers, social services, suicide prevention centers, welfare agencies.

Appendix D. Sample Data

This appendix contains sample data for:

- Occupational Employment Statistics
- Current Population Survey
- CPS March Supplement
- National Compensation Survey
- Employment Projections
- Survey of Occupational Injuries and Illnesses

Occupational Employment Statistics

Table D-1 Home Health Aides Employment and Wages in 2000 by Industry Group

SIC	SIC title	Estimated total employment	% employment by industry	Hourly mean wage	Hourly median wage	Annual mean wage
651	Real Estate Operators (Exc Developers) and Lessors	1,730	0.30	7.70	7.12	16,010
673	Trusts	170	0.00	12.87	13.53	26,700
702	Rooming and Boarding Houses	160	0.00	9.27	9.28	19,270
729	Miscellaneous Personal Services	1,060	0.19	7.63	7.65	15,920
736	Personnel Supply Services	44,450	7.90	9.03	8.60	18,780
801	Offices and Clinics of Doctors of Medicine	3,980	0.70	10.35	9.89	21,520
804	Offices and Clinics of Other Health Practitioners	310	0.01	9.80	9.87	20,380
805	Nursing and Personal Care Facilities	31,250	5.60	8.81	8.65	18,320
806	Hospitals	27,110	4.80	9.38	8.83	19,520
808	Home Health Care Services	189,990	33.80	8.14	7.91	16,930
809	Miscellaneous Health and Allied Services, nec.	3,110	0.60	8.09	7.85	16,820
821	Elementary and Secondary Schools	na*	na*	8.76	8.52	18,220
832	Individual and Family Social Services	74,040	13.20	7.94	7.89	16,520
833	Job Training and Vocational Rehabilitation	10,310	1.80	8.89	8.32	18,480
836	Residential Care	128,770	22.90	8.36	8.16	17,390
839	Social Services, not elsewhere classified	1,550	0.30	8.27	8.10	17,190
864	Civic, Social, and Fraternal Associations	380	0.10	8.49	7.65	17,670
866	Religious Organizations	160	0.00	11.28	9.59	23,450
874	Management and Public Relations Services	1,970	0.40	8.03	7.83	16,710
902	State Government (OES designation)	26,090	4.60	14.94	15.17	31,080
903	Local Government (OES designation)	11,110	2.00	9.04	8.94	18,800
	Total/Average	**561,120**	**100.00**	**8.23**	**8.71**	**18,110**

Percentile estimates	10%	25%	50%	75%	90%
Hourly wage	$6.14	$7.13	$8.23	$9.88	$11.93
Annual wage	$12,770	$14,840	$17,120	$20,540	$24,810

Source: http://stats.bls.gov/oeshome.htm *Estimates not released due to high relative standard error

Table D-2. Nursing Aides, Orderlies, and Attendants Employment and Wages in 2000 by Industry Group

SIC	SIC title	Estimated total employment	% employment by industry	Hourly mean wage	Hourly median wage	Annual mean wage
632	Accident and Health Insurance and Medical	350	0.0%	$7.80	$6.78	$16,220
651	Real Estate Operators (Except Developers) and Lessors	4,240	0.3%	$8.77	$8.71	$18,240
653	Real Estate Agents and Managers	1,250	0.1%	$7.66	$7.64	$15,930
702	Rooming and Boarding Houses	120	0.0%	$7.45	$6.85	$15,490
729	Miscellaneous Personal Services	430	0.0%	$7.16	$6.70	$14,890
736	Personnel Supply Services	53,430	4.2%	$10.04	$9.82	$20,880
801	Offices and Clinics of Doctors of Medicine	12,810	1.0%	$9.50	$9.23	$19,760
803	Offices and Clinics of Doctors of Osteopathy	240	0.0%	$10.32	$9.05	$21,470
804	Offices and Clinics of Other Health Practitioners	5,280	0.4%	$8.63	$8.41	$17,960
805	Nursing and Personal Care Facilities	654,640	51.4%	$8.86	$8.61	$18,430
806	Hospitals	334,580	26.3%	$9.64	$9.42	$20,040
807	Medical and Dental Laboratories	350	0.0%	$9.47	$9.38	$19,690
808	Home Health Care Services	33,980	2.7%	$8.36	$7.96	$17,380
809	Miscellaneous Health and Allied Services, nec.	7,200	0.6%	$10.08	$9.79	$20,970
821	Elementary and Secondary Schools	680	0.0%	$8.31	$8.22	$17,280
822	Colleges, Universities, Professional Schools, and Junior Colleges	3,650	0.3%	$9.31	$9.17	$19,370
832	Individual and Family Social Services	6,780	0.5%	$8.18	$7.88	$17,010
833	Job Training and Vocational Rehabilitation	1,770	0.1%	$8.28	$8.05	$17,220
835	Child Day Care Services	60	0.0%	$8.27	$8.03	$17,200
836	Residential Care	56,810	4.5%	$8.17	$7.96	$16,990
864	Civic, Social, and Fraternal Associations	140	0.0%	$8.06	$7.71	$16,760
866	Religious Organizations	930	0.1%	$9.39	$8.93	$19,520
873	Research, Development, and Testing Services	470	0.0%	$12.34	$12.29	$25,670
874	Management and Public Relations Services	3,060	0.2%	$9.32	$8.93	$19,380
901	Federal Government (OES designation)	10,250	0.8%	$12.65	$12.60	$26,310
902	State Government (OES designation)	19,950	1.6%	$10.94	$10.31	$22,760
903	Local Government (OES designation)	48,530	0.4%	$9.81	$9.66	$20,410
	Total/Average	**1,273,460**	**100.0%**	**$9.18**	**$8.89**	**$19,100**

Percentile estimates	10%	25%	50%	75%	90%
Hourly wage	$6.48	$7.51	$8.89	$10.59	$12.69
Annual wage	$13,480	$15,620.00	$18,500	$22,030	$26,390

Source: http://stats.bls.gov/oeshome.htm *Estimates not released due to high relative standard errors

Table D-3. Personal and Home Care Aides Employment and Wages in 2000 by Industry Group

SIC	SIC title	Estimated total employment	% employment by industry	Hourly mean wage	Hourly median wage	Annual mean wage
075	Animal Services, Except Veterinary	na*	na*	$9.29	$8.09	$19,320
651	Real Estate Operators (Except Developers) and Lessors	2,680	0.7%	$7.96	$7.91	$16,550
702	Rooming and Boarding Houses	390	0.1%	$6.96	$7.76	$16,140
729	Miscellaneous Personal Services	4,310	1.2%	$7.28	$6.58	$15,150
734	Services To Dwellings and Other Buildings	na*	na*	$8.56	$8.22	$17,790
736	Personnel Supply Services	1,730	0.5%	$8.41	$8.20	$17,490
801	Offices and Clinics of Doctors of Medicine	450	0.1%	$7.69	$7.51	$15,990
804	Offices and Clinics of Other Health Practitioners	660	0.2%	$8.71	$8.42	$18,120
805	Nursing and Personal Care Facilities	12,940	3.5%	$8.09	$7.82	$16,820
806	Hospitals	6,960	1.9%	$8.19	$7.98	$17,040
808	Home Health Care Services	113,010	30.8%	$6.82	$6.49	$14,180
809	Miscellaneous Health and Allied Services, nec.	3,570	1.0%	$7.85	$7.70	$16,330
821	Elementary and Secondary Schools	na*	na*	$8.47	$8.41	$17,620
832	Individual and Family Social Services	102,260	27.9%	$7.88	$7.75	$16,400
833	Job Training and Vocational Rehabilitation	20,170	5.5%	$8.10	$7.85	$16,840
835	Child Day Care Services	1,040	0.3%	$6.99	$6.97	$14,550
836	Residential Care	88,200	24.1%	$8.20	$7.97	$17,060
839	Social Services, not elsewhere classified	3,600	0.9%	$7.60	$7.56	$15,810
902	State Government (OES designation)	1,580	0.4%	$9.98	$9.86	$20,750
903	Local Government (OES designation)	3,050	0.8%	$8.13	$7.60	$16,910
	Total/Average	**366,600**	**100%**	**$7.67**	**$7.50**	**$15,960**

Percentile estimates	10%	25%	50%	75%	90%
Hourly wage	$5.74	$6.43	$7.50	$8.53	$10.13
Annual wage	$11,940	$13,370	$15,600	$17,750	$21,080

Source: http://stats.bls.gov/oeshome.htm *Estimates not released due to high relative standard errors

Table D-4. Home Health Aides Employment and Wages in 2000 by State

State	Employment	Wage estimates		
		Median hourly	Mean hourly	Mean annual
United States	561,120	$8.23	$8.71	$18,110
Alabama	4,890	$7.92	$7.67	$16,480
Alaska	630	$11.07	$11.05	$23,020
Arizona	9,820	$8.04	$7.90	$16,720
Arkansas	3,460	$7.01	$6.79	$14,590
California	33,210	$9.56	$8.82	$19,880
Colorado	6,400	$11.06	$10.02	$23,010
Connecticut	11,340	$12.76	$11.45	$26,540
Delaware	1,060	$8.99	$9.03	$18,710
DC	960	$8.28	$8.13	$17,220
Florida	23,550	$8.54	$8.17	$17,760
Georgia	6,420	$7.68	$7.68	$15,980
Hawaii	2,050	$8.02	$7.64	$16,680
Idaho	2,600	$7.68	$7.64	$15,970
Illinois	11,610	$8.25	$7.96	$17,160
Indiana	8,800	$8.50	$8.54	$17,680
Iowa	5,720	$8.16	$8.13	$16,970
Kansas	4,490	$8.29	$8.21	$17,240
Kentucky	5,050	$8.07	$7.91	$16,790
Louisiana	4,710	$8.90	$7.82	$18,520
Maine	3,600	$8.91	$8.24	$18,530
Maryland	5,900	$8.24	$8.04	$17,140
Massachusetts	15,740	$10.00	$9.92	$20,810
Michigan	24,370	$8.93	$8.64	$18,580
Minnesota	17,620	$9.30	$9.36	$19,350
Mississippi	1,800	$9.17	$8.68	$19,070
Missouri	8,580	$7.72	$7.67	$16,050
Montana	1,230	$7.61	$7.58	$15,820
Nebraska	1,900	$9.14	$9.17	$19,000
Nevada	1,540	$8.53	$8.05	$17,730
New Hampshire	1,550	$10.15	$10.21	$21,100
New Jersey	21,870	$9.16	$9.13	$19,060
New Mexico	3,080	$8.16	$7.97	$16,960
New York	107,130	$8.87	$8.17	$18,440
North Carolina	22,560	$7.84	$7.76	$16,300
North Dakota	1,450	$7.58	$7.61	$15,770
Ohio	26,560	$8.51	$8.30	$17,710
Oklahoma	6,040	$7.91	$7.64	$16,440
Oregon	6,720	$8.91	$8.44	$18,530
Pennsylvania	20,210	$8.69	$8.71	$18,080
Rhode Island	2,660	$10.94	$10.30	$22,750
South Carolina	4,000	$8.01	$7.87	$16,670
South Dakota	809	$7.93	$7.89	$16,490
Tennessee	5,780	$8.00	$7.87	$16,640
Texas	61,150	$7.86	$6.60	$16,340
Utah	3,060	$9.40	$8.78	$19,560
Vermont	1,400	$8.60	$8.27	$17,890
Virginia	8,770	$7.85	$7.68	$16,320
Washington	10,720	$8.74	$8.43	$18,190
West Virginia	4,620	$6.54	$6.44	$13,590
Wisconsin	11,310	$8.68	$8.48	$18,060
Wyoming	530	$7.94	$7.88	$16,510

Source: Bureau of Labor Statistics Occupational Employment Survey (http://www.bls.gov/oes)

Table D-5. Nursing Aide, Orderly, and Attendant Employment and Wages in 2000

State	Employment	Wage estimates		
		Median hourly	Mean hourly	Mean annual
United States	1,273,460	9.18	8.89	19,100
Alabama	19,720	7.68	7.62	15,980
Alaska	1,370	12.75	12.52	26,510
Arizona	15,030	9.07	9.07	18,860
Arkansas	15,440	7.31	7.22	15,210
California	91,620	9.54	9.17	19,840
Colorado	14,450	9.72	9.68	20,210
Connecticut	23,190	11.93	11.99	24,820
Delaware	3,600	9.86	9.58	20,510
DC	3,420	10.23	9.88	21,280
Florida	65,510	8.73	8.54	18,150
Georgia	31,270	7.82	7.71	16,260
Hawaii	2,980	10.86	10.85	22,600
Idaho	5,640	7.84	7.79	16,300
Illinois	50,420	8.87	8.64	18,450
Indiana	28,450	9.26	9.14	19,260
Iowa	19,050	8.96	8.75	18,640
Kansas	18,520	8.50	8.34	17,690
Kentucky	20,900	8.28	8.20	17,230
Louisiana	26,330	6.55	6.40	13,630
Maine	8,510	9.09	9.03	18,900
Maryland	24,070	10.34	9.82	21,500
Massachusetts	39,390	10.84	10.64	22,540
Michigan	40,260	9.84	9.84	20,460
Minnesota	17,620	9.30	9.36	19,350
Mississippi	15,850	7.26	6.94	15,110
Missouri	38,080	8.14	8.01	16,930
Montana	4,800	7.96	7.85	16,560
Nebraska	10,800	8.92	8.73	19,000
Nevada	4,680	10.19	10.04	21,200
New Hampshire	6,570	10.64	10.38	22,140
New Jersey	37,370	10.85	10.29	22,570
New Mexico	6,090	8.48	8.25	17,650
New York	90,000	11.48	11.69	23,880
North Carolina	40,330	8.55	8.36	17,780
North Dakota	5,610	8.14	8.04	16,920
Ohio	66,200	9.04	8.90	18,790
Oklahoma	22,120	7.43	7.40	15,460
Oregon	11,900	10.02	9.83	20,840
Pennsylvania	68,980	9.52	9.39	19,800
Rhode Island	7,560	10.16	10.00	21,130
South Carolina	14,710	8.23	7.98	17,110
South Dakota	6,320	8.32	8.19	17,310
Tennessee	29,630	8.27	8.16	17,190
Texas	78,020	7.58	7.35	15,760
Utah	7,530	8.33	8.18	17,330
Vermont	2,920	9.28	9.12	19,310
Virginia	28,400	8.62	8.43	17,930
Washington	18,460	9.94	9.83	20,670
West Virginia	9,000	7.42	7.22	15,430
Wisconsin	39,940	9.63	9.52	20,030
Wyoming	2,280	8.15	8.04	16,960

Source: Bureau of Labor Statistics Occupational Employment Survey (http://www.bls.gov/oes)

Table D-6. Personal and Home Care Aide Employment and Wages in 2000

State	Employment	Wage estimates		
		Median hourly	Mean hourly	Mean annual
United States	**372,990**	**7.91**	**7.73**	**16,449**
Alabama	3,320	7.00	6.64	14,570
Alaska	880	11.22	10.93	23,340
Arizona	2,510	8.46	8.39	17,590
Arkansas	1,370	6.54	6.41	13,600
California	30,900	8.03	7.64	16,710
Colorado	5,440	7.60	7.56	15,820
Connecticut	4,780	10.24	9.80	21,310
Delaware	na	7.20	6.63	14,980
DC	520	7.92	7.93	16,460
Florida	11,210	8.17	8.07	17,000
Georgia	3,830	7.83	7.62	16,280
Hawaii	310	8.05	7.60	16,740
Idaho	730	7.25	7.30	15,070
Illinois	8,870	6.96	6.60	14,470
Indiana	6,590	8.51	8.25	17,700
Iowa	2,220	7.81	7.73	16,250
Kansas	5,120	7.87	7.81	16,360
Kentucky	2,350	7.52	7.22	15,650
Louisiana	5,840	6.19	6.17	12,870
Maine	5,170	8.12	8.05	16,900
Maryland	3,220	8.20	8.09	17,060
Massachusetts	5,760	9.05	9.11	18,820
Michigan	14,900	7.91	7.85	16,450
Minnesota	12,270	9.02	8.91	18,770
Mississippi	1,070	6.92	6.54	14,400
Missouri	10,260	7.15	7.25	14,860
Montana	2,290	6.90	6.95	14,350
Nebraska	730	8.42	8.24	17,510
Nevada	210	8.81	8.36	18,320
New Hampshire	1,860	8.07	7.96	16,780
New Jersey	5,120	9.49	9.23	19,730
New Mexico	3,850	7.34	6.97	15,260
New York	54,230	8.13	7.90	16,920
North Carolina	13,690	7.45	7.47	15,510
North Dakota	1,720	7.80	7.77	16,210
Ohio	9,210	8.25	8.10	17,150
Oklahoma	4,830	6.72	6.46	13,970
Oregon	4,710	8.50	8.29	17,680
Pennsylvania	14,460	8.28	7.80	17,220
Rhode Island	1,400	9.65	9.49	20,070
South Carolina	3,500	7.88	7.82	16,400
South Dakota	1,350	8.12	8.11	16,890
Tennessee	6,340	7.07	6.72	14,710
Texas	63,850	6.13	6.11	12,750
Utah	1,030	7.77	7.80	16,170
Vermont	510	7.93	7.84	16,490
Virginia	6,830	7.16	6.66	14,890
Washington	7,460	8.09	7.88	16,820
West Virginia	3,330	6.37	6.33	13,250
Wisconsin	10,460	8.34	8.25	17,350
Wyoming	580	6.94	6.70	14,440

Source: Bureau of Labor Statistics Occupational Employment Survey (http://www.bls.gov/oes)

Current Population Survey

Table D-7. Characteristics of Direct Care Paraprofessionals in the U.S., 2000

Category	Nursing Home Aide	Home Care Aide	Hospital Aide
Worker class			
Government	6.0%	11.3%	16.8%
Private for-profit	77.7%	70.1%	58.4%
Private nonprofit	14.8%	7.4%	24.9%
Self-employed	1.6%	11.3%	0.0%
Hours usually worked per week			
20 hrs. or less	7.2%	18.7%	3.8%
21-34 hrs.	11.6%	8.1%	7.6%
35-59 hrs.	11.0%	10.9%	13.0%
40 hrs.	50.9%	34.2%	59.5%
More than 40 hrs.	3.8%	9.5%	7.6%
Varies FT	6.0%	6.7%	3.8%
Varies PT	1.6%	2.8%	3.2%
Mean hrs usually work at main job	36.7	35.0	38.6
Full time/Part time status			
Full time	79.4%	69.5%	87.5%
Part time	20.6%	30.5%	12.5%

Source: US Bureau of the Census, CPS, October 2000

CPS March Supplement

Table D-8. Characteristics of Direct Care Paraprofessionals in the U.S., 1997 - 1999

Category (N =)	Nursing Home Aide 1089	Home care aide 935	Hospital aide 608
Age group			
<25	21.0%	7.1%	16.1%
25-34	26.5%	23.0%	26.5%
35-44	25.6%	28.7%	28.3%
45-54	15.4%	23.5%	17.1%
55-64	9.4%	13.5%	10.7%
65+	2.0%	4.3%	1.3%
Mean age	36.8	42.2	37.8
Sex			
Male	8.6%	8.0%	19.1%
Female	91.4%	92.0%	80.9%
Race			
White	70.6%	67.3%	72.0%
Black	24.5%	30.6%	23.8%
American Indian/Eskimo	1.3%	1.1%	1.6%
Asian/Pacific Islander	3.6%	1.1%	2.5%
Citizenship			
Native, born in US	85.0%	75.3%	86.3%
Native, born in US outly	1.8%	1.1%	0.8%
Native, born abroad	0.6%	1.0%	1.6%
Foreign born, naturalized	3.9%	8.7%	5.4%
Foreign born, not US citizen	8.6%	14.0%	5.8%
Educational attainment			
Less than HS	23.0%	24.3%	8.7%
HS graduate	48.7%	41.3%	43.3%
Some college	23.9%	30.2%	42.4%
4+ years college	4.5%	4.3%	5.6%
Marital status			
Married	42.1%	44.7%	50.0%
Widowed/divorced/separated	21.9%	32.3%	18.8%
Never married	35.9%	23.0%	31.3%

Note:

Workers includes occupation codes 447 (nursing aides, orderlies and attendants) and 465 (welfare service aides) in the following industries:

- nursing home aides: industry code 832 (nursing facilities)
- home care aides: industry codes 761 (private home) and 840 (health svc, nec.)
- hospital aides: industry code 831

Source: www.bls.census.gov/cps/cpsmain.htm

Table D-9. Work Patterns of Direct Care Paraprofessionals in the U.S., 1997-1999

Characteristic	Nursing Home Aide	Home care aide	Hospital aide
Wage			
Usual hourly wage	$7.57	$7.40	$8.58
Usual weekly amount	$284	$257	$371
Income			
Person total income	$15,029	$14,494	$18,248
Family total income	$32,824	$31,703	$43,130
Poverty ratio			
<1.00	16.5%	20.9%	7.9%
1.00-1.99	20.1%	26.0%	23.3%
2.00-2.99	25.7%	25.7%	23.8%
3.00+	27.6%	27.5%	44.9%
Weeks worked per year	43.7	42.9	46.9
Hours usually worked per week	32.0	29.2	31.5
Reasons worked less than 35 hrs.			
Could only find PT job	13.9%	16.1%	12.4%
Wanted PT	50.9%	41.4%	52.2%
Slack work	11.5%	22.7%	13.4%
Other	23.7%	19.9%	21.9%
Health insurance			
By employer	42.6%	30.3%	63.0%
Medicare	2.4%	5.3%	1.3%
Medicaid	11.1%	13.6%	3.3%
CHAMPS	2.1%	2.5%	2.6%
Other coverage	2.3%	3.0%	3.8%
Health insurance employer pays			
All	23.7%	25.8%	21.9%
Part	67.0%	69.3%	72.6%
None	9.3%	4.9%	5.5%
Pension provided by employer			
Yes	44.6%	34.0%	75.1%
No	55.4%	66.0%	24.9%
Union member			
Yes	7.2%	10.8%	19.8%
No	92.8%	89.2%	80.2%

National Compensation Survey

Table D-10. Wages of Long-Term Care Paraprofessionals in the U.S., 2000

Title	Health aides, except nursing	Nursing aides, orderlies & attendants	Welfare service aides
OCSM	K446	K447	K465
Mean hourly wage			check both
Total	10.60	9.00	7.81
Full time	10.49	9.45	8.02
Part time	9.32	8.96	6.97
Work level 1	8.23	7.40	5.59
Work level 2	8.71	8.30	7.03
Work level 3	9.42	8.83	8.44
Work level 4	11.25	10.13	10.21
Work level 5	12.86	12.06	11.86
Work level 6	13.58	12.34	11.93
Work level 7	18.58	16.64	na
Work level 8	16.10*	na	na
Private industry total	10.31	8.63	7.47
Full time	10.60	8.67	8.53
Part time	8.47	8.48	6.30
Work level 1	8.35	7.14	5.38
Work level 2	8.57	8.10	5.52
Work level 3	8.92	8.53	6.96
Work level 4	11.13	9.89	8.29
Work level 5	12.79	10.84	10.37
Work level 6	12.88	11.72	12.92
Work level 7	14.40	16.81	na
Work level 8	16.65	na	na
State & local gov't total	12.34	11.18	10.13
Full time	12.40	11.35	10.17
Part time	11.32	9.42	9.50
Work level 1	na	8.84	na
Work level 2	11.11	9.93	8.60
Work level 3	11.61	10.72	9.44
Work level 4	12.09	11.33	12.75
Work level 5	13.02	14.55	13.04
Work level 6	15.08	na	na
Work level 7	na	16.61	na
Work level 8	na	na	na

Source: Bureau of Labor Statistics (2000). National Compensation Survey: Occupational Wages in the United States, 1998. Washington, D.C.

Note: Work level is based on 10 leveling factors: Knowledge, supervision received, guidelines, complexity, scope and effect, personal contacts, purpose of contacts, physical demands, work environment, and supervisory duties. There are 15 work levels that follow the Federal Government's white-collar General Schedule.

*Data only available for 1999

Table D-11. Wages of Long-Term Care Paraprofessionals by Region in the U.S. in 2000

Title	Health aides, except nursing	Nursing aides, orderlies & attendants	Welfare service aides
OCSM	K446	K447	K465
Mean hourly wage			
Total	10.60	9.00	7.81
Metropolitan	10.72	10.72	7.88
Nonmetropolitan	9.63	9.63	7.28
New England	13.07	10.76	10.87
Metropolitan	13.71	10.82	11.27
Nonmetropolitan	9.38	10.08	na
Middle Atlantic	12.14	9.68	10.57
Metropolitan	12.02	9.72	10.64
Nonmetropolitan	13.56	8.78	na
East North Central	10.33	9.37	7.70
Metropolitan	10.51	9.26	7.77
Nonmetropolitan	9.86	9.86	na
West North Central	9.41	8.79	8.59
Metropolitan	9.63	9.52	7.60
Nonmetropolitan	na	7.94	na
South Atlantic	9.63	8.10	8.01
Metropolitan	9.69	8.27	8.01
Nonmetropolitan	8.79	7.51	na
East South Central	9.43	7.68	na
Metropolitan	9.81	7.90	na
Nonmetropolitan	na	7.19	na
West South Central	9.03	7.62	5.49
Metropolitan	9.00	7.90	5.43
Nonmetropolitan	na	6.62	na
Mountain	8.13	8.85	8.80
Metropolitan	8.25	9.24	9.58
Nonmetropolitan	na	8.03	na
Pacific	13.08	9.87	8.71
Metropolitan	13.08	9.89	8.71
Nonmetropolitan	na	9.59	na

New England: CT, ME, MA, NH, RI, VT
Middle Atlantic: NJ, NY, PA
East North Central: IL, IN, MI, OH, WI
West North Central: IA, KS, MN, MO, NE, ND, SD
South Atlantic: DE, DC, FL, GA, MD, NC, SC, VA, WV
East South Central: AL, KY, MS, TN
West South Central: AR, LA, OK, TX
Mountain: AZ, CO, ID, MT, NV, NM, UT, WY
Pacific: AK, CA, HI, OR, WA
Metropolitan Area: Consolidated Metropolitan Statistical Area (CMSA)

Table D-12. Weekly Hours Worked by Long-Term Care Professionals in the U.S. in 2000

Title	Health aides, except nursing	Nursing aides, orderlies & attendants	Welfare service aides
OCSM	K446	K447	K465
Mean Hours per Week			
Total	34.1	33.5	28.4
Full time	39.4	38.7	39.3
Part time	17.7	21.1	20.5
Work level 1	30.1	29.7	24.8
Work level 2	34.6	34.3	24.3
Work level 3	31.1	32.8	31.7
Work level 4	34.5	33.9	35.1
Work level 5	36.9	37.8	36.5
Work level 6	37.2	31.4	36.8
Work level 7	38.2	38.1	na
Work level 8	na	na	na
Private industry	33.7	33.1	27.6
Full time	39.4	38.6	39.5
Part time	17.7	21.2	20.6
Work level 1	30.0	39.2	24.2
Work level 2	34.5	34	24.1
Work level 3	30.2	32.3	31.5
Work level 4	34.1	33.9	34.4
Work level 5	37.2	37.2	34.4
Work level 6	36.4	29.5	35.3
Work level 7	na	32.9	na
Work level 8	na	na	na
State & local gov't	36.7	36.3	35.1
Full time	39.3	39.4	38.4
Part time	18.1	20.1	16.5
Work level 1	na	33.4	na
Work level 2	35.5	36.8	28.8
Work level 3	35.6	36.7	33.5
Work level 4	38.0	34.0	37.2
Work level 5	36.2	39.1	38.4
Work level 6	39.1	na	na
Work level 7	na	39.1	na
Work level 8	na	na	na

Source: Bureau of Labor Statistics (2000). National Compensation Survey: Occupational Wages in the United States, 1998. Washington, D.C.

Note: Work level is based on 10 leveling factors: Knowledge, supervision received, guidelines, complexity, scope and effect, personal contacts, purpose of contacts, physical demands, work environment, and supervisory duties. There are 15 work levels that follow the Federal Government's white-collar General Schedule.

Table D-13. Weekly Hours Worked by Long-Term Care Paraprofessionals in the U.S. in 2000

Title	Health aides, except nursing	Nursing aides, orderlies & attendants	Welfare service aides
OCSM	K446	K447	K465
Mean Hours per Week			
Total	34.1	33.5	28.4
Metropolitan	34.5	33.6	28.3
Nonmetropolitan	31.0	33.1	28.5
New England	26.9	32.6	23.5
Metropolitan	28.4	32.4	27.2
Nonmetropolitan	20.3	35.0	na
Middle Atlantic	35.4	33.6	36.5
Metropolitan	35.5	33.5	36.3
Nonmetropolitan	34.6	34.9	na
East North Central	34.0	33.7	29.0
Metropolitan	35.6	33.8	28.7
Nonmetropolitan	30.4	33.6	na
West North Central	27.3	31.9	28.2
Metropolitan	27.9	31.2	28.3
Nonmetropolitan	na	32.9	na
South Atlantic	34.0	35.2	27.8
Metropolitan	33.7	35.3	27.0
Nonmetropolitan	40.0	34.8	na
East South Central	34.3	34.1	na
Metropolitan	36.2	32.6	na
Nonmetropolitan	na	38.2	na
West South Central	36.8	33.4	23.2
Metropolitan	36.6	34.5	22.7
Nonmetropolitan	na	29.9	na
Mountain	32.8	30.2	34.8
Metropolitan	34.0	32.3	34.7
Nonmetropolitan	na	26.6	na
Pacific	36.9	34.0	31.2
Metropolitan	37.3	33.8	31.2
Nonmetropolitan	na	36.9	na

New England: CT, ME, MA, NH, RI, VT
Middle Atlantic: NJ, NY, PA
East North Central: IL, IN, MI, OH, WI
West North Central: IA, KS, MN, MO, NE, ND, SD
South Atlantic: DE, DC, FL, GA, MD, NC, SC, VA, WV
East South Central: AL, KY, MS, TN
West South Central: AR, LA, OK, TX
Mountain: AZ, CO, ID, MT, NV, NM, UT, WY
Pacific: AK, CA, HI, OR, WA

Metropolitan Area: Consolidated Metropolitan Statistical Area (CMSA)

Employment Projections

Table D-14. Employment Projections for Nursing Aides, Orderlies, and Attendants in the U.S., 2000 to 2010

Industry	2000 Employment		2010 Projections		Change, 2000-2010	
	Number	%	Number	%	Number	%
All industries	**1,373,206**	**100.0**	**1,696,579**	**100.0**	**323,374**	**23.6**
Nursing and personal care facilities	644,871	47.0	797,483	47.0	152,611	23.7
Hospitals, public & private	349,227	25.4	388,019	22.9	38,792	11.1
Residential care	54,559	4.0	92,845	5.5	38,286	70.2
Local government	54,241	3.9	61,244	3.6	7,003	12.9
Personnel supply services	53,336	3.9	88,080	5.2	34,744	65.1
Home health care services	42,693	3.1	77,781	4.6	35,088	82.2
Self-employed, primary	42,080	3.1	51,231	3.0	9,151	21.7
Private households, exc second job	29,901	2.2	23,519	1.4	-6,382	-21.3
State government	21,061	1.5	23,519	1.4	2,457	11.7
Office of physicians	13,257	1.0	20,754	1.2	7,497	56.6
Federal government	11,766	0.9	11,181	0.7	-585	-5.0
Educational Services	11,250	0.8	12,711	0.7	1,461	13.0
Religious organizations	10,913	0.8	12,518	0.7	1,606	14.7
Self-employed, secondary	6,999	0.5	9,618	0.6	2,619	37.4
Health & allied services	6,845	0.5	10,825	0.6	3,980	58.1
Individual & misc social services	6,394	0.5	8,049	0.5	1,655	25.9
Office of other health practitioners	5,493	0.4	8,264	0.5	2,771	50.4
Offices of other health practitioners	5,493	0.4	8,264	0.5	2,772	50.5
Wage & salary workers, second job	3,033	0.2	2,934	0.2	-99	-3.3
Management and public relations	1,625	0.1	2,383	0.1	758	46.6
Accounting, auditing, and bookkeeping	1,273	0.1	1,707	0.1	434	34.1
Job training & related services	1,269	0.1	1,718	0.1	449	35.4
Real estate agents & managers	768	0.1	1,004	0.1	237	30.9

Source: http://www.bls.gov/asp/oep/nioem/empiohm.asp

Table D-15. Employment Projections for Home Health Aides, 2000 to 2010

Industry	2000 Employment		2010 Projection		Change, 2000-2010	
	Number	%	Number	%	Number	%
All industries	**615,381**	**100.0**	**906,633**	**100.0**	**291,253**	**47.3**
Home health care services	191,949	31.2	326,606	36.0	134,657	70.2
Residential care	130,700	21.2	200,175	22.1	69,475	53.2
Individual & misc social services	76,617	12.5	96,451	10.6	19,834	25.9
Personnel supply services	46,978	7.6	77,580	8.6	30,603	65.1
Nursing and personal care facilities	33,606	5.5	41,559	4.6	7,953	23.7
Hospital, public & private	30,236	4.9	40,313	4.4	10,077	33.3
Job training & related services	18,932	3.1	25,624	2.8	6,692	35.3
Self-employed, primary	18,570	3.0	22,608	2.5	4,038	21.7
Private households	13,195	2.1	9,867	1.1	-3,328	-25.2
Local government	11,412	1.9	12,886	1.4	1,474	12.9
State government	8,084	1.3	8,762	1.0	678	8.4
Self-employed, secondary	3,089	0.5	4,244	0.5	1,156	37.4
Offices of physicians	2,414	0.4	3,780	0.4	1,365	56.5
Health & allied services	2,409	0.4	3,810	0.4	1,401	58.2
Real estate operators and lessors	1,983	0.3	2,318	0.3	335	16.9
Child day care services	1,532	0.2	2,344	0.3	811	52.9
Management & public relations	1,371	0.2	2,011	0.2	640	46.7
Wage & salary workers, secondary	1,339	0.2	1,295	0.1	-44	-3.3
Religious organizations	1,052	0.2	1,188	0.1	136	12.9
Offices of other health practitioners	1,022	0.2	1,538	0.2	516	50.5
Federal government	946	0.2	831	0.1	-115	-12.2
Miscellaneous personal services	772	0.1	878	0.1	105	13.6
All other personal services	514	0.1	597	0.1	83	16.1
Civic & social associations	459	0.1	536	0.1	77	16.8
Unpaid family worker, primary	234	0.0	390	0.0	156	66.7

Source: http://www.bls.gov/asp/oep/nioem/empiohm.asp

Table D-16. Employment Projections for Personal and Home Care Aides, 2000 to 2010

Industry	2000 Employment		2010 Projection		Change, 2000-2010	
	Number	%	Number	%	Number	%
All industries	**413,633**	**100.0**	**672,126**	**100.0**	**258,492**	**62.5**
Home health care services	132,979	32.1	226,266	33.7	93,287	70.2
Residential care	92,198	22.3	172,586	25.7	80,388	87.2
Individual & misc social services	76,617	18.5	96,451	14.4	19,834	25.9
Job training & related services	23,012	5.6	31,146	4.6	8,134	35.3
Nursing and personal care facilities	13,256	3.2	22,130	3.3	8,874	66.9
Hospital, public & private	8,754	2.1	10,699	1.6	1,945	22.2
Self-employed, primary	5,343	1.3	6,505	1.0	1,162	21.7
Miscellaneous personal services	4,557	1.1	5,180	0.8	622	13.6
Health & allied services	3,515	0.8	5,559	0.8	2,044	58.2
Local government	3,292	0.8	3,717	0.6	425	12.9
Real estate operators and lessors	2,572	0.6	3,007	0.4	435	16.9
Personnel supply services	2,552	0.6	4,214	0.6	1,662	65.1
State government	2,432	0.6	2,716	0.4	284	11.7
Child day care services	1,504	0.4	2,300	0.3	796	52.9
Offices of other health practitioners	1,022	0.2	1,538	0.2	516	50.5
Self-employed, secondary	889	0.2	1,221	0.2	333	37.5
Education services	810	0.2	915	0.1	105	13.0
Rooming houses and other lodging	503	0.1	533	0.1	31	6.1
Offices of physicians	282	0.1	442	0.1	160	56.7
Equipment rental and leasing	227	0.1	337	0.1	110	48.5
Wholesale trade, other	205	0.0	244	0.0	39	19.3
Membership organizations	140	0.0	156	0.0	16	1.1
Used merchandise and retail stores	104	0.0	113	0.0	30	28.5

Source: http://www.bls.gov/asp/oep/nioem/empiohm.asp

Table D-17. Projections of Nursing Aide, Orderly, and Attendant Employment by State, 1998 to 2008

State	1998 Employment	2008 Employment	Employment Change	Percent Change
Alabama	19,700	24,850	5,150	26.1
Alaska	1,050	1,400	350	33.3
Arizona	14,150	18,750	4,600	32.5
Arkansas	17,200	25,350	8,150	47.4
California	88,500	107,900	19,400	21.9
Colorado	13,950	18,200	4,250	30.5
Connecticut	25,600	29,450	3,850	15.0
DC	na	na	na	na
Delaware	4,150	5,350	1,200	28.9
Florida	62,350	83,450	21,100	33.8
Georgia	na	na	na	na
Hawaii	4,200	4,950	750	17.9
Idaho	5,300	7,150	1,850	34.9
Illinois	52,750	61,850	9,100	17.3
Indiana	26,200	34,950	8,750	33.4
Iowa	18,750	22,250	3,500	18.7
Kansas	16,050	20,250	4,200	26.2
Kentucky	na	na	na	na
Louisiana	23,900	29,350	5,450	22.8
Maine	9,900	11,850	1,950	19.7
Maryland	na	na	na	na
Massachusetts	40,100	46,350	6,250	15.6
Michigan	45,350	49,900	4,550	10.0
Minnesota	31,050	35,300	4,250	13.7
Mississippi	13,950	16,700	2,750	19.7
Missouri	37,500	44,350	6,850	18.3
Montana	4,950	6,150	1,200	24.2
Nebraska	11,200	14,050	2,850	25.4
Nevada	2,850	4,250	1,400	49.1
New Hampshire	6,200	7,950	1,750	28.2
New Jers ey	40,350	48,250	7,900	19.6
New Mexico	7,950	10,450	2,500	31.4
New York	105,950	129,050	23,100	21.8
North Carolina	43,750	62,150	18,400	42.1
North Dakota	6,350	7,900	1,550	24.4
Ohio	65,450	81,550	16,100	24.6
Oklahoma	19,900	26,050	6,150	30.9
Oregon	12,450	14,400	1,950	15.7
Pennsylvania	75,550	92,400	16,850	22.3
Rhode Island	9,100	11,150	2,050	22.5
South Carolina	14,100	19,300	5,200	36.9
South Dakota	5,900	7,350	1,450	24.6
Tennessee	26,250	32,800	6,550	25.0
Texas	91,250	112,550	21,300	23.3
Utah	5,850	8,750	2,900	49.6
Vermont	2,750	3,550	800	29.1
Virginia	27,750	38,600	10,850	39.1
Washington	24,000	30,500	6,500	27.1
West Virginia	8,800	10,150	1,350	15.3
Wisconsin	38,650	45,600	6,950	18.0
Wyoming	na	na	na	na
USA	**1,359,250**	**1,684,250**	**325,000**	**23.9**

Source: http://almis.dws.state.ut.us/occ/projections.asp

** Projects not available for 2000-2010, in more current data, BLS has split this category into Home health aids and Personal and home care aides

Table D-18. Projections of Personal Care and Home Health Aide Employment by State, 1998 to 2008

State	1998 Employment	2008 Employment	Employment change	Percent change
Alabama	8,450	13,900	5,450	64.5
Alaska	na	na	na	na
Arizona	7,800	12,550	4,750	60.9
Arkansas	5,600	8,750	3,150	56.3
California	36,900	54,400	17,500	47.4
Colorado	8,750	15,500	6,750	77.1
Connecticut	12,050	15,650	3,600	29.9
DC	na	na	na	na
Delaware	1,800	2,450	650	36.1
Florida	31,400	46,500	15,100	48.1
Georgia	na	na	na	na
Hawaii	na	na	na	na
Idaho	2,100	3,250	1,150	54.8
Illinois	na	na	na	na
Indiana	10,150	16,500	6,350	62.6
Iowa	5,050	7,350	2,300	45.5
Kansas	11,000	14,400	3,400	30.9
Kentucky	na	na	na	na
Louisiana	9,450	10,600	1,150	12.2
Maine	5,950	8,900	2,950	49.6
Maryland	na	na	na	na
Massachusetts	22,550	31,450	8,900	39.5
Michigan	27,100	35,100	8,000	29.5
Minnesota	20,150	30,200	10,050	49.9
Mississippi	4,250	6,500	2,250	52.9
Missouri	14,700	19,550	4,850	33.0
Montana	3,950	5,300	1,350	34.2
Nebraska	2,200	3,100	900	40.9
Nevada	2,150	3,550	1,400	65.1
New Hampshire	na	na	na	na
New Jersey	23,800	38,250	14,450	60.7
New Mexico	5,200	7,250	2,050	39.4
New York	126,700	165,400	38,700	30.5
North Carolina	24,400	36,850	12,450	51.0
North Dakota	1,650	2,250	600	36.4
Ohio	31,000	49,650	18,650	60.2
Oklahoma	8,650	14,950	6,300	72.8
Oregon	6,150	11,900	5,750	93.5
Pennsylvania	25,750	35,650	9,900	38.4
Rhode Island	4,450	5,900	1,450	32.6
South Carolina	2,950	5,100	2,150	72.9
South Dakota	1,500	2,100	600	40.0
Tennessee	8,900	11,450	2,550	28.7
Texas	73,850	90,200	16,350	22.1
Utah	2,600	4,100	1,500	57.7
Vermont	2,150	2,750	600	27.9
Virginia	14,850	25,800	10,950	73.7
Washington	21,750	29,550	7,800	35.9
West Virginia	8,850	10,700	1,850	20.9
Wisconsin	16,150	23,650	7,500	46.4
Wyoming	na	na	na	na
USA	**743,000**	**1,176,100**	**433,100**	**58.3**

Source: http://almis.dws.state.ut.us/occ/projections.asp

**Projects not available for 2000-2010, in more current data, BLS has split this category into Home health aids and Personal and home care aides

Survey of Occupational Injuries and Illnesses

Table D-19. Non-Fatal Occupational Injuries and Illnesses Involving Days Away from Work

Occupation SOC Code	All private industries		Health aides 446		Nurse aides & orderlies 447		Welfare service aides 465	
	Number	%	Number	%	Number	%	Number	%
Total cases	1,702,470	100.0	10,100	100.0	75,695	100.0	1,152	100.0
Nature of injury/illness (selected)								
Sprains	739,742	43.5	4,867	48.2	49,472	65.4	433	37.6
Fractures	113,734	6.7	502	5.0	1,610	2.1	0	0.0
Cut, punctures	153,762	9.0	756	7.5	878	1.2	159	13.8
Bruises	155,965	9.2	1,290	12.8	6,098	8.1	67	5.8
Multiple traumatic injuries	59,343	3.5	285	2.8	1,742	2.3	155	13.5
Back pain & pain, exc. back	109,257	6.4	568	5.6	6,419	8.5	126	10.9
Sources of injury/illness (selected)								
Chemicals/chemical products	28,773	1.7	204	2.0	478	0.6	0	0.0
Containers	244,574	14.4	1,562	15.5	1,360	1.8	0	0.0
Furniture & fixtures	58,537	3.4	396	3.9	3,103	4.1	155	13.5
Machinery	114,183	6.7	562	5.6	641	0.8	41	3.6
Parts & materials	192,005	11.3	0	0.0	287	0.4	0	0.0
Worker motion or position	267,060	15.7	1,715	17.0	6,382	8.4	219	19.0
Floors, walkways, ground surfaces	272,026	16.0	1,854	18.4	9,161	12.1	157	13.6
Handtools	77,942	4.6	135	1.3	222	0.3	0	0.0
Vehicles	137,660	8.1	889	8.8	2,217	2.9	202	17.5
Health care patient	72,362	4.3	1,382	13.7	43,876	58.0	111	9.6
Events/exposure (selected)								
Struck by object	229,158	13.5	1,257	12.4	3,668	4.8	202	17.5
Struck against object	116,517	6.8	539	5.3	2,561	3.4	0	0.0
Caught in	76,968	4.5	316	3.1	636	0.8	0	0.0
Fall to lower level	93,881	5.5	164	1.6	1,063	1.4	0	0.0
Fall on same level	190,701	11.2	1,721	17.0	8,467	11.2	146	12.7
Slips or trips without fall	54,761	3.2	489	4.8	1,415	1.9	136	11.8
Overexertion	459,441	27.0	2,939	29.1	42,269	55.8	200	17.4
Repetitive motion	73,195	4.3	416	4.1	366	0.5	0	0.0
Exposed to harmful substance	76,223	4.5	744	7.4	1,808	2.4	0	0.0
Transportation accident	73,246	4.3	150	1.5	1,589	2.1	196	17.0
Assaults & violent acts	23,225	1.4	206	2.0	5,039	6.7	125	10.9
Body parts affected (selected)								
Head	107,696	6.3	528	5.2	2,856	3.8	55	4.8
Neck	30,889	1.8	225	2.2	2,060	2.7	88	7.6
Back	424,251	24.9	3,020	29.9	32,205	42.5	222	19.3
Shoulder	93,787	5.5	373	3.7	5,972	7.9	19	1.6
Finger	149,475	8.8	628	6.2	1,862	2.5	0	0.0
Hand	70,809	4.2	681	6.7	1,640	2.2	0	0.0
Wrist	84,410	5.0	692	6.9	2,805	3.7	82	7.1
Knee	127,953	7.5	594	5.9	4,784	6.3	48	4.2
Foot, toe	77,649	4.6	519	5.1	1,639	2.2	0	0.0
Multiple body parts	148,188	8.7	989	9.8	7,833	10.3	240	20.8

Source: Bureau of Labor Statistics Survey of Occupational Injuries and Illnesses

Table D-20. Incidence of Non-Fatal Occupations Injuries and Illnesses Involving Days Away From Work Per 10,000 Full-Time Workers by Industry, 1999

Industry SIC	All private industries	Nursing & personal care facilities 805.0	Hospitals 806.0	Home health care services 808.0	Individual & family services 832.0	Job training 833.0
Total cases	**188.3**	**448.7**	**251.4**	**280.5**	**152.0**	**316.7**
Nature of injury/illness (selected)						
Sprains	81.8	266.1	150.1	165.5	54.9	148.5
Fractures	12.6	13.1	9.7	12.5	10.1	14.5
Cut, punctures	17.0	13.8	6.6	4.2	8.2	10.4
Bruises	17.3	37.4	23.2	19.5	15.1	43.9
Multiple traumatic injuries	6.6	11.3	5.9	9.8	6.5	13.1
Back pain & pain, exc. back	12.1	39.5	15.4	28.2	15.8	17.9
Sources of injury/illness (selected)						
Chemicals/chemical products	3.2	5.5	4.4	2.3	1.2	19.2
Containers	27.1	25.7	22.9	7.6	14.6	48.8
Furniture & fixtures	6.5	20.1	14.5	7.9	8.7	23.3
Machinery	12.6	9.5	7.5	1.9	3.0	11.0
Parts & materials	21.2	3.4	2.6	1.5	1.6	6.1
Worker motion or position	29.5	41.9	36.1	26.3	23.8	24.6
Floors, walkways, ground surfaces	30.1	68.0	36.7	57.7	33.4	69.2
Handtools	8.6	3.2	3.6	2.2	1.3	8.2
Vehicles	15.2	7.7	10.3	43.6	17.7	25.9
Health care patient	8.0	214.3	80.3	101.0	19.1	21.7
Events/exposure (selected)						
Struck by object	25.4	30.0	15.4	8.2	15.5	67.2
Struck against object	12.9	19.8	11.7	6.6	13.3	16.6
Caught in	8.5	4.9	4.7	1.9	na	5.1
Fall to lower level	10.4	3.7	6.1	17.3	8.5	26.3
Fall on same level	21.1	67.6	31.1	41.7	25.4	44.1
Slips or trips without fall	6.1	10.3	7.9	6.3	4.4	6.3
Overexertion	50.8	219.2	115.6	111.2	34.5	73.1
Repetitive motion	8.1	6.6	7.4	3.4	9.6	4.2
Exposed to harmful substance	8.4	18.6	12.4	7.5	4.6	6.9
Transportation accident	8.1	1.3	2.7	42.5	14.1	14.7
Assaults & violent acts	2.6	27.0	8.3	7.0	6.1	18.8
Body parts affected (selected)						
Head	11.9	21.4	9.6	6.4	4.3	26.3
Neck	3.4	10.0	6.3	10.9	5.5	4.5
Back	46.9	173.5	93.6	105.1	34.6	95.9
Shoulder	10.4	32.0	16.6	12.1	11.3	14.5
Finger	16.5	16.4	10.5	6.5	5.7	33.1
Hand	7.8	13.5	7.1	7.0	4.4	5.8
Wrist	9.3	22.3	11.6	8.6	5.5	8.7
Knee	14.2	27.7	19.5	17.3	17.5	26.2
Foot, toe	8.6	11.9	7.5	9.2	4.8	24.8
Multiple body parts	16.4	47.4	23.1	50.1	25.3	26.3

Source: Bureau of Labor Statistics Survey of Occupational Injuries and Illnesses

Appendix E. Issues from Four States

This appendix describes issues affecting direct care paraprofessionals in four states–California, Illinois, New York, and Wyoming. It includes the following sections:

- Introduction
- State Characteristics
- Long-Term Care Services
- Training and Certification Requirements
- Findings

Introduction

Currently, many long-term care providers report a crisis in their ability to provide medical and personal services due to a shortage of paraprofessional workers. This crisis is affecting access to care, appropriate levels of care, and quality of care, which prompts concern from many levels including providers, State legislators, and Federal regulators.

The lack of consistent, inclusive data hampers understanding the scope and scale of the labor shortage.

To help understand the broader context of the issue, this study included a series of discussions and interviews with healthcare professional organizations and service providers in four diverse states: California, Illinois, New York, and Wyoming. The focus of the fieldwork was on data sources and data initiatives with an emphasis on existing state resources and programs. The availability, accuracy, and accessibility of data were of primary concern. However, in each state, informants also addressed many of the qualitative issues surrounding the problem of recruiting and retaining paraprofessional workers.

The objective of the discussions and interviews was to obtain insights about:

- Existing conditions

- Existing data sources
- Requirements for additional data resources to support planning and policymaking
- Use of data by providers and by professional associations
- Benefits of existing datasets
- Gaps in available data

The interviews used pre-scripted questions about paraprofessional data, although the actual interview instruments varied across states. The questions were framed to elicit responses about both the quality and quantity of data available and their relationship to workforce recruitment and retention. Research staff from each of the four collaborating health workforce centers conducted the personal interviews.

Informants were identified in a variety of ways, including advice of stakeholders and use of Internet and published resources. Those interviewed included providers of direct care services, administrators of nursing facilities, representatives of state regulatory agencies, researchers, acknowledged experts in the field, and consumer advocacy representatives. The mix of informants interviewed varied across states.

This chapter summarizes the results of the fieldwork, with conclusions drawn from the observations of those interviewed. The individual state reports that detail the fieldwork findings are available on request. In general, there was consensus across the states about a distinct shortage of paraprofessional workers and the harmful effect the shortage is having on delivery of care to long-term care consumers. There was some variation in the kinds of data that informants felt stakeholders should have for policy and planning, with differences primarily dependent on stakeholders' positions in the delivery system.

State Characteristics

To provide a better understanding of the environments in which the informants provide care, this section presents some background information about the four states. It includes physical and demographic characteristics and a snapshot of each state's long-term care delivery system.

California, Illinois, New York, and Wyoming vary in both geography and demography. Variations in population size and distribution suggest differences in the conditions under which each State provides care and in the environments in which paraprofessionals work. The challenges of rural communities require different employment strategies from those necessary in major metropolitan areas. Three of the states, California, Illinois, and New York, have major metropolitan areas and many rural communities. Wyoming is largely rural with many small towns ranging in population from 2,000 to 5,000 people. States with larger numbers of elderly face challenges different from those states with smaller numbers face. Both New York and Illinois are at or above the national average for population 65 and older, while California and Wyoming are below average. California is the most populous State in the country, while Wyoming is the least. Geographically, California and Wyoming are among the largest states in the U.S., while Illinois and New York rank in the middle.

Table E-1 shows the geographic and demographic characteristics of the states.

Table E-1. Characteristics of States Related to Geography and Demography

State	% of Population over 65^	Rank in Total Population	Rank in Total Area*	Total Population (in 1,000s)	Population Density (pop per sq.mi.)
United States	12.4			281,422	79.6
California	10.6	1st	3rd	33,872	217.2
Illinois	12.1	5th	24th	12,419	223.4
New York	12.9	3rd	30th	18,976	401.9
Wyoming	11.7	50th	9th	494	5.1

^Source: U.S. Census Bureau, State and County Quick Facts, 2000, http://quickfacts.census.gov/qfd/.

*Source: Rand McNally, World Atlas, Imperial Edition

Long-Term Care Services

The following charts represent an overview of the states' long-term care services. Although there are differences among the states, there are many similarities in their delivery system configurations. The states provide similar options for those needing care through skilled nursing facilities, home care agencies, hospice services, a variety of adult residential or assisted living options, as well as many state-specific programs administered through Medicaid waiver providers and State offices of aging. Much of the variation in long-term care delivery appears in the configurations of state-specific Medicaid and Medicare waiver programs or demonstrations, programs designed to meet the needs of the elderly who remain in community or home settings. Of particular note in this regard is the Program for All-inclusive Care for the Elderly, or PACE, which began at On Lok, a not-for-profit organization in San Francisco. This capitated model, developed as a system of all-inclusive care for the elderly, integrates the needs of consumers within the system by providing seamless care across settings. The program emphasizes keeping the client in the community as long as possible. This model varies considerably from traditional configurations in which care is delivered through silos by individual agencies with no coordination for the consumer along the continuum of care. The PACE program received legislated status as a Medicare provider in the Balanced Budget Act of 1997, making it an available model for all fifty states.[8]

Skilled Nursing Facilities

Table E-2 shows the number of nursing home facilities in the four states and the number of CNAs working in them in September 2000.

8 Pace, On Lok Senior Health, www.onlok.org/pace.html

Table E-2. Characteristics of States Related to Nursing Homes, 2000

State	Nursing Homes*	Certified Nurse Aides (FTE)*	Elderly Aged 65 and Over^	Elderly Over Age 85^
United States	17,023	602,614	34,991,753	4,239,587
California	1,378	45,198	3,595,658	425,657
Illinois	870	28,971	2,448,352	311,488
New York	663	47,338	1,500,025	192,031
Wyoming	40	1,144	57,693	6,735

Source: American Health Care Association, Health Services Research and Evaluation, Spring 2001 from HCFA OSCAR data, September 2000, http://www.ahca.org* (Link accessed 2001. May no longer be available on website.)

Home Health Agencies

Table E-3 shows the number of Medicare-certified home health agencies in each State in January 2000 and home health aides working in them numbered as follows:

Table E-3. Characteristics of States Related to Home Health, 2000

State	Certified Home Health Agencies (1/00)^	#s of Home Health Aides 1999+
United States	7,880	577,530
California	625	*36,490
Illinois	313	10,890
New York	223	122,720
Wyoming	44	370

^Source: National Association for Homecare, http://www.nahc.org
+Source: Bureau of Labor Statistics, http://www.bls.gov/oes/

*The numbers of home health aides in California may be distorted by the certification process. It is not only possible but also common to be dually certified as a nurse aide and a home health aide in California. These workers would be counted only once and are probably contained in the numbers of nursing aides. 93,210 people were listed as nursing aides in the BLS data for 1999 in California. This number does not segregate those who are dually certified nor does it provide the location where the aide is employed. Therefore, a dually certified aide working in a home health setting would not necessarily be recorded as a home health aide. In 2001, California's Department of Health Services Licensing reported 66,000 CNAs, 42,000 CNAs/HHAs and 900 HHAs .

Some home care agencies have certified status, while others operate without licenses or certification. Non-certified agencies are not included in this count of certified home health agencies. By Federal law, only certified home health agencies (CHHAs) can provide care to Medicare beneficiaries. CHHAs and their employees are highly regulated, and data about them is available. However, the other entities that provide home care are inconsistently regulated in states and operate as licensed home care agencies, home health agencies, and staffing agencies, etc. In general, they offer home care services to private pay clients or to Medicaid-insured patients. Additionally, these businesses provide staff to fill temporary needs at certified agencies. A certified home health aide may be employed by a licensed agency but may be contracted to a CHHA. In New York, for instance, licensed agencies provide care through contracts with State social service agencies in a variety of social service programs. In New

York, there are over 900 home health agencies employing over 250,000 workers[9], only 223 of which are certified agencies. The variation in regulation across states makes these home health businesses and their employees difficult to count.

Hospice Agencies

Table E-4 shows the number of hospice agencies in 2000 by state.

Table E-4. Characteristics of States Related to Hospices, 2000

State	Medicare Certified Hospices +
United States	2,288
California	186
Illinois	87
New York	54
Wyoming	15

+ Source: National Association for Homecare, http://www.nahc.org

Assisted Living Facilities and Adult Day Care Programs

Other types of provider facilities are not easy to enumerate due to the disparities in defining alternative living and care arrangements in a wide variety of regulatory configurations. Assisted living facilities, which are based on a social rather than medical model[10], adult day care facilities, and organizations and facilities that serve the mentally retarded and developmentally disabled community are difficult to track because licensing requirements and descriptions vary so significantly from State to State.

In 1998 there were approximately 28,000 assisted living residences housing about 1.15 million people in the United States.[11] Services in these facilities are generally supplied by personal care staff that provide help with personal hygiene, housekeeping, and related activities. The following state-by-state breakdown of such programs is indicative of the difficulty in counting these provider organizations.

California

California had 74 long-term care programs administered by six State agencies in 1998. In 2000, California licensed 11,511 facilities that included 4,593 adult residential facilities, 29 residences for the chronically ill, 6,172 residences for the elderly, 72 social rehabilitation facilities, 599

9 What Is Home Care? New York State Association of Health Care Providers, Inc., http://www.nyshcp.org
10 Facts on Aging: Assisted Living and Shared Housing, Illinois Department on Aging, p.1, http://www.state.il.us/aging
11 About Assisted Living, National Center for Assisted Living, p. 1, http://www.ncal.org

adult day care centers, and 46 adult support centers.[12] California licenses residential care facilities that provide specialty, sub acute and rehabilitative care with special provisions in the licensing law for facilities that serve Alzheimer's patients. However, assisted living facilities are not presently a separate category of licensure.[13]

Illinois

In December 1999, the Illinois General Assembly passed a law effective in January 2001 that required the licensing of assisted living facilities. As a result, no statistics are yet available on the number of these establishments in Illinois. The law states that assistants in these facilities need not be certified as nursing assistants but their direct care staff will be screened through an Illinois health care worker background check.[14] There are approximately 84 organizations and businesses supplying adult day care at multiple sites throughout the state.[15] Through its Department of Aging, Illinois offers a Community Care Program that supplies case management service, homemaker and companion service, and adult day care service to eligible adults.[16]

New York

In 1991, the New York State Legislature passed a bill authorizing the creation of the Assisted Living Program (ALP), which allowed licensing for 4,200 beds. This program substituted ALP beds for the same number of nursing home beds in the State with a commensurate reduction in beds licensed for nursing homes. The State has awarded permission for 4,000 beds but only 3,000 beds are presently operating.[17] There are approximately 135 agencies providing adult day services in the state. There are 59 local county offices for the aging with two additional offices on Indian reservations and one office that is city affiliated in Manhattan.[18] There are numerous social service agencies linking seniors to available programs throughout the state.

Wyoming

In 2001, Wyoming had 26 hospitals, 41 nursing homes (including 13 long-term care units at hospitals) and 43 agencies providing home care. In 1993, the Wyoming legislature defined assisted living facilities and included limited nursing services as part of the definition. The regulations were effective in October 1994 and presently there are seven assisted living facilities operating in the state, two of which are public facilities run by the state.[19]

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12 State of California – Health and Human Services Agency, Department of Social Services, Community Care Licensing Division, http://ccld.ca.gov/docs/attachments/0501adultelderlystats.pdf
13 State Assisted living Policy: 1998 Section III, Office of the Assistant Secretary for Planning and Evaluation, Department of Health and Human Services, http://aspe.hhs.gov/daltcp/reports/98state.htm, p. 16,
14 Facts on Aging, p. 1.
15 Illinois Association of Adult Day Care Providers, Illinois Department on Aging, http://www.state.il.us/aging
16 Illinois Department on Aging, In-Home Care, http://www.state.il.us/aging/1athome/ccp.htm.
17State Assisted Living Policy: 1998 Section III, p. 102.
18New York State Office for the Aging, http://aging.state.ny.us
19 Wyoming Department of Health, Aging Division, http://wdhfs.state.wy.us/aging/providers/institutions.htm

Home- and Community-Based Waiver Programs

Home- and community-based waivers fund additional programs that provide care to aged and non-aged disabled populations. These are Medicaid-administered programs federally approved under section 1915 of the Social Security Act.[20] They serve the mentally and developmentally disabled, the physically disabled, children with special needs who have other qualifying conditions, persons with AIDS, consumers with traumatic brain or head injury, and other eligible populations. Many provider agencies serving the mentally retarded and developmentally disabled community offer personal care services funded through waivers. These services represent a large portion of Medicaid spending in the states. In 1999, Medicaid paid $10.4 billion for waiver services, $3.5 billion for personal care services, and $2.2 billion for home health care.[21] Services provided to waiver participants are substantial, and the workforce providing care is numerous. Some estimates suggest that as high as 50% of the paraprofessional workforce is providing care to these consumers. Aides serving the mentally retarded and developmentally disabled populations in the states are generally not certified or licensed. Table E-5 shows the number of Medicaid waiver programs offering funding for services and the populations served in the four fieldwork states.

Table E-5. Medicaid Waiver Programs in the Four States, 2000

State**	# of Waiver Programs	Total Cost In Millions $	Total # Persons Served	Total # MR/DD	Total Aged Disabled
California	5	482.9	46,898	34,212	8,551
Illinois	5	290.8	38,227	6,961	17,396
New York	7	1,784.9	56,875	36,179	19,732
Wyoming	3	45.4	2,092	1,110	982

** Source: Long-term Care: Implications of Supreme Court's Olmstead Decision, GAO Report, GAO-01-1167Y, 09/24/01, Appendix 1, Page 25.

Training and Certification Requirements

States have to meet the Federal minimum requirement for educating CNAs working in skilled nursing homes that participate in Medicare and home health aides working in certified home health agencies that supply services to Medicare-insured patients. The requirement is 75 hours of training and includes classroom instruction and clinical experience. However, states have the prerogative to establish individual standards as long as they meet or exceed the national requirements. Maintaining a registry for nurse aides who work in skilled nursing facilities, have

20 Provisions Respecting Inapplicability and Waiver of Certain Requirements of This Title, Social Security Administration, Title XIX, Social Security Act, http://www.ssa.gov/OP_Home/ssact/title19/1915.htm.
21 The Policy Book, AARP Public Policies 2001, Chapter 7 Long-Term Care, p. 19, www.aarp.org

received training and certification, and have passed background checks is a compulsory condition of the Federal mandate regulating nurse aides in nursing homes (OBRA 1987).

Once again, there is variation in training, certification, and registration across the four states.

California

In California, nurse aides are required to have 60 hours of classroom training with an additional 100 hours of supervised clinical training. An aide must pass an examination for certification and must register with the Department of Health Services Licensing and Certification Section in the Aides and Technician Certification Section (ATCS) Registry. Home health aides are required to have 120 hours of training, 75 hours of which are in the classroom. CNAs are able to take an extra 40 hours of training and then dually qualify as a HHA. California does not track aides by place of employment, so dual certification makes it difficult to know in what setting an aide might be working. Training occurs in a variety of settings including high schools, community colleges, adult and regional occupation centers, and nursing schools, as well as qualified nursing facilities. Personal care aides are not certified in the state. These workers provide most services under the auspices of the California Department of Social Services through the In-Home Supportive Services (IHSS) program. There are an estimated 230,000 workers providing personal home care to both elderly and disabled clients through IHSS.

They ATCS Registry also lists home health aides and hemodialysis technicians, and they, like nurse aids, must pass a criminal background check.

Illinois

In Illinois, CNAs are required to have 120 hours of training for certification. This includes 80 hours of classroom instruction and 40 hours of practical clinical experience. The titles nursing aide and nursing assistant are used interchangeably in the state. HHAs must meet the same educational requirements. Training is offered through a variety of educational institutions including vocational programs, community colleges, secondary schools, and community organizations.

The Illinois Department of Professional Regulation is not involved in the actual certification of paraprofessionals through authorized educational and vocational programs. No document indicating certification is ever issued to individuals by the registry or by the certifying agency. The employer bears the burden of checking the Illinois Nurse Aide Registry to verify certification and to be sure that the aide is registered.

New York

New York requires training for nurse aides that is of "at least 100 hours duration" and includes at least 30 hours of clinical training.[22] Training occurs in a multitude of settings including high schools, vocational training schools, nursing homes, community colleges, and home health agencies. Nurse aides must file with the Nurse Aide Registry for renewal of their certification every two years and provide proof of having worked at least seven hours in the previous twenty-four months. If the aide is employed at the time of renewal, the employer is required to pay any fees attached to the registration process.[23] The New York State Department of Health requires HHAs working in certified agencies to complete 75 hours of approved training.

Wyoming

Wyoming requires 75 hours of training for all nursing assistants "regardless of an individual's title or care setting."[24] The Wyoming State Board of Nursing maintains the Nurse Aide Registry and also "develops and enforces standards"[25] including regulation of the certification process and training of nurse aides. HHAs must have passed a nurse aide competency assessment and have taken an additional 16 hours of training within two weeks of beginning employment in a home care setting. Therefore, an HHA is qualified as a CNA as well as an HHA. CNAs are required to renew their certification every two years. Although literacy is often required for employment as a nurse aide, Wyoming has a provision for oral examination of the nurse aide to accommodate deficiencies in reading.

Training in Wyoming occurs at some high schools, community colleges, and at many nursing homes. The School of Nursing at the University of Wyoming actually requires that all applicants accepted to the registered nursing program be CNAs. Program directors feel that this assures some direct knowledge of the type of work that a registered nurse will perform. This initiative also augments the CNA workforce if only for a temporary period since all potential nursing students are working, at least for the short-term, as nursing assistants.

Fieldwork Findings: Worker Shortages

The following observations summarize the fieldwork. While the reports varied considerably in their presentations, informants were essentially consistent in their remarks. There was consensus that there are compelling concerns about the interplay of the diminished supply of paraprofessional workers and the increasing demand for services from the community. Many informants felt strongly about the need for planning around workforce issues in the context of delivery, utilization and quality of care. Collection of data is important to aid in developing

22 New York State Health Rules and Regulations, NYCRR Title 10, Section 415.26, http://w3.health.state.ny.us/.
23 New York State Health Rules & Regulations, NYCRR Title 10, 415.26 (6).
24 Regulations of the State of Wyoming, Chapter VIII Section 2, http://nursing.state.wy.us/.
25 Regulations of the State of Wyoming, Chapter VIII, Section 3.

strategies to address the problem. Improving State and Federal databases was an overriding concern. Informants suggested that current and accurate paraprofessional data would:

- Improve efforts to recruit new workers
- Enhance retention strategies for employees
- Aid in understanding the supply of and the demand for workers
- Help to ascertain the relationship between workforce availability and consumer access to services
- Elucidate the interaction between reimbursement models and provision of care

The following statements in bold type are summary sentiments or observations that relate to informants' comments. Clarifying information follows each remark.

Too Few Workers to Provide Quality Services

The four states reported shortages of paraprofessional workers. Although informants could not cite data sources or other evidence that precisely document these shortages, there was consensus that shortages exist; that they are significant; and that they require the attention of government policymakers, regulators, providers, and consumers.

All states reported that finding solutions to the shortage will require strategies with many dimensions. There was consensus that the factors leading to the shortage are complex and that solutions require not only new economic strategies, but also alteration of social, educational, welfare, and immigration policies with a focus on enhancing working conditions and pay.

Informants in Illinois, Wyoming, and New York indicated that the worker shortage will affect both the quantity and quality of care.

Informants suggested that adverse incidences in nursing homes are the best testament to the effects of deficient numbers of workers on quality of care. However, there is a disincentive for nursing homes to emphasize such occurrences because of the fear of sanctions. Therefore, any accurate assessment of the link between quality and staffing levels is diminished. The result is often anecdotal information about such problems.

Documenting the Shortage Is Difficult

No comprehensive dataset that addresses paraprofessionals is available to inform researchers about worker shortages. States use a variety of information to inform their workforce policy. For instance, California performed an interesting exercise by reviewing and counting the number of certificates issued to nursing assistants from July 1, 1998 through May 1, 2001. The State compared that number to the number of certificates not renewed for previously certified nursing assistants during the same time period. There were 35,974 new aides certified in that 22-month period. However, there were 46,751 previously certified nurse aides who did not renew their certifications. This resulted in a net loss during that time of 10,777 aides. Another analysis of the number of certificates issued in July 1997 revealed that more than half of the certificates supplied in 1997 had not been renewed in 2001.

Many Factors Affecting the Shortage

The paraprofessional workforce is particularly sensitive to the economy.

There is tremendous competition for entry-level workers from other service industries and retail establishments. In Wyoming, one respondent described the problem as an "employment crisis." Jobs abound, and workers are scarce. New York informants indicate that this sensitivity to the

economy is actually a visible phenomenon. Providers could document that shortages began as retail establishments or tourist venues began expansion in their communities. In New York, this is dubbed "the thruway effect," because it happens in identifiable ways at identifiable times across the State especially along the New York State Thruway.

There is both internal and external competition for workers.

Informants in California suggest that there is not only external competition for workers but there is also internal competition. Facilities that can offer better salaries, benefits, and working conditions, such as acute care hospitals, can draw potential workers from nursing facilities and home health agencies. In New York, licensed home care agencies appear to have higher turnover rates than either certified home health agencies or nursing homes. This might be attributable to better working conditions, better pay, or more benefits available from larger facilities or integrated delivery systems. Home care agencies provide more part-time employment than institutional nursing facilities and are generally not able to offer extensive advancement or educational opportunities to their employees. Licensed agencies in New York are frequently sole-proprietorship businesses that operate with small margins that limit their ability to offer expanded benefit packages. Note, however, that some of these smaller agencies are creative in their attempts to attract and retain a caring, competent, and stable workforce. Many larger providers commented on the need for these community-based agencies to offer services especially where cultural diversity affects care delivery. Distinct resources available in neighborhoods where workers and consumers share ethnic backgrounds and language are important to the social aspects of providing care.

The problem may not just be one of supply but rather of distribution or working status of the workforce. According to New York and Wyoming informants, even if there are enough trained workers in the State in the aggregate, they may not be active in the workforce. All states report that numbers in their registries include people trained as paraprofessionals who have discontinued their certification or who are not presently providing direct care.

Informants also noted other distribution problems. Some local areas have plenty of workers, while adjacent communities have too few. California's labor situation illustrates this. Counties across the State have differing pay scales for workers in the In-Home Supportive Services Program. A worker who can earn higher wages in one county than in an adjacent one will logically be drawn to the higher pay.

Other distribution problems may be attributable to population concentrating in large cities, which creates a greater pool of potential workers. This is particularly true in metropolitan areas such as New York City where workers are more abundant than in many of the smaller, rural upstate communities.

The paraprofessional workforce is mobile.

Informants indicate that anecdotal experience with the paraprofessional workforce suggests that workers are very mobile. Wyoming informants indicated that workers "move on" to like facilities or providers of care, "move out" to other jobs in other sectors, or occasionally "move up" with more training to higher levels of assistive care. In New York it is fairly common for workers to leave long-term care and then return to it after doing another job in a sector such as retail.

Influence of Government Regulation And Reimbursement

Federal reimbursement rates are insufficient to allow additional wage or benefit incentives to attract paraprofessional workers.

In Wyoming, "Pay rates for CNAs are very low relative to their importance to long-term care." Wyoming and New York informants indicated that the work is emotionally difficult and physically demanding with few rewards and that the workforce is largely female and poor and the wage rate does not provide a living wage.

Federal payment policy drives reimbursement policies of other payers.

Private insurance carriers, proprietary agencies, and individuals paying privately for services establish payment rates based on those established by the government. Federal payment rates limit the wages of paraprofessional workers because they drive not only governmentally supported services but also the for-profit, private market as well. Some change in Federal reimbursement policy may, therefore, be fundamental to any remedial efforts focused on improved benefits for paraprofessionals.

California informants indicated that employers play important roles in the market. There is a relationship between provider responsibility, government regulation and payment methodologies.

The problem with the paraprofessional workforce is two-fold. The difficulty of initial recruitment is coupled with the challenge of retention. There is an interesting relationship between factors that complicate recruitment and retention. The low wages that characterize the jobs hinders recruiting workers for employment as paraprofessionals. Once workers are actually hired, limited financial resources hinder employers' efforts to retain them. Government policies inhibit the ability of an employer to offer expanded benefit packages when reimbursement for caseloads is highly regulated with little inherent flexibility. This is true not only at the Federal but at the state level, as well.

California's IHSS program is an example of a program the funding of which affects workforce incentives. IHSS is a social services program in which funders participate at various levels. This intent of the program was to meet the needs of the state's elderly populations for in-home personal care services. IHSS provides care through a variety of delivery mechanisms including contract, county homemaker, and individual provider models.[26] The most popular of these is the individual provider model in which consumers hire workers directly. This option is sometimes administered through public authorities within California counties that act as intermediaries that help consumers find and keep workers. The other options include services delivered through contracted agencies that hire and assign workers to caseloads, or care delivered by State social service agency employees.[27] This program is funded by the Federal government through Medicaid and through matching funds from both the State and the county in which services are provided. However, wage levels across counties vary considerably. In Los Angeles, for instance, paraprofessional workers earn $6.25 per hour with no benefits. In San Francisco,

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26 In Home Support Services, California Advocates for Nursing Home Reform, p. 1. http://www.canhr.org/publications/factsheets/fs_ihss.htm.

27 California Advocates for Nursing Home Reform, p. 1.

paraprofessional workers in the same program receive $9.00 per hour with comprehensive medical and dental benefits.[28] The discrepancy is attributable to the variation in the degree to which counties provide wages, incentives, and benefits. Many of these workers are unionized through the Service Employees' International Union (SEIU). This union has been actively campaigning for improved benefit packages in the counties where wages are low. Unionization has benefited these workers.

All stakeholders need to take responsibility for this workforce.

Government policy alone cannot provide the comprehensive solutions necessary to meet future needs. Although Federal policy sets the standard, each system component bears some responsibility in the interaction between policy creation, implementation, and distribution of resources. Society must make a dedicated commitment to care for the elderly and disabled and be willing to make focused contributions to care. An example of distributing responsibility among various parts of the system is wage pass-through legislation, which is intended to supplement hourly pay for paraprofessionals. Individual providers handle these monies differently. It is important to assure that designated wage incentives are reaching their intended target and are not being used for other purposes. Accountability rests with both the payer and the provider employer. Another example of interaction between parts of the system involves family members who contribute substantial unpaid time and resources to caring for elderly relatives. Government regulations and business policies should encourage efforts by family caregivers through enabling legislation that makes available generous employment leave policies or provides tax incentives. These initiatives would support family caregivers who offer help to elders while still permitting them to maintain their own personal and work responsibilities. Effective in January 2000, California has implemented a $500 tax incentive for long-term caregivers who qualify by income, familial relationship, and the need of the individual requiring care.[29]

Providing care to the elderly and disabled creates complex challenges that will require creative, collaborative solutions. Considered, deliberate change that engages all parts of the system must occur to encourage stakeholders to find constructive strategies to address the problems. Solutions need to be multi-faceted and address the wide range of issues that affect this workforce.

Many Issues Affect Recruiting and Retaining Paraprofessionals

Retention is a major issue even immediately after training.

Yields from training classes are not high. According to New York and Wyoming informants, new trainees are not always able to pass the competency tests or may not like the work after training. California estimates that half of those trained in one year are lost to the system within

28 California Advocates for Nursing Home Reform, p. 1.
29 2001 California Supplement, Long-Term Care Credit, http://www.taxcpe.com/pdfs/casupp.pdf, pp. 6-9.

three years. In New York, a nursing home cited the example of a training class that graduated 12 new aides in March, only one remained working in the facility five months later in August. In Wyoming, one nursing home reported that typically, from a class of fifteen participants, only three or four will actually qualify and choose to work as a nursing assistant.

Learning about retention strategies is of major interest to employers.

New York and Wyoming informants suggest that recruiting workers is a problem that policymakers must address through enhancement of work status and benefits, but retaining workers is a problem that individual providers must thoughtfully consider and address with creative workplace strategies. Informants were especially interested in information about successful strategies in the industry that enhance paraprofessional retention in organizations and facilities.

Although pay may be important to retention, the key issues are the work and the work environment.

Informants in the industry feel that low wages, the diminished status of the work, and the difficult work conditions all contribute to major difficulties in recruiting and retaining workforce for nursing facilities, home health care, and personal care services. Illinois informants indicated the work is labor intensive, emotionally difficult, and poorly reimbursed. Wyoming informants indicated it is physically and mentally stressful, with paraprofessionals having high rates of work related injuries.

Assessing unmet patient needs could provide an estimate for workforce requirements.

In both California and New York, there was interest in using patients on waiting lists or numbers of clients refused for services to assess unmet need. Informants in California suggested that lists of patients awaiting services needed to be reviewed to evaluate first, the speed of patient access to care, and second, access to appropriate levels of care. California and New York informants suggested that available staffing directly influences both of these aspects of care delivery.

A New York respondent provided the following example to illustrate the difficulties endemic to short staffing. A hospital discharge officer refers a patient for home health services as appropriate care at discharge. Provider agencies deny service due to lack of available staff. The patient needing home services either remains in the hospital (for lack of an available caregiver in the home) or moves to a rehabilitation setting or nursing home until care at home can be obtained. Although a longer hospital stay or transfer to another facility may be necessitated by the immediate health demands of the individual, this is expensive for the payer and counterproductive for the recuperating patient. A long-term care system must be responsive to patient demand and be capable of supplying appropriate treatment at each point in the continuum of care.

Though California and New York informants suggested tracking unmet patient needs as a means of determining worker shortages, there was concern that the statistical integrity of keeping waiting lists or lists that detail refusals of care might be complicated, with duplication if patients seek care unsuccessfully from several provider agencies.

Career options and ladders for the paraprofessional would make the job more attractive.

Many facilities and organizations are interested in providing further opportunities for training. All states report that career ladders are important for retention of the workforce. Nursing facilities and home care agencies may offer opportunities for further training or higher education grants and scholarships for workers interested in receiving more education. New York funds

several programs that allow cross training. However, not all organizations can provide these opportunities. Additionally, an aide's family situation may impede pursuing educational opportunities.

The paraprofessional workforce does not have the strength of a large national organization to represent its interests. Unionization may be important for this workforce.

Advocates often provide compelling voices in support of the groups they represent. Paraprofessional workers do not have a powerful lobby that promotes their interests particularly at the individual state level. In Illinois there is no membership association for paraprofessional workers. In New York and California, unions provide a voice for some of the workforce. In New York City, a union that negotiates benefits and working conditions represents most of the paraprofessional workforce. Unionization keeps wages at the contracted level since pay is negotiated for a period of time. There is a downside to this since union scales make it difficult for providers to meet the market immediately when there is fluctuation that raises pay. This can place the union employer at a disadvantage to non-union agencies when it comes to being competitive with wages at a particular point in time. However, unions do provide many desirable benefits including health insurance and educational opportunities for workers. Informants saw these factors as positive incentives to union membership and to paraprofessionals having the desire to work for providers who are unionized.

There are some national professional organizations that have gained repute for their efforts on behalf of paraprofessionals. The Direct care Alliance, a coalition of long-term care workers, consumers, and concerned providers was advocates reform and encourages policy to ensure quality jobs for a stable, valued, and well trained paraprofessional workforce.[30] The National Association for Home Care formed the Home Care Aide Association of America to provide an organization that advocates directly for home care workers.[31] This organization has several goals, including standardizing training for home care aides, promoting a national classification system, advocating effective use of home care aides, and increasing reimbursement for their services.[32]

A system of informal caregivers exists.

New York and Wyoming informants indicated that many caregivers are family members, church associates, neighbors, and friends of the elderly who supply help with a variety of activities of daily living or instrumental activities of daily living. As many as 60% of the elderly infirm may rely exclusively on unpaid caregivers. This informal network is essential to the system.[33] These caregivers provide vital services in an extended support system without the use of public

30 The Paraprofessional Healthcare Institute, http://www.paraprofessional.org
31 Home Care Aide Association of America, http://www.nahc.org/HCA/home.html
32 Home Care Aide Association of America.
33 Allen K, Long-Term Care: Implications of Supreme Court's Olmstead Decision Are Still Unfolding, GAO-01-1167T, September 24, 2001, p. 9

resources. Even those patients who access care from the formal system often supplement that care with substantial help from family members and friends. Over 95% of the elderly with disabilities who are not living in institutions are the beneficiaries of some informal support services.[34] New York informants expressed concern that the system ignores these family caregivers who also need formal support services to encourage their continued contribution. Caregiver tax incentives, respite programs, and programs that allow payment to family caregivers address some of these concerns. Connecticut, Nebraska, New Jersey, New Mexico, and South Carolina are some of the states that have addressed the need for respite care with increased budget appropriations.[35] Several states have established caregiver support programs including Oregon, Pennsylvania, Texas, Florida, Michigan, New York, and Illinois.[36] The Family Caregiver Alliance, National Center for Care giving recently conducted a survey of 15 State programs to determine the kinds of State initiatives that were being directed at family caregivers. They selected five "best practices" programs in California, New Jersey, New York, Oregon, and Pennsylvania for their innovation and the range of options for caregiver support services.[37] Government programs that address the needs of informal caregivers will become increasingly important as the formal system becomes more stressed with finding sufficient paid workforce.

According to New York and Wyoming informants, another component of the informal system is a gray market that consists of privately paid workers who independently contract with the patient consumer. The number of these workers is considered significant enough to be of concern to the formal system and to raise some pertinent questions. For the purposes of this report, there are several issues. How to track these workers and what is their effect on the delivery system? What are the ramifications for quality of care and for patient safety? Fieldwork interviews indicated that the gray market creates a drain on the formal system by diverting potential workers from the pool of available paraprofessionals. There are no controls over work conditions for the paraprofessional, and there is little job security for workers in the informal system. However, this gray market can and often does provide higher wages for the worker since pay is not constrained by public reimbursement rates and since benefits are not generally part of the wage package. According to New York informants, higher wages are attractive to people working at or just above the minimum wage level. The apparent success of this gray market suggests that increased wages in the formal system might have a positive effect on the supply of workers.

34Stone, p. 13

35 State Study Shows Progress on Long-Term Care, Points to Lag in Federal Health Care Initiatives, The Alzheimer's Association, http://www.alz.org/media/news/1999/Pplongterm_care.htm (website accessed 2001, no longer available at www.alz.org.)

36 The Family Caregiver Alliance, National Center on Care giving, Survey of Fifteen States' Caregiver Support Programs, http://www.caregiver.org/caregiver/jsp/content_node.jsp?nodeid=457 p. 2. (website accessed 2001, publication no longer available on web, hard copy may be ordered.)

37 The Family Caregiver Alliance, p. 6.

New York informants indicated that from the patient perspective, the gray market generates concern about quality of care provided by unregulated workers who may be without formal training or official institutional and organizational oversight. The safety net provided by regulatory mechanisms and established institutions is not active for the consumer who is contracting privately. There is, apparently, greater danger for diminished quality of care and for abuse.

Both the informal network and the gray market make it difficult to assess who is providing care to elderly disabled populations. Informants suggest that the numbers of these providers are significant and that the lack of information about them distorts the ability of the system to plan for the future, further confounding efforts to gather accurate data about paraprofessional workers.

Initiatives

In each location, states have made significant efforts to collect, refine, and use data to address long-term care issues. Informants were consistently interested in understanding the dynamics of the long-term care system, including the relationship of providing care with workforce supply.

California

California has implemented specific strategies to address the problem of staffing issues for long-term care providers. The state's Aging with Dignity initiative provided a grant of $25 million for a Caregiver Training Initiative. The State also committed over $270 million in the 2000 to 2001 State budget to initiatives that help elderly people remain in their homes.[38] This money is targeted to giving tax credits to family caregivers and to increasing senior caregiver wages among other approaches. California has also established a Long-Term Care Council in the Department of Health and Human Services that focuses on strategic planning to improve access to and quality of long-term care provided to state residents. The state legislature recently commissioned a report on the nurse assistant workforce that is to be published in the coming months. California's Certified Nurse Assistant Workforce Crisis: A Report on Recruitment, Training, and Retention includes a survey of CNAs in the state. The report is intended to make recommendations about this segment of the health workforce. California's Employment Development Department recently issued a report titled The Quest for Caregivers: Helping Seniors Age With Dignity. In a survey of 322 employers of nurse aides, 25% responded that it was very difficult to recruit experienced workers and an additional 36% indicated it was somewhat difficult. Twenty-six percent of home health providers, responding to a question about recruitment of experienced worker, indicated that it was very difficult, while 43% point to some difficulty. The report examined a range of employment issues including wages, benefit, work hours, training, physical demands of the job, and a variety of other indicators. The

38 Aging With Dignity, Governor's Budget Summary, Department of Finance, State of California, http://www.dof.ca.gov/HTML/BUDGT00-01/Aging-N.htm

California Office of Statewide Health Planning and Development (OSHPD) compiles reports on long-term care facilities and an annual report on home health agencies that include indicators of staffing in facilities but does not address actual counts of workers.

Illinois

In Illinois, the State Department of Public Health, through its Illinois Center for Health Statistics, collects a variety of data about paraprofessionals from several sources within state government. Long-term care facilities complete an annual survey for the State that includes staffing information about full and part-time counts of paraprofessionals. This information is submitted to the Illinois Health Facilities Planning Board. Additionally, home health agencies are required to complete an annual license renewal questionnaire that has a staffing component. The report requires a count of full- and part-time staff for the month of October for each business operated, total hours worked by employees, and total home health visits. This provides a snapshot of paraprofessional employment in the home health industry as of October each year. The facility and business data are used for statewide health planning.

A report titled Nursing Home Staffing Levels Are Inadequate in Chicago was issued in January 2001 as a minority staff report of the House Committee on Government Reform. This study was commissioned by three members of the U.S. House of Representatives from the Chicago area, Representatives Janice D. Schakowsky, Rod R. Blagojevich, and Bobby L. Rush, to evaluate staffing levels in Chicago nursing homes. The study examined staffing levels in 273 nursing homes and found that 84% did not meet minimum preferred staffing levels.[39] The Chicago Jobs Council conducted a study entitled Understanding Entry-Level Health Care Employment in Chicago that was published in August 2000. Focus groups of employers, job seekers, and educators were convened to discuss demand for entry-level jobs for low income, welfare-to-work, or long-term unemployed workers. The study determined that health care was one of the fastest growing sectors in the economy and that the training of nursing assistants and other entry level workers should be a focus of their efforts. Through its Office of Health Regulation in the Department of Health, Illinois has also created a group called the Nurse Aide Recruitment and Retention Taskforce that focuses on workforce issues. Illinois is investigating creating a new job title called "feeding assistant." Workers in this category would be employed in facilities such as assisted living facilities.

New York

New York has implemented various initiatives in an effort to better understand pertinent issues and to plan for the care of state residents. A law passed in 1997 called the Long-term Care Integration and Finance Act required the Department of Health to conduct a study of assisted

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39 Minority Staff Special Investigations Division, Committee on Government Reform, U.S. House of Representatives, Nursing Home Staffing Levels Are Inadequate in Chicago, January 16, 2001, http://www.house.gov/reform/min/pdfs/pdf_inves/pdf_nursing_staff_IL_rep.pdf, p. 1.

living and the Office of Mental Health to do a similar study of delivery of mental health services in adult care facilities.[40] This resulted in a report issued in May 1999 titled Assisted Living In New York: Preparing For the Future. The report discussed demographics, utilization patterns, regulatory oversight, recommendations, and options for program development. The Future of Aging in New York State: Project 2015, is a joint effort of the New York State Office for the Aging and the State Society on Aging. This report was compiled by several experts from information gathered during public forums held throughout the State in 2000.[41] The issue papers included in the compendium range in subject from informal care giving to elder abuse and neglect to living arrangements for the elderly. Additionally, the New York Association of Homes and Services for the Aging issued a report in 2000 titled The Staffing Crisis In New York's Continuing Care System: Analysis and Recommendations, which surveyed nursing homes by mail and telephone about staffing issues. The report includes several substantial recommendations for local, state, and national actions to address workforce recruitment and retention. As far back as 1988, New York was interested in workforce issues in long-term care environments. In that year, New York State's Long-Term Care Policy Coordinating Council conducted the New York State Home Care Worker Study: Phase 1: Agency Survey that surveyed home care agencies about agency, worker, and client characteristics. In 1990, this same group, in coordination with the New York State Department of Social Services, published Recommendations for Action: Recruitment, Training and Retention of Home Care Workers, which suggested strategies to improve recruitment and retention of home care workers.

New York collects data on its home health workers through the Department of Health Licensed Home Care Services Agency Annual Statistical Report, which surveys licensed agencies about patient referrals and discharges, cost of services provided, and staffing.

Wyoming

Several groups have conducted surveys of paraprofessionals in Wyoming in recent years including the State Board of Nursing, the Quality Health Foundation of Wyoming and the Wyoming Health Care Association. The Board of Nursing (BON) survey requested data on CNAs and HHAs working in the state. This survey of all employers of CNAs and HHAs focused on the number of positions available, filled, and vacant. The BON database indicates that in May 2001, there were 3,657 current licenses for CNAs (including HHAs). The Quality Health Care Foundation of Wyoming and the Wyoming Health Care Association, trade associations representing nursing homes and home health agencies in the state, collaborate on mail and telephone surveys of CNAs in Wyoming. A recent wage survey revealed that the lowest paid CNAs in the State made $7.00 per hour while the highest paid workers earned $12.86 per hour.

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40 Assisted Living in New York: Preparing for the Future, Report to the Governor and the Legislature, May 1999, New York State Department of Health, Office of Continuing Care, http://www.health.state.ny.us/nysdoh/alra/main.htm.
41 New York State Office for Aging, Project 2015, http://aging.state.ny.us/explore/project2015/index.htm.

The University of Wyoming and the Wyoming Health Resources Network are collaborating on a promising endeavor. They are cooperating in the creation of a statewide health workforce registry that will count and track both licensed and allied health workers starting in the summer of 2001. Wyoming's small size makes quality data collection and management both possible and achievable.

Conclusions

Informants generally agreed on the complexity of the problems related to recruiting and retaining paraprofessionals in the workforce. Specifically, respondents agreed that:

- A significant healthcare worker shortage poses considerable risk to both quality and quantity of care for vulnerable populations.
- Data collection and analysis is inadequate for policy planning.
- Inconsistencies complicate compiling and understanding existing datasets.

Appendix F. CNA Registry Details

This chapter describes the CNA registries and includes the following sections:

- Introduction
- Registry Background
- Legislative Mandate
- CNA Registries in the Fifty States
- Best Practices
- Discussion

Introduction

One of this report's original hypotheses was that CNA registries would be logical platforms on which to build more effective systems for collecting and organizing data relating to long-term care paraprofessional workers. The intent was to consider expanding CNA registries so that they would include data on paraprofessional workers other than nurse aides and additional data elements that would support workforce planning. This thought was reinforced by the Federal government's mandate to states to maintain registries of certified nurse aides working in nursing homes [OBRA 1987]. Additional impetus for expanding the scope of CNA registries is the increasing interest in mandating criminal background checks for direct care paraprofessional workers. Requirements relating to HIPAA may also support expanding the CNA registries.

To help understand the implications of extending existing CNA registries, this study included an inquiry of agencies responsible for the existing registries in each of the 50 states. Questions related to the contents of registry files, uses of the data, access to the files, and possibilities for using the registries for other purposes.

This chapter summarizes that inquiry. It has five sections. The first presents general background on the registries. The second briefly describes the current legislative mandate for CNA

registries. The third presents tabulations of the specific inquiry questions. The fourth describes best practices among the states, and the fifth briefly describes the inquiry's findings and general conclusions.

Registry Background

The main purpose of CNA registries is to track the background, training, and certification of workers who provide direct care to residents in nursing homes. In most states the registries include only CNAs working in skilled nursing facilities, although in some states there are additional classes of workers and provider organizations.

The registries are largely a creation of Federal legislation that directly addressed nursing home reform in the Federal Nursing Home Reform Act, Subtitle C of OBRA 1987. Subsequent Federal refinements of this law appear in OBRA 1989 and OBRA 1990. State nurse aide registries are funded through the Federal mandate with a 50% Federal match of state money.

Registries operate in a variety of ways. State agencies manage and maintain some. Seven are under contract to a national consultant who works directly with the state supervisory agencies to maintain and update registry files. This company also conducts required testing for CNAs in about a third of the states.

Registries have various configurations depending on the controlling state's legislation and the purposes for which they exist. Some registries maintain only certification and demographic data about nurse aides, while others also contain criminal background information. Some registries list and track a more expansive group of paraprofessional workers including home health aides, medication aides, and, in some states, all direct care workers.

The desire to protect vulnerable people from criminal acts on the part of some states has sparked an interest in gathering background information on direct care workers, with the intent of identifying those with criminal histories. Using registries either to maintain background information or to manage the dissemination of information about criminal histories has caused some registries to evolve beyond their initial purposes of simply registering and tracking nurse aides in nursing homes. As our inquiry discovered, states use registries for a variety of functions.

Some registries track only certified nurse aides, while others list a variety of additional categories of direct care workers. Registries may be a single, self-contained entity or they may have a separate registration mechanism and a separate abuse registry. For example, South Carolina's health regulations state that "the nurse aide abuse registry program is responsible for placing Certified Nurse Aides with substantiated allegations of abuse, neglect or misappropriation of resident property, and or findings in a court of law on the Abuse Registry of

the South Carolina Nurse Aide Registry."[42] In South Carolina, the entity responsible for certifying nurse aides also maintains a patient abuse registry. However, this varies considerably by state. In Kansas, a separate agency, the Kansas Bureau of Investigation, manages the abuse registry and supplies background information about listed paraprofessionals to the Department of Health Occupations Credentialing, the agency responsible for registering nurse aides.

Criminal background checks for direct care paraprofessional workers other than nurse aides are becoming the norm in many states. As previously noted, these checks are motivated by an interest in public safety and the need to protect the consumer. This trend toward universal background examination of all direct care workers may provide some additional momentum for creating central registries that track the demographic characteristics of the entire direct care workforce. Such characteristics could include places of employment, criminal histories, and any substantiated findings of abuse and neglect.

Nomenclature Problems

Formal registration of direct care workers requires precise definitions and accurate. Standard nomenclature and definitions are critical prerequisites for effective registries. In some states, such as Indiana, Oklahoma,[43] and Rhode Island, for example, the term "nurse aide" or "nurse assistant" is encompassing and includes any worker, certified or not, who performs nursing-related tasks delegated by a registered or licensed nurse, regardless of the setting in which the delegation occurs. In other states, such as New York, for example, "nurse aide" or "nurse assistant" is more specific and connotes only those workers certified to provide direct care in residential health care facilities.[44]

"Personal care attendant," a term used in Federal classifications, has acquired many meanings across the country. Depending on the State or depending on the setting in which services are provided, a personal care attendant may be called a mental health aide, a behavioral assistant, a developmental disability aide, a respite worker, or a service aide. These differences in terminology impede comparison between states and, if not reconciled, could defeat any national initiative to use registry data to support national health workforce planning and policymaking.

Despite these difficulties, registries appear to have significant potential to support a number of planning and policymaking functions, in addition to their primary purpose of certifying the qualifications of the workers. This study includes a discussion of fieldwork that suggests individual provider organizations are anxious to have access to statistics that will allow them to benchmark their performance against that of other facilities. Their motivation is to gain a better

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42 Health Regulations Certification Nurse Aide Abuse Registry, http://www.scdhec.net/hr/cert/hrnar.htm
43 Excerpts from Title 63 of the Oklahoma Statutes, Oklahoma Law on Nurse Aides, Certification and the Nurse Aide Registry, Oklahoma State Department of Health, http://www.health.state.ok.us/program/nrsaid.
44 Center for Consumer Health Care Information, New York State Department of Health, Nurse Aide Registry, http://www.health.state.ny.us/nysdoh/healthinfo/webnuraid.htm.

understanding of workforce shortages in their areas and to formulate effective strategies in response to problems. Respondents see statewide data as imperative to developing legislative initiatives and aggregate national data as essential to understanding, defining, and implementing regulatory and reimbursement policy.

Registries hold the promise of providing data to users at these various levels, if the data are consistent across broad categories of direct care workers. Presently, limited funding and lack of organizational uniformity make such efforts impossible. However, with cooperation between the states and the Federal government, a consistent national data system based on registries could serve the needs of a variety of stakeholders.

Such an effort requires a major investment in technology, additional Federal funding of administration, and a definitive national consensus on what data to collect. It is important to recognize that presently there is no data collection effort focusing primarily on collecting paraprofessional worker data on the local, state, or Federal level [Chapter 3]. Instruments that collect data for other purposes such as patient outcome assessments (OSCAR, OASIS), cost reporting (Medicare and Medicaid), State and Federal licensing, comprehensive national workforce data (BLS, CPS), or quality assurance initiatives (ORYX) contain only limited information about direct care workers.

The supply of paraprofessional workers appears to be critically deficient in several states, although no definitive data exists to support that observation. Registries are a potentially important mechanism for assessing the supply, background, and training of direct care workers. However, this potential can only be realized through the coordinated efforts of various constituents.

Legislative Mandate

OBRA 1987 created new conditions for regulating nursing homes including the reform of facility standards, establishment of health and safety requirements, and new stipulations related to training and monitoring of nurse aides within facilities.[45] This legislation required each State to establish a nurse aide registry.

The Code of Federal Regulations lists the requirement that each State must establish and maintain a registry of nurse aides that must contain the following information on each individual who has successfully completed a nurse aide training and competency evaluation program (in accordance with Federal regulations):

- Individual's full name

45 Harrington C et. al., 1997 State Data Book on Long-Term Care Program and Market Characteristics, Department of Social and Behavioral Sciences, University of California, San Francisco and the Department of Health Services Organization and Policy of the College of health professions, Wichita State University, Wichita, KS, May 1999, p. 15.

- Information necessary to identify each individual
- Date the individual became eligible for placement in the registry through successfully completing a nurse aide training and competency evaluation program
- Information on any finding by the State survey agency of abuse, neglect, or misappropriation of property by the individual (including documentation of the allegation, any hearing, the finding, and a statement by the individual so accused)[46]

These regulations detail the requisite training, the competency assessments, the approval of programs, and a variety of other requirements surrounding the administration and use of nurse aides in nursing facilities.

CNA Registries in the Fifty States

This study included an inquiry of all 50 State registries and the District of Columbia. The inquiry solicited information regarding the respective registries and the types of data elements they maintained. Inquiries were mailed to non-informants at least three times and attempted telephone contact to increase the response rate.

Inquiry Responses

There were 45 responses to the inquiry. This section describes the responses and includes supplemental information gleaned from a variety of sources, most notably State web sites related to the registries. Although our work encompassed many aspects of the registries, a comprehensive study of their operation and contents was beyond the scope of this project. The examples below are illustrative and not all inclusive.

The Agencies Responsible for the Registries

Responsibility for the registries in all of the 45 states that responded rests with state government agencies including Departments of Public Health, Departments of Health and Environment, State Boards of Nursing, Divisions of Commerce and Economic Development, State Divisions of Aging, and Departments of Human or Social Services. For most states, the Department of Health (51%, 23 of 45) or Board of Nursing (31%, 14 of 45) manages the registry. Eight states (Alaska, Hawaii, Iowa, Maryland, Massachusetts, Missouri, Utah, and Washington) use one of the other departments of state government to supervise the registry.

In several states, occupational regulation in the form of Nurse Practice Acts and the consequent rules and regulations contain the state requirements for training and registration of nurse aides or nursing assistants. The definitions of these workers in statute vary widely. In other states,

46 Code of Federal Regulation, Title 42, Chapter IV Centers for Medicare Medicaid Services, Department of Health and Human Services, Volume 3, parts 430 to end, National Archives and Records Administration, http://www.access.gpo.gov/nara/cfr/waisidx_01/42cfrv3_01.html.

legislation and regulation governing the licensing and operation of facilities, e.g., nursing homes, home health agencies, adult residential care facilities, etc., contain the rules governing the required training and registration of these workers.

In seven states and the District of Columbia (Connecticut, Delaware, Mississippi, New Jersey, New York, Maryland, the District of Columbia, and as of October 2001, Pennsylvania), a private corporation, Assessment Systems Inc (ASI)[47], manages the nurse aide registry and data base. This company also supplies approximately 30 states with competency testing through the National Nurse Aide Assessment Program. In states that use ASI, there is an active interface between ASI and the state administrative agencies responsible for supervising nurse aide testing or registration.

As previously indicated, many registries have evolved beyond their original mandates. Nurse aide registries may, as happens in Massachusetts, also manage or coordinate the reimbursement of costs for nurse aide training programs and testing expenses to qualified programs under Medicaid or Federal regulations.[48]

47 Assessment Systems, Inc. is a private for profit business that specializes in assistance with establishment and maintenance of nurse aide registries and in providing testing for nurse aide competency. The company provides services to state regulatory agencies and national associations. ASI develops and administers standardized examinations used in the certification and licensing of occupations and professions. http://www.asisvcs.com

48 Massachusetts Nurse Aide Registry Program Mission Statement, http://www.state.ma.us/dph/dhcq/nar.htm.

Workers Listed in the Registries

Table F-1 the variety of workers states list in their registries:

Table F-1. Types of Workers Listed in State Registries

Type of Worker	States
Nursing Aides	All
Home Health Aides	California, Kansas, Indiana, Maine, Oklahoma, Rhode Island, Utah, Wisconsin, Wyoming, Kentucky*
Medication Aides	Kansas, Missouri, Nebraska, North Dakota, Oklahoma
Personal Care Aides	Illinois
Hemodialysis Technicians	California
Orderlies	Minnesota
Developmental Disability Aides	Illinois
Comprehensive Registries listing workers in multiple settings	Oklahoma, Rhode Island, Maryland, Kansas

*Lists home health aides when there has been a finding of abuse

Ninety-six percent of respondent states (43 of 45) list certified nurse aides in their registries. The two states that indicated exceptions use different terminology to describe these workers. Idaho lists certificated aides, and Pennsylvania lists registered aides.

Only 18% (8 of 45) list home health aides in their registries. Those states are California, Kansas, Maine, Oklahoma, Rhode Island, Utah, Wisconsin, and Wyoming. However, in some states, the term "nursing assistant" includes unlicensed direct care workers in a multitude of health care settings; therefore, lists of nursing assistants or aides may include those working in home care or other settings. Maryland and New Hampshire, for instance, have enacted such all-encompassing legislation.

In California, training is structured in such a way that CNAs can add an additional 40 hours of training and become dually certified as HHAs [49]. CNAs, HHAs, dually certified CNAs/HHAs, and hemodialysis technicians are all listed in the California registry. A worker who is currently certified and who has passed a criminal background check is given an active status. A worker who has failed the background assessment is placed on inactive status, making him/her unemployable by healthcare providers in any direct care capacity.

Indiana passed a law in 1999 that required the Indiana State Department of Health to register home health aides who have completed competency evaluation programs.[50] In 2000, the State revised the definition of nurse aide to include any individual providing care delegated by a licensed professional in a range of settings including hospital, outpatient surgery centers, home health agencies, and hospices.[51] Home health aides are now included in this definition.

Illinois is the only State that lists personal care aides in its registry.

Kansas registers nurse aides, home health aides, and medication aides but also requires criminal background checks on all health care workers in any health setting regardless of direct access to patients.[52]

Kansas, Missouri, Nebraska, North Dakota, and Oklahoma register certified medication aides, and Nebraska and Missouri maintain separate registries for them. In Nebraska, the Department of Health and Human Services Regulation and Licensure maintains the registries.[53]

Kentucky tracks home health aides only when there has been a finding of abuse.

In 2000, Maryland passed a law requiring certification of "an individual regardless of title, who routinely performs tasks delegated by an RN or an LPN for compensation."[54] The law requires certification from the Board of Nursing for all nursing assistants including geriatric and home health nursing assistants and registration of all medication assistants. An aide who has a record of abuse, neglect, or misappropriation of property is excluded from certification or renewal of certification. The registry provides monthly updates to employers that detail any change in their aides' status.[55]

Massachusetts lists nurse aides on its registry, but also lists any unlicensed direct care worker who has a substantiated finding of abuse on record.

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49 California Fieldwork, Center for California Health Workforce Studies, appendix to this report, p. 16.
50 Indiana Code Title 16, Article 27, Chapter 1.5-1, http://www.in.gov/legislative/ic/code/title16/ar27/ch1.5.html.
51 Indiana Code, Title 16, Article 28, Chapter 13-1, http://www.in.gov/legislative/ic/code/title16/ar28/ch13.html
52 Interview with Lesa Roberts, Director, Health Occupations Credentialing, State of Kansas, September 19,2001.
53 Nebraska Department of Health and Human Services Regulation and Licensure, http://www.hhs.state.ne.us
54 Title 10, Maryland Department of Health and Mental Hygiene, Subtitle 39, Board of Nursing, Certified Nursing Assistants, http://www.dhmh.state.md.us/mbn/cna
55 The Maryland Nurse Aide Program, Assessment Systems, Inc., http://www.asisvcs.com/topnav/profiles/pdf/0721.p df

The Minnesota Nursing Assistant Registry lists nursing assistants working in nursing homes or certified boarding care homes, including aides and orderlies and those employed by nursing pool agencies.[56] Effective in 1999, the Minnesota legislature allowed individuals to take a competency evaluation without first enrolling in a nursing assistant education program. Although Federal legislation allows a nurse aide in training to be employed for up to four months before being certified, Minnesota now requires that any aide without the required training must pass the competency evaluation before beginning employment. However, those in standard nurse aide training programs in the State may still be employed prior to certification.[57] This is an unusual model and is an interim legislative measure that requires evaluation by the Commissioner of Health before the legislature extends the rule.

Oklahoma has an extremely comprehensive aide registry. A nurse aide in Oklahoma is "any person who provides, for compensation, nursing care or health-related services to residents in a nursing facility, a specialized facility, a residential care home, or an adult day care center and who is not a licensed health professional…(including) any person who provides such services to individuals in their own homes as an employee or contract provider."[58] This legislation addresses all direct care workers and requires that they be listed on a registry. Oklahoma has created a "uniform employment application for nurse aide staff" to register each worker.

Rhode Island registers all aides in health care facilities or home settings. According to the definition of nursing assistants in Rhode Island law, any nurse aide, orderly, or home health aide who is a paraprofessional in the State and who is providing care to an elderly, infirm, or disabled person within his/her training in a variety of settings including hospitals, patient homes, nursing facilities, and rehabilitation facilities must be registered.[59]

Effective January 2001, Utah no longer offers separate certification for home health aides. The State requires testing all existing home health aides by July 2001 to "grandfather" them as CNAs.

West Virginia lists only CNAs in its registry but is adding identifiers that would indicate the type of provider agency where the nurse aide is employed, i.e., home health long-term care, or in provision of personal care settings.

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56 Chapter 144A.61, Subdivision 2, Nursing Assistants, Minnesota Statutes, http://www.revisor.leg.state.mn.us/stats/144A/61.html

57 Nursing Assistant, Training, Competency Evaluation and Eligibility, Department of Health, State of Minnesota, http://www.health.state.mn.us/divs/fpc/profinfo/ib99_13.htm

58 Title 63 of the Oklahoma Statues (63-1-1950.1), Oklahoma State Department of Health, Nurses Aide Registry, http://www.health.state.ok.us/program/nrsaid.

59 Health Professions Regulation, Nursing Assistant Advisory Board, Rhode Island Department of Health, p. 1, http://healthri.org/hsr/professions.

Several states list other categories of workers:

- California's registry includes hemodialysis technicians.
- Illinois' registry lists developmental disability aides.
- North Carolina lists all aides who have successfully completed nurse aide competency assessment regardless of the setting in which services are performed.
- Washington tracks all persons "ineligible" to work in nursing homes.
- Arkansas' registry includes the names of CNAs who have completed training and competency assessment and also lists any employment restrictions due to criminal history. Since 1997, the registry also includes the names of non-CNAs, i.e., dietary, laundry, and maintenance workers, with criminal histories that would restrict or prevent employment by long-term care providers. This repository is called the Long-Term Care Facility Employment Clearance Registry.[60]

Configuration of the Registries

Although some states track unlicensed assistive personnel certifications as well as documentation of abuse and neglect in the same registry, other states maintain separate criminal abuse tracking systems. This may require an interface between two state systems when a provider of care is investigating the employability of a worker. However, in some cases where a dual configuration exists, one system automatically feeds to another so that providers or consumers can obtain the information requested from a single source.

North Carolina Division of Facility Services, which is a part of the Department of Health and Human Services, uses two separate registries. "An individual must successfully complete a state-approved nurse aide training and competency evaluation program to be listed on the Nurse Aide I Registry."[61] This registry contains the aide's name, certain demographic data, and the competency completion date. The department also maintains a separate registry called the Health Care Personnel Registry that contains "a listing of unlicensed assistive personnel (nurse aides) or unlicensed health care personnel (nurse aides, in-home aides, in-home personal care aides, adult care home personal care aides or their supervisors) who are being investigated for or have been found to have caused harm."[62] Tracking of investigations occurs across all health care settings including nursing homes, hospitals, home care agencies, hospices, nursing pools, adult

60 Nursing Assistant Training & Certification Program, Arkansas Medicaid Office of Long-Term Care, http://www.medicaid.state.ar.us/general/units/oltc/restrict.htm

61 North Carolina Department of Health and Human Services Division of Facility Services, Nurse Aide I FAQ, http://www.ncnar.org/faq.html.

62 Health Care Personnel Registry Section, North Carolina Division of Facility Services, p. 1, http://facility-services.state.nc.us/hcarpage.htm

care homes, family care homes, state-operated hospitals, and residential facilities and hospitals for the mentally ill, developmentally disabled and substance abusers.[63]

Other states maintain separate registries by occupation. Missouri has a registry of Level I Medication Aides and Certified Medication Technicians. Nebraska has both a Nurse Aide Registry and a Medication Aide Registry. The certifying course for medication aide in Nebraska is either a 20- or 40-hour course that includes a competency evaluation. The length of the course is determined by the setting in which medication is to be administered.[64] In most cases, a medication aide must have either nurse aide training or home health training before receiving certification to administer medication.

North Dakota has a unique arrangement in that nurse aides are listed on two registries in the state. The North Dakota Department of Health, Emergency Health Services Division maintains a Registry of Certified Nurse Aides, as does the North Dakota Board of Nursing. This registry is called the Nurse Assistant Registry, which is a "listing of all persons who are authorized by the board or included on another state registry and who have been recognized by the board to perform nursing interventions delegated and supervised by a licensed nurse."[65] The North Dakota Board of Nursing also registers medication assistants.

Texas has two registries. The first is the Nurse Aide Registry, which is located in the Texas Department of Human Services, and the second is the Misconduct Registry, which is maintained by the Texas Department of Public Safety. Legislation passed in 2001 requires that a facility or agency "shall search the Employee Misconduct Registry and the Nurse Aide Registry maintained under the OBRA of 1987."[66]

Kentucky's Board of Nursing maintains a nurse aide registry that contains the name, social security number, address, date of registration, and an "abuse registry indicator". This indicator alerts a consumer to the aide's disqualification from employment. The Cabinet for Health Services maintains an abuse registry that is a "listing of those individual nurse aides who have had an allegation of resident neglect, abuse, or misappropriation of resident property substantiated."[67]

Not all registries update their listings by deleting workers who have not renewed registration. Federal regulations require that a nurse aide not have a 24-month consecutive lapse in work, and registries must ascertain that a nurse aide has worked in the previous 24 months to maintain

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63 Health Care Personnel Registry Section, p. 1.
64 Title 172 Chapter 96 004, Nebraska Department of Health and Human Services Regulation and Licensure, http://www.state.ne.us/home/SOS/hhs/t172-96.pdf.
65 North Dakota Administrative Regulations, Article 54-07 Chapter 01, North Dakota Board of Nursing, http://www.ndbon.org.
66 Texas State Senate Bill 1245, Chapter 48, Human Resources Code, Texas State Legislature Online, http://www.capitol.state.tx.us, p. 6.
67 Kentucky Administrative Regulations, Kentucky Legislature, Title 906 Chapter 1:100, Nurse Aide Registry, http://www.lrc.state.ky.us/kar/906/001/100.htm.

active registration.[68] This necessitates at least some sort of biennial renewal mechanism either by individual nurse aide registration or by employer survey. Although registries must track registration status, active or inactive, they are not required to remove records of those who are no longer in current standing. Indiana, for instance, listed 95,800 certified nurse aides in the State in 1999 even though only 31,000 were known to be working there in that year. Florida's registry has accumulated 250,000 names since it began operation in 1985 with only a portion of those workers currently employed as aides.[69] Florida updates aide status annually but retains the listing of all nurse aides registered since inception of the registry. Eight hours of work within the previous two years qualifies an aide as active in the state.

Registry Uses

All inquiry respondents indicate that registries exist to comply with Federal and State rules and regulations. In general, the registries confirm the certification status of nurse aides and their employability as determined by passing or failing a criminal background check conducted in the state.

Only 11% of the states (5 of 45) use the registries for monitoring and planning. Those states are Missouri, Nebraska, New Hampshire, North Carolina, and Wyoming.

Since 1989, New Hampshire has regulated nursing assistants under the Nurse Practice Act. Nursing assistants are now licensed by the State and registered with the State Board of Nursing. Nurse aides qualify in the State after completing 100 hours of training (40 in the classroom and 60 in a clinical practice setting) and passing competency testing by an independent evaluator.[70] A nursing assistant must renew her license every two years by demonstrating 450 hours of nursing related activity during that period. A nursing assistant may be "given a number of job titles, from home health aide to patient care technician. Regardless of the title or setting, if a person is providing nursing-related activities that person must be licensed."[71] The evolution to nursing assistant licensure in New Hampshire occurred as a result of a Certified Nursing Assistant Task Force, which was formed in New Hampshire in 1991.[72] New Hampshire is now considering a change in name for these workers to Licensed Nurse Aide.

North Carolina has conducted substantial national research on the subject of the paraprofessional workforce through its North Carolina Division of Facility Services, the Cecil B. Sheps Center for Health Services Research, and the Institute on Aging. The latter two are located at the

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68 Code of Federal Regulation, 42 C.F.R.483.146 (b)(3).
69 Boen JL, Who will take care of us? Shortage of nursing assistants worries elder-care providers, The Fort Wayne News Sentinel, October 18, 2000.
70Kinson M, New Hampshire Licenses Nursing Assistants, Insight, Volume 6 Number 1, 1997, p. 1, http://www.ncsbn.org.
71 Kinson, p. 2.
72 Kinson, p. 2.

University of North Carolina.[73] Studies include "Comparing State Efforts to Address the Recruitment and Retention of Nurse Aides and Other Paraprofessional Aide Workers," "A Follow-Up Survey to States on Wage Supplements for Medicaid and Other Public Funding to Address Aide Recruitment and Retention in Lon-Term Care Settings," and "Results of a Follow-Up Survey to States on Career Ladder and Other Initiatives to Address Aide Recruitment and Retention in Long-Term Care Settings."[74]

In Wyoming, hospitals, nursing homes, the University of Wyoming, and the medical and nursing associations have formed a coalition called the Wyoming Health Resources Network that is working with the University of Wyoming's Center for Rural Health Research and Education to create a State registry of health workers. The registry is expected to contain information relating to both licensed and other allied health workers and facilities.[75]

Maine has created a Governor's Task Force to investigate nurse aide issues. Maine is one of sixteen states that have introduced a wage pass-through targeting nurse aides to encourage workforce retention.[76]

Virginia has mandated the State Board of Nursing "to certify and maintain a registry of all certified nurse aides…(and) to collect, store, and make available nursing workforce information regarding the various categories of nurses certified, licensed or registered."[77] Subsequently, some data is collected to meet this requirement.

Funding

Funding for each registry is achieved through a memorandum of agreement between CMS and the appropriate state agency. Although there are limitations in Federal regulations on fees that may be charged to registrants, registries do collect some fees from registrants or from the provider agencies that make inquiries of the registry. More than a third (16 of 45 states) of those responding indicated receiving some fees from registrants, while only 4.4% (2 of 45) indicated that fees from provider organizations helped support the registry. Some variation would naturally occur in registries that track more than certified nurse aides. The Federal regulation that restricts fees charged to applicants doesn't apply to unlicensed assistive personnel other than nurse, and, therefore, registries that track other paraprofessionals would be able to generate income from registering those workers. In some states, the cost of initial registration may not be charged to nurse aides, but renewal of registrations, on an annual or biennial basis depending on state mandate, may generate income for the registry.

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73 See North Carolina Division of Facility Services, http:// facility-services.state.nc.us, Cecil G. Sheps Center for Health Services Research, http://www.shepscenter.unc.edu, North Carolina Institute on Aging, http://www.aging.unc.edu.
74 North Carolina Division of Facility Services, http://facility-services.state.nc.us/careerna.pdf.
75 Appendix , Wyoming Long-Term Care Paraprofessionals, p. 1, p. 8.
76 Comparing State Efforts to Address the Recruitment and Retention of Nurse Aide and Other Paraprofessional Aide Workers, North Carolina Division of Facility Services, September 1999, p. 3.
77 Laws of the State of Virginia 54.1-3005, Chapter 30, Article 1, http://www.dhp.state.va.us/nursing.

In Arkansas, the State pays for the initial registration but individuals pay for renewals. In New Hampshire, CNAs registering under the Federal mandate do not pay the $20 biennial fee, but CNAs working in non-mandated environments do pay a fee.

Demographic Information in the Registries

Table F-2 shows the type of demographic information some of the registries contain. Registry information about nurse aides varies across states. All registries track by name, and 95.6% list an address that was current at the time of registration. More than two-thirds (31 of 45) of respondent states include other demographic information such as age, sex, or race. Eighty percent track the date of approved training. Nearly three-quarters (73%, 34 of 45) list the place of training and, with the exception of Kentucky, Minnesota, New York, New Mexico, Nevada, South Dakota, and Wisconsin, 84% (38 of 45) list the last date of registration.

Only 40% track the name and address of an aide's employer. Those states are Arizona, Arkansas, Hawaii, Iowa, Kansas, Maine, Massachusetts, Minnesota, Mississippi, Nebraska, New Hampshire, North Carolina, North Dakota, Ohio, South Dakota, Texas, Wisconsin, and West Virginia. A change in employment triggers an update to the aide file in these registries. In some of these states, however, change in employment may be noted only at re-registration.

Seven states track the termination of employment. This is an important data item that would help to make a registry an effective mechanism for accurate tracking of direct care workers. If maintenance of CNA registration were employer-linked, the listing by current job status would yield counts of workers who were actually employed at any point in time. Florida and Kansas track nurse aides' employment yearly by requiring that employers register, on October 1 and January 1, respectively, all workers on payrolls in health facilities on those dates.

Many types of identifiers distinguish nurse aides within the registries. Alabama, Arizona, California, Georgia, Kentucky, Illinois, Maine, Missouri, New Mexico, and Wisconsin list social security numbers of registrants. Other identifiers, including license or certification number of the nurse aide, may be used as a link to the registry system. In Iowa, search of the Nurse Aide Registry requires either the name of the nurse aide or the nurse aide id number the state issues.[78] In Illinois, a search may be conducted by entering either the social security number or the name of the aide.[79] Similarly, Georgia permits searching by name or social security number.

78 The Iowa Nurse Aide Registry Online, http://www.dia-hfd.state.ia.us/nurseaides/.
79 State of Illinois, Nurse Aide Registry, http://app.idph.state.il.us/nar/index.htm.

Table F-2. Type of Worker and Information in State Registries

State	CNA	HHA	Other Categories	Name	Current Address	Other Demographic Info	Date of Training	Last Registration	Status
Alabama	X			X				X	X
Alaska	X			X	X	X	X	X	X
Arizona	X			X	X	X	X	X	
Arkansas	X			X	X	X	X	X	X
California	X	X	X	X	X	X	X	X	X
Colorado	X			X	X				X
Connecticut	X			X	X	X		X	
Delaware	X			X	X	X	X	X	
District of Columbia	NA								
Florida	X			X	X	X	X	X	
Georgia	X			X	X		X		
Hawaii	X			X	X	X	X	X	X
Idaho	X			X	X	X	X	X	
Illinois	X		X	X	X	X	X		X
Indiana	NA								
Iowa	X			X	X	X	X		
Kansas	X	X	X	X	X	X	X	X	X
Kentucky	X	X*		X	X			X	
Louisiana	NA								
Maine	X	X		X	X	X	X	X	X
Maryland	X			X	X		X	X	
Massachusetts	X		X**	X	X	X	X	X	
Michigan	NA								
Minnesota	X			X	X	X	X	X	
Mississippi	X			X	X	X	X	X	X
Missouri	X		X***	X			X		
Montana	NA								
Nebraska	X		X***	X	X	X	X	X	X
Nevada	X			X	X		X		X
New Hampshire	X			X	X	X	X	X	X
New Jersey	NA								
New Mexico	X			X	X	X	X		
New York	X			X	X	X	X	X	X
North Carolina	X		X****	X	X	X	X	X	X
North Dakota	X			X	X	X	X	X	X
Ohio	X			X	X		X	X	X
Oklahoma	X	X	X	X	X	X		X	X
Oregon	X			X	X	X	X	X	
Pennsylvania	X			X	X	X	X	X	
Rhode Island	X	X	X*****	X	X		X	X	X
South Carolina	X			X	X	X	X	X	
South Dakota	X			X	X	X	X		X
Tennessee	X			X	X	X		X	X
Texas	X		X******	X	X	X		X	X
Utah	X	X		X	X		X	X	X
Vermont	X			X	X		X	X	
Virginia	X			X	X	X		X	
Washington	X			X	X	X		X	X
West Virginia	X			X	X		X	X	X
Wisconsin	X	X		X	X	X	X		
Wyoming	X	X		X	X	X	X	X	X

* Home Health Aides with documented findings of abuse are included in Kentucky CNA Registry.
** Unlicensed direct care providers with substantiated findings of abuse are included in the Massachusetts CNA Registry.
*** Missouri and Nebraska maintain separate medication aide registries.
**** North Carolina maintains a Health Care Personnel Registry which lists all aides with allegations or findings of abue.
***** Rhode Island lists all aides in healthcare facilities.
****** Texas maintains a separate abuse registry for direct care staff working in long term care facilities.

Criminal or Misconduct Status in the Registries

Alaska, Arkansas, California, Hawaii, Illinois, Kansas, Maine, Mississippi, Nevada, Oklahoma, Washington, and Wyoming list criminal status in their nurse aide registries.

Alabama, Illinois, Kansas, Massachusetts, Nebraska, New Hampshire, New York, North Dakota, Ohio, Oklahoma, Rhode Island, South Dakota, Tennessee, Texas, Utah, and Washington list either substantiated findings or allegations of abuse and neglect. Illinois, Kansas, Oklahoma, and Washington track both criminal status and findings of abuse, neglect, or other violations.

States vary in their listing of allegations of abuse and neglect. This appears to be a controversial subject, with some advocates feeling that only substantiated findings should be listed on any public record. Supporters of this view suggest that accusations may not always be well founded since the populations served are sometimes confused or demented, and that the caregiver, on balance, deserves consideration in terms legal protection. The legislation requiring background checks on nurse aides does provide for the aide to have the opportunity to make a statement on the official record attached to the investigation or finding of abuse or neglect.

States handle criminal status or documented incidence of abuse, neglect or misappropriation of property differently. In 24 of the 45 respondent states, the CNA registry maintains some indication of complaint, adverse action, or documentation of discipline or findings of abuse. In Arizona, Colorado, Connecticut, Delaware, Georgia, Iowa, Idaho, Kentucky, New Mexico, North Carolina, Oregon, South Carolina, Virginia, and West Virginia this information may not be on the nurse aide file, but notification to the registry of a finding of abuse or misconduct does trigger a change in the registered status. Depending on state policy, misconduct information the registry receives from another investigative state agency causes removal of the aide's name or a change of the aide's status to inactive or ineligible for health care employment. Notification by the nurse aide registry to a separate abuse registry regarding a change in nurse aide status may also occur. In Florida, Maryland, Minnesota, Missouri, Pennsylvania, Vermont and Wisconsin, the nurse aide registry does not offer information about findings of abuse, neglect, or misappropriation of property. These records may be contained in a separate registry or may be accessed only by special request from approved providers making inquiries.

In Florida, the CNA registry is a part of the Department of Health. The board issues a certificate to practice as either a Level I or Level II CNA and maintains a registry of those with current certification. A CNA may work in a variety of health care settings including home health agencies. Each year in October, CNA employers are required to provide the registry with a list of all aides whom they have employed for at least eight hours in the previous 24 months. The registry is updated accordingly.[80] A CNA must work a minimum of 8 hours within two years to maintain a state certification. Depending on the place of employment, a background screening is required for nursing assistants. The CNA registry is authorized by statute to access the

80 2001 Florida Statutes, Title XXXII, Chapter 464, http://www.leg.state.fl.us/Statute.

background-screening database of the Agency for Health Care Administration, which performs the required investigation.[81] The two databases maintain separate information.

In Kentucky, the Board of Nursing maintains the nurse aide registry, which contains an abuse registry indicator, but two separate state agencies investigate the actual allegations of abuse and neglect, while a third manages education and training.

Massachusetts' General Laws a mandate that all long-term care facilities process a criminal offender record check for all employees providing direct care to patients. The Criminal History Systems Board maintains these "records of criminal offender status." The Nurse Aide Registry is a separate entity that is part of the Division of Health Quality in the Massachusetts Department of Public Health. Thus, two distinct registries provide required information. Facilities must register their staff with the Criminal History Systems Board for employees to be allowed to request information. These selected individuals are approved to check employment applicants' criminal histories.[82] Therefore, the process is not available to the public.

The Central Registry Unit of the Missouri Division of Aging receives all complaints of abuse, neglect, or other violations by a caregiver and refers the allegations to the appropriate investigative agency. The Division of Aging maintains a separate registry called the Employee Disqualification List (EDL) which all care providers in skilled nursing facilities and intermediate and residential care facilities, in-home care providers, and employers of temporary nursing assistants consult for information about potential employees.[83] The Department of Social Services places a name on the list after an appropriate investigation and a final determination that prohibits employment in one of these settings.[84] This list is available to authorized users only. However, a written request for information from an individual consumer will be honored.

In Pennsylvania, when an allegation against a nurse aide has merit, "a notation is made on the individual's file on the Nurse Aide Registry. This prohibits future employment by that person in a nursing home."[85] Only the names of nurse aides in good standing are available for the public online through a web site link. Information about nurse aides disqualified from employment is available exclusively by individual telephone inquiry directly to the registry.[86]

A nursing assistant in Vermont is licensed and listed on a registry maintained by the Board of Nursing. A nurse aide must have completed appropriate training and competency evaluation and must not have been convicted of a crime that makes him or her unfit to provide services. The

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81 Background Screening and Exemption Application, The Florida Department of Health, http://www.doh.state.fl.us/mqa/cna/cna_screening.html.
82 Criminal History Systems Board, General Information, The Commonwealth of Massachusetts, http://www.state.ma.us/chsb/cori/cori_cert.html
83 Employee Disqualification List, Missouri Department of Health and Senior Services, State of Missouri, http://www.dhss.state.mo.us/Senior_Services/edl.htm
84 Chapter 660, Section 315, Missouri Revised Statutes, http://www.moga.state.mo.us/STATUTES/c600-699/6600000315.HTM
85 Pennsylvania Department of Health, Nurse Aide Registry, http://www.health.state.pa.us.
86 Pennsylvania Nurse Aide Registry On-Line, http://www.asisvcs.com/services/registry/search_fs.asp?CPCat=0639NURSE?

Board of Nursing also has the power to revoke the license of anyone who does not meet these conditions. Listing on the registry, therefore, assumes a current license in good standing, i.e., appropriate training, assessed competency, and no criminal finding on the record.

Wisconsin maintains a Nurse Aide Directory in the Wisconsin Department of Health and Family Services that lists nurse aides and medication aides who have completed training and competency testing. Listing of certified nurse aides on the Nurse Aide Directory is required regardless of setting in which the aide is providing care. The registry does not maintain any detailed records about the criminal background of a nurse or medication aide but does disqualify an aide when appropriate.[87] Caregiver background checks are provided by another entity, the Wisconsin Caregiver Misconduct Registry, which is maintained in the same state department. The latter registry contains the names of any disqualified nurse aide or other "noncredentialed caregiver" with a confirmed finding of abuse, neglect, or other applicable offense on his or her record. A 1998 law in Wisconsin requires all health care providers including hospitals, nursing homes, home health agencies, hospices, personal care worker agencies, and supportive home care service agencies to conduct criminal background checks on all health care workers who will have access to clients.[88] However, those seeking information solely about nurse aides can obtain it directly through the Nurse Aide Registry.[89] An interactive voice response system indicates that the nurse aide has been disqualified for a finding of abuse or neglect, but the system offers no information about the finding. Only written requests to the registry yield that background information.

States handle notifying employers of new findings of criminal abuse in a variety of ways. In some states, employers must make repeated periodic inquiries of the system after initial verification of the nurse aide's eligibility for employment to be certain that no change in eligibility has occurred. In other states, a monthly list of new findings alerts employers to new determinations of ineligibility. In any case, under Federal law, an employer may not knowingly employ under any circumstances any person who is disqualified from care giving by findings of abuse, neglect, or misappropriation of property. In some states, the list of offenses which lead to ineligibility are more extensive than the Federal criteria and may even include juvenile judgments.

Access to Nurse Aid Registry

Thirty-six percent of states offer access to the registries via the Internet, 91% offer access via telephone, 60% offer access by fax request, and 76% offer access by written request or by e-

87 Wisconsin Nurse Aide Program-Introduction, http://www.dhfs.state.wi.us/caregiver/NATD/NATDintro.htm .
88 Reichard R, Testimony to the U.S. Senate Special Committee on Aging Representing The American Association of Homes and Services for the Aging, p. 3, http://aging.senate.gov/events/hr25rr.htm
89 Wisconsin Caregiver Misconduct Registry, Wisconsin Department of Health & Family Services, http://www.dhfs.state.wi.us/caregiver/misconduct.HTM

mail. Many states provide multiple options, with some states limiting the information available via some mediums.

Iowa, Idaho, New Hampshire, New Jersey, New York, North Carolina, and Wisconsin have telephone interactive voice response systems.

Fifty-eight percent of respondents have open public access to the registries. Some registries provide only limited public data such as active or inactive status. States may require a written inquiry or access by a special identifier when detailed information is needed. Such limited access assures confidentiality for the worker who is disqualified and protects the information from use by anyone not accessing the listings for employment purposes. Nevada and California allow limited public access. Missouri requires a social security number to obtain information. Ohio provides only the name and address of the certified employee when a public inquiry is made.

Delaware and Texas allow public access with special approval. Iowa, Kentucky, North Dakota, and Oregon require a special password.

Connecticut, Hawaii, South Dakota, and Vermont allow access to provider organizations only. Indiana limits access to those who purchase a subscription to the registry.[90]

New Mexico makes a nurse aides' status available on an automated system. However, detailed information about aides with other than active status can only be obtained by speaking directly with a registry representative.[91]

There was no assessment of access to criminal background registries, which are maintained separately from nurse aide registries. The research suggests that states often protect background information in any registry from full public dissemination or from public access. This comes from the view that a need to know about particular offenses is theoretically limited to potential employers, institutional providers, or private consumers. Special safeguards often identify qualified inquiries to the registry; therefore, access to detailed contents is limited.

Some states allow detailed inquiries by written request. This permits individuals who do not possess provider identifiers but who are considering private employment of a nurse aide to uncover any undesirable background that would affect patient care. Missouri initiated a Caregiver Background Screening Service through an executive order of the Governor that allows families to request background information on a potential caregiver through a written request form.[92] States sometimes require that the information provided remain confidential and prohibit use by people other than an employer or potential employer. Some states readily provide limited information to the public. New York, for instance, maintains an enumerated list of persons (by

90 Certified Nurse Aide Registry, State of Indiana, http://www.in.gov/isdh/regsvcs/acc/certhha/index.htm
91 New Mexico Nurse Aide Registry, http://www.health.state.nm.us/dhi/NAR.htm
92 Caregiver Background Screening Service, Missouri State Government, http://www.gov.state.mo.us/background.(Link accessed 2001, Link no longer available).

name and nurse aide certification number) of persons disqualified for employment as nurse aides. It is available to the public via the Internet.[93]

Anticipated Changes

Fifty-eight percent of states (26 of 45) plan no changes.

California, Kansas, and West Virginia indicated that they would add more occupations to their databases. Kansas is considering including non-certified employees of health care providers. California will add certified developmental disability attendants. West Virginia expects to include home health aides and personal care aides.

Maine has considered legislation to register all unlicensed assistive personnel, but the cost of registration has delayed passage of the proposed law.

Arizona, New Hampshire, and Rhode Island hope to use their registries for future workforce planning.

Utah and West Virginia indicate that they expect the registries will support more state agencies.

Maryland and Mississippi expect the registries will support criminal background checks.

West Virginia intends to track multiple employers. Oklahoma will include training and employment on their registries.

Connecticut, Florida, Mississippi, Oklahoma, Rhode Island, Utah, Washington, and West Virginia anticipate adding new data elements to enhance their registries.

Other plans for registry systems include expansion or creation of Internet access in Minnesota, Wisconsin, and Washington; more automation in Kansas; and the installation of an interactive voice response system in Utah.

Future Uses of Registries

Seventy-four percent of the states are willing to permit use of their registries for workforce planning, and 45% are willing to supply estimated counts of workers. Forty-nine percent are willing to provide data for workforce planning, and 49% are willing to allow using data for workforce reports. Some of the informants indicated that there were limitations on the availability of data, since it could only be used as authorized by the regulating agencies or as allowed in statute.

Thirty-eight percent indicated that additional funding would be necessary to support other uses of the registry. Twenty-seven percent responded that statutory or regulatory change would be required for such usage. Thirty-six percent of the registries would require new systems or new

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93 New York State Department of Health, Center for Consumer Healthcare Information, Nurse Aide Registry, http://www.health.state.ny.us/nysdoh/healthinfo/nuraidreg.htm.

equipment to provide expanded services. Concerns were also expressed about the confidential nature of the information maintained and the need to preserve privacy.

Best Practices

Inquiry responses and an interview conducted with the Director of the Registry identified Kansas as a State that was progressive in both the structure and use of its CNA registry.

Kansas is unique in that, at the time the Federal mandated that states create registries, it had already legislated a requirement for registering some direct care workers. Subsequently, Kansas passed a legislative initiative that encouraged compilation of a uniform set of data to provide information about utilization, trends, and cost of health care, including information about health care occupations.[94] This provided a strong impetus for systematic collection of data about the paraprofessional health workforce.

There are eleven agencies in the State that license, register, or certify health professionals. The Kansas Department of Health and Environment (KDHE) houses the Health Occupations Credentialing (HOC) section, which licenses such professionals as dietitians, nursing home administrators, and speech pathologists. HOC also certifies nurse aides, home health aides, and medication aides[95] and houses the Nurse Aide Registry.

Kansas has a more extensive database than most states. A nurse aide, home health aide, or medication aide is certified as eligible for employment under state administrative rules promulgated in accord with Federal regulations. As a condition of continuing certification, Federal regulation requires documentation that a nurse aide has been actively employed during the previous twenty-four months. Kansas obtains verification of employment on an annual basis. This is achieved by a survey of health employers including hospitals, adult care homes, home health agencies, and some staffing agencies on January 1 of each year. The individual aide record is updated annually when employment information is submitted on the survey. The registry first certifies the aide as meeting the qualifications for employment and then verifies employment on an annual basis. Any prohibition from employment discovered in an aide's background is also documented in the registry.

Notification to the registry of substantiated findings of abuse, neglect, or misappropriation of property by the Kansas Bureau of Investigation triggers an entry on the individual aide's record, as does any Federal disqualification for fraud or abuse, or any other mandated prohibition on employment. The registry at HOC serves as a single source for certification confirmation and criminal background checks for employer inquiries on nurse aides, home health aides, or

94 Kansas Statute Chapter 65, Article 68, Kansas Legislative Services, http://www.accesskansas.org/legislative/statutes/index.cgi and Letter from Kansas Department of Health and Environment, May 1, 2000.
95 Kansas Health Occupations Credentialing, Division of Health, Bureau of Health Facilities, http://www.kdhe.state.ks.us/hoc.

medication aides who are registered under Kansas law as qualified to be employed as direct care workers.

Findings of Abuse, Neglect, Misappropriation, or Other Disqualifying Criminal Behavior

HOC also provides a single source for inquiries regarding the criminal background of other uncertified adult care home and home health workers. In 1997, the State passed laws mandating all "operators of adult care homes, home health agencies, and staffing agencies to assure that no one worked in those settings who had a criminal history of a prescribed list of crimes."[96] The legislation required criminal record checks of any worker who was employed in a covered health care setting. The statutes that require providers to perform these checks are found in the licensing laws for nursing homes and other facilities and home health agencies.[97] These laws require that all staff members, including office and dietary personnel but excluding licensed medical professionals, be subject to a background record check.

An update to their technical systems has given HOC the ability to have multiple interfaces with a variety of sources including the Kansas Bureau of Investigation (KBI), which is responsible for maintaining criminal records of individuals in the state. When HOC receives a request for a background record check for a potential employee, it forwards that inquiry to KBI. KBI conducts the record review and provides the search results to HOC. HOC then passes the results to the requesting employer.

This process suggests a possible resource for data on uncertified health workers. Since a core element of the criminal record check system is a job classification code, a statistical analysis by category of worker would be possible. The collection of names obtained through the various inquiries generated by this state mandate is not presently available on a public registry. However, this state directive does provide data on uncertified health workers in mandated facilities.

Also in Kansas, juvenile convictions affect the possibility of employment. Since this is protected information, it allows the KBI to funnel the information from a juvenile record to a defined and authorized user, HOC, that can then disseminate appropriate information to inquiring parties to the extent it is legally disclosable.

Employer Survey

Health care providers in mandated facilities complete the obligatory annual report that lists all health employees as of January 1 of the reporting year and submit it to HOC. Although data input requires about four months, the registry effectively captures an accurate count of workers as of January 1 each year. Updating current employment counts is endogenous to the process.

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96 Kansas Health Occupations Credentialing, p. 1.
97 Kansas Statute, Chapter 65, Article 51, Section 17, Kansas Legislative Services.

Although these updates do not occur during the year, the database is sufficiently accurate at any point in time to allow for some reporting and tracking of trends. If an employee leaves or moves to another job, the change is not recorded until the subsequent filing.

Since implementing its new system in 2000, Kansas' registry has over 130,000 individual records listed by job code. This has allowed Kansas to plan and create educational initiatives to address workforce requirements.

Planning for the Paraprofessional Workforce

In Kansas, an industry advisory group that consists of a variety of providers, including adult homes and hospitals, was formed to give government agencies feedback and to provide educational planning for appropriate employment programs. This has been particularly helpful from an educational perspective since required core competencies in particular settings are discussed, and core curricula addressing those needs can be created.

Kansas is a rural state with a need for flexibility in its workforce. Communities are often geographically isolated and dependent on local resources for care across settings. The HOC director suggested that Kansas viewed career options for paraprofessionals as part of a wheel rather than as a ladder. Each spoke in the wheel represented particular competencies needed for particular settings while the hub represented core competencies. The State has devised some innovative training to allow a certified nurse aide to work in home health by adding 20 hours of curriculum to the nurse aide training. A medication aide requires an additional 60 hours of training. The closing of mental health hospitals in the State also created a need for more flexibility in certification. Mental health workers were displaced, and the adult care provider community felt that many of those workers were qualified to work in other settings without having to begin with basic training. A 20-hour bridge course was designed to allow a mental health aide to become a certified nurse aide. Other modifications in training have since been instituted.

This flexibility in credentialing allows workers in small towns to provide care in multiple settings and also permits workers to have full-time employment. Providers in rural areas are not always able to offer sufficient caseloads to keep a worker employed for an eight-hour day. Cross certification meets the needs of the consumers, employers, and workers, allowing an aide to move across settings as required.

Kansas has been imaginative with its resources. Physical therapy assistants and occupational therapy assistants can take a bridge course focused on geriatric long-term care to test and certify as a CNA. Kansas is considering such other initiatives as training EMTs to become CNAs in a similar crossover curriculum.

Other Best Practices

Several other states have registries with features relevant to this study and/or to policymakers interested in standardizing registries across the U.S. For example, many states have comprehensive registries. Oklahoma has a very comprehensive registry with a standard application system. Rhode Island registers all aides working in health care facilities or patient homes. Illinois registers personal care aides and developmental disability aides in addition to CNAs. Vermont and New Hampshire license nurse assistants, which creates a number of interesting possibilities for tracking these workers. Such practices suggest that some states are interested in more expanded information and monitoring of paraprofessional workers.

Discussion

Worker registries appear to offer a useful model for improving data collection about direct care paraprofessional workers. Expanding the registries involves additional costs, especially if new categories of workers are added to the systems, new data elements are included, and additional background checks are required. However, there are few other options that provide access to consistent data at the local, state, and national levels.

Some observers suggest that making registries mandatory for all unlicensed direct care personnel would further impede the hiring process and create more delays in the route from training to provision of care. Creating more bureaucracy and enforcing more rules would further complicate an already difficult employment environment. However, Federal legislation allows for the employment of a nurse aide in a nursing facility on a provisional basis for up to four months without certification. The same option might be extended to other direct care workers who could begin employment while awaiting completion of the registration process.

The cost of such an undertaking seems to be the strongest objection of those whose opinions were sought. Although informants suggest that registries may be good starting points for data collection, they indicate that providers are taxed for resources under the new payment systems and there are no extra funds for registering or tracking direct care staff. There is agreement that continuity across states would help create a national database to inform policy and planning but that without Federal support, states would be unable to accomplish such an initiative. Funding is, therefore, a major impediment. States express motivation to know more about these workers and willingness to improve data collection, if it is supported.

Any new initiative to collect data on paraprofessionals will require technical, human, and financial resources. The consensus obtained from literature review, survey documents, and informant observation is that some initiative must be forthcoming and that the initiative must focus on the problems surrounding this workforce—data collection and analysis, workforce and workplace initiatives, education and career opportunities, and recruitment and retention strategies. Demographic trends suggest that the crisis in the workforce will intensify over the coming decades due to an aging population and more opportunity in other industries for people who currently provide this care. Although difficulties may be felt more acutely in some states or experienced differently by particular types of providers in the continuum of care, at some point the crisis will affect every component of the system—consumer, provider, and payer.

The first step in addressing the issue should be a careful assessment of the workforce. This can only be achieved through gathering and analyzing accurate data. Registries appear to provide an appropriate locus for such effort. Augmentation of the registries needs to include technical staffing that is able to extract appropriate data from the information collected. Presently, registries supply limited services for a defined audience. Any planning or policy initiatives require trained analysts with distinct objectives to produce standardized products that could be aggregated across states for national use or disseminated as regional information to providers in a locality.

Appendix G. Annotated Bibliography

In addition to the national database, several states and private entities also collect or analyze data related to direct care workers. This appendix presents the following examples.

National

Crown WH, Ahlburg DA and MacAdam M. (1995). The demographic and employment characteristics of home care aides: A comparison with nursing home aides, hospital aides, and other workers. The Gerontologist, 35(2), 162-170.

> *Based on the 1987-1989 CPS March Supplement data, this article describes demographic characteristics and work conditions of home care aides, nursing home aides, hospital aides, and other workers.*

General Accounting Office (2001). Nursing workforce: Recruitment and retention of nurses and nurse aides is a growing concern. Washington, DC: Author.

> *This report addresses the concerns about recruitment and retention of nurses and nurse aides. It contains CPS and OES data that are relevant to direct care workers Note that the definitions of direct care workers in CPS data are different from those by Crown et al. (1995).*

Leon J and Franco SJ. (1998a). Home and Community-Based Workforce. Bethesda, MD: Project HOPE.

> *Part of this report shows results of telephone interviews with 623 home care workers, mostly paraprofessionals, throughout the country. Respondents of Medicare Current Beneficiary Survey identified the sample. The report provides a profile of workers and compares them by employment type (agency vs. self-employed) as well as occupation title.*

North Carolina Division of Facility Services (1999). Comparing state efforts to address the recruitment and retention of nurse aide and other paraprofessional aide workers. Author.

> *The author conducted a survey of State Medicaid agencies and State Units on Aging in 50 states to collect information addressing policy issues related to aide wages and benefits and actions underway or being considered to address aid worker shortages. Forty-eight states responded. The majority of states said that aide recruitment and retention was a major workforce issue, and a number of states have either taken action or*

are considering action to address the issue. Actions include wage pass through, enhanced incentives, shift differentials, transportation reimbursement, career ladders, training, and establishment of work groups.

North Carolina Division of Facility Services (2000). Results of a follow-up survey to states on wage supplements for Medicaid and other public funding to address aide recruitment and retention in long-term care settings. Author.

This is a follow-up study of the survey conducted a year before. This report focuses on implementation of wage pass through. The impact of wage pass through was different among states; some reported positive effect while others reported negative and no effects.

State

Florida

Florida Department of Elder Affairs (2000). Recruitment, training, employment and retention report on certified nursing assistants in Florida's nursing homes. Tallahassee, FL: Author.

This report reviews existing literature on recruitment and retention of CNAs in nursing homes. Key issues include: severity of CNA shortages, training, screening, as well as need for more data.

Salmon JR, Crews C, Reynolds-Scanlon S, Jang Y, Weber SM, and Oakley ML. (1999). Nurse aide turnover: Literature review of research, policy and practice. Tampa, FL: Florida Policy Exchange Center on Aging.

This report, produced for Florida Department of Elder Affairs, reviews existing research on turnover of nurse aides. Key issues include: worker profile, wages and benefits, job design, burnout, and training.

Iowa

Hill SB. (1998 and 1999). Certified nursing assistant recruitment and retention pilot project. Des Moines, IA: Iowa Caregivers Association.

This project was funded by Iowa Department of Human Services to conduct a CNA recruitment and retention pilot project. The project has four phases: a mail survey of CNAs in the State to identify factors potentially related to turnover, two focus groups of CNAs, pilot project interventions, and evaluation of the intervention. The results of phases 1 (survey) and 2 (focus groups) are available at Iowa Caregivers Association.

New York

New York Association of Homes and Services for the Aging (2000). The staffing crisis in New York's continuing care system: A comprehensive analysis and recommendations. Albany, NY: Author.

The report consists of literature review, results of a survey of 672 nursing home providers throughout the states (250 responded), and telephone survey results of 86 randomly selected association members in different settings. The report demonstrates the serious worker shortages in the long-term care system in New York State and makes several policy recommendations.

New York State Long-Term Care Policy Coordinating Council (1988). New York State home care worker study: Phase 1: agency survey. Albany, NY: Author.

A mail survey was conducted with 1,144 home care agencies and programs in New York State (final sample n=523). The report contains information on agency characteristics, client characteristics, staff organization, wages, benefits, promotional opportunities, worker training, worker recruitment, worker shortage, and worker turnover.

New York State Long-Term Care Policy Coordinating Council (1990). Recommendations for action: Recruitment, training and retention of home care workers. Albany, NY: Author.

Based on their studies on home care agencies, home care labor market, and home care workers, the authors make recommendations to improve recruitment and retention of home care workers.

Ohio

Glock P. (1995). Home health aide and homemaker survey report. Columbus, OH: The Ohio Department of Aging.

This report gives results of a mail survey of 453 home care agencies. The study covers such issues as: wages and benefits, career track of paraprofessionals, reasons for leaving, shortage of workers, and training of workers.

Straker JK and Atchley RC. (1999). Recruiting and retaining frontline workers in long-term care: Usual organizational practices in Ohio. Oxford, OH: Scripps Gerontology Center at Miami University.

Telephone interviews were conducted with administrators of 112 nursing homes and 100 home health agencies in Ohio to understand more about long-term care employers' recruitment and retention practices. The study found that most agencies dramatically underestimated the extent of their turnover problem and did not collect adequate data on the extent and cost of turnover. It was also found that organizational climate rather than economic factors have more impact on turnover rates. Also, employers with high turnover rates are found to conduct different interventions from those with lower turnover rates.

Pennsylvania

Pennsylvania Intra-Governmental Council on Long-Term Care (2001). In their own words: Pennsylvania's frontline workers in long-term care. Harrisburg, PA: Author.

This report shows results of 15 focus groups of frontline workers in different long-term care settings. Key issues surrounding recruitment and retention of direct care workers are discussed from workers' perspectives.

Pennsylvania Intra-Governmental Council on Long-Term Care (2001). Pennsylvania's frontline workers in long-term care: The provider organization perspective. Harrisburg, PA: Author.

This report shows results of 901 telephone interviews with administrators in different long-term care settings throughout the state. The study covers a wide variety of issues surrounding recruitment and retention of frontline workers, including: worker profile, severity of the shortage, consequences of shortages, strategies for handling shortages, and barriers to recruitment and retention.

Appendix H. References

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