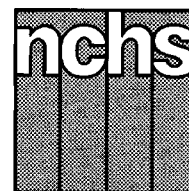


Advance Data



From Vital and Health Statistics of the CENTERS FOR DISEASE CONTROL AND PREVENTION/National Center for Health Statistics

An Overview of Nursing Homes and Their Current Residents: Data From the 1995 National Nursing Home Survey

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Abstract

Objective—This report presents data on the characteristics of nursing homes, utilization by current residents and number of employees. Characteristics of the nursing homes include ownership, certification, bed size, location, and affiliation. Current residents are presented by age, sex, and race. Selected trend data are presented from three previous National Nursing Home Surveys.

Methods—Data presented in this report are from the 1995 National Nursing Home Survey (NNHS). The 1995 NNHS consisted of a two-stage design with a probability sample of 1,500 nursing facilities in the first stage and up to six current residents in the second stage.

Results—About 1.5 million residents were receiving care in 16,700 nursing homes in 1995. Nearly 1.8 million beds were available for use and these facilities operated at about 87 percent of their capacity. The residents were elderly, predominantly female, and white. Since 1985, the number of nursing homes decreased by 13 percent while the number of beds increased by 9 percent.

Keywords: facility characteristics • utilization • demographics • employees

Introduction

The nursing home industry is a major segment of the long-term care system with a mission to provide residential care for the aged and infirm. The dramatic growth in the number of Americans over age 65 makes data about this industry essential. For many elderly people, long-term care is provided in the home by relatives and friends and in small group settings with intermediate levels of care. However,

nursing homes will continue to be used by those who need sophisticated, labor-intensive 24-hour skilled supervision. Therefore, the potential need for this service will continue to be a major factor in the lives of many elderly people.

This report presents cross-sectional and trend information about nursing facilities, their services, and the residents they serve. The 1995 NNHS is the fourth in a series of nationwide

sample surveys of nursing homes and similar facilities that have been conducted by the National Center for Health Statistics (NCHS) since 1973. The first survey was conducted between 1973 and 1974, the second was conducted in 1977, and the survey prior to this one was conducted in 1985. The 1995 survey was conducted between July and December 1995.

Methods

Data in this report were collected in the 1995 National Nursing Home Survey (NNHS). The sampling frame for the 1995 NNHS was the 1991 National Health Provider Inventory (NHPI) as updated by the Agency Reporting System (1) to include nursing facilities that were either missed in the 1991 NHPI or began operation after the 1991 Inventory was completed. The NNHS and the NHPI are segments of the long-term care component of the National Health Care Survey (2). The facilities included in the universe of facilities for the 1995 NNHS were nursing and related care homes in the conterminous United States that had three or more beds, were staffed for use by residents, and routinely provided nursing and personal care services.



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Places providing only room and board and places serving specific health problems (i.e., mental retardation or alcoholism) were excluded. Most nursing facilities are freestanding, but they could be a nursing care unit of a hospital, retirement facility, or similar institution as long as the records of the unit are kept separate from those of the rest of the institution. The resulting frame for the sample selection contained 17,500 nursing homes from which 1,500 facilities were sampled. The number of homes estimated by the survey (16,700) is less than the universe figure for several reasons. Some facilities went out of business or became ineligible for the survey between the time the frame was established and the time the survey was conducted.

Estimates in this report are based on the 1,409 responding nursing homes and 8,056 of their current residents. The sample of current patients was obtained by randomly selecting up to six residents who were on the rolls of the nursing home as of midnight the day prior to the day of the survey. Additional information on survey procedures are in the [Technical notes](#) section of this report.

Because all estimates are based on a sample of nursing homes rather than on a complete enumeration, they are subject to sampling variability. Information on sampling errors is presented in the [Technical notes](#). “Nursing homes,” “homes,” and “facilities” are used interchangeably in this report to refer to the type of places surveyed.

Results

Facility characteristics

National estimates indicate that some 16,700 nursing homes had a total of 1.8 million beds and served more than 1.5 million residents during the period July through December 1995. The number of nursing homes decreased 12.6 percent since the 1985 survey while beds in these facilities increased by 9 percent ([table 1](#)). Data from the NHPI support this decrease in the number of nursing homes and increase in the number of beds over the past few years. The Inventory of Long-Term Care

Table 1. Percent change in homes, beds, and residents between survey years: United States, selected years 1973–95

Survey years	Homes	Beds	Residents
1985 and 1995	-12.6	+9.0	+3.8
1977 and 1985	+1.1	+15.8	+14.5
1973–74 and 1977	+20.4	+19.1	+21.1

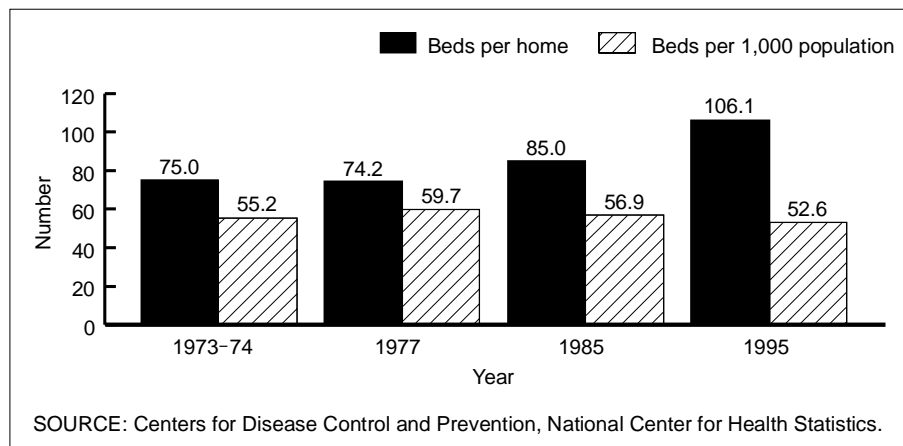


Figure 1. Number of beds per nursing home and beds per 1,000 population 65 years of age and over by year of survey: United States, selected years 1977–95

Places Survey reported 16,388 nursing homes and 1,504,683 beds in 1986 (3). This same survey, renamed the National Health Provider Inventory, was conducted in 1991. Results from the 1991 survey indicate that the number of nursing homes had decreased to 15,511 and the number of beds had increased to 1,615,686 (4). Because the total number of nursing homes in the United States is continuing to decline while the number of beds is increasing, the beds per home ratio increased from 75.0 beds per home in 1973–74 to 106.1 beds per home in 1995 ([figure 1](#)). Ratios of beds per nursing homes are shown for each survey year in [tables 2](#) and [3](#) for selected facility characteristics. As an indication of this transition in bed size, 34.3 percent of 19,100 nursing homes had 100 beds or more in 1985 while this bed size group made up 47.6 percent of the total 16,700 nursing homes in 1985 ([figure 2](#)).

Most nursing homes (66.1 percent) are operated for profit. The large number of proprietary homes with the majority of nursing home beds remain dominant in the nursing home segment of the health care delivery system. However there was a 23.1-percent

decrease since 1985 in the number of proprietary homes while voluntary nonprofit-operated nursing homes showed a 13.2 percent increase during this period ([table 4](#)). Affiliation is a term used to categorize nursing homes into two groups—chain and independent. Chain homes are homes that are members of a group of facilities operating under one general authority or general ownership. Independent homes operate separately from any other home or group. In 1995, slightly more homes were operated as a chain than were independently owned. This was the opposite of the 1985 survey results. More than half (54.3 percent) were operating as part of a chain in 1995 compared with 41.4 percent in 1985 and 28 percent in 1977 ([table 3](#)). With the increased number of homes operated as part of a chain in 1995, there was a corresponding increase in the number of beds and in the bed size of chain homes. Nursing homes operated as part of a chain, contained 55.2 percent of the total bed population and had an average bed size of 107.5 beds per home ([table 3](#)).

An important characterization of nursing homes is according to certification status, which is defined by

Table 2. Number and percent of facility characteristics and measures of utilization for nursing homes by survey year: United States, 1973–74, 1977, 1985, and 1995

Survey year	Facility characteristic					Measures of utilization			
	Homes	Beds	Beds per nursing home	FTE ^{1,2}	FTE's per 100 beds ^{1,2}	Current residents	Admissions	Admissions per 100 beds	Occupancy rate ³
1995	16,700	1,770,900	106.1	933,600	52.7	1,548,600	1,706,400	96.4	87.4
1985	19,100	1,624,200	85.0	793,600	48.9	1,491,400	1,299,200	80.5	91.8
1977	18,900	1,402,400	74.2	647,700	46.2	1,303,100	1,367,400	98.4	92.9
1973–74	15,700	1,177,300	75.0	485,400	41.2	1,075,800	1,110,800	95.3	91.4

¹FTE is full-time equivalent.²Includes only those providing direct patient care: administrative, medical, and therapeutic staff; registered nurses; licensed practical nurses; nurses' aides; and orderlies.³Occupancy rate is calculated by dividing current residents by beds.

NOTE: Admissions and admissions per 100 beds are for the calendar year prior to the survey year.

Table 3. Number and percent distribution of nursing homes, and number of beds and beds per home, and of current residents and occupancy rate by selected facility characteristics: United States, 1995

Facility characteristic	Nursing homes		Beds		Current residents	
	Number	Percent distribution	Number	Beds per nursing home	Number	Occupancy rate ¹
All facilities	16,700	100.0	1,770,900	106.0	1,548,600	87.4
Ownership						
Proprietary	11,000	66.1	1,151,700	104.7	989,700	85.9
Voluntary nonprofit	4,300	25.7	468,100	108.9	420,800	89.9
Government and other	1,400	8.2	151,000	107.9	138,100	91.5
Certification						
Certified by Medicare and Medicaid	11,600	69.7	1,378,400	118.08	1,213,700	88.0
Certified by Medicare only	*1,000	6.1	59,600	59.6	50,000	83.9
Certified by Medicaid only	3,400	20.1	280,300	82.4	240,600	85.8
Not certified	*700	4.2	52,600	75.1	44,300	84.2
Bed size						
Less than 50 beds	2,800	16.8	87,300	31.2	71,100	81.4
50–99 beds	5,900	35.6	430,400	72.9	378,300	87.9
100–199 beds	6,700	40.1	902,500	134.7	794,200	88.0
200 beds or more	1,300	7.5	350,800	269.8	305,000	86.9
Census region						
Northeast	2,900	17.1	378,800	130.6	346,700	91.5
Midwest	5,600	33.4	564,400	100.8	494,900	87.7
South	5,500	32.8	572,700	104.1	495,000	86.4
West	2,800	16.6	254,900	91.0	212,000	83.2
Metropolitan statistical area (MSA)						
MSA	10,300	61.5	1,217,500	118.2	1,068,200	87.7
Not MSA	6,400	38.5	553,400	86.5	480,400	86.8
Affiliation ²						
Chain	9,100	54.3	978,000	107.5	857,300	87.7
Independent	7,600	45.5	788,200	90.7	689,100	87.4

* Figure should not be assumed reliable because the sample size is between 30–59 or the sample is greater than 60 but has a relative standard error over 30 percent.

¹Occupancy rate is calculated by dividing residents by available beds.²Excludes a small number of homes, beds, and residents with unknown affiliation.

NOTE: Figures may not add to totals because of rounding.

the Social Security Administration's Medicare (Title XVIII) and Medicaid (Title XIX) programs. A nursing home can receive certification by both the Medicare and Medicaid programs or

certification by either of them. A nursing home may not meet certification criteria or may choose not to participate in the programs and, therefore, be classified as not certified. Nearly all nursing homes

had some form of certification in 1995. More than two-thirds of all homes were certified by both Medicare and Medicaid. Only 4 percent of the 16,700 homes were not certified (table 3).

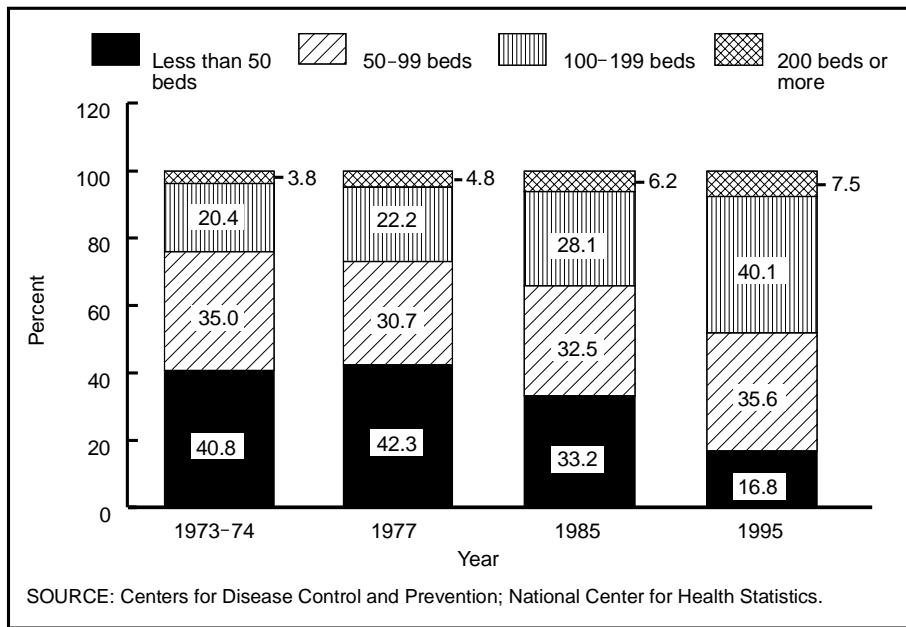


Figure 2. Percent of nursing homes by bed size and year of survey: United States, selected years 1973-95

Table 4. Number of nursing homes and percent change by ownership and affiliation: United States, 1985 and 1995

Ownership and affiliation	1995	1985	Percent change
Ownership			
Proprietary	11,000	14,300	-23.1
Voluntary nonprofit	4,300	3,800	+13.2
Government and/or other	1,300	1,000	+30.0
Affiliation			
Chain	9,100	7,900	+15.2
Independent	7,600	11,100	-31.5

Table 5. Number of nursing homes by ownership, affiliation, and certification status: United States, 1995

Ownership and affiliation	Total	Certification			Not certified
		Certified by Medicare and Medicaid	Certified by Medicare only	Certified by Medicaid only	
All facilities	16,700	11,600	*1,000	3,400	*700
Ownership					
Proprietary	11,000	8,100	*	2,200	300
Voluntary nonprofit	4,300	2,700	*	*800	300
Government and other	1,300	800	*	*	*
Affiliation					
Chain	9,100	7,100	*600	1,200	*
Independent	7,600	4,500	*	2,100	*600

* Figure does not meet standard of reliability or precision (sample size less than 30) and is therefore not reported. If shown with a number, it should not be assumed reliable because the sample size is between 30-59 or the sample size is greater than 60 but has a relative standard error over 30 percent.

NOTE: Numbers may not add to totals because of rounding.

Certification status of nursing homes by ownership and affiliation of the facility is shown in table 5.

The majority of nursing homes were located in the Midwest and in the South. According to the 1995 survey, States in these regions had 66 percent of the homes and beds. The average bed size of the homes by region ranged from a low of 91.0 beds per home in the West to a high of 130.6 beds per home in the Northeast (table 3).

Utilization

An occupancy rate that estimates the percent capacity at which a nursing home is operating is probably the single most important measure of utilization. This ratio of residents to beds remained about the same for the first three surveys (91-92 percent). The ratio in 1995 produced an overall occupancy rate that was down to 87.4 percent (figure 3). By region, the occupancy rate ranged from 83.2 percent for homes in the western states to 91.5 percent for homes in the northeastern states (table 3).

Table 6 presents data by facility characteristics for 1,548,600 current residents according to age, sex, and race. The number of residents in 1995 had increased only 3.8 percent since 1985 compared with a 14.5 percent increase during the period from 1977 to 1985 and a 21.1 percent increase from 1973-74 to 1977 (tables 1 and 2). Nursing home residents are usually

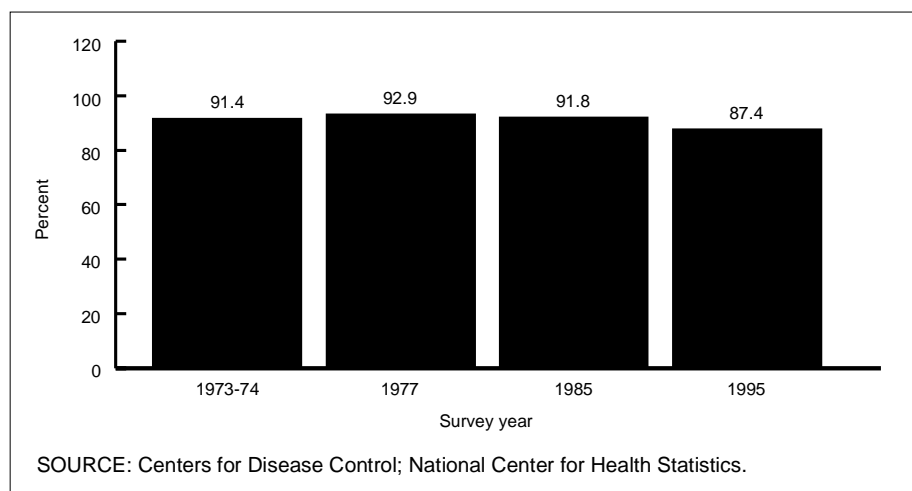


Figure 3. Percent of occupancy in nursing homes by year of survey: United States, selected years 1973–95

elderly. Nearly 90 percent of the residents in the 1995 survey were 65 years and over. More than 35 percent were 85 years and over. Residents were also predominantly white (88 percent) and female (72.3 percent).

The ratio of residents 65 years and over in nursing homes to those in the general population remained virtually unchanged from the first survey in 1973–74 to the survey in 1985, with about 50 of every 1,000 persons 65 and over during this period residing in nursing homes. Thus, nursing home usage had kept pace with the increase in the elderly population. However, in 1995 this ratio was down to 41.3 residents 65 years and over per 1,000 population 65 and over (table 7).

The small increase in the number of nursing home residents compared with previous years, along with the decrease in the ratio of residents to the general population, indicate that older Americans are not entering nursing homes at the same rate as they did in previous years. The tremendous growth in the home care industry in part, as an effort to control health care cost, has attributed significantly to the fact that many older persons are no longer going to nursing homes for care that they can and prefer to receive at home. Between the time that the 1985 and 1995 National Nursing Home Surveys were conducted, three National Home and Hospice Care Surveys were conducted by the National Center for Health Statistics in response to the rapid growth in the number of these

type agencies throughout the United States (5–7) (figure 4). In 1994 about 11,000 home health and hospice agencies were providing care to nearly 2 million patients.

The decline in the number of residents per population 65 years and over has accompanied a continuing decline in the ratio of beds in nursing homes to residents 65 and over in the general population. There was a decrease of 4.3 beds per 1,000 population 65 years and over between 1985 and 1995, and a 6.9 bed decrease between 1977 and 1995 (table 7). However, the occupancy rate of 87.4 percent shows that nursing homes are not filled to capacity and that beds are available despite the decline in the number of beds.

The number of admissions was determined by the administrator's records of the number of residents admitted to the nursing facility during calendar year 1994. Admissions increased from 1.3 million residents in 1985 to 1.7 million in 1995. The admission per 100 beds rate also increased in 1995 (80.5 to 96.4). This ratio was now back up to the levels of the 1973–74 and 1977 surveys of 95.3 and 98.4, respectively (table 1).

Employees

Employee data presented in this report are in terms of full-time equivalent (FTE) employees. FTE's are used to neutralize the variations between facilities that hire part-time workers to

cover the number of hours of a full-time worker. The procedure used to collect employee data differed slightly in each of the survey years. In 1973–74 and 1977, all employees were listed for each sample facility. Estimates were then based on a sample of employees from each sample facility who completed a self-enumerated questionnaire that, among other things, asked questions about full-time and part-time employment status. In the 1985 survey, total counts of selected employee categories were asked of the facility's administrator. In the three previous survey years, the number of full-time and part-time workers and number of part-time hours worked were collected separately. This information was used to convert full-time and part-time employees to FTE's by dividing part-time hours by 35 (the number of hours taken to equal that of one full-time employee's work for one week) and adding the results to full-time employees. Because many nursing homes now keep FTE counts of their employees, the 1995 survey asked the administrator for the number of FTE's for selected categories of employees.

Unlike the two earlier surveys, the 1985 and 1995 surveys included workers providing direct and indirect services to nursing home residents. Indirect services provided by clerical, food, housekeeping, maintenance, and similar personnel are included in the total number of employees for 1985 and 1995. To provide a credible comparison of FTE's in previous surveys with those in 1985 and 1995, FTE's presented in table 1 exclude those providing indirect patient care. However, previously mentioned differences should still be considered when making comparisons for different survey years.

Table 8 shows the total number of FTE's and selected groups of FTE's working in nursing homes in 1995. More than 1.3 million FTE's provided direct and indirect services to the 1.5 million nursing home residents. Nursing care was provided by 913,500 registered nurses, licensed practical or vocational nurses, nurses' aides, and orderlies. The nursing care group accounted for 68.5 percent of all FTE's working in nursing homes, with nurses' aides and

Table 6. Number and percent distribution of current residents by age, sex, and race, according to selected nursing home characteristics: United States, 1995

Nursing home characteristic	All current residents	Age					Sex		Race				
		Total	Under 65 years	65–74 years	75–84 years	85 years and over	Unknown	Male	Female	Black and other			
										White	Total ¹	Black	Unknown
Number	Percent distribution												
All nursing homes	1,548,600	100.0	10.9	15.6	37.6	35.8	*	27.7	72.3	88.0	11.4	9.7	*0.5
Ownership													
Proprietary	989,700	100.0	12.1	16.0	37.6	34.1	*	27.9	72.1	87.0	12.3	10.4	*0.7
Voluntary nonprofit	420,800	100.0	6.2	13.7	38.0	42.1	*	24.5	75.5	90.3	9.3	8.0	*
Government and other	138,100	100.0	16.6	17.4	36.7	29.0	*	36.1	63.9	88.6	11.4	9.9	–
Certification													
Certified by Medicare and Medicaid	1,213,700	100.0	10.4	15.9	37.7	35.9	*	26.8	73.2	87.6	11.8	10.2	*0.6
Certified by Medicare only	50,000	100.0	*	*13.0	37.8	44.3	*	26.7	73.3	96.1	*	*	–
Certified by Medicaid only	240,600	100.0	15.5	15.5	36.5	32.1	*	31.2	68.8	86.9	12.6	10.4	*
Not certified	44,300	100.0	8.8	11.4	39.9	39.9	*	33.3	66.7	93.5	5.9	4.2	*
Bed size													
Less than 50 beds	71,100	100.0	12.0	13.9	38.0	35.9	*	31.4	68.6	90.0	9.2	6.4	*
50–99 beds	378,300	100.0	11.0	13.7	36.5	38.5	*	28.5	71.5	90.5	9.3	7.6	*
100–199 beds	794,200	100.0	9.6	15.6	38.4	36.3	*	26.4	73.6	88.3	10.8	9.5	*
200 beds or more	305,000	100.0	13.1	18.2	37.1	31.3	*	28.5	71.5	83.8	15.9	13.7	*
Census Region													
Northeast	346,700	100.0	10.5	15.7	39.2	34.6	*	27.7	72.3	90.7	9.1	8.1	*
Midwest	494,900	100.0	10.0	15.2	36.3	38.2	*	27.1	72.9	93.0	6.9	6.3	*
South	495,000	100.0	11.2	16.0	38.7	34.0	*	27.3	72.7	82.4	16.4	15.5	*
West	212,000	100.0	12.8	15.2	35.8	35.9	*	30.0	70.0	85.0	14.1	7.6	*
Metropolitan statistical area (MSA)													
MSA	1,068,200	100.0	11.4	16.1	37.0	35.3	*	27.3	72.7	86.7	12.8	11.1	*0.6
Not MSA	480,400	100.0	9.8	14.2	38.9	36.8	*	28.7	71.3	91.1	8.4	6.7	*
Affiliation ²													
Chain	857,300	100.0	10.3	15.8	37.9	35.7	*	26.5	73.5	87.8	11.6	10.0	*
Independent	689,100	100.0	11.6	15.2	37.2	35.7	*	29.2	70.8	88.3	11.3	9.5	*

* Figure does not meet standard of reliability or precision (sample size less than 30) and is therefore not reported. If shown with a number, it should not be assumed reliable because the sample size is between 30–59 or the sample size is greater than 60 but has a relative standard error over 30 percent.

– Quantity zero.

¹Includes races other than white, black, or unknown.

²Excludes a small number of residents in nursing homes with unknown affiliation.

NOTE: Numbers may not add to totals because of rounding.

orderlies being the largest subgroup of nursing care with nearly two-thirds of the group.

There were 52.7 FTE staff per 100 beds providing direct patient care in nursing homes in 1995. This ratio has shown a steady increase since the 1973–74 survey (table 1). Employees providing nursing care had a ratio of 51.6 FTE's per 100 beds. Nurses' aides and orderlies had the highest ratio (33.9 percent) followed by licensed practical nurses and registered nurses (10.5 and 7.3, respectively). Registered

nurses had larger FTE-to-bed ratios in smaller homes (less than 50 beds) and homes certified by Medicare only (table 8).

Discussion

An overview of nursing homes and their utilization patterns for the past 20 years or more shows a transition to lower utilization of nursing home facilities that have declined in numbers and increased in size. Because of this shift in size, the ratio of beds to nursing

homes has increased from 75 in 1973–74 to 106.1 in 1995 with a gradual increase in the percent of homes with more beds. If the quality of care improves as the ratio of FTE's providing direct patient care to the number of beds increases, these larger homes, which have higher FTE ratios, would provide better service to residents. The slight decrease in the occupancy rate and the ratio of beds available per 1,000 population 65 and over, indicate a decline in usage of these facilities. Nursing homes were close to capacity in

Table 7. Rate of beds and residents per 1,000 population 65 years of age and over and total population 65 years of age and over: United States, 1973–74, 1977, 1985 and 1995

Survey year	Beds per 1,000 population 65 years and over	Residents 65 years and over per 1,000 population 65 years and over	Total U.S. resident population 65 years and over in thousands ¹
1995	52.6	41.3	33,648
1985	56.9	46.2	28,530
1977	59.7	47.1	23,494
1973–74	55.2	44.7	21,329

¹For 1995, U.S. Bureau of the Census: Population Projections of the United States, by age, sex, race and Hispanic origin, 1993–2020. Current Population Reports. Series P-25, No. 1111. Washington, U.S. Government Printing Office, 1996. For 1985, U.S. Bureau of the Census: Estimates of the population of the United States, by age, sex, and race, 1980 to 1985. Current Population Reports. Series P-25, No. 985. Washington, U.S. Government Printing Office, 1986. For 1977 and 1973–74, U.S. Bureau of the Census: Estimates of the population of the United States, by age, sex, and race, 1970 to 1977. Current Population Reports. Series P-25. No. 721. Washington, U.S. Government Printing Office, 1978.

Further analysis of long-term care data will certainly point to the rapid growth of home health agencies as an explanation for this decline in utilization.

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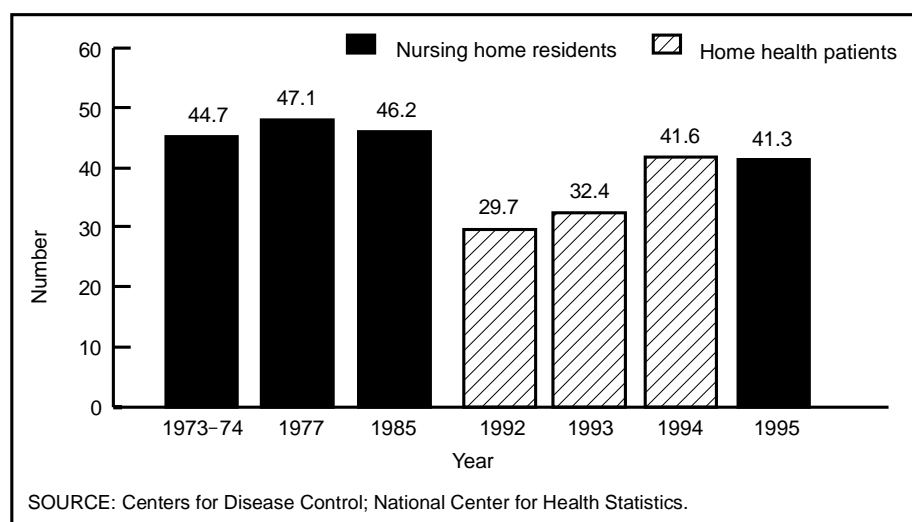


Figure 4. Number of nursing home residents and current home health patients 65 years of age and over per 1,000 population 65 and over: United States, selected years 1973–95

1977 with an occupancy rate of 92.9 percent and nearly 60 beds for every 1,000 persons 65 and over. These statistics have decreased to an occupancy rate of 87.4 percent and about 53 beds per 1,000 persons 65 and over in 1995.

The elderly (65 years and over) population is the fastest growing age group in the U.S. population. The ratio of elderly residents per 1,000 population in this category over the survey years remained about the same. It kept pace with the increased population in this age group. However, there was a slight decline in this ratio in 1995. This decline probably has many causes ranging from healthier elders to the availability of alternative forms of care. A major competitor in the health care

industry has been the emergence of home health care agencies. Their phenomenal growth has resulted from an effort to control health care costs and from the preference of the majority of the elderly population to recover from illnesses at home rather than in a hospital or nursing home. Medical technology more appropriate for use in the home, and government support to pay for these services, are also major factors that produced an industry that on any given day in 1994, was serving an estimated 2.0 million current patients and discharged 5.6 million patients in the year prior to the survey. Over the 3 years the survey was conducted, the ratio of current home health patients 65 and over per 1,000 population 65 and over, increased from 29.7 to 41.6.

Table 8. Number and rate per 100 beds of full-time equivalent employees by occupational categories and selected nursing home characteristics: United States, 1995

Facility characteristic	Occupational category													
	All full-time equivalent employees		Administrative, medical, and therapeutic		Nursing									
	Number	Rate per 100 beds	Number	Rate per 100 beds	Total		Registered nurse		Licensed practical nurse		Nurse's aide and orderly		All other staff	
					Number	Rate per 100 beds	Number	Rate per 100 beds	Number	Rate per 100 beds	Number	Rate per 100 beds	Number	Rate per 100 beds
Total	1,333,300	75.3	20,100	1.1	913,500	51.6	129,700	7.3	185,700	10.5	600,500	33.9	399,700	22.6
Ownership														
Proprietary	823,000	71.5	13,600	1.2	574,100	49.8	78,000	6.8	118,300	10.3	379,500	32.9	235,300	20.4
Voluntary nonprofit	383,100	81.8	4,900	1.0	254,300	54.3	38,300	8.2	51,500	11.0	164,700	35.2	123,900	26.5
Government and other	127,200	84.2	1,600	1.1	85,100	56.3	13,300	9.0	15,900	10.5	56,300	37.3	40,500	26.8
Certification														
Certified by Medicare and Medicaid	1,055,900	76.6	15,000	1.1	727,900	52.8	105,800	7.7	149,600	10.9	473,900	34.4	313,000	22.7
Certified by Medicare only	52,800	88.5	1,900	3.2	35,800	60.0	7,400	12.4	7,000	11.7	21,100	35.4	15,100	25.3
Certified by Medicaid only	191,600	68.4	2,800	1.0	127,500	45.5	13,600	4.8	24,300	8.7	90,400	32.3	61,300	21.9
Not certified	33,000	62.8	400	0.8	22,300	42.4	3,000	5.7	4,800	9.1	15,100	28.7	10,300	19.6
Bed size														
Less than 50 beds	73,000	83.7	4,700	5.4	49,600	56.8	10,700	12.3	11,100	12.8	29,000	33.3	18,700	21.4
50–99 beds	320,500	74.5	5,200	1.2	221,400	51.4	29,200	6.8	43,000	10.0	148,800	34.6	93,900	21.8
100–199 beds	674,500	74.7	8,400	0.9	468,500	51.9	63,700	7.1	96,500	10.7	310,100	34.4	197,600	21.9
200 beds or more	265,300	75.6	1,800	0.5	174,000	49.6	26,100	7.4	35,100	10.0	112,700	32.1	89,500	25.5
Census region														
Northeast	310,400	81.9	4,200	1.1	214,500	56.6	38,000	10.0	39,300	10.4	136,600	36.0	91,700	24.2
Midwest	388,300	68.8	4,800	0.9	264,300	46.8	40,100	7.1	54,300	9.6	171,600	30.4	119,200	21.1
South	435,100	76.0	6,300	1.1	299,800	52.3	30,200	5.3	65,700	11.5	204,800	35.8	129,000	22.5
West	199,500	78.3	4,800	1.9	134,900	52.9	21,500	8.4	26,500	10.4	87,600	34.3	59,800	23.5

Note: Figures may not add to totals because of rounding.

Technical notes

Sample design

The 1995 NNHS used a two-stage probability design similar to the one used in 1985. In both surveys, the elementary sampling unit was the residents served in the facilities. The first stage of selection is a probability sample of the nursing facilities in the universe. The primary sampling strata of nursing facilities were defined by bed size and certification status. The bed size categories used were 3–14, 15–24, 25–49, 50–99, 100–199, 200–399, 400–599, and 600 beds or more. The strata of certified facilities consisted of facilities certified by either Medicare or Medicaid as a skilled nursing or intermediate care facility.

Within primary strata, facilities were surveyed by ownership, geographic region, metropolitan status, State, and county. Nursing homes were then selected using systematic sampling with probability proportional to their bed size. The sampling frame for the within-facility sample was a list of all current residents who were on the rolls of the facility as of midnight the day before the survey. Sampling of current residents within the facilities involved a random selection of six residents currently receiving care from the facility. The sampled units were determined from tables showing sets of sample line numbers for each possible count of residents in the facility. The design selected no more than six current residents. In facilities with six or fewer residents, all residents were selected.

Estimates for number of facilities and for facility characteristics not correlated to bed size was formed by summing data weighted by the reciprocal of the probabilities of selecting the sampled facilities and adjusting for nonresponding facilities within bed size, certification status, and metropolitan status. Poststratified ratio adjustments for beds were added to the prior sampling weight to produce estimates for facility characteristics correlated to bed size, and for all current resident characteristics. Estimates for current resident characteristics were produced by multiplying the prior

sampling weight by the inverse probability of selection within the facility and by adjustment within each facility for questionnaire nonresponse.

Data collection procedures

A letter was sent to the sampled nursing home informing the administrator of the authorizing legislation, the purpose, and the content of the survey. Within a week to 10 days after the letter was mailed, the interviewer assigned to conduct the survey in a particular nursing home made telephone contacts to discuss the survey and to arrange an appointment with the administrator or person designated by the administrator.

Three questionnaires and a sampling list were used to collect the data. The Facility Questionnaire was completed with the administrator or his designee. The Expense Questionnaire and its Definition Booklet were then presented to the administrator for completion or to pass on to an accountant or bookkeeper for completion. The completed questionnaire could be returned by mail. The interviewer then completed the Current Resident Sampling List (CRSL). On the CRSL, the interviewer listed all residents on the register of the nursing home as of midnight the day before the survey. Using a set of sampling tables, the interviewer selected a sample of up to six current residents. Then, the current resident questionnaire was completed with a staff member familiar with the care received by residents and with medical records of the residents.

When all interviews were completed, the interviewer thanked the administrators for their time and cooperation and left a copy of a thank you letter.

The Expense Questionnaire was followed up at several intervals during the course of the survey to improve response rates.

Sampling errors

Because the statistics presented in this report are based on a sample, they will differ somewhat from figures that would have been obtained if a complete census had been taken using the same schedules, instructions, and procedure.

As in any sample survey, the results are subject to both sampling and nonsampling errors. Nonsampling errors include errors due to response bias, questionnaire and item nonresponse, recording, and processing errors. To the extent possible, the latter types of errors are kept to a minimum by methods built into the survey procedures.

The standard error is primarily a measure of the variability that occurs by chance because only a sample, rather than the entire universe, is surveyed. The standard error also reflects part of the measurement error, but it does not measure any systematic biases in the data. It is inversely proportional to the square root of the number of observations in the sample. Therefore, as the sample size increases, the standard error generally decreases.

The chances are about 68 in 100 that an estimate from the sample differs by less than the standard error from the value that would be obtained from a complete census. The chances are about 95 in 100 that the difference is less than twice the standard error and about 99 in 100 that it is less than 2 1/2 times as large.

The standard errors used in this report were approximated using SUDAAN software. SUDAAN computes standard errors by using a first-order Taylor approximation of the deviation of estimates from their expected values. A description of the software and the approach it uses has been published (8). Exact standard error estimates were used in tests of significance in this report. Standard errors for all estimates presented in this report may be calculated using the following general formula, where X is the aggregate of interest in thousands, and A and B are the appropriate coefficients from [table I](#):

$$RSE(X) = A + \frac{B}{X}$$

Similarly, standard errors for percents $100p$ ($0 < p < 1$) may be calculated using the following general formula, where $100p$ is the percent of interest, X is the denominator of the percent, and B is the parameter B in the formula for approximating the $RSE(X)$. The values for B are given in [table I](#).

Table I. Parameters used to compute relative standard errors by type of estimate

Type of estimate	Parameters	
	A	B
Facilities	-0.001982	24.781718
Current residents	-0.000139	321.778954
Admissions	0.013441	534.797538
Beds	-0.000538	862.978462
Full-time equivalent employees	-0.000492	888.770235

$$RSE(p) = \frac{B(1-p)}{pX}$$

The test of significance is based on the Bonferroni multiple comparisons using the Z-test with an overall 0.05 level of significance to test all comparisons mentioned in this report. The critical value of the Z for each test was determined by the number of variables being compared. Not all observed differences were tested, so lack of comment in the text does not mean the difference was not statistically significant.

Presentation of estimates

Publication of estimates for the NNHS is based on the relative standard error of the estimate and the number of sample records on which the estimate is

based. Estimates are not presented in NCHS reports unless a reasonable assumption regarding the probability distribution of the sampling error is possible.

Because of the complex sample design of the NNHS, the following guidelines are used for presenting the estimates:

If the sample size is less than 30, the value of the estimate is not reported.

If the sample size is 30–59, the value of the estimate is reported but should not be assumed reliable. If the sample size is 60 or more and the relative standard error is less than 30 percent, the estimate is reported.

If the sample size is 60 or more but the relative standard error is over 30 percent, the estimate is reported, but should not be assumed reliable.

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