

Nursing Homes, 1977–99: What Has Changed, What Has Not?

Facts from the National Nursing Home Surveys
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It has long been recognized that the nursing home was a place providing care both to residents with needs requiring short stays and to those with more chronic conditions requiring longer, if not permanent, care.^{1,2} In recent years, there has been a rise in assisted living and in other long-term care settings as possible alternatives to nursing homes for individuals requiring long-term care.³ At the same time, postacute care in nursing homes, requiring shorter stays, has grown.⁴⁻⁷ Given these changes, to what extent is the present-day nursing home still a place caring for residents requiring services for a long stay? Has the role of nursing homes in long-term care changed as postacute care has risen and alternative settings such as assisted living have flourished?

This summary provides some key findings about nursing homes between 1977 and 1999, derived from the analysis of the data from the 1977, 1985, and 1999 National Nursing Home Surveys (NNHS) conducted by the Centers for Disease Control and Prevention's National Center for Health Statistics (NCHS). This summary highlights aspects of nursing homes that have changed and those that have not.

Findings show how, between 1977 and 1999, the increase in the number of residents served by nursing homes was accompanied by an increase in the size of the typical nursing home, an increase in the number of discharges and the discharge rate, and a decline in the average length of stay. Together, these facts suggest major changes in the role of nursing homes.

However, the proportion of long-stay residents in nursing homes has not changed substantially. Long-stay residents have remained a stable part of the population served by nursing homes at the same time that the movement in and out of nursing homes of patients staying less than 3 months has grown considerably. Nursing homes remain a place providing care to those with more chronic conditions requiring longer (if not permanent) care, although the pattern of utilization by short-stay patients has changed.

Number of Residents and Facility Size

The number of residents receiving care in nursing homes nationwide on any given day increased over the years from 1.28 million in 1977 to 1.63 million by 1999—a 27 percent increase. During the same period, the number of beds per nursing home facility increased 32 percent. The 16,200 nursing homes in 1977 had an average of 79 beds per facility, an average that grew to 105 among the 18,000 homes in 1999.



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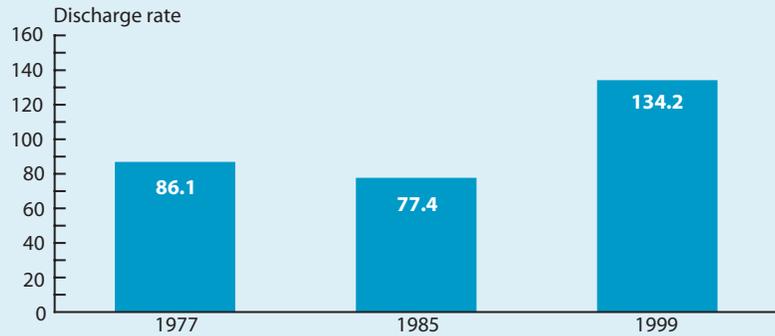


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Discharges: Rate, Primary Payer, and Length of Stay

The growth in the volume of residents has been accompanied by an accelerated rate of discharge (figure 1). In 1977 and 1985, the number of discharges per 100 nursing home beds was 86 and 77, respectively. By 1999, the discharge rate increased to 134 per 100 beds—a 56 percent increase from 1977.

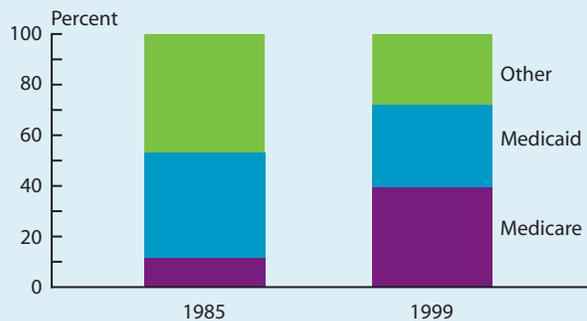
Figure 1. Trend in annual nursing home discharges per 100 beds: United States, 1977–99



NOTES: A discharge rate relative to beds is the number of discharges divided by the number of beds. The increases in the discharge rate between 1977 and 1999 and between 1985 and 1999 are statistically significant at the adjusted *p*-value for multiple comparisons.

As expected, the increase in the discharge rate mirrors the growth in Medicare as the primary payer, given that Medicare is the predominant payer of short-term postacute care (figure 2). In 1985, Medicare was the primary payer for 11 percent of all discharges. In 1999, the percentage had more than tripled to 39 percent.

Figure 2. Percent distribution of discharges by primary payer at discharge: United States, 1985 and 1999



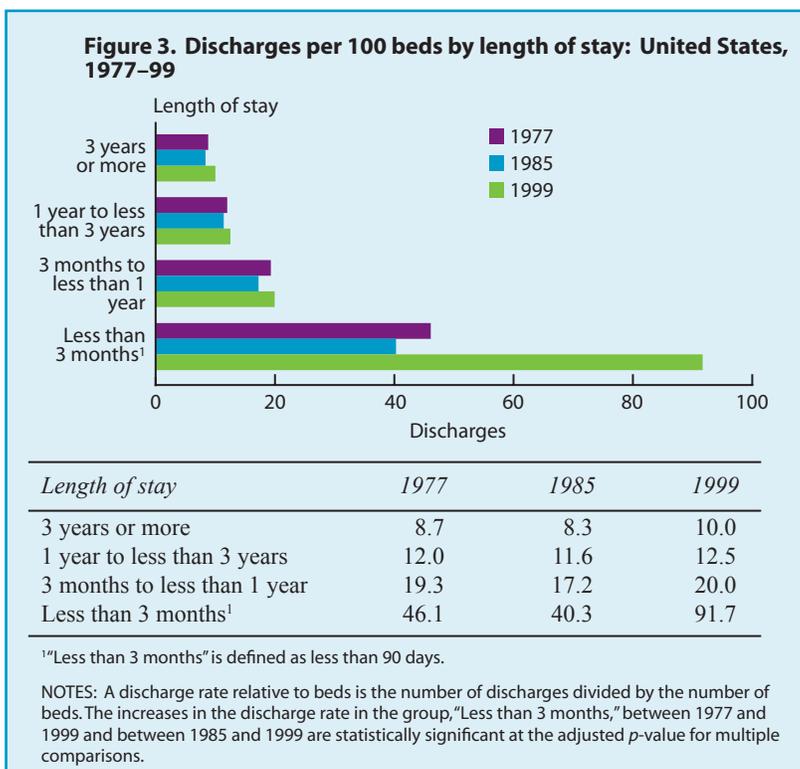
<i>Payer</i>	<i>1985</i>	<i>1999</i>
Other	46.9	28.5
Medicaid	41.7	32.1
Medicare	11.4	39.4

NOTES: The 1977 National Nursing Home Survey did not include a question about payer at discharge so that year is not shown here. The percentage differences between 1985 and 1999 for all three payers are statistically significant at the adjusted *p*-value for multiple comparisons.

Not surprisingly, a drop in the average length of stay of discharged residents accompanied the increased discharge rate and the increase in Medicare as the payment source at discharge. In 1985, for example, the average length of stay for discharges was 398 days, decreasing 32 percent to 272 days in 1999.

Discharge Rate by Length of Stay

The rate of discharge attributed to residents with stays less than 3 months doubled between 1977 and 1999, from 46 discharges per 100 beds in 1977 to 92 in 1999 (figure 3). The discharges with stays less than 3 months account for nearly all (95 percent) of the overall growth in the discharge rate. At the same time, the rate of discharge for persons with stays of 3 months or more has not changed significantly, implying that the proportion of long-stay residents has remained fairly stable. For example, the discharge rate for residents with stays of 1 year to less than 3 years was 12 in 1977 and under 13 in 1999.



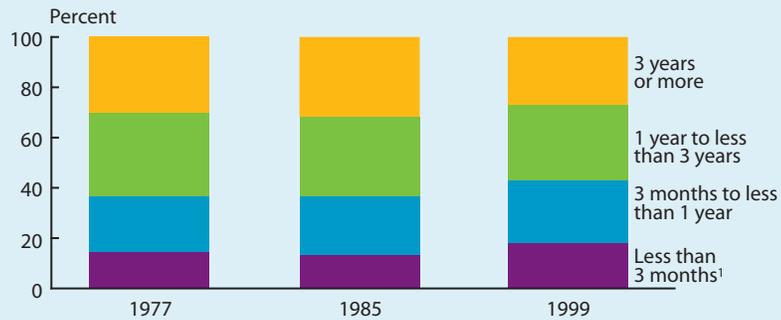
The increase in the number of nursing home residents requiring short stays coincides with the implementation in 1983 of the hospital prospective payment system. This system shortened hospital stays and increased Medicare-funded postacute care in nursing homes.⁴⁻⁷

Residents

Despite the change in the pattern of care for patient stays of less than 3 months, the nursing facility was in 1999, as it was in 1977, a place where many of the residents had been in the facility for substantial durations since their admission. For example, in 1977, 31 percent of the current residents had been in the nursing home for 3 years or more since admission, dropping to only 27 percent in 1999 (figure 4).



Figure 4. Percent distribution of current residents by length of stay: United States, 1977–99



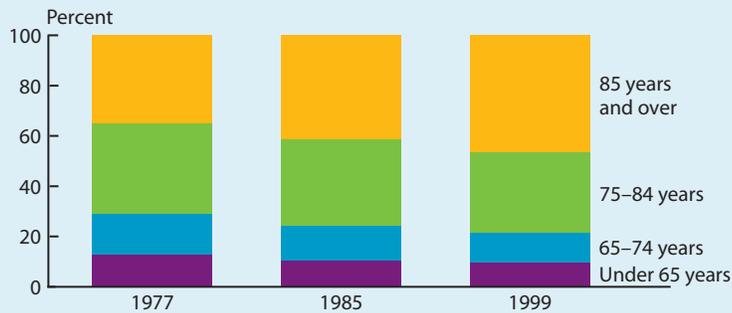
<i>Length of stay</i>	<i>1977</i>	<i>1985</i>	<i>1999</i>
3 years or more	30.7	31.9	27.1
1 year to less than 3 years	32.8	31.4	30.1
3 months to less than 1 year	22.1	23.9	25.0
Less than 3 months ¹	14.4	12.8	17.8

¹“Less than 3 months” is defined as less than 90 days.

NOTES: Current residents refers to the individuals residing in the nursing home at the time of the National Nursing Home Survey. The changes in percentage points between 1977 and 1999 are statistically significant for each length-of-stay group at the adjusted *p*-value for multiple comparisons. The changes in percentage points between 1985 and 1999 for the “Less than 3 months” and “3 years or more” groups are also significant at the adjusted *p*-value for multiple comparisons.

The age distribution of residents has changed. In 1977, 13 percent of the residents were under 65 years of age, and those 85 years and over made up 35 percent of the residents. By 1999, less than 10 percent of residents were under 65 years, and 47 percent were 85 years and over (figure 5).

Figure 5. Percent distribution of current residents by age group: United States, 1977–99



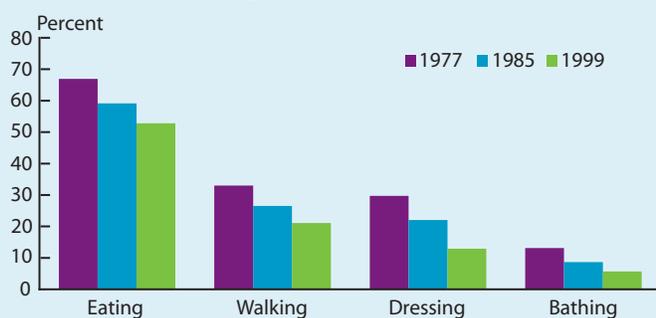
<i>Age group</i>	<i>1977</i>	<i>1985</i>	<i>1999</i>
85 years and over	34.8	40.9	46.5
75–84 years	36.0	34.4	31.8
65–74 years	16.2	13.8	12.0
Under 65 years	13.0	10.9	9.7

NOTES: Current residents refers to the individuals residing in the nursing home at the time of the National Nursing Home Survey. Between 1977 and 1999, the differences in percentages for all age groups are significant at the adjusted *p*-value for multiple comparisons. The differences in percentages between 1985 and 1999 are also significant at the adjusted *p*-value for all age groups except residents under 65 years. Between 1977 and 1985, the differences in percentages for residents 65-74 years and 85 years and over are significant.

The increasing proportion of nursing home residents aged 85 years and over mirrors the growth of this segment of the U.S. population. The population 85 years and over accounted for 1.0 percent of the total population in 1980, climbing to 1.5 percent in 2000, a 50 percent increase.⁸ The change in the proportion of residents 85 years and over in nursing homes between 1977 and 1999 represents a 34 percent increase.

Not surprisingly, with the increasing age of residents in nursing homes, there has been a decline in the percentage of residents who are able to perform activities such as dressing and bathing independently (figure 6). For example, in 1977, 30 percent of the residents could dress without assistance compared with only 13 percent in 1999. Residents who could bathe without assistance made up 13 percent of the residents in 1977, but only 6 percent in 1999.

Figure 6. Percentage of current residents able to perform selected activities independently: United States, 1977–99



Activity	1977	1985	1999
Eating	66.8	59.1	52.8
Walking	32.9	26.5	21.1
Dressing	29.6	22.0	12.9
Bathing	13.0	8.6	5.6

NOTES: Current residents refers to the individuals residing in the nursing home at the time of the National Nursing Home Survey. Eating, dressing, and bathing are included in the traditional definition of activities of daily living (ADLs), but walking is not. The ability to transfer in and out of bed or a chair is also an ADL, but the 1977 survey did not include a question on transferring. Walking is included in this analysis as an indicator of mobility. In the 1977 and 1999 surveys, the question on walking was skipped if the resident was chairfast or bedfast. In the present analysis, residents who were chairfast or bedfast were counted as not being independent for walking. For each activity, the differences in percentage points are significant for all comparisons across the 3 years at the adjusted *p*-value for multiple comparisons

Cases with the status of performance unknown were excluded in the calculation of percentages.

The trends of increasing age and decreasing independence among residents in nursing homes between 1977 and 1999 is consistent with the rise of assisted living and of other alternative settings of long-term care, including home care. With the availability of alternative settings, the use of nursing homes may be increasingly more reserved for when greater needs in medical and rehabilitative care occur—needs that typically increase with age and declining functional status. Recent research indicates a trend in declining functional status and health as the elderly move from a traditional home setting to an assisted-living or related setting and then into a nursing home.³



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In summary, although the use of nursing homes within the health care system has changed substantially over the years (as witnessed by the expansion of postacute care), some characteristics of nursing homes have not changed radically. Despite the increase in the discharge rate, accounted for predominantly by short-stay patients, the nursing home in 1999, as in previous years, was a place where many residents received long-term care for a substantial time period. About 60 percent of residents in nursing homes at any given time had been residents for 1 year or more. These long-stay residents, and the needs of these residents served by nursing homes, had not been displaced markedly by the increase in postacute care in nursing homes.

It has been 5 years since the last NNHS was conducted by NCHS. Many believe the landscape of long-term care, and the role of nursing homes in that care, has altered substantially over this 5-year period. The NNHS conducted in 2004 will provide a better understanding of what changes have occurred and who receives care in today's nursing homes.

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Technical Notes

The 1977, 1985, and 1999 National Nursing Home Surveys (NNHS) were based upon nationally representative samples of facilities, nursing home residents, and discharges from which national estimates are made.⁹⁻¹¹ The type of facility included in the surveys changed over the years. Some categories of facilities included in 1977 and 1985 were not included in the sampling frame of the 1999 NNHS. The 1977 NNHS included an estimated 2,700 facilities classified as offering only personal care services; sampled cases in 1977 representing these facilities were excluded in this analysis. The 1985 NNHS included an estimated 2,200 establishments classified as residential facilities; the sampled cases in 1985 representing these facilities were also omitted. The exclusion of these facilities makes the definition of cases included in the analysis more comparable across 1977, 1985, and 1999. Results reported here may differ from those in earlier reports^{9,10} given the exclusions. More information about the NNHS series is available at <http://www.cdc.gov/nchs/about/major/nnhhsd/nnhsd.htm>.

In this report, counts, such as number of facilities and residents, are rounded numbers. Percentages, averages (means), and rates were calculated from the unrounded numbers derived from the data analysis. References to number of residents or current residents in this report refer to the individuals residing in nursing homes at the time of the NNHS. Discharges refer to the completed stays or episodes of nursing home care (including stays ended because of death) during a defined period of 1 year prior to the date of the survey. Discharges refer to completed stays, not individuals. Because a person could be in and out of a nursing home more than once in a year, a person could have (and be counted as) more than one discharge.

The analysis of primary payer at discharge (figure 2) included recoding the primary payer for select cases. For 1985, 0.8 percent of the discharges had Medicare as the primary payer at discharge and length of stays greater than 100 days (greater than the defined limit of 100 days for Medicare stays in skilled nursing facilities during a benefit period¹²). The average length of stay of these discharges was 454 days. In the 1999 NNHS, there were similar discharges with Medicare as the primary payer, representing 5.6 percent of total discharges, with an average length of stay of 693 days. The primary payer at discharge for these cases in 1985 and 1999 was reclassified as Medicaid for the analysis reported in figure 2. The discharges reported in figure 2 with Medicare as the primary payer had an average length of stay of 23.2 days in 1985 and 24.5 days in 1999, values comparable to those in related analysis.¹³

The significance of all comparisons discussed in this report and noted in charts was determined by assessing the *p*-value for a two-tailed *z*-test calculated by the Bonferroni test for differences between two groups when multiple group comparisons are possible (i.e., there are more than two groups in the domain).¹⁴ The desired level of significance for the overall difference across the multiple groups was set at 0.05, which was adjusted by the Bonferroni test to derive a more stringent *p*-value when comparing two of the groups in the multiple group domain. Explicit statements in the report noting increases or decreases between two groups refer to differences that were statistically significant.

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