MEPS

Special Care Units in Nursing Homes—
Selected Characteristics, 1996

# Research #6 Findings

**U.S. Department of Health and Human Services**
Public Health Service
Agency for Health Care Policy and Research

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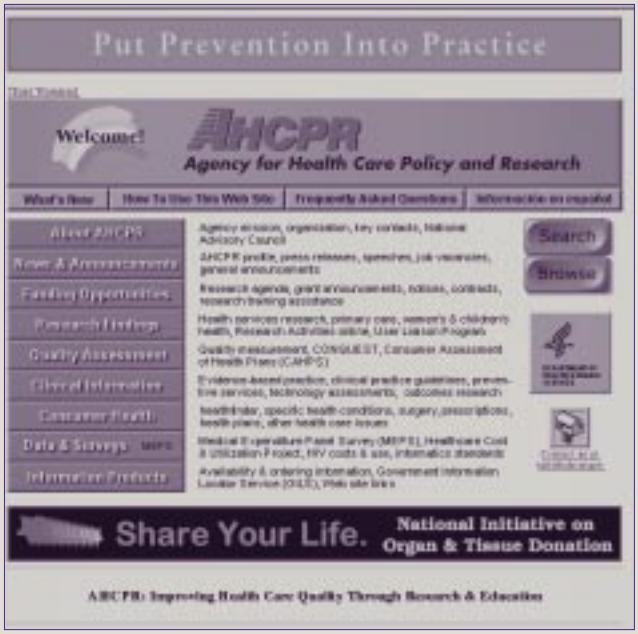


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## Abstract

This report from the Agency for Health Care Policy and Research (AHCPR) summarizes information on special care units in nursing homes, with emphasis on Alzheimer's units. This information comes from the 1996 Nursing Home Component (NHC) of the Medical Expenditure Panel Survey (MEPS).

In 1996, almost a fifth (19.2 percent) of all nursing homes had at least one formal and distinct special care unit. These special care units contained 120,400 beds, or 6.9 percent of all nursing home beds. By far the largest category of special care units was for Alzheimer's and related dementias, which constituted 65.7 percent of all the special care units in nursing homes. More than a tenth (12.6 percent) of nursing homes—or 2,130 homes—had an Alzheimer's unit. The number of beds in these units totaled 73,400.

Hospital-based nursing homes were less likely than other facility types to have special care units. Special care units were more likely to be found in nursing homes that were part of a group or chain than in independent facilities. There was also a clear correlation between the number of nursing beds in the facility and the probability that the facility contained a special care unit. Nursing homes with special care units were more likely than other facilities to be certified by both Medicare and Medicaid.



**Suggested citation**

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MEPS

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# Research #6 Findings

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# The Medical Expenditure Panel Survey (MEPS)

## Background

The Medical Expenditure Panel Survey (MEPS) is conducted to provide nationally representative estimates of health care use, expenditures, sources of payment, and insurance coverage for the U.S. civilian noninstitutionalized population. MEPS also includes a nationally representative survey of nursing homes and their residents. MEPS is cosponsored by the Agency for Health Care Policy and Research (AHCPR) and the National Center for Health Statistics (NCHS).

MEPS comprises four component surveys: the Household Component (HC), the Medical Provider Component (MPC), the Insurance Component (IC), and the Nursing Home Component (NHC). The HC is the core survey, and it forms the basis for the MPC sample and part of the IC sample. The separate NHC sample supplements the other MEPS components. Together these surveys yield comprehensive data that provide national estimates of the level and distribution of health care use and expenditures, support health services research, and can be used to assess health care policy implications.

MEPS is the third in a series of national probability surveys conducted by AHCPR on the financing and use of medical care in the United States. The National Medical Care Expenditure Survey (NMCES) was conducted in 1977, the National Medical Expenditure Survey (NMES) in 1987. Beginning in 1996, MEPS continues this series with design enhancements and efficiencies that provide a more current data resource to capture the changing dynamics of the health care delivery and insurance system.

The design efficiencies incorporated into MEPS are in accordance with the Department of Health and Human Services (DHHS) Survey Integration Plan of June 1995, which focused on consolidating DHHS surveys, achieving cost efficiencies, reducing respondent burden, and enhancing analytical capacities. To accommodate these goals, new MEPS design features include linkage with the National Health Interview Survey (NHIS), from which the sample for the MEPS HC is drawn, and enhanced longitudinal data collection for core survey components. The MEPS HC augments NHIS by selecting a sample of NHIS respondents, collecting additional data on their health care expenditures, and linking these data with additional information collected from the respondents' medical providers, employers, and insurance providers.

## Household Component

The MEPS HC, a nationally representative survey of the U.S. civilian noninstitutionalized population, collects medical expenditure data at both the person and household levels. The HC collects detailed data on demographic characteristics, health conditions, health status, use of medical care services, charges and payments, access to care, satisfaction with care, health insurance coverage, income, and employment.

The HC uses an overlapping panel design in which data are collected through a preliminary contact followed by a series of five rounds of interviews over a 2½-year period. Using computer-assisted personal interviewing (CAPI) technology, data on medical expenditures and use for 2 calendar years are collected from each household. This series of data collection rounds is launched each subsequent year on a new sample of households to provide overlapping panels of survey data and, when combined with other ongoing panels, will provide continuous and current estimates of health care expenditures.

The sampling frame for the MEPS HC is drawn from respondents to NHIS, conducted by NCHS. NHIS provides a nationally representative sample of the U.S. civilian noninstitutionalized population, with oversampling of Hispanics and blacks.

## Medical Provider Component

The MEPS MPC supplements and validates information on medical care events reported in the MEPS HC by contacting medical providers and pharmacies identified by household respondents. The MPC sample includes all hospitals, hospital physicians, home health agencies, and pharmacies reported in the

HC. Also included in the MPC are all office-based physicians:

- Providing care for HC respondents receiving Medicaid.
- Associated with a 75-percent sample of households receiving care through an HMO (health maintenance organization) or managed care plan.
- Associated with a 25-percent sample of the remaining households.

Data are collected on medical and financial characteristics of medical and pharmacy events reported by HC respondents, including:

- Diagnoses coded according to ICD-9 (9th Revision, International Classification of Diseases) and DSM-IV (Fourth Edition, *Diagnostic and Statistical Manual of Mental Disorders*).
- Physician procedure codes classified by CPT-4 (Current Procedural Terminology, Version 4).
- Inpatient stay codes classified by DRG (diagnosis-related group).
- Prescriptions coded by national drug code (NDC), medication names, strength, and quantity dispensed.
- Charges, payments, and the reasons for any difference between charges and payments.

The MPC is conducted through telephone interviews and mailed survey materials.

## Insurance Component

The MEPS IC collects data on health insurance plans obtained through employers, unions, and other sources of private health insurance. Data obtained in the IC include the number and types of private insurance plans offered, benefits associated with these plans, premiums, contributions by employers and employees, and employer characteristics.

Establishments participating in the MEPS IC are selected through four sampling frames:

- A list of employers or other insurance providers identified by MEPS HC respondents who report having private health insurance at the Round 1 interview.
- A Bureau of the Census list frame of private-sector business establishments.
- The Census of Governments from the Bureau of the Census.
- An Internal Revenue Service list of the self-employed.

To provide an integrated picture of health insurance, data collected from the first sampling frame (employers and other insurance providers) are linked back to data provided by the MEPS HC respondents. Data from the other three sampling frames are collected to provide annual national and State estimates of the supply of private health insurance available to American workers and to evaluate policy issues pertaining to health insurance.

The MEPS IC is an annual panel survey. Data are collected from the selected organizations through a prescreening telephone interview, a mailed questionnaire, and a telephone followup for nonrespondents.

## Nursing Home Component

The 1996 MEPS NHC was a survey of nursing homes and persons residing in or admitted to nursing homes at any time during calendar year 1996. The NHC gathered information on the demographic characteristics, residence history, health and functional status, use of services, use of prescription medications, and health care expenditures of nursing home residents. Nursing home administrators and designated staff also provided information on facility size, ownership, certification status, services provided, revenues and expenses, and other facility characteristics. Data on the income, assets, family relationships, and caregiving services for sampled nursing home residents were obtained from next-of-kin or other knowledgeable persons in the community.

The 1996 MEPS NHC sample was selected using a two-stage stratified probability design. In the first stage, facilities were selected; in the second stage, facility residents were sampled, selecting both persons in residence on January 1, 1996, and those admitted during the period January 1 through December 31.

The sampling frame for facilities was derived from the National Health Provider Inventory, which is updated periodically by NCHS. The MEPS NHC data were collected in person in three rounds of data collection over a 1½-year period using the CAPI system. Community data were collected by telephone using computer-assisted telephone interviewing (CATI) technology. At the end of three rounds of data collection,

the sample consisted of 815 responding facilities, 3,209 residents in the facility on January 1, and 2,690 eligible residents admitted during 1996.

## Survey Management

MEPS data are collected under the authority of the Public Health Service Act. They are edited and published in accordance with the confidentiality provisions of this act and the Privacy Act. NCHS provides consultation and technical assistance.

As soon as data collection and editing are completed, the MEPS survey data are released to the public in staged releases of summary reports and microdata files. Summary reports are released as printed documents and electronic files. Microdata files are released on CD-ROM and/or as electronic files.

Printed documents and CD-ROMs are available through the AHCPR Publications Clearinghouse. Write or call:

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On the AHCPR Web site, under Data and Surveys, click the MEPS icon.

Additional information on MEPS is available from the MEPS project manager or the MEPS public use data manager at the Center for Cost and Financing Studies, Agency for Health Care Policy and Research, 2101 East Jefferson Street, Suite 500, Rockville, MD 20852 (301-594-1406).

# Table of Contents

# Special Care Units in Nursing Homes—Selected Characteristics, 1996

by Marc Freiman, Ph.D., and Erwin Brown, Jr., B.S.

## Introduction

Nursing homes in the United States are devoting more resources to the treatment needs of special populations, primarily through the formation of special care units. Several trends have contributed to the creation of these units. The size of the nursing home population has increased 1 to 2 percent annually from 1987 to 1996, and today's nursing home population is more functionally and cognitively disabled and requires more skilled and/or specialized care than ever before (Spillman, Krauss, and Altman, 1997). Shorter lengths of stay in hospitals also have resulted in a greater need for skilled and rehabilitative care following hospitalization. Home health care has partially addressed this need, but there continues to be a subset of individuals who need sophisticated, labor-intensive, 24-hour skilled supervision. In addition, increasing public awareness of Alzheimer's disease and related dementias has created interest in programs that provide services tailored to the needs of people with these conditions.

**In 1996, about a fifth of all nursing homes had at least one special care unit.**

This report is based on the 1996 Medical Expenditure Panel Survey (MEPS) Nursing Home Component (NHC), conducted by the Agency for Health Care Policy and Research (AHCPR). It provides estimates of the number and distribution of nursing homes by type of facility, type of ownership and chain affiliation, certification status, facility size, and geographic distribution. The nursing home characteristics presented in this report are derived from information provided by facility administrators and designated staff in sampled nursing homes.

The 1996 MEPS NHC is a national, yearlong panel survey of nursing homes and their residents. MEPS is the third in a series of AHCPR-sponsored surveys to collect information on the health care use and spending of the American public. The first survey was the 1977 National Medical Care Expenditure Survey (NMCES), and the second was the 1987 National Medical Expenditure Survey (NMES). NMES was the first national expenditure survey to contain an institutional component designed explicitly to collect detailed medical expenditure information on people in long-term care facilities (Potter, 1998).

## Defining Special Care Units

Special care programs span a continuum, from individualized treatment of people with special needs through formal programs where specialized providers care for people with special needs. These programs may also set aside specific portions of a nursing facility for people with special needs or form distinct units specifically designated and staffed for people with specific needs. For example, the range of possibilities with regard to the treatment of Alzheimer's disease and related dementias is explored in the survey results reported in Leon, Chang-Kuo, and Alvarez (forthcoming). In this *Research Findings*, "special care" refers to units established for any special population, not just units designated for Alzheimer's disease and related dementias.

The MEPS NHC gathered data on "formal" special care units as part of an effort to delineate the structure of the nursing facility and any larger facility of which it might be a part. Specifically, the survey interviewer asked:

"We're interested in learning about any special care units within [the nursing home]—units with a specified number of beds identified and dedicated for residents with specific needs or diagnoses. Does [the nursing home] have any special care units, such as those listed on this card?"

The respondent was then shown a card listing the following types of special care units and asked which type(s) of units the facility contained:

- Alzheimer's and related dementias.
- AIDS/HIV.
- Dialysis.
- Children with disabilities.
- Brain injury (traumatic or acquired).
- Hospice.
- Huntington's disease.
- Rehabilitation.
- Ventilator/pulmonary.
- Some other kind of unit.

If "some other kind of unit" was chosen, the respondent was asked for specifics, and the responses were coded into existing or new categories. Respondents also were asked for the number of beds in each type of unit they identified. Because there appears to be no clear and generally accepted distinction in the nursing home industry between rehabilitation and subacute care units, facilities that reported "some other kind of unit" as "subacute" had their units grouped in the rehabilitation category. If a facility reported more than one unit in a category, the beds in these units were summed and the facility was counted as having only one unit in that category.

A subsequent question asked, "Does [the special care unit] have direct patient care staff dedicated to it?" In 96 percent of the cases, the response was "yes" (data not shown). This information provides further support for the perspective that the special care treatment analyzed here is furnished in formal distinct units.

## Findings

As shown in Table 1, 19.2 percent of all nursing facilities had at least one distinct special care unit. These special care units contained 120,440 beds, or 6.9 percent of all nursing home beds.

Hospital-based nursing homes were less likely than other facility types to have special care units (8.0 percent versus 20.4 percent of nursing homes with only nursing beds and 22.9 percent of nursing homes with independent living and/or personal care beds).

Almost two-thirds (65.9 percent) of nursing homes operate for profit, and nearly 20 percent (19.1 percent) of those facilities contain special care units. Among for-profit facilities, special care units were more likely to be found in nursing homes that were part of a group or chain (22.0 percent) than in independent facilities (12.8 percent). Indeed, almost half (48.1 percent) of all beds in special care units were found in for-profit facilities that were part of a group or chain (derived from Table 1). There also was a clear correlation between the number of nursing beds in the facility and the probability that it contained a special care unit. The percentage of nursing homes with a special care unit increased from 4.2 percent of facilities with fewer than 75 beds to 46.7 percent of facilities with 200 or more beds.

Table 2 provides greater detail on the types of special care units. By far the largest category of special care units was for Alzheimer's disease and related dementias; these units constituted two-thirds (65.7 percent) of all special care units found in our sample (data derived from Table 2). More than a tenth (12.6 percent) of nursing homes—or 2,130 homes—had an Alzheimer's unit, with the number of beds in these units totaling 73,400. In addition, 4.9 percent of nursing homes had a distinct rehabilitation and/or subacute care unit, for a total of 28,500 beds. Finally, almost 800 facilities had some other kind of special care unit or units; there were 18,500 beds in these units. Types of units included in this "other" grouping were ventilator/pulmonary, hospice, AIDS/HIV, and brain injury (traumatic or acquired) units. Each of these types was present in less than 1.5 percent of the sample, which precludes separate reliable estimation of these categories.

**The majority of special care units were for Alzheimer's and related dementias.**

### Nursing Homes With Special Care Units

Table 3 presents characteristics of facilities with special care units, and with Alzheimer's units specifically, compared to nursing homes without any special care units. Only 4.7 percent of nursing homes with special care units and 5.1 percent of nursing homes with Alzheimer's units were hospital based, compared with 13.0 percent of facilities without any type of special care unit.

There was little difference in the distribution of for-profit/nonprofit ownership among nursing homes

without any special care units, facilities with special care units, and those with Alzheimer's units. However, among for-profit facilities, there were differences between nursing homes that were part of a group or chain and those that were independent. Only 13.8 percent of nursing homes with special care units and 14.5 percent of those with Alzheimer's units were independent for-profit homes, whereas 22.4 percent of facilities without special care units were independent and for profit.

Nursing homes with any type of special care unit, as well as those with Alzheimer's units specifically, were more likely to be certified by both Medicare and Medicaid (84.7 percent and 80.0 percent, respectively) than facilities without any special care unit (70.4 percent). Further, over half (53.5 percent) of nursing homes with special care units had 125 or more total nursing beds, whereas only 18.1 percent of homes without any special care units fell into this size range.

## Alzheimer's Units

Because Alzheimer's units accounted for two-thirds (65.7 percent) of all special care units, we can present greater detail on the characteristics of such units. In 1996, the average Alzheimer's unit had been in existence for a little more than 6 years (data not shown). According to Figure 1, 55.6 percent of the units had been in operation for 5 years or less. Less than a tenth (9.7 percent) of the units had been operating for 11 years or more.

The average Alzheimer's unit contained 34 beds (data not shown). Figure 2 shows that 46.7 percent of the units had 26-60 beds. Less than a tenth (8.9 percent) of the units had more than 60.

# References

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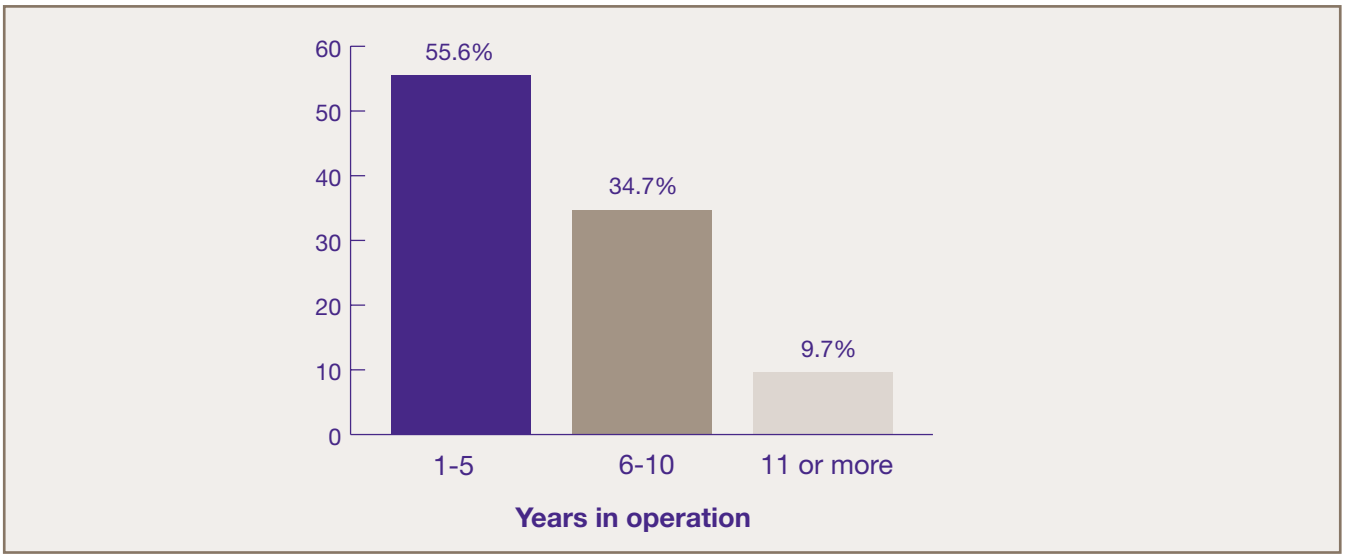
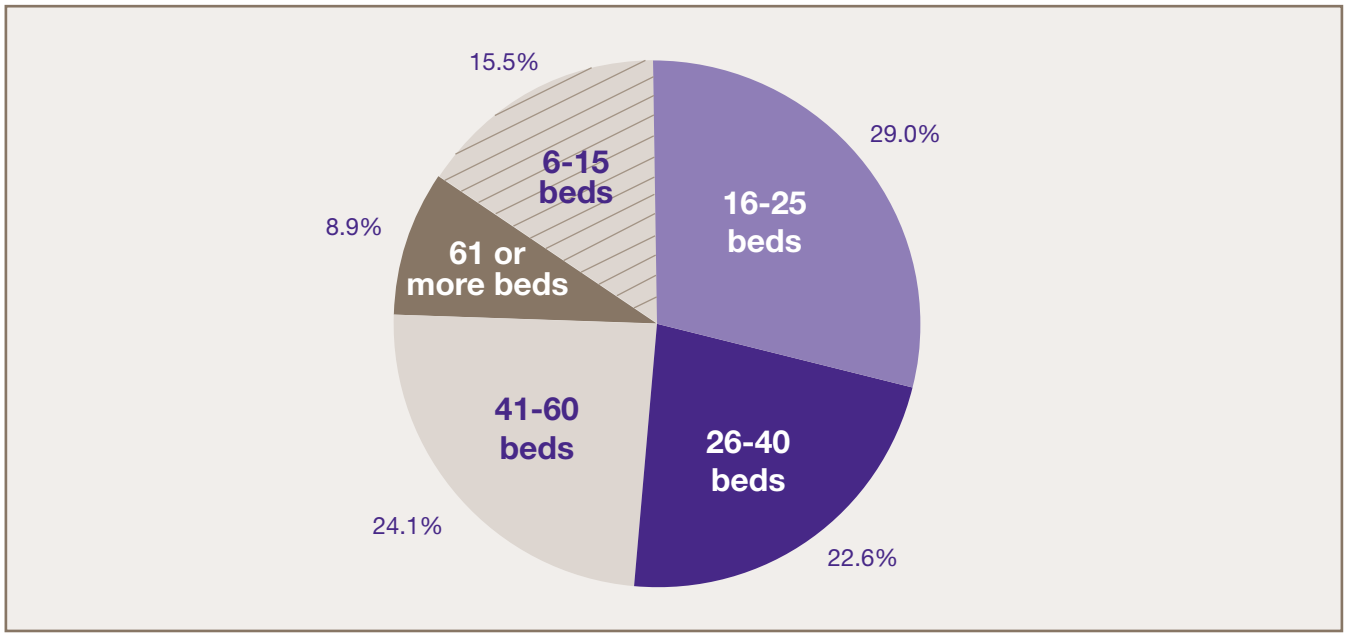
## Figure 1. Percent distribution of Alzheimer's units in nursing homes, by number of years in operation: United States, 1996




**Note:** Years in operation could not be determined for 4.8 percent of all Alzheimer's units. A standard nonresponse adjustment was used to correct for this modest level of item nonresponse.

**Source:** Center for Cost and Financing Studies, Agency for Health Care Policy and Research: Medical Expenditure Panel Survey Nursing Home Component, 1996 (Round 1).

## Figure 2. Percent distribution of Alzheimer's units, by number of beds: United States, 1996




**Source:** Center for Cost and Financing Studies, Agency for Health Care Policy and Research: Medical Expenditure Panel Survey Nursing Home Component, 1996 (Round 1).

# Table 1. Nursing homes with special care units and number of beds in such units, by selected characteristics: United States, 1996

| Facility characteristic | Nursing homes | | Special care unit beds | |
|---|---|---|---|---|
| | Number | Percent with special care units | Number | As a percent of all nursing home beds |
| Total | 16,840 | 19.2 | 120,440 | 6.9 |
| **Type of nursing home** | | | | |
| Nursing home with only nursing home beds[a] | 13,020 | 20.4 | 96,960 | 6.8 |
| Nursing home with independent living or personal care unit[b] | 1,910 | 22.9 | 16,450 | 7.9 |
| Hospital-based nursing home | [c]1,910 | *8.0 | *7,030 | *5.7 |
| **Ownership** | | | | |
| For profit | 11,090 | 19.1 | 74,390 | 6.4 |
| Independent | 3,490 | 12.8 | 16,440 | 4.7 |
| Part of group or chain | 7,600 | 22.0 | 57,950 | 7.0 |
| Nonprofit | 4,420 | 18.7 | 31,140 | 7.4 |
| Independent | 3,170 | 17.1 | 19,530 | 6.6 |
| Part of group or chain | [c]1,250 | 22.9 | 11,610 | 9.1 |
| Government | 1,330 | 22.2 | 14,910 | 9.2 |
| **Facility certification status** | | | | |
| Medicare and Medicaid certified | 12,320 | 22.3 | 100,530 | 7.1 |
| Medicare certified only | [d] | [d] | [d] | [d] |
| Medicaid certified only | 2,870 | 9.8 | 6,860 | 3.0 |
| Not federally certified | [d] | [d] | [d] | [d] |
| **Facility size** | | | | |
| Fewer than 75 beds | 6,010 | 4.2 | *5,600 | *2.0 |
| 75-124 beds | 6,630 | 18.9 | 34,480 | 5.1 |
| 125-199 beds | 2,880 | 39.0 | 46,270 | 10.3 |
| 200 or more beds | 1,320 | 46.7 | 34,090 | 9.7 |
| **Census region** | | | | |
| Northeast | 2,910 | 22.9 | 30,140 | 8.0 |
| Midwest | 5,680 | 18.2 | 36,190 | 6.7 |
| South | 5,080 | 17.1 | 33,160 | 5.9 |
| West | 3,170 | 21.3 | 20,960 | 7.6 |
| **Metropolitan statistical area (MSA)** | | | | |
| MSA | 10,490 | 21.8 | 95,880 | 7.9 |
| Not MSA | 6,350 | 15.0 | 24,560 | 4.5 |

[a] Includes a small number of nursing homes (less than 1 percent of this category) with an intermediate care unit for the mentally retarded.

[b] Includes continuing care retirement communities and retirement centers that include independent living and/or personal care units, as well as nursing homes that contain or are affiliated with independent living or personal care units.

[c] Because this statistic is based on a sample of less than 75, statistical tests that assume a normal distribution may not be appropriate, especially in applications with proportions.

[d] Sample size less than 50.

* Standard error is greater than 30 percent of estimate and should not be considered reliable.

**Source:** Center for Cost and Financing Studies, Agency for Health Care Policy and Research: Medical Expenditure Panel Survey Nursing Home Component, 1996 (Round 1).

## Table 2. Nursing homes with special care units and number of beds in such units, by type of unit: United States, 1996

| Type of unit | Nursing homes with a special care unit | | Special care unit beds | |
|---|---|---|---|---|
| | Number | As a percent of all nursing homes | Number | As a percent of all nursing homes beds |
| All types of units[a] | 3,240 | 19.2 | 120,400 | 6.9 |
| Alzheimer's and related dementias | 2,130 | 12.6 | 73,400 | 4.2 |
| Rehabilitation/subacute | 830 | 4.9 | 28,500 | 1.6 |
| All other[b] | 790 | 4.7 | 18,500 | 1.1 |

[a] Subcategories total more than 3,240 because some facilities had units in more than one category.

[b] Includes ventilator/pulmonary, hospice, AIDS/HIV, brain injury (traumatic or acquired), and all remaining types of units, each of which was present in less than 1.5 percent of the sample.

**Source:** Center for Cost and Financing Studies, Agency for Health Care Policy and Research: Medical Expenditure Panel Survey Nursing Home Component, 1996 (Round 1).

## Table 3. Percent distribution of nursing homes with and without special care units and with Alzheimer's units, by selected characteristics: United States, 1996

| Facility characteristic | All nursing facilities | Facilities without special care units | Facilities with special care units | Facilities with Alzheimer's units |
|---|---|---|---|---|
| Total | 16,840 | 13,600 | 3,240 | 2,130 |
| | | | **Percent distribution** | |
| **Type of nursing home** | | | | |
| Nursing home with only nursing home beds[a] | 77.3 | 76.2 | 81.8 | 78.3 |
| Nursing home with independent living or personal care units[b] | 11.3 | 10.8 | 13.5 | 16.6 |
| Hospital-based nursing home | 11.4 | 13.0 | 4.7 | *5.1 |
| **Ownership** | | | | |
| For profit | 65.9 | 66.0 | 65.4 | 60.2 |
| Independent | 20.8 | 22.4 | 13.8 | 14.5 |
| Part of group or chain | 45.1 | 43.6 | 51.6 | 45.7 |
| Nonprofit | 26.2 | 26.4 | 25.5 | 29.2 |
| Independent | 18.8 | 19.3 | 16.7 | 17.8 |
| Part of group or chain | 7.4 | 7.1 | 8.8 | 11.4 |
| Government | 7.9 | 7.6 | 9.1 | 10.6 |
| **Facility certification status** | | | | |
| Medicare and Medicaid certified | 73.2 | 70.4 | 84.7 | 80.0 |
| Medicare certified only | 5.4 | 5.7 | *4.0 | *5.1 |
| Medicaid certified only | 17.0 | 19.0 | 8.7 | 10.9 |
| Not federally certified | 4.4 | 4.9 | *2.6 | *4.0 |
| **Facility size** | | | | |
| Fewer than 75 beds | 35.7 | 42.3 | 7.9 | *8.9 |
| 75-124 beds | 39.4 | 39.6 | 38.6 | 33.4 |
| 125-199 beds | 17.1 | 12.9 | 34.6 | 37.0 |
| 200 or more beds | 7.8 | 5.2 | 18.9 | 20.7 |
| **Census region** | | | | |
| Northeast | 17.3 | 16.5 | 20.5 | 20.3 |
| Midwest | 33.8 | 34.2 | 31.9 | 39.6 |
| South | 30.2 | 31.0 | 26.8 | 24.5 |
| West | 18.8 | 18.3 | 20.8 | 15.6 |

*Continued*

## Table 3. Percent distribution of nursing homes with and without special care units and with Alzheimer's units, by selected characteristics: United States, 1996 *(continued)*

| Facility characteristic | All nursing facilities | Facilities without special care units | Facilities with special care units | Facilities with Alzheimer's units |
|---|---|---|---|---|
| | Percent distribution | | | |
| **Metropolitan statistical area (MSA)** | | | | |
| MSA | 62.3 | 60.3 | 70.7 | 66.9 |
| Not MSA | 37.7 | 39.7 | 29.3 | 33.2 |

[a] Includes a small number of nursing homes (less than 1 percent of this category) with an intermediate care unit for the mentally retarded.
[b] Includes continuing care retirement communities and retirement centers that include independent living units, as well as nursing homes that contain unlicensed nursing beds.
* Standard error is greater than 30 percent of estimate and should not be considered reliable.

**Source:** Center for Cost and Financing Studies, Agency for Health Care Policy and Research: Medical Expenditure Panel Survey Nursing Home Component, 1996 (Round 1).

# Technical Appendix

## Data Sources and Methods of Estimation

The data in this report were obtained from a nationally representative sample of nursing homes from the Nursing Home Component (NHC) of the 1996 Medical Expenditure Panel Survey (MEPS). The sampling frame was derived from the updated 1991 National Health Provider Inventory. The NHC was primarily designed to provide unbiased national and regional estimates for the population in nursing homes, as well as estimates of these facilities and a range of their characteristics.

The sample was selected using a two-stage stratified probability design, with facility selection in the first stage. The second stage of selection consisted of a sample of residents as of January 1, 1996, and a rolling sample of persons admitted during the year (Bethel, Broene, and Sommers, 1998). Of the 1,123 eligible nursing homes sampled in the NHC, 85 percent responded. Estimates in this report are based on these 952 eligible responding facilities. To bring the sample size in line with the original design of approximately 800 facilities by the end of Round 3, the facility sample was subsampled at the end of Round 1. A total of 127 facilities were randomly deselected.

The MEPS NHC data analyzed here were collected in person during the first of three rounds of data collection. A computer-assisted personal interview (CAPI) system was used for data collection. The Round 1 interview took place during the period March-June 1996. The entire three-round data collection effort took place over a $1^{1/2}$ year period, with the reference period being January 1, 1996, to December 31, 1996 (Potter, 1998).

The facility questionnaire was designed to elicit information on the complex structure of institutions that provide residential care or treatment. Some nursing homes or units exist within larger establishments. In such cases, the entity that appeared on the sampling frame might be the larger facility, the nursing home or unit within the larger facility, or only one of several nursing units within the larger facility. Therefore, the NHC's Round 1 facility questionnaire was designed to identify the larger facility, each eligible nursing home or unit within the larger establishment, and other nonhospital residential parts. Because of this, the point of reference for a specific question may be the sampled nursing home or unit (hereafter referred to as "nursing home"), a larger facility, another nonhospital residential part of a larger facility, one or several nursing homes within a larger facility, or a smaller subunit of the eligible nursing home (Agency for Health Care Policy and Research, 1997).

Data on the sampled nursing homes were obtained using a facility questionnaire administered through CAPI to facility administrators or designated staff. Estimates provided are preliminary and are subject to revision as more information from other parts of the NHC becomes available.

Data in data files released to the public have, in some instances, been masked to preserve the confidentiality of responding nursing homes. As a result, estimates made using the public use version of the data may differ slightly from the estimates presented in this report.

## Facility Eligibility

Only nursing homes were eligible for inclusion in the MEPS NHC. To be included as a nursing home, a facility must have at least three beds and meet one of the following criteria:

- It must have a facility or distinct portion of a facility certified as a Medicare skilled nursing facility (SNF).
- It must have a facility or distinct portion of a facility certified as a Medicaid nursing facility (NF).
- It must have a facility or distinct portion of a facility that is licensed as a nursing home by the State health department or by some other State or Federal agency and that provides onsite supervision by a registered nurse or licensed practical nurse 24 hours a day, 7 days a week (Bethel, Broene, and Sommers, 1998).

By this definition, all SNF- or NF-certified units of licensed hospitals are eligible for the sample, as are all Department of Veterans Affairs (VA) long-term care nursing units. In such cases, and in the case of retirement communities with nursing facilities, only the long-term care nursing units(s) of the facility were eligible for inclusion in the sample. If a facility also contained a long-term care unit that provided assistance

only with activities of daily living (e.g., a personal care unit) or provided nursing care at a level below that required to be classified as a nursing facility, that unit was excluded from the sample (Potter, 1998).

## Definitions of Variables

### Facility Type

This variable, constructed from data from the facility questionnaire, defines the facility's organizational structure as one of three types:

- Hospital-based nursing home. This indicates that the sampled nursing home was part of a hospital or was a hospital-based Medicare SNF.
- Nursing home with independent living or personal care unit. This category includes continuing care retirement communities (CCRCs) and retirement centers that have independent living and/or personal care units, as well as nursing homes that contain personal care units. Non-hospital-based nursing homes with a separate unit in which personal care assistance is provided also are included.
- Nursing home with only nursing home beds. This category includes a small number of nursing homes (less than 1 percent) with an intermediate care unit for the mentally retarded (ICF-MR).

The order of priority for coding facility type followed the sequence listed above.

### Ownership

Respondents reported the ownership type that best described their facility (or larger part of the facility, in situations where the sampled nursinghome was part of a larger facility), as follows:

- For profit (i.e., individual, partnership, or corporation).
- Private nonprofit (e.g., religious group, nonprofit corporation).
- One of four types of public ownership—city/county government, State government, VA, or other Federal agency.

Respondents also reported whether their facility was part of a chain or group of nursing facilities operating under common management.

### Facility Certification Status

Respondents were asked whether any unit in their facility or part of the larger facility (in cases where the sampled nursing home was reported to be part of a larger facility) was certified by Medicare as an SNF and/or Medicaid as an NF. For the purpose of this report, facilities were assigned to mutually exclusive categories based on their responses.

### Facility Size

The size of the sampled nursing home was determined by the number of nursing beds regularly maintained for residents. Beds contained within the sampled nursing home but not licensed for nursing care were excluded; 65 of the 952 nursing homes reported having such unlicensed beds. There were 28,000 unlicensed beds in addition to the 1,756,800 total weighted beds in the sample. These unlicensed beds represented less than 2 percent of the beds in the sampled nursing homes. If the sampled nursing home was part of a larger facility, only the licensed nursing home beds were included.

### Census Region

Sampled nursing homes or units were classified in one of four regions—Northeast, Midwest, South, and West—based on their geographic location according to the MEPS NHC sampling frame. These regions are defined by the U.S. Bureau of the Census.

### Facility Location

A metropolitan statistical area (MSA) is defined as including (1) at least one city with 50,000 or more inhabitants or (2) a Census Bureau-defined urbanized area of at least 50,000 inhabitants and a total metropolitan population of at least 100,000 (75,000 in New England) (U.S. Bureau of the Census, 1996).

MSA data were missing for 14 facilities; an MSA/non-MSA determination was made after a review of the county's population density according to the 1990 census.

## Reliability and Standard Error Estimates

Since the statistics presented in this report are based on a sample, they may differ somewhat from the figures that would have been obtained if a complete census had been taken. This potential difference between sample results and a complete count is the sampling error of the estimate.

The chance that an estimate from the sample would differ from the value for a complete census by less than one standard error is about 68 out of 100. The chance that the difference between the sample estimate and a complete census would be less than twice the standard error is about 95 out of 100.

Tests of statistical significance were used to determine whether differences between estimates exist at specified levels of confidence or whether they simply occurred by chance. Differences were tested using *Z*-scores having asymptotic normal properties, based on the rounded figures at the 0.05 level of significance.

Estimates for sample sizes of less than 50 do not meet standards of reliability or precision and are not reported. In addition, estimates with a relative standard error greater than 30 percent are marked with an asterisk. Such estimates cannot be assumed to be reliable.

### Rounding

Estimates of percentages presented in the tables have been rounded to the nearest 0.1 percent. The rounded estimates, including those underlying the standard errors, will not always add to 100 percent or the full total. To avoid conveying a false sense of precision, estimates of the number of nursing homes and/or units have been rounded to the nearest ten, and estimates of the number of beds have been rounded to the nearest hundred.

### Standard Errors

The standard errors in this report are based on estimates of standard errors derived using the Taylor series linearization method to account for the complex survey design. The standard error estimates were computed using SUDAAN (Shah, Barnwell, and Bieler, 1995). The direct estimates of the standard errors for the estimates in Tables 1-3 in the text are provided in Tables A-C, respectively; the standard errors for Figures 1 and 2 are provided in Tables D and E, respectively.

For example, the estimate of 120,440 beds in special care units (Table 1) has an estimated standard error of 8,340 beds (Table A). The estimate that 65.4 percent of facilities with special care units operate for profit (Table 3) has an estimated standard error of 3.2 percent (Table C).

## Table A. Standard errors for nursing homes with special care units and number of beds in such units, by selected characteristics: United States, 1996

*Corresponds to Table 1*

| Facility characteristic | Nursing homes | | Special care unit beds | |
|---|---|---|---|---|
| | Number | Percent with special care units | Number | As a percent of all nursing home beds |
| | Standard error | | | |
| Total | 368 | 1.3 | 8,340 | 0.5 |
| **Type of nursing facility** | | | | |
| Nursing home with only nursing home beds[a] | 335 | 1.5 | 7,494 | 0.5 |
| Nursing home with independent living or personal care unit[b] | 185 | 4.0 | 3,442 | 1.5 |
| Hospital-based nursing home | 254 | 2.6 | 2,520 | 5.7 |
| **Ownership** | | | | |
| For profit | 342 | 1.6 | 6,864 | 0.6 |
| Independent | 283 | 2.4 | 3,789 | 1.0 |
| Part of group or chain | 312 | 2.0 | 5,910 | 0.7 |
| Nonprofit | 342 | 2.5 | 4,541 | 1.0 |
| Independent | 319 | 2.8 | 3,437 | 1.1 |
| Part of group or chain | 163 | 5.1 | 3,059 | 2.1 |
| Government | 171 | 4.6 | 3,149 | 1.7 |
| **Certification status** | | | | |
| Medicare and Medicaid certified | 336 | 1.5 | 7,390 | 0.5 |
| Medicare certified only | — | — | — | — |
| Medicaid certified only | 275 | 2.4 | 1,719 | 0.7 |
| Not federally certified | — | — | — | — |
| **Facility size** | | | | |
| Fewer than 75 beds | 469 | 1.3 | 2,161 | 0.8 |
| 75-124 beds | 277 | 2.1 | 4,824 | 0.7 |
| 125-199 beds | 164 | 3.2 | 5,549 | 1.1 |
| 200 or more beds | 96 | 4.0 | 4,618 | 1.1 |
| **Census region** | | | | |
| Northeast | 214 | 3.0 | 4,381 | 1.0 |
| Midwest | 343 | 2.2 | 4,831 | 0.8 |
| South | 279 | 2.2 | 4,944 | 0.8 |
| West | 274 | 3.3 | 3,551 | 1.1 |
| **Metropolitan statistical area (MSA)** | | | | |
| MSA | 362 | 1.7 | 7,949 | 0.6 |
| Not MSA | 383 | 2.0 | 3,380 | 0.6 |

[a]Includes a small number of nursing homes (less than 1 percent of this category) with an intermediate care unit for the mentally retarded.

[b]Includes continuing care retirement communities and retirement centers that include independent living and/or personal care units, as well as nursing homes that contain or are affiliated with independent living or personal care units.

**Source:** Center for Cost and Financing Studies, Agency for Health Care Policy and Research: Medical Expenditure Panel Survey Nursing Home Component, 1996 (Round 1).

## Table B. Standard errors for nursing homes with special care units and number of beds in such units, by type of unit: United States, 1996
*Corresponds to Table 2*

| Type of unit | Nursing homes with a special care unit | | Special care unit beds | |
|---|---|---|---|---|
| | Number | As a percent of all nursing homes | Number | As a percent of all nursing home beds |
| | Standard error | | | |
| All types of units | 196 | 1.3 | 8,340 | 0.5 |
| Alzheimer's and related dementias | 164 | 1.0 | 6,140 | 0.3 |
| Rehabilitation/subacute | 104 | 0.6 | 4,040 | 0.2 |
| All other[a] | 111 | 0.7 | 2,993 | 0.2 |

[a]Includes ventilator/pulmonary, hospice, AIDS/HIV, brain injury (traumatic or acquired), and all other remaining types of units, each of which was present in less than 1.5 percent of the sample.

**Source:** Center for Cost and Financing Studies, Agency for Health Care Policy and Research: Medical Expenditure Panel Survey Nursing Home Component, 1996 (Round 1).

## Table C. Standard errors for percent distribution of nursing homes with and without special care units and with Alzheimer's units, by selected characteristics: United States, 1996

*Corresponds to Table 3*

| Facility characteristic | All nursing facilities | Facilities without special care units | Facilities with special care units | Facilities with Alzheimer's units |
|---|---|---|---|---|
| | Standard error | | | |
| Total | 368 | 433 | 196 | 164 |
| **Type of nursing home** | | | | |
| Nursing home with only nursing home beds[a] | 1.6 | 1.9 | 2.7 | 3.5 |
| Nursing home with independent living or personal care unit[b] | 1.1 | 1.2 | 2.4 | 3.2 |
| Hospital-based nursing home | 1.4 | 1.7 | 1.4 | 1.8 |
| **Ownership** | | | | |
| For profit | 1.8 | 2.1 | 3.2 | 4.0 |
| Independent | 1.6 | 1.9 | 2.4 | 3.1 |
| Part of group or chain | 1.9 | 2.2 | 3.4 | 4.2 |
| Nonprofit | 1.8 | 2.2 | 2.9 | 3.8 |
| Independent | 1.7 | 2.1 | 2.4 | 3.0 |
| Part of group or chain | 1.0 | 1.1 | 2.0 | 2.8 |
| Government | 1.0 | 1.2 | 1.8 | 2.4 |
| **Certification status** | | | | |
| Medicare and Medicaid certified | 2.0 | 2.3 | 2.6 | 3.5 |
| Medicare certified only | 1.3 | 1.5 | 1.5 | 2.2 |
| Medicaid certified only | 1.5 | 1.8 | 2.0 | 2.8 |
| Not federally certified | 1.0 | 1.2 | 1.1 | 1.6 |
| **Facility size** | | | | |
| Fewer than 75 beds | 2.1 | 2.4 | 2.3 | 3.0 |
| 75-124 beds | 1.8 | 2.1 | 3.5 | 4.2 |
| 125-199 beds | 1.1 | 1.1 | 3.1 | 0.8 |
| 200 or more beds | 0.6 | 0.6 | 2.2 | 2.8 |
| **Census region** | | | | |
| Northeast | 1.3 | 1.5 | 2.6 | 3.2 |
| Midwest | 1.7 | 2.1 | 3.0 | 4.0 |
| South | 1.7 | 2.0 | 3.0 | 3.6 |
| West | 1.5 | 1.78 | 2.9 | 3.1 |
| **Metropolitan statistical area (MSA)** | | | | |
| MSA | 2.0 | 2.3 | 3.2 | 4.1 |
| Not MSA | 2.0 | 2.3 | 3.2 | 4.1 |

[a]Includes a small number of nursing homes (less than 1 percent of this category) with an intermediate care unit for the mentally retarded.
[b]Includes continuing care retirement communities and retirement centers that include independent living units, as well as nursing homes that contain unlicensed nursing beds.

**Source:** Center for Cost and Financing Studies, Agency for Health Care Policy and Research: Medical Expenditure Panel Survey Nursing Home Component, 1996 (Round 1).

## Table D. Standard errors for percent distribution of Alzheimer's units in nursing homes, by number of years in operation: United States, 1996
*Corresponds to Figure 1*

| Years in operation | Percent | Standard error |
|---|---|---|
| 1-5 | 55.6 | 4.4 |
| 6-10 | 34.7 | 4.2 |
| 11 or more | 9.7 | 2.3 |

**Source:** Center for Cost and Financing Studies, Agency for Health Care Policy and Research: Medical Expenditure Panel Survey Nursing Home Component, 1996 (Round 1).

## Table E. Standard errors for percent distribution of Alzheimer's units, by number of beds: United States 1996
*Corresponds to Figure 2*

| Number of beds | Percent | Standard error |
|---|---|---|
| 6-15 beds | 15.5 | 3.4 |
| 16-25 beds | 29.0 | 3.9 |
| 26-40 beds | 22.6 | 3.5 |
| 41-60 beds | 24.1 | 3.3 |
| 61 or more beds | 8.9 | 2.1 |

**Source:** Center for Cost and Financing Studies, Agency for Health Care Policy and Research: Medical Expenditure Panel Survey Nursing Home Component, 1996 (Round 1).

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