Nursing Home Use by "Oldest Old" Sharply Declines

Presented by Lisa Alexxih
Vice President

The Lewin Group

National Press Club
November 21, 2006
Nursing Home Use by "Oldest Old" Sharply Declines

Prepared by:
Lisa Alecxih
Vice President, The Lewin Group

November 21, 2006
Nursing Home Use by "Oldest Old" Sharply Declines

In the last two decades, the way we support frail older adults in the United States changed significantly with a large shift away from nursing homes, particularly among the oldest old. Consistent with the expressed desire of most older adults to continue to live in the community, this change in the mix of supports suggests continued change as the baby boom generation begins to need long term care. It also cautions policymakers and providers regarding their assumptions about the demand and supply for long term supports and suggests areas for further research.

The National Nursing Home Survey (NNHS) indicates that the percent of older adults (age 65 and older) in nursing homes declined from 4.2 percent in 1985 to 3.6 percent in 2004 and other data sources suggest the decline continues through today. The use rate among the oldest old (age 85 and older) experienced the greatest decline falling from 21.1 percent in 1985 to 13.9 percent in 2004. If older adults continued to use nursing homes like they did in 1985, 1.95 million older adults would reside in nursing homes today. That would add up to nearly 50 percent more than the 1.32 million actual residents age 65 and over in 2004. While the total number of people age 85 and older nearly doubled over the period, the number of individuals age 85 and over in nursing homes remained about the same.

Percent of Older Individuals in Nursing Homes by Age over Time

Source: 1985 and 2004 National Nursing Home Survey (NNHS), National Center for Health Statistics.
Several factors likely contributed to this decline in the use rate:

- **Healthier and Wealthier Oldest Old** - Age-adjusted disability rates among the elderly declined between 1984 and 1999, although the decline was somewhat less among the oldest old (about 10 percent compared to 20-25 percent for younger elderly).\(^1\) Less disability can mean fewer people in nursing homes. In addition, the poverty rate for individuals age 85 and over dropped by 28 percent, from 18.7 percent in 1985 to 13.4 percent in 2005, while the poverty rate for all persons age 65+ declined from 12.6 percent to 10.1 percent (about a 20 percent decline).\(^2\) People with higher incomes have greater ability to choose preferred services.

- **Changes in the Patterns of Nursing Home Use** – In response to changes in Medicare reimbursement and other forces, nursing homes provide services to people needing two distinct types of services: 1) long-term custodial stays primarily financed by residents’ own resources and Medicaid, the federal-state program for individuals with low income; and 2) a growing number of short-term post-acute rehabilitation stays, primarily financed by Medicare. The focus on post-acute stays and shorter custodial stays resulted in a decline in average length of stay from 2.9 years in 1985 to 2.4 years in 2004, while median length of stay declined from 1.7 years to about 1.3 years.\(^3\)

- **Alternatives to Nursing Homes Continued to Developed** – Over the last decade, alternatives to nursing homes grew substantially: 1) residential facilities, such as assisted living, now boast approximately one million residents with an average age over 80; and 2) more home-based services became available through state funded and Medicaid home and community-based (HCBS) waiver programs targeting those at risk of nursing home entry. Families also continue their large role in providing unpaid care to frail older adults.

- **Increased Availability of Private Long Term Care Insurance** – In the 1980s, the long term care insurance market just had launched and today around 10 percent of adults age 65 and older own a long term care insurance policy.\(^4\) This coverage provides a small group of policyholders the resources to choose where they want to live and receive care.

- **Active Efforts by States** – Many states actively tried to reduce the number of Medicaid recipients in nursing homes by providing more home and community-based services and intervening in critical pathways to nursing homes with pre-admission screening or by establishing single entry point systems (such as Aging and Disability Resource Centers (ADRC)) in order to divert people away from nursing homes.

---

The decline in nursing home use rates recently accelerated, with an absolute decline in older nursing home residents of 10 percent since 1999 – from 1.44 million to 1.32 million. During that period, the federal and state governments launched several significant initiatives, including:

- State-specific initiatives in response to a 1999 Supreme Court ruling, the **Olmstead Decision**, which directed states to provide Medicaid services in the most integrated setting appropriate to the needs of qualified individuals with disabilities. Medicaid pays for a large proportion of long term care services for older adults and has an historical bias to cover institutional care. Medicaid also represents the single largest source of revenue for nursing homes at 43 percent.

- The **National Family Caregiver Support Program**, part of the 2000 Reauthorization of the Older American’s Act, which allows states to provide a continuum of caregiver services that best meet caregivers and individual needs. These may include information, assistance and other services. This support of caregivers can make it possible for individuals with disabilities to remain at home and in the community longer.

- President Bush’s **New Freedom Initiative** and Congressional funding for **Real Choice Systems Change** grants which seek to promote full access to community life for individuals with disabilities. Through these grants, states have been provided seed money and technical assistance to adopt best practices for shifting the balance of their long term care systems away from institutions and toward community living.

The changing nature of the use of nursing homes, the care they provide, and the alternatives older adults now seek out implies that, while the absolute number of nursing home residents will invariably increase as a result of the aging of the baby boom generation, the use rate of nursing homes may continue to decline. The Baby Boom generation will represent twice as many older adults in 2030 as today’s cohort of older adults. However, if the demand for nursing homes continues to decline at just half the rate of the national average over the past 20 years, the use rate among older adults would drop from a projected 3.2 percent to 2.5 percent in 2030. This 0.7 percentage point decline represents a similar level of decline as occurred between 1997 and 2004 and would result in only 320,000 more older nursing home residents rather than 830,000 more in 2030.

While uncertainty surrounds many of the factors that contributed to the recent decline in nursing home use (e.g., future disability rates and income levels among older adults), the baby boomers will likely manifest similar preferences to the current cohort and opt for community-based care, possibly to an even greater extent. In addition, states will continue to have an

---

8 The projected nursing home use rate of 3.2 percent in 2030 based on current age-specific use rates is lower than the 3.6 percent use rate in 2004 because there will be a higher percentage of younger old than older old in 2030.
incentive to shift care to lower cost settings when appropriate. Both will likely contribute to further declines in nursing home use rates.

Table of Contents

Introduction .................................................................................................................................... 1
Nursing Homes Today ..................................................................................................................... 2
Modest Declines in Certified Nursing Home Residents Since 1999 .................................................. 3
Large Declines in the Use of Nursing Homes among the Oldest Old ................................................. 4
Why So Many Fewer Nursing Home Residents? ......................................................................... 4
Changes in the Characteristics and Resources of Older Adults ...................................................... 4
  Declines in Disability Rates ........................................................................................................... 5
  Greater Financial Resources ............................................................................................................ 6
  Continued Support from Family and Friends ................................................................................ 7
  Increased Availability of Private Long Term Care Insurance ......................................................... 7
Changes in the System of Long Term Supports .............................................................................. 8
  Changes in Patterns of Nursing Home Use .................................................................................... 8
  Alternatives to Nursing Homes ..................................................................................................... 9
  Active Effort by States .................................................................................................................. 11
Implications for the Future ............................................................................................................. 12

Appendix A Nursing Home Use By Age Over Time: A Comparison of Data Sources
Acknowledgements

I would like to thank all of the individuals who contributed to this paper. Sophie Shen who helped with the data analysis and the following individuals who provided insightful feedback that contributed to its improvement – Barbara Manard, Ruth Katz, Greg Case, John Wren, Don Grantt, Roger Auerbach, Karen Linkins, Sharon Zeruld, Carrie Blakeway, Steven Lutzky, David Kennell, Nancy Whitelaw, Richard Browdie, Allen Dobson, Mike Fishman, and Patricia McMurray.
INTRODUCTION

A quiet revolution in the manner in which we support our country’s older adults has occurred over the past several decades. Consistent with their expressed preferences, the use rate of nursing homes on any given day for long term custodial stays declined among older adults. While the population age 65 and over increased by 29 percent between 1985 and 2005, according to the National Nursing Home Survey, the number of older adults in nursing homes at a point in time increased only 10 percent. As a result, the use of nursing homes as a long term residence for older adults with disabilities declined 14.1 percent -- from 4.2 percent in 1985 to 3.6 percent in 2004 (Exhibit 1).

In a 1999 Health Affairs article, Christine Bishop asked “Where Are The Missing Elders?” when she examined the decline in nursing home use among adults age 65 and older from 4.6 percent to 4.2 percent between 1985 and 1995. Bishop documented that nursing homes increasingly focused on patients with greater disability and post-acute care needs. Also, preferred alternatives, most notably home delivered care and assisted living, were likely filling the gap left by declining nursing home use. This paper examines how the trends documented by Bishop have continued and further accelerated in recent years and discusses their implications for the future.

Exhibit 1
Nursing Home Use Rate among Individuals Age 65 and Over


2 Christine Bishop (1999) “Where Are The Missing Elders? The Decline In Nursing Home Use, 1985 And 1995” Health Affairs, Vol. 18, No. 4, p. 146-155 found at http://content.healthaffairs.org/cgi/reprint/18/4/146.pdf. Bishop included non-certified facilities in her analysis so that the 1985 use rate for individuals age 65 and older was 4.6 percent rather than the 4.2 percent for certified residents reported here.
Nursing Homes Today

In 2005, the United States had about 16,000 certified nursing homes with 1.68 million beds and 1.4 million residents on any given day and 2.8 million discharges over the course of the year. Nursing homes serve two distinct populations:

- **Short Post-Acute Stays** -- Those who need short-term rehabilitation services to recover from an acute episode, such as a hip fracture, mostly financed by Medicare at higher reimbursement rates.

- **Long Term Custodial Stays** -- Typically frailer, older widows who have traditionally used nursing homes for extended periods because they can no longer care for themselves as a result of chronic conditions such as Alzheimer’s Disease and primarily receive Medicaid financing.

Unlike acute care health services, private health insurance and Medicare do not dominate payments for nursing home care. Medicaid, a joint federal and state safety net program for individuals with low income and assets, provides the single largest source of financing for nursing homes at 43 percent, followed by individual and family resources with 28 percent and Medicare with 14 percent (Exhibit 2). Private health insurance payments, which represent post-acute coverage from traditional health insurance and specialized long term care insurance policies, constitute most of the remainder along with other private and public sources.

Exhibit 2
Sources of Funding for Nursing Homes, 2004

![Exhibit 2](source)

Source: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group.

---


Although Medicaid finances 43 percent of nursing home revenues, 65 percent of nursing home residents at a point in time have Medicaid as their primary payment source. This difference occurs because: 1) Medicaid payment rates tend to be lower than other financing sources so do not contribute as much to nursing home revenue as the number of residents might suggest; and 2) Medicaid requires unmarried nursing home residents to contribute nearly all of their income toward the cost of their care and Medicaid picks up the remainder.

Modest Declines in Certified Nursing Home Residents Since 1999

Following steady increases in the number of nursing home residents since the 1970s, after 1999, the absolute number of total nursing home residents age 65 and older on a given day declined from 1.44 million in 1999 to 1.32 million in 2004 (Exhibit 3). Those age 85 and older accounted for over half of the 122,000 fewer residents. This decrease in age 85 and older nursing home residents occurred despite large increases in the number of individuals age 85 and over – almost one million since 2000. If the use rates from 1985 persisted in 2005, approximately 1.95 million residents age 65 and older would have lived in nursing homes – nearly 50 percent more – and nearly all of them age 75 and older.

While the number of nursing home beds did not keep pace with the increase in the number of older adults, capacity does not appear to be an issue. The number of certified nursing home beds increased 15 percent between 1985 and 2005 (1.46 million to 1.69 million), but the number of residents increased only 10 percent, resulting in occupancy rates, a measure of how many beds are used on a given day, declining from 93 percent to 86 percent over the same period.5

Exhibit 3
Number of Nursing Home Residents by Age for Selected Years


Large Declines in the Use of Nursing Homes among the Oldest Old

Although the oldest old continue to use nursing homes more often than younger age groups, over the last two decades, the use rate among individuals age 85 and older declined by over one third—falling from 21.1 percent in 1985 to 13.9 percent in 2004 (Exhibit 4). Similar to the decline in the absolute number of older adults in nursing homes, declines in the use rates, particularly among those age 85 and over, dropped the most since 1999. Over one-half of the decline in nursing home use rates among those age 85 and over occurred during the past six years. Other data sources report consistent findings and indicate that the trend continued in 2005 (Appendix A).

Exhibit 4
Nursing Home Use Rates by Age for Selected Years

![Nursing Home Use Rates by Age for Selected Years](chart)


WHY SO MANY FEWER NURSING HOME RESIDENTS?

The significant decline in nursing home use rates among individuals age 85 and older likely results from both: 1) changes in the characteristics of older adults; and 2) changes in the system that provides long term supports and services to older frail adults.

Changes in the Characteristics and Resources of Older Adults

Older adults today differ in several significant ways from the generations before them. These changes—including lower disability rates and greater financial resources— affect their use of nursing homes. Also, despite our mobile society, today’s older adults continue to enjoy high levels of support from family and friends.
Declines in Disability Rates

Age-adjusted disability rates among older adults declined between 1984 and 1999 across all age groups (Exhibit 5). Researchers speculate that these improvements may be related to public health measures over the last century (improvements in maternal nutrition and better control of the infectious diseases associated with childhood), the progress in medicine and behavioral science (smoking cessation; improved control and treatment of such diseases as hypertension and heart disease; development and use of new surgical interventions, and the impact of newly developed drugs), and possibly social factors such as increases in education levels. Others point out that the specific nature of the disability declines may reflect improvements in the external environment that make it easier to perform such activities as managing money, shopping, and telephoning, regardless of physical state. For example, with electronic deposits, older adults no longer have to go to the bank to deposit their Social Security check and, if need be, adult children can manage the finances of their parents using online banking.

Exhibit 5
Disability Rates among Individuals Age 65 and Over by Age


---

6 Disability is defined as: (1) requiring human help or special equipment with any of six ADLs (eating, transfer, indoor mobility, dressing, bathing, and toileting), incontinence, or outside mobility; (2) being unable to perform any of eight IADLs (meal preparation, laundry, light housework, grocery shopping, getting around outside, money management, taking medicine, making phone calls) lasting three months or longer; or (3) being an institutional resident.


Greater Financial Resources

Today’s older adults, particularly the oldest old, benefited from the post World War II economic boom to a much greater degree than older adults of 20 years ago. In 1985, individuals age 85 and older were born in 1900 and earlier, lived through the Depression and only began accruing Social Security benefits when they were age 37 or older. Most of today’s oldest old enjoyed peak earning years between the end of World War II through the 1960s. They have also benefited more from indexing of Social Security benefit payments, cost of living adjustments (COLA) that began in 1975 and the creation of the Supplemental Security Income (SSI) programs. While the overall percent of individuals age 65 and over with income less than the poverty threshold declined by 30 percent between 1982 and 2005 (14.6 percent to 10.1 percent), the poverty rates among those age 75 to 84 and 85 and older declined more sharply, 37.1 and 36.6 percent respectively (Exhibit 6). Greater financial resources afford the current elderly the ability to choose preferred services.

Exhibit 6
Elderly Poverty Rates Over Time

**Continued Support from Family and Friends**

Despite more women working and more families living in different parts of the country, family and friends of older adults with disabilities continue to play a critical role in supporting these individuals in the community. Approximately two-thirds of older adults with functional impairments received all or most of the assistance they needed from unpaid caregivers, typically family and friends, while living in the community *(Exhibit 7)*. The proportion supported by unpaid care has remained fairly consistent over the past 20 years.⁹ Congress recognized the need to continue to support family caregivers through the Older Americans Act in 2001 and, starting in 2002, all states received grants to develop or expand family caregiver programs that provide training, support groups and respite from caregiving responsibilities.

**Exhibit 7**

*Distribution of Source of Support among Older Adults with Functional Impairments*

![Distribution of Source of Support among Older Adults with Functional Impairments](image)


**Increased Availability of Private Long Term Care Insurance**

Private long term care insurance provides one of the few available mechanisms for the elderly to protect themselves against the catastrophic costs of long term care. Although long term care insurance currently pays for only a small portion of the total cost of long term care, it could become more important in the future. Insurers began offering long term care insurance widely in the mid-1980s. In order to guard against overexposure to an unknown risk, these early policies had limited benefits and restrictive eligibility criteria. During the 1990s, insurers determined that long term care insurance was viable and now offer more comprehensive policies with greater flexibility.

---

Current long term care insurance policies typically include nursing home and home and community-based care coverage, including assisted living. The purchaser generally can select a daily amount of coverage; the policy will pay benefits up to that limit if the policyholder receives services from a certified provider and meets the insurer’s disability eligibility criteria. Purchasers have the option of automatically increasing the level of coverage over time or buying increased coverage at specified intervals (inflation protection). In some cases, purchasers also have the option to purchase nonforfeiture benefits that return some of the insured’s investment in his or her policy if he or she stops paying premiums (lapses).

Today, around 10 percent of adults age 65 and older own a long term care insurance policy. This coverage provides a small group of policyholders the resources to choose where they want to receive care. Policyholders chose home care and assisted living at a higher rate than those without policies.

**Changes in the System of Long Term Supports**

Over the past 20 years, financing changes, policy changes, and innovation in the private sector and government have fundamentally changed the system of long term supports.

**Changes in Patterns of Nursing Home Use**

In response to changes in Medicare reimbursement for both nursing homes and hospitals, nursing homes increasingly focus on post-acute rehabilitation. The percentage of stays paid for by Medicare increased from 1.5 percent of the total in 1985 to 12.9 percent in 2005. As the absolute number of nursing home residents at a given point in time remained about the same, the number of people using a nursing home at all during the year increased (2.8 million discharges in 2005 compared with 1.2 million in 1985). This greater number of discharges results from generally shorter lengths of stay as a result of more rehabilitation stays. The proportion of current residents with a length of stay less than three months increased 53 percent from 12.7 to 19.4 percent. A greater number of short stays contributed to a decline in average length of stay from 2.9 years in 1985 to 2.4 years in 2004, while median length of stay declined from 1.7 years to about 1.3 years. Even among those using nursing homes for custodial care

---

(longer than three months), the percent staying for five or more years declined from 19.8 percent in 1985 to 14.4 percent in 2004.\(^{14}\)

As the functioning of the overall older population improved, those in nursing homes for long term stays became frailer and more likely to suffer from cognitive impairment. The percent of residents needing assistance with five or six activities of daily living (such as eating, bathing, dressing, toileting, getting in and out of bed, and transferring) increased from one-half to almost two-thirds between 1985 and 2004 (Exhibit 8). The combination of greater frailty and post-acute stays results in nursing homes serving individuals with higher acuity and more complex medical needs.

**Exhibit 8**

Distribution of Nursing Home Residents Needing Assistance with Activities of Daily Living, 1985 and 2004

![Chart showing the distribution of nursing home residents needing assistance with activities of daily living in 1985 and 2004.](chart)


**Alternatives to Nursing Homes**

During the past 10 to 20 years, more alternatives to nursing homes have developed, including home-based services and residential facilities such as assisted living. Today, about one million older adults live in places other than their individual family homes that provide a range of services, including supervision, supportive services, health related services, social services,
recreational activities, meals, housekeeping, laundry, and transportation services. Some of these places are facilities run by corporations while others are private residences providing support to a few people in their home. Many have specialized units for Alzheimer’s residents.

The age distribution of those in alternative residential facilities mirrors nursing homes, both with an average age around 83, while the level of impairment tends to be less in alternative residential facilities. In many cases, alternative residential facilities appear to provide a substitute for individuals who might have used nursing home care 20 years ago (Exhibit 9). However, these populations are not likely to be completely comparable because 11 percent of those in alternative residential facilities\textsuperscript{15} and 39 percent of those in alternative residential community settings\textsuperscript{16} had no functional impairment.\textsuperscript{17} Another important distinction between nursing homes and alternative residential facilities surfaces with the primary revenue source -- Medicaid constitutes the dominant payment source for nursing homes while private resources provide the main source of revenue for alternative residential facilities.

![Exhibit 9](image)

**Exhibit 9**
Use Rates of Residential Settings, 1985 and 2004


\textsuperscript{15} The Medicare Current Beneficiary Survey defines alternative residential facilities as having supervision 24 hours per day, seven days per week.

\textsuperscript{16} Spillman and Black defined alternative residential community settings as those that were not designated facilities and offered assistance with meals, housekeeping or laundry, and medication.

**Active Effort by States**

Many states use pre-admission screening programs and coordination with hospital discharge planners through single entry point systems, such as Aging and Disability Resource Centers, in order to divert people away from nursing homes and reduce the number of Medicaid nursing home residents. They have also instituted programs to transition individuals who had been in nursing homes for extended stays back to the community. Some states also eliminated wait lists for Medicaid home and community-based services (HCBS) by expanding their programs. Others moved from a first-come first-serve wait list policy to a policy that triages individuals based on the immediacy with which they might enter a nursing home. States have begun to offer cash-based benefits to Medicaid participants designed to give them more choice to meet their care needs in the community. Finally, many states also provide home and community-based care to individuals with income above Medicaid eligibility limits in an effort to prevent or delay nursing home entry and possible Medicaid spenddown.

In recent years, states have steadily shifted the balance of long term care spending from nursing homes to residential alternatives, such as home and community settings. In 1981, Congress authorized the Medicaid home and community-based services (HCBS) waiver programs, which allowed states to offer services in the community to individuals who might otherwise need to be in an institution, as long as it would not cost more. Participants in Medicaid waivers for older adults or younger adults with physical disabilities more than tripled between 1992 and 2002, going from 167,000 to 537,000, while the number of people in nursing homes using Medicaid services declined in absolute terms.\(^\text{18}\) These shifts affected the proportion of Medicaid long term care spending devoted to home and community-based care services for older adults and those with physical disabilities to increase from less than 10 percent in the 1980s to 23 percent in 2005, with much of the increase since 2000 (Exhibit 10).\(^\text{19}\)

---

\(^{18}\) CMS Form 372 reported waiver recipients provided by CMS and American Health Care Association tabulations of OSCAR data and Cowles, M. Nursing Home Statistics Yearbook.

Exhibit 10
Medicaid Long Term Care Spending for the Elderly and Younger Individuals with Disabilities

IMPLICATIONS FOR THE FUTURE

The changing nature of the use of nursing homes, the care they provide, and the alternatives older adults now seek out implies that, while the number of nursing home residents will invariably increase as a result of the aging of the baby boom generation, the use rate of nursing homes may continue to decline. While uncertainty surrounds future disability rates and income levels among older adults, the baby boomers will likely manifest similar preferences to the current cohort and opt for community-based care, possibly to an even greater extent. In addition, states will continue to have an incentive to shift care to lower cost settings when appropriate.

The baby boom generation will represent twice as many older adults in 2030 as today’s cohort of older adults. However, if the demand for nursing homes continues to decline at just half the rate of the national average over the past 20 years, the use rate among older adults would drop from a projected 3.2 percent to 2.5 percent in 2030.20 This 0.7 percentage point decline represents a similar level of decline as occurred between 1997 and 2004 and would result in only 320,000 more older nursing home residents rather than 830,000 more in 2030.

---

20 The projected nursing home use rate of 3.2 percent in 2030 based on current age-specific use rates is lower than the 3.6 percent use rate in 2004 because there will be a higher percentage of younger old than older old in 2030.
A continued decline seems feasible given the wide variation in the use of nursing homes across the country today. An examination of total nursing home residents per 100 elderly by state indicates that on average in 2005, 4.0 residents per 100 individuals age 65 and older lived in a nursing home, but it ranges from 1.48 in Alaska to 6.42 in North Dakota (Exhibit 11). Even states with already low nursing home use continue to reduce their census even further. Oregon, which in 1995 was among the top ten states with the lowest nursing home residents per 100 population age 65+, also had the greatest percentage decline in the country between 1995 and 2005 going from 2.74 to 1.79 residents per 100 elderly (a 35 percent decline). In 2005, 42 states and the District of Columbia had nursing home residents per 100 population age 65+ above Oregon’s 1995 level of 2.74.

Exhibit 11
Nursing Facility Residents per 100 Individuals Age 65+, 2005

These findings call for further research to better understand: 1) the variation in the use of nursing homes across states; 2) how nursing homes continue to adapt to their changing environment; 3) who is being served and the care that is provided to individuals in alternative residential settings, such as assisted living; 4) the role of family caregivers in supporting frail older adults remaining in the community given changing demographics, greater labor force participation of women and mobility; and 5) states’ efforts to keep individuals with disabilities in the community and their cost implications.
Appendix A
Nursing Home Use By Age Over Time:
A Comparison of Data Sources

Compiling nursing home current resident estimates from alternative sources, both census and survey estimates, indicates a consistent decline in the number of nursing home current residents (see Exhibit A-1 on next page). However, the point at which the decline began differs based on the alternative data sources. Online Survey and Certification Reporting (OSCAR) data show a decline in residents after 1998 while the Medicare Current Beneficiary Survey (MCBS) data began a decline after 1996. The National Nursing Home Survey (NNHS) data continued to increase through 1999, but shows a clear decline in 2004.

Focusing on the absolute levels of the estimates, the OSCAR estimates fall between the NNHS and the MDS estimates. The difference between the NNHS and the OSCAR data was the greatest in 1999, but narrowed in 2004. Exhibit A-2 summarizes the key features and notable aspects of the data sources.

Exhibit A-3 presents estimates of the proportion of individuals age 65 and older using nursing homes for the data sources that provide information by age. Among these data sources, the MCBS and NNHS data appear to be consistent in both the level and trend in the estimates after 1996 when the MCBS changed the definition of institutions. The Minimum Data Set (MDS) data provide estimates slightly lower than the MCBS and NNHS data.
Exhibit A-1
Estimates of Nursing Home Current Residents

Note: All estimates, with the exception of the 1987 National Medical Expenditure Survey (NMES) and 1996 Medical Expenditure Panel Survey (MEPS) and the 1984-1989 National Long Term Care Survey (NLTCS), include residents of certified nursing facilities.
### Exhibit A-2
Data Sources for Estimates of Nursing Home Current Residents

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Sample/Universe</th>
<th>Number of Resident Observations</th>
<th>By Age?</th>
<th>Year of Peak # of Residents</th>
<th>Other Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>NNHS</td>
<td>Sample of facilities and residents; in 2004 only includes certified facilities, but certified facilities can be identified in prior years</td>
<td>5,200-8,200</td>
<td>Yes</td>
<td>1999</td>
<td>Weighting methodology may be an important consideration</td>
</tr>
<tr>
<td>MDS</td>
<td>Universe based on individual assessment</td>
<td>~1.4M</td>
<td>Yes</td>
<td>Not available prior to 2002</td>
<td>Reliability of reporting by nursing homes questioned</td>
</tr>
<tr>
<td>OSCAR</td>
<td>Universe reported by facilities</td>
<td>1.4-1.5M</td>
<td>No</td>
<td>1998</td>
<td>Consistently slightly higher than MDS</td>
</tr>
<tr>
<td>MCBS</td>
<td>Sample of Medicare beneficiaries</td>
<td>~1,300</td>
<td>Yes</td>
<td>1996?</td>
<td>Methods changed between 1995 and 1996</td>
</tr>
<tr>
<td>NLTCS</td>
<td>Sample of Medicare beneficiaries age 65+</td>
<td>~1,300</td>
<td>Yes, only age 65+</td>
<td>Trend data inconsistent</td>
<td>Estimates before 1999 include all institutions, not just certified NFs; Awaiting 2004 weights</td>
</tr>
<tr>
<td>NMES &amp; MEPS</td>
<td>Sample of facilities and residents</td>
<td>~5,900</td>
<td>Yes</td>
<td>Only two points</td>
<td>1996 MEPS consistent with NNHS</td>
</tr>
</tbody>
</table>

**National Nursing Home Survey (NNHS)** -- a continuing series of national sample surveys of nursing homes, their residents, and their staff. Nursing home surveys have been conducted in 1973-74, 1977, 1985, 1995, 1997, 1999, and 2004. The sample size varies by year -- for facilities between 1,000 and 1,500 and for the residents sampled in these facilities, it varied between 5,200 and 8,200 for most of the years.

**CMS MDS Active Resident data** -- includes only residents in Medicare and/or Medicaid certified nursing homes whose most recent assessment transaction is not a discharge and whose most recent transaction has a target date less than 180 days old.²⁹ If a resident has not had a transaction for 180 days, then that resident is assumed to have been discharged. This should be equivalent to a census of the universe, not a sample. The MDS data are reported since the fourth quarter of 2002.

Exhibit A-3
Estimates of the Use of Nursing Homes by Individuals Age 65 and Over at a Point in Time

<table>
<thead>
<tr>
<th>Year</th>
<th>NNHS (Certified)</th>
<th>MCBS</th>
<th>NLTCS</th>
<th>MDS</th>
<th>NMES &amp; MEPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1984</td>
<td>4.2%</td>
<td>4.5%</td>
<td>5.0%</td>
<td>4.2%</td>
<td>4.2%</td>
</tr>
<tr>
<td>1985</td>
<td>4.1%</td>
<td>4.5%</td>
<td>4.9%</td>
<td>4.4%</td>
<td>4.2%</td>
</tr>
<tr>
<td>1986</td>
<td>5.5%</td>
<td>3.7%</td>
<td>4.1%</td>
<td>4.4%</td>
<td>4.2%</td>
</tr>
<tr>
<td>1987</td>
<td>4.2%</td>
<td>4.1%</td>
<td>3.7%</td>
<td>4.2%</td>
<td>4.1%</td>
</tr>
<tr>
<td>1988</td>
<td>4.5%</td>
<td>4.4%</td>
<td>3.5%</td>
<td>3.4%</td>
<td>4.5%</td>
</tr>
<tr>
<td>1989</td>
<td>4.4%</td>
<td>4.2%</td>
<td>4.5%</td>
<td>4.1%</td>
<td>4.1%</td>
</tr>
<tr>
<td>1990</td>
<td>4.2%</td>
<td>4.1%</td>
<td>4.1%</td>
<td>4.2%</td>
<td>4.1%</td>
</tr>
<tr>
<td>1991</td>
<td>4.1%</td>
<td>4.2%</td>
<td>4.2%</td>
<td>4.1%</td>
<td>3.7%</td>
</tr>
<tr>
<td>1992</td>
<td>4.4%</td>
<td>4.1%</td>
<td>3.7%</td>
<td>3.8%</td>
<td>3.6%</td>
</tr>
<tr>
<td>1993</td>
<td>4.2%</td>
<td>4.1%</td>
<td>3.7%</td>
<td>3.6%</td>
<td>3.5%</td>
</tr>
<tr>
<td>1994</td>
<td>4.1%</td>
<td>4.1%</td>
<td>3.7%</td>
<td>3.5%</td>
<td>3.4%</td>
</tr>
<tr>
<td>1995</td>
<td>4.1%</td>
<td>4.1%</td>
<td>3.7%</td>
<td>3.5%</td>
<td>3.4%</td>
</tr>
<tr>
<td>1996</td>
<td>3.7%</td>
<td>3.6%</td>
<td>3.4%</td>
<td>3.3%</td>
<td>3.3%</td>
</tr>
<tr>
<td>1997</td>
<td>3.8%</td>
<td>3.6%</td>
<td>3.5%</td>
<td>3.3%</td>
<td>3.3%</td>
</tr>
<tr>
<td>1998</td>
<td>3.6%</td>
<td>3.5%</td>
<td>3.4%</td>
<td>3.3%</td>
<td>3.3%</td>
</tr>
<tr>
<td>1999</td>
<td>3.6%</td>
<td>3.5%</td>
<td>3.4%</td>
<td>3.3%</td>
<td>3.3%</td>
</tr>
<tr>
<td>2000</td>
<td>3.6%</td>
<td>3.5%</td>
<td>3.4%</td>
<td>3.3%</td>
<td>3.3%</td>
</tr>
<tr>
<td>2001</td>
<td>3.6%</td>
<td>3.5%</td>
<td>3.4%</td>
<td>3.3%</td>
<td>3.3%</td>
</tr>
<tr>
<td>2002</td>
<td>3.6%</td>
<td>3.5%</td>
<td>3.4%</td>
<td>3.3%</td>
<td>3.3%</td>
</tr>
<tr>
<td>2003</td>
<td>3.6%</td>
<td>3.5%</td>
<td>3.4%</td>
<td>3.3%</td>
<td>3.3%</td>
</tr>
<tr>
<td>2004</td>
<td>3.6%</td>
<td>3.5%</td>
<td>3.4%</td>
<td>3.3%</td>
<td>3.3%</td>
</tr>
<tr>
<td>2005</td>
<td>3.6%</td>
<td>3.5%</td>
<td>3.4%</td>
<td>3.3%</td>
<td>3.3%</td>
</tr>
<tr>
<td>2006</td>
<td>3.6%</td>
<td>3.5%</td>
<td>3.4%</td>
<td>3.3%</td>
<td>3.3%</td>
</tr>
</tbody>
</table>
All of the data sources that permit estimates by age reveal declining trends, particularly for those age 85 and older (Exhibit A-4). In comparing the NNHS estimates to the MDS estimates for 2004, the proportion age 65-74 and 75-84 using nursing homes were very similar. Among individuals age 85 an older, the NNHS estimate was slightly higher than the MDS estimate—13.9 percent versus 12.4 percent. This difference is similar to the difference between the NNHS and the NLTCS in 1999.

Exhibit A-4
Nursing Home Use Rates by Age for Selected Years and Data Sources

The decline in the number of nursing home residents at a point in time reflects a change in the use of nursing homes. While the number of individuals using nursing homes at any point during the course of the year has remained steady, the number at a point in time declined slightly during the 2000 to 2004 period (Exhibit A-5). The length of stay for current nursing home users has declined approximated one-half a year on average—from 2.9 years on average in 1985 to 2.4 years on 2004. The largest shift among current users occurred for those with the shortest and longest stays. The proportion with stays less than three months increased from 12.7 percent in 1985 to 20.0 percent in 2004, while those with stays exceeding five years declined from 17.3 percent to 12.0 percent (Exhibit A-6). Subsetting on longer custodial stays lasting three months or more also shows a general shift to shorter stays (Exhibit A-7).
Exhibit A-5
Trends in Nursing Home Use at Anytime During the Year and at Point in Time

http://www.cms.hhs.gov/CertificationandComplianc/12_NHs.asp

Exhibit A-6
Discharges and Current Residents by Length of Stay, 1985 and 1999

Exhibit A-7
Current Residents with Stays Longer than Three Months by Length of Stay, 1985 and 1999

<table>
<thead>
<tr>
<th></th>
<th>1985 Age 65+</th>
<th>2004 Age 65+</th>
<th>1985 Age 85+</th>
<th>2004 Age 85+</th>
</tr>
</thead>
<tbody>
<tr>
<td>5+ years</td>
<td>19.8%</td>
<td>14.4%</td>
<td>22.0%</td>
<td>15.8%</td>
</tr>
<tr>
<td>3-5 years</td>
<td>16.0%</td>
<td>17.0%</td>
<td>17.0%</td>
<td>17.8%</td>
</tr>
<tr>
<td>1-3 years</td>
<td>37.2%</td>
<td>38.5%</td>
<td>36.8%</td>
<td>39.1%</td>
</tr>
<tr>
<td>6-12 months</td>
<td>16.4%</td>
<td>17.7%</td>
<td>14.9%</td>
<td>16.3%</td>
</tr>
<tr>
<td>3-6 months</td>
<td>10.3%</td>
<td>12.3%</td>
<td>9.3%</td>
<td>11.0%</td>
</tr>
<tr>
<td>3-6 months</td>
<td>10.3%</td>
<td>12.3%</td>
<td>9.3%</td>
<td>11.0%</td>
</tr>
</tbody>
</table>


Data Sources

National Nursing Home Survey (NNHS)


National Long Term Care Survey (NLTCS)


Medicare Current Beneficiary Survey (MCBS)


1987 National Medical Expenditure Survey (NMES) and 1996 Medical Expenditure Panel Survey (MEPS)


Online Survey and Certification Reporting (OSCAR)


Minimum Data Set (MDS)