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Why Are Nursing Home Utilization Rates Declining?

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Why Are Nursing Home Utilization Rates Declining?

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Executive Summary

One strategy to create a more balanced long-term care delivery system is to reduce the use of institutional services, including nursing homes. Nursing home use has been declining since the mid-1980s, but few analyses have been conducted to determine the reasons for this change. In this study, RTI used a wide variety of administrative data to graphically analyze the factors associated with this decline. We used data at the state level and created graphs for a single year (generally 2007) and for changes over time (generally 1997 to 2007). To add a qualitative dimension to the analyses, we held discussions with state experts on long-term care. The analyses presented in this report are descriptive, and causation cannot be attributed to the factors being analyzed.

Our main findings are as follows:

- Nursing home beds, residents, and Medicaid residents per 1,000 people aged 75 and older declined substantially over the decade. The number of nursing home residents per 1,000 people aged 75 and older fell by 19.9 percent between 1997 and 2007.

- Nursing home use is related to various demographic variables other than age. States with a higher proportion of older people below the federal poverty level had greater numbers of nursing home residents per 1,000 people aged 75 and older. States with high levels of older people living in rural areas had higher levels of nursing home residents per 1,000 older people.

- The principal strategy that states use to reduce nursing home use is to expand home and community-based services (HCBS). Our results on the effect of home and community-based services on nursing home residents per 1,000 people aged 75 and older are mixed. Examining a single year, 2007, states with higher levels of HCBS spending (principally Medicaid) and higher proportions of total Medicaid long-term care expenditures for home and community-based services were associated with lower nursing home use. Examining the change in Medicaid HCBS spending between 1997 and 2007, however, shows little effect on the number of nursing home residents per 1,000 people aged 75 and older. An extension of the research by Kaye, LaPlante, and Harrington (2009), which grouped states into high established HCBS, high expanding HCBS, and low HCBS categories, found no difference in the decline in nursing home use rates over the period 1997 to 2007.

- It is widely believed that the expansion of residential care facilities, including assisted living facilities, diverted a substantial portion of people who would otherwise have gone to nursing homes. For 2007, our analysis shows that states with a higher supply of residential care facility beds tended to have lower numbers of nursing home residents per 1,000 people aged 75 and older. However, this finding does not hold up when examining the changes over the 1997 to 2007 period. Moreover, categorizing the states into high, medium, and low groups according to their residential care facility bed supply and tracking their nursing home resident use over time shows little difference in the decline in use rates among the three groups.

- A major shift in focus has taken place among nursing homes over the past 15 years from long-term care toward post-acute care covered by Medicare. As facilities focus on short-term skilled care and rehabilitation, there may be a spillover to the long-
term care population. As the proportion of nursing home residents covered by Medicare in a state increases, the number of nursing home residents per 1,000 people aged 75 and older declines. Between 1997 and 2007, as the percent increase in the proportion of nursing home residents who were covered by Medicare increased, so did the percent decrease in the number of nursing home residents per 1,000 people aged 75 and older.

In conclusion, an important component of balancing the long-term care system is controlling nursing home use. Nursing home use has fallen substantially in recent years, but little research has been done to analyze the reasons for this decline. Although the analytic techniques used here are only descriptive and suggestive, our study finds mixed evidence for the effect of expanding home and community-based services and residential care facilities on nursing home use as measured by the number of nursing home residents per 1,000 people aged 75 and older. Only the increased use of Medicare skilled nursing facility benefit had a consistently negative effect on nursing home use, both for a single year and examining changes over time. These results suggest that states may need to more than just expand home and community-based services and residential care if they want to reduce nursing home use. The findings also suggest that state and federal policy makers may wish to think more broadly about the interactions between Medicare and Medicaid in determining nursing home use.
Section 1. Introduction

One of the key goals of federal and most states’ long-term care policy is to increase the use of home and community-based services (HCBS) and to reduce reliance on institutional care (Wiener & Anderson, 2009). The overall goal is to create a “balanced” long-term care financing and delivery system. However, for older people and younger adults with disabilities, most of the initiatives focus on increasing the use of home and community-based services rather than on finding specific ways to reduce use of nursing homes. Nursing facility transition programs and the Money Follows the Person initiatives are exceptions to this observation (Anderson, Wiener, & O’Keeffe, 2006).

Although it is not widely known, the use of nursing homes as measured by the number of residents in facilities on a single day has declined substantially over the past two decades. The use of short-term post-acute care in nursing homes has grown dramatically, but the number of nursing home residents on an average day has not changed in many years, despite an increasing number of older people. Nursing home residents were 4.2 percent of the population aged 65 and older in 1985 but fell to 3.6 percent of the population aged 65 and older in 2004, a drop of one-seventh (Alecxih, 2006). The decline was especially steep between 1999 and 2004. Despite a larger number of older people, the absolute number of elderly nursing home residents was quite flat between 1995 and 2004, at about 1.3 million residents. Surprisingly, the biggest decline in the nursing home use rate has been among the 85 and older population.

Despite the centrality of this issue for balancing efforts, there has been no systematic effort to examine the reasons for this decline over time in nursing home use per 1,000 older people. This report begins to fill the gap by conducting descriptive analyses of factors associated with the decline in nursing home residents, Medicaid nursing home residents, and nursing home beds. Factors analyzed include sociodemographic characteristics, expansion of home and community-based services, increased use of residential care facilities, and increased use of Medicare-covered post-acute care. In most cases, we are able to extend the analyses to 2007.
Section 2. Methodology

RTI conducted two types of research activities to understand the change in the nursing home use rate between 1997 and 2007. The first activity involved analyzing state-level secondary data on nursing home use over time and factors that may have contributed to a change in the nursing home use rate, such as public expenditures for home and community-based services and demographic changes. Section 3 presents these results in graphs that display the relationships between these factors. The second activity involved conducting interviews with state policy officials in nine states that had varying rates of change in nursing home use over the research period to gain their insights on potential reasons for changes in their states.

Quantitative Analysis

We performed descriptive analyses using secondary data on nursing home use, expenditures, number of service users, service supply and demand, and other factors. Our focus was on older people and younger adults with physical disabilities; we did not include data on people with intellectual disabilities.

We created measures from these secondary data to present graphs on nursing home use for single years and over time. Graphs with data for one year, usually 2007, address the relationship between the policy variable being analyzed (e.g., number of residential care facility beds per 1,000 people aged 75 and older) and the outcome variable (number of nursing home residents per 1,000 people aged 75 and over) at a single point in time. In these graphs, each data point represents a state.

Like all cross-sectional analyses, our findings are limited in that the causal relationship among the variables is not certain. For example, does a state having a high residential care bed supply and a low nursing home resident use have the low nursing home use because of substitution of residential care for nursing home care? Or is there some other unique characteristic about the state that makes the relationship not replicable by other states? Put another way, is there something unique about the states of Washington and Oregon that makes replication of their experience by other states extremely difficult? Because of these limitations, we also examined changes over time to assess whether states that changed their long-term care system during the time period (e.g., substantially increased the supply of residential care facility beds per 1,000 people aged 75 and older) had a different level of change in the number of nursing home residents per 1,000 people than states that did not change their long-term care system in that way (e.g., increased their supply of residential care beds only slightly).
Data

RTI collected a diverse range of secondary data. These data usually spanned the years 1997 to 2007, though some data were not available for all 11 years of the research period. See Appendix A for the complete list of data sources.

We conducted all analyses at the state level. In some cases, we also present the data for the nation as a whole for comparison purposes. In this way, it is possible to assess how far from the national average a given state appears on a particular measure.

To make the measures comparable across states with varying sized populations, we standardized (divided) the measures of expenditures or numbers of service users by the number of 1,000 people aged 75 and older, the population which accounts for over three-quarters of nursing home residents (Jones et al., 2009). Because the nursing home population is heavily weighted toward the older population, standardizing by the general population is inappropriate. For example, if a state had 60,000 nursing home residents and 300,000 people aged 75 and older in a given year, we divided 60,000 by 300, which yields 200 nursing home residents per 1,000 people aged 75 and older. By dividing nursing home residents (or beds) by the population at risk, a nursing home use “rate” is generated, which provides a means for making an “apples to apples” comparison across states.

To focus our analyses on older people and younger adults with physical disabilities, we excluded disabled persons in intermediate care facilities for persons with mental retardation/developmental disabilities and excluded home and community-based services for persons with intellectual disabilities. Although persons with intellectual disabilities are also at risk for nursing home use, a very small minority of these persons reside in nursing homes. In 2004, only 0.7 percent of nursing home residents had a diagnosis of mental retardation (Jones et al., 2009).

Analyses

We conducted three types of analyses—cross-sectional analyses for a single year, percent change over time, and groupings of states over time—and present this information in graphs in Section 3. These graphs are plotted using an X-axis versus Y-axis orientation and usually contain 51 data points (the 50 states plus the District of Columbia), with a “regression line.” The regression line denotes the line running through the data that minimizes the distance between the line and all of the data points taken as a whole. Because only two characteristics are being compared in these graphs, the line is best interpreted as the “correlation” between the two measures presented. The line does not imply causality or indicate the strength of effect of the measure of the X-axis variable on the Y-axis variable.

- In cross-sectional analyses, two measures in the same year are graphed against each other (e.g., graph of percent of 2007 long-term care expenditures spent on
home and community-based services on the X-axis vs. 2007 nursing home residents per 1,000 people aged 75 and older on the Y-axis). We performed these analyses to assess the relationship between the factor on the X-axis and the factor being affected on the Y-axis. A horizontal (“flat”) line indicates that the two factors are not related. Lines with increasingly higher vertical slopes indicate a stronger relationship between the two factors.

▪ Although not discussed here, we also graphed prior year data for a measure on the X-axis (e.g., year 2004 percent of long-term care expenditures spent on home and community-based services vs. 2007 nursing home residents per 1,000 people aged 75 and older) to see if a change in a variable such as HCBS expenditures takes a few years to result in a change in nursing home use. These “lagged” analyses did not differ from the analyses of measures in the same year.

▪ In percent change over time analyses (e.g., percent change between 1997 and 2007 in Medicaid HCBS expenditures per 1,000 people aged 75 and older on the X-axis vs. percent change between 1997 and 2007 in nursing home residents per 1,000 people aged 75 and older on the Y-axis), the graphs have a single regression line portraying the relationship between the two measures. These analyses reduce the influence of a single year in the data and show the overall trend over an approximate 10-year period. Each of the state data points in the graph represents the change in the X-axis causal factor over time, compared with the change in the Y-axis factor being affected over time. The resulting regression line represents the relationship between the two factors across all states. Again, a horizontal line indicates that the two factors are not related using this technique. Lines with increasingly higher vertical slopes indicate a stronger relationship between the two factors.

▪ In grouping states on a given measure over time, the graphs have lines representing each set of states, along with an additional line representing the national average on the measure for reference. These graphs were done in two ways:
  – First, these graphs disaggregate the potential causal effect across 50 states into three different state groups, which differ in terms of the relative size (usually “high,” “medium,” and “low” states) of the effect in the first year in the graph. For example, the growth of residential care beds over time differs across states. The third of states where this growth was the highest in the first year of the graph are grouped together and presented using a single line so that the effect on nursing home use, compared with similar lines for the medium-growth and low-growth states, can be assessed. In this way, it is possible to assess whether the experience of high states is different from that of low states in terms of nursing home use rates over time.
  – Second, we follow the groupings in a recent article by Kaye and colleagues (2009), which analyzed the effect of Medicaid HCBS expenditures on total Medicaid long-term care expenditures. This article has sparked a great deal of interest among long-term care policy analysts, and we extend their analyses to nursing home use.

We analyzed the following policy and demographic variables (X-axis of graph):

▪ Various demographic variables, such as percent of population that is urban/rural, poverty rate among older people, and elderly median income. Urban areas with more choice in care setting, lower poverty rates, and high elderly median income may result in lower nursing home use rates.
Why Are Nursing Home Utilization Rates Declining?

- Medicaid HCBS spending per 1,000 people aged 75 and older. Medicaid HCBS spending includes HCBS waiver, state plan personal care, and home health services but excludes waiver services for individuals with mental retardation or developmental disabilities and individuals with mental illness. Higher HCBS spending across states may result in lower nursing home use across states as more persons are served in the community.

- Medicaid HCBS participants. Increasing numbers of these participants may result in decreasing nursing home use.

- Percent of Medicaid long-term care expenditures for home and community-based services. Increasing proportions of state budgets for home and community-based services may result in lower nursing home use rates.

- Percent of nursing home residents who are Medicare residents. Increasing proportions of residents whose care is reimbursed by Medicare may result in decreasing nursing home use as the proportion of Medicaid residents drops, assuming the proportion of private-pay beds remains constant.

- Number of residential care facility beds per 1,000 people aged 75 and older. Increasing residential care bed supply may result in a lower nursing home use rate as persons with lesser frailty are served in residential care settings.

We analyzed the following nursing home variables (Y-axis of graph):

- Total nursing home residents per 1,000 people aged 75 and older. Some causal factors may have an effect on nursing home use regardless of payer type for nursing home care.

- Medicaid nursing home residents per 1,000 people aged 75 and older. Although this measure may be more sensitive to causal factors relating to Medicaid policy, it may be less sensitive to non-Medicaid causal factors.

- Nursing home beds per 1,000 people aged 75 and older. This measure reflecting the “built” supply is the broadest measure but may not be sensitive to some causal factors; nursing homes may keep beds open even if the number of residents in a facility falls.

For simplicity of presentation, Section 3 contains only the graphs for total nursing home residents per 1,000 people aged 75 and older. Our analyses found nearly identical relationships for the other two nursing home variables (nursing home beds and Medicaid nursing home residents), and these graphs are presented in Appendix B with corresponding exhibit numbers.

To interpret the graphed line, one first makes a statement about the change in the variable on the X-axis being graphed, followed by a statement about the associated change in the variable on the Y-axis. To make the graphs in Section 3 easy to understand, we present a single sentence describing the relationship between the two variables being analyzed.

For example, in Exhibit 2-1, regarding the percentage of residents who were Medicare beneficiaries and nursing home residents in year 2007, the right-hand side of the line points downward, so the graph may be interpreted as follows: “States that had higher proportions
of nursing home residents who were Medicare beneficiaries had a lower ratio of nursing home residents per 1,000 people aged 75 and older.”

**Exhibit 2-1. Nursing Home Residents per 1,000 People Aged 75 and Older by Percent of Nursing Home Residents Who Are Medicare Beneficiaries, 2007**

Note: States that had higher proportions of nursing home residents who were Medicare beneficiaries had a lower ratio of nursing home residents per 1,000 people aged 75 and older.

In some graphs, we truncated data points for one or two states whose values were either very high or very low compared with all other states. Doing so prevented the regression line from being unduly influenced for these outlier values and allowed for a regression line more representative of all remaining states. For example, Medicaid HCBS expenditures per 1,000 resident people aged 75 and older for Alaska were over $7 million, but the next highest values for this measure were approximately $3 million. To reduce the influence of Alaska’s value on the regression line, we limited (truncated) the value for Alaska to $3 million.

**Qualitative Analysis**

To gain greater insight into the dynamics causing the decline in nursing home use, we conducted telephone interviews with state officials in eight states: Alabama, Kentucky, Minnesota, New Mexico, Ohio, Oklahoma, Pennsylvania, and Wisconsin. We chose these states because of their relative decrease in nursing home use over time and their progress toward balancing Medicaid long-term care expenditures over time. Minnesota, New Mexico, and Wisconsin are representative of three innovative HCBS states that have had a large reduction in nursing home use over the research period. Alabama and Oklahoma are representative of more traditional states that had also experienced a large reduction in
nursing home use over the research period. Finally, Kentucky, Ohio, and Pennsylvania are representative of states that had a reduction in nursing home use that was substantially below the national average (or even an increase in nursing home use on a per 1,000 people aged 75 and older basis) over the research period.

We developed a discussion guide for use across these states. Each discussion guide contained a graph and table denoting that state’s respective change in the nursing home use rate over the research period and asking for the state’s perspective about the change over time. Then, each discussion guide contained the same questions concerning the degree to which demographic changes, Medicaid policies, non-Medicaid policies, and long-term care infrastructure changes over the research period may explain the state’s change in its nursing home use rate. Appendix C presents a sample discussion guide.

We sent the discussion guide to state interviewees in advance so they could review the questions to be asked in the telephone interview and think about their potential response. After completion of the interview, we sent our interview notes to the state officials for review and comment. The resulting documents became our final findings from these interviews.

We present selected results from these interviews throughout this report where appropriate. However, respondents usually were not able to identify specific causes for the observed decrease in nursing home use in their states, most often giving a history of state initiatives in long-term care.
Section 3. Results

Overall Trends in Nursing Home Use

Between 1997 and 2007, the number of people aged 75 and older, the population with the highest risk of nursing home use, grew from 15.6 million to 18.5 million, an increase of 18.6 percent (U.S. Census Bureau, 2008). Over the same period, the number of current residents in nursing homes decreased slightly, from 1.5 million to 1.4 million (American Health Care Association, 1997, 2007). As a result, the rate of nursing home use per 1,000 people aged 75 and older has declined substantially, from 96.20 residents per 1,000 aged 75 and older in 1997 to 77.06 residents per 1,000 aged 75 and older in 2007, a 19.9 percent decline. This trend is illustrated in Exhibit 3-1.

Exhibit 3-1. U.S. Nursing Home Residents per 1,000 People Aged 75 and Older, 1997–2007

![Graph showing the decline in nursing home residents per 1,000 aged 75 and older from 1997 to 2007.]

Note: The ratio of nursing home residents per 1,000 people aged 75 and older in the United States declined substantially between 1997 and 2007.

Among the states we interviewed, reasons commonly cited for a decline in nursing home utilization were as follows:

- the desire of older persons to remain in the community
- the expansion of Medicaid home and community-based services waivers
- state policies designed to manage the number of nursing home beds
- an increase in privately funded assisted living
- an increased emphasis by the nursing home industry toward post-acute care rather than long-term care
As the nursing home bed supply tightens, policy makers have historically been concerned that a reduced number of nursing home beds will result in increased waiting lists and that nursing homes will seek to maximize profit by admitting lighter care residents, leaving “heavy care” residents without services (Wiener, Stevenson, & Goldenson, 1999). Unlike hospitals, nursing homes have few emergency admissions and carefully screen whom they admit, balancing care needs, facility resources, and payment sources. This concern does not appear to be valid. States with fewer nursing home residents relative to the population served a more disabled population than states with a higher number of nursing home residents. In particular, as the number of nursing home residents per 1,000 people aged 75 and older increased, the average activities of daily living (ADL) score decreased (Exhibit 3-2). This finding is consistent with multivariate analyses conducted by Walsh, Greene, and Kaganova (2006) using Minimum Data Set information from 2003 to 2005.

Exhibit 3-2. Nursing Home Residents per 1,000 People Aged 75 and Older by Average Nursing Home ADL Scores, 2007

![Graph showing the relationship between nursing home residents and average ADL scores.](image)

Note: ADL = activities of daily living. As the number of nursing home residents per 1,000 people aged 75 and older increases, the average ADL index in the state declines.

**Demographic Characteristics and Nursing Home Use**

Aside from age, several sociodemographic variables are associated with nursing home use (Alecxih, 2009). In this section, we analyze the effect of income and living in a rural area on nursing home use.

**Relationship between Income and Nursing Home Use**

The relationship between the financial status of older people and nursing home use is somewhat complicated. On the one hand, nursing homes have their historical roots in
county poor homes that took care of older people who had no family. Moreover, lower-income older people with disabilities may have fewer family caregivers who are capable of providing the support needed to remain in the community (Johnson & Wiener, 2006). On the other hand, lower-income older people are more likely to qualify for Medicaid and be eligible to receive publicly financed home and community-based services, which may prevent them from using nursing home care. High-income older people, however, may have more informal resources and be better able to afford both home and community-based services and nursing home care. If nursing home care is a “normal good,” people will purchase more of it as their income rises.

The income data available at the state level is for people aged 65 and older rather than for the 75 and older population; the most recent income data by states are for 2005.

*Median Income and Nursing Home Use*

Our analysis of the data for income and nursing home use for 2005 reveals almost no relationship between the median income of the population aged 65 and older and the numbers of nursing home residents per 1,000 people aged 75 and older (Exhibit 3-3).

**Exhibit 3-3. Nursing Home Residents per 1,000 People Aged 75 and Older by Population Aged 65 and Older Median Income, 2005**

Note: There is very little relationship between median income among older people and use of nursing home care.
Exhibiting the relationship between an increase in median income of people aged 65 and older and a decrease in nursing home residents over the period 1997 to 2005 (Exhibit 3-4), we find almost no relationship, similar to the finding for 2005. The trend over time is for states with a larger percentage increase in the median income for people aged 65 and older to have almost no effect on the percentage decrease in nursing home residents per 1,000 people aged 75 and older. This finding is inconsistent with the notion that nursing home care is a normal economic good and that people buy more of it as their income increases.

Exhibit 3-4. Nursing Home Residents per 1,000 People Aged 75 and Older by Population Aged 65 and Older Median Income, 1997–2005

Note: Over the years 1997 to 2005, states with large percent increases in the median income for people aged 65 and older had almost the same percent decrease in the number of nursing home residents per 1,000 people aged 75 and older as states with small percent increases in median income.

Poverty and Nursing Home Use

The data on the relationship between poverty among older people and nursing home use show a positive relationship between the proportion of the noninstitutionalized population aged 65 and older below the federal poverty level in a state and the number of nursing home residents per 1,000 people aged 75 and older. States with a higher proportion of older people below the federal poverty level also had a greater number of nursing home residents per 1,000 people aged 75 and older (Exhibit 3-5).
Exhibit 3-5. Nursing Home Residents per 1,000 People Aged 75 and Older by Percent Aged 65 and Older Below Federal Poverty Level, 2007

Note: The higher the proportion of older people below the federal poverty level in a state, the greater the number of nursing home residents per 1,000 people aged 75 and older.

Examining the effect of the change on the proportion of the low-income elderly population that is poor and nursing home use, we find little association between the percent change in the proportion of the population aged 65 and older below the federal poverty level and in the percent change in nursing home residents per 1,000 people aged 75 and older (Exhibit 3-6). Although the number of nursing home residents is declining overall, there was a slightly smaller decrease in the number of nursing home residents among the states with a greater decrease in the poverty rate.

**Rural Residence and Nursing Home Use**

Resources for care and support are generally more limited in rural areas than in urban areas. Shortages of physicians are common, and rural hospitals are often under financial stress, with fewer resources and less-well-equipped facilities than urban hospitals (Ricketts, 2000). Limited health care resources make it difficult to sustain long-term care for chronic illness in the community setting.
Exhibit 3-6. Nursing Home Residents per 1,000 People Aged 75 and Older by Percent Change in the Proportion of the Population Aged 65 and Older Below the Federal Poverty Level, 1999–2007

Note: Over the years from 1999 to 2007, states with a larger decrease in the poverty rate had a smaller decrease in percentage of nursing home residents per 1,000 people aged 75 and older.

Persons in rural areas also may not have access to the kinds of community services available in urban areas; long travel distances and labor shortages can also limit home and community-based services (Freiman, Mitchell, & Wiener, 2008). One state official reported that some of the higher rates of institutionalization in that state are in the most rural counties and that there are not a lot of other service options in those areas of the state. Consequently, families may have no practical choice other than to use nursing homes for older persons with significant chronic care needs.

There is a positive relationship between the population aged 65 and older living in rural areas and nursing home use (Exhibit 3-7). The states with a higher percent of persons 65 and older living in rural areas also had a higher proportion of nursing home residents per 1,000 people aged 75 and older. Because the numbers of persons aged 65 and older in rural areas remained constant in recent years, we present data for 2007 only.
Exhibit 3-7. Nursing Home Residents per 1,000 People Aged 75 and Older by Percent of the Aged 65 and Older Population Living in Rural Areas, 2007

Note: The greater the proportion of elderly persons living in rural areas of a state, the greater the number of nursing home residents per 1,000 people aged 75 and older.

Home and Community-Based Services and Nursing Home Use

Many federal and state policy makers believe that increasing the supply of home and community-based services will reduce nursing home use, thus reducing the incremental cost of expanding home and community-based services or perhaps even saving money, compared with a system with less noninstitutional services. Several studies have found that home and community-based services are associated with reduced nursing home use, even where overall cost savings have not been found.

Using the proportion of states’ Medicaid long-term care spending on home and community-based services, Miller and colleagues (1998) found that, in a sample of people with dementia, unmarried persons who lived in high HCBS states stayed in the community longer than those who lived in low HCBS states. Similarly, using the Health and Retirement Survey, Muramatsu et al. (2007) found that living in a state with higher HCBS expenditures was associated with lower risk of nursing home admission among childless seniors. However, the association was not statistically significant among seniors with living children. Doubling state HCBS expenditures per person aged 65 or older would reduce the risk of nursing home admission among childless seniors by 35 percent. In their recent evaluation of the Cash and Counseling demonstration, Dale and Brown (2007) found that persons in the cash and counseling treatment group reduced their nursing home expenditures relative to persons in the control group. Finally, although not specifically focused on nursing home use or cost, Kaye et al. (2009) found that Medicaid spending growth was greater for states offering...
limited noninstitutional services than for states with large, well-established noninstitutional service programs. They contend that expansion of home and community-based services appears to entail a short-term increase in spending, followed by a reduction in institutional spending and long-term cost savings.

Because Arizona and Vermont provide home and community-based services under a research and demonstration waiver, their expenditures are not included in our analyses. Expenditures for Medicaid HCBS waivers for persons with intellectual disabilities are also excluded.

**Home and Community-Based Services and Nursing Home Use in a Single Year**

Examining data for 2007, there is an inverse relationship between state spending for home and community-based services and nursing home use. As total Medicaid and non-Medicaid state spending on home and community-based services per 1,000 people aged 75 and older increased, the number of nursing home residents per 1,000 people aged 75 and older decreased (Exhibit 3-8). For this graph, home and community-based services is the sum of Medicaid home and community-based services for older people and younger persons with physical disabilities and state-funded programs for home and community-based services for older people obtained from a recent AARP study (Mollica, Sims-Kastelein, & Kassner, 2009).

**Exhibit 3-8. Nursing Home Residents per 1,000 People Aged 75 and Older by Medicaid and State HCBS Expenditures per 1,000 People Aged 75 and Older, 2007**

![Graph showing the relationship between Medicaid and state HCBS expenditures and nursing home residents per 1,000 people aged 75 and older in 2007.](image)

Note: HCBS = home and community-based services. Higher Medicaid and state-funded home and community-based services are associated with a lower number of nursing home residents per 1,000 people aged 75 and older.
Not surprisingly, this inverse relationship between HCBS spending and nursing home use holds up when only Medicaid spending is examined (Exhibit 3-9). This finding was expected because total 2007 state-funded HCBS programs for older people was only $1.2 billion, compared with $21.1 billion in Medicaid spending for home and community-based services in 2007 (Burwell, Sredl, & Eiken, 2009; Mollica, Sims-Kastelein, & Kassner, 2009).

Exhibit 3-9. Nursing Home Residents per 1,000 People Aged 75 and Older by Medicaid HCBS Expenditures per 1,000 People Aged 75 and Older, 2007

Note: HCBS = home and community-based services. Higher Medicaid HCBS expenditures are associated with a lower number of nursing home residents per 1,000 people aged 75 and older.

Another way of measuring state involvement in home and community-based services is to compute the proportion of Medicaid long-term care expenditures for noninstitutional long-term care services. Assessing data for 2007, we find a negative relationship between the balance of nursing home and home care spending in the Medicaid program and nursing home use. As the proportion of Medicaid long-term care expenditures for home and community-based services increased, the number of nursing home residents per 1,000 people aged 75 and older declined (Exhibit 3-10).

A third way of measuring the size of a state’s Medicaid HCBS program is to assess the number of service participants per 1,000 people aged 75 and older. Our analysis of the available data (from 2005) reveals no relationship between the number of Medicaid participants and nursing home use. As the number of Medicaid HCBS participants per 1,000 elderly persons increased, there was no effect on nursing home residents per 1,000 people aged 75 and older (Exhibit 3-11).
Exhibit 3-10. Nursing Home Residents per 1,000 People Aged 75 and Older by Percent of Medicaid Long-Term Care Expenditures for Home and Community-Based Services, 2007

Note: HCBS = home and community-based services; ICFMR = intermediate care facility for persons with mental retardation; LTC = long-term care; MRDD = mental retardation/developmental disabilities. As the percent of Medicaid long-term care expenditures for home and community-based services increases, the number of nursing home residents per 1,000 people aged 75 and older declines.

Exhibit 3-11. Nursing Home Residents per 1,000 People Aged 75 and Older by Medicaid HCBS Participants per 1,000 People Aged 75 and Older, 2005

Note: HCBS = home and community-based services. As the number of Medicaid HCBS participants per 1,000 people aged 75 and older increases, there is no change in the number of nursing home residents per 1,000 people aged 75 and older.
This lack of relationship may reflect wide variation in the costs per participant and length of time receiving services. It may also reflect poor-quality data on the number of participants, which are believed to be less accurate than the data on expenditures.

**Home and Community-Based Services and Nursing Home Use: 1997–2007**

Although the previous graphs examined the effect of home and community-based services on nursing home use for a single year, the following graphs examine the effect of the changes in home and community-based services over time on the changes in nursing home use over time. The period analyzed is 1997 to 2007.

A slight positive relationship exists between changes in HCBS expenditures per capita and decreases in nursing home use per capita. As the percent change in Medicaid HCBS expenditures per 1,000 people aged 75 and older increased, there was a small increase in the percent decline in the number of nursing home residents per 1,000 population (Exhibit 3-12). In other words, the number of nursing home residents per capita decreased a bit more with higher levels of HCBS spending.

**Exhibit 3-12. Percent Change in Nursing Home Residents per 1,000 People Aged 75 and Older by Percent Change in Medicaid HCBS Expenditures per 1,000 People Aged 75 and Older, 1997–2007**

Note: HCBS = home and community-based services. As the percent increase in Medicaid HCBS spending increases, there is a small increase in the percent decrease in nursing home residents per 1,000 people aged 75 and older.
There is no relationship between changes in the proportion of Medicaid long-term care spending for home and community-based services and nursing home use (Exhibit 3-13). As the percent change from 1997 to 2007 in the proportion of Medicaid long-term care expenditures that are for home and community-based services increased, there was no increase in the decrease in nursing home residents per 1,000 people aged 75 and older. In other words, over the period 1997 to 2007, states that increased the proportion of the long-term care spending on home and community-based services did not experience greater percentage reductions in nursing home use.

Exhibit 3-13. Nursing Home Residents per 1,000 People Aged 75 and Older by Percent Increase in the Proportion of Medicaid Long-Term Care Expenditures for Home and Community-Based Services, 1997–2007

Note: HCBS = home and community-based services; ICFMR = intermediate care facility for persons with mental retardation; LTC = long-term care; MRDD = mental retardation/developmental disabilities. As the percent change in the proportion of Medicaid long-term care expenditures for home and community-based services increases, there is very little change in the percent decrease in nursing home residents per older people age 75 and older.

As noted in the introduction to this section on home and community-based services, Kaye et al. (2009) recently analyzed Medicaid home and community-based services and total long-term care spending and reported that states with “established” HCBS programs had lower rates of increase in Medicaid long-term care expenditures than states with “low” levels of Medicaid home and community-based services (Exhibit 3-14). Moreover, their interpretation of their data was that states with “expanding” HCBS programs had high levels of increases in Medicaid long-term care services for a period of time, and then expenditure increases leveled off. We extend their analyses by using their classification of states to assess whether the three types of states had different experiences in the reduction in nursing home use.
Exhibit 3-14. Nursing Home Residents per 1,000 People Aged 75 and Older by Kaye, LaPlante, and Harrington’s Categorization of Low HCBS States, High Established HCBS States, and High Expanding HCBS States, 1997–2007

Note: HCBS = home and community-based services. There is very little difference among the three groups of states in the pattern of decline in nursing home use over time.

over the period 1997 to 2007. There does not appear to be a difference in the decrease in nursing home use among the three types of states. Low HCBS states, high established HCBS states, and high expanding HCBS states all experienced the same pattern of decline.

Relationship between Assisted Living Facilities/Residential Care Facilities and Nursing Home Use

Assisted living and residential care facilities provide an important service option for consumers needing a range of long-term care services. These facilities provide help with personal assistance, supervision for persons with cognitive impairment, and medication management and other health-related tasks. Private-pay costs of assisted living and other residential care facilities are approximately half of the cost of nursing home care (Genworth Financial, 2008). These persons also choose these types of care settings because they believe they will enjoy a higher quality of life and receive a higher quality of care. These

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care settings often also allow more consumer autonomy and are less medicalized than nursing homes.

In 2004, 41 states reported that approximately 121,000 residents had their care paid, at least in part, by Medicaid (Mollica & Johnson-Lamarche, 2005). Residential care services can be provided under Medicaid either through HCBS waivers or the state-plan personal care option; most residents received payment for a fairly modest level of personal care rather than a comprehensive set of services.

Residential care facilities and the total bed supply grew steadily during the research period. In 2007, states reported 38,373 licensed residential care facilities with 974,585 units/beds (Mollica, Sims-Kastelein, & O’Keeffe, 2007), whereas there were 1,671,238 nursing facility beds (American Health Care Association, 2007). Most state officials interviewed for this report noted the growth in assisted living in their states, with some states such as Alabama attributing part of the decrease in nursing home use to the growth in residential care facility beds. Data from Ohio and Washington suggest that there is some overlap in disability levels between residential care facilities and the nursing home population (Applebaum et al., 2009; Leitch, 2009).

Use of assisted living and residential care services may reduce nursing home use through different mechanisms. If persons with Medicaid coverage elect services in residential care facilities as opposed to nursing homes, then Medicaid-reimbursed nursing home use may decrease. On the other hand, if persons without Medicaid coverage choose assisted living or residential care services, their choice may reduce private demand for nursing home care and possibly postpone their admission to a nursing home. Therefore, increased use of assisted living may reduce both Medicaid and private demand for nursing home use.

Our analysis of data for 2007 shows that as the ratio of assisted living and residential care beds per 1,000 people aged 75 and older increased across states, the ratio of total nursing home residents per 1,000 people aged 75 and older decreased across states (Exhibit 3-15). Thus, on a cross-sectional basis, there appears to be an inverse relationship between residential care facility use and nursing home use. However, this inverse relationship does not hold up over the 2000 to 2007 period for which we had data on residential care facility beds (Exhibit 3-16). National data on residential care facilities are unavailable for 1997 to 1999. Larger increases in the ratio of assisted living and residential care beds per 1,000 people aged 75 and older resulted in lower decreases in the ratio of total nursing home residents per 1,000 people aged 75 and older. So an increase in this assisted living and residential bed measure over time was associated with a slightly lower decrease in the nursing home use rate. This finding implies that growth in residential care may have primarily affected persons who do not have a nursing home level of disability. If the demand for residential care is largely persons with lesser frailty who are not nursing home eligible, then growth in residential care over time may not directly offset nursing home use.
Exhibit 3-15. Nursing Home Residents per 1,000 People Aged 75 and Older by Assisted Living and Residential Care Beds per 1,000 People Aged 75 and Older, 2007

Note: As the ratio of assisted living and residential care beds per 1,000 people aged 75 and older increases, the ratio of nursing home residents per 1,000 people aged 75 and older decreases.

Exhibit 3-16. Nursing Home Residents per 1,000 People Aged 75 and Older by Assisted Living and Residential Care Beds per 1,000 People Aged 75 and Older—Change 2000–2007

Note: Between 2000 and 2007, as the percent change over time in the ratio of assisted living and residential care beds per 1,000 people aged 75 and older increases, the percent decrease over time in the ratio of nursing home residents per 1,000 people aged 75 and older decreases slightly.
Exhibit 3-17 presents trend lines for three groups of states and the entire United States by the number of residential care facility beds per 1,000 people aged 75 and older. To construct this graph, we grouped the states by whether they were in the upper, middle, or lower third in 2000 in their supply of assisted living and residential beds per 1,000 people aged 75 and older and graphed their nursing home residents per 1,000 people aged 75 and older. These trend lines show that regardless of a state’s relative supply of assisted living and residential care beds at the beginning of the research period, total nursing home residents declined at approximately the same rate (the lines have relatively the same slope, regardless of where they begin and end).

**Exhibit 3-17. Nursing Home Residents per 1,000 People Aged 75 and Older for States with High, Medium, and Low Assisted Living and Residential Care Beds per 1,000 People Aged 75 and Older in 2000, by Year**

Note: Between 2000 and 2007, states with a low, medium, or high ratio of assisted living and residential care beds per 1,000 people aged 75 and older experienced approximately the same percentage point decrease over time in the ratio of nursing home residents per 1,000 people aged 75 and older. States in the low group: Connecticut, Delaware, District of Columbia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maryland, Massachusetts, Minnesota, Mississippi, New Jersey, New Mexico, Oklahoma, South Dakota, West Virginia. States in the medium group: Alabama, Arkansas, Florida, Hawaii, Kansas, Michigan, Montana, Nevada, New Hampshire, New York, North Dakota, Ohio, Rhode Island, Tennessee, Texas, Utah, Wyoming. States in the high group: Alaska, Arizona, California, Colorado, Georgia, Idaho, Maine, Missouri, North Carolina, Oregon, Pennsylvania, South Carolina, Vermont, Virginia, Washington, Wisconsin.

For example, the line representing the lower third of states in terms of their assisted living and residential care bed supply shows that the states began the research period in 2000 with a relatively high nursing home use rate, compared with other states, and realized an approximate 13 percentage point drop in the ratio of total nursing home residents per 1,000 people aged 75 and older. Similarly, the line representing the upper third of states in terms of their assisted living and residential care bed supply shows that these states experienced
an approximate 15 percentage point drop in the ratio of total nursing home residents per 1,000 people aged 75 and older. Thus, regardless of where these very different groups of states in terms of residential care bed supply started, they experienced approximately the same change in the nursing home use rate.

**Relationship between Medicare Skilled Nursing Facility Use and Overall Nursing Home Use**

Nursing homes provide services to persons whose care is reimbursed by Medicaid, private insurance, Medicare, or out of pocket. Although persons with Medicaid or private insurance entering nursing homes often have long-term care needs, persons entering nursing homes with Medicare as the primary payer are admitted entirely from inpatient hospital settings and have higher skilled needs related to post-operative surgery or rehabilitation. Consequently, Medicare payment for these post-acute patients is considerably higher than Medicaid or private insurance reimbursement for patients with fewer skilled needs. Although Medicare’s skilled nursing facility coverage lasts for an average of only about 27 days, this higher reimbursement rate may provide incentives to maximize the number of Medicare residents (Centers for Medicare & Medicaid Services, 2008).

Increases in the proportion of patients with Medicare reimbursement may result in a lower proportion of Medicaid patients or private-pay patients, or both. Increasing the proportion of Medicare patients may also be a strategy to offset lower overall demand caused by the decreasing disability rate over time. Both of these scenarios may result in a more balanced system that is less reliant on Medicaid reimbursement. One state official from the Minnesota interview reported that facilities with a higher proportion of Medicare patients are accustomed to discharging residents quickly, and this practice has had a spillover effect on Medicaid and private-pay residents. Thus, facilities with a higher proportion of Medicare patients are less likely to keep people for longer stays than those that are more oriented toward the long-stay population. The state official also reported that services in Medicare facilities were more rehabilitation or medically oriented than services in facilities where the average length of stay is much longer; thus, the Medicare-oriented facilities may be less attractive to long-stay residents.

The analyses suggest that there is an inverse relationship between Medicare nursing home use and overall nursing home use. In 2007, states that had higher proportions of nursing home residents who were Medicare beneficiaries had a lower ratio of nursing home residents per 1,000 people aged 75 and older (Exhibit 3-18).
Exhibit 3-18. Nursing Home Residents per 1,000 People Aged 75 and Older by Percent of Nursing Home Residents who are Medicare Beneficiaries, 2007

Note: In year 2007, as the proportion of nursing home residents who were Medicare beneficiaries increases, the ratio of nursing home residents per 1,000 people aged 75 and older decreases.

In addition, when analyzing the change between years 1997 and 2007, we find that higher increases in the proportion of nursing home residents who were Medicare beneficiaries were related to larger decreases in both total nursing home residents and Medicaid nursing home residents per 1,000 people aged 75 and older (Exhibit 3-19). Surprisingly, however, the change in the proportion of nursing home residents who had their care paid by Medicare was only slightly associated with the change in the number of nursing home beds per 1,000 people aged 75 and older (see Appendix B). This finding may be due to aspects of some Medicaid reimbursement policies, which allow facilities to recover their fixed costs even when their occupancy rates fall. For example, Oklahoma has a deliberate strategy of using Medicaid nursing home reimbursement to promote a stable bed supply.
Exhibit 3-19. Nursing Home Residents per 1,000 People Aged 75 and Older by Percent Change in Proportion of Nursing Home Residents who are Medicare Beneficiaries, 1997–2007

Note: Between 1997 and 2007, as the percent change over time in the proportion of nursing home residents who were Medicare beneficiaries increases, the percent decrease over time in the ratio of nursing home residents per 1,000 people aged 75 and older increases.
Section 4. Conclusions

One strategy to create a more balanced long-term care delivery system is to reduce the use of institutional services, including nursing homes. Nursing home use has been declining since the mid-1980s, but there has been little research on the reasons for this change. In this study, we used a wide variety of administrative data to graphically analyze the factors associated with this decline. We primarily used data at the state level, and we created graphs for a single year (generally 2007) and for changes over time (generally 1997 to 2007). In addition, we held discussions with state experts on long-term care, which added a qualitative dimension to the analyses. Although we analyzed only nursing home residents per 1,000 people aged 75 and older, we found similar results for nursing home beds and Medicaid nursing home residents. These analyses are descriptive, and causation cannot be attributed to the factors being analyzed.

Our main findings are as follows:

▪ Nursing home beds, residents, and Medicaid residents per 1,000 people aged 75 and over declined substantially over the decade. The number of nursing home residents per 1,000 people aged 75 and over fell by 19.9 percent between 1997 and 2007. On average, nursing homes in states with tighter bed supplies served a more disabled population.

▪ Nursing home use is related to various demographic variables other than age. Although there does not appear to be a relationship between overall median income of older people and nursing home use in 2005, states with greater increases in overall median income between 1997 and 2005 had a lower decrease in nursing home residents. States with a greater proportion of older people below the federal poverty level had higher numbers of nursing home residents per 1,000 people aged 75 and older. States with high levels of older people living in rural areas had higher levels of nursing home residents per 1,000 older people.

▪ The principal strategy that states have used to reduce nursing home use is to expand home and community-based services. Our results on the effect of home and community-based services on nursing home residents per 1,000 people aged 75 and older are mixed. Examining a single year, 2007, states with higher levels of HCBS spending (principally Medicaid) and higher proportions of total Medicaid long-term care expenditures for home and community-based services were associated with lower numbers of nursing home residents per 1,000 people aged 75 and older. However, for 2005, no relationship exists between the number of Medicaid HCBS participants per 1,000 people aged 75 and older and the number of nursing home residents per 1,000 people aged 75 and older.

Examine the change in Medicaid HCBS spending over 1997 and 2007, however, shows little effect on the number of nursing home residents per 1,000 people aged 75 and older. Both absolute changes in HCBS spending per 1,000 people aged 75 and older and percent changes in the proportion of Medicaid long-term care expenditures that were for home and community-based services had little effect on the percent decrease in nursing home residents per 1,000 people aged 75 and older during the period.
An extension of the research by Kaye et al. (2009) grouping states into high established HCBS, high expanding HCBS, and low HCBS spending categories found no difference in the decline in nursing home use rates over the period 1997 to 2007.

- It is widely believed that the expansion of residential care facilities, including assisted living facilities, drew a substantial portion of people who would otherwise have gone to nursing homes. For 2007, our analysis shows that states with a higher number of residential care facility beds per 1,000 people aged 75 and older tend to have lower numbers of nursing home residents per 1,000 people aged 75 and older. However, this finding does not hold up when examining the changes over the 1997 to 2007 period. Percent changes in the number of residential care facility beds per 1,000 people aged 75 and older only slightly affect the percent decrease in the number of nursing home residents per 1,000 people aged 75 and older. Moreover, categorizing the states into high, medium, and low groups according to their residential care facility bed supply and tracking their nursing home resident use over time shows little difference in the decline among the three groups.

- A major shift in focus has taken place among nursing homes over the past 15 years from long-term care toward post-acute care covered by Medicare. As facilities focus on short-term skilled care and rehabilitation, there may be an unintended effect on the long-term care population. That is, facilities geared to take care of Medicare residents may apply the same short-term perspective to more traditional long-term care residents, who may also be discharged more quickly. Thus, as the proportion of nursing home residents covered by Medicare in a state increases, the number of overall nursing home residents per 1,000 people aged 75 and older declines. Similarly, as the percent increase in the proportion of nursing home residents who are covered by Medicare increases over time, so does the percent decrease in the number of nursing home residents per 1,000 people aged 75 and older.

In conclusion, an important component of balancing the long-term care system is controlling nursing home use. Although nursing home use has fallen substantially in recent years, few analyses have been conducted to determine the reasons for this decline. The analytic techniques used here are descriptive and only suggestive of the reasons; however, we found mixed evidence on the effect of simply expanding home and community-based services and residential care facilities on nursing home use. These results suggest that states may need to take stronger action than simply expanding home and community-based services and residential care if they want to affect nursing home use. States may need to establish aggressive nursing home screening and diversion initiatives and nursing facility transition/Money Follows the Person programs to prevent people from being admitted to nursing homes and to discharge them home as early as possible. Of the policy initiatives we examined, only the increased use of Medicare skilled nursing facility benefit had a consistently negative effect on nursing home use, both for a single year and examining changes over time. This finding may be related to the short-term, post-acute character of Medicare skilled nursing facility residents. Nursing homes in states with a high proportion of Medicare residents may have a greater emphasis on discharging residents quickly that has spillover effects on non-Medicare residents. These findings suggest that state and federal
policy makers may wish to think more carefully about the interactions between Medicare and Medicaid in determining nursing home use.
References


Why Are Nursing Home Utilization Rates Declining?


Appendix A: 
Data Sources

Assisted Living and Residential Care Facility Beds


Demographic Variables—Percent of Population That Is Rural, Poverty Rate Among Older People, and Median Income
AGING Integrated Database American Community Survey (ACS) data through the AGing Integrated Database. Available at: http://www.agidnet.org/default.asp?keep=0.


Medicaid Home and Community-Based Services Participants

Medicaid Long-Term Care Expenditures for HCBS


Why Are Nursing Home Utilization Rates Declining?


**Nursing Home Residents, Medicaid Nursing Home Residents, Nursing Home Beds, and Percent of Nursing Home Residents Who Are Medicare Beneficiaries**


**Population of the United States and the Individual States**


**Other Sources**


Appendix B:
Graphs for Nursing Home Beds and Medicaid Nursing Home Residents

Exhibit 3-1a. U.S. Nursing Home Beds per 1,000 People Aged 75 and Older, 1997–2007

Exhibit 3-1b. U.S. Medicaid Nursing Home Residents per 1,000 People Aged 75 and Older, 1997–2007
Exhibit 3-2a. Nursing Home Beds per 1,000 People Aged 75 and Older by Average Nursing Home ADL Scores, 2007

Note: ADL = activities of daily living.

Exhibit 3-2b. Medicaid Nursing Home Residents per 1,000 People Aged 75 and Older by Average Nursing Home ADL Scores, 2007

Note: ADL = activities of daily living.
Exhibit 3-3a. Nursing Home Beds per 1,000 People Aged 75 and Older by Population Aged 65 and Older Median Income, 2005

Exhibit 3-3b. Medicaid Nursing Home Residents per 1,000 People Aged 75 and Older by Population Aged 65 and Older Median Income, 2005
Exhibit 3-4a. Nursing Home Beds per 1,000 People Aged 75 and Older by Population Aged 65 and Older Median Income, 1997–2005

Exhibit 3-4b. Medicaid Nursing Home Residents per 1,000 People Aged 75 and Older by Population Aged 65 and Older Median Income, 1997–2005
Exhibit 3-5a. Nursing Home Beds per 1,000 People Aged 75 and Older by Percent Aged 65 and Older Below Federal Poverty Level, 2007

Exhibit 3-5b. Medicaid Nursing Home Residents per 1,000 People Aged 75 and Older by Percent Aged 65 and Older Below Federal Poverty Level, 2007
Exhibit 3-6a. Nursing Home Beds per 1,000 People Aged 75 and Older by Percent Change in the Proportion of the Population Aged 65 and Older Below the Federal Poverty Level, 1999–2007

Exhibit 3-6b. Medicaid Nursing Home Residents per 1,000 People Aged 75 and Older by Percent Change in the Proportion of the Population Aged 65 and Older Below the Federal Poverty Level, 1999–2007
Exhibit 3-7a. Nursing Home Beds per 1,000 People Aged 75 and Older by Percent of the Aged 65 and Older Population Living in Rural Areas, 2007

Exhibit 3-7b. Medicaid Nursing Home Residents per 1,000 People Aged 75 and Older by Percent of the Aged 65 and Older Population Living in Rural Areas, 2007
Exhibit 3-8a. Nursing Home Beds per 1,000 People Aged 75 and Older by Medicaid and State HCBS Expenditures per 1,000 People Aged 75 and Older, 2007

Exhibit 3-8b. Medicaid Nursing Home Residents per 1,000 People Aged 75 and Older by Medicaid and State HCBS Expenditures per 1,000 People Aged 75 and Older, 2007

Note: HCBS = home and community-based services.
Exhibit 3-9a. Nursing Home Beds per 1,000 People Aged 75 and Older by Medicaid HCBS Expenditures per 1,000 People Aged 75 and Older, 2007

Exhibit 3-9b. Medicaid Nursing Home Residents per 1,000 People Aged 75 and Older by Medicaid HCBS Expenditures per 1,000 People Aged 75 and Older, 2007

Note: HCBS = home and community-based services.
Why Are Nursing Home Utilization Rates Declining?

Exhibit 3-10a. Nursing Home Beds per 1,000 People Aged 75 and Older by Percent of Medicaid Long-Term Care Expenditures for Home and Community-Based Services, 2007

Note: HCBS = home and community-based services; ICFMR = intermediate care facility for persons with mental retardation; LTC = long-term care; MRDD = mental retardation/developmental disabilities.

Exhibit 3-10b. Medicaid Nursing Home Residents per 1,000 People Aged 75 and Older by Percent of Medicaid Long-Term Care Expenditures for Home and Community-Based Services, 2007

Note: HCBS = home and community-based services; ICFMR = intermediate care facility for persons with mental retardation; LTC = long-term care; MRDD = mental retardation/developmental disabilities.
Exhibit 3-11a. Nursing Home Beds per 1,000 People Aged 75 and Older by Medicaid HCBS Participants per 1,000 People Aged 75 and Older, 2005

Note: HCBS = home and community-based services.

Exhibit 3-11b. Medicaid Nursing Home Residents per 1,000 People Aged 75 and Older by Medicaid HCBS Participants per 1,000 People Aged 75 and Older, 2005

Note: HCBS = home and community-based services.
Exhibit 3-12a. Percent Change in Nursing Home Beds per 1,000 People Aged 75 and Older by Percent Change in Medicaid HCBS Expenditures per 1,000 People Aged 75 and Older, 1997–2007

Note: HCBS = home and community-based services.

Exhibit 3-12b. Percent Change in Medicaid Nursing Home Residents per 1,000 People Aged 75 and Older by Percent Change in Medicaid HCBS Expenditures per 1,000 People Aged 75 and Older, 1997–2007

Note: HCBS = home and community-based services.
Exhibit 3-13a. Nursing Home Beds per 1,000 People Aged 75 and Older by Percent Increase in the Proportion of Medicaid Long-Term Care Expenditures for Home and Community-Based Services, 1997–2007

Note: HCBS = home and community-based services; ICFMR = intermediate care facility for persons with mental retardation; LTC = long-term care; MRDD = mental retardation/developmental disabilities.

Exhibit 3-13b. Medicaid Nursing Home Residents per 1,000 People Aged 75 and Older by Percent Increase in the Proportion of Medicaid Long-Term Care Expenditures for Home and Community-Based Services, 1997–2007

Note: HCBS = home and community-based services; ICFMR = intermediate care facility for persons with mental retardation; LTC = long-term care; MRDD = mental retardation/developmental disabilities.
Why Are Nursing Home Utilization Rates Declining?

Exhibit 3-14a. Nursing Home Beds per 1,000 People Aged 75 and Older by Kaye, LaPlante, and Harrington’s Categorization of Low HCBS States, High Established HCBS States, and High Expanding HCBS States, 1997–2007

Note: HCBS = home and community-based services.

Exhibit 3-14b. Medicaid Nursing Home Residents per 1,000 People Aged 75 and Older by Kaye, LaPlante, and Harrington’s Categorization of Low HCBS States, High Established HCBS States, and High Expanding HCBS States, 1997–2007

Note: HCBS = home and community-based services.
Exhibit 3-15a. Nursing Home Beds per 1,000 People Aged 75 and Older by Assisted Living and Residential Care Beds per 1,000 People Aged 75 and Older, 2007

Exhibit 3-15b. Medicaid Nursing Home Residents per 1,000 People Aged 75 and Older by Assisted Living and Residential Care Beds per 1,000 People Aged 75 and Older, 2007
Exhibit 3-16a. Nursing Home Beds per 1,000 People Aged 75 and Older by Assisted Living and Residential Care Beds per 1,000 People Aged 75 and Older—Change 2000–2007

Exhibit 3-16b. Medicaid Nursing Home Residents per 1,000 People Aged 75 and Older by Assisted Living and Residential Care Beds per 1,000 People Aged 75 and Older—Change 2000–2007
Exhibit 3-17a. Nursing Home Beds per 1,000 People Aged 75 and Older for States with High, Medium, and Low Assisted Living and Residential Care Beds per 1,000 People Aged 75 and Older in 2000, by Year

Exhibit 3-17b. Medicaid Nursing Home Residents per 1,000 People Aged 75 and Older for States with High, Medium, and Low Assisted Living and Residential Care Beds per 1,000 People Aged 75 and Older in 2000, by Year

Exhibit 3-18a. Nursing Home Beds per 1,000 People Aged 75 and Older by Percent of Nursing Home Residents who are Medicare Beneficiaries, 2007

Exhibit 3-18b. Medicaid Nursing Home Residents per 1,000 People Aged 75 and Older by Percent of Nursing Home Residents who are Medicare Beneficiaries, 2007
Exhibit 3-19a. Nursing Home Beds per 1,000 People Aged 75 and Older by Percent Change in Proportion of Nursing Home Residents who are Medicare Beneficiaries, 1997–2007

Exhibit 3-19b. Medicaid Nursing Home Residents per 1,000 People Aged 75 and Older by Percent Change in Proportion of Nursing Home Residents who are Medicare Beneficiaries, 1997–2007
Appendix C: Sample Discussion Guide

Why Are Nursing Home Utilization Rates Declining?

Thank you for taking time to speak with us today. This interview should take about one hour.

As you know, CMS has contracted with RTI International to conduct formative research on the Systems Change for Community Living Grants Program. A primary purpose of this research is to gain an understanding of how systems change occurs and to share this information with Grantees and other interested parties to understand what works and what does not work, and why. As part of this formative research, we are preparing a topic paper on the reasons for the decline in the national nursing home utilization rate over the past two decades.

One of the key goals of federal long-term care policy is to reduce reliance on institutional care and to increase use of home and community-based services. Over the past 20 years, the number of people aged 75 and older increased by nearly 60 percent, but the number of nursing home residents has remained virtually the same, resulting in a much lower rate of nursing home use per 1,000 people aged 75 and older. Despite the centrality of this issue for balancing efforts, there has been virtually no systematic effort to examine the reasons for this decline over time in nursing home use per 1,000 older people.

As part of this research effort, we are conducting interviews with nine states to obtain an understanding of the factors that may have contributed to the national decline in the use of nursing homes. Although most states experienced a decline, the rate of decline varied among states, and a few states experienced an increase. We plan to interview six states where the nursing home use rate declined greatly and three states that have either not experienced a significant decline or experienced an increase.

Following this interview, we will write up a summary of the discussion and send it to you for your review. After we have completed all of the interviews and reviewed the notes, we may have a few additional follow-up questions for some or all states to address. As needed, we will contact you again—generally by e-mail—to obtain your responses to these questions.

We plan to develop a draft of the topic paper this spring and submit it to CMS for review. Pending revisions and final approval, the paper will be posted on the hcbs.org and cms.hhs.gov websites.

Your participation will in no way affect the standing of your state’s CMS grant(s). We will identify our findings only by state, and nothing that you say to us will be attributed to you personally. Is it OK if we get started? If so, please tell us about your agency and your role in it.
**FILL IN FOR ALL BEING INTERVIEWED**

State: Wisconsin  
Name:  
Title:  
Affiliation/Organization Name:  

For the purposes of our research, we define the nursing home use rate as the number of nursing home residents per 1,000 people aged 75 and older in the state. Using this definition, we have collected data and developed descriptive analyses for both your state and the nation, presented below in graph and table format.

Following the presentation of the data, we ask a series of questions to gain understanding of why the change in nursing home use has occurred over this period. Please review the data regarding your state’s nursing home use below, and think about how and why your state’s nursing home use rate has changed over time.

**Your State’s Nursing Home Use Rate Compared to the Nation**

Between 1995 and 2007, the national nursing home use rate decreased by 19 percent, but your state decreased by 34 percent. When comparing your state’s rate of change to that of the remaining states over this period, your state is in the highest third of all states in regard to the percentage decrease in the nursing home use rate between 1995 and 2007.

Below, we present data on the national nursing home use rate and your state’s nursing home use rate for each year between 1995 and 2007. The same data are presented in graph and table format for ease of comparison.
Appendix C — Sample Discussion Guide

Exhibit C-1. Nursing Home Use Rate for Wisconsin and the United States, 1995–2007

![Graph showing nursing home use rate for Wisconsin and the United States, 1995–2007.](chart.png)

0 20 40 60 80 100 120 140
0 100 200 300 400 500
Year

United States Wisconsin

Exhibit C-2. Number of Nursing Home Residents per 1,000 People Aged 75 and Older

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<tbody>
<tr>
<td>U.S.</td>
<td>91.1</td>
<td>91.0</td>
<td>87.4</td>
<td>83.5</td>
<td>79.8</td>
<td>78.7</td>
<td>77.1</td>
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<td>75.5</td>
<td>73.9</td>
<td>75.0</td>
<td>73.8</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>132.0</td>
<td>124.2</td>
<td>119.2</td>
<td>112.2</td>
<td>110.4</td>
<td>104.0</td>
<td>104.1</td>
<td>97.7</td>
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<td>95.1</td>
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Note: Based on nursing home resident data from Harrington et al.; reports of nursing facilities, staffing, residents, and facility deficiencies; and U.S. Census population estimates of the population.

How would you explain your state’s nursing home use rate over time and its relationship to the nation’s use rate? To help you think about these data, we present below a list of state initiatives or policies that may affect any state’s nursing home use rate. Please consider whether any of these initiatives or policies was instrumental affecting your state’s nursing home use rate. Please describe how the initiative/policy may have affected your state’s use rate.

**State Initiatives/Policies Potentially Affecting a State’s Nursing Home Use Rate**

1. What demographic changes in your state may have affected nursing home use?
   - Change in the disability rate
   - Change in income or assets of older people
   - In- or outmigration of younger population
Why Are Nursing Home Utilization Rates Declining?

- Unemployment rate
- Other

2. What state Medicaid policies might have affected nursing home use?
   - Aging and Disability Resource Centers
   - Other single points-of-entry programs
   - Medicaid home and community-based services (HCBS) waiver waiting lists
   - Medicaid financial or level-of-care eligibility criteria
   - Number of people participating in Medicaid HCBS waivers
   - HCBS waiver scope in terms of target populations or services (e.g., are waiver services provided in residential care settings, including assisted living)
   - State Plan personal care coverage
   - Nursing home transition initiatives
   - Money Follows the Person initiatives
   - Consumer direction
   - Nursing home reimbursement rate
   - Other

3. What non-Medicaid policies may have had an impact on the nursing home use rate?
   - Medicare skilled nursing facility prospective payment
   - Other Medicare policies
   - Other

4. What types of state long-term care infrastructure changes may have contributed to the change in nursing home use?
   - Global budget
   - Administrative reorganization and consolidation
   - Assisted living or other residential care beds and utilization rates
   - Certificate of need limits on nursing home beds
   - Increase in funding for state-funded home care programs
   - Long-term care workforce shortages
   - Long-term care workforce unionization
   - Balance between for-profit and nonprofit facilities
   - Role of nursing home, home care, and consumer advocacy groups
   - Other