CONGRESS OF THE UNITED STATES CONGRESSIONAL BUDGET OFFICE



Rising Demand for Long-Term Services and Supports for Elderly People



Notes

Numbers in the exhibits and text of this document may not add up to totals because of rounding.

Unless otherwise indicated, the years referred to in this document are calendar years.

In this document, "elderly" people are those 65 and above.

Definitions of the terms used in this report are provided in a glossary. The source for many of those definitions is the glossary of terms compiled by the Office of the Assistant Secretary for Planning and Evaluation at the Department of Health and Human Services, available at http://aspe.hhs.gov/daltcp/diction.shtml. Also, details on the data sources and methods underlying the exhibits in this report are provided in supplemental material posted along with this report on CBO's website (www.cbo.gov).

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Rising Demand for Long-Term Services and Supports for Elderly People

By 2050, one-fifth of the total U.S. population will be elderly (that is, 65 or older), up from 12 percent in 2000 and 8 percent in 1950. The number of people age 85 or older will grow the fastest over the next few decades, constituting 4 percent of the population by 2050, or 10 times its share in 1950. That growth in the elderly population will bring a corresponding surge in the number of elderly people with functional and cognitive limitations. Functional limitations are physical problems that limit a person's ability to perform routine daily activities, such as eating, bathing, dressing, paying bills, and preparing meals. Cognitive limitations are losses in mental acuity that may also restrict a person's ability to perform such activities.¹ On average, about one-third of people age 65 or older report functional limitations of one kind or

another; among people age 85 or older, about two-thirds report functional limitations.² One study estimates that more than two-thirds of 65-year-olds will need assistance to deal with a loss in functioning at some point during their remaining years of life.³ If those rates of prevalence continue, the number of elderly people with functional or cognitive limitations, and thus the need for assistance, will increase sharply in coming decades.

What Are Long-Term Services and Supports and Where Do People Receive Them?

The term long-term services and supports (LTSS) refers to the types of assistance provided to people with functional or cognitive limitations to help them perform routine daily activities.⁴

That assistance is provided in several different forms and venues. About 80 percent of elderly people receiving such care live in the community; the remaining 20 percent obtain assistance in institutional settings. Of those living in the community, a small number live in residential communities catering to the needs of elderly people, but most, including many reporting three or

^{1.} For definitions of the terms used throughout this report, refer to the glossary. For details on the data and methods used, see Congressional Budget Office, "Methods for Analysis of the Financing and Use of Long-Term Services and Supports," supplemental material for *Rising Demand for Long-Term Services and Supports for Elderly People* (June 2013), www.cbo.gov/publication/44370.

^{2.} Those estimates are based on data from 2000 to 2010 in the Health and Retirement Study (for people living in the community) and on data from 2010 in the Medicare Current Beneficiary Survey (for people living in institutions).

Peter Kemper, Harriet L. Komisar, and Lisa Alecxih, "Long-Term Care Over an Uncertain Future: What Can Current Retirees Expect?" *Inquiry*, vol. 42, no. 4 (December 2005), pp. 335–350, http://tinyurl.com/l9ml4a9.

^{4.} The terminology referring to the services and infrastructure to help elderly people with impairments has changed in recent years from "long-term care" to "long-term services and supports." This document uses the new term except when the term "long-term care" is appropriate, such as in "long-term care insurance," the term used by private insurance carriers to identify insurance that covers long-term services and supports.

more functional limitations, live in private homes. In the community, elderly people with functional limitations receive assistance primarily from family members and friends (generally unpaid and referred to as informal care); they may also pay for assistance (so-called formal care) from long-term care workers, such as home health aides. In contrast, elderly people with severe functional and cognitive limitations, who may require around-theclock assistance, often live in institutional settings.

Categorizing residential settings is difficult and often confusing because there is no commonly accepted terminology. This report identifies four different categories of residence. The first two categories are considered to be settings for institutional care and the latter two are for care provided in the community.

- Nursing homes (including nursing facilities and skilled nursing facilities)—facilities licensed by the state to provide personal care and skilled nursing care on a 24-hour-a-day basis to residents.
- Other types of institutions—all other facilities, primarily residential care facilities (RCFs) that provide institutional care but are not licensed as nursing homes. In general, an RCF is similar to a nursing home in that it provides assistance on a 24-hour-a-day basis, except it is not licensed to provide skilled care. In addition to RCFs, this second category of residence includes other facilities that provide assistance for people with functional limitations, or supervision of medications, but not on a 24-hour-a-day basis.

- Community-based residences that offer supportive services for elderly people residences that offer basic services (such as meals, housekeeping, and laundry) as well as some health-related services (such as help with medications). Although this type of residence offers services designed to assist elderly people, residents are considered to be living in the community.
- Private homes.

According to data from the Medicare Current Beneficiary Survey, or MCBS, the elderly nursing home population has declined over the past 10 years; more elderly people are living in residential care facilities and other types of care facilities, in community-based housing with supportive services, and in houses in a regular community with no supportive services. That trend is especially pronounced for people 85 or older.

The MCBS and other surveys use different definitions to categorize residential settings. The MCBS identifies people as living in a facility—similar to being institutionalized—if they live in either of the first two categories of residence defined above (a nursing home or an RCF or other type of residence providing institutional care). By contrast, the American Community Survey (ACS), which is administered by the Census Bureau, identifies people as institutionalized if they live in nursing homes or in nursing facilities located on-site at a larger residential complex. Despite the surveys' differences in terminology, however, their estimates are similar: According to the MCBS, about 4.2 percent of elderly people lived in institutional settings in 2009; the comparable figure based on ACS data was 3.9 percent.

How Are Long-Term Services and Supports Financed?

Long-term services and supports are provided and paid for both privately and publicly. More than half of that care is donated—as informal care—by family members and friends, most commonly by spouses and adult daughters. Providing care imposes costs on informal caregivers in the form of time, effort, forgone wages, and other economic costs.⁵ Assuming that informal caregivers provide care similar in value to that provided by home health aides, the Congressional Budget Office (CBO) estimates that the value of that care totaled approximately \$234 billion in 2011.⁶ Because many informal caregivers must sacrifice time that might otherwise be spent earning a wage, the value

Meredith B. Lilly, Audrey Laporte, and Peter C. Coyte, "Labor Market Work and Home Care's Unpaid Caregivers: A Systematic Review of Labor Force Participation Rates, Predictors of Labor Market Withdrawal, and Hours of Work," *Milbank Quarterly*, vol. 85, no. 4 (December 2007), pp. 641–690, http://tinyurl.com/ m2djo97.

^{6.} CBO calculated that value by multiplying \$21 per hour (the average wage of a home health aide in 2011) by approximately 11.2 billion hours of donated care (based on data from the Health and Retirement Study). For more information, see Congressional Budget Office, "Methods for Analysis of the Financing and Use of Long-Term Services and Supports," supplemental material for *Rising Demand for Long-Term Services and Supports for Elderly People* (June 2013), www.cbo.gov/publication/44370.

of that care in terms of forgone wages could be even higher.

The economic value of informal care is substantially higher than total payments for LTSS, which reached about \$192 billion in 2011 (see Exhibits 3 and 4).⁷ The largest payers for LTSS, accounting for about two-thirds of total spending, are the major government health care programs, Medicaid and Medicare.⁸ Out-of-pocket spending is the biggest source of private spending for LTSS and is particularly large for institutional care. Private insurance pays for only a small share of total spending on LTSS, although the number of people with private long-term care (LTC) insurance is growing slowly. Other sources of payment include various federal and state programs for elderly people and private charitable donations.

Private health insurance, Medicare, Medicaid, and private LTC insurance all cover stays in nursing homes as well as visits by home health agencies, but in different circumstances and for different lengths of time. Those multiple funding streams make it difficult to disentangle who pays for which services. Medicare and private health insurance cover LTSS as part of a postacute care benefit that covers rehabilitative care—short-term stays in skilled nursing facilities and home health visits—for people who need skilled care. The coverage is generally short term in nature (lasting about three months or less) and is intended to help beneficiaries recover from acute conditions for which they are also receiving medical care. In contrast, Medicaid and private LTC insurance cover LTSS for an extended period (typically three to five years in the case of private LTC insurance and indefinitely in the case of Medicaid), and they do not require that the need for assistance be connected with an acute health care episode.

The services reimbursed by different payers can be similar; although the purposes for covering the services may differ, the setting and many of the services are the same. Medicare beneficiaries may begin a nursing home stay following a hospitalization for an ailment that leaves them with functional or cognitive limitations. If that loss in functioning persists, they may eventually exhaust their Medicare benefit. At that point, many nursing home residents turn to Medicaid or private long-term care insurance to finance their stay. Likewise, the nonskilled home health services covered by Medicare and the home health aide and personal care services covered by Medicaid are often interchangeable. In addition, determining the point at which a beneficiary no longer requires postacute care is subjective and often decided in arbitrary ways, such as when Medicare's 100-day benefit for care in a skilled nursing facility is exhausted. That substitutability of services and payers, coupled with the difficulty in distinguishing between postacute care and LTSS, make it

difficult to draw clear distinctions between spending for postacute care and for LTSS. Thus, estimates of total spending for LTSS frequently include expenditures for postacute care covered by Medicare and private health insurance, an approach adopted in this report.⁹

Many, if not most, people do not make private financial preparations for their future LTSS needs. They may not have the personal financial resources necessary to purchase private LTC insurance, their health history may preclude the possibility of obtaining such insurance, or they may have concerns about the value of private coverage, including uncertainty about the stability of premiums in the future and the ability of insurance carriers to pay for care that might not be needed for several more decades. Other people may prefer to spend their money on activities while they are still healthy, expecting that their quality of life if they are severely impaired would not be much better even if they had more money to spend on assistive services.¹⁰ Some people may mistakenly expect that

CBO's calculations are based on data from the Centers for Medicare & Medicaid Services. They are adjusted to include only expenditures for elderly people.

About 5.4 million elderly people are enrolled in both Medicaid and Medicare. For information on the challenges of coordinating the financing of medical care and of long-term services and supports for people with both sources of coverage, see Congressional Budget Office, *Dual-Eligible Beneficiaries of Medicare and Medicaid: Characteristics, Health Care Spending, and Evolving Policies* (June 2013), www.cbo.gov/publication/44308.

For an example of an estimate that includes care covered by Medicare, see Kirsten J. Colello and others, *Long-Term Services and Supports: Overview and Financing*, CRS Report for Congress R42345 (Congressional Research Service, April 4, 2013). For an example of an estimate that excludes care covered by Medicare, see Carol O'Shaughnessy, "National Spending for Long-Term Services and Supports (LTSS), 2011," National Health Policy Forum (February 1, 2013), www.nhpf.org/library/details.cfm/ 2783.

Jeffrey R. Brown and Amy Finkelstein, "Insuring Long-Term Care in the United States," *Journal of Economic Perspectives*, vol. 25, no. 4 (Fall 2011), pp. 119–142, http://tinyurl.com/l997ekg.

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their private health insurance (not long-term care insurance) or Medicare will provide for their needs or that they will be able to easily obtain Medicaid coverage. Some research finds that the availability of Medicaid deters some people from purchasing private coverage, even though Medicaid is an imperfect substitute for private insurance.¹¹ Other people may believe that their income and savings will be sufficient or that they will be able to obtain the assistance they need from family members and close friends.

How Might Expenditures on Long-Term Services and Supports Change Over Time?

LTSS expenditures for elderly people now account for an estimated 1.3 percent of gross domestic product (GDP).¹² That share is likely to rise in the future as the population ages. To explore the potential implications of the growing elderly population, CBO developed three alternative scenarios regarding the future prevalence of functional limitations among the elderly, holding constant other factors affecting those expenditures, such as growth in prices for LTSS, changes in family structure that could affect the provision of informal care, and changes in how services and supports are delivered. In those scenarios, LTSS expenditures were projected to range from 1.9 percent of GDP to 3.3 percent of GDP by 2050. (The combination of actual future prevalence of functional limitations and changes in those other factors could result in LTSS spending that was less than 1.9 percent of GDP or more than 3.3 percent of GDP by 2050. Spending could be higher, for example, if the provision of informal care fell relative to the provision of formal care as a result of a shrinking average family size.)

Projections of LTSS expenditures are subject to considerable uncertainty. In addition to estimates of the prevalence of functional limitations, they require judgments about future innovations in the delivery of care, changes in the use of services, and future rates of growth in the costs of labor and other inputs to long-term care.

Uncertainty About the Prevalence of Functional Limitations

Over several decades leading up to the beginning of the 21st century, the general health and functioning of elderly people steadily improved.¹³ Many factors—improvements in public health (including vaccinations), plentiful food, better living conditions, higher educational attainment, and safer work environments—contributed to a reduced prevalence of functional limitations (as well as greater life expectancy).

From 2000 to 2010, however, the prevalence of functional limitations among elderly people had no discernible trend and, looking ahead, the

sources of further improvement are less evident. For example, educational attainment, a significant factor affecting the prevalence of functional and cognitive limitations, is expected to continue to improve in the future, but at a much slower rate.¹⁴ The risk of workplace injuries has fallen as fewer jobs require physical labor, but workers may face higher longer-term risks as a result of more sedentary lifestyles. An increase in the prevalence of obesity, for example, is expected to increase the prevalence of functional limitations, all else being equal.¹⁵ However, other trends in behavior (such as a decline in smoking) could offset some of that effect.

Uncertainty About Future Costs of LTSS Inputs

Many factors can affect future prices for LTSS inputs, including, for example, changes in the size and characteristics of the workforce and changes in how LTSS is delivered. The difficulty in forecasting changes in those factors and in understanding how those factors contribute to changes in the prices of

^{11.} Ibid., p. 129.

^{12.} Calculated using total LTSS expenditures of \$192 billion in 2011 divided by GDP for that year.

Dora L. Costa, "Changing Chronic Disease Rates and Longterm Declines in Functional Limitation Among Older Men," *Demography*, vol. 39, no. 1 (February 2002), pp. 119–137, http://tinyurl.com/lqzxvdj.

^{14.} Linda G. Martin, Robert F. Schoeni, and Patricia M. Andreski, "Trends in Health of Older Adults in the United States: Past, Present, Future," *Demography*, vol. 47, no. 1 supplement (March 2010), pp. S17–S40, http://tinyurl.com/kmddemo.

^{15.} Soham Al Snih and others, "The Effect of Obesity on Disability vs. Mortality in Older Americans," *Archives* of Internal Medicine, vol. 167, no. 8 (April 2007), pp. 774–780, http://tinyurl.com/kbtflp7; and Honglei Chen and Xuguang Guo, "Obesity and Functional Disability in Elderly Americans," *Journal of the American Geriatrics Society*, vol. 56, no. 4 (April 2008), pp. 689– 694, http://tinyurl.com/mk5gcg5.

LTSS inputs means that predictions of future prices of LTSS inputs are highly uncertain. For this analysis, CBO assumed that prices for communitybased care would grow at the rate of growth of average wages for long-term care workers over the 2010–2050 period (because community-based care is labor-intensive). CBO further assumed that prices for institutional care would initially grow at a rate consistent with historical growth in nursing home prices but then grow at a progressively slower rate, consistent with the underlying assumptions about growth in health care costs in CBO's *The 2012 Long-Term Budget Outlook*.

Uncertainty About How Care Will Be Delivered

Government programs that assist frail elderly people, such as Medicaid, have experimented with

several different models of health care financing and delivery. One major change has been the gradual shift to providing care to people as they continue to live in private homes rather than in institutional settings. The projected growth in programs that devote many of their resources to addressing the needs of elderly people—through Social Security payments and spending for Medicare and Medicaid—will generate pressure on federal and state budgets, suggesting that various forms of experimentation will probably occur in the future as part of attempts to reduce costs.¹⁶

Economic and technological changes may also complicate the efforts of policymakers to accurately estimate future resource needs for home- and community-based LTSS. For example, labor force participation might change as more people age but remain healthy. Average family size also could change. Both of those factors could affect the availability of informal care.

^{16.} Total federal spending for Social Security, Medicaid, Medicare (net of premiums), and the Children's Health Insurance Program amounted to 9.6 percent of GDP in 2012; along with future subsidies for the purchase of health insurance through exchanges, they will total 13.5 percent of GDP in 2030 and 16.2 percent of GDP in 2050, CBO estimates, if the programs continue to operate as specified in current law. See Congressional Budget Office, *The 2012 Long-Term Budget Outlook*, supplemental data (June 2012), www.cbo.gov/publication/ 43288. The estimates include spending for people under age 65, such as Social Security Disability Insurance payments and Medicaid spending for the nonelderly population.

Financing Long-Term Services and Supports for an Aging Population in the United States

Relative to the total U.S. population, the number of elderly people in the United States will grow rapidly over the next four decades because of the post-World War II baby boom, the subsequent slowing of the birth rate, and a declining overall mortality rate, among other factors. The aging of the population has implications for government programs that serve elderly people—in particular, Social Security, Medicare, and Medicaid—and will affect government budgets at the federal, state, and local levels. In addition to drawing on informal care donated by family and friends, elderly people with functional limitations rely heavily on Medicare and Medicaid to help finance their use of long-term services and supports.

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Exhibit 1.

Elderly Adults As a Share of the U.S. Population, 2000 to 2050



Between 1946 and 1964, more than 75 million babies were born in the United States, forming a cohort that has come to be known as the baby-boom generation. The oldest people in the group turned 65 in 2011. The aging of that generation, in combination with increases in longevity and other factors, will cause the share of the population age 65 or older to grow rapidly from 2010 to 2030. The share of the population age 85 or older will grow rapidly beginning around 2030 and continuing until at least 2050.

Source: Congressional Budget Office tabulations based on population projections reported in *The 2012 Long-Term Budget Outlook* (June 2012), www.cbo.gov/publication/43288.

Note: Members of the baby-boom generation (people born between 1946 and 1964) started turning 65 in 2011 and will turn 85 beginning in 2031.

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Exhibit 2.



Source: Congressional Budget Office tabulations based on population projections reported in *The 2012 Long-Term Budget Outlook* (June 2012), www.cbo.gov/publication/43288.

The caregiving burden on families and social networks will grow over the coming decades as the U.S. population ages. In 2010, people over 65 accounted for about one-sixth of the adult U.S. population (people age 18 or older); the share of people age 85 or older, who are most in need of care, was very small in 2010 relative to the overall adult population. Those shares, however, will rise significantly over the coming decades, the Congressional Budget Office projects. By 2030, about one-fourth of adults in the United States will be age 65 or older; the biggest increases—roughly 50 percent higher than their shares in 2010-will be among adults ages 65 to 74 and ages 75 to 84. From 2030 to 2050, the share of adults age 85 or older will nearly double, climbing from almost 3 percent to more than 5 percent.

Exhibit 3.

Estimated Economic Value of Formal and Informal Long-Term Services and Supports for Elderly People in the United States, 2011



- Source: Congressional Budget Office based on information from the Centers for Medicare & Medicaid Services, Office of the Actuary (for estimates of spending for formal care); data from the Health and Retirement Study; and data on average hourly wages of home health aides as reported by MetLife Mature Market Institute. For more information, see the supplemental material for this report.
- Notes: In this exhibit, expenditures for institutional care include the cost of stays, including room and board as well as assistive services, in skilled nursing facilities, nursing homes, and nursing facilities housed inside continuing care retirement communities. Expenditures for community-based services include the cost of assistive services provided in all other settings, including private homes, adult day care facilities, and residential facilities that are not nursing homes.

The economic value of informal care is estimated on the basis of the number of donated hours of care reported in the Health and Retirement Study and the average hourly wage of a home health aide (a typical long-term care worker). In this estimate, the value of an hour of informal care is assumed to equal the cost of hiring someone to provide the care (about \$21 per hour in 2011).

The total value of long-term services and supports for elderly people, including the estimated economic value of informal (or donated) care, exceeded \$400 billion in 2011, the Congressional Budget Office estimates. Expenditures for institutional care-provided in skilled nursing facilities, nursing homes, and nursing facilities located in continuing care retirement communities-totaled \$134 billion in 2011, or about 31 percent of LTSS expenditures.¹⁷ Expenditures for homeand community-based service providers, such as home health and personal care agencies and adult day care providers, totaled \$58 billion, or less than half of the amount spent for institutional care. Informal care, which is usually provided by family members and close friends, accounts for more than half of the total economic value of long-term services and supports. The economic value of informal care in 2011 was about \$234 billion, CBO estimates. Choosing to provide informal assistance to a frail elderly person may entail a substantial sacrifice of free time on the part of a caregiver; more than half of all informal caregivers work full time in addition to providing such care, and the burdens for caregivers who do not work full time may also be substantial.¹⁸ 🔶

 Richard W. Johnson and Joshua M. Wiener, A Profile of Frail Older Americans and Their Caregivers, Retirement Project Occasional Paper 8 (Urban Institute, February 2006), p. 33, www.urban.org/ publications/311284.html.

^{17.} This definition of institutional care, used by the Centers for Medicare & Medicaid Services in its estimates of national health expenditures, is similar to but not the same as the definition of institutional care used in Exhibits 11 through 14.

Exhibit 4.

Expenditures for Long-Term Services and Supports for Elderly People, 2011



- Source: Congressional Budget Office based on information from the Centers for Medicare & Medicaid Services, Office of the Actuary.
- Notes: This exhibit does not include the economic value of informal care.

Medicare expenditures for postacute care are included because it is difficult to distinguish between spending for long-term services and supports and spending for postacute care (the providers are usually the same for both kinds of care).

- a. Includes both federal and state expenditures.
- b. Includes beneficiaries' cost sharing for Medicare and Medicaid.
- c. Includes expenditures by the Department of Defense, the Department of Veterans Affairs, other private funding (including, for example, charitable donations), general assistance, and other state and local programs.

Spending for long-term services and supports comes from public and private payers, but about two-thirds of formal services are paid for by the two major government health care programs, Medicaid and Medicare. Medicaid, an insurance program for low-income people that is funded jointly by the federal and state governments, pays for long-term services and supports for people with functional losses who meet the financial requirements to qualify for coverage. Medicare covers health care expenses for nearly all people 65 or older, as well as younger people who are disabled. Most LTSS spending from private sources is from out-of-pocket payments for institutional care, reflecting relatively low rates of private longterm care insurance coverage.¹⁹ According to the Health and Retirement Study, about 13 percent of people age 65 or older have private LTC insurance; among those receiving assistance, coverage is even lower (see Exhibit 18). Payments by private insurance may also be low because many private policies do not cover the full cost of care.²⁰ The small share of private spending for community-based care is probably because such care is often provided informally by family members and friends, without any payment.

20. Payments by private insurance may be underreported. At least some of the spending may be reported as out of pocket even though it is eventually reimbursed by insurance, because some policies reimburse policyholders after they pay the health care provider. See America's Health Insurance Plans, *Guide to Long-Term Care Insurance: 2012 Update*, p. 5, http://tinyurl.com/ll60aom.

^{19.} As in Exhibit 3, the definition of institutional care for purposes of reporting expenditures differs somewhat from the definition used in later exhibits.

Functional and Cognitive Limitations Among Elderly People Living in the Community

People receiving long-term services and supports typically report difficulty in performing one or more activities of daily living (ADLs), which include bathing, dressing, eating, walking, transferring out of bed or a chair, and using the toilet, and instrumental activities of daily living (IADLs), which include preparing meals, shopping, using the telephone, managing money, and taking medications. In addition to those functional limitations, they may have cognitive limitations, such as memory loss and confusion. Some people who report difficulty with ADLs and IADLs live independently without any assistance, but a majority of such people—especially those with cognitive limitations—receive assistance, which is mostly provided informally.

Exhibit 5.

Functional Limitations Among Elderly People Living in the Community, 2000 to 2010



The probability of having functional limitations increases significantly with age. Less than 20 percent of people ages 65 to 74 who are living in the community report difficulty with functional limitations, but by age 85 or older, the share of people living in the community reporting functional limitations almost triples. Almost a third of people ages 75 to 84 and more than half of those age 85 or older report functional limitations. More than 40 percent of people age 85 or older have difficulty performing one or more activities of daily living, compared with 14 percent of those ages 65 to 74.

In this exhibit, as well as other exhibits reporting the prevalence of functional limitations, the reported rates are an average of the rates observed over the 2000–2010 period (weighted by the population in each year). The Congressional Budget Office selected that approach because rates for specific years within that period did not show any particular trend, and pooling observations over several different survey years improved the precision of reported statistics.

Activities of Daily Living (ADLs)

Include bathing, dressing, eating, walking, transferring out of bed or a chair, and using the toilet.

Instrumental Activities of Daily Living (IADLs)

Include preparing meals, shopping, using the telephone, managing money, and taking medications.

- Source: Congressional Budget Office tabulations of data from the Health and Retirement Study, including the 2000, 2002, 2004, 2006, 2008, and 2010 waves. See the supplemental material for additional information.
- Note: Individuals are grouped into four mutually exclusive categories in order of increasing functional loss: no impairments (no difficulty in any ADL or IADL, not reported in this exhibit); difficulties with 1 or more IADLs but no difficulty with any ADL; difficulties with 1 or 2 ADLs; and difficulties with 3 or more ADLs. People reporting difficulty performing ADLs may also have functional limitations for one or more IADLs.

Exhibit 6.

Functional Limitations Among Elderly People Living in the Community, by Educational Attainment, 2000 to 2010



Activities of Daily Living (ADLs)

Include bathing, dressing, eating, walking, transferring out of bed or a chair, and using the toilet.

Instrumental Activities of Daily Living (IADLs)

Include preparing meals, shopping, using the telephone, managing money, and taking medications.

- Source: Congressional Budget Office tabulations of data from the Health and Retirement Study, including the 2000, 2002, 2004, 2006, 2008, and 2010 waves. See the supplemental material for additional information.
- Note: Individuals are grouped into four mutually exclusive categories in order of increasing functional loss: no impairments (no difficulty in any ADL or IADL, not reported in this exhibit); difficulties with 1 or more IADLs but no difficulty with any ADL; difficulties with 1 or 2 ADLs; and difficulties with 3 or more ADLs. People reporting difficulty performing ADLs may also have functional limitations for one or more IADLs.

Functional limitations are much more common among people with little education because they tend to work in occupations that expose them to greater risk of injuries that can lead to impairment. They are also more likely than others to engage in risky health behaviors, such as smoking, which increase the risk of eventual impairment.²¹ On average, over the 2000-2010 period, elderly people with less than a high school education living in the community were more than twice as likely as those with at least a high school diploma to have difficulty performing three or more activities of daily living. The relationship between educational attainment and functional loss persists across all major age groups among elderly people, but it is less pronounced among people who are 85 or older (the data for particular age groupings are not shown in the exhibit). 🔶

21. Larkin L. Strong and Frederick J. Zimmerman, "Occupational Injury and Absence From Work Among African American, Hispanic, and Non-Hispanic White Workers in the National Longitudinal Survey of Youth," *American Journal of Public Health*, vol. 95, no. 7 (July 2005), pp. 1226–1232, http://tinyurl.com/kymug52; and Zachary Zimmer and James S. House, "Education, Income, and Functional Limitation Transitions Among American Adults: Contrasting Onset and Progression," *International Journal of Epidemiology*, vol. 32, no. 6 (2003), pp. 1089–1097, http://tinyurl.com/ k5lbqpk.

Exhibit 7.

Functional Limitations Among Elderly People Living in the Community, by Race and Ethnicity, 2000 to 2010



The prevalence of impairment varies significantly between elderly non-Hispanic white people and elderly people in other racial and ethnic groups. Only 25 percent of non-Hispanic white people age 65 or older living in the community report some degree of functional impairment, compared with roughly 35 percent of other elderly people. The biggest difference among groups is in the percentage of people with multiple impairments; non-Hispanic white elderly people are considerably less likely than other elderly people to report three or more functional impairments. Even after controlling for educational attainment, the differences (although smaller) generally persist.²² As is the case with educational attainment, the differences by race and ethnicity are generally consistent across all age groups among elderly people, but the differences are smaller for people 85 or older.

Activities of Daily Living (ADLs)

Include bathing, dressing, eating, walking, transferring out of bed or a chair, and using the toilet.

Instrumental Activities of Daily Living (IADLs)

Include preparing meals, shopping, using the telephone, managing money, and taking medications.

- Source: Congressional Budget Office tabulations of data from the Health and Retirement Study, including the 2000, 2002, 2004, 2006, 2008, and 2010 waves. See the supplemental material for additional information.
- Note: Individuals are grouped into four mutually exclusive categories in order of increasing functional loss: no impairments (no difficulty in any ADL or IADL, not reported in this exhibit); difficulties with 1 or more IADLs but no difficulty with any ADL; difficulties with 1 or 2 ADLs; and difficulties with 3 or more ADLs. People reporting difficulty performing ADLs may also have functional limitations for one or more IADLs.

^{22.} That finding is based on CBO's tabulations of data from the Health and Retirement Study, but it is not reported in the exhibit.

Exhibit 8.

Functional and Cognitive Limitations Among Elderly People Living in the Community, by Age, 2000 to 2010



Activities of Daily Living (ADLs)

Include bathing, dressing, eating, walking, transferring out of bed or a chair, and using the toilet.

Instrumental Activities of Daily Living (IADLs)

Include preparing meals, shopping, using the telephone, managing money, and taking medications.

- Source: Congressional Budget Office tabulations of data from the Health and Retirement Study, including the 2000, 2002, 2004, 2006, 2008, and 2010 waves. For more information, see the supplemental material.
- Note: Individuals are grouped into four mutually exclusive categories in order of increasing functional loss: no impairments (no difficulty in any ADL or IADL, not reported in this exhibit); difficulties with 1 or more IADLs but no difficulty with any ADL; difficulties with 1 or 2 ADLs; and difficulties with 3 or more ADLs. People reporting difficulty performing ADLs may also have functional limitations for one or more IADLs.

As with functional loss, cognitive limitations are more common at advanced ages.²³ About one of every six people age 85 or older living in the community report cognitive limitations, compared with one of 20 for all people age 65 or older. Loss in cognitive functioning places significant strain on caregivers; many people with impaired cognition eventually enter nursing homes. About one of every five elderly people with three or more functional limitations who are living in the community also have cognitive limitations, but a much smaller proportion of people with one or two functional limitations also have cognitive limitations.

Interestingly, the proportion of people with losses in only the instrumental activities of daily living who also have cognitive limitations is higher than that of people with one or two ADL limitations. That may be because IADLs require more cognitive ability to perform than do activities of daily living; some people who have good physical health but cognitive loss may be able to perform ADLs but not IADLs.

^{23.} For more information on how people were identified as having cognitive limitations, see Congressional Budget Office, "Methods for Analysis of the Financing and Use of Long-Term Services and Supports," supplemental material for *Rising Demand for Long-Term Services and Supports for Elderly People* (June 2013), www.cbo.gov/ publication/44370.

Exhibit 9.

Probability of Receiving Assistance, by Functional and Cognitive Limitations, Among Elderly People Living in the Community, 2000 to 2010

(Average percentage)



People with functional limitations may need assistance to help them perform routine daily activities or to do chores or other necessary tasks. Not every person with one or more impairments requires personal assistance; many rely instead on special equipment, such as canes, wheelchairs, and grab bars. Others who report difficulty may still perform the activities themselves, but not without great effort.

Not surprisingly, people with multiple functional losses are more likely to receive assistance than people with fewer impairments. On average over the 2000–2010 period, for example, about 85 percent of elderly people living in the community who reported difficulty with three or more ADLs received assistance, as compared with about 45 percent of those reporting difficulty with one or two ADLs. People with both functional and cognitive limitations were more likely to receive assistance than those with functional limitations only. For example, 80 percent of those reporting difficulty with one or two ADLs who also had cognitive limitations received assistance.

Activities of Daily Living (ADLs)

Include bathing, dressing, eating, walking, transferring out of bed or a chair, and using the toilet.

Instrumental Activities of Daily Living (IADLs)

Include preparing meals, shopping, using the telephone, managing money, and taking medications.

- Source: Congressional Budget Office tabulations of data from the Health and Retirement Study, including the 2000, 2002, 2004, 2006, 2008, and 2010 waves. For more information, see the supplemental material.
- Notes: As presented in Exhibit 8, a small percentage of people have losses in cognitive functioning but no losses in physical functioning. However, none of those people reported receiving assistance in the HRS. Thus, they are not represented in this exhibit.

Individuals are grouped into four mutually exclusive categories in order of increasing functional loss: no impairments (no difficulty in any ADL or IADL, not reported in this exhibit); difficulties with 1 or more IADLs but no difficulty with any ADL; difficulties with 1 or 2 ADLs; and difficulties with 3 or more ADLs. People reporting difficulty performing ADLs may also have functional limitations for one or more IADLs.

Exhibit 10.

Average Caregiver Hours per Day for Elderly People Living in the Community Who Are Receiving Any Care, by Age and Limitations, 2000 to 2010

(Hours)



Activities of Daily Living (ADLs)

Include bathing, dressing, eating, walking, transferring out of bed or a chair, and using the toilet.

Instrumental Activities of Daily Living (IADLs)

Include preparing meals, shopping, using the telephone, managing money, and taking medications.

- Source: Congressional Budget Office tabulations of data from the Health and Retirement Study, including the 2000, 2002, 2004, 2006, 2008, and 2010 waves. For more information, see the supplemental material.
- Notes: Individuals are grouped into four mutually exclusive categories in order of increasing functional loss: no impairments (no difficulty in any ADL or IADL, not reported in this exhibit); difficulties with 1 or more IADLs but no difficulty with any ADL; difficulties with 1 or 2 ADLs; and difficulties with 3 or more ADLs. People reporting difficulty performing ADLs may also have functional limitations for one or more IADLs.

The caregiver hours are not necessarily exclusive. That is, two hours of assistance might be two hours provided by a single helper or one hour with two helpers present.

People with functional limitations who receive assistance from others primarily rely on informal care to obtain the assistance they need. The number of hours of paid care is highest for people who have difficulty with three or more activities of daily living and who are 85 or older. (In many cases, very elderly people are widowed and thus without a spouse to care for them.) Assistance may be extensive; elderly people with limitations in three or more ADLs who live in the community receive an average of 9 hours of assistance per day (counting both formal and informal sources of care), and people age 85 or older with that degree of impairment typically receive about 11 hours of assistance per day, mostly informal.

People with both functional and cognitive limitations receive significantly more hours of assistance than do people with functional limitations only. For example, people age 85 or older with three or more functional limitations who also have cognitive limitations and who live in the community receive more than 14 hours of care per day (both formal and informal), on average.

Providing Long-Term Services and Supports

The provision of long-term services and supports takes many forms and occurs in various settings. Those services, often provided by friends and family without any formal training, primarily address recipients' need for assistance with routine daily activities, and the types of assistance have not changed much over time. This section of the report describes the settings in which LTSS are provided.

Exhibit 11.





Source: Congressional Budget Office based on data from Medicare Current Beneficiary Survey, Access to Care files, 2010. For more information, see the supplemental material.

Note: A person is considered to live in an institution if he or she resides in a nursing home (or skilled nursing facility) or a long-term care facility that provides 24-hour-a-day caregiver supervision, assistance for people with functional or cognitive limitations, or supervision of medications. That definition is consistent with the MCBS's definition.

Institutionalization is much more common at older ages; in 2010, about one in eight people age 85 or older (13 percent) resided in institutions, compared with 1 percent of people ages 65 to 74. The share of elderly people living in institutional settings has fallen over the past 10 years; more opt to live either in private residences or in residential communities offering supportive services for people with functional limitations.²⁴ Individuals at advanced ages (85 and older) are much more likely to be institutionalized than are younger elderly people (ages 65 to 84) because frailty is more common at advanced ages and also because they are more likely to be widowed and thus not have someone who can care for them if they live in the community.

For purposes of this exhibit, people are considered to be institutionalized if they live in a nursing home (a facility licensed to provide skilled nursing care as well as personal care), in a long-term care facility that provides 24-houra-day supervision (such as a residential care facility), or in a facility that offers assistance for people with functional or cognitive limitations or offers supervision of medications.

That finding is based on CBO's analysis of data from the Medicare Current Beneficiary Surveys from 2001 through 2010; and David C. Grabowski, David G. Stevenson, and Portia Y. Cornell, "Assisted Living Expansion and the Market for Nursing Home Care," *Health Services Research*, vol. 47, no. 6 (December 2012), pp. 2296–2315, http://tinyurl.com/nxalkqs.

Exhibit 12.

Living Arrangements for Elderly People Receiving Long-Term Services and Supports, 2010





Note: A person is considered to live in an institution if he or she resides in a nursing home (or skilled nursing facility) or a long-term care facility that provides 24-hour-a-day caregiver supervision, assistance for people with functional or cognitive limitations, or supervision of medications. That definition is consistent with the MCBS's definition.

Long-term services and supports are provided in several different settings. Almost one in five elderly people receiving LTSS (18 percent) live in institutional settings. Individuals who have the most severe limitations or who have relatively little family or social support generally live in nursing homes, although some may choose to live in residential care facilities or other facilities that are capable of providing the necessary care and support. For purposes of this exhibit, people are defined as institutionalized if they live in a nursing home, a residential care facility, or other type of longterm care facility that provides 24-hour caregiver supervision, assistance for functional limitations, or supervision of medications.

Elderly people living in the community, in contrast, may reside in community-based residences that offer basic services (such as meals, housekeeping, and laundry) as well as some health-related services (such as help with medications), but only about 2 percent live in such residences.

The vast majority—80 percent—of elderly people receiving assistance, including many with several functional limitations, live in private homes. They may receive assistance during the day at adult day care centers or in their own home. The care they receive is usually donated or informal. Formal care is paid for out of their own funds, through private insurance, or through public programs (such as Medicaid).

Exhibit 13.

Characteristics of Elderly People Living in Nursing Homes, 2010



80 **Difficulty Performing** 3 Female 1 or 2 Activities of 60 71 **Daily Living** 40 **Difficulty Performing** 84 3 or More Activities of 20 **Daily Living** Male 29 47 9 0 Portion of People With Not Widowed **Functional Limitations** Widowed Who Also Have Cognitive Limitations

> Activities of Daily Living Include bathing, dressing, eating, walking, transferring out of bed or a chair, and using the toilet.

Elderly people who have multiple limitations are more likely to reside in institutional settings (nursing homes, residential care facilities, or other institutional settings) than are people with fewer limitations. In general, nursing home residents are somewhat older and more frail than residents in other institutional settings. About 80 percent of elderly nursing home residents are age 75 or older.

About 84 percent of elderly nursing home residents have three or more functional limitations; of that 84 percent, about half also have cognitive limitations.

Nearly three-fourths of elderly nursing home residents are women, though only 58 percent of people 65 or older are women. The majority of the female nursing home residents are widowed. Women's longer life expectancy may be a reason that more women than men live in an institutional setting. Also, because they are often widowed, those women cannot depend on a spouse to provide assistance.

About four out of every five nursing home residents are non-Hispanic white; roughly that same proportion of elderly people is non-Hispanic white. •

Source: Congressional Budget office based on data from Medicare Current Beneficiary Survey, Access to Care files, 2010. For more information, see the supplemental material.

a. The share of people with limitations in instrumental activities of daily living (preparing meals, shopping, and managing money, for example) was 0.3 percent (not shown in this exhibit).

Exhibit 14.

Characteristics of Elderly People Living in Residential Care Facilities and Other Institutions, 2001 to 2010



- Source: Congressional Budget office based on data from Medicare Current Beneficiary Survey, Access to Care files, 2001 to 2010. For more information, see the supplemental material.
- a. The share of people with limitations in instrumental activities of daily living (preparing meals, shopping, and managing money, for example) was 2 percent (not shown in this exhibit).

Residential care facilities and other non-nursing home facilities are becoming a more popular source of institutional care for elderly people.²⁵ Since the 1990s, the number of elderly people living in RCFs has grown, whereas the population living in nursing homes has fallen.²⁶ Residents of RCFs have demographic characteristics that are very similar to those of elderly people living in nursing homes. About the same percentage of residents are 85 or older-50 percent in nursing homes and 53 percent in RCFs and other institutional settings. Similarly, nearly three-fourths of the residents at both types of institutional settings are female. But nursing home residents have more functional and cognitive limitations, on average, than residents of other institutional settings. About 84 percent of nursing home residents have three or more functional limitations, whereas only about half of residents of RCFs and other facilities have that many functional limitations. About 50 percent of elderly nursing home residents have cognitive limitations, compared with 34 percent of elderly residents of RCFs and other facilities. Nine out of every ten residents of RCFs and other institutional settings are non-Hispanic white; non-Hispanic whites are more likely than other elderly people to live in those settings.

- 25. For definitions of residential care facilities and institutional care, see the glossary at the end of this report.
- 26. Brenda C. Spillman and Kirsten J. Black, *The Size and Characteristics of the Residential Care Population: Evidence from Three National Surveys* (Department of Health and Human Services, Assistant Secretary for Planning and Evaluation, Office of Disability, Aging, and Long-Term Care Policy, January 2006), http://aspe.hhs.gov/daltcp/reports/2006/ 3natlsur.pdf.

Paying for Long-Term Services and Supports

As elderly people age and become more frail, the cost of providing long-term services and supports grows for them and their families, and it can eventually deplete their income and savings. The high cost of paying for care may be one reason that most people with functional and cognitive losses use only informal care; even people who pay for some formal care usually supplement it with informal care.

The cost of institutional care can have a catastrophic impact on an elderly person's finances. In 2011, the annual cost of care for a resident paying either out of pocket or with private insurance in a semiprivate room in a nursing home averaged nearly \$80,000. Prices vary substantially; according to the MetLife Mature Market Institute, Alaska had the highest average annual nursing home cost—nearly \$250,000—but that state has a significantly higher cost of living. Among all other states, Oklahoma had the lowest average price (at just over \$50,000), and Connecticut had the highest (at about \$135,000).²⁷ Although many nursing home residents enter nursing homes relying on coverage from Medicare or private health insurance, they eventually exhaust those benefitswhich are short term and intended to cover episodes of acute care-as well as other financial resources and turn to Medicaid (the most common payer for nursing home care) to continue to finance their stay. According to the 2004 National Nursing Home Survey, 58 percent of elderly nursing home residents were covered by Medicaid. But only about half of those people were covered by Medicaid when they first entered the nursing home. Among private sources of payment, the

most common form is out-of-pocket spending (because most people with LTSS needs do not have private long-term care insurance).

Even though Medicare appears to account for the largest share of spending on services and supports received in the community (see Exhibit 4), the bulk of those payments are probably for short-term postacute care services relating to an acute illness. Medicaid pays for a significant amount of community-based LTSS. Private insurance and other private sources of payment cover relatively little community-based care, especially when compared with private sources of payment for institutional care. That discrepancy may largely result from the availability of informal care as a substitute for formal care provided in the community and the fact that many people lack coverage or other financial resources to pay for formal care.

^{27.} See MetLife Mature Market Institute, *The 2012 MetLife* Market Survey of Nursing Home, Assisted Living, Adult Day Services, and Home Care Costs (2012).

Exhibit 15.

Prices of Long-Term Services and Supports for People Paying Out of Pocket or With Private Insurance, 2002 to 2012



Source: Congressional Budget Office based on MetLife Mature Market Institute, *Market Survey of Long-Term Care Costs,* 2002 to 2012.

Note: All prices are annualized. For facilities (including adult day care services), annual usage is assumed to be 365 days. For a home health aide, the annual cost is estimated on the basis of 4 hours of personal care per day, 5 days per week, 52 weeks per year.

Growth in the prices for LTSS for people paying out of pocket or with private insurance (private pay) has been faster for institutional care than for community-based care.²⁸ Between 2002 and 2012, private-pay prices for a private or semiprivate room in a nursing home grew by an average of 4.0 percent and 4.5 percent, respectively, per year. By comparison, growth in the average wage of a home health aide—a proxy for the price of community-based care—grew by less than 2 percent per year.

The average price of adult day care (community-based care, but generally in a daytime setting similar to that for institutional care) grew at a rate between that of institutional care and home health aide services (community-based care). By comparison, over the 2002–2012 period, the consumer price index grew by an average of 2.5 percent per year, and the employment cost index grew by an average of 2.7 percent per year. The comparatively slow rate of growth in the cost of community-based care may have contributed to the declining rate of institutionalization in recent years.

^{28.} The price data in the exhibit are annualized on the basis of reported unit prices (price per day or hour of service). Thus, the comparison is limited solely to movements in price over time. This exhibit does not include prices paid by Medicare or Medicaid.

Exhibit 16.

Medicare Spending for Postacute Care and Medicaid Spending for Long-Term Services and Supports, for Beneficiaries Age 65 or Older, Fiscal Years 1995 to 2023

(Billions of dollars) Medicare Spending for Postacute Care 120 Actual Projected 100 80 60 40 Total Community-Based Care 20 Institutional Care 0 1999 2001 2003 2005 2007 2011 2013 2015 2017 2019 2021 2023 1995 1997 2009



Sources: Congressional Budget Office; Centers for Medicare & Medicaid Services.

Note: The spending amounts reported for 2011 differ from those reported in Exhibit 4 because this exhibit includes estimates of fee-for-service spending only, while Exhibit 4 includes CMS estimates of spending by managed care entities for long-term care services and postacute care. The expenditure projections are for people age 65 or older. In addition, the Medicare projections incorporate the assumption that Medicare Advantage enrollment remains constant as a share of total Medicare enrollment. Medicaid and Medicare pay for a greater share of long-term services and supports and LTSS-like services than all other sources of payment (excluding informal care) combined. Although Medicaid spending for institutional care for elderly people still dwarfs spending on community-based care, the latter category is growing more quickly. From 2002 to 2012, Medicaid spending for institutional care grew by an average of about 1 percent per year, whereas spending for community-based care grew by an average of about 8 percent per year. From 2013 to 2023, CBO expects Medicaid spending on LTSS to grow by an average of about 5.5 percent per year.²⁹

Medicare does not cover long-term services and supports; however, through its postacute care benefit (covering stays in skilled nursing facilities and visits from home health care providers), Medicare pays for care provided in the same venues and by the same providers, although for a limited period and only if the beneficiary requires care provided by a licensed home health provider or certified skilled nursing facilities. Medicare expenditures for institutional care grew faster than those of Medicaid from 2002 to 2012: Spending for care in skilled nursing facilities grew by an average of about 6 percent per year. Medicare spending for home health care services rose by an average of about 8 percent per year. From 2013 to 2023, CBO expects, Medicare spending on postacute care will grow by an average of about 6.5 percent per year. 🌢

^{29.} For information on the calculations, see Congressional Budget Office, "Methods for Analysis of the Financing and Use of Long-Term Services and Supports," supplemental material for *Rising Demand for Long-Term Services and Supports for Elderly People* (June 2013), www.cbo.gov/publication/44370.

Exhibit 17.

Share of Elderly People Enrolled in Medicaid, by Type of Residence, 2001 to 2010



Because the high cost of institutionalization quickly drains the finances of many people who live in nursing homes, about two-thirds of elderly nursing home residents are enrolled in Medicaid. The percentage of Medicaid enrollees is much lower among people who live in other types of facilities that furnish longterm services and supports, in part because Medicaid does not cover room and board in facilities that are not nursing homes certified for Medicaid beneficiaries. Among Medicaid beneficiaries living in institutional settings, more are likely to live in nursing homes than in other types of facilities.

Source: Congressional Budget Office based on data from Medicare Current Beneficiary Survey, 2001 to 2010. For more information, see the supplemental material.

a. Residences with supportive services offer basic services (such as meals, housekeeping, and laundry) as well as some health-related services (such as help with medications).

Exhibit 18.

Coverage by Medicaid and Private Long-Term Care Insurance Among Elderly People Living in the Community, by Functional Limitations, 2000 to 2010



Activities of Daily Living (ADLs)

Include bathing, dressing, eating, walking, transferring out of bed or a chair, and using the toilet.

Instrumental Activities of Daily Living (IADLs)

Include preparing meals, shopping, using the telephone, managing money, and taking medications.

- Source: Congressional Budget Office tabulations of data from the 2000, 2002, 2004, 2006, 2008, and 2010 waves of the Health and Retirement Study. For more information, see the supplemental material.
- Notes: People are considered to be covered by Medicaid or private long-term care insurance if they reported in the survey that they were covered by that insurance. Regardless of whether they had functional limitations, they may or may not have used the coverage to pay for long-term services and supports.

Individuals are grouped into four mutually exclusive categories in order of increasing functional loss: no impairments (no difficulty in any ADL or IADL, not reported in this exhibit); difficulties with 1 or more IADLs but no difficulty with any ADL; difficulties with 1 or 2 ADLs; and difficulties with 3 or more ADLs. People reporting difficulty performing ADLs may also have functional limitations for one or more IADLs.

Medicaid and private long-term care insurance show very different patterns in their coverage of long-term services and supports and in the characteristics of their enrollees. Elderly people with three or more functional limitations who live in the community are nearly five times as likely to be Medicaid beneficiaries (24 percent, on average, from 2000 to 2010) as are people with no functional impairments (5 percent); in contrast, elderly people with no functional limitations are twice as likely to hold private long-term care insurance as are people with three or more limitations. People with three or more functional limitations are generally older, are less likely to have worked recently, and have higher medical and LTSS expenses, which could have required use of income and assets that hastened their eligibility for, and subsequent enrollment in, Medicaid.³⁰

Elderly people without any functional limitations generally have higher income and may have purchased LTC insurance to avoid having to use their savings to pay for care if they need assistance later in life. Moreover, because premiums for LTC insurance are usually based on an applicant's likelihood of suffering functional or cognitive limitations in the future, coverage is generally more expensive or even unavailable for people in poor health or with a family history of certain diseases.³¹

- Kirsten J. Colello and Scott R. Talaga, *Medicaid* Eligibility for Persons Age 65+ and Individuals with Disabilities: 2009 State Profiles, CRS Report for Congress R41899 (Congressional Research Service, June 28, 2011).
- Kirsten J. Colello and others, *Long-Term Services* and Supports: Overview and Financing, CRS Report for Congress R42345 (Congressional Research Service, April 4, 2013).

Exhibit 19.

Enrollment in Private Long-Term Care Insurance, 1999 to 2011



Source: Congressional Budget Office based on National Association of Insurance Commissioners, *Long-Term Care Insurance Experience Reports for 2009*, and *Long-Term Care Insurance Experience Reports for 2010* (for data on policies in force).

Note: The data represent all covered lives, not just those of elderly people.

Private long-term care insurance coverage is uncommon among elderly people receiving longterm services and supports-an estimated 11 percent had such coverage in 2010.³² Coverage among the adult U.S. population is lower; only about 3 percent had LTC insurance in 2011. Private insurance (including both health insurance and LTC insurance) paid for less than one-tenth of LTSS spending for the elderly in 2011. The number of people covered by private LTC insurance grew, on average, by 12 percent per year from 1998 to 2005, but the rate of growth slowed over that period. From 2005 to 2011, the average annual rate of growth in enrollment was about 1.5 percent, only slightly faster than the average annual rate of growth in the U.S. adult population (1.1 percent). That slower growth is attributable to premium increases for existing policyholders (as a result of lower investment returns and inaccurate assumptions used in pricing products) and the exit of some carriers from the market, as well as the recent economic downturn.³³ The slower growth is coming at the same time that the age group most likely to purchase LTC insurance—people ages 55 to 64 is reaching its peak as a share of the U.S. population. According to a survey sponsored by America's Health Insurance Plans, people who chose not to buy an LTC policy were more likely than buyers to underestimate the costs of LTSS and their risk of needing LTC benefits and to believe that public programs would pay for necessary care.³⁴

- 33. A.M. Best, "Past Sins, Weak Economy Extend Long-Term Care Writers' Struggle," *Best's Special Report* (March 29, 2010).
- 34. America's Health Insurance Plans, *Who Buys Long-Term Care Insurance in 2010–2011?* (report prepared by LifePlans, March 2012), www.ahip.org/ WhoBuysLTCInsurance2010-2011/.

^{32.} That information comes from CBO's tabulations of data from the 2010 Health and Retirement Study.

Exhibit 20.

Coverage Through the Partnership for Long-Term Care, 2000 to 2011



Source: Congressional Budget Office based on data from individual states' websites (for the original partnership states) and from Truven Health Analytics, Long-Term Care Partnership Program, "DRA Partnership Reports," http://w2.dehpg.net/LTCPartnership/Reports.aspx (for the remaining states).

Notes: Estimates are for all policyholders, not just elderly people.

The sharp increase in sales of partnership policies beginning in 2009 reflects the data from the additional 30 state programs established following enactment of the Deficit Reduction Act of 2005 (DRA). Policy sales for those new DRA state programs were not systematically reported until 2009.

The Partnership for Long-Term Care is an arrangement between states and private insurers intended to reduce dependence on Medicaid for financing long-term services and supports. Long-term care insurance offered through a state's partnership program enables policyholders to maintain larger amounts of countable assets and still qualify for long-term care under Medicaid once the private policy is exhausted.

Although the program was originally limited to four states (California, Connecticut, Indiana, and New York), all states are now permitted to establish Partnerships for Long-Term Care. Each state establishes and administers its own program; reciprocity rules included in the Deficit Reduction Act of 2005 (or DRA, which expanded eligibility to all states) make it possible for most policyholders who purchase a partnership policy and then move from the state to continue to qualify for partnership benefits in their new state of residence. Although total policy sales (both partnership and conventional) have grown more slowly over the past few years, the number of partnership policies has grown rapidly as states have established their own programs in response to the DRA. By 2009, 30 additional states had established programs. (Although some policy sales took place before 2009, the collection of data on sales did not begin until 2009.) Partnership policies accounted for about 10 percent of all LTC policies in 2011, up from 3 percent in 2007. (Some growth in partnership policy sales is because individuals converted their existing conventional policies to partnership policies; those conversions did not contribute to an increase in total sales.)

Three Possible Scenarios of Trends in Functional Limitations and the Demand for Long-Term Services and Supports

To assess future needs for LTSS, the Congressional Budget Office prepared projections through 2050 of the prevalence of functional limitations among elderly people living in the community, the demand for caregivers for those people, and spending on LTSS for the elderly. Those projections reflect three different scenarios regarding the future prevalence of functional limitations.

Scenario 1 incorporates the assumption that the prevalence rates of functional impairments among people of different ages and sexes will remain constant over time, reflecting averages calculated from the 2000–2010 waves of the Health and Retirement Study. That scenario is only hypothetical, however, because relationships between impairment, age, and sex observed today might not continue into the future. The prevalence of functional limitations observed over the 2000–2010 period reflects a combination of factors, including the prevalence of certain health conditions and the effectiveness of medical treatments in combatting the loss in functioning associated with those conditions, all of which might change in the future.

To illustrate the range of uncertainty surrounding the future demand for long-term services and supports, CBO constructed two alternative projections of the prevalence of functional limitations. Although many health-related factors affect functioning (for example, obesity, smoking, diabetes, dementia, and heart disease), Scenarios 2 and 3 present hypothetical projections of the prevalence of functional limitations under the assumption of two different trends in the prevalence of obesity (and with all other factors held constant for simplicity). According to CBO's tabulations of data from the Health and Retirement Study, elderly people who are obese have a higher prevalence of functional limitations than elderly people who are not obese. In addition, obesity at younger ages has been shown to increase the probability that a person will have functional limitations at later ages.³⁵ CBO's projections reflect the assumption that the relationship between obesity and functional loss remains constant over the 2010-2050 period.

Scenario 2 incorporates projections of a decline in the prevalence of functional limitations (using the RAND Corporation's Future Elderly Model) under the assumption that, by 2050, the prevalence of obesity will decline to the level observed in 1978.³⁶ Scenario 3 presents the opposite situation—a rise in the prevalence of functional limitations—under the assumption that the prevalence of obesity increases at the same rate over the next four decades as that observed in the Health and Retirement Study from 2000 to 2010.

35. Soham Al Snih and others, "The Effect of Obesity on Disability vs. Mortality in Older Americans," Archives of Internal Medicine, vol. 167, no. 8 (April 2007), pp. 774–780, http://tinyurl.com/kbtflp7; and Honglei Chen and Xuguang Guo, "Obesity and Functional Disability in Elder Americans," Journal of the American Geriatrics Society, vol. 56, no. 4 (April 2008), pp. 689– 694, http://tinyurl.com/mk5gcg5.

36. For a description of the model, see RAND Corporation, Modeling the Health and Medical Care Spending of the Future Elderly, Research Brief RB-9324 (RAND Corp., 2008), www.rand.org/content/dam/rand/pubs/ research_briefs/2008/RAND_RB9324.pdf. Projections of the prevalence of impairment used in Scenario 2 are based on projections in Dana Goldman and others, "The Fiscal Consequences of Trends in Population Health," National Tax Journal, vol. 63, no. 2 (June 2010), pp. 307–330, http://ntj.tax.org/.

Exhibit 21.

Projected Demand for Caregivers for Elderly People Living in the Community: Three Possible Scenarios, 2010 to 2050

(Percentage of the adult nonelderly population)



Source: Congressional Budget Office tabulations of data from the Health and Retirement Study. Projections are consistent with projections of the prevalence of functional limitations presented in Exhibit 22.

Notes: The percentages are based on the number of caregivers, regardless of the number of hours they work. For additional notes, see Exhibit 22.

In 2010, 4.0 percent of nonelderly adults provided informal long-term care to elderly people living in the community, and 0.8 percent were employed providing formal care. The increase in the number of people who are elderly (as described in Exhibits 1 and 2) will generate substantial increases in the number of people with functional limitations, and those increases will contribute to a much greater demand for caregivers. The demand for longterm care workers, measured in terms of the share of the nonelderly adult population ages 19 to 64, will increase over the coming decades as the need for services grows. At the same time, the caregiving population will shrink relative to that of the elderly. (In these projections, the Congressional Budget Office assumes that patterns of use of long-term care workers would remain the same under all three scenarios.)

Under Scenario 1, demand for caregivers would more than double, to about 10 percent of the nonelderly adult population by 2050. (The percentages are based on the number of workers, not the number of hours worked.) Under Scenario 2, in which the prevalence of functional limitations declines, demand for workers (as a share of the total workforce) would still increase significantly by 2050, to about 7 percent. Under Scenario 3, in which the prevalence of functional limitations increases, about 11 percent of nonelderly adults would be needed to provide formal and informal care by 2050. ◆

Exhibit 22.





Source: Congressional Budget Office tabulations of data from the Health and Retirement Study (2000–2010 average).

Notes: Scenario 1 incorporates the assumption that the prevalence of functional impairments among people of different ages and sexes remains constant through 2050. Scenario 2 incorporates the assumption that the prevalence of obesity falls back to levels observed in 1978 and that all other factors that could influence trends in functional limitations remain constant. Scenario 3—as opposed to Scenario 2—incorporates the assumption that the prevalence of obesity rises (and holds all other factors constant).

Reported rates of prevalence reflect limitations in one or more activities of daily living or instrumental activities of daily living. For 2010, the prevalence is an average of rates (by age and sex) observed in the 2000–2010 waves of the Health and Retirement Study, weighted by the 2010 population. For more information, see the supplemental material.

The increase in the number of elderly people will have a substantial impact on the need for caregivers under various assumptions about the future prevalence of functional limitations; in fact, future prevalence rates by themselves are unlikely to significantly affect future demand for LTSS or expenditures associated with it.

If the prevalence of functional limitations among people of different ages and sexes remained constant (Scenario 1), the prevalence of functional loss (difficulty performing one or more ADLs or IADLs) among elderly people living in the community would be slightly lower in 2030 (26.5 percent) than it was in 2010 (27.2 percent), because the influx of the baby-boom generation will reduce the average age of the elderly. By 2040 and 2050, however, baby boomers will have reached advanced ages, so the overall prevalence of functional loss among the elderly would be higher-climbing to about 29 percent in 2040 and about 30 percent in 2050. Under Scenario 2, the prevalence of functional loss among elderly people would fall by an average of 0.12 percentage points per year from 2010 to 2050, reaching 22 percent by 2050. (In spite of the projected decline in obesity from 2010 to 2050 under that scenario, the total prevalence of functional limitations would still rise in 2040 and 2050 from the 2030 projection because of the babyboomer effect, which will boost the number of people age 85 or older.) Under Scenario 3, the prevalence of functional limitations would increase to about 34 percent by 2050.

Exhibit 23.

Future Spending for Long-Term Services and Supports for Elderly People: Three Possible Scenarios, 2010 to 2050



Sources: Congressional Budget Office based on information from the Centers for Medicare & Medicaid Services, Office of the Actuary. The projections for 2020, 2030, 2040, and 2050 are consistent with the projected increases in impairment reported in Exhibit 21. Projections of GDP are from Congressional Budget Office, *The 2012 Long-Term Budget Outlook* (June 2012), www.cbo.gov/publication/43288. In that report, expenditures for long-term services and supports were included as part of total health care spending, but they were not explicitly identified. For more information, see the supplemental material.

Notes: Scenario 1 incorporates the assumption that the prevalence of functional impairments among people of different ages and sexes remains constant through 2050. Scenario 2 incorporates the assumption that the prevalence of obesity falls back to levels observed in 1978 and that all other factors that could influence trends in functional limitations remain constant. Scenario 3—as opposed to Scenario 2—incorporates the assumption that the prevalence of obesity rises (and holds all other factors constant).

Reported rates of prevalence reflect limitations in one or more activities of daily living or instrumental activities of daily living. For 2010, the prevalence is an average of rates (by age and sex) observed in the 2000–2010 waves of the Health and Retirement Study, weighted by the 2010 population. For more information, see the supplemental material.

By 2050 under all three scenarios, the Congressional Budget Office projects, spending for formal long-term services and supports (not including the economic value of informal care) will rise to a significantly higher share of gross domestic product than it is today, primarily because of the aging of the population. Under the assumption that the prevalence of functional limitations among elderly people of different ages and sexes will remain constant (Scenario 1), spending as a share of GDP will more than double, climbing from 1.3 percent in 2010 to 3.0 percent in 2050. Under Scenario 2's more optimistic projection, spending would still reach 1.9 percent of GDP in 2050. Scenario 3 indicates that if the prevalence of impairment rises rather than falls, even by a relatively modest amount, spending as a percentage of GDP could reach 3.3 percent, two-and-a-half times what it was in 2010, all other things being equal.

The spending estimates vary according to the projections of the prevalence of functional limitations and of the prevalence of institutionalization embodied in the three possible scenarios; all other factors that affect LTSS spending (such as the rate of growth in prices for LTSS, changes in family structure that could affect the provision of informal care, and changes in how services and supports are delivered) are held constant across the scenarios.³⁷

^{37.} Although not reported in Exhibit 22, projections of the prevalence of institutionalization among elderly people are calculated in the same manner as the prevalence of functional limitations for elderly people living in the community. For more information, see Congressional Budget Office, "Methods for Analysis of the Financing and Use of Long-Term Services and Supports," supplemental material for *Rising Demand for Long-Term Services and Supports for Elderly People* (June 2013).

About This Document

This Congressional Budget Office (CBO) report was prepared at the request of the Chairman of the Senate Committee on Finance. In keeping with CBO's mandate to provide objective, impartial analysis, the report makes no recommendations.

Stuart Hagen of CBO's Health, Retirement, and Long-Term Analysis Division wrote the report with guidance from Linda Bilheimer and Melinda Buntin. Jim Baumgardner, Tom Bradley, Stephanie Cameron, Holly Harvey, Jean Hearne, Michael Levine, and Andrea Noda, all of CBO, provided useful comments, as did Harriet Komisar of Georgetown University, David Grabowski of Harvard University, and Tamara Konetzka of the University of Chicago. (The assistance of external reviewers implies no responsibility for the final product, which rests solely with CBO.)

Christine Bogusz edited the report, and Maureen Costantino and Jeanine Rees prepared it for publication. An electronic version is available on CBO's website (www.cbo.gov).

Douglas W. Elmender

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June 2013

Glossary

This glossary of terms related to long-term services and supports is generally based on the glossary compiled by the Office of the Assistant Secretary for Planning and Evaluation at the Department of Health and Human Services, available at http://aspe.hhs.gov/daltcp/diction.shtml.

Activities of daily living (ADLs): Basic personal activities, including bathing, eating, dressing, moving around, transferring from bed to chair, and using the toilet.

Adult day care: A daytime community-based program for adults with functional impairments that provides health, social, and related support services in a protective setting.

Assisted living facility: Residences that provide a "home with services" and that emphasize residents' privacy and choice. Residents typically have private rooms that lock (shared only by choice) and private bathrooms. Personal care services are generally available 24 hours a day. Assisted living facilities provide a broad range of residential care services, including some assistance with activities of daily living and instrumental activities of daily living but excluding nursing services (such as administration of medication). Assisted living facilities stress independence and generally provide less intensive care than that delivered in nursing homes and in other long-term care institutions.

Board and care home: A home that offers housing and personal care services. (Such a residence may also be called an *adult care home* or group home.) Services such as meals, supervision, and transportation are usually provided by the owner or manager.

Caregiver: A person who provides support and assistance with various activities. The person may provide emotional or financial support as well as help with different tasks. Caregivers may be unpaid (informal care) or paid (formal care).

Cognitive impairment: Deterioration or loss of intellectual capacity, as indicated by clinical evidence and standardized tests that reliably measure impairment in the areas of short- or long-term memory; orientation as to person, place, and time; and deductive or abstract reasoning. People with cognitive impairment require continual supervision to protect themselves and others from harm. Such loss in intellectual capacity can result from Alzheimer's disease or from other ailments, such as vascular dementia, Parkinson's disease, dementia with Lewy bodies, and frontotemporal dementia.

Congregate housing: Individual apartments with which residents may receive some services, such as a daily meal with other tenants. Buildings usually have some common areas, such as a dining room or lounge, and additional safety measures, such as emergency call buttons. Rental payments for this type of housing may be paid in part by the government.

Continuing care retirement community: Communities that offer multiple levels of care (independent living, assisted living, and skilled nursing care) and that allow residents to remain in the same environment even if their needs change. These communities provide residential services (meals, housekeeping, and laundry), social and recreational activities, health care services, personal care, and nursing care. They require payment of a monthly fee and possibly a large initial lump-sum payment.

Custodial care: Assistive care for people with functional limitations that does not require specialized training or services. (See also *personal care*.)

Dementia: A group of diseases (including Alzheimer's disease) that are characterized by memory loss and other declines in mental functioning.

Group home: See board and care home.

Home- and community-based services: Any care or services provided in a patient's place of residence or in a noninstitutional setting. Services may include skilled services, such as home health care and other medical services, and nonskilled services, such as personal care, adult day care or day treatment, and homemaking.

Home- and community-based waivers: Under section 1915(c) of the Social Security Act, state Medicaid programs may obtain a waiver to offer a wide array of home- and community-based services that an individual may use to delay or avoid institutionalization. Among the services offered are case management, homemaking, personal care, adult day care, habilitation, and respite care.

Home health agency: A public or private organization that provides health care services in a patient's home.

Home health aide: A person who assists elderly, ill, or disabled people with household chores, bathing, personal care, and other daily living needs.

Home health care: Health care services provided in the home to aged, disabled, sick, or convalescent individuals who do not need institutional care. The care provided includes a wide range of health-related services, such as assistance with medications, treatment of wounds, and intravenous therapy, as well as help with basic needs, such as bathing, dressing, and mobility. The services may be provided by a visiting nurse association, home health agency, county public health department, hospital, or other organized community group and may be specialized or comprehensive. The most common types of home health care are nursing services; speech, physical, occupational, and rehabilitation therapy; homemaker services; and social services.

Homemaker services: In-home help with meal preparation, shopping, light housekeeping, money management, personal hygiene and grooming, and laundry.

Impairment: Any loss or abnormality of psychological, physiological, or anatomical function.

Institutional care: People are considered to be receiving institutional care if they reside in facilities that provide longterm services and supports 24 hours a day, 7 days a week. Generally, two types of facilities provide such care to the elderly: *nursing homes* and *residential care facilities*. In this document, the Congressional Budget Office also includes in the institutionalized population people who live in facilities that provide supervision of medications or assistance in performing activities of daily living or instrumental activities of daily living, even if the facilities do not provide those services on a 24-hour basis. That usage is consistent with how the Medicare Current Beneficiary Survey defines a "facility."¹ Because the counts in that survey are comparable to counts from surveys that do not use as broad a definition of the institutionalized population, relatively few elderly people apparently reside in such facilities.

Instrumental activities of daily living (IADLs): Tasks associated with running a household or living independently, such as using the telephone, taking medications, managing money, doing housework, preparing meals, doing the laundry, and shopping for groceries.

Long-term care: See long-term services and supports.

Long-term services and supports (LTSS): A category that encompasses a variety of supportive services provided to people who have limited ability to perform routine daily activities, such as bathing or dressing. LTSS typically exclude medical services that are needed to manage underlying health conditions. LTSS can be provided in nursing homes or other institutions, in people's homes, or in community-based settings (such as adult day care centers). Medicaid is the primary government payer for most such services. The exceptions are skilled nursing facility services, hospice care, and home health care services, which Medicare pays for in some circumstances.

Brenda C. Spillman and Kirsten J. Black, *The Size of the Long-Term Care Population in Residential Care: A Review of Estimates and Methodology* (report prepared by the Urban Institute for the Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation, Office of Disability, Aging, and Long-Term Care Policy, February 28, 2005).

Nursing facility: See *nursing home*.

Nursing home: A facility licensed by the state to offer residents personal care as well as skilled nursing care on a 24-hour-a-day basis. Nursing homes also provide room and board, supervision, medication management, therapy, and rehabilitation. Many rooms are shared, and communal dining is common. Nursing homes may also be called *nursing facilities* or *skilled nursing facilities*.

Personal care: Services that enable individuals to perform routine daily activities that they would typically accomplish themselves if they did not have a disability. Also called *custodial care*, such services include assistance with activities of daily living as well as self-administration of medications and preparation of special diets.

Postacute care: Recuperation and rehabilitation services provided to patients recovering after a stay in a hospital for acute care. Postacute care is provided by skilled nursing facilities, home health agencies, and inpatient rehabilitation facilities, among others.

Residential care facility (RCF): A facility that provides room, board, and personal care services for people with functional or cognitive limitations or both but that is not licensed as a nursing home. The National Center for Health Statistics, in its *National Survey of Residential Care Facilities*, defines RCFs as "Facilities with four or more beds serving an adult population that are licensed, registered, certified, listed or otherwise regulated to provide housing services (i.e., room and board with at least two meals a day), 24 hour/7 day a week supervision, and help with personal care (e.g., bathing, dressing, or eating) or health-related services (e.g., medication management)."² Although Medicaid does not directly pay for room and board services provided in RCFs, the program covers long-term services and supports provided to RCF residents.

Skilled care: A level of care provided by licensed medical professionals, such as physicians, nurses, and physical therapists.

Skilled nursing care: Daily nursing and rehabilitative care that can be performed only by or under the supervision of skilled medical personnel. Skilled nursing care is a common form of skilled care.

Skilled nursing facility: A facility that is licensed to provide 24-hour nursing care and rehabilitation services in addition to other medical services. The term is usually used to describe facility-based postacute care that is covered by health insurance, such as Medicare. A nursing home, or the part of the nursing home that delivers skilled nursing care, may be called a skilled nursing facility. (See also *nursing home*.)

Joshua M. Wiener and others, National Survey of Residential Care Facilities: Sample Frame Construction and Benchmarking Report (report prepared for the Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation, Office of Disability, Aging, and Long-Term Care Policy, April 15, 2010), p. 2.