

Is Expanding Public-Financed Home Care Cost-Effective?

Jing Guo, Ph.D., Economist, American Institutes for Research

Summary

As American Baby Boomers retire and age, questions about how to deliver long-term care efficiently and control health care costs grow more important with each projected increase in health care needs. Developing and expanding home- and community-based services (HCBS) alternative to institutional long-term care has long been a priority for many state Medicaid programs in addressing these challenges. Can this approach help save money and improve quality of life?

Answering these questions requires examinations of both costs and outcomes. This brief examines recent research on both, exposes fault lines in previous approaches to assessing consumer preferences in long-term care, and provides new evidence on the cost-effectiveness of current long-term care policy. Key findings include the following:

- Expanding home care is not a silver-bullet solution to controlling high long-term care costs.
- Customer satisfaction and preferences need to be taken into account in planning for long-term care.
- People's preference for home- or community-based long-term care depends on how much care they need.

What's the problem?

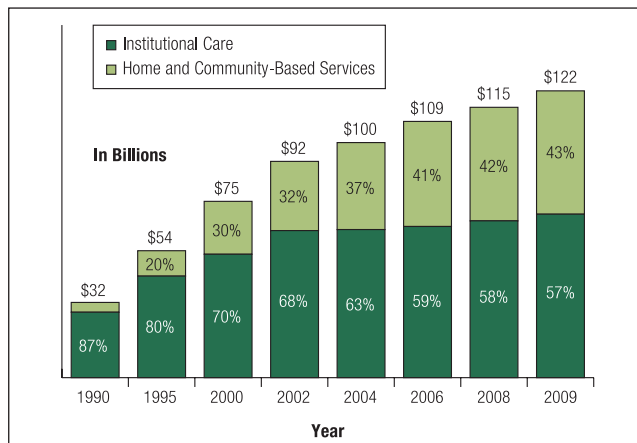
As the primary payer for long-term care services and other health care for a particularly vulnerable population, Medicaid faces vexing challenges — including how to deliver health care efficiently and control costs. Given the projected increase in health care

needs as the nation's elderly population grows and the huge Baby Boom generation retires and ages, these challenges can only grow, especially amid economic crises that strain federal and state budgets. Medicaid long-term care expenditures already account for about one-third of total Medicaid spending, which is around \$130 billion.¹ Although most Medicaid long-term care dollars still go to institutional care, the national percentage of Medicaid spending on HCBS has more than doubled over the last two decades (Figure 1). In 2010, nearly 3.2 million people were receiving HCBS.²

Developing and expanding HCBS alternatives to institutional long-term care has long been a priority for many state Medicaid programs. Many policymakers believe that providing home care could help control costs by keeping people in less expensive settings than nursing homes. When it comes to consumer preferences for long-term care, the general perception is that most people prefer receiving long-term care in their homes or communities rather than in nursing facilities or other institutional settings. However, there is little rigorous evidence to back up this belief. As states have expanded coverage of home care rapidly over the last two decades, voluminous research literature has continuously been focused on whether HCBS is cost-effective, which should mean not only reduced spending but also enhanced value. On the cost side analysis, a variety of previous studies produced a record of nursing home cost savings too small to offset the increased costs of non-institutional health care.^{3,4} Meanwhile, evidence of home care's effect on the probability of institutionalization is conflicting⁵⁻¹⁰ and gauging the cost-effectiveness is difficult because valid and comparable outcomes

are rarely examined — although researchers have emphasized the budget neutrality of home and community-based care. Clearly, current research needs to move beyond simple analyses of cost to rigorously consider both cost and outcomes.^{11–13}

Figure 1. How much has spending on Medicaid long-term care services grown?



Note: Home and community-based care includes home health, personal care services, and HCBS service waivers. Institutional care includes intermediate care facilities for the mentally retarded, nursing facilities, and mental health facilities.

Source: KCMU and Urban Institute analysis of HCFA/CMS-64 data. "Growth in Medicaid Long-term Care Services Expenditures, FFY 1990–2009." Kaiser Slides, The Henry J. Kaiser Family Foundation, accessed July 2012, <http://facts.kff.org/chart.aspx?ch=476>. Reprinted by permission of the Henry J. Kaiser Family Foundation.

Does home care substitute for institutional long-term care?

Is home care a good substitute for institutional care? Considering the data shown in Figure 1, if we relied only on institutional care, would the total cost have been higher than \$122 billion in 2009? Did each dollar of new spending on HCBS lower spending by at least one dollar on what alternative would have been on institutional care? The debate over the actual effect of Medicaid-financed home care for individuals on institutional care continues. Earlier studies of these issues suffer from limitations that may yield biased estimates of home care's true impacts on institutional care use and public expenditures.

Although many previous studies have asked whether home care can be a cost-effective substitute for institutional long-term care, they offer limited evidence on the causal effect of home care use on the probability and costs of institutionalization. To be cost-effective, each dollar spent on home care would have to save enough on nursing home costs to offset the likely increase in overall use it engenders. In principle,

home care should be able to substitute some institutional long-term care, because both types of care aim to meet the needs of people with difficulties performing activities of daily living (ADLs), and a lot of people prefer to receive long-term care at home. But studies seeking answers to this question are difficult to do, primarily due to selection bias. For instance, both home care and nursing home use are likely to be correlated with individual characteristics, some of which — say, health attitudes or habits, or parts of the health status and disease history — aren't backed up by enough data. In addition, home care and institutional long-term care may affect each other simultaneously because the risk of needing such institutional care may also influence home care use. Failure to address these issues can lead to faulty estimates. Some studies suggest a positive or no effect between home care and institutional long-term care,^{14,15} while others underestimate the substitution effects of home care on institutional long-term care.¹⁶ Thus, even the direction of the bias may not be clear enough to be useful to decision-makers.

To improve the estimate of the causal effects of Medicaid home care expenditures on institutional long-term care utilization and costs, my colleagues and I take a different approach. We used a unique instrumental variable approach to address the bias issue¹⁷ and took advantage of a process that encouraged use of Medicaid-financed home care but was not linked to individuals' entry into institutional long-term care. We also included a rich set of baseline disease history and health status attributes to make the results more precise.

Our findings suggest that expanding home care under Medicaid programs could help reduce institutional long-term care use, but the offsets are only partial. Increasing Medicaid expenditures on home care for older adults by \$1,000, for instance, reduces nursing facility use by 2.75 days or \$351 in Medicaid nursing facility costs. This is a conservative estimate because data limitations made it impossible to estimate costs to Medicare and other payment programs for these same beneficiaries. Indeed, a 2011 MetLife market survey of long-term care costs¹⁸ pegged the national average daily rate for a private nursing home room at \$239. If that figure is used instead of Medicaid's direct cost, annual savings jump from \$351 for 2.75 nursing facility days to as high as \$657.¹

¹ These findings are robust to a number of checks. One such check using survival model suggests that doubling previous monthly Medicaid home care expenditures significantly reduced the risk of future nursing home entry by 15 percent, which could be estimated as 1.78 days delay per year in this sample.

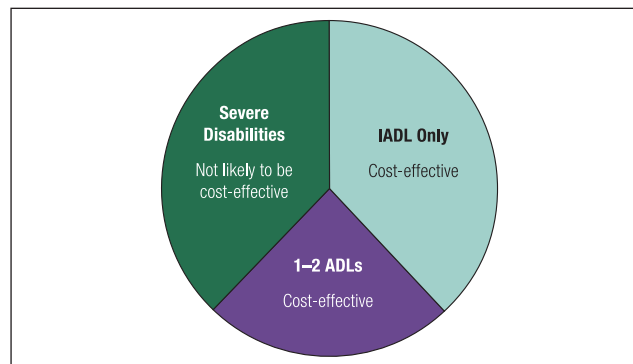
That said, home- or community-based long-term care will not lower states' *overall* costs because there is no 1:1 offset. Although HCBS does significantly substitute for nursing home services, some people who would not use institutional care will accept home-based services, so their overall services use rises. Even so, expanding home care could still be cost-effective if people are more satisfied and their improved quality of life is taken into account in calculations of cost offsets. This is an important policy question that merits further study.

How much and when do patients prefer home care?

Our second study,¹⁹ motivated by the findings above, weighs the evidence on whether home- and community-based care improves quality of life and health outcomes, which is important in calculating cost effectiveness if, as predicted, the costs of such care drive up overall long-term care spending. The current policy of expanding publicly financed home care services is based on qualitative and survey research findings which indicate that older adults generally prefer home care to nursing homes.^{20–24} However, this preference hasn't been rigorously quantified, and research on long-term care's effectiveness has focused disproportionately on a narrow range of clinical outcomes that may not be correlated strongly with individual preferences. The effectiveness of care would be easier to gauge if different health care options were translated into comparable units — such as quality-adjusted life years across studies²⁵ — and standard health economic evaluation methods have rarely been used to assess social preferences for health care delivery options. With little hard evidence about user preferences at hand, policymakers will be hard-pressed to make the best possible decisions about how much to invest in and how much to incentivize particular modes of health care delivery.

Laying the groundwork for a valid scientific methodology for quantifying preferences across long-term care options and health conditions and for an informed policy discussion, our most recent study^{19,26} relied on focus groups and primary data that we collected. In a pilot study, two focus groups discussed long-term care decision-making and preferences among different care options. We also quantified users' long-term care preferences, differentiating between quality of life in home care and nursing facility services.

Figure 2. Cost-effectiveness of providing home care services for long-term care users over age 65



We found that long-term care preferences clearly vary by health condition. Although participants voiced a strong aversion to nursing home care generally and believed that home care could provide higher quality long-term care and foster greater autonomy and independence, preferences for home care decline substantially with levels of disability and eventually disappear when patients suffer both severe physical and cognitive impairment. Specifically, when people need help with only one or two ADLs, such as bathing or dressing, the home care preference is statistically significant and could translate into gains of \$13,500 to \$27,000 per year (over receiving care in an institutional setting) if the value of a quality adjusted life year is set at \$50,000–\$100,000.²⁷

Policy implications

Given the policy trend toward expanding Medicaid home care services, the need to understand whether reorienting delivery from institutions to communities would provide cost-effective care is urgent. Our studies suggest that expanding Medicaid-financed home care services might be a way to delay nursing home entry and avoid some institutional care costs. Significant substitution effects of home care partially offset both nursing facility use and Medicaid nursing facility costs. However, states' total expenditures are *not* likely to be reduced.

Is there still a case, apart from absolute costs, for providing home care? Conventional wisdom aside, long-term care preferences depend significantly on the degree of impairment, and people do not consistently prefer home care over institutional long-term care as long assumed. To provide cost-effective care means that long-term care options should vary by specific population. For example, as illustrated in Figure 2,

among older long-term care users needing help with one or two ADLs (25–30 percent), home- and community-based long-term care should be cost-effective. However, for those with severe disabilities (38–43 percent of older long-term care users, and 6–10 percent of all adults aged 65 and older), expanding home care is unlikely to improve quality of life or save money. Home- and community-based care are important options but not a silver-bullet solution to controlling high long-term care costs.

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ABOUT THE AUTHOR

Jing Guo, Ph.D., is an Economist in the Health & Social Development Program at AIR. Her research focuses on health economics evaluations relevant to policy and medical decision making and the use of econometric methods for causal inference, especially on aging and long-term care. She serves as a scientific committee member for the American Society of Health Economists. She received her doctoral degree in health economics from the University of Chicago.