Medical and Long-Term Care Costs When Older Persons Become More Dependent

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Loss of independence in older persons places considerable financial burden on them, their families, and the health care system. This study estimated the additional medical and long-term care costs that occur during the year when older persons make the transition to dependency at home or move to a nursing home.

METHODS

Study Population

The data used in these analyses were from the Medicare Current Beneficiary Survey, an ongoing survey of representative samples of the Medicare population funded by the Health Care Financing Administration.[1] The sample used for these analyses was derived from the 1995 Medicare Current Beneficiary Survey Cost and Use population, which represents all individuals enrolled in Medicare at some point during 1995. The sample was drawn from 107 major metropolitan areas chosen to represent the United States, including the District of Columbia and Puerto Rico.[2] Each year's sample is drawn in January of the year before the year of the first fall interview, so all beneficiaries in the analysis survived at least 1 year beyond the date they enrolled in Medicare and were therefore at least 66 years old in 1995. These analyses include 6011 elderly persons for whom survey data existed just before 1995 and who survived through the end of 1995. Medicare recipients younger than age 65 years were excluded. Because this study was not meant to be an analysis of costs associated with dying, only those surviving the full year were included in the analyses. Sampling weights were applied to obtain estimates for the US population.

Ascertaining Disability and Residence Status

Interviews were conducted with Medicare Current Beneficiary Survey participants or proxies 3 times per year. The round 10 interview, performed in the last 3 months of 1994, provided baseline disability and residence status, and the 1-year follow-up status came from the round 13 interview, performed in the last 3 months of 1995. A proxy responded for all institutionalized persons.

Disability in activities of daily living was defined as receiving either hands-on help or standby assistance for eating, dressing, bathing, using the toilet, or getting into and out of a chair. A long-term care facility was defined as having 3 or more beds and providing long-term care services throughout the facility or in a separate definable unit.[2]

Ascertaining Medical and Long-Term Care Expenses

The Medicare Current Beneficiary Survey Cost and Use files document all health care spending for Medicare beneficiaries, including services both covered and not covered by Medicare. Survey data were linked to Medicare claims data.[3] During each interview, the Medicare Current Beneficiary Survey participant or proxy was asked about multiple aspects of health care use, including hospital, outpatient facility, institutional, outpatient prescribed medication, dental care, emergency department, and home health care use. Respondents were asked to keep records of services received between interviews and to use Medicare Explanation of Benefits and insurance payment reports, as well as pill bottles, to keep track of health care use and spending. In constructing the Medicare Current Beneficiary Survey files, the Health Care Financing Administration used a complex algorithm to reconcile Medicare claims with self-reported service use, generally relying on patient self-reported expenditure information for services not covered by Medicare.

RESULTS

Of the estimated 28.2 million older Americans who started 1995 with no disability and survived at least 1 year, 3.3% spent no time in a nursing home but developed activities of daily living disability, and 1.1% spent at least some time in a nursing home during the year. Among the 2.1 million persons beginning the year with activities of daily living disability at home, 8.9% spent time in a nursing home. Table 1 portrays the incremental increase in costs for older persons who developed activities of daily living disability at home or who entered a nursing home by comparing their

TABLE 1—Total Health Care Spending (Medical Care and Formal Long-Term Care Costs) According to Level of Dependency Over 1 Year and Estimated Additional Costs of Care for Persons Making the Transition to More Dependent States: US Persons Aged 66 Years and Older, 1995

	Annual Per Person Cost, $, by Status After 1 Year				US Estimates	
Baseline Status	No ADLs	≥1 ADL, No NH Use	NH Use	Difference	No. Making Transition	Total Additional Cost, $ Billions
No ADLs	4771	18 025		13 254	939 520	12.45
No ADLs	4771		36 596	31 825	302 042	9.61
≥1 ADL in community		19 408	40 877	21 469	188 087	4.04
Totals					1 429 649	26.1

Note. ADLs = activities of daily living; ≥1 ADL = help received in 1 or more ADLs (eating, dressing, bathing, using the toilet, getting into and out of a chair); NH = nursing home.

costs with costs of persons who began the year with the same status but did not make the transition. The additional cost for the 1.4 million persons making these transitions totaled $26.1 billion in 1995. The long-term care component (nursing home care, including skilled nursing facilities, and paid home care) was $12.8 billion, and the medical care component (including inpatient and outpatient hospital care, physicians and other medical care providers, prescribed medications, and dental care) was $13.3 billion. Average long-term care costs were $3400 for persons who developed activities of daily living disability at home sometime during the year, $6800 for those starting and ending the year with disability who remained at home, and more than $21 000 for those moving into a nursing home during the year.

DISCUSSION

These findings show the substantial financial effect that accompanies the transition to a more dependent state in the US older population. The $26 billion cost associated with loss of independence represents a substantial fraction of the $284 billion spent for all personal health care by all elderly Medicare beneficiaries in 1995.[4] The basic cost of medical and formal long-term care of the total disabled population is not included in these estimates, which reflect only the increased costs for those becoming more dependent at some time during the calendar year. Furthermore, these estimates do not include the costs of informal (unpaid) care, such as lost wages for the caregiver, or costs associated with loss of independence in the year when death occurs—costs which may be less amenable to preventive interventions than disability that occurs earlier.

Current evidence indicates that the prevalence of disability has declined in the older population,[5,6] although it remains unclear whether the total years spent in the disabled state have declined.[7] Decreases in costs associated with postponing disability onset depend on multiple factors, including whether the absolute number of disabled years also declines, what the offsetting costs of preventive and therapeutic interventions are, and how financing and organization of the health care system change, with greater spending possible even after the health status of the population improves. Clearly, the prevention or even delay of the loss of independence has important implications for financing Medicare and Medicaid and for the quality of life of the older individual. ■

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Contributors

All authors contributed to the conception of the study, planned the analyses, and contributed to the writing and revising of the brief. J.M. Guralnik wrote the first draft. L. Alecxih analyzed the data.

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Human Participant Protection

No protocol approval was needed for this study.

References

1. Adler GS. A profile of the Medicare Current Beneficiary Survey. *Health Care Finance Rev.* 1994;15:153–163.

2. *Medicare Current Beneficiary Survey* [public use file documentation]. Baltimore, Md: Health Care Financing Administration; November 1997.

3. Eppig FJ, Chulis GS. Matching MCBS and Medicare data: the best of both worlds. *Health Care Finance Rev.* 1997;18:211–229.

4. Olin GL, Hongji L, Merriman B. *Health and Health Care of the Medicare Population: Data From the 1995 Medicare Current Beneficiary Survey.* Rockville, Md: Westat; 1999.

5. Manton KG, Corder L, Stallard E. Chronic disability trends in elderly United States populations: 1982–1994. *Proc Natl Acad Sci U S A.* 1997;94:2593–2598.

6. Freedman VA, Martin LG. Understanding trends in functional limitations among older Americans. *Am J Public Health.* 1998;88:1457–1462.

7. Harper DW, Forbes WF. Aging, health risks, and cumulative disability. *N Engl J Med.* 1998;339:481–482.