Estimates of the Incidence, Prevalence, Duration, Intensity and Cost of Chronic Disability among the U.S. Elderly[1]

Eric Stallard, ASA, MAAA, FCA[2]

Presented at the Living to 100 and Beyond Symposium

Orlando, Fla.

January 7-9, 2008

Copyright 2008 by the Society of Actuaries.
All rights reserved by the Society of Actuaries. Permission is granted to make brief excerpts for a published review. Permission is also granted to make limited numbers of copies of items in this monograph for personal, internal, classroom or other instructional use, on condition that the foregoing copyright notice is used so as to give reasonable notice of the Society's copyright. This consent for free limited copying without prior consent of the Society does not extend to making copies for general distribution, for advertising or promotional purposes, for inclusion in new collective works or for resale.

---

1 Support for the research presented in this paper was provided by the National Institute on Aging through grants P01AG17937 and R01AG028259. David L. Straley provided programming support.
[2] Research Professor, Department of Sociology & Associate Director, Center for Population Health and Aging Duke Population Research Institute. Box 90408, Duke University Durham, North Carolina 27708-0408. eric.stallard@duke.edu

Abstract

Objectives: To estimate the burden of chronic disability on the U.S. elderly population, using sex-specific measures of long-term care (LTC) service use, intensity and costs.

Methods: Multistate life-table analysis of adjacent rounds of the National Long-Term Care Survey (NLTCS) from 1984, 1989 and 1994, using criteria introduced in the Health Insurance Portability and Accountability Act (HIPAA) of 1996 to stratify the disabled population according to level of disability based on ADL and cognitive impairment criteria. Rates of transition to/from non-disabled to disabled states and from all states to death were computed and analyzed for differences by age and sex. Rates of service use, intensity and costs were computed conditional on age and sex.

Results: Approximately 20 percent of the residual life expectancy at age 65 for males and 30 percent for females were spent in a state of chronic disability. For both sexes, the years of chronic disability above age 65 were split evenly between mild/moderate and severe disability. The expected costs of purchased LTC services were $59,000 (includes home/community care and institutional care, in constant 2000 dollars), with substantial sex differences—$29,000 for males versus $82,000 for females.

For both sexes, the overwhelming majority (92 percent) of the LTC costs were incurred during episodes of severe disability, with the remaining (8 percent) incurred during episodes of mild/moderate disability. Residual lifetime unpaid home/community care averaged 3,200 hours for males and 4,000 hours for females, with approximately one-third of those hours incurred during episodes of mild/moderate disability.

Differences in the costs of acute health care were substantial for the different levels of disability and associated differences in survival.

Conclusions: The criteria for identifying severely disabled persons introduced by HIPAA effectively targeted the high-cost disabled subpopulation. This group accounted

for the overwhelming majority of purchased LTC services, and a large majority of unpaid LTC services, over age 65. Sex differences in expected per capita lifetime LTC costs were substantial, with females outspending males 2.8 to 1.