



SOCIETY OF ACTUARIES

Article from:

# Long-Term Care News

September 2008 – Issue No. 21

# Estimates of Incidence, PREVALENCE, DURATION, INTENSITY AND COST OF CHRONIC DISABILITY AMONG THE U.S. ELDERLY\*

by Eric Stallard

*[Editor's Note: This is an abstract of the presentation made at the Society of Actuaries' Living to 100: Survival to Advanced Ages International Symposium held on Jan. 7–9, 2008 in Orlando, Fla. Readers should be alerted to the Living to 100 conferences held by the Society of Actuaries as they contain very pertinent discussions and information on long-term-care-related topics. As well, readers may wish to contact Eric Stallard for a fuller report on this particular presentation.]*

\* 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.

View Stallard's paper and other papers presented at the Living to 100 Symposium at <http://www.soa.org/livingto100monographs>.

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## 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 (NLTC) 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 was 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. ■