

THE ECONOMIC COSTS OF STROKE

Data from the American Heart Association estimate the 2004 economic costs of stroke at \$53.6 billion (1). Nearly two-thirds (62%) of this, or \$33.0 billion, was comprised of direct health care expenditures:

- 26.5 billion – hospital/nursing home
- 2.7 billion – physicians/other health professionals
- 1.1 billion – drugs
- 2.7 billion – home health/other medical durables

Thirty-eight percent (38%) of the total, or \$20.6 billion, represented indirect costs:

- 6.1 billion – lost productivity due to morbidity
- 14.5 billion – lost productivity due to mortality

Stroke was the 8th most expensive medical condition in the United States in 1997, according to a study by the Division of Social and Economic Research of the Agency for Healthcare Research and Quality (113). Medicare was by far the primary source of payment for direct costs associated with stroke, covering an estimated 66%, the highest percentage among the top 15 most expensive conditions. Stroke had the highest mean per person expenditure (\$14,172), as well as the highest percentage of total expenditures used for home health care (13%).

Taylor et al. estimated the lifetime costs of incident stroke by stroke subtype in a study published in *Stroke* in 1996 (114). The aggregate lifetime cost of all estimated 392,344 strokes occurring in 1990 was estimated to be \$40.6 billion; \$29.0 billion (71%) for ischemic stroke, \$6.0 billion (15%) for intracerebral hemorrhage, and \$5.6 billion (14%) for subarachnoid hemorrhage. The study's authors attributed 45% of costs to acute-care costs incurred in the first two years following a first stroke; long-term ambulatory care accounted for 35% and nursing home costs for approximately 18%.

A retrospective study by Hass et al. of nursing home residents in Rochester, Minnesota, compared residents with a confirmed stroke, either major or minor, with those who had not had a stroke. Nursing home residents who had suffered a major stroke were younger and more disabled, requiring more services. While the mean number of nursing home days did not differ between residents with a stroke and those without, the per diem Medicaid reimbursement was 11% higher for those residents with major stroke (115). Residents who suffered a minor stroke showed similar characteristics and costs as residents who had not had a stroke.