

# Annual costs of stroke in US children at least \$42 million

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Stroke in children costs at least \$42 million annually in the United States, researchers report in *Stroke: Journal of the American Heart Association*.

In the first cost analysis of pediatric stroke in the United States, researchers reviewed data from U.S. children age 0 to 20 who used hospital inpatient services. The database, the Kid's Inpatient Database (KID 2003), recorded 2,224 strokes.

"This is just the upfront cost — the initial stroke care of these children — not the long-term care cost," said Warren Lo, M.D., lead author of the study and associate professor of pediatrics and neurology at The Ohio State University and pediatric neurologist at Nationwide Children's Hospital in Columbus, Ohio.

Many other expenses will arise for those caring for a child recovering from a stroke, including transportation and lodging near a hospital with the capability to treat pediatric stroke; rehabilitation, if necessary; and missed time from work for caregivers.

"It's expensive for a kid to have a stroke," Lo said. "We must find more effective treatment — earlier, better treatment — that can reduce cost for kids staying in hospitals."

The study found:

- Acute treatment results in an average hospital stay of 8.3 days, costing almost \$21,000.
- Strokes characterized by bleeding between the brain and skull (subarachnoid hemorrhage) resulted in an 11.2-day hospital stay and cost a average of more than \$31,000.
- The hospital stay for bleeding inside the brain (intracerebral hemorrhage) averaged 9.6 days and cost an average of more than \$24,000.
- [Ischemic stroke](#) (caused by a blockage in a blood vessel in or leading to the brain) averaged a 6.6 day stay and \$15,000 in costs.

Costs were higher at government/public hospitals and urban teaching hospitals. Also, costs were highest in the western [United States](#) and lowest in the South, researchers said.

Of the total, 22 percent were subarachnoid hemorrhage, 23 percent were intracerebral hemorrhage and 55 were ischemic stroke.

In adults, roughly 13 percent of all U.S. strokes are the bleeding type, according to the American Heart Association/American Stroke Association. However, in this study, the bleeding type accounted for almost 45 percent in children.

Of the cases, private insurance covered 55 percent of the children, Medicaid or Medicare government insurance programs covered 35 percent and self-pay or other coverage accounted for the remaining 10 percent. The study also found that for families with the higher incomes, childhood [stroke](#) costs were greater.

Furthermore, boys had more hemorrhages, while girls had more ischemic strokes. The strokes occurred most often in children ages 15 to 20 years old — but the reasons for this were not clear.

Researchers calculated actual pay in 2003 dollars for hospital services after discounts were applied and didn't include doctor fees that may have been billed separately. Researchers said it was difficult to directly compare to studies of adults; however, the magnitude of the costs are similar.

Source: American Heart Association ([news](#) : [web](#))

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