Young Stroke Survivors Face Barriers to Care

BY SHARON WORCESTER
Southeast Bureau

The finding that relatively young stroke survivors have less access to care and more difficulty affording the medications that they need, compared with their older counterparts, reflects the more widespread problem of lack of medical insurance in the United States—a problem that has "staggering ramifications," according to Dr. Steven Levine, professor of neurology and director of the cerebrovascular education program at the Mount Sinai Stroke Center and School of Medicine, New York, speaking in an interview.

"We can no longer assume that younger stroke survivors have better access to care than their older counterparts," he said, commenting on findings from research by Dr. Deborah A. Levine of the University of Alabama, Birmingham, and her colleagues. (The two doctors are not related.)

Dr. Deborah A. Levine reported that between 1997 and 2004, the number of stroke survivors aged 45-64 years in the United States who were unable to afford prescribed medications increased significantly from 8% to 13% (Stroke 2007; 38:1557-64).

The findings, based on the responses of 5,840 individuals who participated in the National Health Interview Survey—an in-person household survey conducted annually by the National Center for Health Statistics—suggest that in 2004, about 76,000 stroke survivors in the United States were unable to afford prescribed medications. Those under age 65 years—along with blacks, women, and those with high comorbidity or low health status—had the lowest rates of being able to afford their medications.

Younger age was associated with reduced medication affordability, perhaps due to competing expenses or lack of prescription drug coverage.

A number of barriers to care and medications were identified among those with reduced ability to afford medication, suggesting these are particularly vulnerable populations.

For example, compared with stroke survivors who were able to afford medications, those who could not more often had a lack of transportation (15% vs. 3%), no health insurance (16% vs. 3%), annual income below $20,000 (66% vs. 40%), no usual place of care (6% vs. 2%), and out-of-pocket medical expenses of $2,000 or more.

These barriers to care likely equate to the barriers to secondary stroke prevention—and thus to an increased risk of subsequent cardiovascular event, according to Dr. Deborah A. Levine and her associates, who noted that medication access is an essential component of secondary stroke prevention.

Ischemic stroke survivors have up to a 14% annual risk of recurrent stroke, and also are at risk for other cardiovascular events that can adversely affect health, quality of life, and financial status; younger patients often are in the most productive years of their lives, and thus may be hit the hardest by these effects.

Stroke tops the list of disabling diseases among adults, with only 1 in 5 returning to work, 1 in 11 returning to work full time, and 1 in 30 becoming institutionalized, according to one study that looked at stroke survivors 3 months following the event (Arch. Phys. Med. Rehab. 2000; 81:205-9).

Dr. Deborah A. Levine's findings expand on those from an earlier study in which she and her colleagues found that younger age among stroke survivors was associated with no general doctor visit (odds ratio 1.4), no medical specialist visit (odds ratio 1.69), and an inability to afford medications (odds ratio 2.94) in the previous 12 months after adjusting for sex, race, income, neurologic disability, health status, and comorbidity.

Lack of health insurance explained the lack of access to medical care—which is particularly problematic when it comes to primary care visits since the majority of secondary prevention measures are prescribed by primary care physicians—but did not explain the lack of ability to afford medications. After adjustment for

Affordability of Medications Differs According to Geographic Region

In addition to identifying stroke survivor populations unable to afford medications, Dr. Deborah A. Levine and her associates also found certain regional differences in barriers to care.

The inability to afford medications was similar in the South (weighted percentage 11%; population estimate 184,173), West (10%; population estimate 67,872), and Midwest (9%; population estimate 88,369), but significantly lower in the Northeast (5%; population estimate 37,361). Furthermore, the ability to afford medications appears, based on the survey data, to have decreased in the South, West, and Midwest across the study period, while remaining stable in the Northwest, Dr. Levine said.

Other barriers to care, including percentage of population with annual household income lower than $20,000 and percentage with out-of-pocket medical expenses of $2,000 or more were also significantly lower in the Northeast (see graphic, p. 41), and although uninsured rates were similar across the regions, survivors in the South and West had lower rates of private insurance with or without Medicare (the insurance type associated with the best medication coverage).

Other possible explanations for these findings include differences in prescription drug coverage rates, public assistance rates, and competing household costs—none of which could be directly assessed in the study, she noted.

Pages 40a—40b

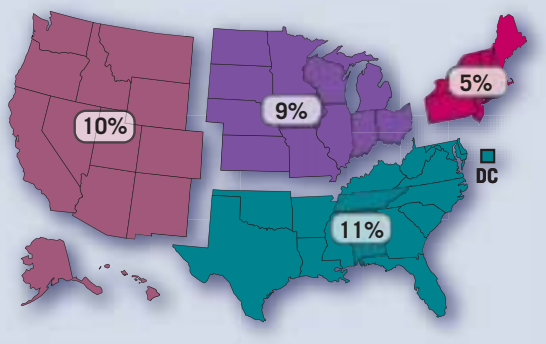
health insurance, younger age remained independently associated with reduced medication affordability, perhaps because of competing expenses or lack of prescription drug coverage, Dr. Deborah A. Levine said in an interview.

For the earlier study, Dr. Deborah A. Levine and her colleagues used 1998-2002 data from the National Health Interview Survey, including responses from 3,681 stroke survivors, representing about 4 million U.S. stroke survivors, nearly a third of whom are aged 45-64 years. The implications of the findings of these studies are numerous and alarming, according to the investigators (Arch. Neurol. 2007;64:37-42).

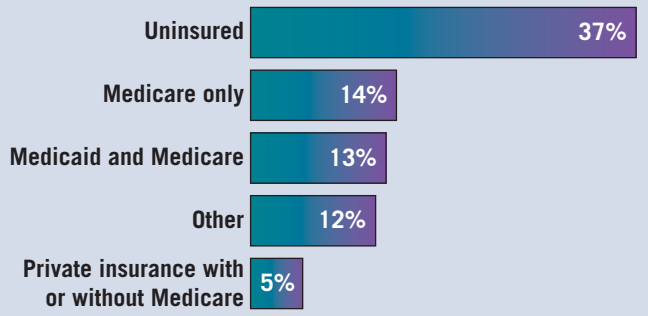
For example, reduced medication access, specifically patient self-reduction in prescription use, has been associated with increased serious adverse event rates and emergency department visits, a number of adverse health conditions and outcomes in diabetics, and high rates of angina and nonfatal stroke or myocardial infarction in those with cardiovascular disease.

And given that stroke survivors are discharged from rehabilitation with an average of 11 medications with a cost totaling about $750 per month (based on 2004 monthly average wholesale price), according to one study, and given that stroke survival is improving while age-specific stroke incidence is remaining constant and the size of the 65 and older population is increasing—as is the number of uninsured nonelderly in the United States—the the long-term care of stroke survivors will prove costly, Dr. Deborah A. Levine said. ■

Stroke Survivors in the South Least Able to Afford Medications



Largest Percentage of Stroke Survivors Unable to Afford Medications Are Uninsured



Note: Based on weighted percentages of 5,840 responses from the 1997-2004 National Health Interview Survey.
Source: Dr. Deborah A. Levine

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