Stroke is a common, disabling, and expensive condition. In the United States alone, stroke prevalence exceeds 3.2%, with an annual cost approaching $40 billion, including the cost of health care services, medications, and lost productivity. Stroke is not restricted to old age. Nearly 1 of every 5 strokes occurs in young adults; strokes can also occur in adolescents and children. Several lines of evidence have raised public health concerns about the rising prevalence of traditional vascular risk factors in young individuals, and their potential role in increasing the risk for ischemic stroke, recurrent stroke, and poststroke mortality. These data have started drawing attention to the problem of stroke in the young, and have already stimulated research in the field.

Compared to stroke in the aged population, stroke at young age incurs a disproportionately large economic cost by leaving victims disabled in, or prior to, their most productive years. A sizeable proportion (up to 53%) of young stroke patients do not return to the workforce, and an additional 23% require occupational adjustment in order to resume work. Factors such as poststroke functional independence, positive attitude, and type of work are independent predictors of resuming work. In this issue of Neurology, an esteemed group of researchers in the field of young adult stroke report on the prevalence, excess risk, and risk factors of unemployment after a stroke or TIA in young individuals in the Netherlands. Over a span of 3 decades (1980–2010), the investigators prospectively accrued and followed a relatively large number of young stroke patients. By obtaining de-identified data from the Dutch Central Bureau of Statistics, a national registry of citizens who receive disability payments, these authors, in contrast to previous studies, could compare disability payments (a marker for unemployment) in stroke patients vs the working population. Nearly 30% of this stroke cohort received disability payments after a mean follow-up of 8.1 years, with 84.2% on full disability and the rest on partial disability. The higher risk for unemployment in stroke cases was evident for both sexes and across most age groups. Those in the 35–44 years age group endured the highest risk for unemployment, at a time when individuals are typically the most productive. As expected, patients with brain hemorrhage had the highest rates of unemployment. Baseline stroke severity and the duration of follow-up were associated with a higher risk for unemployment. Interestingly, excluding TIA patients from the analysis did not substantially change the risk for unemployment. These results suggest an enduring effect of stroke-related neurologic deficits, and possibly other intangible effects of stroke regardless of deficits, which prevent survivors from returning to the workforce.

Stroke survivors need more than just medications or limb or language rehabilitative services to resume life after stroke. A greater understanding of stroke-induced cognitive, psychosocial, and personality changes is needed. For the 30- or 40-year-old stroke survivor, preventing a second stroke and treating the underlying cause remains crucial, especially given the daunting statistics showing substantial long-term mortality and recurrent event rates after stroke or TIA. Physicians usually focus on uncovering etiology and optimizing stroke preventive medications, a strategy requiring high numbers needed to treat to prevent a single recurrent event. But for patients, major concerns include the immediate consequences of the stroke or TIA on their job and financial stability, on family life, the ability to cook, drive, or participate in recreational activities, and care for aged relatives or children. Patients frequently need to cope with the social stigma of stroke or their own feelings of guilt, or changes in family dynamics, including divorce. In our experience, poststroke anxiety, depression, and fatigue are common, and regardless of physical disability, play an important role in preventing resumption of normal life and job. A multidisciplinary, holistic approach that provides appropriate pharmaceutical treatment but also addresses issues such as poststroke depression, anxiety, and personality changes, and provides vocational counseling and advice about health insurance and social services, will benefit every person who has a stroke.

The results of the current study suggest opportunities to develop integrated care programs designed to address the numerous consequences of stroke that

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Go to Neurology.org for full disclosures. Funding information and disclosures deemed relevant by the authors, if any, are provided at the end of the editorial.
limit the quality of life of stroke survivors. While the above study was conducted in individuals aged 18–50 years, the results may be generalizable to any working individual, young or old. After all, many people (including several physician colleagues) continue to work well into their eighth or ninth decades. We need to formulate and implement strategies that increase access to resources for patients who develop stroke during vocational age. In a recent review, we provided a list of the few available resources. From a research standpoint, outcome measures such as modified Rankin Scale scores and even the recently proposed time spent at home poststroke may not be adequate. Perhaps we need to start incorporating “return to work” as a global outcome measure that assesses the efficacy of multidisciplinary treatment strategies for any working individual who develops a stroke. Health care policy changes and other measures to improve the return to employment rate would likely provide greater patient and family satisfaction while reducing the long-term costs of stroke.

STUDY FUNDING
No targeted funding reported.

DISCLOSURE
A. Singhal has served as Chair of the American Academy of Neurology Taskforce on Raising Awareness of Stroke in Young Adults. He receives research support from NIH–National Institute of Neurological Disorders and Stroke (award numbers R21NS077442, R01NS051412, and U10NS086729); has served as a consultant for Biogen Idec and as a medicolegal expert witness, and has received honoraria from the American Academy of Neurology, Elsevier, Medlink, and Sun Pharma. Dr. Singhal’s wife is an employee of Biogen Idec and holds stock in Biogen Idec and Vertex Pharmaceuticals, Inc. W. Lo receives research support from NIH. Go to Neurology.org for full disclosures.

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