

Mobile Ultrasound Screening Gains Acceptance

The mobile screening companies offer tests Medicare does not routinely reimburse, at affordable prices.

BY TIMOTHY F. KIRN
Sacramento Bureau

Can in a van? From a country club in Austin, Tex., to an evangelical church in Porterville, Calif., to the community hall in Rutherfordton, N.C., people are lining up to be screened for their stroke risk, and maybe even to have their bone density measured.

Mobile ultrasound stroke screening is growing in popularity, and it is being offered by enterprising companies not affiliated with any hospital. The cost: about \$109 for the carotid artery sonogram, and generally less than \$200 for a more extensive package that might include the bone density or echocardiography.

Everything is paid for out of pocket with cash or a credit card.

And, the perhaps surprising thing about this burgeoning mobile stroke screening business is that it is not being widely challenged by physician groups

and the traditional medical establishments, the way coronary calcium screening using electron beam CT has been, for example.

On the contrary, many experts say the time for stroke screening has come, and the vans can offer that screening at a fraction of the cost of a hospital.

Stroke is currently the third leading cause of death in the United States, and, because stroke incidence more than doubles in each successive decade of life beyond age 55 years, the aging of the population means stroke will grow as a problem.

Ultrasound stroke screening may be essential for prevention, and prevention may be necessary to reduce not only stroke mortality but morbidity as well. No one wants to be a stroke survivor, they say.

Up to 30% of stroke survivors become permanently disabled, and 20% require institutionalization within 3 months of the

stroke. Between 1992 and 2002, the death rate from stroke dropped 13%, but the actual number of deaths rose 7%.

Ultrasound screening can identify individuals with carotid artery narrowing, and that is a major risk factor, said William Flinn, M.D., professor and head of the vascular surgery division at the University of Maryland, Baltimore.

Moreover, the companies not only seem to be offering a credible service, but their activities educate the public about stroke risk, said Dr. Flinn, who coordinates a free screening program for the American Vascular Association, a group founded to promote stroke awareness and treatment.

A significant number of individuals could benefit from such programs, Dr. Flinn said.

In their screening campaign conducted last May, ultrasound screens were offered at 130 centers in 40 states to individuals older than 55 years with cardiovascular risk factors. Of the first 5,000 persons screened,

8% had carotid stenosis of 50% or greater, and less than half of these at-risk individuals were on either antiplatelet therapy or statin therapy.

Men were more likely than women to have stenosis of 50% or more. At-risk women were less likely than the at-risk men to be receiving any preventive medical treatment.

The companies say that opposition to mobile screening has been minimal because registered technicians perform the tests, board-certified physicians read them, and persons with abnormal tests are referred back to their own physicians.

And there is a market for what they do, because they offer screening tests that Medicare does not routinely reimburse, at affordable prices.

For \$109, the mobile units of Cleveland-based Life Line Screening screen for stroke

risk, abdominal aortic aneurysm, and peripheral artery disease. For \$129, they will also screen for osteoporosis.

According to Paula Motolik, of Life Line, one of the oldest companies in the mobile screening business, the profit margins are low because of the expense of the equipment. But on the plus side, there is a demand. The company has grown from

stroke has not been established. A person who is asymptomatic and found to have 60% carotid stenosis, for example, has a 5-year annual stroke risk of 2%. Endarterectomy reduces that risk to 1%, and the person is still at high risk for heart disease.

Screening may be "good for business, but whether it is a good thing for patients is a bit of an open question," Dr. Derdeyn



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a single van in 1993 to 53 vans in 2004.

HealthFair USA, a relative newcomer, has nine modified buses—each costing about \$300,000 with equipment—that offer up to nine screening tests, including the stroke ultrasound, echocardiograms and electrocardiograms. In the 5 years since the company's founding, it has screened about 450,000 persons along the Eastern seaboard.

The company plans to add seven more units before the end of the year, said company president Terrence Diaz, who started his career in medicine as an emergency medical technician. "The technology has come down in cost, allowing us to charge affordable prices."

Still, concerns remain about the lack of follow-up on the referrals, cost-effectiveness of the widespread screening, and the quality of exams that private companies offer.

Carotid stenosis probably is a good marker for atherosclerosis, and therefore the information that the ultrasound exams provide is probably beneficial, said Colin P. Derdeyn, M.D., program director of endovascular surgical neuroradiology, at the Mallinckrodt Institute of Radiology at Washington University, St. Louis.

But from a socioeconomic standpoint, the cost-benefit of ultrasound screening for

said. One concern is that the companies will screen people who are too young to seriously be considering their stroke risk, he said.

Ms. Motolik said Life Line tends to be invited to set up screenings at places where individuals are likely to be older, like senior centers. The mean age of its clients is 62 years.

Furthermore, all clients are educated about stroke risk before they pay for anything, and persons younger than 40 are specifically informed that their risk of having any of the conditions that Life Line screens for is extremely low.

Groups such as the American Stroke Association (ASA), a division of the American Heart Association, tend not to have any position on ultrasound screening or the mobile vans.

Blood pressure, pulse, and carotid bruits continue to be the standard of care for assessing stroke risk routinely, said Edgar Kenton, M.D., past chair of ASA's media advisory committee.

But he also noted that half of individuals with hypertension are not treated adequately, and many Americans have no medical insurance. Therefore, he said, he personally cannot be opposed to any activity that increases public access to health services. ■

Benefit of t-PA in Acute Ischemic Stroke Is Greater in Women

BY JEFF EVANS
Senior Writer

Women are more likely than men to benefit from treatment with tissue plasminogen activator after an acute ischemic stroke, reported David M. Kent, M.D., of the Tufts-New England Medical Center, Boston, and his associates.

The finding arose from a pooled analysis of four randomized trials comprising 2,178 patients who suffered an acute ischemic stroke.

In the pooled analysis, men did

not differ in the probability of a normal or near-normal outcome at 90 days when treated with either tissue plasminogen activator (39%) or placebo (37%). But women treated with tissue plasminogen activator (t-PA) within 6 hours of symptom onset were significantly more likely to have a normal or near-normal outcome than were women who received a placebo (41% vs. 30%).

Treatment with t-PA enabled women in the analysis to have a probability of a normal or near-normal outcome comparable with men who received t-PA

(41% vs. 39%). The trials defined normal or near-normal outcome as a score of 1 or less on the modified Rankin scores (Stroke 2005;36:62-5).

Women are known to be more likely than men to have a poor outcome after an acute ischemic stroke. Women on placebo had a significantly lower probability (30%) of a normal or near-normal outcome than did men who received a placebo (37%).

The significance of t-PA treatment according to sex did not change when the investigators controlled for age, systolic blood

pressure, diabetes, baseline score on the National Institute of Health Stroke Scale, the symptom onset to treatment time (OTT), the Alberta Stroke Program Early CT Score, the effects of OTT on treatment, and the interaction of diabetes and OTT.

The researchers postulated that female sex might affect the likelihood of reperfusion because of sex-based differences in coagulation and fibrinolysis and that it might affect the response of the brain to ischemia and reperfusion because of some as-yet unknown effect of estrogen, the vascular

anatomy of stroke, or the particular stroke subtype.

Only 45% of the patients in the four studies combined were women despite the fact that the overall lifetime risk of stroke is higher in women than in men. A recent report suggesting that women are less likely than men to receive IV thrombolytic therapy highlights the fact that a bias toward t-PA treatment in men may result in the unintended "targeting of treatment to patients who are actually less likely to benefit from therapy (i.e., men)," the investigators said. ■