Bedside Device Accurately Differentiates Stroke from Other Conditions

A bedside electronic device that measures eye movements can successfully determine whether the cause of severe, continuous, disabling dizziness is a stroke or something benign, according to results of a small study led by Johns Hopkins Medicine researchers and published in *Stroke*.

To distinguish stroke from a more benign condition, such as vertigo linked to an inner ear disturbance, specialists typically use three eye movement tests that are essentially a stress test for the balance system. In the hands of specialists, these bedside clinical tests (without the device) have been shown in several large research studies to be extremely accurate. One of those tests, known as the horizontal head impulse test, is the best predictor of stroke. To perform it, practitioners ask patients to look at a target on the wall and keep their eyes on the target as the practitioner moves the patients’ head from side to side. However, this requires expertise to determine whether a patient is making the fast corrective eye adjustments that would indicate a benign form of dizziness as opposed to a stroke.

For the new study, researchers instead performed the same test using a small, portable device—a video-oculography machine that detects minute eye movements that are difficult for most physicians to notice. Photo courtesy of Johns Hopkins Medicine.

Proportion of Male Nurses Continues to Increase

According to a recent U.S. Census Bureau study, “Men in Nursing Occupations,” the proportion of male RNs has more than tripled since 1970, from 2.7% to 9.6%, and the proportion of male licensed practical nurses (LPNs) and licensed vocational nurses (LVNs) has more than doubled from 3.9% to 8.1%. The difference between the 2011 estimate and the 2000 and 2006 estimates for percentage of LPNs and LVNs who are men is not statistically significant. The study presents data from the 2011 American Community Survey to analyze the percentage of men in each of the detailed nursing occupations: RN, nurse anesthetist, nurse practitioner (NP), and LPNs/LVNs.

Men typically outearn women in nursing fields but not by as much as they do across all occupations. For example, women working as nurses full time, year-round earned 91 cents for every dollar male nurses earned; in contrast, women earned 77 cents to the dollar men earned across all occupations.

Because the demand for skilled nursing care is so high, nurses have very low unemployment rates. Unemployment was lowest among NPs and nurse anesthetists (approximately 0.8% for both). For RNs and LPNs/LVNs these rates were a bit higher but still very low, at 1.8% and 4.3%, respectively.

Other study highlights included:

- There were 3.5 million employed nurses in 2011, approximately 3.2 million of whom were women and 330,000 men.
- Of the employed nurses (both sexes), 78% were RNs, 19% were LPNs/LVNs, 3% were NPs, and 1% were nurse anesthetists.
- The majority of RNs (both sexes) worked in hospitals (64%). The majority of LPNs/LVNs worked in nursing care facilities or hospitals (approximately 30% each). The percentages for hospitals and nursing care facilities are not significantly different from each other.
- In 2011, 9% of all nurses were men whereas 91% were women. Men earned, on average, $60,700 per year, whereas women earned $51,100 per year.
- Men’s representation was highest among nurse anesthetists at 41%.

detects minute eye movements that are difficult for most physicians to notice. The machine includes a set of goggles, akin to swimming goggles, with a USB-connected webcam and an accelerometer in the frame. The webcam is hooked up to a laptop where a continuous picture of the eye is taken. Software interprets eye position based on movements and views of the pupil, while the accelerometer measures the speed of the movement of the head.

The Hopkins-led study enrolled 12 patients at the Johns Hopkins Hospital and the University of Illinois College of Medicine at Peoria, who later underwent confirmatory magnetic resonance imaging (MRI). Six were diagnosed with stroke and six with a benign condition using video-oculography. MRI later confirmed all 12 diagnoses.

The device was developed overseas and is used in balance clinics there, but is not yet approved for use in the United States. A company, GN Otometrics, which makes the devices used in the proof-of-concept study, loaned them to the research team but did not have any involvement, financial or otherwise, in the study.

The lead researcher said that if additional larger studies confirm these results, the device could one day be the equivalent of an electrocardiogram, routinely used to rule out heart attack in patients with chest pain.


20 States Receive RWJF Nursing Grants

The Robert Wood Johnson Foundation (RWJF) has announced a new $3 million initiative to help states prepare the nursing profession to address the nation’s top health care challenges—access, quality, and cost.

The Future of Nursing State Implementation Program will bolster efforts already underway in 50 states and the District of Columbia—the Future of Nursing: Campaign for Action—to transform health care through nursing and meet the challenges stemming from an aging and more diverse population. A joint initiative of AARP and the RWJF, the Campaign for Action is working to implement the Institute of Medicine’s (IOM) evidence-based recommendations on the future of nursing. The Campaign provides a voice and a vehicle for nurses at all levels to lead system change to improve health outcomes for patients and families by collaborating with business, consumer, and other health professional organizations.

The initiative will provide 2-year grants of up to $150,000 to 20 state-based Action Coalitions that have made substantial progress toward implementing the IOM recommendations. The grants call for states to obtain matching funds. Grant recipients will work to implement programs that prepare nurses to lead system change, strengthen nursing education, expand access to care by maximizing the use of nurses, recruit and train a more diverse nursing workforce, and improve quality and coordination of health care.

Grantee states are Colorado, Connecticut, Florida, Georgia, Idaho, Iowa, Kansas, Louisiana, Maryland, Michigan, Mississippi, Missouri, Nebraska, New Jersey, Pennsylvania, Rhode Island, Tennessee, Utah, Wisconsin, and Wyoming.


NSAID Use Scrutinized in Pain Relief Study

A recently released study, “Actuarial Cost Profile of Pain Management Using Prescription NSAIDs” documents the fast-growing financial toll linked to nonsteroidal anti-inflammatory drugs (NSAID) toxicity and side effects.

Vireo Systems, Inc., a manufacturer of nutraceuticals, pain relief capsules and cream, and other health promotion products, commissioned an independent researcher to conduct the study. Vireo’s priority was to explore quantitative statistics from a cross-section of published literature on the role of prescription NSAIDs for pain management. Among the findings:

• Nearly 13.8 million adults 65 and older regularly use NSAIDs for treating pain and inflammation.

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Gastrointestinal issues, renal problems, and cardiac complications are the most cited side effects.

- Adults older than 75 who regularly use NSAIDs are six times more likely to experience toxic side effects than other users.
- The average hospitalization cost for someone experiencing common NSAID-associated side effects is $15,000 to $20,000.
- By 2030, older adults will represent approximately half of all NSAID users and will be responsible for two thirds of the added costs for all NSAID side effects.

The study also reported that physicians write 70 million NSAID prescriptions every year despite mounting evidence of disproportionate side effects in the older adult community. NSAIDs are the second most commonly prescribed drugs, with antibiotic agents being the most common. The most active pharmaceutical ingredients in today’s common NSAIDs include naproxen, ibuprofen, celecoxib, and diclofenac.

More information about medication management can be found in the April 2013 issue of the Journal of Gerontological Nursing, including Arnstein and Herr’s article about pharmacological relief of pain in older adults.


Free Seated Exercise Booklet Available

To help provide exercise to people living with limited mobility, The Scooter Store, along with Mary Ann Wilson, RN, founder, executive director, and host of the PBS television show, “Sit and Be Fit™,” have put together a complimentary, 32-page booklet with a series of exercises. The booklet, Exercise in Your Power Chair, includes full-color illustrations for exercises covering almost every area of the body—from neck to core muscles and down to the toes. It can be downloaded from http://www.exercisebooklet.com.


Time for Plaque Build-Up May Offer Treatment Window

Researchers have identified a possible treatment window of several years for plaques in the brain that are thought to cause memory loss in conditions such as Alzheimer’s disease.

For the study, conducted by the Mayo Clinic and published in Neurology, 260 people ages 70 to 92 had two or more brain scans over an average of 1.3 years to measure plaque build-up in their brains. Of the participants, 22% had impaired thinking abilities or memory at the start of the study.

The study found that the rate of buildup accelerates initially, then slows before plateauing at high levels. The rate of plaque accumulation was highest in those with mid-range levels at the start of the study. Those with low levels or high levels of plaques as the study began had lower rates of plaque build-up.

The study also found that the rate of build-up of plaques was more closely tied to the total amount of amyloid plaques in the brain than other risk factors, such as the level of cognitive impairment, age, and the presence of the APOE gene.

The results suggest the presence of a long treatment window where medications may be able to help slow build-up of the amyloid plaques that are linked to cognitive decline; however, trying to treat the plaque build-up after the amyloid plaque load has plateaued may not be as successful.


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