New metric predicts language recovery following stroke

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A team of researchers led by NewYork-Presbyterian Hospital/Columbia University Medical Center has developed a method to predict post-stroke recovery of language by measuring the initial severity of impairment. Being able to predict recovery has important implications for stroke survivors and their families, as they plan for short and long-term treatment needs. Findings are reported online in the journal *Stroke*.

"These results indicate that if we know the extent of the initial impairment following stroke, then we can predict with remarkable accuracy how patients will function 90 days later," said Ronald M. Lazar, Ph.D., professor of clinical neuropsychology in neurology and neurological surgery, Columbia University College of Physicians & Surgeons, and a neuropsychologist at NewYork-Presbyterian Hospital/Columbia University Medical Center. "We have established the first reliable metric of the current standard care for post-stroke language treatment, and a standard against which future treatments can be compared."

For many years, it was thought that the size of the stroke, patient age and education, and specific characteristics of the type of language deficit were together predictive of recovery - but no reliable metric had been established.

Funded by the National Institutes of Health, the NewYork-Presbyterian Hospital/Columbia-led team used the Western Aphasia Battery (WAB) test to assess language function at 24 - 72 hours after stroke onset and

then again at 90 days. They found that among patients with mild to moderate aphasia after acute stroke, recovery (defined as the change in WAB score between baseline and 90 days) improved to about 70 percent of their maximum potential recovery, as long as they received some aphasia therapy.

According to the National Institute of Neurological Disorders and Stroke, up to 25 percent of all stroke survivors experience language impairments involving the ability to speak, write, and understand spoken and written language. A stroke-induced injury to any of the brain's language-control centers can severely impair verbal communication. There are more than one million Americans with aphasia, which is a disorder of language that occurs after brain injury; stroke is the most common injury causing aphasia.

This study involved patients in the Performance and Recovery in Stroke (PARIS) database, which is based at the Neurological Institute of Columbia University Medical Center and NewYork-Presbyterian/Columbia.

Provided by Columbia University Medical Center