



Miller School-Led Stroke Registry Receives Record Funding, Expands Focus

The Florida Stroke Registry, a state-wide initiative led and started by the University of Miami Miller School of Medicine's Department of Neurology, has received record funding for 2021-2022.



The Florida Legislative Session awarded the registry \$1 million in renewed Healthcare Appropriations funding for fiscal year 2022, and for the first

time, the Florida Stroke Registry will receive \$400,000 annually for the next three years from the CDC's Paul Coverdell National Acute Stroke Program.

Stroke is the fifth-leading cause of death in the U.S., but it is much more disabling than it is fatal, according to Ralph L. Sacco, M.D., M.S., director of the Florida Stroke Registry and professor and Olemberg Chair of Neurology at the Miller School. The Florida Stroke Registry is a national model and



was one of the first to provide data-driven perspectives of race, ethnic, sex and geographic stroke disparities.

“The mission of the Florida Stroke Registry has been and continues to be to advance the quality of stroke care by transforming data into actions that save lives and reduce disability after stroke,” said Dr. Sacco, who is also executive director of the Evelyn F. McKnight Brain Institute at the Miller School.

While the Healthcare Appropriations funding focuses on data looking at what happens during the hospitalization for stroke patients in Florida, Coverdell Program funding will expand the Registry’s collection to include what happens before stroke patients get to the hospital with enhanced data from emergency medical services (EMS). This will include how long it takes patients to call 911, as well as what happens when they are discharged from the hospital and ways to improve the transitions of care.

New Areas of Focus

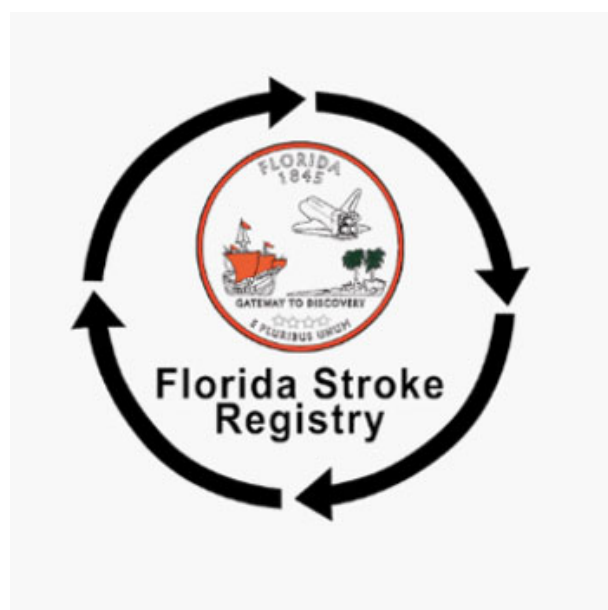
The new funding will result in research that will, for example, make the quality of stroke care more transparent to EMS personnel when they are deciding where to transport stroke patients. Another area of focus will be to better understand why patients have re-hospitalizations and recurrent strokes after discharge.

The Florida Stroke Registry began in 2012 under Dr. Sacco’s direction as a National Institutes of Health-funded program charged with reducing health disparities in acute stroke treatment and improving stroke care in Florida and Puerto Rico.



“When the five-year NIH funding was over, through a grassroots effort with many of our partners in the state, we were able to show the legislature the value of having a state stroke registry,” said Florida Stroke Registry Education Core director Jose G. Romano, M.D., professor of neurology and chief of the Stroke Division.

On July 1, 2017, the Florida Legislature established a need for the stroke registry and made it law that stroke centers functioning in the state participate in the Registry by providing data. The Miller School remains central to today’s Florida Stroke Registry, housing, aggregating, cleaning and analyzing the data to identify and address gaps and



improvements in stroke care. Along with the Florida Department of Health, which oversees the Florida Stroke Registry contract, the Registry continues to collaborate with the American Heart Association “Get With The Guidelines – Stroke” quality improvement program.

“We currently have 154 stroke centers (of a total 170 statewide) that participate in the Stroke Registry by providing data, and thereby contributing to more than a decade of information on stroke care in the state,” Carolina M. Gutierrez, Ph.D., director of Research and Advocacy for the Florida Stroke Registry, said. “The FSR maintains a rich dataset and strong stakeholder network.”



Improving Care and Outcomes

The data has in fact helped to improve acute stroke care and outcomes in Florida. For example, between 2010 and 2020, use of clot busting medications in stroke doubled at Florida stroke centers. Eligible stroke patients who receive the clot-busting drug tissue plasminogen activator, or tPA, within 90 minutes of symptom onset are 25% less likely to die in the hospital, and 33% more likely to be discharged home, according to the American Heart Association. In Florida, tPA treatment within 60 minutes of hospital arrival rose from 19% in 2010 to 92% in 2020 and treatment within 45 minutes of arrival went from 6% to 75% over the same time span.

The data also has pointed to disparities in care and helped to improve those, according to Dr. Romano.

“Data from 2010 to 2017 revealed that Black stroke patients were less likely to receive tPA compared to white patients. Stroke centers in the Registry worked to eliminate that disparity,” Dr. Romano said. “We identified a disparity at one of our own hospitals, thanks to the Florida Stroke Registry. The data alerted us to the fact that the time from when the stroke patients arrived until a CT scan was done was worse for Blacks than for whites. So, we did a deep dive and found out that communication with our Haitian Creole speaking patients was driving the delays. We have since implemented a translation tool that is available immediately and eliminated the disparity in stroke care.”

The registry continuously tracks and measures stroke performance and outcomes to transfer data into action and provides feedback to stroke centers so that they can improve, according to Dr. Sacco.



Sharing Best Practices

“When we identify a stroke center as having declining outcomes, we develop educational initiatives to address the issue. And if a stroke center is having better outcomes than others, we create seminars and materials for our members on these best practices, so they too can share and implement them and improve the quality of stroke care,” Dr. Sacco said.

Few states are able to secure Coverdell funding. In the current cycle, only 13 states have received Coverdell Program funds.

“We are proud to have been selected as one for this prestigious funding,” Dr. Gutierrez said. “The Healthcare Appropriations and Coverdell Program funding will allow us to continue to build a strong network of regional stroke coalitions throughout Florida with clinicians, emergency services, community health services, and stroke researchers. We also plan to increase our contact with patients, caregivers, and the general community. One of our goals is to use this data to create evidence-based interventions that we can develop, test and implement throughout the state.”

In addition to Drs. Sacco, Romano, and Gutierrez, the Registry includes key Department of Neurology stroke clinicians/researchers: Tatjana Rundek, M.D., Ph.D.; Negar Asdaghi, M.D.; Sebastian Koch, M.D.; Erika Marulanda-Londoño, M.D.; Nicole Sur, M.D.; Gillian Gordon-Perue; Hannah Gardner, Sc.D.; Chuanhui Dong, Ph.D.; Scott Brown, Ph.D. (Dept. of Public Health); and staff members Stephanie Rodriguez, Hao Ying, Kefeng Wang, Marti Flothmann, and Karlon Johnson, a FSR Ph.D. fellow. Along with these members, the registry receives oversight from the Florida Stroke Registry Advisory Committee



comprised of stroke experts from around the state.

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