# Study on simulated stroke wins major neurology award

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A study performed by Loyola University Medical Center resident neurologists has won a prestigious 2015 Safety and Quality Award from the American Academy of Neurology.

The study found that using a high-fidelity patient simulator (mannequin) and other simulation-based education techniques can significantly improve the knowledge, skills and confidence of first-year neurology residents treating stroke patients in the emergency department.

Loyola's study was one of three projects in the country to receive the Safety and Quality Award in the residents-and-fellows category. The award recognizes research and/or quality improvement projects designed to improve safety and/or quality in practice. The projects must demonstrate innovative and forward-thinking approaches, as well as measurable and replicable improvement.

The award was presented during the American Academy of Neurology annual meeting in Washington, D.C. to Rick Gill, MD, (first author of the study); Esteban Golombievski, MD; and Michael Star, MD. Drs. Gill and Star are neurology residents and Dr. Golombievski is a vascular neurology fellow. Senior authors of the study are Matthew McCoyd, MD, and Sean Ruland, DO. Dr. McCoyd is an assistant professor and Dr. Ruland is an associate professor in the Department of Neurology of Loyola University Chicago Stritch School of Medicine.

The Loyola study evaluated simulation-based medical education

techniques for teaching neurology residents how to treat stroke patients. Six first-year, incoming residents participated in a simulation of a stroke patient arriving in the emergency department. The resident physician managed every step of care, including assessing the mannequin-patient, paging other members of the stroke team, ordering and interpreting lab tests and CT scans, etc. The simulations were performed during the first and third weeks of the residents' orientation.

The physicians' skills improved significantly from the first to the third week. Surveys given to the residents showed their confidence also improved. The new physicians also showed a 16.1 percent improvement on a multiple-choice test about treating stroke patients in the emergency department.

The authors concluded that simulation-based medical education can help new physicians acquire technical and non-technical skills such as leadership, teamwork, communication, situational awareness and decision making.

The study is titled "Simulation-Based Medical Education for Incoming Neurology Trainees to Improve Hospital Stroke Emergency Performance." It was conducted at Loyola University Chicago's Center for Simulation Education and presented during the American Heart Association's International Stroke Conference 2015 in Nashville, Tenn.

Provided by Loyola University Health System