INNOVATION IN THE ED

Grady continues to advance its leading position as an innovative health system, becoming the first hospital in the state of Georgia and one of three hospitals in the country, to introduce BrainScope One—a new imaging technology that can quickly and safely assess patients with minor head injuries for possible brain bleeds.

Grady's Emergency Department (ED) will train its staff to use the hand-held device to perform the EEG test, which can be done right at the patient's bedside. BrainScope One determines whether there is a brain bleed and if the patient needs further evaluation and treatment.

The majority of minor head injuries do not require a CT scan, and Chief of Emergency Medicine, Dr. Hany Atallah, said the new device will significantly reduce unnecessary head CT scans on patients who may not really need them.

"It answers the most pressing question when treating a potential traumatic brain injury: 'Does the patient have blood in his head or not?' And if the answer is no, then he or she can be discharged, and we can treat the next patient who's waiting for care," Atallah said.

Time is a crucial factor in an ED, and BrainScope One is able to give easy-to-read results within a shorter timeframe. As Atallah explains, the wait time before and after the CT scan is significantly longer when compared to the EEG test, which produces results that do not require a radiologist to interpret.

For patients with minor head injuries, CT scans expose them to needless ionizing radiation and increase the lifetime risk of cancer. BrainScope One reduces this risk.

"We're using cutting-edge technology to make things faster and safer for our patients."

The FDA-approved device also assesses concussions, and will be a less expensive option for patients.

Site for Clinical Study
Grady was one of 11 clinical sites for two validation studies conducted in August 2015. Grady emergency physicians Drs. David Wright and Tamara Espinoza from Emory University School of Medicine were the site's principal investigators.

The first study built a database of physiological and clinical data from patients with a suspected head injury who came to the Grady ED. This database was used to develop the device's algorithm.

The second study was a prospective trial where the data collected was used to validate the device with the FDA. This trial data was submitted to the FDA in support of the device's clearance for sale to the market.

"The data supports the use of Brain Scope to accurately differentiate between patients who are at risk for significant intracranial bleeding after a blunt head injury. Used properly, the BrainScope technology is a promising tool that could greatly reduce the number of unnecessary CT scans performed in the emergency setting," Wright said.