

Team studies EEGs in the ER to improve seizure diagnosis, care

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(Medical Xpress)—Even though it could impact their admission or care in the hospital, few seizing patients receive a diagnostic electroencephalogram, or EEG, in the emergency department, says a new study presented this week by University of Cincinnati researchers. Provided by University of Cincinnati

The research team, led by assistant professor of emergency medicine and neurosurgery William Knight, MD, looked at the use of EEGs to diagnose status epilepticus, a life-threatening condition in which the brain is in a state of persistent seizure for more than five minutes.

Status epilepticus affects more than 100,000 people each year in the United States, and the use of an EEG in the [emergency department](#) could assist with diagnosing [patients](#) who need immediate care for a persistent seizure. [KC1]

To better understand how EEGs are used in patients suspected of [seizures](#), Knight and his collaborators conducted a retrospective chart review of all adults who came to the emergency department of an urban, tertiary care hospital with seizures or suspected status epilepticus and who received an EEG within 24 hours of admission.

They found that over a quarter of patients with suspected seizures had an EEG performed in the ED, but only 6 percent of the EEGs resulted in a diagnosis of seizures. Only 2 percent of EEGs performed after a patient was admitted to the hospital were positive—demonstrating that some patients with a negative EEG may not need to be admitted.

"We showed that overall, a very small proportion of seizure patients in the ED end up with status epilepticus," says Knight. "We also concluded that there may be future opportunities to utilize ED observation units to obtain EEGs in seizure patients—which may ultimately reduce hospital and/or [intensive care unit](#) (ICU) admissions."

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