

Greater access to advanced epilepsy care coming to OSF Illinois Neurological Institute

For many Illinoisans, accessing highly specialized epilepsy care can mean traveling hours from home.

At OSF HealthCare Illinois Neurological Institute in Peoria, people from across the state have access to one of Illinois' few Level 4 [Epilepsy Centers](#), offering the highest level of specialized epilepsy care available.

Designated by the [National Association of Epilepsy Centers \(NAEC\)](#), the Level 4 accreditation recognizes the center's ability to provide advanced diagnostic testing, comprehensive medical management and complex surgical treatments for epilepsy. The designation also reflects a broader commitment to expanding access for expert epilepsy care for people throughout Illinois.

For [Thandar Aung, MD](#), medical director of the epilepsy center at OSF HealthCare Illinois Neurological Institute, improving access to specialized epilepsy care was one of the primary reasons she joined OSF.

"In my past job, I was getting patients from all over the country, and even outside of the United States," Dr. Aung says. "The access to epileptologists, or rather the lack of access, really showed why there are limitations."

Having spent her career in large metropolitan academic medical centers, Dr. Aung saw firsthand how difficult it can be for people to find an epilepsy specialist.

Peoria stood out because of its ability to serve people across a large geographic region. OSF Illinois Neurological Institute regularly cares for people throughout Central and Western Illinois, including communities near the Iowa and Missouri borders. For many Illinois residents living near those state lines, receiving care in Illinois can also make a significant difference when navigating insurance coverage.

Epilepsy is a lifelong condition, so getting the right care as early as possible helps people live their lives to the fullest.

What Level 4 means for patients

The NAEC designates epilepsy centers based on the level of care they can provide. A Level 4 epilepsy center offers the most comprehensive services available, including advanced diagnostic testing, multidisciplinary care and complex surgical procedures for people whose seizures cannot be controlled with medication alone.

"Level 4 is where you're able to do the invasive epilepsy surgeries, including invasive pre-surgical evaluation such as depth electrodes also known as stereoelectroencephalography (SEEG)," Dr. Aung says. "You place them in the brain based on a hypothesis, using all the available data to determine where the seizures are coming from. Of course, this is very dependent on experience. If you place the SEEG electrodes in the wrong locations, you could localize the seizures to the wrong part of the brain, potentially leading to an unsuccessful surgery or harm to the patient."

The Level 4 designation also reflects the collaborative approach patients receive. Physicians, including epileptologists and functional neurosurgeons, work alongside specialized nurses, neuropsychologists, neuroradiologists, social workers and other experts to create individualized treatment plans tailored to each person's needs.

Advancing epilepsy care

While medications successfully control seizures for many people with epilepsy, others have drug-resistant epilepsy and may benefit from surgery or newer technologies.

Magnetoencephalography (MEG) is one innovation Dr. Aung is particularly excited about. The technology measures the brain's magnetic fields (instead of the electrical field used in an electroencephalogram (EEG)), to help identify where seizures originate.

"With an EEG, we try to read the brain and its electrical activity," Dr. Aung says. "There's another way you can read brain activity by using the magnetic field. Sometimes you cannot see the electrical activity, but you can see it with the magnetic activity."

Dr. Aung also hopes to expand access to epilepsy clinical trials, giving patients opportunities to receive promising therapies before they become widely available and helping researchers better understand which treatments work best for each person.

Recognizing the signs

Epilepsy is a neurological disorder characterized by recurring seizures, but not every seizure looks the same. While some involve full-body convulsions, others may appear as brief staring spells, confusion or other subtle changes.

Dr. Aung encourages anyone experiencing unexplained episodes or symptoms that [continue to occur](#) to seek medical evaluation as soon as possible.

Although seizures are commonly related to abnormal brain activity, she notes that some heart conditions can mimic seizures and may be life-threatening if left untreated.

As one of the few Level 4 [epilepsy centers](#) in Illinois, OSF HealthCare Illinois Neurological Institute is continuing to grow its capabilities with one goal in mind: ensuring more patients throughout the state have access to the advanced, comprehensive epilepsy care they need.