

Epilepsy center

One in three patients with [epilepsy](#) is [drug-resistant epilepsy](#) and may benefit from investigations and operative treatment at [comprehensive epilepsy center](#).

Epilepsy centers provide a patient-oriented team that will typically include epileptologists (neurologists with expertise in treating seizures), neurosurgeons, neuropsychologists, nurse specialists, EEG technologists, social workers, and others with [training](#) and [experience](#) in [epilepsy treatment](#).

In USA further work is required to remedy the decreased access to specialized epilepsy care due to geographical disparities, and to better understand its contribution to overall disparities affecting epilepsy surgery referrals ¹⁾.

While an [epilepsy center](#) has capabilities for advanced seizure monitoring and surgical intervention, they are not required to have a [functional neurosurgeon](#) who is primarily focused on [epilepsy surgery](#). Therefore, the objective of a study by Clark et al. from the Department of Neurological Surgery [Sacramento](#) was to determine the impact of having a sub-specialized, epilepsy-focused functional [neurosurgeon](#) on patient outcomes.

They conducted a retrospective [chart review](#) for all patients who underwent surgical intervention for medically refractory epilepsy at a Level 4 Comprehensive Epilepsy Center from 2008 through 2019. Data was divided into two groups: group 1 comprised patients who had surgery before the hiring of a dedicated epilepsy-focused functional neurosurgeon in 2016, and group 2 was afterward. They compared surgical procedures, significant complications, and seizure outcomes.

A total of 101 patients underwent 105 operations (52 in group 1 and 53 in group 2), not including intracranial EEG insertion. Compared to group 1, group 2 had more surgeries performed per year (15.1 vs. 6.5), and a significantly lower Engel score at last follow-up (1.78 vs. 2.57; $p < 0.001$). There was no difference in the percentage of cases undergoing EEG, and no difference in complication rates.

In this series, the hiring of a sub-specialized functional neurosurgeon dedicated to epilepsy surgery in a comprehensive epilepsy center was associated with an increase in surgical volume and improved seizure outcomes ²⁾.

[Childhood cancer](#) survivors with [drug-resistant epilepsy](#) should be referred to an epilepsy center for a higher level of [care](#) ³⁾.

Brno Epilepsy Center

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1)

Louis S, Rabah N, Rammo R, Bingaman W, Jehi L. Disparities in the nationwide distribution of [epilepsy centers](#). *Epilepsy Behav.* 2021 Nov 14;125:108409. doi: 10.1016/j.yebeh.2021.108409. Epub ahead of print. PMID: 34788733.

2)

Clark AJ, Samuel R, Saez I, Kennedy J, Seyal M, Shahlaie K, Girgis F. The impact of sub-specialization within functional neurosurgery on patient outcomes in a comprehensive epilepsy center. *Clin Neurol Neurosurg.* 2021 Apr 20;205:106636. doi: 10.1016/j.clineuro.2021.106636. Epub ahead of print. PMID: 33984798.

3)

Siddiqui A, McGregor AL, Wheless JW, Klimo P, Boop FA, Khan RB. Utility of [Epilepsy Surgery](#) in Survivors of [Childhood Cancer](#). *Neuropediatrics.* 2021 Apr 14. doi: 10.1055/s-0041-1728653. Epub ahead of print. PMID: 33853165.

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