Patients with epilepsy find rapid access to Kaiser Permanente Northern California epilepsy centers

Josiah Ambrose, MD, Nausheen Mahmood, MD, Cynthia I. Campbell, PhD, Abigail Eaton, PhD

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| Challenge | Poor access to epilepsy centers is a barrier to surgical and non-surgical treatments. This study describes access times to a Level IV Epilepsy Center within an integrated health care delivery system (IDS) for patients with newly diagnosed epilepsy, and examines patient factors associated with accessing care.  |
| Existing Evidence | Twenty-five percent of epilepsy patients will not be seizure free with medications alone​. Professional guidelines recommend referral to a surgical epilepsy center for epilepsy patients who have failed two or more anti-epileptic drugs​. However, the average referral time to a Level 4 epilepsy center in the United States is 15-18 years,​ with surgical access times up to 20 years from diagnosis​. Patients with delayed surgeries have worse outcomes and generate greater health care costs. IDSs have developed systems for coordinated care, yet no studies have evaluated the referral time from epilepsy diagnosis to an epilepsy center within an IDS such as Kaiser Permanente Northern California (KPNC).  |
| Target Population | Adult patients with a de novo diagnosis of epilepsy within KPNC and seen at the regional Level IV Epilepsy Centers from 2008-2021 |
| Intervention or Exposure | Patient and Health System Factors:* Age group, gender, race/ethnicity, Medicaid/Medicare, psychiatric comorbidities, developmental delay diagnoses, neighborhood deprivation index, number of distinct anti-epileptic drugs prescribed.
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| **Outcomes/Key Findings** | Epilepsy Center Access: Average time in years from epilepsy diagnosis, first prescription of an anti-epileptic drug, first appointment with a general neurologist**Findings: Average time to epilepsy center access was within three to four years of initial diagnosis and onset of neurological care. However, longer time to referral of older and developmentally delayed epilepsy patients remains an ongoing challenge.** Findings demonstrate relatively short timelines to epilepsy centers compared to studies of traditional, non-integrated health care systems where delays of 15-18 years have been reported. Multivariate analyses found that age over 40, presence of developmental delay, and more AEDs were associated with longer times to epilepsy access. Ethnicity, Medicare status, and psychiatric comorbidity were not associated with longer access times.  |
| **Resulting Action/Change** | * Communication of findings to regional neurology leadership (annual KPNC and UCSF meetings) as well as a national audience (American Epilepsy Society and manuscript publication).
* Additional education will be provided to regional KPNC neurologists to consider referral to an epilepsy center for patients 40 years and up and developmentally delayed patients, when appropriate.
* Use findings to develop a validated database algorithm to prospectively identify patients with medically-refractory epilepsy in a future study.
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| Additional Recommendations |  |
| Implementation Tools  | Communication at Regional Neurology meetings and via Quarterly Neurology newsletter |
| Implementation Measurement | Remeasurement of Epilepsy Center Access time points in 2-3 years (future study) |
| Reference |   |