

**Model of a Pediatric New Onset Seizure Clinic to Improve Outcomes**  
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**Problem:** The misdiagnosis and mismanagement of epilepsy is common (1) There is a need for evidence based care in the treatment of epilepsy. The rate of misdiagnosis of epilepsy in a national sample of difficult-to-treat patients from a developed country is extremely high, with more than 30% of those with “definite epilepsy” not having epilepsy at all.(2)

**Evidence:** Epilepsy is the most common serious chronic neurological disorder in children the prevalence of epilepsy in children is 1 in 200.(3) The New Onset Seizure Clinic run by epileptologists, epilepsy nurse practitioners and a multidisciplinary team, with rapid access to care after first seizure offers a better way to improve outcomes in children with epilepsy.

**Strategy:** Institution of New Onset Seizure Clinic Model that optimizes clinical care, patient education, and ongoing clinical research to improve current and future outcomes for children with epilepsy.

**Practice Change:** A multidisciplinary team was put in place in the New Onset Seizure Clinic. This team consists of physicians, nurses, social workers, psychologists, and research assistants with experience and specialized training in pediatric epilepsy.

**Evaluation:** Minimize wait times for initial visit as well as “in clinic” waiting times. Maximize seizure freedom through tested clinical pathways. Education offered by written and verbal methods by nurses with specialty training in epilepsy. Support for quality of life outcomes by social workers and psychologists. Ongoing research protocols within the clinic setting to improve current and future outcomes and to develop evidence based guidelines.

**Results:** New patient evaluations occur within 7 to 10 days. Initial visit time from arrival to discharge was 83+- 26 minutes. Follow-up visit time from arrival to discharge 22+- 18 minutes. Efficacy of initial monotherapy in children with new diagnosis of untreated epilepsy: 65% of children with partial onset seizures achieve long term seizure freedom.(4) and 78% of children with generalized onset seizures achieve long term seizure freedom (submitted, Holland et al). Four additional active research protocols are currently in progress that will influence practice.

**Recommendations:** It is possible to design and refine an epilepsy clinic model that optimizes clinical care, patient education, and clinical research. This design may be generalizable to other medical centers.

## **Bibliography:**

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