

Session/Poster#

Presenter

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Lekshmi Peringassery Sateesh
Child Neurology Resident

Advisor(s): Dr. Geetha Chari, Child Neurology

Application of plan-do-study-act method in seizure rescue medication practices: A single pediatric neurology clinic quality improvement study

Objective: To assess if seizure rescue medications are prescribed appropriately with documentation in the EMR

Background: Administration of appropriate rescue medication is crucial in management of prolonged seizure and cluster seizures to avoid progression to status epilepticus.

Methods: The study is a retrospective single clinic analysis of pediatric patients with convulsive seizures employing the 'plan-do-study-act' (PDSA) method for quality assessment. Two separate cohorts-PDSA1 and PDSA2 were compared at two separate time frames spanning three months each with educational session in between.

Results: 38 and 30 patients were enrolled in PDSA1 and PDSA2 cycles respectively. In PDSA1, 25 patients (65.8%) had appropriate rescue prescriptions. Out of the rest, 8 (21.2%) were not prescribed medications due to unclear reasons and 5(13%) were seizure free for more than 2 years. In PDSA2, the percentage of rescue medication prescribed improved to 73%. Clonazepam ODT was the most prescribed rescue medication in both cohorts. There was an increase in prescribing trend of Valtoco and Nayzilam noted in the PDSA2. Increase in intranasal rescue medication from 11% to 32% and decrease in rectal rescue medication from 21% to 9% were noted in PDSA2. The analysis of appropriate dosing of medications and proper documentation in PDSA2 cohort was high, 95% and 89% respectively.

Conclusions: Our study showed improvement of seizure rescue medication prescription practices in PDSA2 compared to PDSA1 cycles. The role of educational session for fellows, attending physicians and patient family regarding the timing of rescue medication, appropriate options, and correct dosing after the PDSA1 was significant. Effective strategy of implementing systematic and rigorous standards in PDSA cycles sequentially could improve the prescription rate to 100% for convulsive seizures and consequently result in reduction in number of ED visits for breakthrough seizures and status epilepticus admissions.