OBJECTIVE:
To compare the effectiveness of a specialized urgent-access single seizure clinic (SSC) versus standard care.

BACKGROUND:
Care for patients with seizures is fragmented. It is unknown whether specialist clinics improve outcomes for patients requiring workup for seizure(s). There is no high-quality evidence to describe SSC effectiveness.

DESIGN/METHODS:
A prospective study of 200 patients referred to our SSC for first seizure evaluation. Demographic, clinical, and paraclinical variables were analyzed against historical controls. Binary logistic regression analysis was conducted to predict the impact of dichotomized variables on predicting epilepsy.

RESULTS:
Mean patient age was 42.1 years (range 14-88). Referral sources were predominantly emergency department and family physicians. A diagnosis was established at first contact in 80.9% of cases. 16.1% of patients required a second visit. 0.5% of patients required three consultations. 82/200 (41%) patients were diagnosed with epilepsy. Syncope was found in 24.5%, single unprovoked seizure in 14.4%, and alcohol withdrawal seizures in 4.6%.

Mean wait-time for first assessment was reduced by 71% (23.6 SSC versus 80.1 days standard care). Mean wait-time for an EEG was 4.0 days (37.1 days standard care). In 134/200 cases a CT scan had been performed. The wait-time for an MRI requested by the SSC was 44.9 days (81.3 days standard care). 63 patients were started on anti-epileptic drugs, with 63.50% starting lamotrigine, 7% levetiracetam, 5% phenytoin, and 5% topiramate.

Presence of generalized spike-wave discharges (odds-ratio (OR)=12.8;CI:5.3-30.7;p<0.00) or focal spike-wave (OR=6.8;CI:1.9-23.6;p=0.003), tongue trauma (OR=6.3;CI: 2.9-13.9;p<0.001), and pre-assessment stratification as high risk for seizure recurrence (OR=4.3;CI:1.7-10.9;p=0.002) strongly predicted epilepsy. SSC physicians were 17.1 more likely to accurately diagnose epilepsy versus nurses; there was a non-significant correlation between physician and nurse diagnoses.

CONCLUSIONS:
The SSC reflects an effective platform for single point-of-access care for seizure workup. This model reduces wait-times, improves patient access, and streamlines care.

Category - Epilepsy and Clinical Neurophysiology (EEG): Health Services/Outcomes Research