

## Quality issue / initial problem

Support for mental health problems in children with chronic illness is an important area of unmet need.<sup>1</sup>

**Why epilepsy?**  
60% of children with epilepsy have a mental disorder, but only 4% receive appropriate treatment.<sup>2</sup>

**Why executive dysfunction (ED) and epilepsy?**  
95% have difficulties with cognition and behaviour that affects education.<sup>2</sup> (33% meet criteria for ADHD)<sup>3</sup>

**Service barriers seem to be affecting access to appropriate assessment and effective treatment.**<sup>4</sup>

## Specific aim

All children with epilepsy and ED should be identified and receive appropriate assessment leading to a clear management plan in a timely manner.

## Measurement of improvement

**Baseline data** patient journeys to identify process barriers and range of supports required.

**Outcome measures:**

- Proportion who receive assessment for ED
- Proportion with clear management plan

**Process measures:**

- Proportion screened for ED
- Time from identification of ED to assessment
- Time from assessment to treatment

**Balancing measures:**

- Process measures
- Stakeholder satisfaction; Cost

**Rejected referrals to CAMHS or lengthy delays**  
**Epilepsy diagnosis to ED treatment**  

Service	Epilepsy (days)	CAMHS WL (days)	Assessment (days)	Treatment (days)
Neuropsychology	~750	~100	~100	~100
CAMHS ADHD	~500	~500	~100	~100

  
**175 children (6-17 years old) with epilepsy**

- Of 61% screened; 42% likely to have ED
- 38% had contact with CAMHS; 7% treatment for ED

**Reason for referral to CAMHS**  

Reason	No patients	Cumulative %
ADHD / ED	~21	~35
Behaviour	~21	~65
Mood / Anxiety	~14	~85
Autism	~5	~95
LD	~4	~100
Other	~2	~100

## Tests of change

Neurology liaison meeting:

- 1.Joint clinic: Psychiatrist joins Neurologist
- 2.Facilitated referral to CAMHS
- 3.Pragmatic screening
- 4.New decision pathway

## Effects of change

- Heterogeneity between complex patients requires multiple solutions (i.e. care pathways)
  - Ongoing role for CAMHS ADHD & Neuropsychology
- Screening an assessment time could be reduced
  - **Quick and safe for neurologist assess and treat ED with liaison support from psychiatrist**

## Lessons learned and message for others

Neurologists could be supported to safely manage many children with ED, but there is still a role for joint working

- A data driven approach has helped clarify priorities
- Seek outcome measures that are easy to obtain

## Tools

- Focus groups
  - Case studies
  - Population stratification
  - Pareto chart
- Process map
  - Driver diagram
  - Easier outcome data required for run chart

## References

1. Glazebrook C et al. Detecting emotional and behavioural problems in paediatric clinics. Child Care, Health and Development. 2003;29:141-149.
2. Reilly C et al. Academic achievement in school-aged children with active epilepsy: A population-based study. Epilepsia, 2014;55:1910–1917.
3. Reilly C et al. Neurobehavioral Comorbidities in Children With Active Epilepsy: A Population-Based Study. Pediatrics. 2014;133:e1586-e1593.
4. Williams AE et al. Epilepsy and attention-deficit hyperactivity disorder: links, risks, and challenges. Neuropsychiatr Dis Treat. 2016;12:287–296.