Coverage slightly exceeded usual paper-based data collection, with NeoTree capturing 25 more admissions and 17 more outcomes than the ward clerk. Median completion times were 16 and 8 minutes for an admission and outcome respectively.

Conclusions This study demonstrates how a digital health app can be optimised according to think-aloud usability insights to produce a highly usable intervention that is ultimately used and taken up by newborn HCPs in a low-resource neonatal unit. This study spearheads translational approaches to digital health intervention development by combining agile, user-centred design with traditional qualitative methods to expedite timely and pragmatic development of NeoTree. These findings could inform optimisation and successful uptake of similar apps in other low-resource settings.

British Paediatric Neurology Association

1527

NEUROCOGNITIVE ASSESSMENT FOR CHILDREN WITH IDIOPATHIC EPILEPSY

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Background The effects of epilepsy are felt in physical, mental health, cognitive function and educational achievements. With the improvement in diagnostic and therapeutic modalities, we can expect a better quality of life.

Objectives assess the effect of different anti epileptic drugs on the neurocognitive functions of the children with idiopathic epilepsy.

Methods Case-control study, where thirty children diagnosed with genetic epilepsy were recruited from paediatric neurology clinic, Ain Shams University compared to 30 children included in the control group who were recruited from the outpatient clinic with the same age and sex as cases.

All included children were subjected to the following:

History taking including (Onset, course, seizures' type, (GTCs,absence,focal),treatment duration, and antiepileptic drug used. Developmental, diet and medication history. History of major illnesses and Familial similar condition. General, neurological examination and Neurocognitive assessment by using Wechsler Intelligence Scales, Wisconsin card sorting test the computerized version, and Continuous Performance Test.

Results *Results:* In the present study we have evaluated 30 patients with genetic epilepsy who were regularly attending the Pediatric neurology clinic, Ain Shams University, with male to female ratio 1:2 in whom 63% were using levetiracetam, while 33% were using valproate 20% were using carbamazepine, 6% using lamotrigine and 23% using poly therapy. They were compared to 30 healthy individuals of same age and sex groups who served as the control group. Fifty-six% of patients had generalized tonic-clonic seizures, 34% had absence seizures and 10% had focal seizures. The mean age of the studied patients was 10.72 years and the mean duration of treatment was 2.6 years.

Regarding Wechsler Intelligence Scales, results showed that 26.7% of cases were very low mental function as regards total IQ, 30% low average, while 43% were average total IQ compared to 60% of controls were average total IQ while 26.7% were high average and 13.3% were very high. In our study, patient group had significantly lower full-scale, performance, and verbal IQs compared with the control group. The verbal

IQ were higher in patients using monotherapy than those using poly therapy, levetiracetam has the highest Wechsler intelligence scale profile compared to those using valproate or poly therapy. In Wisconsin card sorting test, patients performed poorly compared to controls, patients using monotherapy had better scores than those on poly therapy, patients using LEV had a better score than patients using other medications, there was no significant difference between patients with generalized tonic-clonic seizures and those with absence seizures. *Regarding* Continuous performance test: it was found that controls have a better score than patients with idiopathic epilepsy, there was a significant difference between patients with GTCs and those having absence seizures regarding total omission and average delay, there was a negative moderate correlation between duration of treatment and digits span and there was a negative moderate correlation between the dose of LEV and picture completion.

Conclusions Children with idiopathic epilepsy are more vulnerable to cognitive deficits than healthy children. The longer the duration of therapy and the use of more than one anti-epileptic medication, the more cognitive deficit observed in these patients.

Association of Paediatric Emergency Medicine

1528

PAEDIATRIC EMERGENCY DEPARTMENT ATTENDANCES DURING THE FIRST WAVE OF THE COVID-19 PANDEMIC – PATTERNS OF CONDITIONS, DEMOGRAPHICS AND ETHNICITIES

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Background The first wave of the coronavirus pandemic in the United Kingdom began in March 2020 and resulted in the closure of schools and non-essential services as mandated by the government. During this period a notable reduction in the number of children attending the Paediatric Emergency Department (PED) was witnessed. At this time information that Black, Asian and Minority Ethnic (BAME) patients were having worse outcomes from COVID-19 was becoming apparent. This raised questions about which groups of patients were not utilising the emergency services despite being acutely unwell and how we can better support these patients.

Objectives The primary objective was to identify the specialty-specific case mix of emergency paediatric presentations during the first wave of the COVID-19 pandemic in comparison to the same time period in the preceding year. A secondary aim was to understand if COVID-19 had an impact on the proportion of BAME patients attending the PED.

Methods We retrospectively collected data on PED attendances at a busy district general hospital in two time periods; March to May 2020, and March to May 2019. Information on patients' age, gender, ethnicity, diagnosis (categorised by specialty) and the outcome of their attendance were collected for all children aged 0–16 within each time period.