of this study was to understand the scope of neurological TSC care delivery across Canada. Methods: A survey was developed after literature review and discussion amongst two Paediatric Epileptologists and one Nurse Practitioner with expertise in TSC. Canadian Paediatric Neurologists participated via an anonymous web-based survey through the Canadian League Against Epilepsy (CLAE) and Canadian Neurological Sciences Federation (CNSF). Results: Fifty-eight responses were received. A dedicated TSC clinic was reported by 24% (n=14). Sixty percent (n= 35) reported preforming serial screening EEG monitoring in infants and 58% (n= 34) started prophylactic therapy when EEG abnormalities occurred. Vigabatrin was used in 37% (n=21). For management of drug-resistant epilepsy, surgery was reported as the preferred therapeutic option in 57% (n=32) of respondents. Barriers to treatment identified were a lack of multi-disciplinary care, unfamiliarity with new therapies and insufficient resources. Conclusions: Our findings demonstrate the variability in neurological care delivery of patients with TSC. With few dedicated TSC clinics, there is a need for the establishment of a national network to support clinical practice, research and education.

P.088

Family identified barriers to accessing services for children with attention deficits and neurodevelopmental disorders

B Wiley (Calgary) *K Taylor* (Calgary), *K Murias* (Calgary)*

doi: 10.1017/cjn.2022.184

Background: Obtaining early intervention services is crucial for improving outcomes in children with neurodevelopmental disorders (NDDs) such as Autism or Attention Deficit/Hyperactivity Disorder. Identifying barriers in accessing services in the healthcare system is necessary to optimize the Patient and Family-Centered Care approach. Methods: Parents of children with an NDD co-occurring with attention deficits were recruited from the Neurodevelopmental Attention Clinic at the Alberta Children's Hospital. Parents completed a semi-structured interview and the Barriers to Accessing Services (BAS) questionnaire. Results: Nine families participated representing 10 children. Interviews were evenly spread between biological mothers and fathers. All children had attention deficits; 4 children were also diagnosed with Autism and 5 with "other" neurologic conditions. The two barriers most identified by families (67%) through the BAS questionnaire were "Didn't know where to find help" and "Steps to seek help are too overwhelming", consistent with information obtained in the interview. Conclusions: Children with an NDD and attention deficits often have complex medical needs. Parents have identified challenges initiating, and navigating the many steps involved to secure services. We will collect information from more families to determine how services for children with complex medical needs can become more accessible.

P.089

Characteristics of children with cerebral palsy secondary to intrapartum asphyxia in the post-therapeutic hypothermia era

H Pekeles (Montreal)* *F Al Amrani* (Muscat)
M Perez-Morgui (Montreal) *P Wintermark* (Montreal), *M Shevell* (Montreal)

doi: 10.1017/cjn.2022.185

Background: We explored the profile of children with cerebral palsy (CP) secondary to intrapartum asphyxia (IAP), who were treated with therapeutic hypothermia (TH). We compared neonatal characteristics between children treated with TH with a mild vs severe CP. Methods: We collected perinatal and outcome measures of children treated with TH for IAP. We searched the literature for characteristics of children prior to TH to compare to our cohort. We subdivided our cohort into mild vs. severe CP and compared neonatal characteristics to identify predictors of severe phenotype. Results: We found more children with severe (19/30) compared to mild CP (11/30). Post-TH era children leaned towards a more severe phenotype compared to prior to TH. Children with severe CP had significantly higher mean birth weight, lower 5- and 10-minute Apgars, and more often white matter with associated deep gray matter injury or near-total injury pattern on MRI compared to the mild phenotype group (all $p<0.05$). Conclusions: Our data leaned to a more severe CP in cooled children compared to pre-TH. Birthweight, 5- and 10-minute Apgars and MRI findings were significantly different between our mild vs severe group. Our findings can guide clinicians how to better weigh these factors when counseling parents in the neonatal period.

P.090

Symptomatic neonatal seizure treatment duration and seizure recurrence: a retrospective single center study

A Martinez (Montreal)* *M De Carolis* (Montreal)* *B Marandyuk* (Montreal) *S Tremblay* (Montreal) *G Lodygensky* (Montreal) *A Birca* (Montreal), *E Pinchefsky* (Montreal)

doi: 10.1017/cjn.2022.186

Background: While seizures have adverse neurological effects, the prescribed antiseizure medications (ASMs) may also have a negative impact on neonatal brains and contribute to detrimental neurodevelopmental outcomes. The objectives were to evaluate: 1) the impact of implementing a neonatal seizure treatment protocol in 2016; 2) the influence of ASM duration and other clinical factors on seizure recurrence and epilepsy onset. Methods: Retrospective chart review of 139 term newborns born

between 2013 and March 2021 admitted at Sainte-Justine University Center Hospital with acute symptomatic seizures. Associations were assessed using Student T-test and Fisher exact test. Results: We did not observe significant change in the number of ASMs prescribed for acute seizure control (33% required 33 ASMs before vs 22% after 2016) nor significant change in frequency of prescription of ASM at discharge over time. ASM continuation at discharge was not associated with seizure recurrence (p=0.14, OR 2.14, 95%CI 0.78-5.86) or epilepsy (p=0.78, OR 1.32, 95% CI 0.45-3.90). Epilepsy occurred in 15 (12%) of children between 15 days to 72 months of age. Conclusions: No association was found between ASM maintenance at discharge following acute symptomatic neonatal seizures and the occurrence of epilepsy. Discontinuation of ASMs should be considered prior to discharge.

Other Multidisciplinary

P.091

Multi-modal analysis of outcomes in pediatric mild traumatic brain injury (mTBI)

P de Jesus (Calgary)* *B Craig* (Calgary) *ND Forkert* (Calgary) *R D'Arcy* (Burnaby) *M Fritzler* (Calgary) *K Barlow* (Calgary), *MJ Esser* (Calgary)

doi: 10.1017/cjn.2022.187

Background: mTBI is the most common type of head injury among children but diagnosing and managing symptoms are challenging due to heterogeneity. This study used multi-modal analysis to examine how acute mTBI symptoms transition to chronic deficits. Methods: Subjects included a cohort with mild TBI (n=40, 8-18 years old) and age/sex-matched controls (n=27). All participants received symptom assessment, neuropsychological evaluation, ERP assessment, neuroimaging, and serum cytokine analysis. Results were analyzed individually and in multi-modal models to identify important outcome predictors. Results: mTBI resulted in higher symptom burdens compared to controls. There were no group differences in measures of balance, ERP, FA, or MD. Female mTBI participants had lower CNSVS Neurocognition Index scores (p=0.0401) and faster reaction times (p=0.0385) than controls. Repetitive mTBI males had faster psychomotor speed than symptomatic mTBI males (p=0.0260). CTACK levels were higher in female mTBI groups (p= 0.0043), SCGF- levels were lower in male mTBI groups (p=0.0486), and MDC levels were lower in female mTBI groups (p=0.0377) compared to controls. Multi-modal models revealed key predictors from all modalities, despite most measures producing non-statistically significant results in individual analyses. Conclusions: Multi-modal analysis may afford the opportunity to delineate complex mTBI pathology and provide better identification of biomarkers than unimodal analysis.

Stroke

P.092

Health inequity and time from stroke onset to arrival trends: a single-centre experience

AM Pai (Toronto)* *D Nichol* (Toronto) *D MacGregor* (Toronto) *I Bhathal* (Toronto) *M Moharir* (Toronto) *T To* (Toronto) *B Ertl-Wagner* (Toronto) *A Kassner* (Toronto) *GA deVeber* (Toronto), *N Dlamini* (Toronto)

doi: 10.1017/cjn.2022.188

Background: Clinical outcomes following childhood arterial ischaemic stroke (AIS) depend on age at the time of stroke, infarct size and location. However, other important variables including health inequity and stroke onset to arrival times remain inadequately addressed. This study reported trends in health inequity and stroke onset to arrival times along with proximity to a stroke centre in Canada. Methods: Childhood AIS patients (N=234) with stroke onset between 2004-2019 at a Level 2 (comprehensive) stroke centre were included. Measures of material deprivation included household income, education, single-parent families, and housing quality. Patients were stratified into 3 cohorts (by date of stroke onset) and postal codes were categorized as minimal, moderate, or most deprived neighbourhoods. Results: Over the 16-year period, an increasing number of patients arrived from the most deprived neighbourhoods. Although, there was no significant association between material deprivation and stroke onset to arrival time, an increasing number of patients presented within 6 hours of stroke onset ($\chi^2 = 13.8$, $p = 0.008$). Furthermore, most patients arrived from urban neighbourhoods. Conclusions: The faster stroke onset to arrival trend is encouraging, however, material deprivation trends are concerning. Thus, future studies exploring post-stroke outcomes should consider material deprivation, stroke onset to arrival times, and geographical proximity.

Clinical Neurophysiology (CSCN)
Dementia and Cognitive Disorders

P.094

The three sisters of fate: Genetics, pathophysiology and outcomes of animal models of neurodegenerative diseases

M Klonarakis (Vancouver) *M De Vos* (Vancouver) *E Woo* (Calgary)* *L Ralph* (Toronto) *J Thacker* (Toronto), *J Gil-Mohapel* (Victoria)

doi: 10.1017/cjn.2022.189

Background: Alzheimer's disease, Parkinson's disease, and Huntington's disease are neurodegenerative disorders characterized by progressive structural and functional loss of specific