autosomal recessive disorder; most cases are due to homozygous deletion of *SMN1* gene. Methods: This study uses the Canadian Paediatric Surveillance Program to determine the minimum annual incidence of 5q-SMA from birth to 18 years of age in Canada. The protocol can be accessed at www.cpsp.cps.ca/surveillance. Results: Eighteen cases were reported in 2020-2021. Ten (55%) cases were reported from Ontario and the remaining cases were reported from Atlantic Canada and Western Canada. Their median age was 11 months (IQR 4–21); 61% were male. The most common presenting symptoms were hypotonia and delayed motor milestones in 12 (86%) and 10 (71%) cases respectively. On average, the diagnosis was delayed after onset of symptoms by three months for SMA Type 1, by eight months for Type 2, and by 18 months for Type 3. Twelve (86%) cases received nusinersen as their first disease-modifying treatment. Conclusions: Early recognition and newborn screening are essential to reduce diagnostic delay and enable timely treatment of SMA. Other data sources including the Canadian Neuromuscular Disease Registry and molecular genetic laboratories will be used to estimate the annual incidence of pediatric SMA in Canada.

Other Child Neurology

P.085

The relationship between sleep and behavior in attention deficit/hyperactivity disorder

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Background: Attention-Deficit/Hyperactivity Disorder (ADHD) is a neurodevelopmental disorder that is associated with long-term reduced quality of life and impaired functioning. ADHD is commonly associated with sleep disturbances that can contribute to many difficulties in a child's life. This study aims to elucidate this complex relationship by utilizing a subset of the Adolescent Brain Cognitive Development (ABCD) database. Methods: The population included a group of children with ADHD age 10-13 years (n=212) and a matched typically developing (TD) group (n=212). Sleep data was obtained through Fitbit actigraphy measures, and the Parent Sleep Disturbance Scale (SDS). Behavioural and emotional subscores were obtained from the Child Behaviour Checklist (CBCL). Results: There were no significant correlations between the actigraphy and SDS sleep data. SDS sleep data were significantly different between ADHD and control groups, while actigraphy data was not. Sleep latency (measured by actigraphy) and 3 out of 6 of the SDS subscores were significantly related to behavioural scores. Conclusions: The results of this study indicate that sleep may not be an important mediator of behaviour and emotional responses in children with ADHD. Future studies should explore both influences on sleep parameters as well as behaviour and other measures important to families.

P.086

Risk factors for term born periventricular white matter injury in children with cerebral palsy: a case control study

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Background: The aim of this study was to identify possible risk factors associated with term-born newborns with cerebral palsy and PWMI on imaging. Methods: This is a case-controlled study with cases from the Canadian Cerebral Palsy Registry and controls from Alberta Pregnancy Outcomes and Nutrition Study. PWMI was diagnosed based on MRI reports and 160 cases were compared to 1950 controls. Risk factor were selected *a priori*; including pregnancy complications, toxin exposure, perinatal infection, sex, small for gestational age, and perinatal adversity. Multivariate regression binomial model was used to calculate odds ratios(OR) and 95% confidence intervals(CI). Results: Multivariable analyses suggested PWMI was associated with pregnancy complications(OR=3.35; 95% CI=2.23-4.94), antenatal toxin exposure(OR=2.45; 95% CI=1.67-3.55), perinatal infection(OR=3.61; 95% CI=1.96-6.29) and perinatal adversity(OR=2.03; 95% CI=1.42-2.94). Term born males were not more likely to have PWMI compared to females(OR=1.37; 95% CI=0.98-1.93). Multiple regression analyses suggested independent associations between PWMI and pregnancy complications(OR=3.63; 95% CI 2.40-5.40), antenatal toxin exposure(OR=2.62; 95% CI 1.77-3.84), perinatal infection(OR=3.42; 95% CI 1.83-6.05) and perinatal adversity(OR=2.49; 95% CI= 1.71-3.69). Conclusions: Risk factors such as pregnancy complications, toxin exposure, perinatal infection and perinatal adversity are associated with PWMI in term-borns, suggesting a 'two-hit' model that could involve an interaction among both antenatal and perinatal variables.

P.087

The landscape of paediatric tuberous sclerosis complex (TSC) neurological care in canada: results from a national survey

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Background: Tuberous Sclerosis Complex (TSC) is a genetic disease that affects multiple body systems with the neurological manifestations causing the greatest disease burden. The objective

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

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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

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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

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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