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

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

F Ghanim (Calgary) *K Harkness* (Calgary) *V Guadagni* (Calgary), *K Murias* (Calgary)*

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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.

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

A Marefi (Montreal)* *N Husein* (Montréal) *M Dunbar* (Calgary) *D Dewey* (Calgary) *N Letourneau* (Calgary) *M Oskoui* (Montreal) *A Kirton* (Calgary), *M Shevell* (Montreal)

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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

M Nabavi Nouri (Lonson) *M Zak* (Toronto) *R Whitney* (Hamilton), *D Haile* (Lonson)*

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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