

body mass index (BMI) may also be at risk of significant neurodevelopmental disorders. The relationship between maternal pre-pregnancy BMI and neurodevelopmental outcomes in preterm infants is not yet clearly defined.

OBJECTIVES: To determine the association of pre-pregnancy BMI of mothers of infants born <29 weeks gestational age (GA) and neurodevelopmental impairment (NDI) at 18-24 months corrected age (CA).

DESIGN/METHODS: Preterm infants born <29 weeks GA between January 2005 and December 2015 evaluated in the neonatal follow-up clinic at 18-24 months CA were included. Demographic characteristics as well as neurodevelopmental status including Bayley-III cognitive, language, and motor scores and sensory impairments were compared between three groups based on maternal pre-pregnancy BMI (BMI₁ [18.5-24.9 kg/m²] vs. BMI₂ [25-29.9 kg/m²] vs. BMI₃ [≥30 kg/m²]) using univariate and multivariable regression models. The primary outcome was a composite of death or NDI.

NDI was defined as the presence of Bayley-III <85 on one or more of the cognitive, motor, or language composite scores, any cerebral palsy (GMFCS ≥1), sensorineural or mixed hearing impairment, or unilateral or bilateral visual impairment.

RESULTS: Of 771 eligible infants, 53 not seen in the follow-up clinic and 21 born to mothers with BMI <18.5 kg/m² were excluded. Of the remaining 697 participants, 315 (45%) infants were in BMI₁, 235 (34%) in BMI₂, and 147 (21%) in BMI₃ groups. Infants in BMI₁, BMI₂, and BMI₃ groups had mean (SD) birth weight of 897 (231), 854 (208), and 867 (234) grams and median GA (IQR) of 27 (3), 26 (2), and 27 (3) weeks respectively. Rates of associated impairments are shown in Figure 1. The odds of a composite of death or NDI in BMI₂ vs. BMI₁ and BMI₃ vs. BMI₁ groups were 1.33 (95%CI 0.86-2.06) and 0.76 (95%CI 0.47-1.22) respectively (Table 1). Infants born to mothers in the BMI₂ group had twice the odds of scoring <85 on the Bayley-III language composite than those in BMI₁ (adjusted odds ratio 2.06 [95% CI; 1.28-3.32]).

CONCLUSION: Pre-pregnancy body mass index was not associated with death or neurodevelopmental impairment in very preterm infants at 18-24 months corrected age. However, infants born to mothers who were overweight were more likely to have lower language scores.

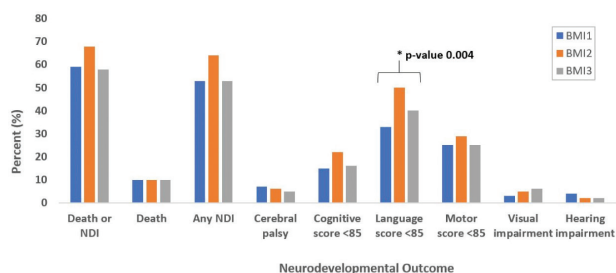


Figure 1. Neurodevelopmental outcomes at 18-24 months corrected age

Table 1. Neurodevelopmental outcomes at 18-24 months corrected age

	BMI ₁ (N=315)	BMI ₂ (N=235)	BMI ₃ (N=147)	BMI ₂ vs. BMI ₁ *aOR (95% CI)	BMI ₃ vs. BMI ₁ *aOR (95% CI)
Death or NDI, n (%)	145/246 (59%)	134/196 (68%)	73/125 (58%)	1.33 (0.86-2.06)	0.76 (0.47-1.22)
Death, n (%)	30 (10%)	23 (10%)	14 (10%)	0.81 (0.42-1.58)	0.86 (0.40-1.86)
Any NDI, n (%)	116/217 (53%)	111/173 (64%)	59/111 (53%)	1.46 (0.93-2.32)	0.75 (0.45-1.26)
Cerebral palsy, n (%)	20/285 (7%)	13/209 (6%)	6/133 (5%)	0.86 (0.39-1.90)	0.59 (0.22-1.59)
Bayley-III cognitive composite score <85, n (%)	39/263 (15%)	43/192 (22%)	21/128 (16%)	1.61 (0.92-2.81)	1.17 (0.62-2.22)
Bayley-III language composite score <85, n (%)	72/220 (33%)	80/161 (50%)	42/105 (40%)	2.06 (1.28-3.32)	1.03 (0.60-1.78)
Bayley-III motor composite score <85, n (%)	55/224 (25%)	47/163 (29%)	28/111 (25%)	1.09 (0.65-1.83)	0.87 (0.48-1.58)
Visual impairment, n (%)	9/285 (3%)	10/210 (5%)	8/133 (6%)	n/a†	n/a†
Hearing impairment, n (%)	10/284 (4%)	5/203 (2%)	2/132 (2%)	n/a†	n/a†

Abbreviations: BMI: Body mass index; BMI₁: 18.5-24.9 kg/m²; BMI₂: 25-29.9 kg/m²; BMI₃: ≥30 kg/m²;

NDI: neurodevelopmental impairment

Different variables have different denominators due to missing/unknown values

* Adjusted for maternal age, nulliparous, smoking during pregnancy, antenatal steroids, chorioamnionitis, multiple birth, c-section delivery, gestational age, sex, outborn, 5 minute Apgar <7, SGA, and maternal education (for outcomes not involving death)

†Model could not be fit due to small numbers

30 EXPLORING THE LIVED EXPERIENCE OF NON-OFFENDING CAREGIVERS IN PAEDIATRIC ABUSIVE HEAD TRAUMA

Meggie Shannon¹, Qendresa Sahiti², Amy Ornstein³

¹Dalhousie University and IWK Health

Centre, ²Dalhousie University, ³IWK Health Centre

BACKGROUND: Abusive head trauma (AHT) is the most common cause of death due to physical abuse and despite prevention efforts, the incidence remains largely unchanged. For survivors, there can be multiple adverse health consequences with lifetime costs in the range of millions per child. While studies have focused on both short- and long-term outcomes for children with AHT, little is known about the experience of their non-offending caregivers (NOCs).

OBJECTIVES: To explore the lived experience of NOCs in paediatric AHT, including their perspectives on paediatric practice and prevention strategies.

DESIGN/METHODS: Institutional Research Ethics Board approval was obtained. Recruitment materials were shared through the National Centre on Shaken Baby Syndrome's email, social media, and presentation at their Family Symposium. Inclusion criteria were North American NOCs in paediatric AHT, who lived with the offender. Using a phenomenological approach, six semi-structured interviews were conducted over Zoom for Healthcare, audio-recorded, transcribed, and rendered anonymous. Transcripts were coded using ATLAS.ti and classified by consensus into major themes and subthemes by the research team. Data collection and analysis continued until saturation was reached.

RESULTS: All participants reported ongoing, multidimensional impacts of the trauma on their physical and mental health, years after occurrence. Primary themes identified included: (1) NOCs need compassion and support. Among other aspects of their experience, feeling judged and accused by healthcare providers (HCPs), compounded their trauma, (2) NOCs reported varied experiences within healthcare including a perceived lack of AHT knowledge among HCPs, and could be better served by an extension of multidisciplinary supports, (3) NOCs are resilient, devoted, and powerful advocates for their children all while managing negative emotions such as feeling betrayed, guilt and fear for their child's life, (4) NOCs experienced challenges navigating systems and accessing supports, including financial, geographical and psychosocial barriers, and (5) There was varied exposure to AHT prevention materials, and many felt the stigma associated with AHT limits engagement with the subject, which may be a barrier to prevention efforts.

CONCLUSION: NOCs hold a unique and relevant perspective, not previously documented. While further research is required, our findings suggest that by extending compassion to caregivers and accessible multidisciplinary supports, the experience and overall wellbeing of NOCs could be improved. By better addressing the complex needs of NOCs, and increasing knowledge of AHT, HCPs have an opportunity to mitigate the negative impacts of the event and create better outcomes for children.

31 IDENTIFYING CHILD MALTREATMENT IN VIRTUAL MEDICAL APPOINTMENTS - WHAT ARE WE MISSING?

Stephanie Lim-Reinders¹, Kelley Zwicker², Michelle Ward³, Nita Jain⁴, Kristopher Kang⁴, Claudia Malic¹, Amy Ornstein⁵

¹University of Ottawa, Faculty of Medicine,

²Ottawa Community Pediatricians Network,

CHEO, ³Children's Hospital of Eastern

Ontario, ⁴University of British Columbia,

⁵IWK Health Centre

BACKGROUND: Throughout the COVID-19 pandemic, concerns have emerged regarding missed cases of child maltreatment. Evidence suggests an increased incidence of child maltreatment despite a documented decline in reports to child protective services. In Ottawa, reports dropped by 30-40% at the start of the pandemic in 2020. Pediatricians play an important role in the detection of child maltreatment and many

have shifted from in person to virtual care. However, there is a paucity of published literature on this topic. We hypothesize that the shift to virtual visits is a barrier to identifying cases of child maltreatment and may contribute to missed cases.

OBJECTIVES: Our survey assesses if and how Canadian pediatricians are identifying child maltreatment over virtual medical appointments, as well as the barriers and enabling factors to doing so.

DESIGN/METHODS: The Canadian Paediatric Surveillance Program (CPSP) is a joint effort with the Canadian Paediatric Society and Public Health Agency of Canada towards national pediatric surveillance through monthly surveys to 95% of Canadian pediatricians. Using their infrastructure, a one-time survey was sent to 2770 pediatricians between November 2021 and January 2022 with data analyzed for qualitative themes and descriptive statistics.

RESULTS: There was a 34% response rate ($n=928$) and 704 valid responses. Exclusions were for no provision of virtual care, incomplete surveys or no reported cases of child maltreatment in their career ($n=93$, 10%). The average number of years in independent practice was 17.5 years, and 69% had not provided virtual care prior to the pandemic. Based on a virtual visit, at least one case of child maltreatment was reported by 16% of physicians prior to the pandemic, and by 11% following March 2020. Nearly one-third (30%) of these cases required a subsequent in-person visit prior to making the report. Social stressors and clear disclosures from patients and caregivers were the main factors leading to reports. The virtual physical exam was not a factor that triggered concerns of maltreatment in any case. Respondents reported at a rate of 68% that it was slightly or much more difficult to detect child maltreatment over virtual visits. Concerns that a case had been missed or identified late in association with virtual care were reported by 29% of physicians ($n=206$) with some commenting that clear harm resulted.

CONCLUSION: This survey shows that virtual medical care presents barriers to identifying child maltreatment and may be an important factor in missed cases of child maltreatment.

32

HOW DO CHILDREN WITH MEDICAL COMPLEXITY DIE? A SCOPING REVIEW

Grace Ng¹, Marie-Hélène Bourassa², Hema Patel¹

¹McGill University, ²McGill

BACKGROUND: While children with medical complexity (CMC) are recognized as an emerging and unique cohort, end of life remains poorly understood and little is known about illness trajectory, decision making and communication experiences for this group of patients and their families.

OBJECTIVES: This scoping review aimed to describe existing literature on the characteristics of end of life in CMC.

DESIGN/METHODS: The study was conducted in accordance with the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR). Electronic databases (MEDLINE, CINAHL, PsycINFO, Scopus, Embase) were searched up to June 2021. Studies reporting children, adolescents and young adults who were at end of life and fulfilled the definitional framework of medical complexity by Cohen et al were included by two independent reviewers. Data on study aims, design, methods, outcome measures and key findings were extracted, followed by quantitative and qualitative analysis of the results.

RESULTS: Of 1535 publications initially identified, 23 studies were included. In terms of study characteristics, 20 (87.0%) studies were quantitative, 15 (65.2%) were published from 2015 to 2021 and 14 (70.0%) originated from the USA. Study outcomes were categorized into 5 main groups: (1) Place of death (30.8%), (2) Health care use (23.1%), (3) Interventions received or withdrawn (17.9%) (4) Decision making and communication (12.8%) and (5) Others (15.4%). These outcomes were found to be associated with sociodemographic factors and CMC diagnostic categories. Majority of CMC deaths occurred in hospitals and the mean proportion of hospital deaths reported was 68.8% (33.5% to 91.9%). Studies evaluated health care utilization at

end of life in various settings including hospice, home care, hospital and the intensive care unit. Interventions studied in this cohort included mechanical ventilation, cardiopulmonary resuscitation, hemodialysis, procedures and medication use. Studies reported that CMC were subjected to more intensive interventions when compared to non-CMC. The 2 main themes which emerged from qualitative studies were that of advance care planning experiences and the unique end of life experiences of CMC and their families.

CONCLUSION: This scoping review highlighted the unique characteristics of end of life in CMC and outlined the emerging body of literature as well as knowledge gaps on this topic. A better understanding of this cohort of CMC would serve to inform clinical practice, service development and future research opportunities.

33

EVALUATION OF A SECURE MESSAGING SYSTEM FOR CHILDREN WITH MEDICAL COMPLEXITY

Camilla Parpia¹, Clara Moore², Madison Beatty², Susan Miranda³, Sherri Adams², Jennifer Stinson³, Arti Desai⁴, Leah Bartlett⁵, Erin Culbert⁶, Eyal Cohen⁷, Julia Orkin²

¹University of Toronto Faculty of Medicine,

²The Hospital for Sick Children, ³SickKids

Research Institute, Toronto, Canada,

⁴University of Washington, Seattle,

Washington, USA, ⁵RVH, ⁶Credit Valley

Hospital, Mississauga, Canada, ⁷Hospital for

Sick Children

BACKGROUND: The Connecting2gether (C2) platform is a secure online information-sharing tool that aims to improve care for children with medical complexity (CMC) and their families. A key feature of C2 is secure messaging which enables parents to communicate with their child's care team members (CTMs) in a timely manner.

OBJECTIVES: (1) Evaluate the use of a secure messaging system, (2) Examine and compare the content of messages to email and phone calls, and (3) Explore parent and CTMs' perceptions and experience using secure messaging as a method of communication.

DESIGN/METHODS: This study is a sub-study of a larger feasibility evaluation of the C2 platform. Parents of CMC were recruited from a tertiary level complex care program to use the C2 platform for 6 months. Parents could invite CTMs involved in their child's care to register on the platform. Secure messages were extracted from C2 usage reports, and phone and email documentation from the electronic medical record. Quantitative data from C2 usage reports were analyzed using descriptive statistics. Messaging content codes were iteratively developed through review of the C2 messages. Semi-structured interviews were completed with parents and CTMs. Communication and interview data were analyzed using thematic analysis.

RESULTS: 36 parents and 43 care team members, including HCPs and family members, registered on the C2 platform. Participants sent a total of 1853 messages on C2 with parents and nurse practitioners sending a mean of 33.1 and 87.4 messages, respectively. 85.5% of all C2 messages were responded to within 24 hours. Email and phone calls focused primarily on clinical concerns and medications, whereas C2 messaging focused more on education, proactive check-ins, and non-medical aspects of the child's life (Figure 1). Four themes emerged from the participant interviews related to C2 messaging: Connection to Care Team, Efficient Communication, Clinical Uses of Secure Messaging, and Barriers to Use (Figure 2).

CONCLUSION: Overall, our study provides valuable insight into the benefits of secure messaging in the care of CMC. Secure messaging provided the opportunity for continued patient education, proactive check-ins from HCPs, and casual conversations about family and child life, which contributed to parents feeling an improved sense of connection with their child's health care team. Secure messaging can be a beneficial additional communication method to improve communication between parents and their care team, reduce the associated burden of care coordination, and ultimately, improve the experience of care delivery.