

appears driven by milder difficulties in cmTBI and OI groups. In fact, across CBCL and BRIEF subscales, children with msTBI were rated as approaching or exceeding a full standard deviation deficit based on normative data. TBI severity was also associated with white matter microstructure and cross-domain associations linked microstructure with observable neurobehavioral morbidities, suggesting a possible mechanism post-injury. Future longitudinal studies would be useful to examine the temporal evolution of deficits.

Categories: Acquired Brain Injury (TBI/Cerebrovascular Injury & Disease - Child)

Keyword 1: child brain injury

Keyword 2: cognitive functioning

Keyword 3: brain structure

Correspondence: Julia Friedman Center for Biobehavioral Health, Abigail Wexner Research Institute julia.friedman@nationwidechildrens.org

35 Preliminary reliability of the Coma Recovery Scale, Revised (CRS-R) in children with a history of disorders of consciousness after acquired brain injury

Natasha N Ludwig, Stacy Suskauer, Beth Slomine
Kennedy Krieger Institute, Baltimore, MD, USA

Objective: The Coma Recovery Scale-Revised (CRS-R) is the gold standard assessment of adults with disorders of consciousness (DoC); however few studies have examined the psychometric properties of the CRS-R in pediatric populations. This study aimed to demonstrate preliminary intra-rater and inter-rater reliability of the CRS-R in children with acquired brain injury (ABI).

Participants and Methods: Participants included 3 individuals (ages 10, 15, and 17 years) previously admitted to an inpatient pediatric neurorehabilitation unit with DoC after ABI who were followed in an outpatient brain injury clinic due to ongoing severe disability. ABI etiology included traumatic brain injury (TBI; n=2) and encephalitis (n=1). Study participation took place on average 4.6 years after injury (range 2-9). The Glasgow Outcome Scale-Extended, Pediatric Version (GOS-E Peds), a measure of outcome after pediatric brain injury,

was administered as part of screening. Two participants were placed in the GOS-E Peds "lower severe disability" category (i.e., score of 6) and one was placed in the "upper severe disability" category (i.e., score of 5). The CRS-R includes 6 subscales measuring responsiveness including Auditory (range 0-4), Visual (range 0-5), Motor (range 0-6), Oromotor/Verbal (range 0-3), Communication (range 0-2), and Arousal (range 0-3) with higher scores indicating higher-level function. Subscales are totaled for a CRS-R Total score. Behaviors shown during the CRS-R are used to determine state of DoC [Vegetative State (VS), Minimally Conscious State (MCS) or emergence from a minimally conscious state (eMCS)] based on 2002 Aspen Guidelines. Participants were administered the CRS-R three consecutive times on the same day. Administrations were completed by two raters in this order: Rater 1 (1A), Rater 1 (1B) and Rater 2. Intra-rater reliability was deemed by percent agreement across the 6 subscales between Rater 1A and 1B. Inter-rater reliability was deemed by percent agreement across the 6 subscales between 1A and 2.

Results: Mean CRS-R Total score for Rater 1A was 22 (SD=1.73, range 20-23), Rater 1B was 22 (SD=1.73, range 20-23), and Rater 2 was 21.33 (SD=2.08, range 19-23). Intra-rater reliability was 100% and inter-rater reliability was 94% across all subscales. All participants were deemed eMCS at all 3 ratings.

Conclusions: Data from this very small sample of children suggests that the CRS-R demonstrates both intra-rater and inter-rater reliability in patients with a history of DoC after ABI. Given that all children were at the high end of the scale (eMCS), further research is needed with a larger sample of children with a range of states of DoC.

Categories: Acquired Brain Injury (TBI/Cerebrovascular Injury & Disease - Child)

Keyword 1: psychometrics

Keyword 2: brain injury

Keyword 3: test reliability

Correspondence: Natasha N. Ludwig Kennedy Krieger Institute Johns Hopkins School of Medicine ludwign@kennedykrieger.org

36 Exploring Neuropsychological Care for Pediatric Patients in Neurocritical Care and Outpatient Follow-Up

Paige E Naylor, Andrea Jagusch, Emma Basel, Michelle Loman, Elisabeth Vogt
Medical College of Wisconsin, Milwaukee, WI, USA

Objective: Integration of neuropsychological services into multidisciplinary clinics for pediatric patients requiring neurocritical care has previously been shown to improve access to care and promote connection to vital services for children recovering from traumatic brain injuries or other serious insults or infections impacting the brain. As such, the objective of this study is two-fold. First, to explore the unique model of care provided by a neuropsychological inpatient service at the Medical College of Wisconsin/Children's Wisconsin. Secondly, to describe the benefit of neuropsychology in the Brain Recovery Assessment and Interdisciplinary Needs Clinic (BRAIN) a neurocritical care outpatient follow-up multidisciplinary clinic.

Participants and Methods: Participants include N =298 pediatric inpatients from a Level 1 Pediatric Trauma center referred to the neuropsychological inpatient consultation service from February 2020 to July 2022. Qualitative methods were used to describe the flow and number of patients initially referred to the neuropsychological inpatient service and then those who followed up in outpatient neuropsychological care prior to and after the implementation of a multi-disciplinary clinic for children admitted to the Neurocritical Care Unit. Rates of follow-up with neuropsychological care were compared pre- and post-establishment of the multidisciplinary clinic. Additional analyses were conducted to explore factors known to impact follow-up with care post-hospitalization (e.g., socioeconomic status, race, ethnicity).

Results: Prior to the establishment of the BRAIN clinic, approximately 60 to 70% of patients were referred for outpatient neuropsychological follow-up. Approximately 30% of patients referred to the inpatient neuropsychological service following the establishment of the BRAIN clinic were referred for multidisciplinary care, while 20% did not require additional intervention and 50% were referred for outpatient neuropsychological follow-up. Analyses indicated increased follow-up rates with neuropsychological care following the establishment of the BRAIN clinic.

Conclusions: Integration of neuropsychology into inpatient care and subsequent multi-

disciplinary settings for pediatric patients with traumatic brain injuries or other serious insults and CNS infections increased access to neuropsychological care. Additional clinical implications will be discussed.

Categories: Acquired Brain Injury (TBI/Cerebrovascular Injury & Disease - Child)

Keyword 1: traumatic brain injury

Keyword 2: stroke

Correspondence: Paige Naylor, PhD Medical College of Wisconsin pnaylor@mcw.edu

37 Predictors of Out-of-Home Placement after Non-Accidental Traumatic Brain Injury Among Young Children

Stephanie A. Hitti, Amy K. Connery, Antonia Chiesa
Children's Hospital Colorado, Denver, Colorado, USA

Objective: Inflicted traumatic brain injury (TBI) is one of the leading causes of childhood injury and death. Studies have consistently demonstrated worse outcomes for children with inflicted TBIs compared to accidental TBIs. Out of home placement, a known developmental risk factor, is a frequent occurrence in inflicted TBI, which may also contribute to worse outcomes for children. Little is known about what injury, child, and family factors predict out-of-home versus in-home placements. We hypothesize that injury severity, child, and family risk factors will be predictive of out-of-home placement after hospital discharge from an inflicted TBI.

Participants and Methods: Participants included 175 children with inflicted head injuries ages who received care at a large children's hospital from 2012 to 2021. 88% of children were alive at discharge and were included in the study. The total sample included 154 children. Ages ranged from 0.2 to 76 months (M = 11.81, SD = 14.50) and 64.9 % were male.

Race/Ethnicity distribution was as follows: 66.9% White, 29.9% Latinx or Hispanic, 4.6% Black, 3.3% American Indian or Alaskan, and 22.5% identified another race or ethnicity or identified as multiracial.

Measures included injury severity (e.g., days spent in the PICU, post-resuscitation GCS), child (e.g., race/ethnicity, gender), and family factors (e.g., prior history of domestic violence,