

 $R_{esponse} E_{valuation} In N_{eurofibromatosis} S_{chwannomatosis} \\ INTERNATIONAL COLLABORATION$

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Developing Endpoints Across Multiple Cognitive Domains

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Neurocognitive Outcomes Working Group

- Started 2011
- Goal to identify measures of cognition and psychosocial functioning for use in clinical trials
 - Well-designed measures (good psychometrics)
 - Easily administered in clinical trials setting
 - Previous use in clinical trials
 - Previous use with NF1
 - Availability in other languages
- Preschool subcommittee 2016
 - Lead: Bonnie Klein-Tasman



Relevant Domains

- Cognition
- Language
- Visual-spatial
- Memory
- Attention
- Executive functions
- Adaptive skills
- Academics
- Psychosocial
- Social skills
- Social cognition
- Computerized measures
- Global outcome measures

2016 Neurology supplement

Preschool- Upcoming Neurology supplement

Upcoming Neurology supplement



Traumatic Brain Injury Common Data Elements (CDE) Initiative

- Co-sponsored by NNDS, VA, NIDRR, DCoE, and DVBIC
- 8 working groups, including one focused on cognitive and psychological outcomes



TBI CDE Workgroup Method

- Subgroups for each cognitive domain working simultaneously
- Standardized search and review process
 - Each subgroup used similar search terms to find measures
 - Measures reviewed on same properties (similar to our CogRATE Form)
- For each cognitive domain, recommended measures organized into three tiers
 - Core: single, well-established measure
 - Supplemental: more in-depth assessment
 - Emerging: promising measures under development



Recommendations for outcome measures in pediatric TBI

Cognitive Domain	Core	Supplementary	Emerging
IQ	Wechsler Abbreviated Scale of Intelligence (WASI)	None	None
Executive Function	Delis-Kaplan Executive Function System (DKEFS) Verbal Fluency	 DKEFS Trail Making Test Behavior Rating Inventory of Executive Function (BRIEF) Contingency Naming Test 	 Test of Executive Control Test of Strategic Learning NIH Toolbox
Attention/Processing Speed	WISC/WPPSI Processing Speed	 Conners Continuous Performance Test Test of Everyday Attention (TEA-Ch) 	1. Flanker Test 2. NIH Toolbox



SPECIAL COMMUNICATION Arch Phys Med Rehab 2010;91:1650-1660

Recommendations for the Use of Common Outcome Measures in Traumatic Brain Injury Research

Elisabeth A. Wilde, PhD, Gale G. Whiteneck, PhD, Jennifer Bogner, PhD, Tamara Bushnik, PhD, David X. Cifu, MD, Sureyya Dikmen, PhD, Louis French, PsyD, Joseph T. Giacino, PhD, Tessa Hart, PhD, James F. Malec, PhD, Scott R. Millis, PhD, Thomas A. Novack, PhD, Mark Sherer, PhD, David S. Tulsky, PhD, Rodney D. Vanderploeg, PhD, Nicole von Steinbuechel, PhD

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Recommendations for the Use of Common Outcome Measures in Pediatric Traumatic Brain Injury Research

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Advantages of TBI CDE Model

Efficient

 Tier groupings gives more guidance for primary and secondary study aims measures

Future work will focus on updating recommendations



New Model

- Subgroups reviewing multiple domains concurrently
- Previous papers have focused on pediatric measures
 - Considering inclusion of adult measures (especially those that extend from childhood into adulthood)
 - Special section for infant/toddler measures
- Timeline
 - July 2020-February 2021
 - Adaptive
 - Psychosocial
 - Academics
 - Social Cognition
 - March 2021-October 2021
 - Language
 - Cognition
 - Executive Functions
 - Memory
 - November 2021-June 2022
 - Attention
 - Computerized Measures
 - Global Outcome Measures

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Neurocognitive Committee

<u>Chair</u>

Jennifer Janusz

Committee Members

- Cynthia Campen
- Pete de Blank
- Allison de Castillo
- Kristina Haebich
- Kristi Hardy
- Kelly Janke
- Bonnie Klein-Tasman *
- Staci Martin
- Jonathan Payne *
- Carlos Prada
- Natalie Pride
- Tena Rosser
- Pete Stavinoha
- Heather Thompson
 - Karin Walsh *
 - Nicole Ullrich
- Pam Wolters

Patient Representatives

- Maureen Hussey
- Jessica Samblanet
- Connie Sorman

* Steering Committee