## Outcome Domain:

Social Cognition

## Domain Description and Relevance in TBI:

“Social cognition refers to the cognitive processes necessary for successful social interaction. A growing body of literature has documented impairments in this domain after TBI, in some cases independent of other cognitive impairments.” – McCauley et al. 2012

Table CDE Classification by Type of TBI Study and Relevant Population for Recommended Social Cognition Outcome Measures

| Outcome Measure Name | Relevant TBI Population | Acute Hospitalized | Moderate/ Severe Rehabilitation | Concussion/ Mild TBI | Epidemiology |
| --- | --- | --- | --- | --- | --- |
| Interpersonal Negotiations Strategies (INS) | Pediatric | Supplemental | Supplemental | Supplemental | Supplemental |
| Reading the Mind in the Eyes Test-Child Version | Pediatric TBI | Supplemental | Supplemental | Supplemental | Supplemental |
| Video Social Inference Test (VSIT) | Pediatric TBI | Supplemental | Supplemental | Supplemental | Supplemental |

### References

McCauley SR, Wilde EA, Anderson VA, Bedell G, Beers SR, Campbell TF, Chapman SB, Ewing-Cobbs L, Gerring JP, Gioia GA, Levin HS, Michaud LJ, Prasad MR, Swaine BR, Turkstra LS, Wade SL, Yeates KO. Recommendations for the Use of Common Outcome Measures in Pediatric Traumatic Brain Injury Research. J Neurotrauma. 2012 March; 29: 678-705. PubMed PMID: 21644810.

## Interpersonal Negotiations Strategies (INS)

### DESCRIPTION

The INS measures of social cognition through semi-structured interview. Four scenarios are presented to the subject, who must employ social problem-solving skills to work through four steps: defining the problem, generating alternative strategies, selecting specific strategy, and evaluating outcome.

### PERMISSIBLE VALUES

For each task, the child's response is scored on a scale from 1-4 (impulsive = 1 point, unilateral = 2 points, reciprocal = 3 points, or collaborative = 4 points). An average score is obtained from the four problems. Higher scores indicate better interpersonal negotiation strategies.

### PROCEDURES

The test is administered as a semi structured interview.

### COMMENTS

The test is normed for ages 6-16.

### RATIONALE

“The INS interview and scoring system has demonstrated internal reliability and predictive validity with pediatric TBI research and has been used in other pediatric TBI studies.” – McCauley et al. 2012

### REFERENCES

Yeates, K., Schultz, L., and Selman, R. (1990). Bridging the gaps in child-clinical assessment: Toward the application of social-cognitive development theory. Clin Psychol Rev 10, 567-588.

Janusz, J., Kirkwood, M., Yeates, K., and Taylor, H. (2002). Social problem-solving skills in children with traumatic brain injury: Long-term outcomes and prediction of social competence. Child Neuropsychol 8, 179-194.

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Hanten, G., Wilde, E., Menefee, D., Li, X., Lane, S., Vasquez, C., Chu, Z., Ramos, M., Yallampalli, R., Swank, P., Chapman, S., Gamino, J., Hunter, J., and Levin, H.(2008). Correlates of social problem solving during the first year after traumatic brain injury in children. Neuropsychology 22(3), 357-370.

## Reading the Mind in the Eyes Test-Child Version

### DESCRIPTION

In this test, children are presented with photographs of the eyes of adults and given a choice of four emotions or mental states for each picture, and must choose which emotion is represented. The test was originally developed for autism and has applicability to TBI.

### PERMISSIBLE VALUES

Range of scores is 0-36.

### PROCEDURES

The test is individually administered and takes about 10 minutes.

### COMMENTS

Tested on children as young as 6, but instrument has not been normed or standardized.

### RATIONALE

“Social cognitive functions, including emotion recognition, are increasingly recognized as factors in psychosocial outcome studies of typically developing children and adults.” – McCauley et al. 2012

### REFERENCES

Baron-Cohen, S., Wheelwright, S., Scahill, V., Lawson, J., and Spong, A. (2001). Are intuitive physics and intuitive psychology independent? A test with children with Asperger Syndrome. J Dev Learn Dis 5, 47-78.

Tonks, J., Williams, W., Frampton, I., Yates, P., and Slater, A. (2007). Reading emotions after child brain injury: a comparison between children with brain injury and non-injured controls. Brain Inj 21(7), 731-739.

Tonks, J., Williams, W., Frampton, I., Yates, P., Wall, S., and Slater, A. (2008). Reading emotions after childhood brain injury: case series evidence of dissociation between cognitive abilities and emotional expression processing skills. Brain Inj 22(4), 325-332.

## Video Social Inference Test (VSIT)

### DESCRIPTION

In the VSIT, the subject is presented with video vignettes and must respond to questions about the social interactions with occurred. This assesses the subject’s ability to make social inferences, such as detecting sarcasm and identifying aberrant social behavior. It has been used in adolescents and adults with TBI.

### PERMISSIBLE VALUES

Scores are given for (1) the number of correct social inferences on the first item in each pair (maximum of 16), (2) the number of correct inferences for the items requiring an immediate prediction (maximum of 8) and (3) the number of correct inferences for items requiring a delayed prediction (maximum of 8).

### PROCEDURES

The subject views 16 pairs video vignettes of conversations between two people on a computer, each less than 30 seconds in length, and responds to questions.

### COMMENTS

The test was developed for use in adolescents and young adults.

### RATIONALE

“Social cognitive functions, including emotion recognition, are increasingly recognized as factors in psychosocial outcome studies of typically developing children and adults.” – McCauley et al. 2012

### REFERENCES

Turkstra, L. (2008). Conversation-based assessment of social cognition in adults with traumatic brain injury. Brain Inj 22(5), 397-409.

Stronach, S., and Turkstra, L. (2008). Theory of mind and use of cognitive state terms by adolescents with traumatic brain injury. Aphasiology 22(10), 1054-1070.

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adolescents: data from normally developing adolescents and preliminary data from their peers with traumatic brain injury. J Head Trauma Rehabil 16(5), 469-483.

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