Assessment Strategies
Ongoing Monitoring

OVERVIEW

Students who have sustained TBIs can demonstrate uneven patterns of strengths and weaknesses. Their skills can change rapidly during recovery. Thus, it's important for educators to understand various tools that can help evaluate present levels of performance. Assessment strategies for students who have sustained TBIs include: observations, interviews, checklists and rating scales, standardized norm-referenced tests, curriculum-based measures, functional behavior assessments, and computer-based neurocognitive tests. This module contains information about what those assessment strategies can measure, the names of tests commonly used in schools, and the importance of implementing ongoing progress monitoring.

Students who have sustained TBIs often present inconsistent profiles and behavioral difficulties in the classroom. When working with students who have sustained a TBI, it is crucial for educators to implement appropriate assessment strategies and ongoing progress monitoring. Members of the school's multidisciplinary team, such as the school psychologist, speech-language pathologist, and occupational therapist, can help teachers conduct assessments and devise strategies for ongoing progress monitoring to help meet a student's specific needs.

Types of School-Based Assessments

- Observations
- Interviews
- Checklists and Rating Scales
- Standardized Norm-Referenced Tests
- Curriculum-Based Measures
- Functional Behavior Assessment
- Computer-Based Neurocognitive Tests

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OBSERVATIONS

Teachers routinely observe their students. However, they do not always have a systematic way of recording what they see. Teachers can collect observational data through strategies such as narrative recording, A-B-C (antecedent-behavior-consequence) charts, scatter plots, event recording, and duration and latency recording. These strategies can help chart a student's progress or response to intervention over time.

Sometimes it is helpful to have an outside observer, such as the school psychologist, come into a teacher's classroom to conduct an observation during regular instructional time. This person can observe the individual student, as well as how the student interacts with the classroom environment (the teacher, other students, the classroom, the materials, the physical space, the classroom management system, and more). The goal is to gather information about the student in their natural setting. One example of a structured observation system is the Behavioral Observation of Student in School (BOSS), in which the observer records the student's time on-task at regular intervals.

INTERVIEWS

Interviews with parents, teachers, other school-based professionals, and medical providers can be a rich source of data. Talking with each of these individuals will help educators gain a better understanding of a student's strengths and difficulties.

Often, a comprehensive interview with parents will shed light on issues at school because they can provide information about sleep patterns, eating habits, relationships with siblings, medical history, and more. Parent interviews should involve questions about the head injury along with background information about what the child was like (cognitively, emotionally, and socially) before the injury.

Interviews can be unstructured, semi-structured, or structured. Some interviews are norm-referenced and provide a score that compares a student to typical same-age peers, such as the Survey Interview and Expanded Interview form of the Vineland Adaptive Behavior Scales, Second Edition (Vineland-II).

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CHECKLISTS AND RATING SCALES

Checklists and rating scales can be used to monitor changes as a result of intervention, refine observations, and guide intervention formulation. Checklists typically involve simply checking off whether or not a child exhibits a particular skill or behavior. Rating scales quantify how often or to what degree a student exhibits a skill or behavior.

Checklists and rating scales are typically quick and easy to administer and score. Some might be informal and designed by educators for a specific purpose. For example, if John is receiving a behavioral intervention that focuses on following classroom rules, his teachers might complete a twice-daily rating on a 1–5 scale ("unacceptable" to "excellent") of how well he behaved in the classroom. Checklists and rating scales can also be completed by parents, related service personnel, and even the students themselves to evaluate their self-perceptions and self- awareness.

Standardized checklists and rating scales can demonstrate how far a child's behaviors deviate from those of typical same-age peers. Some examples of such measures that might be useful for a student with TBI include:

Behavior and Social Skills

- Child Behavior Checklist (CBCL)
- Behavior Assessment System for Children—Third Edition (BASC-III)
- School Social Behavior Scale Rating Form—Second Edition (SSBS)
- Social Skills Rating System (SSRS)

Adaptive Behavior

- Adaptive Behavior Assessment System—Second Edition (ABAS-II)
- Scales of Independent Behavior-Revised (SIB-R)
- Vineland Adaptive Behavior Scales—Second Edition (VABS-II)

Executive Functioning

- Behavior Rating Inventory of Executive Functioning (BRIEF)

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Cognitive Ability

While all students in a school might take a group-administered test of cognitive ability, a student with TBI being evaluated for special education eligibility would likely be administered a norm-referenced test of cognitive ability by the school psychologist. This gives the test administrator the opportunity to observe the student perform an array of tasks in an allotted amount of time. A few examples of such tests include:

- Weschler Intelligence Scale for Children—Fifth Edition (WISC-V)
- Woodcock-Johnson-IV Tests of Cognitive Abilities—Fourth Edition (WJ-IV)
- Stanford-Binet Intelligence Scales—Fifth Edition (SB-V)
- Differential Ability Scales—Second Edition (DAS-II)
- Cognitive Assessment System—Second Edition (CAS2)
- Comprehensive Test of Nonverbal Intelligence—Second Edition (CTONI -2)
- Differential Abilities Scale—Second Edition (DAS-II)
- Kaufman Assessment Battery for Children—Second Edition (KABC-II)
- Wechsler Preschool and Primary Scale of Intelligence—Third Edition (WPPSI-III)
- Wechsler Abbreviated Scale of Intelligence—Second Edition (WAIS-II)

It is important to understand that a global or standard score on a test might not fully represent a student's ability. Students who have sustained a TBI often present uneven patterns of performance or "spotty profile traits." Thus for TBI students, it is important to look at each area of the assessment individually to determine their skill levels. In addition to overall IQ scores, cognitive assessments will measure processing areas, such as verbal ability, nonverbal ability, processing speed, and working memory.

Academic Achievement

Whereas typical classroom assessments measure a specific skill that was just taught, academic achievement tests measure specific academic areas compared to typical same-age peers. Skill areas might include reading, writing, math, and oral language skills. Each of these skill areas

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are generally broken down into subdomains, such as reading fluency, word recognition, decoding, and reading comprehension. A few commonly used individual assessments of academic skills include:

Academic-General

- Wechsler Individual Achievement Test—Third Edition (WIAT-III)
- Woodcock Johnson Test of Achievement—Third Edition (WJ-III)
- Kaufman Tests of Educational Achievement—Second Edition (KTEA-II)
- Peabody Individual Achievement Test—Third Edition (PIAT-III)

Academic-Targeted

- Key Math Diagnostic Test
- Woodcock Reading Mastery Tests—Third Edition (WRMT-III)

Other Domains

Following are additional standardized tests to evaluate functioning in various domains that might be affected by a TBI:

Neuropsychological

- Children's Category Test
- NEPSY-II—Second Edition
- Repeatable Battery for the Assessment of Neuropsychological Status (RBANS)

Memory

- Children's Memory Scale
- Continuous Performance Test-II
- Logical Memory I and II

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- Wechsler Memory Scale—Fourth Edition (WMS–IV)
- Wide Range Assessment of Memory and Learning—Second Edition (WRAML-2)

Executive Function

- Behavior Rating Inventory of Executive Function (BRIEF)
- Delis-Kaplan Executive Function System
- Executive Control Battery
- Stroop Color and Word Test
- Trail Making Test—Part B
- Wisconsin Card Sorting Test

Attention/Concentration

- Delayed Gratification Task
- Digit Span (Forward and Reversed) (Wechsler scales)

Language/Verbal Learning

- Boston Naming Test
- Children's Auditory Verbal Learning Test
- Multilingual Aphasia Examination
- Token Test—Short Form
- Clinical Evaluation of Language Functioning—Fifth Edition
- Arizona Articulation Proficiency Scale—Third Edition
- Goldman-Fristoe Test of Articulation—Third Edition

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- Stuttering Severity Instrument—Fourth Edition
- Test of Childhood Stuttering

Visual Perception

- Developmental Test of Visual Perception—Second Edition
- Test of Visual Perceptual Skills

Motor Skills

- Grooved Pegboard

Some important things to note:

- Students with TBI often have test scores that are inconsistent with their daily functioning.
- IQ tests can demonstrate the student's knowledge of previously learned information. However, they do not address the ability to learn new information, which is often an area of impairment for students with TBI.
- Students who have sustained TBIs often focus better in a one-on-one interaction than in a distracting classroom. Thus, their test scores might show their potential without illuminating areas of difficulty in the classroom.

Curriculum-Based Measures (CBMs)

CBMs are a method for sampling student skills in key curricular areas through the use of short-duration measures that assess accuracy and fluency. CBM content and procedures can sample the curriculum widely or specifically. CBM can be used for screening, monitoring progress, diagnosis and instructional planning, and prognosis. CBM allows teachers to work efficiently, produces accurate meaningful information to index standing and growth, and provides information to plan better instructional programs.

For example, a student might complete a reading probe in which they read aloud from a grade-level passage for one minute. The evaluator will tally how many words the student read

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correctly in one minute. This process can:

- help to identify areas of academic struggle.
- allow progress monitoring in specific subjects.
- allow for pre-injury and post-injury comparison.
- provide a low-stress assessment that is easily administered in the classroom setting.

Such tests, which are relatively undemanding, can prevent exacerbation of symptoms such as headache and fatigue in a student with TBI.

Functional Behavior Assessments (FBAs)

FBA is the foundation of a proactive and preventive approach to behavior problems. With a FBA, educators can identify certain situations in the classroom or school environment that can cause and/or maintain problem behaviors and use that information to develop a behavior intervention plan. A FBA summarizes an event, what happened before the incident or problem event occurred (its antecedents), and the consequences that preceded and maintained the problem behavior. Once you identify what might trigger problem behaviors, you can develop behavior intervention plans that teach more desirable behaviors while also decreasing or eliminating things in the environment that trigger the behavior in the first place.

The previously discussed strategies of observations and interviews are key components of a FBA, which can also include manipulation of variables to help evaluators recognize gradual and immediate triggers, as well as consequences of behavior. Educators can then use those data to develop an effective intervention plan.

Computer-Based Neurocognitive Tests

Computer-based neurocognitive tests, such as the Immediate Post-Concussion Assessment and Cognitive Testing (ImPACT), are typically used for student athletes. These assessments are administered pre-season to obtain a baseline for each student's level of functioning. If a student athlete sustains a concussion, they re-take the test, and those scores are compared to baseline. The goal is to bring the student's score back to baseline before allowing a return to

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active play. Computer-based neurocognitive tests should only be used along with other assessment strategies and a comprehensive evaluation from a health-care provider.

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