

Table 3

Review of all tests recommended by publishing companies, distributors (PUB) or speech language pathologists (SLPs). Statements regarding test purpose were taken from test manuals and advertisements. The term “criterion referenced scoring” refers to tests designed for a population with communication disorders and for which normative data were not collected. Tests with lighter shading were designed for and standardized on children; tests with darker shading were designed for and standardized on both children and adults; all other tests were designed for and standardized on adults. All standardization samples were North American unless otherwise noted.

Assessment Tool	Recommended by PUB                      SLP	Purpose/Related to TBI?	Standardization sample
Alzheimer’s Quick Test of Temporal-Parietal Function  Wiig, Nielsen, Minthon, Warkentin (2002) The Psychological Corporation	√	A screening test for the detection of temporal-parietal dysfunction and Alzheimer’s Disease in adults.	Field-tested on 135 adolescents and adults.
ASHA Functional Assessment of Communication Skills in Adults  Frattali et al. (1995) ASHA		√ A means for assessing functional communication behaviors at the level of disability in a valid, reliable, sensitive yet efficient manner.	2 pilot studies, 1 field test Field test included 185 adult subjects with either aphasia from left CVA (131) or cognitive-communication impairment resulting from TBI (54). Subjects from three severity groups were tested; mild, moderate, and severe based on Western Aphasia Battery scores. Age range from 16-89; 133 males, 52 females.
Aphasia Diagnostic Profiles  Helm-Estabrooks (1992) Applied Symbolix		√ To provide a systematic method of assessing language and communication impairment associated with aphasia resulting from acquired brain damage.	290 neurologically impaired patients who had incurred strokes or other brain damage that might result in aphasia (68 with an unclear etiology or TBI) and 40 healthy subjects (used to estimate difficulty of tasks). Ages: 22-95 years old; 53% female, stratified by education level, race not stated. Median time post onset was 45 days.
Assessment of Language Related Functional Activities  Baines, Martin, & McMartin Heeringa (1999) ProEd		√ To assess language-related functional activities of patients 16 years and older.	“Criterion-referenced scores for rating of independent functioning.”

Assessment Tool	Recommended by PUB SLP	Purpose/Related to TBI?	Standardization sample
<p>Attention Process Training (APT) Test</p> <p>Sohlberg &amp; Mateer (2001). Lash &amp; Associates Publishing/Training Inc.</p>	√	To assist in evaluating possible attentional impairment, to document appropriateness of initiating attention training, and to determine the level at which training needs to begin.	277 healthy adults ranging in age from 18 to 80.
<p>Bay Area Functional Performance Evaluation (BaFPE)</p> <p>Bloomer &amp; Lang MADDAK, Inc.</p>	√	A behaviorally anchored assessment designed to assess how a client may function in task-oriented and social interactional settings. Designed to be used with TBI, psychiatric, geriatric, or developmentally disabled clients.	Not available.
<p>Behavior Rating Inventory of Executive Function (BRIEF)</p> <p>Gioia, Isquith, Guy, Kenworthy (2000) Psychological Assessment Resources</p>	√	A questionnaire for parents and teachers to complete in order to assess executive function behaviors in the home and school environments. Designed to be used with TBI, LD, Attentional disorders, depression, and other disorders.	Standardized and validated to be used with males and females ages 5 through 18 years. The majority of the samples came from 25 Maryland schools (private and public schools in urban, rural and suburban settings). 1,419 Parent Forms and 720 Teacher Forms were completed.
<p>Behavioral Assessment of the Dysexecutive System (BADS), including the Dex questionnaire</p> <p>Wilson et al. (1996) Thames Valley Publishing, Inc.</p>	√	A battery that predicts everyday problems arising from executive disturbances.	The test was normed on a group of 216 healthy adults in each of the three ability bands (below average, average, above average according to the NART) and balanced to have approximately equal numbers of men and women in each of these bands. 92 patients with variety of neurological disorders (TBI 59%, encephalitis 6.5%, dementia 13%, stroke 8.5%, ABI via other means 13%; 78 patients completed all 6 tests and were used in validity studies; ages 19-76 years
<p>Boston Diagnostic Aphasia Examination-III (BDAE-III)</p> <p>Goodglass, Barresi, &amp; Kaplan</p>	√	To assess functional communication skills (multiple modalities) of adult clients with aphasia.	242 persons with aphasia.

Assessment Tool	Recommended by PUB                      SLP	Purpose/Related to TBI?	Standardization sample
(2000) Psychological Corporation			
Boston Naming Test (BNT)  Kaplan et al. (1983) Psychological Assessment Resources	✓	Provides a detailed examination of the ability to name pictured objects, which is a problem area for people with aphasia as well as other neuropathological conditions.	Healthy adults (N = 1-28) ages 18-59 years. Norms for small groups of children (N = 5) from kindergarten to grade 5 accompany the test. Extensive supplementary norms are available in sources such as Spreen & Strauss (1998).
Brief Test of Head Injury (BTHI)  Helm-Estabrooks and Hotz (1991) Riverside Publishing Company	✓                      ✓	Cognitive-communicative assessment tool designed to quickly measure a variety (cognitive, language and memory) of early manifested deficits in adult patients with TBI. Specific areas of testing: Orientation/attention, following commands, linguistic organization, reading comprehension, naming, memory, visual-spatial skills. Designed to probe above behaviors in patients that might have paralysis, limited range of motion, visual neglect, and aphonia. To be administered in 25-30 minutes.	Standardization sample included both head-injured (n=265) and non-injured (n=29). Scores of non-injured patients were not used in constructing the Total Score norms, but were used to estimate the average difficulty for non-injured patients and to classify the upper range of the BTHI Severity scores as a borderline.  60% of participants were tested within two months of injury.
Burns Brief Inventory of Communication and Cognition  By Martha Burns (1997) Psychological Corporation	✓                      ✓	To identify communication and cognitive deficits of patients ages 18-80.	Criterion-referenced scoring.
California Verbal Learning Test-II (CVLT-II)  Delis, Kramer, et al. (2000) The Psychological Corporation	✓	Provides a short, individually administered assessment of the strategies and processes involved in learning and remembering verbal information. Can quantify numerous parameters of learning and memory based on a cognitive processing analysis.	Standardization sample was 1,087 healthy adults (565 females and 522 males) ages 16-89, matched to the most recent US Census in terms of demographic variables. Additional data for CVLT performance in neurogenic populations, including TBI, can be found in the test manual.
California Verbal Learning Test for Children (CVLT-C)  Delis, Kramer, Kaplan, & Ober	✓	To assess multiple components of verbal learning and memory within the context of an everyday memory task, in children ages 5-16. Designed to assist clinicians and educators in: 1) Identifying children with	Initially normed on 920 children from 5-16 years of age. Supplementary norms are available in sources such as Spreen &

Assessment Tool	Recommended by PUB SLP	Purpose/Related to TBI?	Standardization sample
(1994) The Psychological Corporation		subtle to severe learning disabilities, 2) isolating deficient learning strategies that may underlie a child's specific learning problems, and 3) Designing remediation programs based on the child's verbal learning strengths and weaknesses. Designed for use with children with learning disabilities, ADHD, mental retardation, other neurological disorders, and psychiatric problems.	Strauss (Spreen & Strauss, 1998).
Clinical Evaluation of Language Fundamentals, Fourth Edition (CELF-4)  Semel, Wiig, & Secord (2003) The Psychological Corporation	√	For the identification, diagnosis and follow-up evaluation of language and communication disorders in students ages 5-21 years. Designed to evaluate a student's general language ability, whether or not a language disorder is present, the nature of the disorder, the underlying clinical behaviors (e.g., working memory), and how the disorder affects the student's classroom performance.	More than 4,500 children, adolescents, and young adults, ages 5-21. The sample included individuals who were bilingual, but English was the primary language of all participants. About 9.5% of the sample were students receiving special services, including speech, physical, or occupational therapy. Data are provided for individuals with language learning disability, mental retardation, pervasive developmental disorder/ autism, and hearing impairment.
Cognistat  Kiernan et al. (2002) Psychological Assessment Resources, Inc.  Originally published as Neurobehavioral Cognitive Status Exam (NCSE). Northern California Neurobehavioral Group. Fairfax, CA: Northern California Neurobehavioral Group; 1988)	√	To rapidly assess intellectual functioning in 5 major ability areas: language, constructional ability, memory, calculation skills, and reasoning/judgment.	Two groups (20-39 and 40-66 years) of 60 volunteers; a geriatric group (70-92 years) of 59 volunteers; and a neurosurgical group (25-88 years) of 30 patients with documented brain lesions (e.g., stroke, brain injury). Several studies published on NCSE, reviewed in (Doninger, Bode, Heinemann, & Ambrose, 2000)
Communicative Abilities of Daily Living 2 (CADL-2)  Holland, Frattali & Fromm (1999). The Psychological Corporation	√	To assess the functional communication skills of adults with neurogenic communication disorders	175 adults with neurogenic communication disorders (primarily from stroke or traumatic brain injury) between ages 20-96 years. Participants from 17 states. Selected to represent demographics of 1997 U.S. census.

Assessment Tool	Recommended by PUB SLP	Purpose/Related to TBI?	Standardization sample
			Patients with damage to either cerebral hemisphere were included and the majority of patients were judged by their clinicians to have mild or moderate communication disorders.
Comprehensive Assessment of Spoken Language (CASL)  Carrow-Woolfolk (1999) American Guidance Services	√	Provides in-depth evaluation of oral language processing systems, knowledge and use of words and grammatical structures of language, the ability to use language for special tasks requiring higher level cognitive functions, and the knowledge and use of language in communicative settings.  Manual states that the tool has value for evaluation of individuals with oral language disorders. This tool tests word retrieval, idiomatic language, non-literal language, inference, pragmatic judgment all of which would be appropriate measures for rating severity of effects of TBI.	Total standardization sample included 1,700 typically developing children, age range 3 to 21 years (100 subjects at each 6 month interval 4-11 and 150 at each 1 year interval 12-21).
Cognitive Linguistic Quick Test (CLQT)  Helm-Estabrooks (2001) Psychological Corporation	√	√	To assess neurological impairment of patients ages 18-89.  Criterion referenced scoring.
Children's Orientation and Amnesia Test (COAT)  Ewing-Cobbs, Levin, Fletcher, Miner, & Eisenberg (1990). Published in Neurosurgery, 27, 683-691.		√	To assess cognition serially during the early stage of recovery from traumatic brain injury in children and adolescents.  Standardized on 146 children aged 3-15 years 37 of whom had a TBI; 63 males and 83 females
Controlled Oral Word Association (COWA) Subtest  Multilingual Aphasia Examination Benton, Hamsher, Rey & Sivan (1994) The Psychological Corporation	√		To provide a relatively brief but detailed examination of the presence, severity, and qualitative aspects of aphasic language disorders for patients between 6 and 69 years of age.  Sample included 360 healthy Iowa adults, ages 16-69 years, stratified for age, education, and gender. Additional norms available for COWA in Spreen & Strauss (1998). Supplementary norms for adults with TBI can be found in (Rey et al., 2001).

Assessment Tool	Recommended by PUB SLP	Purpose/Related to TBI?	Standardization sample
<p>Watson-Glaser Critical Thinking Appraisal (CTA)</p> <p>Watson &amp; Glaser (1980) The Psychological Corporation</p>	√	<p>To: (1) measure gains in critical thinking abilities resulting from instructional programs in schools, colleges, businesses and industrial settings; (2) predict success in certain types of occupations or instructional programs in which critical thinking is known to play an important role; (3) determine, for research purposes, the relationship between critical thinking abilities and other abilities or traits. The availability of comparative forms makes it possible to measure development of these skills either as a consequence of specific instruction or over an extended period of time.</p>	<p>Norms are presented for high school students (sample of over 7,000 students from 24 high school districts in 17 states), college students (1,804 students in junior colleges and 4-year programs; 941 “pre-professional” students in teaching, nursing, MBA, and medical programs), business employees (sample of 146 sales representatives from a large business machine company), and civil service employees and applicants (1,444 state patrol trooper applicants and 188 police officers).</p>
<p>Delis-Kaplan Executive Function System (D-KEFS)</p> <p>Delis, Kaplan, &amp; Kramer (2001) Psychological Corporation</p>	√	<p>To assess key components of executive functions within verbal and spatial modalities of patients ages 8 through 89 years.</p>	<p>Standardized on “over 1,500” individuals demographically and regionally matched with the U. S. population</p>
<p>Detroit Test of Learning Aptitude-Third Edition (DTLA-3)</p> <p>Hammill (1991) Pro-Ed</p>	√	<p>Designed to measure different but inter-related mental abilities in children. Designed to be used by psychologists, diagnosticians, special educators, speech and language pathologists, and others who are interested in examining the psychological constitution of examinees.</p> <p>Has four principle uses: 1) Determine strengths and weaknesses among developed mental abilities, 2) Identify children and youths who are significantly below their peers in important abilities, 3) Make predictions about future performance, and 4) Serve as a measurement device in research studies</p>	<p>Standardized on 2,587 typically developing children in the US.</p>
<p>Discourse Comprehension Test (DCT)</p> <p>Brookshire &amp;. Nicholas (1993) BRK Publishers</p>	√	<p>To assess comprehension and retention of spoken narrative discourse by adults with aphasia, right hemisphere brain damage, or TBI.</p>	<p>The standardization sample included 40 healthy adults, 20 aphasic adults with left hemisphere brain damage, 20 non-aphasic adults with right hemisphere brain damage, and 20 adults with TBI.</p>
<p>Expressive One Word Picture</p>	√	<p>To obtain a basal estimate of a child’s verbal</p>	<p>Standardized on a representative</p>

Assessment Tool	Recommended by PUB SLP	Purpose/Related to TBI?	Standardization sample
Vocabulary Test – Third Edition (EOWPVT)  Brownell (2000) Academic Therapy Publications		intelligence by means of his acquired one-word expressive picture vocabulary. This edition combines the previous lower and upper levels of the EOWPVT and extends the use of the test from ages 2-0 through 18-11.	sample of 2,327 school-age individuals stratified by age, geographic region, ethnicity, level of parent education, community size, and gender.
Florida Affect Battery  Unpublished.	√		Not standardized – research version only.
Fullerton  Thorun (1980) Consulting Psychologists Press, Inc.	√	Developed to meet the increasing need for a valid language assessment instrument that could distinguish normal from language impaired adolescents (ages 11 to 18 years).	Sample drawn from cities and rural areas of California and Oregon and included 762 subjects ranging in age from 11 to 18. “For the most part, the standardization population represented the mainstream of education.”
Functional Independence Measure (FIM)  Uniform Data System for Medical Rehabilitation (1996)  Based on Forer, Granger, et al. (1987). Functional Independence Measure. Buffalo, NY: The Buffalo General Hospital, State University of New York at Buffalo.	√	Developed to resolve the long-standing problem of lack of uniform measurement and data on disability and rehabilitation outcomes. Measures independent performance in self-care, sphincter control, transfers, locomotion, communication, and social cognition.	Data are available from numerous studies listed on the Center for Outcome Measurement in Brain Injury (COMBI) website: <a href="http://www.tbims.org/combi/FIM/fimref.html">www.tbims.org/combi/FIM/fimref.html</a> (Accessed June 1, 2004)
Functional Linguistic Communication Inventory (FLCI)  Bayles & Tomoeda (1994) Canyonlands Publishing, Inc.	√	To quantify the functional linguistic communication skills of moderately and severely demented individuals.	40 individuals whose only diagnosis was Alzheimer’s Disease and who were recruited from the community through the Alzheimer’s Association, the memory disorders clinic at the Arizona Health Sciences Center, and community adult daycare centers, adult care homes, and nursing homes.
Galveston Orientation Amnesia Test (GOAT)  Levin, O’Donnell, Grossman (1979) Published in Journal of Nervous	√	To assess orientation to person, place, and time; to assess memory before and after injury.	77 persons with TBI from 8 facilities; 4 to 140 days post-injury; administered weekly.

Assessment Tool	Recommended by PUB SLP	Purpose/Related to TBI?	Standardization sample
and Mental Disease 167:65-684.			
GFW Auditory Memory Battery (Recognition Memory Subtest)  Goldman, Fristoe & Woodcock (1974) American Guidance Service	√	To identify those subjects who are deficient in auditory skills and to provide information describing their auditory deficiencies. Assesses three aspects of short-term auditory memory performance: recognition memory, memory for content, and memory for sequence.	Approximately 700 healthy children and adults ages 3.0 to 80.0, with concentration in the range of 3.0-12.0.
Kagan's rating scales	√	No information available.	No information available.
La Trobe Communication Questionnaire  Douglas, J., O'Flaherty, C., & Snow, P. (2000). Measuring perception of communicative ability: the development and evaluation of the La Trobe communication questionnaire. Aphasiology 14. 251-268.	√	Designed to measure perceived communicative ability and as such is appropriate for collecting information from various sources including the self-perceptions of individuals as well as the perceptions of others with whom they converse and interact.	Data presented for 256 young adults ages 16-40 years, including 147 primary subjects and 109 close others. O'Flaherty & Douglas (O'Flaherty & Douglas, 1997) published a qualitative analysis of 5 individuals with TBI and their communication partners.
Measure of Cognitive-Linguistic Abilities (MCLA)  Ellmo, Graser, Krchnavak, Hauck, & Calabrese (1995) Speech Bin	√	Designed to provide a systematic evaluation of clients who have mild to moderate impairments caused by TBI. The MCLA has three major purposes as stated in the manual: 1) To assess linguistic abilities, 2) To help identify cognitive deficits that have an impact on linguistic performance, and 3) To recognize the important interrelationship between cognition and language.	Standardized on 204 healthy, English-speaking adults ages 16-50 with no history of TBI or other neurologic disorder.
Mini Inventory of Right Brain Injury (MIRBI)  Pimental and Kingsbury (1989) Pro-Ed	√	To evaluate adults with right brain injury and to identify individuals who have deficits in visual, language, emotion, affect, general behavior, memory, orientation, and/or non-verbal processing.	Data for 30 patients with a diagnosis of right brain injury and 13 patients with a diagnosis of left brain injury documented by neurological evaluation and CT. Thirty normal subjects matched for age, education, and sex (with the right brain injured group) also included.
Mini-Mental State Examination (MMSE)  Folstein, M, Folstein, S. & McHugh (1975)	√	A popular measure to screen for cognitive impairment, to document intellectual changes that occur with time, and to assess the effects of potential therapeutic agents on cognitive functioning, particularly in the elderly.	Standardized on 63 normal elderly persons and 137 patients with one of the following: dementia, affective disorder depressed type, affective disorder manic type, schizophrenia,



Assessment Tool	Recommended by PUB SLP	Purpose/Related to TBI?	Standardization sample
PAR			personality disorder with drug abuse, and neurosis.
Mt Wilga Test for Higher Level Language Functioning  Christie, Clarke & Mortensen (1986). Unpublished manuscript. Sydney, NSW: Mt Wilga Rehabilitation Centre.	√	Not available.	Standardization sample was 100 healthy 15-25 year olds in Sydney, Australia, from a wide range of educational and socio-economic backgrounds.
Nelson-Denny Reading Test  Brown, Fishco & Hanna (1993) Riverside Publishing Co.	√	A reading survey test for high school and college students and adults. A two-part test, the Nelson-Denny measures vocabulary development, comprehension, and reading rate	Approximately 12,000 high school students and students from 39 2-year colleges and 38 4-year colleges and universities.
Neurobehavioral Functioning Inventory (NFI)  Kreutzer, Seel & Marwitz (1999) The Psychological Corporation	√	To be used to develop an effective treatment plan for adult patients with TBI.	Standardized on persons ages 16 years and older; factor-analysis study completed using responses from 520 individuals. Normative scales are provided based upon patient age and injury severity.
Paced Auditory Serial Addition Test (PASAT)  Gronwall et. al, 1977  Available from The Psychological Corporation (1998)	√	A serial addition task used to assess capacity and rate of information processing, and sustained and divided attention.	Standardization data are available for healthy adults in North America and the UK (Spreen & Strauss, 1998). A child version is also available [CHIPASAT]. Data are available for adults with TBI (Gronwall & Sampson, 1974; Stuss, Stethem, Hugenholtz, & Richard, 1989). Other references are listed in Spreen and Strauss (1998).
Peabody Picture Vocabulary Test (PPVT-III)  Lloyd Dunn & Leota Dunn (1997) American Guidance Services	√	To assess an examinee's receptive vocabulary and serves as a screening test of verbal ability, or as one element in a comprehensive test battery of cognitive processes.	Standardized on 2,725 subjects ages 2.5 through 90 years.

Assessment Tool	Recommended by PUB SLP	Purpose/Related to TBI?	Standardization sample
Pediatric Test of Brain Injury  Hotz, Helm-Estabrooks & Wolf Nelson In Press.	√	To assess the cognitive-linguistic skills of school-aged children and adolescents in acute care and rehabilitation settings after traumatic brain injury	In progress.
Porch Index of Communicative Ability (PICA)  Porch (1971) Consulting Psychologists Press.	√	To assess and quantify certain verbal, gestural and graphic abilities. This tool is a sensitive and reliable measurement of the degree of deficit and amount of recovery	Standardization sample included "left-hemisphere-damaged aphasic subjects" (280 in (B Porch, 1971) and 357 in (BE Porch & Callaghan, 1981), 96 adults with right hemisphere damage, and 100 adults with bilateral lesions (BE Porch & Callaghan, 1981). The sample was designed to be reflective of a typical clinical case load, in terms of age, race, sex, education, occupation, and etiology
Preschool Language Scale-3 (PLS-3)  Zimmerman et al. (1991) The Psychological Corporation	√	Can be used to assess receptive and expressive language skills in infants and young children.	Standardized on more than 1,900 normal language children in 40 states ages 2 weeks to 6;11 years. Within each age, 50% were male, 50% were female. Sample was stratified on the basis of parent education level, race, and geographic region.
The Profile of Executive Control System (Pro-Ex)  Broswell et al. (2001) Lash & Associates Publishing	√	To accurately assess the executive control system that is commonly affected among persons with brain injuries.	Data from 32 subjects provided by therapists working in acute care, community re-entry, and outpatient rehabilitation programs at a community hospital. Examiners were from multiple disciplines ranging from allied health professionals to social workers and vocational counselors. All examinees were involved in a rehabilitation program or undergoing an evaluation prior to rehabilitation, age 18 years or older, and diagnosed with brain injury acquired as an adult.
Prospective Memory Screening	√	To identify prospective memory deficits.	Not standardized; test of

Assessment Tool	Recommended by PUB SLP	Purpose/Related to TBI?	Standardization sample
Test  Sohlberg & Mateer (2001) Lash & Associates Publishing			stimulability for treatment.
Repeatable Battery for the Assessment of Neuropsychological Status (RBANS)  Randolph (2001) The Psychological Corporation	√	To determine the neuropsychological status of adults ages 20-89 with neurologic injury or disease, such as dementia, head injury, or stroke	Standardized on 540 adults selected to represent the U.S. population demographics.
Reading Comprehension Battery for Aphasia- II (RCBA-II)  LaPointe & Homer (1998) The Psychological Corporation	√	To provide systematic evaluation of the nature and degree of reading impairment in adolescents and adults with aphasia.	Criterion-referenced scoring.
Rehabilitation Institute of Chicago Evaluation of Communication Problems in Right Hemisphere Dysfunction-Revised  Halper, Cherney & Burns (1996) Aspen Publications	√	To screen those sequelae that are typically found in the right brain-damaged population and are known to be clinically important to the rehabilitative process.	Sample included 40 Right hemisphere damaged subjects and 36 Non-brain-damaged subjects.
Receptive One Word Picture Vocabulary Test (ROWPVT)  Gardner (1990) Academic Therapy Publications	√	To obtain an estimate of a child's one-word hearing vocabulary based on what he has learned from home and formal assessment.	Standardized on 1,128 typically developing children ranging in age from 2 years to 11;11 years; testing conducted at schools and child development centers in the San Francisco area.
Rey Auditory Verbal Learning Test (RAVLT)  Rey (1958), Lezak (1976, 1983)	√	A brief, easily administered pencil and paper measure that assesses immediate memory span, new learning, susceptibility to interference, and recognition memory.	A number of normative studies based on large samples of healthy people were conducted. See summary in Spreen & Strauss (1998).
Rivermead Behavioral Memory Test (RBMT)  Wilson, Cockburn, & Baddeley (1985) Western Psychological Services	√	To detect impairment of everyday memory functioning and to monitor change following treatment for memory difficulties.	The test was initially standardized in the UK on a sample of brain- damaged patients and a sample of 118 healthy subjects aged 16-69 years with a mean IQ of 106. The RBMT has since been standardized with community-dwelling elderly

Assessment Tool	Recommended by PUB SLP	Purpose/Related to TBI?	Standardization sample
			people aged 70 years and over, with healthy adolescents aged 11-14 years, and with children aged 5-10 years.
Rancho Los Amigos Levels of Cognitive Functioning (LOCF)  Hagan (1979) Ellingsworth Press LLC	√	To provide: 1) a means of assessment that does not require the brain-injured patient's cooperation, 2) a wide range of behavioral descriptions, 3) a common, descriptive vocabulary, 4) a means of increasing the understanding of brain injured patients' behaviors by professionals and family members, 5) predictive information, and 6) a baseline for establishing individual and team treatment objectives (Malkmus, Booth, & Kodimer, 1980).	The LOCF Scale was developed by an interdisciplinary group from the Communications Disorders Service in Ranchos Los Amigos Hospital (Downey, CA). The group delineated a series of behaviors observed in 1,000 neurologically impaired patients during their convalescence post head injury.
Ross Information Processing Assessment – Second Edition (RIPA-2)  Ross-Swain (1996) Pro-Ed	√	√	To assess cognitive-linguistic functioning in clients with traumatic brain injury.
Ross Information Processing Assessment – Geriatric Edition (RIPA-G)  Ross-Swain & Fogle (1996) Pro-Ed	√	√	To identify, describe, and quantify cognitive-linguistic deficits in the geriatric population.
Scales of Cognitive Ability for Traumatic Brain Injury (SCATBI)  Adamovich & Henderson (1992) Pro-Ed	√	√	Provides a systematic method for assessing cognitive deficits associated with traumatic brain injury.
Sklar Aphasia Scale  Sklar (Publication date unknown) Western Psychological Services	√	√	To provide objective measurements and evaluations of speech and language disorders resulting from brain damage
			244 patients with TBI from 26 sites in U.S. and Canada. Consisted primarily of patients who suffered closed-head injuries.
			30 aphasic veterans (15 subjects over 50 years old and 15 subjects were under 50 years old) (Sheehan & Aseltine, 1973). German version of the test also available (Cohen, Engel, Kelter, List, & Strohner,

Assessment Tool	Recommended by PUB SLP	Purpose/Related to TBI?	Standardization sample
			1977).
Social Skills Rating System (SSRS)  Gresham & Elliott (1990) American Guidance Services	√	Assists professionals in screening and classifying children suspected of having significant social behavior problems and aids in the development of appropriate interventions for identified children.	Standardized on a national sample of 4,170 typically developing children using their self-ratings as well as the ratings of children made by 1,027 parents and 259 teachers.
Speed and Capacity of Language-Processing Test (SCOLP)  Baddeley, Emslie & Nimmo-Smith (1992) Thames Valley Test Company	√	The SCOLP provides very time-efficient measures of pre-morbid IQ and speed of information processing, helping to gauge degree of intellectual loss and mental slowing following traumatic brain injury.	Stratified sample of 224 healthy subjects in the UK with approximately equal numbers sampled from each of the registrar general's six social class bands and from four age bands (16-31, 32-47, 48-64, and 65-80). For normative data from an American sample, see: (Saxton et al., 2001).
Sydney Psychosocial Reintegration  Unpublished	√	Not available.	Not standardized.
Test of Auditory- Perceptual Skills – Upper Level (TAPS-UL)  Gardner (1996) Psychological and Educational Publishers	√	A battery of auditory-perceptual skills that yields valuable information in diagnosing children and adolescents who have auditory-perceptual difficulties, imperceptions auditory modality, language problems, or learning problems. The TAPS:UL is suitable for students ages 12 to 18.	Standardized on 703 healthy subjects: 326 male and 377 female. Age range 12.0-18.0 years. Subjects were enrolled in 30 private schools, parochial schools, and public schools in various geographic locations throughout the US and Canada; this is a "reasonably representative sample based on the 1990 US Census".
The Awareness of Social Inference Test (TASIT)  McDonald, Flanagan, Kinch & Rollins (2002). Thames Valley Test Company	√	Provides a systematic examination of social perception by using videotaped vignettes and standardized response probes based upon recent accounts of how social cues provide meaning.	Sample included 283 normal socially-skilled adults and 12 people with severe TBI (main studies); roughly equal number of males and females; age range 14-60, average age 22.9.
Test of Adolescent and Adult Language (TOAL-3)  Hammil, Brown, Larsen & Wiederholt (1994)	√	The original TOAL was designed to identify students who are significantly below their peers in language proficiency, determine particular strengths and weaknesses and document students' progress. It was revised (TOAL-2) to improve its clinical and technical	Standardized on 3,056 healthy persons residing in 26 states, using census data as a guide to be representative of the regions; tested on participants ages 12-24 years.

Assessment Tool	Recommended by PUB SLP	Purpose/Related to TBI?	Standardization sample
Pro-Ed		adequacy. It was revised again to include assessment for young adults.  Assesses linguistic aspects of listening, speaking, reading, and writing.	
Test of Adolescent and Adult Word Finding  German (1990) DLM Teaching Resources	√	To assist professionals in the assessment of adolescents' and adults' word-finding skills by providing extensively researched naming tasks and systematic test procedures supported by reliability and validity investigations and representative normative data.	Standardized on 1200 adolescents in grades 7-12 and 553 adults ages 20-80 years, in 21 states in the U.S.
Test of Everyday Attention (TEA)  Robertson, Ward, Ridgeway & Nimmo-Smith (1994) Thames Valley Test Company	√      √	The TEA gives a broad-based measure of the most important clinical and theoretical aspects of attention: no other test of attention exists which does this. The TEA can be used analytically to identify different patterns of attentional breakdown.	Originally standardized on 154 normal volunteers in Australia, ranging in age from 18-80, stratified into 4 age groups and 2 levels of educational attainment; in addition, 80 unilateral stroke patients were given TEA 2 months post-CVA. "The test has been validated successfully with closed head-injured patients, stroke patients, and patients with Alzheimer's Disease, including those of low educational level."
Test of Everyday Attention for Children (TEA-Ch)  Manly, Anderson, Robertson & Nimmo-Smith (1998) Thames Valley Test Company	√	A battery of psychological tests for the assessment of attention in children.	Standardized on 293 healthy subjects ranging in age from 6 to 15.11 years, from a school in Melbourne, Australia, representative sample of the census. Sample equally distributed across 7 age bands; equal numbers of males and females competent in English.  For information regarding TBI data see: Anderson, Fenwick, Manly, & Robertson, 1998; Catroppa & Anderson, 1999; Fenwick & Anderson, 1999.
Test of Language Comprehension - Expanded Edition (TLC)	√      √	Designed to evaluate delays in the emergence of linguistic competence and in the use of semantic, syntactic and pragmatic language strategies.	Standardization sample was Level 1: 2,188 males and females; 69% Caucasian; Level 2 : 1,796 males

Assessment Tool	Recommended by PUB SLP	Purpose/Related to TBI?	Standardization sample
Wiig & Second (1989) The Psychological Corporation		Two levels: Level 1 5 to 9 years, Level 2 9 to 18 + yrs. Sub-tests: Ambiguous sentences, listening comprehension (making inferences), oral expression (recreating sentences), figurative language, remembering word-pairs. All subtests may provide insight on a TBI patient's deficits.	and females; 88% Caucasian Authors developed performance comparisons based on students in regular public school classrooms. Students with language disorders or other exceptional students who were pulled out for therapy were excluded; however, children mainstreamed in regular education classes were included.
Test of Problem Solving  Zachman et al. (1991) Linguistics	√	To test a child's ability to verbalize reasons, solutions, and justifications in a semantically and linguistically appropriate manner.	Standardized on 842 randomly selected children ages 6.0 to 11.11 years; racial distribution patterned after 1980 census; no representative national sampling.
The Token Test- Short Form  (De Renzi & Faglioni, 1978)	√	The purpose of the original Token Test is to assess comprehension of commands of increasing complexity. The shortened version is designed to broaden the assessment capacity of the test for people with severe aphasia.	Original sample was 215 Italian adults with no neurological disorders and 200 patients with left-hemisphere injury and aphasia, due to stroke, tumor, trauma, or cerebral atrophy. Other short versions are also available (Spree & Strauss, 1998).
Western Aphasia Battery (WAB)  Kertesz (1982) The Psychological Corporation	√	To evaluate the main clinical aspects of language function, content, fluency, auditory comprehension, repetition, naming, reading, writing, and calculations. Nonverbal skills tested as well.	Sample was 20 patients with stable chronic infarcts with TBI were assessed 3 months to 7 years post-injury; 9 women, 11 men.
Woodcock Johnson III Tests of Cognitive Abilities  Mather & Woodcock (2001) Riverside Publishing	√	To provide a comprehensive set of individually administered norm-referenced tests for measuring intellectual activity and academic achievement.	Standardized on over 8,000 healthy subjects ranging from age 2 to age 90+ (including college and university students).
The Word Test – Elementary  Barrett, Huisingh, Orman, Bowers & LoGuidice (1990) Linguistics	√	To assess a subject's ability to recognize and express the critical semantic attributes of his lexicon.	Standardized on a random sample of 805 subjects ages 7;0 to 11;11; with consideration for sex, race, age, and school.
The Word Test – Adolescent	√	To assess a subject's facility with language and word meaning, using common as well as unique contexts.	Sample included 1,042 normal subjects, ages 12-17 years,

Assessment Tool	Recommended by PUB SLP	Purpose/Related to TBI?	Standardization sample
Zachman, Huisingh, Barrett, Orman & Blagden (1989) Linguisticsystems		Test surveys four semantic and vocabulary tasks reflective of school assignments, as well as language usage in everyday life.	randomly selected with consideration of race, sex, and age. Ethnicity considered according to census.
Writing Process Test  Warden & Hutchinson (1992) Applied Symbolix	√	Developed to measure writing performance in a naturalistic context, to help educators assess students' awareness of the processes they engage in while composing, and to evaluate the quality of students' written products with enough specificity to give useful feedback about their strengths and weaknesses.	Standardized on more than 5,000 students in grades 2-12 were tested across 11 school districts. An attempt was made to match the percentages of children in the sample to key demographic categories (age, region, sex, race, Hispanic background) in the U.S.

#### References

- Anderson, V., Fenwick, T., Manly, T., & Robertson, I. (1998). Attentional skills following traumatic brain injury in childhood: A componential analysis. *Brain Injury, 12*, 937-939.
- Catroppa, C., & Anderson, V. (1999). Attentional skills in the acute phase following pediatric traumatic brain injury. *Child Neuropsychology, 5*, 251-264.
- Cohen, R., Engel, D., Kelter, S., List, G., & Strohner, H. (1977). Validity of the Sklar Aphasia Scale. *Journal of Speech and Hearing Research, 20*, 146-154.
- De Renzi, E., & Faglioni, P. (1978). Normative data and screening power of a shortened version of the Token Test. *Cortex, 14*, 41-49.
- Doninger, N., Bode, R., Heinemann, A., & Ambrose, C. (2000). Rating scale analysis of the Neurobehavioral Cognitive Status Examination. *Journal of Head Trauma Rehabilitation, 15*(1), 683-695.
- Fenwick, T., & Anderson, V. (1999). Impairments of attention following childhood traumatic brain injury. *Child Neuropsychology, 5*, 213-223.
- Gronwall, D. M. A., & Sampson, H. (1974). *The Psychological Effects of Concussion*. New Zealand: Auckland University Press.
- Malkmus, Booth, & Kodimer, 1980, Rehabilitation of the head injured adult: Comprehensive cognitive management. Downey, CA: Professional Staff Association of the Rancho Los Amigos Hospital, Inc.



- O'Flaherty, C., & Douglas, J. M. (1997). Living with cognitive-communicative difficulties following traumatic brain injury: Using a model of interpersonal communication to characterize the subjective experience. *Aphasiology*, *11*, 889-911.
- Porch, B. (1971). *Porch Index of Communicative Ability* (First ed.): Consulting Psychologists Press.
- Porch, B., & Callaghan, S. (1981). *Making predictions about recovery: Is there HOAP?* Paper presented at the Clinical Aphasiology, Minneapolis.
- Rey, G. J., Feldman, E., Hernandez, D., Levin, B. E., Rivas-Vazquez, R., Nedd, K. J., et al. (2001). Application of the Multilingual Aphasia Examination-Spanish in the evaluation of Hispanic patients post closed-head trauma. *The Clinical Neuropsychologist*, *15*(1), 13-18.
- Saxton, J. A., Ratcliff, G., Dodge, H., Pandav, R., Baddeley, A., & Ganguli, M. (2001). Speed and Capacity of Language Processing Test: Normative data from an older American community-dwelling sample. *Applied Neuropsychology*, *8*(4), 193-203.
- Sheehan, J., & Aseltine, S. (1973). Aphasic comprehension of time spacing. *Journal of Speech and Hearing Research*, *16*, 650-657.
- Spreen, O., & Strauss, E. (1998). *A compendium of neuropsychological tests* (Second ed.). New York: Oxford University Press.
- Stuss, D. T., Stethem, L. L., Hugenholtz, H., & Richard, M. T. (1989). Traumatic brain injury: A comparison of three clinical tests and analysis of recovery. *The Clinical Neuropsychologist*, *3*(2), 145-156.