Overview of Advanced Clinical Solutions for WAIS-IV and WMS-IV

Research Directors
James Holdnack, PhD
Lisa Drozdick, PhD
Gloria Maccow, PhD
Assessment Training Consultant

Agenda

• Describe the purpose of Advanced Clinical Solutions for WAIS-IV and WMS-IV (ACSW4W4).
• Discuss applications and components of ACSW4W4.

Advanced Clinical Solutions for WAIS-IV and WMS-IV is an individually administered array of tests, procedures, and scores addressing specific clinical questions and needs.
Overview of Advanced Clinical Solutions
Gloria Maccow, Ph.D., Assessment Training Consultant

Primary Goal of ACS . . .
To expand and enhance the clinical utility of WAIS-IV and/or WMS-IV through . . .

Applications of ACS . . .
additional assessments of:
  – premorbid functioning
  – effort
  – social cognition
  – executive function

A separate instrument, Texas Functional Living Scale, linked with the WAIS-IV and WMS-IV, can be used to assess instrumental activities of daily living.

Applications of ACS . . .
and software that delivers:
  – Demographically Adjusted Norms
  – Additional scores for WAIS-IV and WMS-IV
  – Reliable Change scores
Designed for Use . . .

- in forensic settings to measure premorbid function (insurance claims) and suboptimal effort (malingering).
- with older adults to assess current status, premorbid functioning, decline in cognitive functions, and reliable change.

Designed for Use . . .

- with individuals who have traumatic brain injury to assess premorbid functioning, executive functions, and social cognition.
- with individuals with Autism/Asperger's to evaluate social cognition.

Components of ACS

Memory Grid Cards
Word Choice Stimulus Book
Record Forms/Booklets
Premorbid Functioning

**Test of Pre-Morbid Functioning (TOPF)**

- Revision of the Wechsler Test of Adult Reading (WTAR).
- Provides an estimate of premorbid intellectual functioning.

---

Premorbid Functioning

**Test of Pre-Morbid Functioning (TOPF)**

- Revised and re-normed with WAIS–IV and WMS–IV.
- Enhanced by the addition of more difficult words and an extended IQ range of predictability.
## Test of Premorbid Functioning

### Uses Atypical Grapheme-Phoneme translation to measure word knowledge through reading.

### Relatively resistant to brain injury and dementia.

### Premorbid Prediction Models

- Demographics only (simple or complex)
- TOPF only
- Demographics with TOPF

Predict WAIS-IV Indexes and WMS-IV IMI, DMI, and VWMI

### Estimates amount of cognitive functioning lost due to brain injury.

An observed difference between expected performance and actual performance may indicate loss of functioning, or there may be some other reason for lower test scores.

Not designed to diagnose reading disorder.
Test of Premorbid Functioning

- Do not use the TOPF if there is a history of reading disorder.
- Do not use the reading test if examinee has aphasia or alexia.
- Use only when there is a suspected loss in cognitive functioning.

Sample Data—Case Study 2

43 year-old AF-AM Male; Ph.D. in economics. While riding his bicycle, he was struck by a motor vehicle.

Effort

Assessing Suboptimal Effort

- Help determine if the examinee’s level performance is consistent with the nature of his or her injury or clinical condition.
- Information on effort may be required for certain medical-legal and forensic evaluations.
**Effort**

**Assessing Suboptimal Effort**
- Available for Ages 16-69
- External Measure
  - New subtest: Word Choice
- Embedded Measures
  - Reliable Digit Span
  - Logical Memory Recognition
  - Verbal Paired Associates Recognition
  - Visual Reproduction Recognition

---

**Word Choice**

1. Examinee identifies each word as either man-made or natural.
2. Examinee sees and hears 50 words in succession.
3. Examinee sees card with 50 pairs of words and selects word that was previously presented from each pair.

---

**Social Cognition**

**Assessing Social Cognition**
- An assessment of an individual’s ability to understand non-verbal communication and social interactions.
- Three new subtests (Social Perception, Faces - Supplemental, Names - Supplemental) provide assessments of emotion, face, and name recognition, as well as prosody and incidental recall of emotional expression. Audio files on CD-ROM.
**Social Perception Subtest**

**Consists of 3 tasks**
- Affect Naming (Happy, Sad, Angry, Surprise, Disgust, Fear, and Neutral)
- Prosody-Face Matching (includes Sarcasm)
- Prosody-Pairs Matching
  - Listen to a pair of individuals interacting.
  - Describe how tone of voice changes the meaning of what is said.

---

**Executive Function**

Assessing Executive Function with selected tests from Delis-Kaplan Executive Function System (D-KEFS)
- Trail Making (Conditions 2, 3, & 4)
  - Number Sequencing, Letter Sequencing, Number-Letter Switching
- Verbal Fluency
  - Letter and Category Fluency, Category Switching

Now correlated with WAIS–IV and WMS–IV

---

**Verbal Fluency**

**Note** - this is a language test.
Deficits in executive functioning may be inferred if no significant language impairments are present.
**Instrumental Activities of Daily Living**

**Texas Functional Living Scale**

---

**About TFLS**

TFLS is a brief, ecologically valid, performance based measure to identify the level of care required by an individual.

Authors: Munro Cullum, PhD, Myron F. Weiner, MD, and Kathleen C. Saine, PhD.

Publication Date: April 2009

---

**Overview of TFLS**

- Brief assessment of functional competence
  - 15 minutes to administer
  - Assesses Instrumental Activities of Daily Living (IADL)
- Performance-based measure
  - Direct assessment of skills
- Designed for Ages 16-90
Use TFLS to . . .

- Assess functional abilities (Time, Money and Calculation Skills, Communication, Memory)
- Screen for dementia
- Monitor functional decline
- Monitor treatment/drug efficacy
- Determine level of care required

Linked with WAIS-IV and WMS-IV

Interpretation of TFLS

Total Score T-Score metric combines all 4 domains.
- T-Score above 40 points suggests individual can live independently.
- T-Score below 25 points often suggests individual may need to reside in a special care unit.
- T-score of 26-40 (mild, mild-to-moderate, and moderate impairment) suggests individual may need partial or fully assisted living.

ACS Software

Additional Scores
Demographically Adjusted Norms

- Enable clinician to refine hypothesis about the degree to which a specific score is unexpected when compared to individuals of similar background characteristics (e.g., education level).
- Norms approximate the unique demographic subgroup of an individual.

Available for WAIS-IV and WMS-IV Subtest and Index Scores
- Education-only adjusted norms
- Full Demographically adjusted norms

Use of Demographically Adjusted Norms

- Meant to minimize the impact of psychosocial variables on the diagnosis of cognitive impairment, such as estimating the degree of cognitive impairment after a brain injury or insult.
- “...most appropriately applied in the context of a neurodiagnostic assessment.”
Use of Demographically Adjusted Norms

NOT a replacement or substitute for WAIS-IV or WMS-IV conventional age-adjusted norms. NOT to be used for:

- psychoeducational evaluations,
- determination of intellectual deficiency,
- vocational assessment,
- "any context in which the purpose of the evaluation is to determine the absolute functional level (IQ or Memory) of the examinee relative to a representative sample of the U.S. population" (The Psychological Corporation, 2002).

Premorbid Function

- Software applies a regression equation to predict premorbid abilities using demographic characteristics and/or performance on the ACS Test of Premorbid Functioning (TOPF).
- Software Provides
  - Estimate of Premorbid IQ (FSIQ, GAI, VCI, PRI, WMI, and PSI)
  - Estimate of Premorbid Memory Ability (IMI, DMI, and VWMI)

Reliable Change

- Assesses whether performance differences over time are due to actual changes in functioning, and not to the unreliability of the measure.
- Uses scores from the WAIS-IV and/or WMS-IV to compute a reliable change score between an assessment at Time 1 and Time 2.
Reliable Change

- Software uses regression based models to provide an indicator of a significant decline in performance between test sessions controlling for the impact of practice effects, ability level, and age where appropriate.
- Available for all WAIS-IV and WMS-IV subtest and index scores.

Additional Subtest Scores

Allow better identification and description of the nature and extent of observed memory problems.

Additional WAIS-IV Subtest Scores
- Cancellation

Additional WMS-IV Subtest Scores
- Logical Memory
- Verbal Paired Associates
- Designs
- Visual Reproduction

Additional Index Scores

WMS-IV Indexes
- Auditory Immediate
- Auditory Delayed
- Auditory Recognition
- Visual Immediate
- Visual Delayed
- Visual Recognition
- Designs Spatial
- Designs Content
Additional WMS-IV Contrast Scores

**Auditory**
- Immediate vs. Delayed
- Recognition vs. Delayed

**Visual**
- Immediate vs. Delayed
- Recognition vs. Delayed

Designs: Spatial vs. Content

Information on Contrast scores available at www.WMS-IV.com

Summary
ACS: Construct Coverage

**Refined assessment of memory functions**
- Error scores
- Additional indexes

**Suboptimal Effort**
- Word Choice
- Embedded Measures

**Social Cognition**
- Affect Recognition, Prosody
- Faces
- Names

**Executive Function**
- Trail-Making
- Verbal Fluency

**Change in cognitive function**
- Demographic Adjustments to Norms
- Premorbid Ability estimation
- Reliable Change Scores (regression based)

For More Information . . .

www.acsw4w4.com
www.psychcorp.com

Comments or Questions
gloria.maccow@pearson.com
724-766-7692