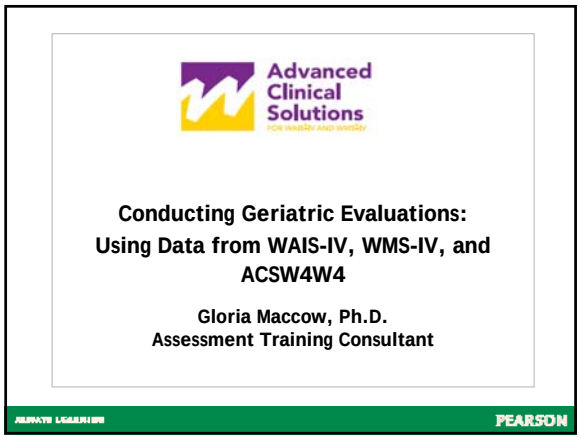



## Objectives

- **Select components of *Advanced Clinical Solutions for WAIS-IV and WMS-IV* to determine the presence of dementia;**
- **Link assessment data to treatment based on the demands of the individual's functional environment.**



## Three Batteries

- **WAIS-IV, WMS-IV, and ACS were developed to be used together.**
- **Decisions made in the development of one instrument affected the development of other components.**
- **Each instrument provides unique information about the examinee.**

## Factors to Consider

- The tests were built together to allow users to better identify the nature of the underlying cognitive difficulty.
- One of the strengths of the tests is their co-norming.
- Use regression based approach to partial out overlapping variance (contrast scores).



## Three Batteries

- WAIS-IV, WMS-IV, and ACS were developed to be used together.
- Decisions made in the development of one instrument affected the development of other components.
- Each instrument provides unique information about the examinee.



## Applications of Batteries

WAIS-IV and WMS-IV used for

- School based evaluations
- Disability evaluations
- Psychiatric evaluations
- Neuropsychological evaluations
- Forensic evaluations
- Medical/legal evaluations
- Competency evaluations
- Vocational Rehabilitation evaluations, etc.

## Factors to Consider

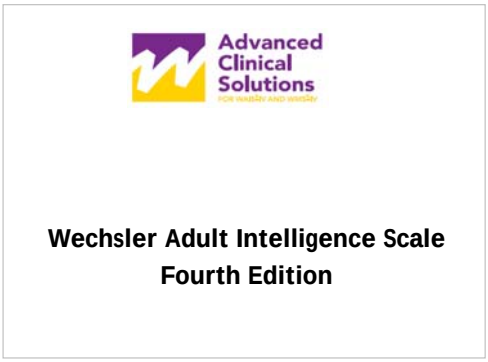
- Difficult to build one instrument to answer all possible questions.
- Not all clinicians will need all pieces of information.
- Expectation is that clinicians will select those measures that best fit their practice and workflow.



## Factors to Consider

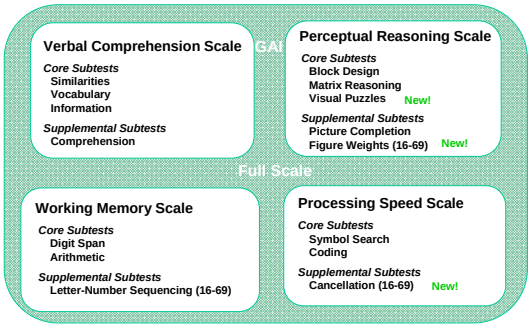
- The tests were built together to allow users to better identify the nature of the underlying cognitive difficulty.
- One of the strengths of the tests is their co-norming.
- Use regression based approach to partial out overlapping variance (contrast scores).






**Wechsler Adult Intelligence Scale**
**Fourth Edition**

## WAIS-IV Content and Structure Ages 16-90






## What is the GAI?

- The WAIS-IV GAI provides the practitioner with a summary score that is less sensitive than the FSIQ to the influence of working memory and processing speed.
- GAI = sum of scaled scores for VCI subtests and PRI subtests



## What is the GAI?

- WAIS-IV GAI should be used for discrepancy comparisons
  - Ability and Memory
  - Ability and achievement
- GAI is NOT a replacement for FSIQ

## General Ability Index

*Consider** using the GAI if a significant and unusual discrepancy exists between

- ✓ VCI and WMI; or
- ✓ PRI and PSI; or
- ✓ WMI and PSI, or
- ✓ between subtests within WMI and/or PSI.

*Note*: The FSIQ is the most valid measure of overall cognitive ability and WM and PS are vital to comprehensive evaluation of cognitive ability.



## General Ability Index - Note!

- The GAI is used when neuropsychological deficits adversely impact performance on WM and PS.
- Impaired performance on WM and/or PS may mask actual differences between general cognitive ability (FSIQ) and other cognitive functions (e.g., memory).
- The GAI does not replace the FSIQ. Report and interpret GAI along with FSIQ.

[see WAIS-IV Technical Manual]



Advanced Clinical Solutions

## Wechsler Memory Scale Fourth Edition

## Memory and Learning

- **Encoding: External information is transformed into mental representations or memories and stored in STM.**
- **Consolidation: Information from immediate memory is solidified into long-term memory stores.**
- **Retrieval: Information is brought into conscious awareness.**



## WMS-IV Test Battery

**Seven subtests:**

- **Logical Memory, Verbal Paired Associates, and Visual Reproduction - retained from WMS-III.**
- **Brief Cognitive Status Exam, Designs, Spatial Addition, and Symbol Span - NEW.**



## WMS-IV Test Battery

**Logical Memory, Verbal Paired Associates, Designs, and Visual Reproduction have two conditions:**

- **the immediate condition (I), and**
- **the delayed condition (II),**

**Condition I and II are administered about 20-30 minutes apart.**



## WMS-IV Batteries

| | |
|---|---|
| **Adult Battery** | **Ages 16-69** |
| **Older Adult Battery** | **Ages 65-90** |

**[Also, WMS-IV Flexible Approach]**

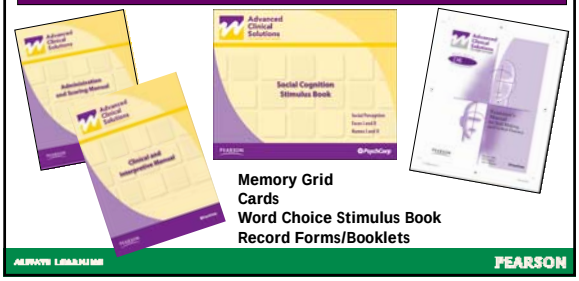


## Types of Scores

- **Primary Subtest Scaled Scores (mean=10, sd = 3)**
- **Index Scores (mean=100, sd = 15)**
- **Process Scores (Scaled Score or Cumulative Percentage)**
- **Contrast Scaled Scores**



## Components of ACS




Memory Grid Cards
Word Choice Stimulus Book
Record Forms/Booklets

## 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



## Remember! Many Factors Can Influence Performance

- Acuity
- Attention
- Executive Functioning
- Global Intellectual Functioning
- Working Memory
- Language Impairment (Auditory Memory subtests)
- Visual-Spatial Processing (Visual Memory subtests)
- Fatigue
- Poor Effort
- Impulsivity

Advanced Clinical Solutions

**Sample Case Study**

**Clinical Applications: Assessing Dementia**
**Mabel Sample82**

PEARSON

## Intake Information

- **Mabel is an 82-year old female.**
- **She attended college but did not complete degree.**
- **She was married for 50 years until her husband died 10 years ago.**
- **She was a homemaker and never worked outside the home.**


PEARSON

## Referral Concerns

- **Her children referred Mabel for evaluation.**
- **They are concerned about declines in her cognitive abilities and about her living alone.**


PEARSON

## Referral Concerns

**According to her children,**

- **Mabel evidences word retrieval difficulties, and difficulty sequencing complex information.**
- **She is forgetful and easily overwhelmed with instrumental daily activities.**



## Intake Information

- **Mabel is in relatively good physical health.**
- **She was diagnosed with atrial fibrilation and osteoporosis – both are being treated with medication.**
- **She takes Namenda to treat cognitive decline.**



## Dementia or Mild Cognitive Impairment

**Clinical concepts concerning this referral:**

- **Change in cognitive status from a previous level**
- **Mental Status**
- **Memory impairment**
- **Self-care**
- **Depression**



## Clinical Questions

- **Is Mabel experiencing dementia?**
  - **Does she evidence deficits in two or more areas of cognition?**
  - **Does she manifest a decline in memory and other cognitive functions relative to premorbid cognitive ability?**
- **If cognitive abilities are impaired, what is the impact on daily living?**



## Procedures Utilized

- **WAIS-IV**
- **WMS-IV + Brief Cognitive Status Exam**
- **ACS: Additional Scores**
- **ACS: Test of Premorbid Functioning**
- **Reliable Change Scores (Serial Assessment)**
- **Texas Functional Living Scales**



## Evaluation Results

- **Mini Mental Status Exam = 19 (middle stage/moderate Alzheimer's disease).**
- **BDI-II=1 (no indication of depression).**

## WAIS-IV: Probable Dementia of Alzheimer's Type-Mild

| Composite | Clinical Mean | Control Mean | Mean Diff. | *p* value | Effect Size |
|---|---|---|---|---|---|
| VCI | 86.2 | 103.0 | 16.84 | <.01 | 1.04 |
| PRI | 85.8 | 101.5 | 15.72 | <.01 | 1.01 |
| WMI | 84.3 | 100.9 | 16.66 | <.01 | 1.12 |
| PSI | 76.6 | 102.6 | 26.06 | <.01 | 1.70 |
| FSIQ | 81.2 | 102.0 | 20.87 | <.01 | 1.25 |

n = 44



## WAIS-IV: Mild Cognitive Impairment

| Composite | Clinical Mean | Control Mean | Mean Diff. | *p* value | Effect Size |
|---|---|---|---|---|---|
| VCI | 99.0 | 106.1 | 7.13 | <.01 | .49 |
| PRI | 93.9 | 102.4 | 8.43 | <.01 | .61 |
| WMI | 96.6 | 104.7 | 8.13 | <.01 | .54 |
| PSI | 94.9 | 102.2 | 7.33 | .05 | .53 |
| FSIQ | 94.8 | 104.8 | 10.00 | <.01 | .72 |

n = 53



## WAIS-IV Scores

| *Index*/Subtest | *Index Score*/ Scaled Score | *Index*/Subtest | *Index Score*/ Scaled Score |
|---|---|---|---|
| *Verbal Comprehension* | *98* | Perceptual Reasoning | *92* |
| Similarities | 11 | Block Design | 9 |
| Vocabulary | 10 | Matrix Reasoning | 9 |
| Information | 8 | Visual Puzzles | 8 |
| *Working Memory* | *97* | *Processing Speed* | *74* |
| Digit Span | 10 | Coding | 6 |
| Arithmetic | 9 | Symbol Search | 4 |

Full Scale IQ = 89 General Ability Index = 95

## Index-Level Discrepancy Comparisons

| Comparison | Score 1 | Score 2 | Diff. | Critical Value .05 | Significant Difference Y / N | Base Rate Overall Sample |
|---|---|---|---|---|---|---|
| VCI - PRI | 98 | 92 | 6 | 9.75 | N | 32.5 |
| VCI - WMI | 98 | 97 | 1 | 8.82 | N | 48.1 |
| VCI - PSI | 98 | 74 | 24 | 9.75 | Y | 7 |
| PRI - WMI | 92 | 97 | -5 | 10.99 | N | 37.1 |
| PRI - PSI | 92 | 74 | 18 | 11.75 | Y | 12.1 |
| WMI - PSI | 97 | 74 | 23 | 10.99 | Y | 7.3 |
| FSIQ - GAI | 89 | 95 | -6 | 3.19 | Y | 12.4 |



## PSI: Weakness

**Mabel's ability to mentally process routine information rapidly without making errors is a weakness relative to her verbal reasoning and nonverbal reasoning abilities.**



## PSI: Functional Implication

**A weakness in the speed of processing routine visual information may make the task of comprehending novel and/or non-routine information more time-consuming and difficult for Mabel.**

## PSI: Functional Implication

**A weakness in simple visual scanning and tracking may leave her less time and mental energy for the complex task of understanding new material.**



## WMS-IV: Probable Dementia of Alzheimer's Type-Mild

| WMS-IV Index | Clinical Mean | Control Mean | Mean Diff. | *p* value | Effect Size |
|---|---|---|---|---|---|
| AMI | 68.5 | 107.1 | 38.60 | <.01 | 2.24 |
| VMI | 69.7 | 102.5 | 32.85 | <.01 | 2.00 |
| IMI | 71.7 | 107.4 | 35.71 | <.01 | 2.16 |
| DMI | 63.6 | 104.6 | 40.98 | <.01 | 2.39 |
| GAI | 86.9 | 110.4 | 23.57 | <.01 | 1.64 |

n = 48 (ages 65-89)



## WMS-IV: Mild Cognitive Impairment

| WMS-IV Index | Clinical Mean | Control Mean | Mean Diff. | *p* value | Effect Size |
|---|---|---|---|---|---|
| AMI | 89.9 | 105.6 | 15.65 | <.01 | 1.05 |
| VMI | 89.3 | 102.1 | 12.84 | <.01 | 0.89 |
| VWMI | 91.6 | 107.2 | 15.54 | <.01 | 1.22 |
| IMI | 90.8 | 105.8 | 15.00 | <.01 | 1.09 |
| DMI | 87.5 | 103.5 | 16.00 | <.01 | 1.01 |
| GAI | 97.2 | 106.9 | 9.73 | <.01 | 0.78 |

n = 50 (ages 55-84)

## WMS-IV Scores: BCSE

- Mabel's global cognitive functioning, as measured by the BCSE, was in the Low range, compared to others, ages 70 to 90, with a similar educational background.
- This classification level represents 2–4% of cases within her age and education group.
- Functioning in this range has a moderately high probability of being considered atypical, though not necessarily diagnostic.



## WMS-IV Scores

| *Index*/Subtest | *Index Score*/ Scaled Score | *Index*/Subtest | *Index Score*/ Scaled Score |
|---|---|---|---|
| *Auditory Memory* | *78* | *Visual Memory* | *66* |
| Logical Memory I | 9 | Visual Reproduction I | 3 |
| Logical Memory II | 2 | Visual Reproduction II | 5 |
| Verbal Paired Associates I | 7 | | |
| Verbal Paired Associates II | 7 | Symbol Span | 6 |
| *Immediate Memory* | *77* | *Delayed Memory* | *67* |
| Logical Memory I | 9 | Logical Memory II | 2 |
| Verbal Paired Associates I | 7 | Verbal Paired Associates II | 7 |
| Visual Reproduction I | 3 | Visual Reproduction II | 5 |



## Ability-Memory Analysis

**Ability Score Type: GAI (= 95)**

**Predicted Difference Method**

| Index | Predicted WMS-IV Index Score | Actual WMS-IV Index Score | Diff. | Critical Value | Sign. Diff. Y / N | Base Rate |
|---|---|---|---|---|---|---|
| Auditory Memory | 97 | 78 | 19 | 9.33 | Y | 5-10% |
| Visual Memory | 97 | 66 | 31 | 7.72 | Y | <1% |
| Immediate Memory | 97 | 77 | 20 | 10.41 | Y | 4% |
| Delayed Memory | 97 | 67 | 30 | 10.86 | Y | 1% |

## Retention of Information

WMS-IV Indexes

| Index | Score 1 | Score 2 | Contrast Scaled Score |
|---|---|---|---|
| Immediate Memory Index vs. Delayed Memory Index | 77 | 67 | 5 |



## Auditory Memory Relative to WAIS-IV Abilities

Contrast Scaled Scores

| Score | Score 1 | Score 2 | Contrast Scaled Score |
|---|---|---|---|
| General Ability Index vs. Auditory Memory Index | 95 | 78 | 5 |
| Verbal Comprehension Index vs. Auditory Memory Index | 98 | 78 | 5 |
| Working Memory Index vs. Auditory Memory Index | 97 | 78 | 6 |



## GAI vs. AMI

**The clinical groups that significantly differ from the controls and have large effect sizes on the GAI vs. AMI are**

- **Probable Dementia of the Alzheimer's Type-Mild Severity,**
- **Mild Cognitive Impairment,**
- **Mild and Moderate Intellectual Disability,**
- **Schizophrenia, and**
- **Moderate-to-Severe TBI groups.**

## Auditory Process Scores

**Auditory Memory Process Score Summary**

| Score | Raw Score | Scaled Score | Percentile Rank | Cumulative Percentage (Base Rate) |
|---|---|---|---|---|
| LM II Recognition | 15 | - | - | 17-25% |
| VPA II Recognition | 22 | - | - | 10-16% |
| VPA II Word Recall | 5 | 7 | 16 | - |



## Forgetting and Retrieval: Auditory Modality

**Logical Memory**

| Score | Score 1 | Score 2 | Contrast Scaled Score |
|---|---|---|---|
| LM II Recognition vs. Delayed Recall | 17-25% | 2 | 1 |
| LM Immediate Recall vs. Delayed Recall | 9 | 2 | 1 |



## Forgetting and Retrieval: Auditory Modality

**Verbal Paired Associates**

| Score | Score 1 | Score 2 | Contrast Scaled Score |
|---|---|---|---|
| VPA II Recognition vs. Delayed Recall | 10-16% | 7 | 9 |
| VPA Immediate Recall vs. Delayed Recall | 7 | 7 | 10 |



## Visual Memory Relative to Other Abilities

| Score | Score 1 | Score 2 | Contrast Scaled Score |
|---|---|---|---|
| General Ability Index vs. Visual Memory Index | 95 | 66 | 2 |
| Perceptual Reasoning Index vs. Visual Memory Index | 92 | 66 | 2 |



## Visual Process Scores

**Visual Memory Process Score Summary**

| Score | Raw Score | Scaled Score | Percentile Rank | Cumulative Percentage (Base Rate) |
|---|---|---|---|---|
| VR II Recognition | 2 | - | - | 17-25% |
| VR II Copy | 43 | - | - | >75% |



## Forgetting and Retrieval: Visual Modality

**Visual Reproduction**

| Score | Score 1 | Score 2 | Contrast Scaled Score |
|---|---|---|---|
| VR II Recognition vs. Delayed Recall | 17-25% | 5 | 6 |
| VR Copy vs. Immediate Recall | >75% | 3 | 2 |
| VR Immediate Recall vs. Delayed Recall | 3 | 5 | 8 |

## Modality-Specific Memory Strengths and Weaknesses

| WMS-IV Indexes | | | |
|---|---|---|---|
| Index | Score 1 | Score 2 | Contrast Scaled Score |
| Auditory Memory Index vs. Visual Memory Index | 78 | 66 | 5 |



## Visual Working Memory

**Mabel's ability to keep in mind a mental image of a symbol and its relative spatial position on the page is below average (Symbol Span scaled score = 6).**



## Immediate Memory Relative to WAIS-IV GAI

| Score | Score 1 | Score 2 | Contrast Scaled Score |
|---|---|---|---|
| General Ability Index vs. Immediate Memory Index | 95 | 77 | 4 |

## GAI vs. IMI

**The clinical groups that significantly differ from the controls and have large effect sizes on the GAI vs. IMI are**

- Probable Dementia of the Alzheimer's Type-Mild Severity,
- Mild Cognitive Impairment,
- Mild and Moderate Intellectual Disability,
- Right Temporal Lobectomy,
- Moderate-to-Severe TBI groups, and
- Autistic Disorder groups.



## Delayed Memory Relative to WAIS-IV GAI

| Score | Score 1 | Score 2 | Contrast Scaled Score |
|---|---|---|---|
| General Ability Index vs. Delayed Memory Index | 95 | 67 | 3 |



## GAI vs. DMI

**The clinical groups that significantly differ from the controls and have large effect sizes on the GAI vs. DMI are**

- Probable Dementia of the Alzheimer's Type-Mild Severity,
- Mild Cognitive Impairment,
- Mild and Moderate Intellectual Disability,
- Right Temporal Lobectomy,
- Autistic Disorder, Schizophrenia, and
- Moderate-to-Severe TBI groups.

## Additional Scores-AMI

| WMS-IV Index | Index Score | Percentile Rank | Qualitative Description |
|---|---|---|---|
| Auditory Immediate | 89 | 23 | Low Average |
| Auditory Delayed | 67 | 1 | Extremely Low |
| Auditory Recognition | 76 | 5 | Borderline |



## Additional Scores-AMI

| Score | Score 1 | Score 2 | Contrast Scaled Score |
|---|---|---|---|
| Auditory Immediate Index vs. Auditory Delayed Memory Index | 89 | 67 | 1 |
| Auditory Recognition Index vs. Auditory Delayed Memory Index | 76 | 67 | 5 |



## Test of Premorbid Functioning

- **Uses Atypical Grapheme-Phoneme translation to measure word knowledge through reading.**
- ***Relatively*** **resistant to brain injury and dementia.**

## Test of Premorbid Functioning

- **Premorbid Prediction Models**
  - **Demographics only (simple or complex)**
  - **TOPF only**
  - **Demographics with TOPF**
- **Predict WAIS-IV Indexes and WMS-IV IMI, DMI, and VWMI**



## Premorbid Functioning

**Test of Premorbid Functioning Score Summary**

| | Raw Score | Standard Score | Percentile Rank | Qualitative Description |
|---|---|---|---|---|
| Test of Premorbid Functioning | 61 | 119 | 89.7 | High Average |



## Premorbid Functioning

**WAIS-IV Actual – Predicted Comparison**

| Composite | Actual | Equated | Difference | Critical Value | Significant Difference | Base Rate |
|---|---|---|---|---|---|---|
| FSIQ | 89 | 117 | -28 | 6.11 | Y | 3.4% |
| VCI | 98 | 117 | -19 | 7.3 | Y | 9.3% |
| PRI | 92 | 117 | -25 | 11.12 | Y | 17.9% |
| WMI | 97 | 118 | -21 | 9.77 | Y | 16.1% |
| PSI | 74 | 118 | -44 | 11.04 | Y | 5.7% |

Actual – Predicted Comparison based on
Test of Premorbid Functioning Equated Model

## Premorbid Functioning

**WMS-IV Actual – Predicted Comparison**

| Index | Actual | Equated | Difference | Critical Value | Significant Difference | Base Rate |
|---|---|---|---|---|---|---|
| IMI | 77 | 117 | -40 | 9.65 | Y | 2.2% |
| DMI | 67 | 118 | -51 | 10.36 | Y | 3.9% |

Actual – Predicted Comparison based on
Test of Premorbid Functioning Equated Model



## Reliable Change Score

**Used to determine if there has been a change in cognitive functioning between 2 time periods**

- Decline associated with dementia or other progressive neurological condition.
- Improved function related to intervention such as rehabilitation or medication effects.



## Reliable Change Score

**Applies multivariate hierarchical regression method to control for practice effects and other factors associated with change in performance.**

*Predictors*: **Time 1 performance, GAI (or VCI or PRI), Age, Education, Sex, Test Interval.**

## Reliable Change Score

- **Compare actual time 2 performance to predicted time 2 performance**
  - **Statistically significant difference**
  - **Base rate**
- **If difference is significant and rare, may indicate a decline or improvement in functioning.**



## Reliable Change Score

**Serial Assessment Report for WAIS-IV and WMS-IV Mabel Sample82**

**Test-Retest Interval 6 months 0 days**



## WAIS-IV Serial Assessment

WAIS–IV Composite Comparisons

| Composite | Time 1 Actual | Time 2 Actual | Time 2 Predicted | Time 2 Actual-Predicted Difference | Critical Value | Significant Difference | Base Rate |
|---|---|---|---|---|---|---|---|
| FSIQ | 89 | 81 | 93 | -12 | 5.73 | Y | <1% |
| VCI | 98 | 93 | 101 | -8 | 8.11 | N | |
| PRI | 92 | 82 | 98 | -16 | 8.67 | Y | 2% |
| WMI | 97 | 97 | 94 | 3 | 9.59 | N | |
| PSI | 74 | 65 | 83 | -18 | 12.26 | Y | 1% |

Serial Assessment scores for WAIS–IV are based on retest data obtained for an interval of 8–82 days. Intervals greater than 82 days are based on the data for 82 days.
Statistical significance (critical value) at the .05 level.

## WMS-IV Serial Assessment

WMS–IV Index Comparisons

| Index | Time 1 Actual | Time 2 Actual | Time 2 Predicted | Time 2 Actual-Predicted Difference | Critical Value | Significant Difference | Base Rate |
|---|---|---|---|---|---|---|---|
| AMI | 78 | 70 | 94 | -24 | 8.59 | Y | <1% |
| VMI | 66 | 58 | 73 | -15 | 7.64 | Y | 2-5% |
| IMI | 77 | 67 | 87 | -20 | 8.67 | Y | <1% |
| DMI | 67 | 63 | 81 | -18 | 10.11 | Y | 2% |

Serial Assessment scores for WMS–IV are based on retest data obtained for an interval of 14–84 days. Intervals greater than 84 days are based on the data for 84 days.
Statistical significance (critical value) at the .05 level.



## Clinical Questions

**Is Mabel experiencing dementia?**

- **Progressive and long-term decline in cognitive function.**
  - **Perceptual reasoning ability**
  - **Speed of processing visual information**
  - **Memory**



## Diagnosis and Treatment

- **Evaluate all data to determine if Mabel's current functioning is consistent with a diagnosis of Dementia.**
- **Establish the impact of cognitive impairment on Mabel's performance of instrumental activities of daily living.**

## Instrumental Activities of Daily Living

**Texas Functional Living Scale**

| Score | Time Total | Money and Calculation Total | Communication Total | Memory Total | TFLS Total |
|---|---|---|---|---|---|
| Raw Score | 8 | 6 | 26 | 3 | 43 |
| Subscale Cumulative Percentage | 51-75 | 17-25 | 26-50 | 3-9 | |
| TFLS T-Score | | | | | 40 |



## Instrumental Activities of Daily Living

- Impairments in cognitive functions adversely impact Mabel's ability to perform instrumental activities of daily living.
- T-score of 40 on the TFLS indicates mild impairment.



## Diagnosis

- On initial assessment, Mabel's performance indicated a possible decline in functioning from previous levels of performance with a clear memory impairment present.
- On re-evaluation, Mabel showed significant declines in general intellectual and memory functioning.

## Diagnosis

- The data indicate a progressive and long-term decline in cognitive function.
- The clinician diagnosed Mabel with Alzheimer's Disease.



## Living Arrangements

- It was determined that Mabel required an assisted living environment due to her significant difficulties with memory and daily functioning.
- Mabel was placed in an assisted living facility close to her children. She functioned relatively independently and did well with structured routines.



## Interventions: Encoding

- Given her relative strength in higher-order conceptualization and reasoning, Mabel may benefit from using associative linkages when encoding information.
- By linking new information to what has been previously learned, she may be able to gain a more global understanding of the information and improve recall.

## Interventions: Encoding

- When she first encounters new information, she should link it in as many ways as possible to already known information.
- This strategy creates several avenues for remembering the information later.



## Interventions: Encoding

- Encourage her to use external memory sources.
- For example, leaving verbal messages on her telephone answering machine, to remind herself to pay bills, take medication, schedule/keep appointments, etc.



## Interventions: Retention of Information

To increase her ability to retain information, build on her relative strength in verbal comprehension.

- Encourage her to verbalize the steps she will use to complete a daily routine (e.g., dressing) or to complete an assigned task. This self-talk can reinforce the sequencing of all necessary steps for successful task completion.

## Interventions: Retention of Information

**To increase her ability to retain information, build on her relative strength in verbal comprehension.**

- **To complete extensive or complex tasks, ask her to break down these larger tasks into shorter, simpler tasks with feasible deadlines.**



## Interventions to Improve Skills

- **Her short-term memory and vocabulary skills could be improved at home while playing games that require memory, concentration, and recall of information.**



## Interventions to Improve Skills

- **Computer-assisted educational programs may be of benefit to her.**
- **If she enjoys video games, learning can be integrated into this fun activity.**
- **Numerous commercial educational software packages exist to meet her needs.**

For more information contact your Pearson Assessment Consultant

| Name | Telephone | Geographic Area |
|---|---|---|
| Diane Donaldson | 800.627.7271 x 262022 | CA (Central), NV |
| Anise Flowers | 800.627.7271 x 262308 | AR, TX (South) |
| Diana Gintner | 800.627.7271 x 262267 | FL |
| Michael Grau | 800.627.7271 x 262279 | CT, MA, NY (Central/Upstate) |
| John Hanson | 800.627.7271 x 262159 | MI, MN, WI |
| Maggie Kjer | 800.627.7172 x 262248 | GA |
| Tiffany Laszlo | 800-627-7271 x 267052 | MO, ID, ND, NM, SD |
| Chris McMorris | 800-627-7271 x 267053 | OH, LA, WV |
| Patrick Moran | 800.627.7271 x 262134 | CA (North), OR, WA |
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| Michael Suess | 800.627.7271 x 262236 | IL |
| Susan Wallace | 800.627.7271 x 262295 | DC, MD, VA |
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Advanced Clinical Solutions

**Questions and Comments**

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