COVID update: Initial experience with remote assessment using the UDS3 T/V-Cog

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In-person visits restricted in 100% of ADRCs as of 3/20
- Restrictions currently loosened for many ADRCs, but likely to persist in some form
- Need to retain and continue to characterize participants unable/unwilling to conduct in person visits
- Pre-existing need for remote assessment tool
- UDS3 Telephone/Video Cognitive Battery (USD3 T/V-Cog) version 1.0 developed in 5/20, then distributed by NACC with lightning speed by 6/20

![UDS3 Cognitive Battery](image)

<table>
<thead>
<tr>
<th>UDS3 Cognitive Battery</th>
<th>UDS3 T/V-Cog (Core)</th>
<th>UDS3 T/V-Cog (Core + Optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MoCA</td>
<td>X</td>
<td>MoCA-Blind/Telephone (Wittich et al., 2010)</td>
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<td>Craft Story</td>
<td>Craft Story</td>
<td>Craft Story</td>
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<tr>
<td>Benson Complex Figure</td>
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<td>RAVLT (Rey, 1964)</td>
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<tr>
<td>Number Span</td>
<td>Number Span</td>
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<td>Category/Phonemic Fluency</td>
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<td>Trail Making Test A &amp; B</td>
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<td>Oral Trail Making Test (Ricker &amp; Axelrod, 1994)</td>
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<tr>
<td>Multilingual Naming Test</td>
<td>X</td>
<td>Verbal Naming Test (Yochim et al., 2015)</td>
</tr>
<tr>
<td>Geriatric Depression Scale</td>
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</tbody>
</table>
USD3 T/V-Cog Update

- To date, 150 USD3 T/V-Cog packets submitted to NACC by 6 Centers
- Procedures in place for response to queries via CTF and NACC
- Spanish translation imminent
- Wake Forest ADRC USD3 T/V-Cog pilot for subsequent inter-ADRC validation study in progress

Pilot design
- UDS3 T/V-Cog administered to ~100 participants within 6 mos of in-person UDS3
- Equal numbers of cognitively normal and MCI; all possible participants w/dementia
- Stratified randomization to four groups:
  - Short battery / telephone
  - Long battery / telephone
  - Short battery / video
  - Long battery / video

- Since July, 57 participants approached; 5 refusals (2 CN, 3 dementia), 52 completed
USD3 T/V-Cog Update

Feasibility/validity to date:
- 51/52 completed batteries judged as valid
- 1 invalid battery (hearing)
- 3/52 batteries w/tech issues (call/video drop) but still valid

Initial impressions:
- Video is preferable to phone
  - Better interaction
  - Better monitoring of participant and environment to ensure validity
  - Will allow future incorporation of tests with visual stimuli
- Drawbacks of video approach
  - Less feasible for participants with dementia?
  - Availability of technology
  - Availability of connectivity
- Possible solution: commercially available tablet for older adults
  - Simplified interface
  - Zoom-enabled
  - Built-in connectivity
  - Initial pilot testing successful; discussions in progress with company for inter-ADRC study

<table>
<thead>
<tr>
<th></th>
<th>NC</th>
<th>MCI</th>
<th>DEM</th>
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<tbody>
<tr>
<td>Tel/Short</td>
<td>6</td>
<td>6</td>
<td>2</td>
<td>14</td>
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<tr>
<td>Tel/Long</td>
<td>5</td>
<td>7</td>
<td>2</td>
<td>14</td>
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<tr>
<td>Video/Short</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td>10</td>
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<tr>
<td>Video/Long</td>
<td>7</td>
<td>5</td>
<td>1</td>
<td>13</td>
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<tr>
<td><strong>Total</strong></td>
<td>26</td>
<td>19</td>
<td>7</td>
<td>52</td>
</tr>
</tbody>
</table>
USD3 T/V-Cog Update

**Initial impressions continued:**

- Can T/V-Cog provide a reliable cognitive diagnosis for Research Framework and NACC specifications? Yes
- Can T/V-Cog data be used for research questions? Yes
- Can T/V-Cog data be combined with in-person UDS3 data for research questions? To be determined in upcoming validation study

**Next steps:**

- Wake Forest ADRC T/V-Cog Pilot study completion: mid-November
- Results used to design inter-ADRC validation study for March submission
- Refine battery
  - Remove any problematic tests
  - Inclusion of visual tests for video format
- Determine interest in participation from other Centers

**Questions for discussion:**

- What information can help Centers decide whether/when to use T/V-Cog?
- Comments from ADRCs that have used T/V-Cog?
With gratitude!

• Bonnie Sachs, Steve Rapp and Eric Fischer from WF ADRC
• CTF cognitive working group: Andy Saykin, Lisa Barnes, Mary Sano, Sandy Weintraub, Rhoda Au, Allan Levey
• NACC (Merilee Teylan and Bud)
• Nina, Cerise and Grayson for encouragement and support
• WF ADRC participants for stepping up in these strange times