**Introduction**

- Discourse is often disrupted in individuals with aphasia (IWAs).
- Discourse is infrequently and inconsistently used clinically despite endorsement by IWAs.\(^1,2\)
- Most often cited barrier is time.
- More efficient ways to implement discourse analysis are needed.
- Core Lexicon (CoreLex) lists can help clinicians identify how typical the items used by clients are.
- Checklists exist for commonly used stimuli.\(^3\)
- Checklists developed from large databases of controls.

**Specific Aims**

- To investigate the reliability of an automatic scoring procedure for core lexicon.

**Methods**

- A random sample of 49 transcripts from IWAs and 48 control speakers were retrieved from the AphasiaBank database.\(^4\)
- Tasks included 2 picture sequence stories (Broken Window and Refused Umbrella), 1 procedural task (Peanut Butter and Jelly Sandwich), 1 story retell (Cinderella), and 1 picture scene description (Cat Rescue). See Figure 1 in middle column.
- Samples represented discourse from a range of aphasia types and severities.
- Compare two scoring modalities:
  - Gold standard – hand scoring each transcript.
  - Experimental – automated scoring using software.

**Automated Scoring**

- CLAN is a free transcript analysis software (https://dali.talkbank.org/clan/).
- The CLAN command “freq +s@filename.cut +r6 *.cex +d2”, compared transcripts for each task to CoreLex items.
- This outputs an Excel file with participants scores for each task.

**Results**

<table>
<thead>
<tr>
<th>Task</th>
<th>ICC Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broken Window</td>
<td>0.98</td>
</tr>
<tr>
<td>Refused Umbrella</td>
<td>0.97</td>
</tr>
<tr>
<td>Sandwich</td>
<td>0.99</td>
</tr>
<tr>
<td>Cinderella</td>
<td>0.95</td>
</tr>
<tr>
<td>Cat Rescue</td>
<td>0.96</td>
</tr>
</tbody>
</table>

**Discussion and Conclusions**

- Both scoring methods were reliable and accurate.
- Most scoring discrepancies were resolved by editing the software command or files used to search transcripts.
- Two major sources of disagreement were identified that would be time-intensive to resolve.
  1. Information presented in revisions and retracing.
  2. Paraphasias with the intended target available.
- Automated scoring represented a significant time saver compared to hand scoring.
  - Time savings are likely to be more noticeable with increasing numbers of samples to be scored.
- Current normative data should be used with caution when comparing to automated analyses of AphasiaBank data.

**References**