**Supplement S1**

**ONDRI Datasets Filenames for Data Reported in this Publication**

All files retrievable beginning Fall 2020 through the ONDRI OND01 data release on Brain-CODE and can be accessed per posted date use policies for the Ontario Neurodegenerative Disease Research Initiative.

OND01\_VCI\_01\_CLIN\_DEMOG\_2018APR19

OND01\_VCI\_01\_CLIN\_MEDHX\_CHCKLST\_2019JAN24

OND01\_VCI\_02\_CLIN\_GAD\_2019AUG20

OND01\_VCI\_01\_CLIN\_MRS\_2018SEP20

OND01\_VCI\_02\_CLIN\_NIHSS\_2018AUG15

OND01\_VCI\_01\_CLIN\_DHX\_2020JUN04

OND01\_VCI\_01\_NIMG\_SABR\_FULL\_2018JUL26

OND01\_VCI\_01\_NPSY\_SEQSTORT2A\_2020APR02

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| **Supplement S2***Inter- and intra-rater reliability data for individual discourse variables (variables calculated from these core measures were not subjected to separate reliability procedures)* |
|  | Inter-rater ICCsa |
| Measure | % of files rated | ICC value |
| # Words  | 56.4% | .999 |
| Time | 25.5% | .989 |
| Total C-units | 25.5% | .915 |
| Percent grammatical C-units | 21.5% | .938 |
| Average # clauses per C-unit | 21.5% | .964 |
| # CIUs | 67.7% | .969 |
| % Main Events | 65.4% | .850 |
|  |  |  |
|  | Intra-rater ICCsa |
| Measure | % of files rated | ICC value |
| # Words  | 38.2% | 1.00 |
| Time | 25.5% | 1.00 |
| Total C-units | 25.5% | .924 |
| Percent grammatical C-units | 32.9% | .984 |
| Average # clauses per C-unit | 32.9% | .941 |
| # CIUs | 38.2% | .993 |
| % Main Events | 41.1% | .992 |
|  |  |  |

*Note*. Single measures, two-way mixed ICC model, absolute agreement definition. ICC = intraclass correlation coefficient.

**Supplement S3**

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| N (%) of missing values by group | Low cognition | High cognition |
| **DESCRIPTIVE MEASURES ONLY** |
| **Stroke History** |  |  |
| Stroke location | 1 (1.09%) | 0 (0.00%) |
| Circulation involved | 1 (1.09%) | 0 (0.00%) |
| TOAST classification | 7 (7.61%) | 1 (1.54%) |
| **MRI-derived volumetric** | 3 (3.26%) | 3 (4.62%) |
|  |  |  |
| **MEASURES USED TO CLASSIFY LOW VS. HIGH GROUPS** |
| **Neuropsychology** |  |  |
| Trail-Making Test A | 0 (0.00%) | 1 (1.54%) |
| DKEFS verbal fluency-category | 0 (0.00%) | 1 (1.54%) |
| Digit span forward | 1 (1.09%) | 0 (0.00%) |
| Digit span total | 2 (2.17%) | 0 (0.00%) |
| RAVLT delayed recall | 1 (1.09%) | 0 (0.00%) |
| RAVLT recognition hits | 1 (1.09%) | 0 (0.00%) |
| BVMT-R recognition hits | 1 (1.09%) | 0 (0.00%) |
| VOSP incomplete letters | 1 (1.09%) | 0 (0.00%) |
| WASI-II vocabulary | 1 (1.09%) | 0 (0.00%) |

*Note.* Demographic (Table 1), neuroimaging (Table 2), and neuropsychological (Table 3) measures not listed here had no missing data. Four participants were excluded from the analysis as detailed in the text. Of participants included, there were no missing discourse data.

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| **Supplement S5***Raw scores from neuropsychological tests* |  |
| Variablea | Mean (IQR) Range |
|  | Low cognition | High cognition |
| **Domain: Executive and Speed of Processing** |  |  |
| SDMT (# items in 90s) | 31.92 (14)4 – 50 | 42.12 (11)21 – 61 |
| TMT A (time, s) | 55.28 (23.57)23.9 – 180.0 | 36.55 (12.52)22.4 – 70.4 |
| TMT B (time, s) | 145.64 (88.75)55.4 – 300.0 | 90.38 (37.20)46.6 – 300.0 |
| DKEFS Color-WordColor Naming (time, s) | 42.71 (13.60)24.4 – 90.0 | 33.44 (7.70)23.1 – 46.8 |
| DKEFS Color-WordWord Reading (time, s) | 29.89 (9.10)16.4 – 90.0 | 24.38 (6.30)17.8 – 33.9 |
| DKEFS Color-WordInhibition (time, s) | 89.91 (40.42)50.4 – 180.0 | 63.82 (18.35)43.6 – 105.4 |
| DKEFS Color-WordSwitching (time, s) | 97.35 (45.60)50.4 – 180.0 | 68.60 (16.40)45.9 – 119.4 |
| DKEFS Verbal Fluency: letter (# correct responses) | 30.18 (18.75)2.0 – 72.0 | 43.18 (17.00)23.0 – 69.0 |
| DKEFS Verbal Fluency:category (# correct responses) | 31.20 (13.75)8.0 – 56.0 | 40.23 (14.00)19.0 – 61.0 |
| **Domain: Attention** |  |  |
| Digit Span forward (longest # digits) (Wechsler, 2011) | 6.18 (2.00)3 – 9 | 6.58 (1.00)4 – 9 |
| Digit Span backward (longest # digits) (Wechsler, 2011) | 4.36 (1.00)2 – 8 | 4.97 (2.00)3 – 8 |
| Digit Span total (total raw score = raw digit span forward + raw digit span backward) | 15.06 (5.00)8 – 25 | 17.32 (4.00)10 – 28 |
| **Domain: Memory** |  |  |
| RAVLT immediate recall A1-A5 trials (total # items)  | 34.62 (11.00)17 – 56 | 46.18 (12.00)28 – 61 |
| RAVLT delayed recall A7 trial (total # items) | 5.57 (6.00)0 – 14 | 9.28 (3.00)2 – 15 |
| RAVLT recognition hits (raw recognition score) | 11.37 (5.00)2 – 15 | 13.57 (2.00)9 – 15 |
| BVMT-R immediate recall (total # items) | 12.01 (10.00)1 – 31 | 19.02 (9.00)9 – 31 |
| BVMT-R delayed recall (total # items) | 4.68 (3.00)0 – 12 | 8.06 (4.00)3 – 12 |
| BVMT-R recognition discrimination (# hits – # false alarms) | 4.47 (2.00)-1 – 6 | 5.43 (1.00)3 – 6 |
| **Domain: Visuospatial** |  |  |
| WASI-II Matrix Reasoning (total score) | 14.09 (9.00)3 – 25 | 18.38 (6.00)5 – 27 |
| Judgment of Line Orientation (split-half, total score = split half score x 2) | 23.00 (10.00)14 – 30 | 25.13 (6.00)10 – 30 |
| VOSP Incomplete Letters (total # correct responses) | 19.23 (1.00)16 – 20 | 19.58 (1.00)16 – 20 |
| **Domain: Language** |  |  |
| BNT 15-item version (total # correct responses per standard administration rules) | 13.38 (2.00)6 – 15 | 14.31 (1.00)11 – 15 |
| TAWF Verb Naming (total # correct responses) | 17.41 (4.00)9 – 21 | 19.03 (2.00)13 – 21 |
| BDAE-III Semantic Probe (total # correct responses) | 58.02 (2.00)52 – 60 | 59.00 (1.00)53 – 60 |
| WASI-II Vocabulary (split half, total score = [split half score x 2] + 3) | 38.81 (9.00)13 – 55 | 45.40 (10.00)27 – 57 |

aSDMT – Symbol Digit Modalities Test (Smith, 1991); TMT – A & B Trail Making Test (Spreen & Strauss, 1998); DKEFS – Delis-Kaplan Executive Function System (Delis, Kaplan, & Kramer, 2001); RAVLT - Rey Auditory Verbal Learning Test (Strauss, Sherman, & Spreen, 2006); BVMT-R – Brief Visuospatial Memory Test – Revised; WASI-II Wechsler Abbreviated Scale of Intelligence 2nd Ed. (Wechsler, 2011); VOSP – Visual Object and Space Perception Battery (Warrington & James, 1991); BNT – Boston Naming Test (Mack, Freed, Williams, & Henderson, 1992); TAWF – Test of Adolescent/Adult Word Finding (German, 1990); BDAE-III – Boston Diagnostic Aphasia Examination 3rd Ed (Goodglass et al., 2001).