**Supplemental Text**

**National Neuropsychology Network (NNN) Specific Aims (NIMH; R01MH118514)**

The proposed National Neuropsychology Network (NNN) will contribute clinical diagnostic information and item-level data on the most widely used neuropsychological (NP) tests to the National Institute of Mental Health (NIMH) Data Archive (NDA). Data analyses will identify the latent constructs underlying these tests, increase efficiency of NP measurement, determine which NP measures are most informative with respect to key diagnostic questions, and examine the relations of psychiatric diagnoses and symptoms to cognitive impairment and disability.

**Aim 1**. **Establish Network Infrastructure:** We will launch the NNN with four sites, comprising major teaching clinics nationwide, and implement a shared clinical protocol and technological infrastructure for assessment. Sites include: Emory University, Medical College of Wisconsin, UCLA, and University of Florida. Goals for this aim include:

* Establishing the technological infrastructure for the network, including implementation of the Q-interactive platform for Pearson measures, and a new point-of-testing digital platform for additional measures. Pipelines will be developed to transmit data from both platforms to the NDA/Research Domains Criteria Data Base (RDoCdb).
* Collecting data on NP tests that are the most widely used in the United States in real-world clinic samples, comprising a diversity of neuropsychiatric syndromes that raise complex differential diagnostic questions.
* Implementing a structured clinical protocol to include demographics, diagnostics, and dimensional ratings of symptoms and disability using instruments proposed as NIH Common Data Elements, emphasizing those endorsed by the NIMH Research Panel, and developing a short, Structured History Protocol for Neuropsychology (SHiP-NP) to promote standardization and serve as a core transdiagnostic instrument specifically for the NP exam.

**Aim 2: Data Collection and Deposit:** The NNN will enroll 10,000 cases and deposit item-level data in RDoCdb. The cases and tests used will represent clinical NP services nationally. The sites span general outpatient and multiple specialty clinics, including those focused on dementia and degenerative conditions, epilepsies (including psychogenic non-epileptic seizures [PNES]), movement disorders, and other complex neuropsychiatric disorders. In these syndromes, mental illnesses (prominently depression, anxiety, or psychotic symptoms) are either directly part of the differential diagnosis (e.g., “dementia vs depression”) or the psychiatric symptoms may be critical moderators of cognitive impairment. The NNN aims to deposit in the NDA item-level data records for each of 47 widely administered instruments in more than 500, up to 10,000 participants each.

**Aim 3**. **Data Analyses:** The NNN aims to execute analyses of high value to the field, to:

* Identify the latent constructs measured by the NP tests and determine the most efficient measurement methods to identify these constructs, leading to proposal for new tests and batteries. We hypothesize that this project will yield proposals to cut administration time by 50% for widely used “core” batteries.
* Determine how original and proposed novel measures relate to diagnostic outcomes. We will examine hypotheses that examine the utility of NP measures in: (a) the differential diagnoses of Mild and Major Neurocognitive Disorders; (b) the lateralization of seizures in focal epilepsies; and (c) determining the impact of comorbid mood, anxiety and psychotic disorders, and the relations of dimensional mood, anxiety, and psychotic symptoms to neurocognitive dysfunction, problems with everyday functioning, and disability.