<u>Improving cognitive outcome precision & responsiveness with modern psychometrics</u>

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Time frame: either August 1 or September 1, 2007, to run for 5 years (until 2012)

This project will apply modern psychometric approaches to neuropsychological and cognitive testing data from ADNI and from Helena Chui's subcortical ischemic vascular dementia (SIVD) program project grant. We will compare approaches to handling measurement error and bias. We will combine modern psychometric techniques with biomarker and neuroimaging results as candidate composite outcomes for randomized trials. We will test all of these approaches using real and simulated data. Since all of the elements of the Uniform Data Set (UDS) are included in the ADNI battery, we will develop clinically useful score reports for the UDS that summarize general cognition, memory, and executive functioning. We will work closely with the ADNI Statistical Core to determine whether more sophisticated analytic strategies for neuropsychological data will provide a powerful complement to the sophisticated analytic strategies being developed for MRI and PET in ADNI.

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