NACC Project #2008-JI-02 (Secondary Analysis of NACC data)
“Identification of Cognitive Endophenotypes”

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Project Work Dates
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Project Description
Development of cognitive endophenotypes for genetic studies of Alzheimer's disease (AD) and other dementias is a growing area of research. Cognitive endophenotypes can be conceptualized as representing sub-clinical (or pre-clinical) phenotypes associated with dementia. Endophenotypes have potential for use in genetic studies to refine samples, in epidemiological studies to study environmental influences over time, and in clinical trials where clinicians may seek a specifically refined sample of participants at risk for disease. Previous efforts to identify patterns of cognition associated with various dementia phenotypes have been hampered by small samples with limited neuropsychological assessment data. The National Alzheimer’s Coordinating Center (NACC) data repository presents an opportunity to address small sample problems by providing a large dataset, collected with rigorous standardized methods, for cognitive endophenotype development. We propose to perform secondary data analyses on NACC neuropsychological assessment data to determine cross-sectional patterns of cognitive performance to facilitate identification of archetypal endophenotypic patterns and cognitive phenotypes by stage and disease type. The project will use factor analysis and latent class analysis methods. The goal of the project is to utilize the detailed neuropsychological data available from the NACC samples as a hypothesis generating preliminary dataset for an ongoing study of cognitive endophenotypes.

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