PREDICTING THE EARLY SEPARATION OF AD AND VAD USING DIAGNOSTIC DATA FROM THE AGING, DEMOGRAPHICS AND MEMORY STUDY (ADAMS) AND RISK FACTORS FROM PREVIOUS DECADES FROM THE NATIONALLY REPRESENTATIVE HEALTH AND RETIREMENT STUDY (HRS)

J. Koontz\textsuperscript{1}, J.J. McArdle\textsuperscript{2}

\textsuperscript{1}Statistics, University of California, Irvine, Irvine, \textsuperscript{2}Psychology, University of Southern California, Los Angeles, CA, USA

Introduction: This study examined risk factors present before the diagnosis of dementia. We used data from the Aging, Demographics and Memory Study (ADAMS), a stratified sample from the nationally representative Health and Retirement Study (HRS), comprised of persons of retiring age and older given a clinical assessment for cognitive impairment and other health information.

Aims: Define the early separation of AD and VaD using ADAMS diagnostic data and risk factors from previous decades from the HRS data.

Methods: A subset of 330 individuals from the ADAMS study diagnosed with either Alzheimer's disease (AD) or vascular dementia (VaD) was considered. The risk factors were age, gender, years of education, APO-\(\varepsilon\) status. We also created and used empirical Bayes estimates of latent growth curve trajectories from the longitudinal data on three individual variables: Episodic Memory performance, Mental Status and Cardiovascular Risk Indicest. We used the logistic regression to estimate whether a participant would be later diagnosed with either Alzheimer's disease (AD) or vascular dementia (VaD).

Results: Each APO-\(\varepsilon4\) allele more than doubled the odds of being classified into the AD group (OR =2.48). Higher levels of performance and maintenance of Episodic Memory (EM) ability across age decreased the odds of being in the AD group (OR Intercept = 0.92; OR Slope= 0.79). Every unit of increased Cardiovascular Risk (CR) decreased the odds of being classified having AD (OR = 0.77).

Conclusions: Subjects with higher EM scores and higher levels of CR factors are more at likely to experience VaD than AD.