

cognitive data, ancillary studies focused on caregiver and heart disease outcomes, and provide examples of national and international mentoring that has leveraged REGARDS data. Finally, we will describe opportunities for additional data sharing and new ancillary studies.

#### DESIGN OF REGARDS: A NATIONAL COHORT OF BLACK AND WHITE ADULTS TO STUDY DISPARITIES IN STROKE AND COGNITIVE FUNCTION

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The REGARDS study enrolled 30,239 whites and blacks aged >45 from 2003 – 2007, with oversampling of blacks and residents of the Stroke Belt. Potential participants were mailed a letter/brochure followed by telephone call. After verbal consent, telephone interview assessed cardiovascular health and cognitive function. In a home visit, measurements of risk factors, biological samples, EKG, written consent were obtained; during the in-home visit, self-administrated questionnaires were left to be completed and returned. Participants are followed for hospitalizations via telephone at 6-month intervals. Annually and biennially, brief and more comprehensive assessments of global cognitive function are conducted. Medical records for suspected strokes are collected with adjudication by stroke experts. A 2nd in-home and telephone assessment was conducted 2013-2016, approximately 10 years after baseline. This presentation will describe the methodological details of REGARDS, progress on the specific aims of the current grant, and establish the context for the remaining presentations.

#### REGARDS COGNITIVE ASSESSMENT AND APPROACHES TO DEFINING COGNITIVE IMPAIRMENT AND CHANGE IN COGNITIVE FUNCTION

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Since 2003, REGARDS participants have taken part in telephone-based cognitive assessments. Global cognitive status is assessed annually with the Six-item Screener. Between 2006 and 2009, measures of learning and memory (CERAD Word List) and language/executive function (Animal and Letter Fluency) were implemented, and are administered biennially. A Brain Health Substudy, conducting in-home clinical examinations of neuropsychological, neurological, and functional status among 1000 participants, is underway to validate telephone assessments and estimate prevalence of VCID in REGARDS. Approaches to defining incident cognitive impairment and cognitive change, including definitions employed for case/cohort studies using stored blood samples, will be described. We will discuss psychometric and

methodological considerations for characterization of risks for cognitive impairment across race and region, as well as longitudinal trajectories of cognitive function.

#### USING REGARDS TO STUDY FAMILY CAREGIVER WELL-BEING, HEALTH, AND MORTALITY

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The REGARDS study has provided a unique opportunity to study both disease-specific (stroke) and broader samples of family caregivers, and to examine the effect of transitions to caregiving over time. Using REGARDS has afforded many advantages over conventional caregiving research, including the availability of biomarker and mortality data, a large sample of non-caregiving controls who can be carefully matched to caregivers, and ability to track onset of caregiving over time. Our findings illustrate the complex nature of caregiving-related effects. While caregiving leads to worse psychological well-being, we have found minimal physical health decreases and reduced mortality rates compared to matched non-caregiving samples. These findings have policy implications and have challenged the conventional beliefs about caregiving based on previous studies of convenience samples. Diverse students and junior faculty members from multiple universities have also gained experience and contributed to high impact papers from this work.

#### ADDING HEART DISEASE OUTCOMES TO REGARDS: THE REGARDS MYOCARDIAL INFARCTION ANCILLARY STUDY

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The REGARDS-MI ancillary study provided new outcomes of heart disease events and adjudicated cause of death. A primary focus has been disparities in and risk factors for coronary artery disease. We demonstrated that compared to White men, Black men have a higher risk of fatal coronary heart disease (CHD) but a lower risk of non-fatal CHD. Ongoing work is investigating potential reasons for this. We have investigated the role of CHD in aging including the relationship between heart failure and cognitive function and the association of MI with functional status. The REGARDS-MI study has served as a platform for mentoring trainees and early stage investigators, many from underrepresented groups, and provided data to a large number of investigators to pursue research in CHD. To date, REGARDS-MI has contributed to nearly 200 publications and spawned additional ancillary studies. This presentation will highlight some of these publications and other research in progress.

#### OPPORTUNITIES FOR MORE AGING AND DISPARITIES RESEARCH, MENTORING, AND DATA SHARING WITH REGARDS

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