

### HEARING LOSS AND FRAILITY AMONG OLDER ADULTS: THE ARIC NEUROCOGNITIVE STUDY

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Hearing Loss (HL) is common among older adults and is associated with factors (e.g., walking speed and social isolation) that may mediate an association with frailty. In the Atherosclerosis Risk in Communities (ARIC) study, frailty was defined as a composite variable (unintentional weight loss, energy expenditure, walking speed, low energy, and grip strength) while HL was measured using pure-tone audiometry. Among, 3179 participants in 2015-2017, 251 (7.9%) were frail. In a model adjusted for demographic and clinical risk factors, mild HL (n=1263; Odds Ratio[OR]=1.42; 95% Confidence Interval[CI]=1.01-2.01) and moderate HL (n=854; OR=1.67; 95%CI=1.09-2.55) were associated with higher odds of frailty relative to those without HL (n=1063). Among participants who completed an ARIC visit 2-years later, the odds of developing frailty tended to be higher among those with mild (OR=1.46; 95%CI=0.91-2.33) and moderate HL (OR=1.43; 95%CI=0.77-2.67). Future research should focus on mechanisms underlying association and determine the impact of treatment of HL. Part of a symposium sponsored by Sensory Health Interest Group.

### VISION MEASURES IN AGING COHORTS: GAPS AND OPPORTUNITIES

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There is wide variation in the methods used to assess vision across existing aging cohort studies. While subjective vision measures are valuable in capturing individuals' perspectives, objective criteria are often needed to fully characterize visual impairment in older adults. In addition, visual function extends beyond acuity; contrast sensitivity, visual fields, and depth perception are known to impact daily functioning, and are needed to comprehensively assess visual function. Broader uptake of subjective and objective vision measures, and harmonization of vision measures across datasets is needed to robustly examine the role of visual impairment on aging and health outcomes. In this presentation, we will draw on work using data from the National Health and Aging Trends Study, Health and Retirement Study, and Health, Aging and Body Composition Study, among others, to illustrate uses of vision data in aging cohort studies, and examine the gaps and opportunities for improvement in vision measures. Part of a symposium sponsored by Sensory Health Interest Group.

### THE ACHIEVE TRIAL: LESSONS LEARNED FROM NESTING A RANDOMIZED CONTROLLED TRIAL WITHIN AN OBSERVATIONAL COHORT STUDY

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Hearing impairment in older adults is linked to accelerated cognitive decline and a 94% increased risk of incident dementia in population-based observational studies. Whether hearing treatment can delay cognitive decline is unknown but could have substantial clinical and public health impact. The NIH-funded ACHIEVE randomized controlled trial of 977 older adults aged 70-84 years with untreated mild-to-moderate hearing loss, is testing the efficacy of hearing treatment versus health education on cognitive decline over 3 years in community-dwelling older adults (Clinicaltrials.gov Identifier: NCT03243422.) This presentation will describe lessons learned from ACHIEVE's unique study design. ACHIEVE is nested within a large, well-characterized multicenter observational study, the Atherosclerosis Risk in Communities Study. Such nesting within an observational study maximizes both operational and scientific efficiency. With trial results expected in 2022, this presentation will focus on the benefits gained in design and recruitment/retention, including dedicated study staff, well-established protocols, and established study staff-participant relationships. Part of a symposium sponsored by Sensory Health Interest Group.

### VISION IMPAIRMENT AMONG LATE MID-LIFE WOMEN: MICHIGAN STUDY OF WOMEN'S HEALTH ACROSS THE NATION

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There are few data on mid-life sensory health and its contribution to health and disability outcomes. The Study of Women's Health Across the Nation—Michigan site (N=252 women, mean age=66.0 years) collected comprehensive data regarding ocular health to estimate the burden and correlates of vision impairment (VI) and unmet need for vision correction in this population. The prevalence of VI based on presenting and best-corrected visual acuity was 11.1% (95% CI 7.5,15.7) and 2.8% (95% CI 1.1,5.6), respectively. Thus, 75.0% of presenting VI was