7.6 vs. 10.7±7.3; p=.013), and motor experiences of daily living (16.9±8.9 vs. 10.6±7.1; p<.001) and motor symptoms (34.1 ± 12.1 vs. 31.8±12.2; p=.014). Men performed worse at inhibition (6.4±4.6 vs. 7.8 ± 5.0; p=.014) but made fewer errors on inhibition/switching (7.0±3.9 vs.7.8±4.4; p=.05). Men had higher depression scores: 12.5±8.9 vs. 9.4±7.8; p=.016. No differences in performance on spatial cognition were noted. Men with moderate PD were more depressed, had worse motor and cognitive function, non-motor and motor experiences of daily living and motor symptoms than women. Sex-tailored therapies may reduce differences in performance between sexes.

#### APOLIPOPROTEIN E, LEUKOCYTE TELOMERE LENGTH AND MEMORY IN EXCEPTIONALLY LONG-LIVED FAMILIES

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Exceptional aging has heritable components. One genetic risk factor for cognitive aging may be Apolipoprotein E (APOE), but it is unclear to what extent APOE relates to cognitive aging versus risk of Alzheimer's disease. Cognitive aging may also be influenced by leukocyte telomere length (LTL), posited to be a marker of "biological age". We examine the relationship between APOE, LTL, and memory in aging. For APOE, effects of ε4 (ε3ε4/ε4ε4) and  $\varepsilon 2$  ( $\varepsilon 2\varepsilon 3/\varepsilon 2\varepsilon 2$ ) versus the more common  $\varepsilon 3\varepsilon 3$  referent genotype on episodic (EM) and working memory (WM) were examined, comparing longevous families to the general population. Participants belonged to a multi-generational, international cohort (Long Life Family Study) including relatives from long-lived families and spouse-controls. 3,654 participants with valid memory, APOE, and telomere data at baseline were included. Regression analyses were stratified by age group and relative status, adjusting for sex, education, and country. Among controls, ε2 was associated with better WM (p<0.05) in those aged 70-79. In relatives,  $\varepsilon$ 2 was linked to better EM (p<0.05) in those 60-69. Within  $\varepsilon$ 2 carriers, longer LTL related to higher EM/WM for those <60, but lower EM/WM among those 60-69 (p<0.05). In relatives, ε4 was linked to worse EM, but better WM in those <50. Within ε4 carriers ≥80, longer LTL related to poor EM/WM. Thus, APOE related differently to distinct memory functions, and such associations varied by familial longevity and age. LTL demonstrated both positive and negative associations with memory functions depending on APOE status and age group.

## IS THERE AN ASSOCIATION BETWEEN OBSTRUCTIVE SLEEP APNEA AND FRAILTY IN OLDER VETERANS WITH DIABETES?

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Obstructive Sleep Apnea is a highly prevalent disease, where incidence increases with age. Individuals with chronic diseases such as diabetes and obesity are at risk of OSA increasing the risk of frailty. A retrospective chart review was conducted to study the association between OSA and frailty in older diabetic Veterans. Baseline polysomnography data for 91 patients  $\geq$  65 years was obtained from the electronic health records at the Miami VA Medical Center. Patients were screened for frailty from January 2016 to August 2017, and followed until October 2018. Patients were then dichotomized into frail (Frailty Index (FI) ≥.21) and nonfrail (robust FI =<.10 and pre-frail FI  $\geq$ .10, <.21) groups. The mean participant age is 70.9 years, with (SD) of 4.8. The mean age for the frail group is 71.1 years, with a SD of 5.2. Mean age for the non-frail group is 70.5 years, with a SD of 4.2. Linear regression demonstrated a significant positive linear relationship between BMI (t=2.096 p-value= .039) and the frailty index. In binomial logistic regression, adjusting for covariates, BMI was associated with increased apnea severity (OR=1.139, 95% CI= 1.044-1.241), p=.003. However, no significant association was found between FI and apnea severity. The severity of OSA based on the Apnea-Hypopnea Index had no significant association with frailty status. However, the study demonstrated a significant association between obesity and frailty, where higher BMI coincided with higher frailty. Increasing BMI coincided with increased severity of OSA, suggesting that BMI acts as a possible confounder between frailty and OSA.

# QUALITY IMPROVEMENT IN LTC: EFFECTIVENESS OF MONTESSORI-BASED ACTIVITY PROGRAMMING IN VA COMMUNITY LIVING CENTER

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Montessori-based Activity Programming (MAP) was adapted for Veterans Affairs (VA) Community Living Centers (CLCs) and aims to increase independence and meaningful engagement in residents with cognitive impairment. The Montessori model prioritizes offering choice, knowing and harnessing a resident's abilities, and enabling them to carry out purposeful roles and activities. Any perceived deficit in cognitive functioning is "circumvented" by preparing the environment to support maximum independence. The implementation of MAP-VA in VA Western NY CLC involved 3 lodges, 52 staff, 16 champions, and 65 CLC residents. Standardized implementation measures demonstrated improvements over six months in five domains assessing development of a resident-directed community. Hypothesized outcomes included improved national percentile quality improvement (QI) rankings related to psychological symptoms and medications (e.g., depressive symptoms and use of antipsychotic/antianxiety medications)

and physical functioning (e.g., less falls and ability to move independently). Scores six months prior to the implementation of MAP-VA (April, 2018 to September, 2018) were compared with scores during six months of implementation post training (November, 2018 to March, 2019). Compared to pre-intervention QI measures related to psychological symptoms, a clinically meaningful trajectory of symptom decrease was observed with rankings during implementation (e.g., depressive symptoms, amount of antipsychotic medications). Likewise, compared to pre-intervention QI rankings regarding physical functioning, post-training rankings showed a trajectory of improvement (e.g., help with ADLs, ability to move independently). Implementation of the MAP-VA intervention demonstrates preliminary evidence for improvement in QI measures related to psychological symptoms and physical functioning. Implications for QI efforts in VA CLCs will be presented.

### ENGAGING AFRICAN AMERICAN FAMILIES IN END OF LIFE DISCUSSIONS: CHALLENGES AND FACILITATORS

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Our previous study, African American Preferences Around End of Life, identified that AA Elders wanted to talk to their family about their preferences, but their family tended to avoid discussing end of life topics. We found that African American families often have a difficult time broaching the subject of end of life for a variety of emotional, cultural and religious reasons. Therefore, the purpose of this qualitative descriptive study was: To better understand the challenges and facilitators that influenced end of life conversations within the African American family. Methods: In this qualitative descriptive study, we interviewed 15 AA family caregivers of older adults. Participants were family members of older adults enrolled in an urban Program of All-inclusive Care for the Elderly. Individual interviews lasted on average 50 minutes. Data analysis was completed using conventional content analysis. Results: The majority of participants were between 55 - 65 years of age and adult children of the AA older adult. Two themes emerged for challenges: I'm not comfortable and We just don't talk about it. For facilitators again, two themes emerged: Another person took the initiative (e.g. health care provider led the conversation) and participants' previous experience with death led them to initiate EOL conversations. In addition, three participants reported that after participating in the interview they planned to talk to their loved one to find out their end of life preferences. The results of this study provide insight into how health care providers can facilitate these important end of life preferences conversations.

### SURVEILLANCE PROGRAM IDENTIFIES HEALTH OUTCOMES FOR FORMER WORKERS

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According to the US Bureau of Labor Statistics, the average age of retirement is 62. While many retirees may have employer-provided or other access to healthcare, others have limited access to affordable care until full Medicare eligibility at 65. Regardless of access, retirees with toxic occupational exposures may not have providers with specialized knowledge of tests or diagnoses for exposure-related health conditions, especially those with long-latency. The National Supplemental Screening Program for U.S. Department of Energy Former Workers is described here as a nationwide program providing recurring (every 3 years) integrated health screenings designed to identify both occupational and non-occupational conditions in the context of exposure so that early identification can enable appropriate and timely diagnoses and treatments to improve health outcomes. Since September 2005, there has been 18,518 initial exams for former workers, of whom 5,461 returned for rescreening exams through April 2019. The average age of those returning was significantly younger at initial exam (63.4 years) compared to those who did not return (65.1 years). The most common occupational condition was noise-induced hearing loss not attributable to natural, age-related loss (67%). Rare and long-latency occupational health conditions, such as asbestosis or silicosis, were identified at rates expected (1-4%). The most common non-occupational condition was elevated body mass index (BMI>25, 77.3%), followed by hypertension (20.7%), of which 50% had no prior knowledge or clinical diagnosis. In conclusion, occupational health surveillance programs can provide value for identifying non-occupational health conditions and as a supplementary source of health information and care.

#### MIDLIFE HEALTH FACTORS AND LATER-LIFE COGNITIVE DISEASE: RESULTS FROM THE 1998-2014 HEALTH AND RETIREMENT STUDY

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Understanding lifecourse determinants of older-age health outcomes is indispensable for resources planning and optimizing public health in light of continued gains in longevity in the US and worldwide. Data increasingly points to midlife health and modifiable risk factors as critical targets for improving older-age health outcomes and mitigating potential cognitive impairment and disease. We used 16-years of biennial data (1998-2014) from the Health and Retirement Study (unweighted-n=6,724), to examine how a comprehensive battery of midlife (age 50-64 years) health measures (disability, physical function, comorbid conditions, and self-reported health) affect cognitive status (using Langa-Weir criteria: Normal, Cognitively Impaired Not Dementia (CIND), and Dementia) and death 16-years later. Additionally, we test for racial/ethnic and gender modifications in the effects of these conditions on the outcomes of interest. We used