

as ≥ 4 -fold rise in titers. Crude odds ratios suggest that females are more likely to seroconvert to influenza A strains (H1N1: OR = 1.39, (0.98-1.96) ; H3N2: 1.17 (0.85 – 1.62)), while males are more likely to seroconvert to the B strain (OR = 0.85 (0.60 – 1.22)). Furthermore, this sex difference was modified by frailty – for example, the odds of seroconversion to H1N1 were 65% higher for females than males among those who were nonfrail, and only 30% higher among females who were frail. Together, these results suggest that sex and frailty interact to impact immune responses to influenza vaccines. These findings may be leveraged to better protect vulnerable populations.

URBAN-RURAL DIFFERENCES IN SARCOPENIA PREVALENCE AND NUTRITIONAL RISK FACTORS: THE NHANES (2001–2002 AND 2011–2014)

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Background: Older adults living in rural areas experience health inequities compared to their urban counterparts. These include comorbidities, poor diet and physical inactivity; known risk factors for sarcopenia. No studies examining urban-rural differences in the prevalence of sarcopenia and slow gait speed among older adults in the United States exist. **Objective:** To compare the prevalence of sarcopenia and slow gait speed between urban and rural older adults living in the United States. As a secondary aim, we examined relationships between rural residency, total energy and total protein on gait speed and grip strength. **Methods:** We performed a secondary data analysis of two cohorts in the continuous NHANES (2001-2002 and 2011-2014), using gait speed or grip strength data, along with urban-rural status, dietary, examination, questionnaire and demographic data in older (≥ 60 yrs.) adults. **Results:** The prevalence of GripBMI weakness was higher in urban vs. rural participants (27.4% vs. 19.2%), whereas their absolute grip strength was lower (31.75(± 0.45) vs. 33.73(± 0.48)). Total energy, total protein and relative protein intakes were similar between urban and rural participants. Total energy intake was associated with gait speed and grip strength. **Conclusions:** Older adults living in urban areas of the United States, were weaker compared to their rural counterparts. Rural residency was not associated with gait speed or grip strength. Total energy intake was associated with slower gait speed but higher grip strength. This report is the first to examine urban-rural differences in sarcopenia and slow gait speed in older adults living in the United States.

SESSION 2927 (POSTER)

DEMENTIA AND COGNITIVE IMPAIRMENT I

A SHORT, VALID, AND FLEXIBLE WEB-BASED SCREENER FOR MILD COGNITIVE IMPAIRMENT

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Clinical assessments for identifying mild cognitive impairment (MCI) can be costly and time-consuming. Few screeners for MCI exist that can be implemented quickly and outside of the clinic using flexible, cost-effective methods, such as web-based, mobile device-friendly assessments. Using data from middle-aged, racially and ethnically diverse Offspring Study participants (N=34 with MCI, N=54 without MCI; mean age: 53.9 \pm 3.4), we analyzed the sensitivity and specificity of several web- and telephone-based measures to identify MCI, after accounting for age and education. Web assessments included the Verbal Paired Associates (PA) and Visual PA tests. Phone assessments included the Number Series, Letter and Category Fluency, Number Span Forward & Backward, the AD8, and self-reported memory complaints. The discriminant ability of the web-based Visual PA test for MCI (ROC Area = .69) was comparable to phone-based measures, including the Category Fluency (ROC Area = .69), Number Span Forward (ROC Area = .61) and Backward (ROC Area = .67), and Letter Fluency (ROC Area = .68). Visual PA strongly predicted MCI, with a 98% reduction in the odds of MCI for every additional correct answer (OR=0.02), but our results are imprecise (95%CI: .000 to .76). A web-based Visual PA measure appears comparable to phone assessments in detection of MCI, although substantial uncertainty in its diagnostic precision remains. However, it is short, easily administered on a large-scale, and our evidence suggests that it can provide a sensitive and specific test to refer racially and ethnically diverse individuals for more thorough clinical assessment.

AN INNOVATIVE MODEL OF DEMENTIA PROGRAMMING FOR COMMUNITY-DWELLING OLDER ADULTS WITH FAMILY CAREGIVERS

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Decide, Discover, and Do!™ (D3) is an alpha-version iPad application developed and evaluated in a National Institute on Aging-funded Phase 1 SBIR project. The goal of D3 is to enhance the quality of life and care for community-dwelling persons living with dementia whose primary care partners are family members. D3 consists of (1) evidence-based activities for care partners to facilitate with their loved ones and (2) video-based interactive training on best practices in dementia care, for care partners. The activities are unique in that they create an overarching narrative for daily activities that creates a consistent routine capitalizing on procedural memory. The activities build upon one another, starting with the persons living with dementia choosing a topic (e.g., nature) early in the day, followed by the dyad engaging in a tablet-based activity related to the topic (e.g., reading an article about forests), and culminating in an experiential activity (e.g., tasting various foods found in nature, e.g. wild raspberries). A total of 18 participants took part