SOCIAL COHESION AFFECTS THE ASSOCIATION BETWEEN FRAILTY AND DISABILITY IN COMMUNITY-DWELLING OLDER ADULTS

Boqin Xie[1], *1. Fudan University School of Nursing, Shanghai, China, China*

The relationships between physical frailty and perceived neighborhood social cohesion (PNSC) and functional disability among community-dwelling older adults are poorly understood. This study aims to (1) examine the associations of frailty and PNSC with disability; and (2) evaluate low PNSC as a risk factor in the association between frailty and disability. A sample of 1645 older adults using multistage sampling method in Shanghai were randomly selected in this cross-sectional study. Frailty operationalized as Cardiovascular Health Study criteria (OR=2.4, 95%CI 1.16-4.96 for pre-frailty; OR=7.28, 95%CI 3.37-15.73 for frailty) and PNSC measured as Neighborhood Cohesion Scale (OR=1.81, 95%CI 1.23-2.67) were independently associated with basic and instrumental activities of daily living disability. A significant interaction of frailty and PNSC on disability (F (2, 66)=4.31, P=.014) was found, using a two-way analysis of covariance (ANCOVA). Compared to robust individuals with high PNSC, pre-frailty with high PNSC was not significantly associated with disability while pre-frailty with low PNSC was associated with approximate 4-fold increased prevalence of disability (OR=3.87, 95%CI 1.46-10.24, p=.006). Frailty with high PNSC was associated with higher likelihood of disability (OR=6.47, 95%CI 2.35-17.87) and frail individuals with low PNSC stood out with 10-fold increased prevalence of disability (OR=9.94, 95%CI 3.50-28.26). All analyses were controlled for demographical and clinical covariates. Our results suggest high level of social cohesion serves as a buffer against the impact of physical frailty on functional disability. These findings notably imply to the development of interventions for older frail adults from the neighborhood perspective.

SESSION 3595 (PAPER)

RESEARCH METHODS AND MEASUREMENT OF COGNITIVE IMPAIRMENT

FEASIBILITY AND ACCEPTABILITY OF DETECTING COGNITIVE IMPAIRMENT AND DEMENTIA IN PRIMARY CARE PRACTICES

Rachel O'Conor,[1] Julia Yoshino Benavente,[1] Laura Curtis,[1] Marina Arvanitis,[1] Richard Gershon,[1] and Michael Wolf[1], *1. Northwestern University, Chicago, Illinois, United States*

As the age of the US population increases, so does cognitive impairment (CI); therefore early detection of CI is critical for ensuring its appropriate management. As part of a NINDS Consortium to detect CI and dementia in primary care (DetectCID), we are implementing and evaluating a brief 2-step CI detection paradigm (MyCog), that can be delivered in clinics with diverse populations via the electronic health record (step 1) and iPad (step 2). We conducted focus groups with 25 clinicians and administrative leaders from academic and community primary care practices to 1) understand how CI is being assessed, and 2) evaluate the feasibility of implementing the MyCog paradigm into existing primary care workflows. Several key themes emerged from the discussions. No proactive detection strategy for CI was regularly used outside of the Medicare Annual Wellness Visits (AWV); variable assessments including the Minicog, MoCA, or MMSE were used to fulfill the AWV requirement. Regarding the feasibility of our MyCog Paradigm, our 2-step process was positively received, with the brief case-finding step 1 satisfying AWV requirements and replacing the longer assessments currently being used. Clinicians preferred that step 2 be self-administered due to limited clinician time for wellness visits, and highlighted logistical challenges such as room availability and storage and maintenance of the iPad. Overall, clinicians felt that the identification of CI was valuable and supported standardization, but indicated regular case finding was unlikely without clear guidance on clinical decision-making.

GEOGRAPHIC DISPARITIES IN COUNTY-LEVEL PREVALENCE OF ALZHEIMER'S DISEASE ACROSS THE UNITED STATES

Mackenzie E. Fowler,[1] Christina DiBlasio,[1] Michael Crowe,[1] and Richard E. Kennedy,[1] *1. University of Alabama at Birmingham, Birmingham, Alabama, United States*

Small-area geographic disparities in health care delivery have been observed across multiple disorders, but remain poorly studied for Alzheimer's disease (AD) and other dementias. While national and state estimates of the prevalence and incidence of AD are available, estimates across finer geographic regions offer an opportunity to tailor programs to the needs of the local population. We estimated prevalence of AD at the county level across the continental United States. We used prevalence rates of AD by age category and race among Medicare fee-for-service beneficiaries published by the Centers for Disease Control (CDC). These prevalence rates were projected onto bridged-race county-level population data for 2017 from the National Center for Health Statistics, with empirical Bayes spatial smoothing to reduce variability in rates due to small population sizes. Estimated prevalence of AD varied more than threefold across counties, from a low of 51.8 per 1,000 persons in Loving County, Texas to a high of 169.6 per 1,000 persons in Kalawao County, Hawaii. Higher prevalence of AD was seen in the Southeastern and Midwestern United States. However, we observed specific counties with low prevalence of AD within regions with high prevalence of AD, and vice versa. These small-area geographic variations may provide vital information about social and environmental influences on dementia care, yet little data have been available to date. Understanding geographic disparities in prevalence will be critical for addressing practice variation in the prevention and diagnosis of dementia.

MISCLASSIFICATION IN DEMENTIA DATA IN THE CARDIOVASCULAR HEALTH STUDY: A PROBABILISTIC BIAS ANALYSIS

Michelle Odden,[1] Alice Arnold,[2] Anne B. Newman,[3] Adina Zeki Al Hazzouri,[4] Lindsay Miller,[5] Oscar Lopez,[6] Kenneth Mukamal,[7] and Andreea Rawlings[8], *1. Stanford University, Stanford, California, United States, 2. University of Washington, Seattle, Washington, United States, 3.*

University of Pittsburgh, Pittsburgh, Pennsylvania, United States, 4. Columbia University, New York, New York, United States, 5. Oregon State University, Corvallis, Oregon, United States, 6. University of Pittsburgh, Pittsburgh, Pennsylvania, United States, 7. Beth Israel Deaconess Medical Center, Boston, Massachusetts, United States, 8. Kaiser Permanente Center for Health Research, Portland, Oregon, United States

Data routinely collected in observational studies from phone calls, medical records, and death certificates can be used to categorize dementia, though there may be misclassification. We applied probabilistic bias analyses to assess the magnitude, direction, and uncertainty of the error due to misclassification of dementia data in the Cardiovascular Health Study (CHS). We categorized dementia among all participants (73,284 person-years) using medications, ICD-9 codes, use of proxy, and death certificates, and compared to the gold standard adjudicated dementia in the CHS Memory Studies (28,250 person-years). Using the gold standard, positive (PPV) and negative predictive values (NPV) of dementia categorization were estimated within strata defined by age and sex. In probabilistic bias analyses, we reclassified participants from the full study using estimated PPVs and NPVs in 5,000 replicates. We estimated the hazard ratio (HR) of dementia associated with age, race, sex, hypertension, diabetes, and APOE4 genotype in this bias analysis and compared these results to those using original data. ICD-9 codes had low specificity and were excluded in further analyses. The NPV was differential by sex (66% for females and 79% for males) and race (51% for blacks, 60% for whites). In bias analysis, the HR for black race was attenuated from 2.81 (95%CI:1.36-5.80) to 1.23 (95%CI:1.14-1.33). The estimate for hypertension was statistically significant only in bias analysis. Estimates and inferences for the other covariates were modestly different. Differential misclassification may lead to important biases of risk factors, but can be recognized and addressed using probabilistic bias analyses.

PROMIS COGNITIVE FUNCTION AND CONCERN SCALES: LINGUISTIC VALIDATION IN AMERICAN SIGN LANGUAGE FOR DEAF OLDER ADULTS

Poorna Kushalnagar[1], *1. Gallaudet University, Washington, District of Columbia, United States*

Objective: To culturally and linguistically validate PROMIS Cognitive Functions and Concerns Scales in American Sign Language (PROMIS-ASL) for use with deaf older adults over 50. Methods: We used the standard procedures developed at the U.S. National Center for Health Statistics Cognitive Survey Laboratory to culturally adapt and translate items from the cognitive scales of the Patient Reported Outcomes Measurement Information System (PROMIS). We describe cultural adaptation and linguistic translation procedures led by a team of primarily deaf investigators. Using multidimensional exploratory or confirmatory factor analyses, we identify or confirm the items most likely to comprise each subset. Once the PROMIS-ASL version is finalized, we will compute test-retest reliability using ICC (intraclass correlation coefficient) from two-way random effects ANOVA models. Results: We produced an accessible patient reported outcomes cognitive measure in American Sign Language and a culturally appropriate set of items that are relevant to the experiences of deaf older adult over 50 users of accessible technology and services. Conclusions: The final PROMIS-ASL product with cognitive domain will be distributed for public use.

USING SERIAL TRICHOTOMIZATION WITH NEUROPSYCH MEASURES TO INFORM DECISIONS ON FITNESS TO DRIVE AMONG OLDER ADULTS

Stephanie Yamin,[1] Valerie Ranger,[1] Arne Stinchcombe,[1] Frank Knoefel,[2] and Michel Bédard[3], *1. Saint Paul University (Ottawa), Ottawa, Ontario, Canada, 2. Bruyere Continuing Care, Ottawa, Ontario, Canada, 3. Lakehead University, Thunder Bay, Ontario, Canada*

Older adults report that driving provides a sense of independence and wellbeing. For some older adults, driving cessation becomes necessary due to their health status having an impact on their ability to drive safely. Decisions related to driving cessation are difficult and often left to the clinical judgement of primary care physicians. There is an interest in developing a method that could help assist physicians in making that determination. To date, there is no neuropsychological test that produces an acceptable level of sensitivity and specificity allowing for the determination of an individual's fitness to drive. Serial trichotomization involves classifying drivers as either pass, fail or indeterminate based on cutpoints that leads to 100% sensitivity and specificity. The purpose of this study was to examine the serial trichotomization method using four common neuropsychological tests (i.e., 3MS, Trails A & B, clock drawing). Sensitivity and specificity for each test were established using a medical expert's clinical judgement. Charts of 105 patients at a tertiary memory disorders clinic were reviewed and data related to neuropsychological test scores and clinical judgement around fitness to drive were abstracted. After applying the trichotomization, 38.1% of the sample were classified as unfit to drive, 36.1% were classified as indeterminate, and 25.8% were classified as fit to drive. This study adds to the growing body of literature supporting the use of serial trichotomization to streamline decision-making about fitness to drive.

SESSION 3600 (PAPER)

SOCIAL DETERMINANTS OF HEALTH

COMMUNITY-LEVEL SOCIAL DETERMINANTS OF MORTALITY IN OLDER ADULTS: AN ASSESSMENT OF RHODE ISLAND CITIES AND TOWNS

Steven A. Cohen,[1] Julia Broccoli,[1] Heather O'Neill,[2] and Mary L. Greaney[1], *1. University of Rhode Island, Kingston, Rhode Island, United States, 2. PixelsforHumans, East Greenwich, Rhode Island, United States*

Addressing the causes of place-based health disparities among older adults have focused on understanding social determinants of health on a large geographic level, such as region, state, or county. However, there is a growing realization for the need to understand how place-based characteristics at smaller geographic areas relate to population health and contribute to successful aging. The purpose of this study was to assess the magnitude of the associations between place-based social determinants and life expectancy (LE)