

Quebec, Canada, 3. universite de Sherbrooke, Sherbrooke, Quebec, Canada

Studies that examined satisfaction with care in older adults are scarce. The aim of this research was to analyse satisfaction among older adults considering mental health, socio-clinical and health system factors and by age category. Data come from the Étude sur la Santé des Aînés Services study including 1,624 adults aged  $\geq 65$  years recruited between 2011-2013 in primary care in Quebec. Patient satisfaction was assessed during interviews with questions adapted from the Primary Care Assessment Survey. Mental health (anxiety, depression, suicidal ideation, psychological distress, cognition), social support, quality of life, the presence of pain and chronic conditions were self-reported. Health service use was extracted from administrative registries. Logistic regressions stratified by age were used to examine the associations of low satisfaction in three dimensions of care. For continuity of care, the determinants of low satisfaction were pain and attraction index for psychiatric services in adults 65 to 75 years versus anxiety, cognition and hospitalizations in adults 75 years and older. For patient-provider interactions, the determinants were psychological distress, attraction index for psychiatric services in adults 65 to 75 years versus quality of life and cognition in adults 75 years and older. For adequacy of care, anxiety, psychological distress, social support, pain, quality of life and attraction index for psychiatric services were significant in adults 65 to 75 years versus quality of life and cognition in adults 75 years and older. Results highlight different patterns of satisfaction by age category that should be used to improve care delivered in primary care.

#### DEVELOPMENT OF A CLAIMS-BASED ALGORITHM TO IDENTIFY PATIENTS WITH AGITATION IN ALZHEIMER'S DEMENTIA

Steve Hwang,<sup>1</sup> Christie Teigland,<sup>2</sup> Zulkarnain Pulungan,<sup>2</sup> Alexis Parente,<sup>2</sup> and RoseAnn DePalma,<sup>1</sup> 1. *Avanir Pharmaceuticals Inc, Aliso Viejo, California, United States*, 2. *Avalere Health, Washington, District of Columbia, United States*

Agitation is common in patients with Alzheimer's dementia. Lack of a consensus definition has limited our understanding of the prevalence, patient profile, and added healthcare burden of agitation in Alzheimer's dementia (AAD). We developed an algorithm to identify AAD patients using 100% of Medicare Fee-For-Service administrative claims from 2011-2017. We adapted the International Psychogeriatric Association (IPA) 2015 definition, which had not been tested using real-world data. Patients were required to have 2+ claims  $\geq 30$  days apart for Alzheimer's disease and dementia, and continuous enrollment with medical/pharmacy coverage for 6-months pre- and 12-months post-index diagnosis. The AAD cohort included patients with 2+ claims  $\geq 14$  days apart with ICD-9-CM/ICD-10-CM codes selected based on the IPA definition (e.g., dementia with behavioral disturbance, irritability/anger, restlessness/agitation, violent behavior, impulsiveness, wandering). Patients with severe psychiatric disorders were excluded. The final population included 255,669 patients with (34.6%) and 482,710 patients without agitation (65.4%). The mean age in both populations was 82 years. Although the majority of patients in both

groups was female, the proportion of males was slightly larger in the AAD group (31.2% vs 29.7%). Patients in the AAD group were also more likely to be low-income (dual-eligible: 44.0% vs 39.6%), disabled (10.4% vs 9.3%), and using antipsychotic and antidepressant medications. The 2 populations had similar comorbidity rates. AAD prevalence may be underestimated using claims data, given imprecise and under-coding. These findings suggest AAD patients can be identified using a claims-based algorithm to support early interventions that can potentially improve outcomes and reduce costs of care.

#### EXCLUSION OF MEDICARE ADVANTAGE ENROLLEES FROM MEDICARE HEALTH OUTCOMES ANALYSES: POTENTIAL FOR BIAS

Arseniy Yashkin, Igor Akushevich, and Anatoliy Yashin, *Duke University, Durham, North Carolina, United States*

The aim of this paper is to assess the extent of the potential bias introduced by the exclusion of the Medicare Advantage (MA) population— an increasingly sizeable (31% of all beneficiaries in 2017) subset of the Medicare population which does not provide claims data to the Centers for Medicare and Medicaid Services— from Medicare-based health outcomes and epidemiologic analyses. Using self-reported data from the Health and Retirement Study together with monthly information on Medicare enrollment, we compared MA enrollees with individuals enrolled in traditional Medicare (TM) on 42 variables representing demographic, socioeconomic, adverse health behavior and health status-related characteristics over the 1991-2015 period. We used both univariate analysis (t-tests and standardized differences) and multivariate logistic regression to compare the two groups. We found that apart from differences in economic (higher in TM group) and education status (lower in MA group) – which have been increasing in magnitude over the 1991-2015 period— the MA subset was highly comparable with the traditional Medicare (TM) population. Even though the TM population was characterized by slightly higher levels of morbidity, the resulting crude prevalence rates for common age-related diseases in the TM/MA groups were within each other's 95% confidence intervals and did not represent a major source of bias. MA membership was not associated with increased mortality at any point over the 1991-2015 period. We conclude that exclusion of the MA population will not lead to notable bias in health outcome analyses apart from those for which income and education are important explanatory factors.

#### FUNCTIONAL CORRELATES OF SELF-REPORTED ENERGY IN THE HEALTH, AGING, AND BODY COMPOSITION STUDY

Rebecca Ehrenkranz,<sup>1</sup> Andrea Rosso,<sup>2</sup> Briana Sprague,<sup>1</sup> Qu Tian,<sup>3</sup> Eleanor Simonsick,<sup>3</sup> Nancy Glynn,<sup>1</sup> Caterina Rosano,<sup>1</sup> and Theresa Gmelin,<sup>1</sup> 1. *University of Pittsburgh, Pittsburgh, Pennsylvania, United States*, 2. *School of Public Health, University of Pittsburgh, Pittsburgh, Pennsylvania, United States*, 3. *National Institute on Aging, Bethesda, Maryland, United States*

While fatigue in older age is well studied, the clinical relevance of maintaining higher energy late in life is less understood. We explored associations of self-reported energy with cognitive performance, depressive symptoms, and physical

function in the Health, Aging and Body Composition study ( $n=2,529$ , mean age =75.9, 63.5% white, 44.9% men). Self-reported energy over the past month was recorded from 0-10 (least to most energy) and dichotomized at the median ( $\geq 7$ =high energy). Cognitive performance was measured using Modified Mini-Mental State Examination and Digit Symbol Substitution Test. Depressive symptoms were measured using the Center for Epidemiologic Studies Depression scale. Physical function was assessed via fitness (timed 400-meter walk), self-reported physical activity, and usual and rapid gait speed. Variables bivariately associated with energy entered a logistic regression model with higher energy as the outcome, adjusted for demographics, chronic conditions, strength, and body mass index (BMI). Overall, 58% of the sample reported high energy, and self-reported energy was greater for males and those without chronic conditions ( $p<0.05$ ). Lower odds of higher self-reported energy were found for participants with more depressive symptoms (aOR 95% CI= 0.55 [0.50, 0.62]) and longer time to walk 400m (aOR = 0.79 [0.70, 0.89]). Increased odds of higher self-reported energy were found for participants with faster usual and rapid gait speeds (aOR = 1.3 [1.2, 1.5]; aOR = 1.2 [1.1 – 1.4], respectively). Associations with cognitive performance were not significant. Higher self-reported energy reflects fewer depressive symptoms and greater physical function independent of demographics, chronic conditions, strength, and BMI.

#### IDENTIFYING A POPULATION LIVING WITH ALZHEIMER'S: CONCORDANCE BETWEEN MEDICARE CLAIMS AND SURVEY REPORTS

Ayse Akincigil,<sup>1</sup> and Camille McKenzie,<sup>2</sup> 1. *Rutgers, The State University of New Jersey, New Brunswick, New Jersey, United States*, 2. *Rutgers University--New Brunswick, New Brunswick, New Jersey, United States*

Community-level estimates of Alzheimer's disease and related dementias (ADRD) are necessary to assess health care needs and supports (to patients and family members), determine the burden of disease, conduct public health planning, improve access and care quality improvement, and to build a workforce with the necessary skills. Data from Medicare claims can provide efficient and timely estimates. However, earlier studies suggest that identifying ADRD populations solely from Medicare claims fails to capture many individuals that live with ADRD, with false-negative cases as high as 60%. We examined nationally representative data from the 2015-2017 Medicare Current Beneficiary Survey (MCBS) to assess the claims-based case ascertainment method, covering the transition to the International Classification of Diseases, Tenth Revision (ICD-10). The study population included community dwellers aged 65 or older, enrolled in traditional fee-for-service ( $n=12,409$ ). Claims based method identified 1,325 cases (10.7% prevalence). However, there were 196 (1.6%) additional cases that self/proxy reported ADRD, but there was no ADRD diagnosis in any of their Medicare claims (hereafter referred to as self-report only). On average, the self-report only group reported higher numbers of limitations in activities, or instrumental activities of daily living, worse overall health, and more difficulty in concentrating or remembering, suggesting they are likely to be false negatives under claims-based case ascertainment method. In

conclusion, claims based case ascertainment methods failed to capture some individuals with ADRD, but the magnitude of false-negative cases declined substantially in the era of ICD-10.

#### OUTPATIENT PHYSICAL THERAPISTS SHOULD BE COMPETENT IN CARE OF OLDER ADULTS: A TOTAL POPULATION REGISTER-BASED STUDY

Solveig Arnadottir, *University of Iceland, Reykjavik, Iceland*

In Iceland, outpatient physical therapy (OPT) is traditionally not focused on older clients. Yet, the Icelandic population is aging as other populations in the world, and national policies endorse aging in place. The objective of this study was to explore 17 years of demographic information on OPT clients and to identify if this information reflects the total population aging. The research was built on 17 years (1999-2015) of complete data from: the Icelandic Health Insurances register with information on the total population of OPT clients ( $N=172071$ ), and the Statistics Iceland register with demographic information on the total general population. The results revealed that in 1999, older adults comprised 18.3% of all OPT clients, and in 2015 it had increased to 23.5%. Therefore, OPTs were 23% more likely to treat an older adult in 2015, compared to 1999 (Risk Ratio [RR] 1.23; 95% Confidence Interval [CI] 1.19-1.27). In the same time period older people became 15% more prevalent in the general population (RR 1.15; 95%CI 1.10-1.21). Linear modelling revealed a yearly 3.45% (95%CI 3.05-3.85) increase from 1999 to 2015 in the overall proportion of older OPT clients. This yearly trend, however, varied depending on age group and sex with the highest yearly increase in the  $\geq 85$  years old men (9.1%; 95%CI 7.90-10.35). This case of Iceland presents 17 years of continuous growth in older adults seeking OPT service. These findings reinforce an urgent need to enhance the geriatric competence of OPTs, who in their clinical practice frequently encounter older adults.

#### PREDICTING LIFE EXPECTANCY USING VETERANS AFFAIRS ELECTRONIC HEALTH RECORD DATA

Alexandra Lee,<sup>1</sup> Bocheng Jing,<sup>2</sup> Sun Young Jeon,<sup>1</sup> John Boscardin,<sup>1</sup> and Sei Lee,<sup>1</sup> 1. *University of California, San Francisco, San Francisco, California, United States*, 2. *San Francisco VA Medical Center, San Francisco, California, United States*

Electronic health records (EHRs) are a rich source of health data that could be used to create individualized life expectancy predictions to aid in clinical decision-making for long-term preventative treatments, such as cancer screening. Few previous studies have incorporated all possible predictors from the EHR. We aimed to screen and incorporate a large number of possible predictors from EHR data into a life expectancy (LE) prediction equation. Using the national Veteran's Affairs (VA) EHR databases, we identified all patients aged 50+ with a primary care visit during 2005 and assessed demographics, diseases, medications, laboratory results, healthcare utilization, and vital signs during the one year prior to the visit. Mortality follow-up was complete through 2017. We used an 80% random sample for model development and a 20% random sample for model validation. We used a Gompertz survival model with backwards selection to identify approximately 100 variables for the