

Protein plays a critical role in healthy aging. Little research exists regarding the association between meal program participation and protein consumption among individuals 65 and older. The objective of this research is to provide health professionals with a better understanding of how meal program participation through delivery services or congregate sites may relate to nutritional status. We analyzed cross-sectional data on 2845 individuals ≥ 65 years old who participated in the National Health and Nutrition Examination Survey (NHANES) during 2013-2018. Using linear regression models, we explored relationships between meal participation and covariates (sex, race, marital status, income, and age) on protein intake. Protein intake did not differ significantly between individuals who participated in meal programs and those who did not. However, among individuals who answered whether or not they participated in meal programs, race was significantly associated with decreased protein intake. Non-Hispanic Blacks experienced a two-day average 8.82 grams lower [SE:1.48; $p < .0001$] than their white counterparts. Similarly, Hispanic/Latinos' two-day protein average was 4.29 grams lower [SE:2.05; $p = 0.0426$]. The association between earning an income of $< \$20,000$ per year and protein intake was also statistically significant [β : -8.44. SE:2.4, $p = 0.0014$]. Understanding protein intake among older adults who utilize meal programs is a gap in current literature. Results from this research may inform questions that health professionals should include in their assessments of older adults and provide guidance for nutrition policies and meal programs for people over 65.

ASSOCIATIONS BETWEEN METFORMIN AND ASPIRIN USE ON CANCER INCIDENCE AND MORTALITY IN OLDER ADULTS.

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Diabetes increases risk of malignancies, and this association increases with age. Metformin may protect against cancer development and progression, but results are mixed and limited to younger cohorts. We examined whether metformin, in the presence or absence of aspirin, reduces incident cancer and cancer-related mortality in older adults. ASPirin in Reducing Events in the Elderly (ASPREE) was a primary prevention trial of daily aspirin vs placebo which enrolled community-dwelling adults from Australia (70+ years) and the US (65+ years for minorities) followed for a median of 4.7 years. Invasive cancer was adjudicated by an expert panel. Cox proportional-hazards models, controlling for age at randomization and known cancer risk factors, were used to analyse the relationship between baseline metformin use, randomized treatment arm, cancer incidence (first in-trial cancer) and mortality. For participants with controlled diabetes, there was a significant reduction in cancer mortality in metformin users compared to nonusers (Adjusted [Adj] HR=0.24, 95%CI=0.07, 0.80), but not for cancer incidence (Adj HR=0.61, 95%CI=0.29, 1.27). For participants

with uncontrolled diabetes, there was no significant difference in cancer incidence (Adj HR=0.95, 95%CI=0.66, 1.38) or mortality (Adj HR=1.18, 95%CI=0.62, 2.26) between metformin and non-metformin users. Uncontrolled diabetes, irrespective of metformin use, increased risk of cancer incidence and mortality compared to non-diabetics. Aspirin did not modify the effect of metformin on cancer incidence or mortality. Our findings show that metformin may have protective effects against cancer-related mortality for those older persons whose diabetes is well-controlled, and underscores the importance of diabetes control to minimise cancer risk.

CASE STUDY - CANDIDA AURIS IN SKILLED NURSING FACILITY

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Candida Auris (*C. auris*), is a multidrug-resistant organism, first described in Japan 2009, and now a serious, emerging global health threat¹. *C. auris* pathogen can potentiate morbidity and mortality, i.e. lifelong contact precaution isolation, intravenous antifungal treatment, hospitalization and mortality rate of 30-60%¹. Los Angeles County (LAC) developed 15 new cases in May 2020, and 73 cases in July 2020, amidst COVID-19 pandemic². A 88 year old Black female had a positive skin test for *C. auris* by LAC Department of Public Health (DPH) during skilled nursing facility (SNF) admission for hip fracture in September 2020. Patient's risk factors for *C. auris* included: age, kidney transplantation (1998) immunosuppression on tacrolimus, fungal infection on fluconazole, drug-drug interaction between tacrolimus-fluconazole including nephrotoxicity and neurotoxicity, malnutrition, bedbound, Stage 4 sacrococcyx pressure ulcer, osteomyelitis on broad-spectrum antibiotics, chronic indwelling catheter, and healthcare setting. Our multimorbid and frail patient remained asymptomatic with *C. auris* under an interdisciplinary team approach, including geriatricians, infectious disease, pharmacists, SNF team and local DPH. Our patient's psychosocial isolation and family distress with local DPH guidelines for COVID-19 SNF visitation restrictions were compounded by multifaceted coordination of patient-centered care between SNF team and specialists via telehealth. Further research in the prevention, detection, and management of *C. auris* is warranted to protect our vulnerable SNF residents. 1. Centers for Disease Control and Prevention. (2020). Tracking Candida auris. <https://www.cdc.gov/fungal/candida-auris/tracking-c-auris.html> 2. Los Angeles County Health Alert Network. (2020). CDPH Health Advisory: Resurgence of Candida auris in Healthcare Facilities in the Setting of COVID-19. <http://publichealth.lacounty.gov/eprp/lan/alerts/CAHANcauris082020.pdf>

CHARACTERISTICS AND PROGNOSIS OF LONG-TERM HOME CARE PATIENTS

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With demographic aging, many older adults require home medical care. Although home-based primary care is promoted in the United States and Japan, there is insufficient evidence about it. We aimed to study the characteristics and prognoses of long-term home care patients. We prospectively registered 151 patients, estimated to receive physician home visits for more than six months, in a clinic in Chiba, Japan, in 2020. The mean (\pm SD) age was 83.9 ± 10.0 years and ranged from 31 to 102 years. Most patients were men (60.3%) and aged 65 years or above (95.3%). We investigated clinical information, the Edmonton Symptom Assessment System Revised Japanese version (ESAS-r-J), Dementia Assessment Sheet in Community-based Integrated Care System 21 items (DASC-21), EuroQOL 5 dimensions 5-level (EQ-5D-5L) every six months, and the incidence of hospital admission, death, and patient transportation by ambulance. The most frequent diagnoses were dementia (31.1%), bone and articular diseases (17.2%), cerebrovascular diseases (11.9%), organ failure (9.3%), and neurological diseases (9.3%). Most patients (78.2%) showed more than 30 points on the DASC-21, suggesting cognitive impairment. Worse wellbeing, drowsiness, tiredness, anxiety, depression, and pain were the most prevalent symptoms. EQ-5D-5L index values were distributed around -0.02 and $0.4-0.7$. During the first three months of physician home visits, 21.9% of patients had hospital admissions, 12.5% of them died, and 11.7% required hospital transportation by an ambulance. In this study, most long-term home care patients suffered from cognitive impairment. In addition to receiving care for daily life, these patients require intensive medical management.

COST REDUCTION BEHAVIORS AND COST-RELATED MEDICATION NONADHERENCE IN OLDER ADULTS WITH ATRIAL FIBRILLATION

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While factors such as forgetfulness may result in medication nonadherence, 2.7 million older adults in the US experience cost-related nonadherence (CRN). Limited research has explored CRN and associated cost-reduction behaviors (CRB) in older adults with atrial fibrillation. The objectives of this study were to 1) describe the prevalence of CRN, CRB and spending less on basic needs to afford medication and 2) examine factors associated with CRB among older adults with atrial fibrillation. Data were drawn from the Systematic Assessment of Geriatric Elements in Atrial Fibrillation (SAGE-AF), a prospective cohort of older adults with atrial fibrillation (>65 years). Using a self-administered survey, all participants completed a validated CRN measure. Chi-square and t-tests were used to evaluate differences in participant characteristics across CRB and significant characteristics ($p < 0.05$) were entered into a logistic regression model. Participants ($N = 1244$) were on average 76 years and 49% were female. Among all participants, 4.2% reported CRN; 69.1% reported CRB; and 5.9% reported spending less on basic needs. Compared to participants who did not engage in CRB, participants who engaged in CRB were less

likely to be cognitively impaired and more likely to be a race/ethnicity other than non-Hispanic white; have Medicare insurance; and have comorbidities. CRB were common among older adults with atrial fibrillation and was associated with intact cognitive function, the presence of medical comorbidities and non-White race. Clinicians might consider providing patients with cognitive impairment additional support such as patient assistance programs or referrals to pharmacists for medication therapy management to assist with CRB.

HEARING LOSS AND HEALTH CARE SEEKING

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Hearing loss is common among older adults. Hearing loss is associated with increased health care expenditures, risk of 30-day readmission, and longer length of hospital stay. However, little is known about behaviors and attitudes in seeking care. In this cross-sectional analysis, we examined data from the 2016 Medicare Current Beneficiary Survey (MCBS) datasets. Participants are asked to describe their self-perceived trouble hearing. Health care seeking attitudes were assessed on all study participants in 2016 via self-report avoidance or delay of care, personal health concerns, and sharing health status. Multivariate regression models adjusted for demographic/socioeconomic characteristics and general health determinants were used to explore the association between trouble hearing and outcomes. In the 2016 MCBS, 12,140 Medicare beneficiaries, representing 51 million with survey weights, answered questions on help-seeking attitudes. In the sample, 55.6% reported no trouble hearing, while 38.8% and 5.5% reported a little trouble and a lot of trouble hearing, respectively. Those with a lot of trouble hearing were more likely to report avoiding doctors (Odds Ratio [OR] = 1.35; 95% Confidence Interval [CI] = 1.09 – 1.67) and delaying care (OR = 1.47; 95% CI = 1.19 – 1.82). However, no differences were found in personal health concerns or willingness to share health status with others. Poorer health care seeking behaviors may help explain higher costs associated with hearing loss as avoidance of care can exacerbate health problems. Further work is needed to understand underlying reasons and whether addressing hearing loss modifies the observed association.

ILLNESS PERCEPTIONS AND HEALTH OUTCOMES AMONG COMMUNITY-DWELLING OLDER ADULTS WITH MULTIPLE CHRONIC CONDITIONS

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Illness perceptions (IP) has been associated with self-management and health outcomes in individuals with chronic diseases such as heart disease and diabetes; however, there is less research on the relationship between IP and health outcomes in individuals with multiple chronic conditions (MCC). Older adults with MCC are more likely to experience poor outcomes such as hospitalizations and poor self-rated health yet, there is less understanding of the processes associated with these outcomes. The purpose of this study was to (1) explore the relationship between IP and self-rated health among older adults with MCC (2) explore the relationship between IP and the number of