the hazard ratio (95% confidence interval) of functional disability was 8.40 (4.05-17.42) for cognitively frailty, after adjustment for age, sex, education, living alone, smoking, drinking, number of comorbidities (hypertension, stroke, chronic heart disease, diabetes, chronic kidney disease, poor hearing, poor vision, osteoarthritis or rheumatism, minor trauma fracture, or cancer).

Conclusion: Cognitive frailty was associated with an increased risk of functional disability in community-dwelling older adults. Cognitive frailty could be an underrecognized risk factor for functional disability.

EFFECTIVENESS OF TRANSITIONAL CARE FROM HOSPITAL TO HOME IN FRAIL OLDER ADULTS: A SYSTEMATIC REVIEW

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Frail older adults are at high risk of negative consequences from hospitalization and are discharged without completely returning to their pre-existing health status. Transitional care is needed to maintain care continuity from hospital to home. This systematic review aimed to examine transitional care for frail older adults and its effectiveness. The Cochrane guidelines were followed, and search terms were determined by PICO: (P) frail older adults, not disease-specified; (I) transitional care initiated before discharge; (C) usual care; and (O) all health outcomes. Four databases were searched for English-written randomized controlled trials (inception to 2020), and eight trials were ultimately included. Frail older adults in eight trials (1996–2019) totaled 2,785, with a mean sample size of 310. The intervention components varied from hospital care (e.g., geriatric assessment, discharge planning, rehabilitation) to follow-up care after discharge (e.g., home visit, phone follow-up, community service). Most measured outcomes were readmission (n = 7), function (n = 4), quality of life (n = 4), self-rated health (n = 3), and mortality (n = 3). Statistical significance was reported in the following number of trials: readmission (n = 2), function (n = 2), quality of life (n = 1), self-rated health (n = 3), and mortality (n = 0). The effectiveness of the intervention on each outcome was inconsistent across the trials. Varied transitional care between hospital and home was implemented to improve health status; however, its effectiveness was controversial. A novel, yet evidence-based approach is needed to develop transitional care interventions for these vulnerable populations.

FRAILTY AND DEMENTIA: DIFFERENCES IN HEALTH CARE UTILIZATION AND COSTS

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Frailty and dementia are associated with poor health outcomes and increased health care utilization. A more nuanced understanding of this dynamic may be useful in improving care and developing policies. This retrospective cohort study was conducted using 5% random sample of Medicare fee-for-service beneficiaries (n=1,132,367; mean age 76.2 years; 57.9% female) in 2014-2016. We compared average 1-year home time (number of days alive outside of the hospital and SNF), mean total cost per beneficiary, and a resident long-term care facility days per beneficiary (29.9 vs 9.5, 25.8, and 5.6, respectively). Mean total costs for beneficiaries with both frailty and dementia had a high 1-year mortality rate of 21.9% (vs. dementia alone [9.7%], frailty alone [9.4%] or neither [2.1%]), while having less home time (36 days; difference of 36 days, 31 days, and 53 days, respectively), and more incident ICU stays per 100 PY (29.9 vs 9.5, 25.8, and 5.6, respectively). Increase in co-payment and increased health care utilization and wide geographic variation in costs associated with patients with frailty and dementia suggests room for improvement in health care delivery to improve outcomes of this group.

FRAILTY AND FUNCTIONAL STATUS IMPROVEMENT AFTER SKILLED NURSING FACILITY BASED POST-ACUTE CARE

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People admitted to skilled nursing facility (SNF) for post-acute care undergo comprehensive evaluation and rehabilitation, potentially enabling prediction of future functional recovery. We identified the first SNF admission per beneficiary (n=250,159) between 07/01/2014 – 06/30/2016 in a 5% Medicare sample, using the Minimum Data Set (MDS) and the Outcome and Assessment Information Set (OASIS). Episodes were excluded for non-community discharge (n=43,397) or no OASIS admission assessment within 14 days of SNF discharge (n=77,989). A deficit accumulation Frailty Index (FI) was measured on admission MDS assessment and categorized into robust (MDS-FI<0.15), prefrail (MDS-FI0.15-0.24), mild frailty (MDS-FI0.25-0.34), and moderate or worse frailty (MDS-FI≥0.35). Outcomes were functional decline obtained from OASIS, readmission, or death after initiation of home care. Functional status was measured by activities of daily living from OASIS assessments. A total of 135,310 SNF episodes were matched to OASIS episodes. Of these, there were 6,472 (4.8%) robust patients, 38,923 (28.8%) pre-frail, 63,727 (47.1%) mildly frail and 26,053 (19.3%) moderately frail or worse. In a logistic regression after adjustment for OASIS admission function, compared to robust status, frailty was associated with
hospital readmission or death within 30 days of OASIS admission, (mild frailty OR1.33 [95%CI 1.23-1.45] and moderate or worse OR1.81 [95%CI 1.66-1.97]). Frailty was also associated with functional decline at OASIS discharge, after adjustment for OASIS admission function (mild frailty OR1.50 [95%CI 1.38-1.63] and moderate or worse OR2.30 [95%CI 2.11-2.50]). Among those discharged from SNF with home services, a SNF-based MDS-FI is associated with increased likelihood of poor community outcomes.

**FRAILTY AND MACRONUTRIENTS INTAKE AMONG OLDER BRAZILIAN ADULTS**

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The adequate nutrition has an important role in the prevent and treatment of frailty, however, there are only a few studies showing the relationship between macronutrients intake and this geriatric syndrome, especially in Latin countries. The aim of this study was to analyze the association between macronutrients intake and frailty among older adults in Brazil. This study included 521 community-dwelling individuals aged 60 years old or older. Frailty was assessed using a self-reported instrument and individuals were categorized in two groups: frail and non-frail (robust + pre frail). Food consumption was evaluated using the 24-hour recall and the software NDSR®. Differences between groups was assessed using the Mann Whitney test. The prevalence of frailty was 42.0%. Older adults considered frails presented lower intake of calories (1510.9 kcal vs 1639.3 kcal; p = 0.016), carbohydrates (196.8 g vs 213.3 g; p = 0.011), proteins (60.7 g vs 68.5 g; p = 0.016) and fiber (15.1 g vs 17.5 g; p = 0.002). They also had lower intake of protein per kilograms of weight (0.88 g/kg vs 0.99 g/kg; p = 0.010). The findings demonstrate high prevalence of frail in our sample, and the intake of most macronutrients was significantly lower among older adults with frail, indicating the importance of screening frail as well the evaluation of macronutrients intake among older adults, to prevent malnutrition, sarcopenia and frailty in this population.

**FRAILTY IN A FRAILTY PREVENTION PROGRAM PARTICIPANTS DURING COVID-19 PANDEMIC: A CROSS-SECTIONAL JAPANESE STUDY**

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**Objective:** Health conditions of older adults have deteriorated during the COVID-19 pandemic. Few studies have reported on the frailty of this group of people. The study aimed to investigate physical and social frailty in participants in a frailty prevention program during the COVID-19 pandemic.

**Methods:** A cross-sectional survey was conducted in Japan from January 2021. Further, 863 participants of a frailty prevention program completed the survey. The frequency of program attendance in 2020, physical frailty (5-item frailty screening index), social frailty (diagnostic criteria of social frailty in NCGG-SGS), and depression (GDS-5) were assessed. A related factor of physical frailty was analyzed statistically by Welch’s t test and the Chi-squared test.

**Results:** The study participants’ mean age, proportion of women, and mean enrollment period in program were 86.8±4.9, 96.3%, 64.3±48.6 months, respectively. The program attendance ratio was 83.4% from January to March, 54.3% from April to June, 79.8% from July to September, and 80.0% from October to December. The prevalence of physical frailty was 20.3% non-frailty, 63.7% pre-frailty, and 15.6% frailty. The prevalence of social frailty was 10.0% non-frailty, 28.6% social pre-frailty, 61.8% social frailty, and the prevalence of depression was 36.8%. Participants with physical frailty were significantly older and showed higher prevalence of social frailty and depression, displaying significantly lower attendance program than non-frailty and pre-frailty older adults (p<0.05).

**Conclusions:** The study results suggest that more than half of the participants of a frailty prevention program have social frailty and a high risk of physical frailty due to COVID-19.

**FRAILTY PREVALENCE AND ASSOCIATION WITH MORTALITY ACROSS BIRTH COHORTS IN SWEDISH REGISTRY DATA**

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Frailty is associated with poor health outcomes, reduced quality of life, and mortality. To understand how prevalence of frailty may have changed across birth cohorts, we investigated frailty prevalence at ages 75, 85, and 95 in people born in 1910, 1920, and 1930 in Swedish national registry data. Frailty was assessed with the Hospital Frailty Risk Score, a weighted sum of 109 ICD codes, which we calculated for each year leading up to the specified ages. We additionally investigated the association between frailty and mortality in these birth cohorts. We observed, at 75, a decrease in prevalence of frailty across birth cohorts (16.9%, 10.8%, and 8.8%, respectively). Interestingly, at 85, we found a U-shaped pattern, where those born in 1920 (14.1%) had lower prevalence of frailty than those born in either 1910 (27.7%) or 1930 (25.1%). At age 95, we saw a low prevalence of frailty in the 1910 (7.3%) and 1920 (3.8%) birth cohorts –potentially because of selective survival. There were not substantial differences in prevalence of frailty by sex or birth country. In Cox proportional hazard models adjusted for sex, frailty was consistently associated with mortality. We observed the greatest hazard ratios in the 1930 birth cohort at 75 (HR=2.79, 95% CI 2.62, 2.97) and 85 (HR=2.26, 95% CI 2.01, 2.53) and the 1920 birth cohort at 75 (HR=2.19, 95% CI 2.09, 2.29), where risk was double that of those who were not frail. Understanding changes in prevalence of frailty will help inform public health and intervention measures.