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Background: Cognitive frailty is a newly proposed clinical entity, referring to concurrent cognitive impairment and physical frailty in the absence of dementia. The clinical significance of cognitive frailty remains poorly understood. We aimed to investigate the association between cognitive frailty and functional disability in older adults. **Methods:** A total of 1,644 non-demented older adults aged ≥ 65 years (mean age: 73 ± 6 years; men: 41.8%) and without functional disability at baseline were followed-up for 4 years. Cognitive frailty was defined as the presence of both physical frailty (based on the modified Cardiovascular Health Study criteria) and cognitive impairment (Mini-Mental State Examination score of < 24 points). Functional disability was identified using the database of Japan's Long-term Care Insurance System. Association between cognitive frailty and functional disability was assessed by using the Cox proportional hazard models. **Results:** During the follow-up, 152 participants were identified as being functionally disabled. There was a significant interaction between physical frailty and cognitive impairment on the development of functional disability ($P < 0.1$). Compared with being robust both physically and cognitively, 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 number of incident ICU stays per 100 person-years (PY) across four groups: frailty and dementia, dementia alone, frailty alone or neither. Frailty and dementia were identified using validated claims-based algorithms. We also determined differences in costs per group across different regions within the United States. 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 (306 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). Mean total costs for beneficiaries with both was \$26,030 compared to other groups (\$12,096, \$24,693, and \$9,029, respectively). Across the United States, range of costs varied the most for beneficiaries with both frailty and dementia (\$13,244-31,987 vs \$4,621-15,364, \$20,090-30,965, and \$7,672-10,450, respectively). Increase in 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.