Trauma related death and disability is common among working-age Americans, however the impact on older adults is consequential and increasing. Fractures are the most common traumatic injury diagnosis among Medicare beneficiaries, and though fragility fractures continue to be an important health problem, recent data indicate an increase in high-energy fractures. The purpose of this study was to produce national incidence estimates among US men and women ≥ 65 years using data from the 2003-2014 National Inpatient Sample (NIS). The study cohort included hospitalizations involving upper and/or lower extremity fractures which were further classified by mechanism as high or low energy using external cause of injury codes. Incidence was computed using survey weights provided by NIS, and population estimates from the Census Bureau. The incidence of high-energy fractures increased from 744.1/100,000 persons (95%CI: 681.1–807.1) in 2003 to 821.4/100,000 (95%CI: 795.0 – 874.8) in 2014 in women, and from 359.1/100,000 (95%CI: 331.4–386.8) to 408.2/100,000 (95%CI: 394.–809.2) in men. Over 80% were motor vehicle related. The greatest increase was among those ≥ 85 (1,856.4/100,000 to 2,126.3/100,000 in women; 1,069.1/100,000 to 1,215.1/100,000 in men). Simultaneously, the incidence of low-energy fractures declined: 748.4/100,000 (95%CI: 687.5–809.2) to 443.8/100,000 (95%CI: 423.5 -464.1) in women, and 310.6/100,000 (95%CI: 285 – 336.2) to 206.3/100,000 (95%CI: 196.5 - 216) in men. Results suggest that fractures commonly seen in younger adults will be seen more frequently in older age. It is therefore essential to establish treatment pathways to optimize outcomes for the growing number of injured older adults.

DISENTANGLING AND QUANTIFYING MECHANISMS OF INCREASED FALL RISK AMONG OLDER ADULTS WITH DEPRESSION

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Background: Older adults with depression are up to four times more likely to fall, yet the mechanisms by which depression increases fall risk are unclear. This study sought to quantify and compare the relative strength of selected mechanisms mediating the association between depression and falls. Methods: We used longitudinal linked data (2006 – 2010) from the Health and Retirement Study and Prescription Drug Study. The analytic sample included non-institutionalized adults age > 65 with data on physical functioning and medication use (n=3,565). Falls and injurious falls over the past two years were self-reported outcomes. Depression was measured using the Composite International Diagnostic Interview (CIDI). We used causal mediation analysis to estimate the total and direct associations between depression and falls and compared strength of three potential mediating mechanisms – frailty, cognition, and antidepressant (AD) use. Results: Of 190 participants reporting depression in 2006, 85 (44.7%) fell and 30 (15.8%) were injured from a fall between 2008 and 2010. Depressed individuals were 92% more likely to fall compared to non-depressed (OR=1.92, p<.01). We found significant indirect effects of AD use (indirect OR=1.17, p<.01) and frailty (OR=1.12, p=.013) representing 19% and 13% of the total effect of depression on falls, respectively. Cognition was not a significant mediator. Results were similar for falls leading to injury. Discussion: Results suggest that AD use and frailty explain a significant portion of the elevated risk for falls among depressed individuals. Identification of these and other mechanisms may inform clinical treatment decisions for older adults with depression.

EXPERIENCE-BASED CO-DESIGN TO DEVELOP AN INJURY PREVENTION INTERVENTION IN SKILLED NURSING FACILITIES

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Experience-based co-design (EBCD) improves clinical effectiveness and safety by incorporating end-user perspectives in the design of clinical interventions. To refine a centralized, multi-component fall-related injury prevention service (IPS) to be tested in skilled nursing facilities (SNFs) in a pragmatic trial, we employed a modified EBCD process. We first conducted in-depth interviews with SNF residents, family members, and staff (n = 28; three facilities in two states) regarding their experiences in falls prevention. We then engaged these and other stakeholders from multiple institutions (n=4) in a day-long co-design workshop with our interdisciplinary research team. Building upon themes drawn from the analysis of interviews, we targeted three intervention components that were refined during the workshop: de-prescribing process, osteoporosis treatment, and educational videoconferences. Key outcomes from the ECBD process included development of strategies to ensure that: (1) residents, families, and SNF staff are involved in communication about residents identified as high risk for fall-related injury, and in related treatment decisions; (2) approaches to monitoring for unintended consequences from the injury prevention plan are clearly understood by direct care staff and are compatible with existing workflow; (3) treatment plan risks and benefits are presented in a manner easily understood by stakeholders; and (4) staff education conferences build trust with the IPS nurse and provide direct care staff with support and advice about challenging cases. EBCD is a feasible approach to strengthen intervention development in SNFs and can lead to testable new ideas for protocol refinement to address diverse stakeholder perspectives.

SYSTEMS ADDRESSING FRAIL ELDER CARE: AN IMPLEMENTATION STUDY

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SAFE CareTM was developed at one hospital and found to be an effective care model for frail older adults. SAFE CareTM includes nurse screening for frailty risks,

multidisciplinary assessments, team huddles and care recommendations. Underlying implementation is an organizational change process. Study aim was to evaluate the implementation and outcomes of SAFE CareTM in three additional hospitals. Two units from each hospital were randomized to SAFE CareTM or usual care. Process evaluation employed semi-structured interviews. Inpatients were aged 65+ years with positive frailty risks (N = 1,151). Outcomes evaluated ICU admission, length of stay (LOS), and discharge destination. All outcome analyses were conducted with intention to treat models. Patients were on average 80 years old, 54% female, 58% Caucasian, 83% English speaking, with 3.4 positive frailty risks. Median LOS was 4.2 days, 6.5% ICU admissions, 32% discharge institutional care. Hospitals differed in patient demographics and outcomes. While no differences between treatment groups in patient demographics, intervention patients had more frailty risks and longer expected LOS. 62% of intervention unit patients received intervention. There were no univariate treatment effects on outcomes. In multivariate analysis, intervention unit patients had shorter LOS. While hospitals reported different experiences, all reported challenges in preparing the electronic health record to support SAFE CareTM. Staff reported increased interprofessional team communications. Differences among the hospitals in patients and organizational attributes argue strongly that implementation should be tailored to meet varying institutional needs while common measures and processes underlying implementation should be followed closely.

WHOLE-PERSON, WHOLE-TEAM APPROACH TO QUALITY IMPROVEMENT: WHY PERSON-CENTERED CARE MATTERS

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The Department of Veterans Affairs (VA) began its culture transformation journey in 2006, supporting its nursing homes in providing high-quality, person-centered care in person-centered environments. We implemented a quality improvement intervention to support frontline staff from low-performing VA nursing homes in providing high-quality care using a whole-person, whole-team approach. The intervention consisted of a bundle with four components: 1) specialized frontline staff huddles that encouraged high-quality frontline staff communication and collaboration, 2) micro-root cause analyses and targeted interventions to promote resident sleep and reduce resident falls through individualized care, 3) in-depth frontline conversations regarding residents' distress behaviors and mobility, and 4) targeted, team-based, person-centered performance improvement projects. The intervention was implemented at 8 low-performing VA nursing homes (August 2018 - April 2019) via in-person and virtual sessions and facilitated through CLC-based champions and intervention team-based coaches. We monitored the intervention's impact using pre-post Centers for Medicare and Medicaid Services quality star ratings. We also conducted 17 post-intervention interviews with key informants at 7 participating nursing homes and conducted a content analysis of the data. Pre intervention, all 8 nursing homes had a history of being 1 or 2 stars in overall quality. Post intervention, 3 homes increased 1 star; 1 home increased 2 stars; 2 homes increased 3 stars; 2 homes increased 4 stars. Post intervention, participants perceived improved delivery of person-centered care (e.g., providing individualized sleep hygiene, de-implementing alarms). Our findings suggest a whole-person, whole-team intervention can effectively and efficiently improve both person-centered care and care quality.

SESSION 2924 (PAPER)

FALL PREVENTION II

BIDIRECTIONAL LONGITUDINAL RELATIONSHIPS BETWEEN HOMEBOUND STATUS AND FALLS AMONG OLDER ADULTS

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Research has shown an association between homebound status and falls among older adults. However, this association was primarily drawn from cross-sectional studies. Using the National Health and Aging Trends Study, we examined 1) whether prior-wave falls predicted homebound status in a later wave in 2,916 non-homebound participants in Wave 1 and 2) whether prior-wave homebound status predicted falls in 2,512 participants with no falls in Wave 1. Homebound status (non-homebound and homebound) was determined by the frequency, difficulty, and needing help of outdoor mobility. Falls were ascertained by asking participants whether they had a fall in the last year. Generalized estimation equation models were used to examine their bidirectional association, adjusting for demographics, health-related, and behavioral factors. Participants who had fallen in later waves were more likely to be older non-Hispanic black, comorbid, and have more pain, depression, disabilities, worse health status vision impairment, and low physical activities. Participants who were homebound in later waves tended to older, female, non-Hispanic black, less-educated, living alone or with others only, comorbid, obese, and have more pain, depression, disabilities, worse health status, more hospitalizations, vision and hearing problems, and low physical activities. Previous falls significantly predicted later homebound status (adjusted odds ratio [OR]: 1.28, 95% CI: 1.09-1.50). Prior wave homebound status also significantly contributed to falls in the next year (adjusted OR: 1.28, 95% CI: 1.12-1.46). The bidirectional longitudinal association between homebound status and falls suggests a vicious circle between them. Fall prevention programs should particularly target homebound older adults for falls reduction.