

falls, fear of behavioral symptom exacerbation, competing priorities, and lack of facility specific goals. Innovative approaches to overcoming these barriers will be reviewed.

#### IMPLEMENTATION OF FUNCTION AND BEHAVIOR FOCUSED CARE

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There are many challenges to engaging long term care residents with dementia in physical and functional activities. Resident factors include age, comorbidities, cognitive impairment, motivation, sedation and polypharmacy. Facility factors include the environment, policies and culture within the setting such as a focus on safety versus function. Commonly used non-evidence based interventions include discouraging residents from walking by repeatedly telling them to sit down, and limiting recreational activities to seated positions. De-implementation to remove inaccurate care practices and implementation approaches are needed to facilitate implementation of Function and Behavior Focused Care. This paper will describe the use of the Synthesis Model for the Process of De-Adoption and the Evidence Integration Triangle implementation strategy in the development of the Function and Behavior Focused Care intervention to alter behavior among staff and cognitively impaired residents and optimize function and physical activity in long term care.

#### SESSION 7145 (SYMPOSIUM)

##### LEVERAGING EXISTING DATA FROM CMS-LINKED COHORT STUDIES FOR THE ADVANCEMENT AND TRANSLATION OF FRAILTY RESEARCH

Chair: Qian-Li Xue

Co-Chair: Kristine Ensrud

Discussant: Shari Lin

As population aging is accelerating rapidly, there is growing concern on how to best provide patient-centered care for the most vulnerable. Establishing a predictable and affordable cost structure for healthcare services is key to improving quality, accessibility, and affordability. One such effort is the “frailty” adjustment model implemented by the Centers for Medicare & Medicaid Services (CMS) that adjusts payments to a Medicare managed care organization based on functional impairment of its beneficiaries. Earlier studies demonstrated added value of this frailty adjuster for prediction of Medicare expenditures independent of the diagnosis-based risk adjustment. However, we hypothesize that further improvement is possible by implementing more rigorous frailty assessment rather than relying on self-report of ADL difficulties as used for the frailty adjuster. This is supported by the consensus and clinical observations that neither multimorbidity nor disability alone is sufficient for frailty identification. This symposium consists of four talks that leverage data from three CMS-linked cohort studies to investigate the utility of assessment of the frailty phenotype for predicting healthcare utilization and costs. Talk 1 and 2 use data from the NHATS cohort to assess healthcare utilization by frailty status in the general population and the homebound subset. Talk 3 and 4 use data from the MrOS

study and the SOF study to investigate the impact of frailty phenotype on healthcare costs. Taken together, their findings highlight the potential of incorporating phenotypic frailty assessment into CMS risk adjustment to improve the planning and management of care for frail older adults.

##### PHYSICAL FRAILTY, COGNITIVE IMPAIRMENT, AND HEALTHCARE UTILIZATION IN LINKED COHORT AND CLAIMS DATA

Brian Buta,<sup>1</sup> Orla Sheehan,<sup>2</sup> Shang-En Chung,<sup>1</sup> Marcela Blinka,<sup>3</sup> and Qian-Li Xue,<sup>4</sup> 1. *Johns Hopkins University, Baltimore, Maryland, United States*, 2. *Johns Hopkins University School of Medicine, Baltimore, Maryland, United States*, 3. *Johns Hopkins University, School of Medicine, Baltimore, Maryland, United States*, 4. *Johns Hopkins School of Medicine, Baltimore, Maryland, United States*

Accurate prediction of healthcare utilization is an important issue for Medicare managed care organizations. We hypothesized that physical frailty and cognitive impairment increase the risk of healthcare utilization in older adults receiving Medicare coverage, independent of age and multimorbidity. We used the marginal means/rates model to investigate the association between baseline cognitive impairment with/without frailty (using the physical frailty phenotype), vs. frailty alone, in NHATS and the number of incident non-ER-related hospitalizations and emergency room (ER) visits within 12 months in linked Medicare claims data (N=3,915). After covariate adjustment, physical frailty alone was predictive of both non-ER-related hospitalizations (HR=1.77; p=0.012) and ER visits (HR=1.75; p<0.001). Cognitive impairment with or without frailty was only associated with ER visits (HR=1.53, p=0.002; HR=1.30, p=0.001). Our findings support the value of physical frailty and cognitive impairment assessment above and beyond multimorbidity to improve the prediction of care utilization for vulnerable subgroups of Medicare beneficiaries.

##### ARE ALL HOMEBOUND OLDER ADULTS FRAIL?

Orla Sheehan,<sup>1</sup> Karen Bandeen-Roche,<sup>2</sup> Christine Ritchie,<sup>3</sup> Shang-En Chung,<sup>4</sup> Jeremy Walston,<sup>4</sup> David Roth,<sup>4</sup> and Bruce Leff,<sup>1</sup> 1. *Johns Hopkins University School of Medicine, Baltimore, Maryland, United States*, 2. *Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, United States*, 3. *UCSF, San Francisco, California, United States*, 4. *Johns Hopkins University, Baltimore, Maryland, United States*

Seven million adults in the United States are homebound and suffer the negative, powerful synergies of multiple chronic conditions, functional impairment, social stressors, and limited social capital. The prevalence of frailty in this vulnerable homebound population is unknown. Using representative data from the National Health and Aging Trends study (NHATS) study linked to Medicare claims (n=4756) we sought to assess the prevalence of frailty in the homebound population (n=361). Among the homebound, 68.5% met the frailty criteria compared to 12.3% of the non-homebound population. The frail homebound had lower educational attainment, were more likely to live alone, self-reported poorer health and more chronic physical and mental health conditions than the non-frail homebound (p<0.05 for all). Frail

homebound older adults utilized more health services utilization than non-frail homebound and were twice as likely to be hospitalized (49.8% versus 28.0%,  $p=0.004$ ).

#### FRAILTY PHENOTYPE AND HEALTHCARE COSTS IN OLDER COMMUNITY-DWELLING MEN: THE MROS STUDY

Kristine Ensrud, Allyson Kats, Lisa Lisa Langsetmo, Tien Vo, and John Schousboe, *University of Minnesota, Minneapolis, Minnesota, United States*

To determine the association of the frailty phenotype with subsequent healthcare costs, we studied 1514 men (mean age 79.3 years) participating in the 2007-2009 exam linked with their Medicare claims data. The frailty phenotype (5 components) was categorized as robust, pre-frail or frail. Multimorbidity and a frailty indicator (approximating the deficit accumulation index) were derived from claims data. Functional limitations were assessed by asking about difficulty performing 5 IADL. Total direct healthcare costs were ascertained during 36 months following the exam. Mean annualized costs (2018 dollars) was \$5707 among robust, \$8964 among pre-frail and \$20,027 among frail men. Compared with robust, pre-frailty and frailty were each associated with higher costs after accounting for demographics, multimorbidity, functional limitations and the frailty indicator (cost ratio 1.18 [1.02-1.36] among pre-frail and 1.87 [1.47-2.39] among frail). Findings suggest that assessment of the phenotype may improve identification of individuals at increased risk of costly care.

#### FRAILTY PHENOTYPE AND HEALTHCARE COSTS IN WOMEN IN LATE LIFE: THE SOF STUDY

Lisa Langsetmo,<sup>1</sup> Allyson Kats,<sup>1</sup> John Schousboe,<sup>2</sup> Tien Vo,<sup>1</sup> Brent Taylor,<sup>1</sup> and Kristine Ensrud,<sup>1</sup>

1. *University of Minnesota, Minneapolis, Minnesota, United States*, 2. *University of Minnesota, St Louis Park, Minnesota, United States*

We used data from 1324 women (mean age 83) at the 2002-2004 exam linked with their Medicare claims to determine the association of the frailty phenotype with healthcare costs. The frailty phenotype was categorized as robust, pre-frail or frail. Multimorbidity and a frailty indicator (approximating the deficit accumulation index) were derived from claims. Functional limitations were assessed by asking about difficulty performing IADL. Total direct healthcare costs were ascertained during 36 months following the exam. Compared with robust, pre-frailty and frailty were associated with higher costs after accounting for demographics, multimorbidity, functional limitations and the frailty indicator (cost ratio 1.37 [1.10-1.71] among pre-frail and 1.63 [1.28-2.08] among frail). Discrimination of high-cost (top decile) women was improved by adding the phenotype and functional limitations to a model containing demographics and the claims-based measures. Findings suggest that assessment of the phenotype may improve identification of individuals at higher risk of costly care.

## SESSION 7150 (SYMPOSIUM)

### ESPO/ HEALTH SCIENCES SECTION SYMPOSIUM: LEVERAGING OLDER ADULTS' PERCEPTIONS OF CHRONIC ILLNESS TO IMPROVE CARE

Chair: Anyah Prasad

Co-Chair: Brianna Morgan

Discussant: Mary Naylor

In advanced years of life comorbidity of chronic illnesses is a common phenomenon. While chronic illnesses have been documented to impact overall quality of life, morbidity, and mortality, older adults may develop psychological resources in the years of coping and managing their illnesses. These psychological resources can be influenced by individual perceptions and context as people age, and include concepts such as psychological resilience, inner strength, subjective age, and illness perception. This symposium brings together emerging health science scholars' work on exploring and leveraging these psychological resources to improve care. Amy Ketcham will present a systematic review of psychological resilience and depression in adults with cardiac disease. Brianna Morgan will present a concept analysis exploring the nature of inner strength in people aging with serious illness and cognitive impairment. Anyah Prasad will present results examining the association between chronic illnesses and subjective age and discuss its clinical relevance. Eleanor Rivera will explore illness perception phenotypes in a longitudinal cohort study of older adults with chronic kidney disease. Together, the perspectives shared in this symposium improve understanding of and indicate ways to move toward person-centered and contextual clinical models of care in the management of chronic illnesses among older adults. In addition, the discussant will engage in a dynamic conversation about psychological resources in later life and the role these projects have played in advancing the presenters along their academic trajectories.

### OLDER ADULTS' SUBJECTIVE AGE AS A POTENTIAL PSYCHOLOGICAL RESOURCE IN CLINICAL MANAGEMENT OF CHRONIC ILLNESSES

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Subject age is predictive of future morbidity and mortality and can be potentially viewed as a psychological resource. However, there seems to be a reciprocal relationship between subjective age and health. In a series of analyses, we demonstrated that various measures of health status such as number of chronic illnesses, self-rated health and sensory impairment have an adverse association with older adults' subjective age. Specifically, chronic illnesses seem to have a period effect and age effect. Living with chronic illness over a period of time seems to attenuate its association with subjective age. Similarly, the association between chronic illnesses and subjective age gets weaker with increase in older