

Older adults with musculoskeletal conditions (MSC), including arthritis and osteoporosis, may have a higher risk of falls and falls-related injuries. Differences in balance between individuals with and without self-reported MSC are not well understood. Therefore, this study compared measures of balance (static and dynamic) and reactive stepping between older adults (N=99) with ( $75.79 \pm 5.38$  years, n=38, 82% female) and without ( $75.93 \pm 6.36$  years, n=61, 67% female) MSC. A cross-sectional design was used. Static balance was assessed via postural sway area (PSA) and PSA root mean square (PSARMS) during quiet stance. Dynamic balance was assessed with the Timed Up & Go (TUG), a dual-task cognitive TUG (TUG-COG), and the Four Square Step Test (FSST). Reactive stepping was measured as the first step latency, length, width, time, total number of recovery steps, and time until balance recovery after a backward lean and release. Linear regression was used to assess group differences. After adjusting for age, sex, body mass index (BMI), and grip strength, there were no significant differences between groups in static balance (PSA ( $p=0.884$ ); PSARMS ( $p=0.246$ )) and reactive stepping outcomes (first step latency ( $p=0.184$ ); total number of steps ( $p=0.423$ ); step width ( $p=0.964$ )). The other reactive step outcomes are not reported since explained variance was not statistically significant ( $p>0.05$ ). With dynamic balance, significant group differences showed individuals with MSC took more time to complete TUG ( $p=0.011$ ) and TUG-COG ( $p=0.005$ ), but not the FSST ( $p=0.493$ ). Our findings suggest improving dynamic balance, especially with a walking component, in older adults with self-reported MSC is needed.

#### **BUILDING A FRAMEWORK FOR CARE OF OLDER PATIENTS IN AN ACADEMIC SETTING: HIGH RISK GERIATRICS AMBULATORY CARE PROGRAM**

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**BACKGROUND:** Traditional models of geriatric medicine and health system reimbursement structure often force ambulatory care teams to function as high-volume delivery programs, thereby dis-servicing our most vulnerable and frail older patients. This “high cost and high needs” labeled demographic requires uniquely adapted plans from medical and social work providers. **METHODS:** To better examine opportunities for improved framework for geriatric ambulatory care, the Acute Life Interventions, Goals & Needs (ALIGN) Program has launched several inter-professional pilot programs, each with intention to explore components of health care service to older patients, and feasibility of implementation in other health care systems. Three current models include the ALIGN Program itself, a telemedicine community paramedicine program, and a geriatric surgery co-management program. **RESULTS:** Preliminary results are forthcoming, with initial promising findings. For the first 126

patients enrolled, mean emergency room (ED) visits 6 months prior to ALIGN enrollment were 1.7 visits per person, reduced to 0.7 ED visits/person 6 months post-graduation from the program, and 126 fewer ED visits. Mean hospitalization 6 months prior to enrollment was 0.32 per person, whereas 6 months post-graduation was 0.2 hospitalizations/person, totaling 40.32 hospitalizations saved. Mean length of stay in the hospital 6 months prior to ALIGN enrollment for the 22 patients admitted was 7.7 days, reduced to 7.3 days post-graduation, and 32 fewer hospital days in the small subset of patients requiring hospitalization despite program interventions. **CONCLUSION:** The ALIGN Program’s multi-professional and flexible modularity highlights promising innovative frameworks for ambulatory geriatrics care, warranting further exploration and collaboration.

#### **GRIP STRENGTH CHANGES IN BONE MARROW TRANSPLANT PATIENTS**

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Emerging evidence that cancers survivors may experience premature aging has prompted epidemiology research aimed at the characterization of key premature aging phenotypes. Physical functioning data relevant for premature aging phenotype classification in cancer survivors, however, remain scarce. We assessed the burden of dynapenia, a key sarcopenia indicator, and muscle strength loss in the understudied population of bone marrow transplant (BMT) patients. This study involved secondary analyses of data from patients who underwent bone marrow transplant (BMT) in a cancer Institute in South Florida (June 2018-April 2019) with traditional hematopoietic cell transplantation specific comorbidity index (HCT-CI) scores and other relevant information. T-tests for paired data assessed pre- vs. post-BMT changes in grip strength (GS) (n=9). Prevalence of dynapenia (GS<27Kg and <16Kg) in pre-BMT (n=20) and post-BMT (n=9) periods were calculated. Median age [25th-75th percentiles] age was 61 [55-68] years old. Fifty-percent were females. GS and HCT-CI scores were not correlated. Mean GS loss after BMT was 6.4 Kg (95% confidential interval: 2.5-10.4 Kg, p-value=.003) in post-BMT (median-time-after-BMT: 90 days) minus pre-BMT (median-time-before-BMT: 62 days) comparison. Proportion with dynapenia increased from 10% (1/10) to 20% (1/5) in women, and 10% (1/2) to 75% (3/4) in men. We observed substantial muscle strength loss and dynapenia burden in patients who underwent BMT. Considering that dynapenia is a major, potentially modifiable risk factor for frailty, which is not captured by HCT-TI, we speculated that dynapenia-related targeted assessments and interventions – preventive and/or rehabilitative – could offer complementary approaches for treatment enhancement in BMT patients.

#### **MAZE TEST SCORE ADJUSTMENTS WHEN USING NON-DOMINANT HAND IN FITNESS-TO-DRIVE ASSESSMENTS**

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