

dietary guidelines regarding their nutritional needs. OBJECTIVES/GOALS: The objective of this study is to test the hypothesis that a healthy dietary pattern in the oldest old (aged 80 years and older) is related to greater compliance with dietary recommendations and better nutrient intake profiles. METHODS/STUDY POPULATION: We conducted a cross-sectional study of 122 participants aged 82 to 97 years old from the Geisinger Rural Aging Study (GRAS) cohort in rural Pennsylvania (n = 56 men and 66 women). The main outcome measures of the investigation were the daily nutrient intakes and food group intakes evaluated from the average of three 24-hour dietary recalls. The dietary patterns were determined by cluster analysis from 28 food groups. Diet quality and adherence to the Dietary Guidelines for Americans was assessed by the Healthy Eating Index (HEI)-2015 and the Dietary Screening Tool (DST). Recommended intakes were determined by the Recommended Dietary Allowances (RDAs) or Adequate Intakes (AIs). RESULTS/ANTICIPATED RESULTS: Less than 50% of participants met the dietary recommended intakes for vitamins D, E, K, B6, dietary fiber, zinc, potassium, and calcium. The more-nutrient-dense cluster was characterized by higher intakes of fruits and vegetables. The less-nutrient-dense cluster was characterized by higher intakes of foods including desserts and sweets. After adjusting for age, sex, and energy intake, participants in the more-nutrient-dense dietary pattern had a higher intake of vitamins A, D, K, C, fiber, and potassium ( $p < 0.05$  for all). After adjusting for age and sex, participants in the more-nutrient-dense pattern had better diet quality assessed by the (HEI)-2015 ( $p < 0.001$ ) and DST ( $p = 0.006$ ). DISCUSSION/SIGNIFICANCE OF FINDINGS: Among the oldest old, many participants were found to have nutrient intakes lower than the recommended levels for fundamental nutrients suggesting that dietary guidance in addition to a dietary pattern more aligned with dietary guidelines may be beneficial for supporting healthy aging.

#### 43412

#### **Exploring the link between allostatic load and mortality risk in U.S. Black men of different age groups\***

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ABSTRACT IMPACT: This research study will provide evidence for public policy, systemic changes, and other interventions to address the adverse impacts of prolonged stress exposure experienced by young Black men. OBJECTIVES/GOALS: Previous studies have demonstrated a strong association between allostatic load (i.e., stress-induced cumulative biological risk) and mortality in the Black American population. The aim of this study is to examine the association between allostatic load and mortality in Black men and to determine if the relation varies by age. METHODS/STUDY POPULATION: Data from the third National Health and Nutritional Examination Survey (NHANES III, 1988-1994), linked to the 2015 National Death Index Public Release File, will be used for Black male adults 18 years or older. Allostatic load score includes nine biomarkers: albumin, C-reactive protein, total cholesterol, high-density lipoprotein, hemoglobin A1C, waist-to-hip ratio, systolic blood pressure, diastolic blood pressure, and pulse rate. The number of variables for which the participant's scores fall in the quartile of highest clinical risk are added together to create a summary score. Cox proportional-hazard analyses is employed to estimate the associations between allostatic load and all-cause mortality for the total

sample and stratified by age, adjusting for selected characteristics. RESULTS/ANTICIPATED RESULTS: We hypothesize that the association of allostatic load with mortality will be greater among younger, compared to older, Black men. Young Black men (ages 25-44) are at particular risk of adverse impacts of chronic stress and allostatic load, due to their experience of chronic discrimination, systemic racism, racial battle fatigue, and mundane, extreme, environmental stress. Furthermore, the allostatic load-mortality association may be attenuated for older Black men due to a survival effect. DISCUSSION/SIGNIFICANCE OF FINDINGS: If the association between allostatic load score and mortality is stronger in young Black men, it would provide evidence for early identification of a group with high risk of premature mortality, and for public policy, systemic changes, and other interventions to address the adverse impacts of prolonged stress exposure experienced by young Black men.

#### 49156

#### **Effects of Race and Demographics on Use of Physical Restraints in the Emergency Department**

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ABSTRACT IMPACT: Within three EDs in a regional health system in Connecticut, African American race, male gender, non-Hispanic ethnicity, lack of private insurance, and homelessness were associated with significant odds of being physically restrained during a visit. OBJECTIVES/GOALS: Agitated patient encounters in the Emergency Department (ED) are on the rise, and physical restraints are used to protect staff and prevent self-harm. However, these are associated with safety risks and potential stigmatization of vulnerable individuals. We aim to determine factors that are associated with odds of being restrained in the ED. METHODS/STUDY POPULATION: We conducted a retrospective cohort analysis of all patients ( $\geq 18$  yo) placed in restraints during an ED visit to three hospitals within a large tertiary health system from Jan 2013-Aug 2018. We undertook descriptive analysis of the data and created a generalized linear mixed model with a binary logistic identity link to model restraint use and determine odds ratios for various clinically significant demographic factors. These include gender, race, ethnicity, insurance status, alcohol use, illicit drug use, and homelessness. Our model accounted for patients nested across the three EDs and also accounted for multiple patient visits. RESULTS/ANTICIPATED RESULTS: In 726,417 total ED visits, 7,090 (1%) had associated restraint orders. Restrained patients had an average age of 45, with 64% male, 54% Caucasian and 29% African American. 17% had private insurance, 36% endorsed illicit substances, 51.4% endorsed alcohol use and 2.3% were homeless. African Americans had statistically significant odds of being restrained compared to Caucasians with adjusted odds ratio (AOR) of 1.14 (1.08, 1.21). Females (AOR 0.75 [0.71, 0.79]) had lower odds of being restrained compared to males while patients with Medicaid (AOR 1.57 [1.46, 1.68]) and Medicare (AOR 1.70 [1.57, 1.85]) had increased odds compared to the privately insured. Illicit substance use (AOR 1.55 [1.46, 1.64]), alcohol use (AOR 1.13 [1.07, 1.20]) and homelessness (AOR 1.35 [1.14, 1.16]) had increased odds of restraint use. DISCUSSION/SIGNIFICANCE OF FINDINGS: We showed statistically significant effects of patient demographics on odds of restraint use in the ED. The increased odds based on race,