

Older Adults, Nutrition, and Social Determinants of Health

Promoting Healthy Aging Through Nutrition

Keynote Address
July 20, 2023



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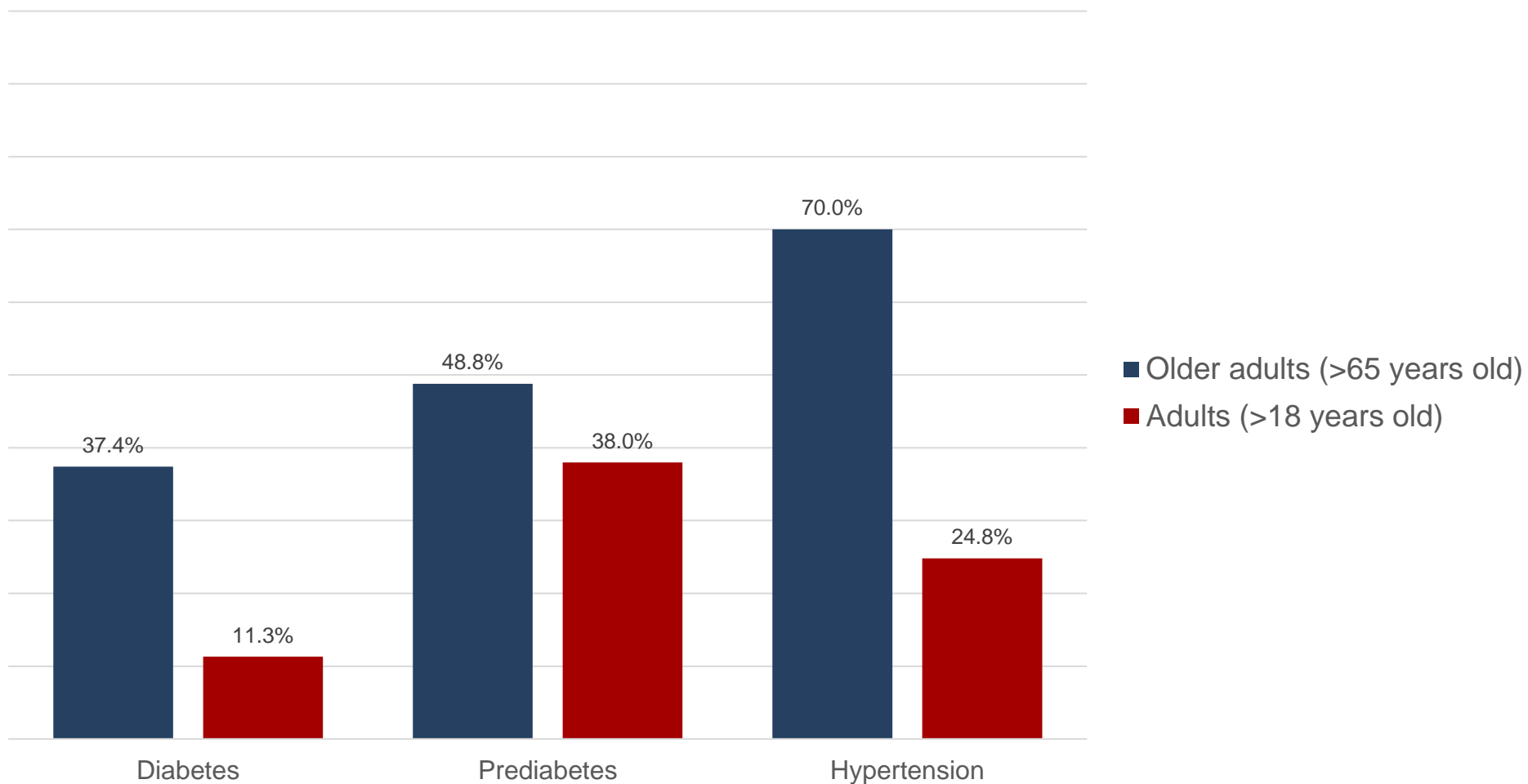
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Societal Context: Importance of Focusing on the Aging Population

- Aging baby boomer population poses challenges in the care for seniors
- In 2000, Medicare-eligible population in the U.S. numbered 35.1 million
- By 2030, this number is expected to increase to 69.7 million
 - Estimated Medicare's annual acute care costs around \$259.8 billion in 2030.



Prevalence of nutrition-related diseases by age group



Malnutrition in Older Adults

- **Malnutrition**
 - 46% of older adults were found to be at-risk of malnutrition
 - 23% of older adults were found to be malnourished

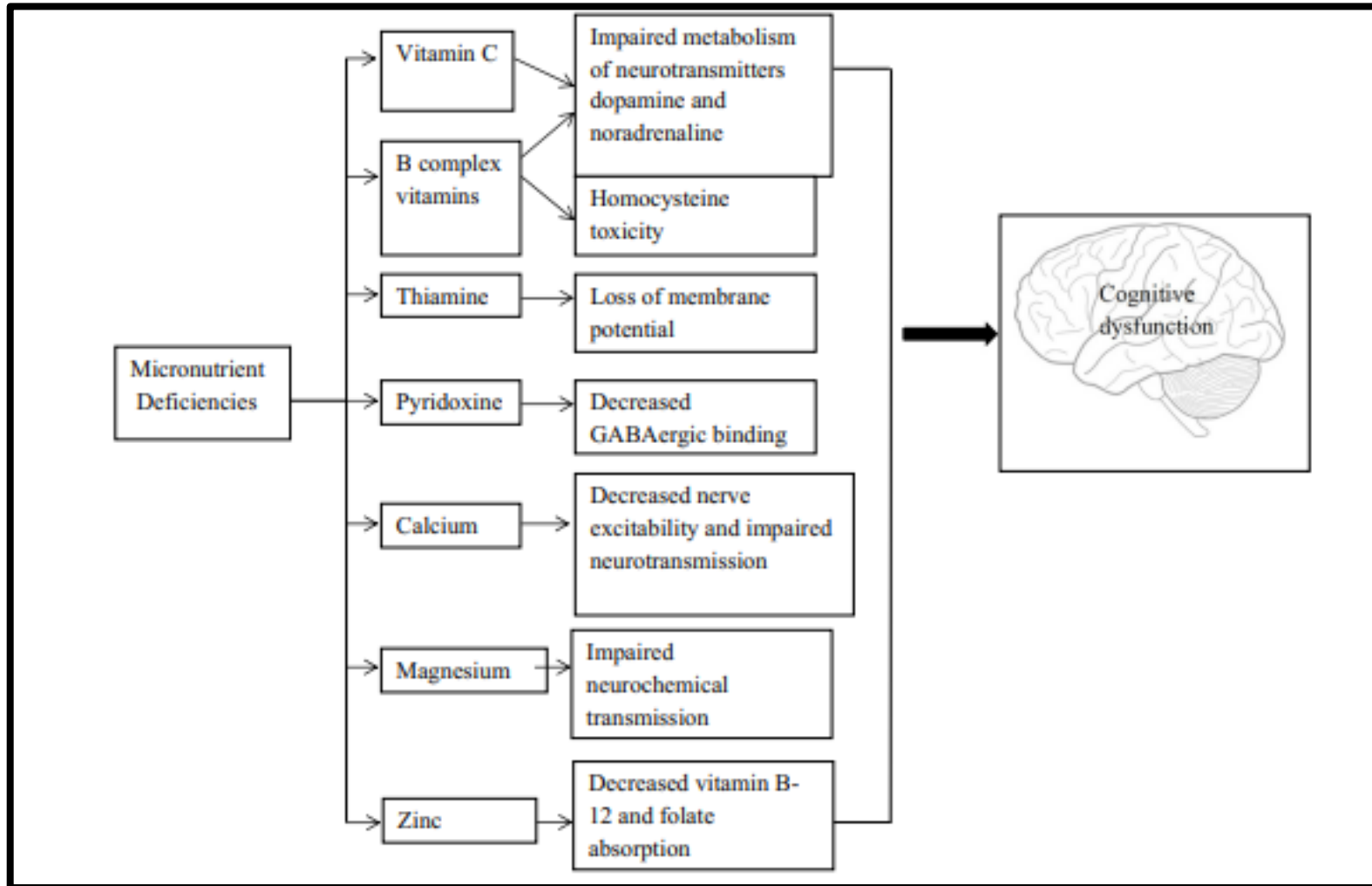


(Volkert, 2013)

The Effect of Poor Nutrition on Aging and Disease

- **Malnutrition in older adults is associated with:**
 - Increased risk of morbidity
 - Increased risk of mortality
 - Disability
 - Poor physical performance
 - Decreased muscle strength
 - Cognitive decline
 - Development of dementia
 - Development of sarcopenia

Key Nutrients Associated with Cognitive Dysfunction

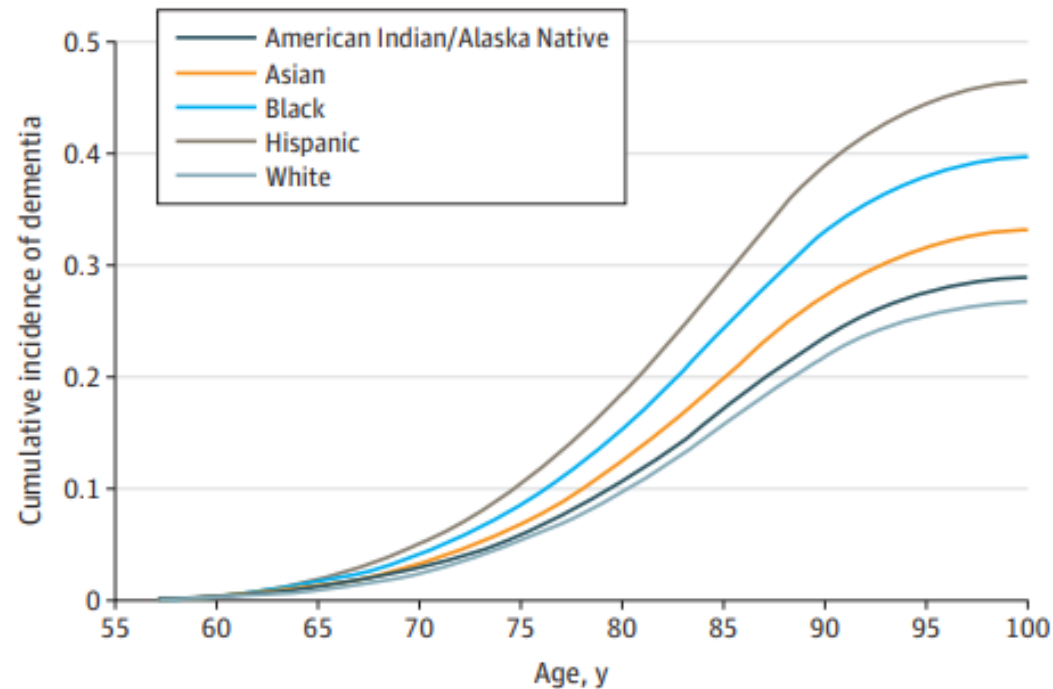
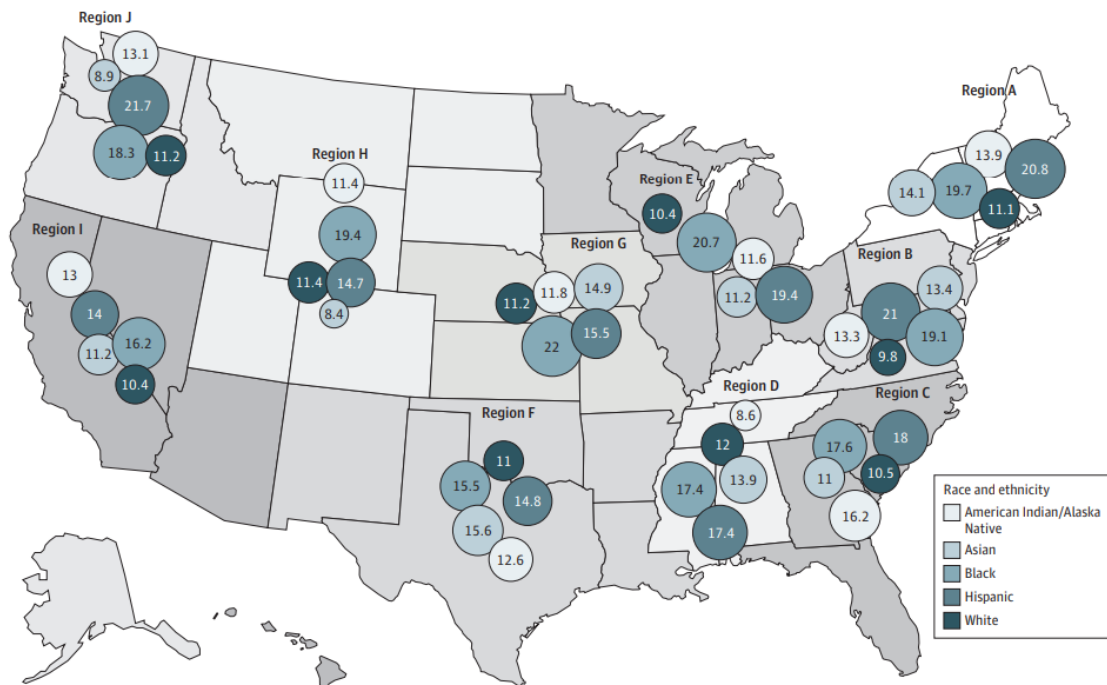


Significant differences in dementia incidence by race and ethnicity

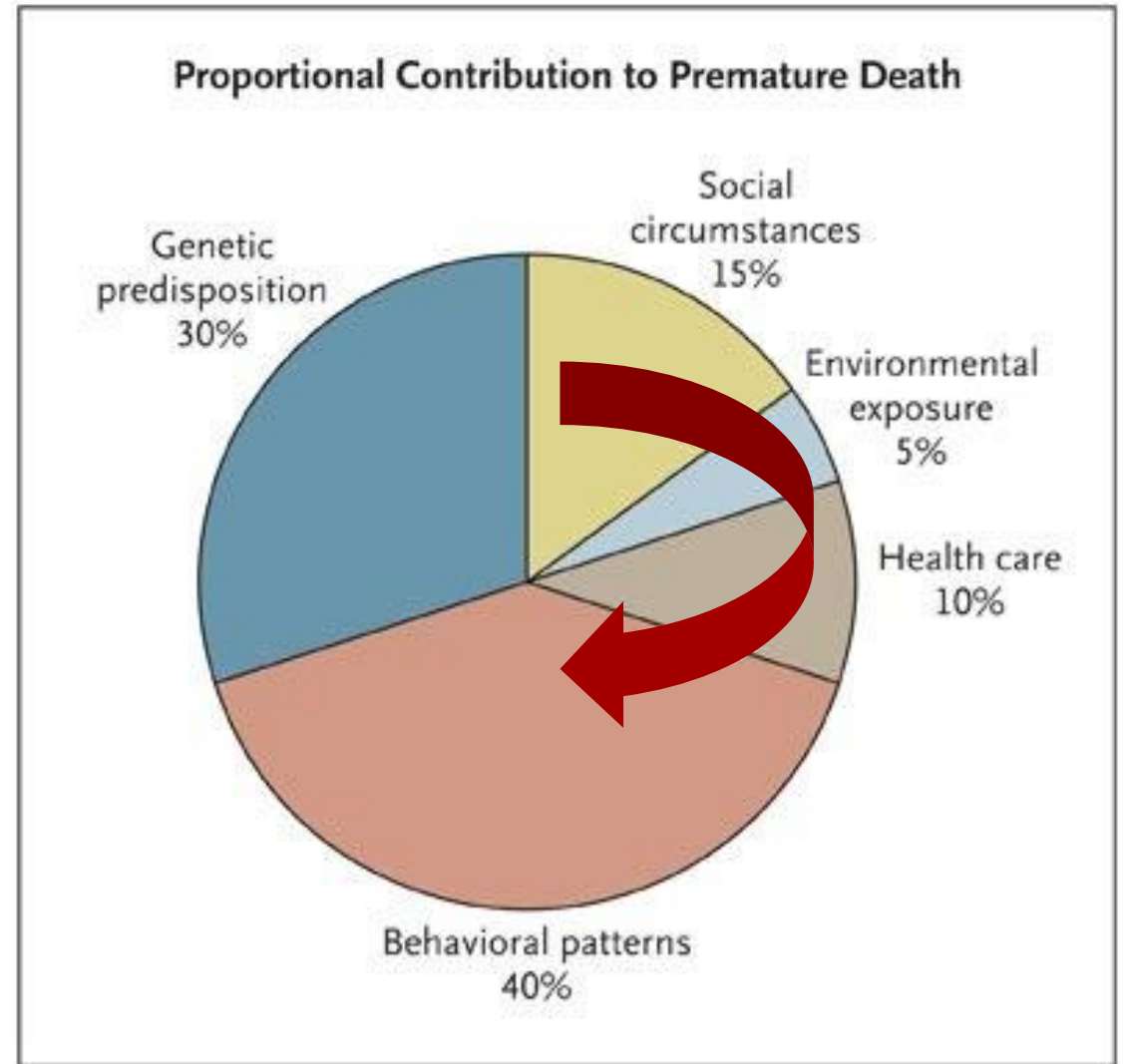
JAMA | Original Investigation

Association of Race and Ethnicity With Incidence of Dementia Among Older Adults

Erica Kornblith, PhD; Amber Bahorik, PhD; W. John Boscardin, PhD; Feng Xia, MS, MPH; Deborah E. Barnes, PhD, MPH; Kristine Yaffe, MD



Most premature deaths in the U.S. are not caused by health care or genetic predisposition, but instead mostly on behavioral pattern and social and environmental factors

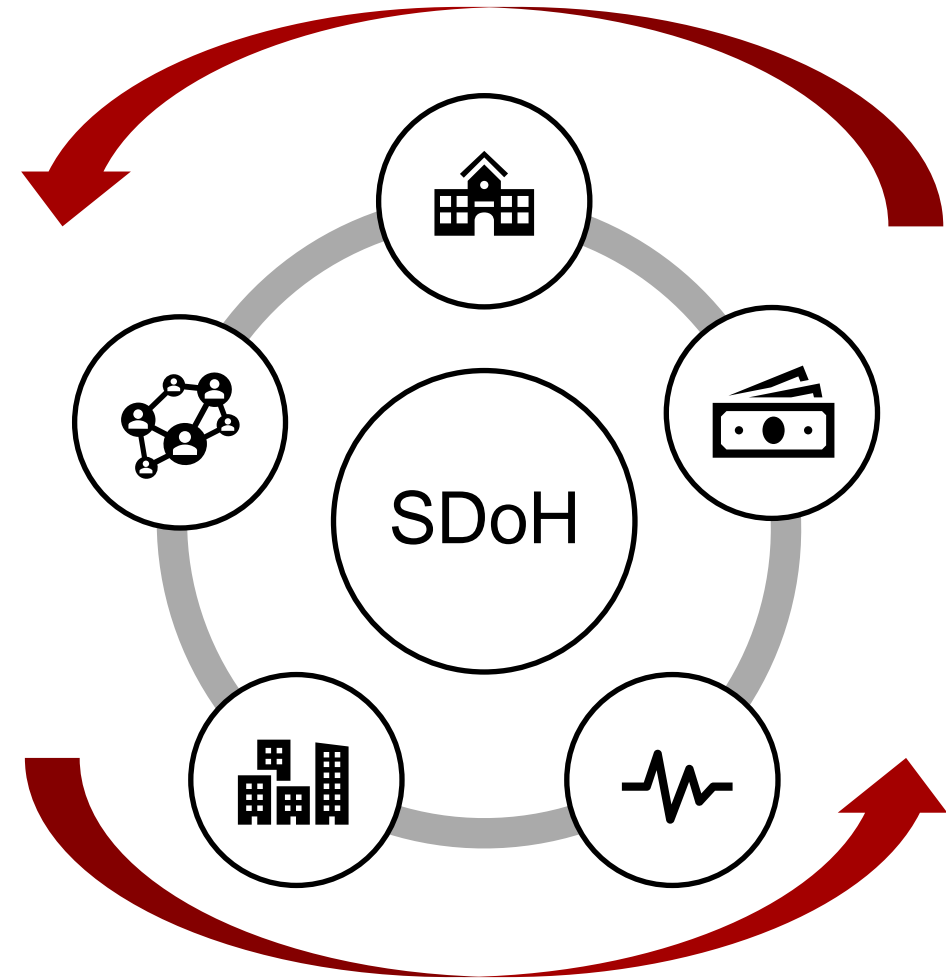


Social Determinants of Health (SDoH)

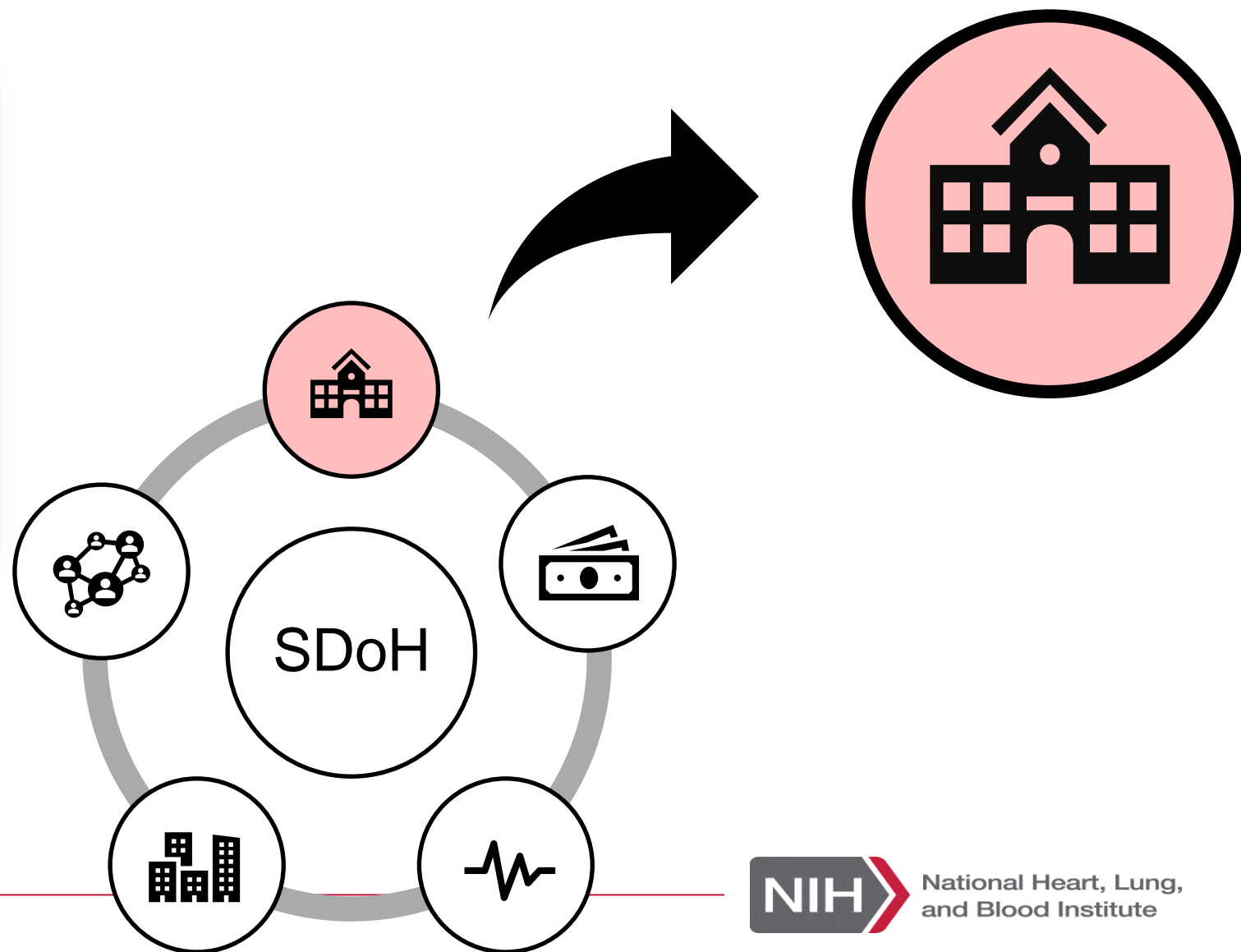
HealthyPeople2030

SDoH Domains

- Education Access and Quality
- Economic Stability
- Health Care Access and Quality
- Neighborhood and Built Environment
- Social and Community Context



Education and Diet-related Outcomes in Older Adults



Correlation between education level and malnutrition

- As education level decreased, malnutrition risk increased.
- Malnutrition risk increased by 1.3-8 times in older adults with low education levels.
- Those of low educational backgrounds were 1.48 times higher (CI 1.33–1.64) risk of malnutrition than those of higher education levels



nutrients



Review

Social and Economic Factors and Malnutrition or the Risk of Malnutrition in the Elderly: A Systematic Review and Meta-Analysis of Observational Studies

Maria Besora-Moreno ¹, Elisabet Llauradó ^{1,*}, Lucía Tarro ^{1,2} and Rosa Solà ^{1,2,3}

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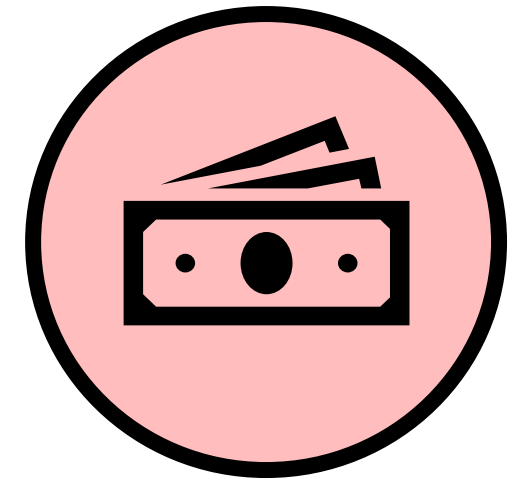
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Received: 20 February 2020; Accepted: 8 March 2020; Published: 11 March 2020





Correlation between income level and malnutrition

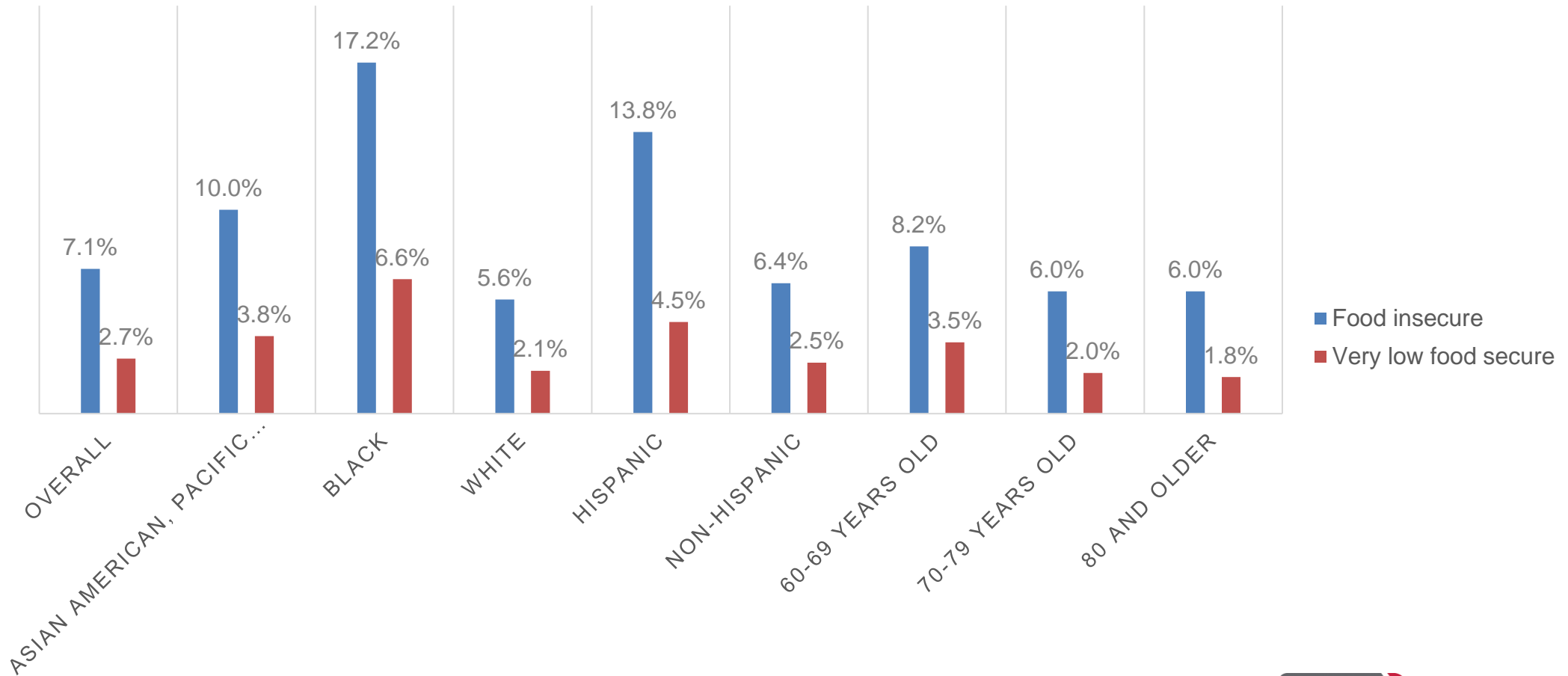
- Association between low-income levels and higher risk of malnutrition.
- Malnutrition risk was 1.31-64.7 times higher in older adults with low-income levels.




Food insecurity among older adults (60+)

By race, ethnicity, and age

Food Insecurity In Seniors (60+), 2021



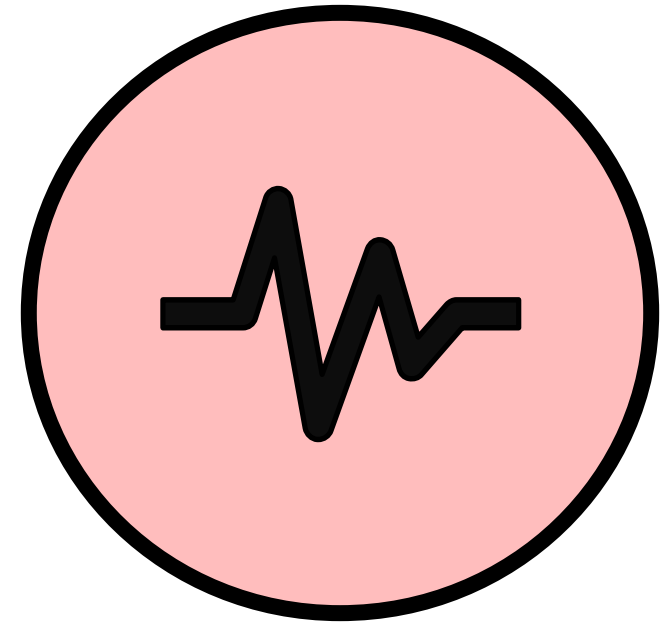
Sex and Race/Ethnic Disparities in Food Security and Chronic Diseases in U.S. Older Adults

Gerontology & Geriatric Medicine
Volume 3: 1–9
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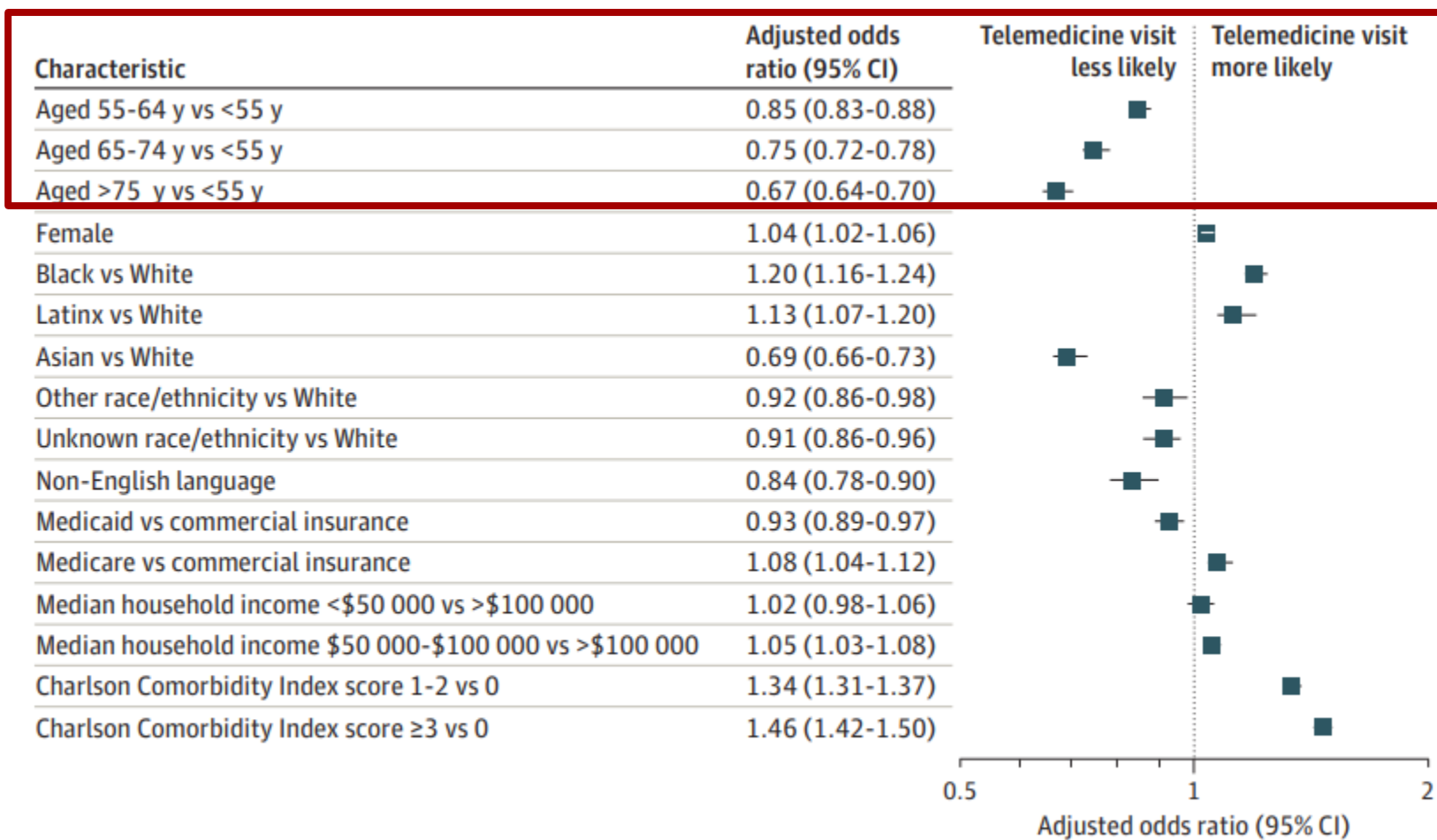
Joan A. Vacarro, PhD¹ and Fatma G. Huffman, PhD, RD¹

- Food insecurity, sex, and race/ethnicity were associated with chronic diseases
 - Those with low food security had a higher percent with the highest obesity categories (BMI = 35-39.9 kg/m² and BMI > 40 kg/m²), high waist circumference, diabetes, hypertension, and lung disease as compared to those who were food secure

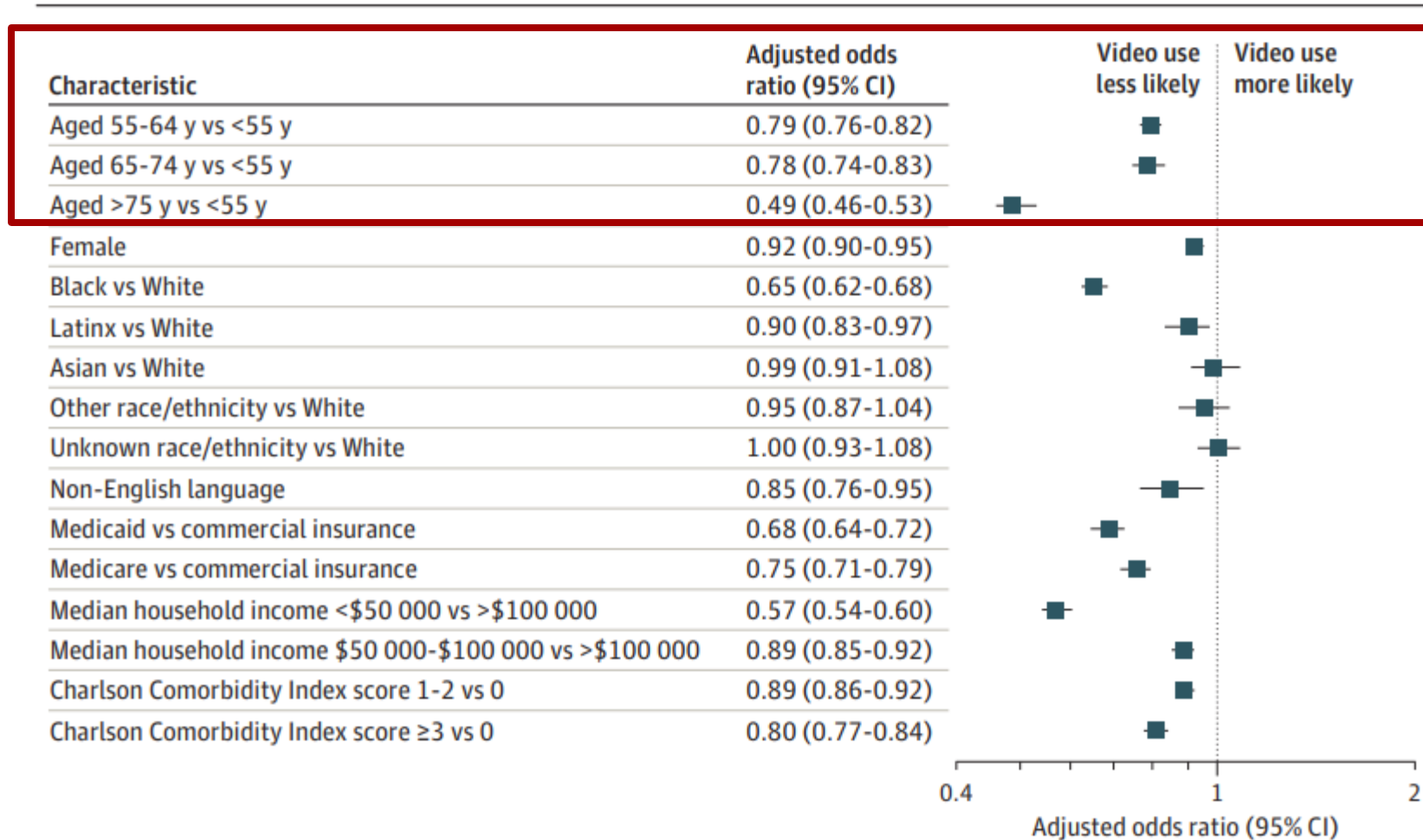




Adjusted odds ratios for telehealth visit completion during COVID-19 pandemic (2020)

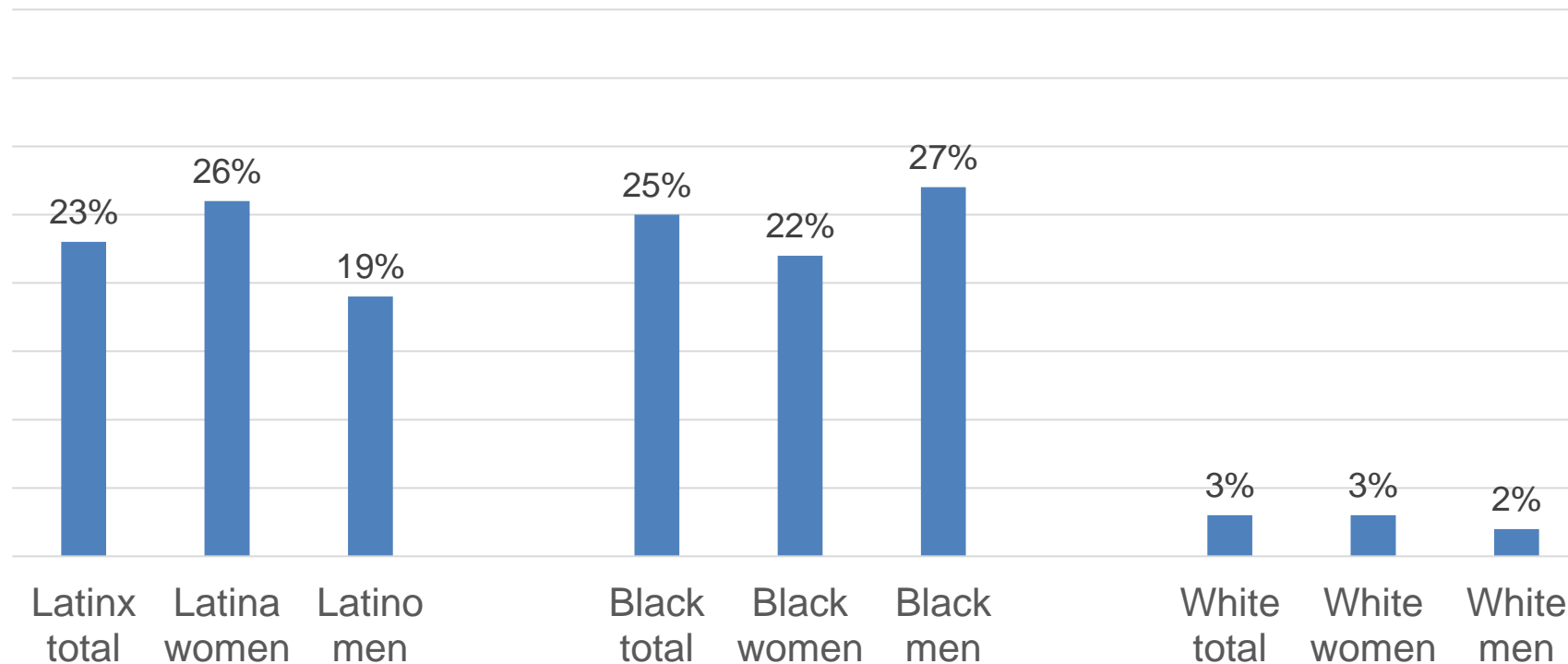


Adjusted odds ratios for video use during telehealth visit during COVID-19 pandemic (2020)



Discrimination in the healthcare setting by race/ethnicity

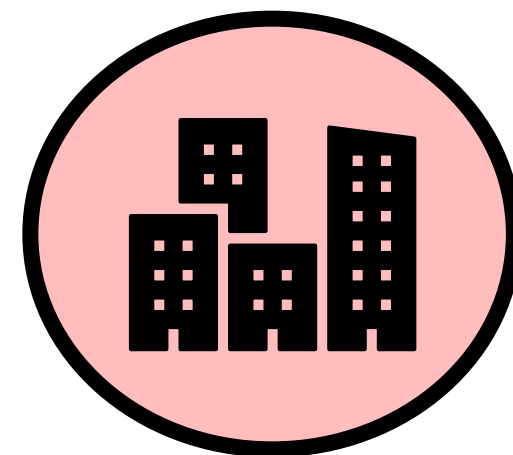
Percent of older adults who report feeling that because of their race or ethnicity they have been treated unfairly and/or have not had their concerns taken seriously when receiving health care



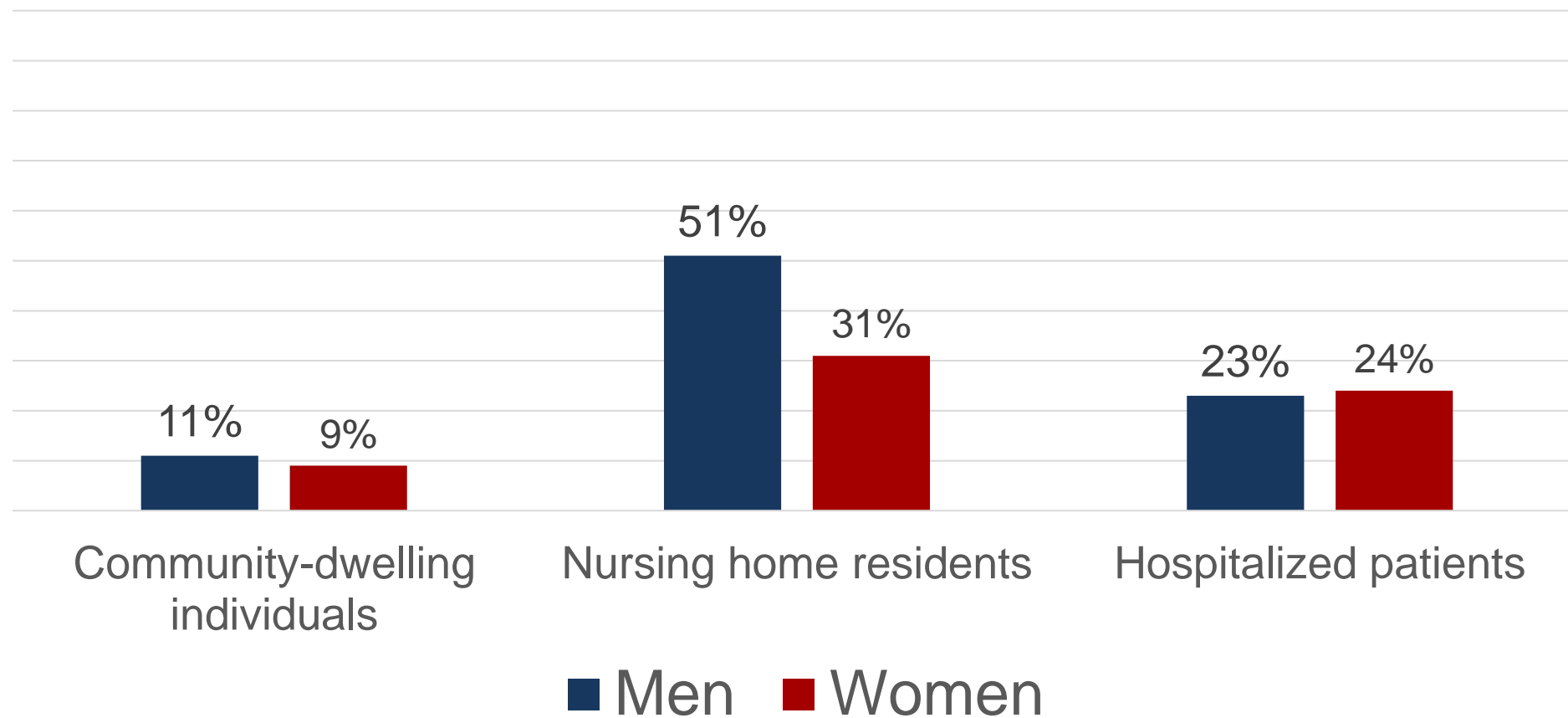
The effect of racial discrimination on patients

Older adults who experienced discrimination in healthcare settings were more likely to have worse health status, be less satisfied with their care, and experience economic hardships.

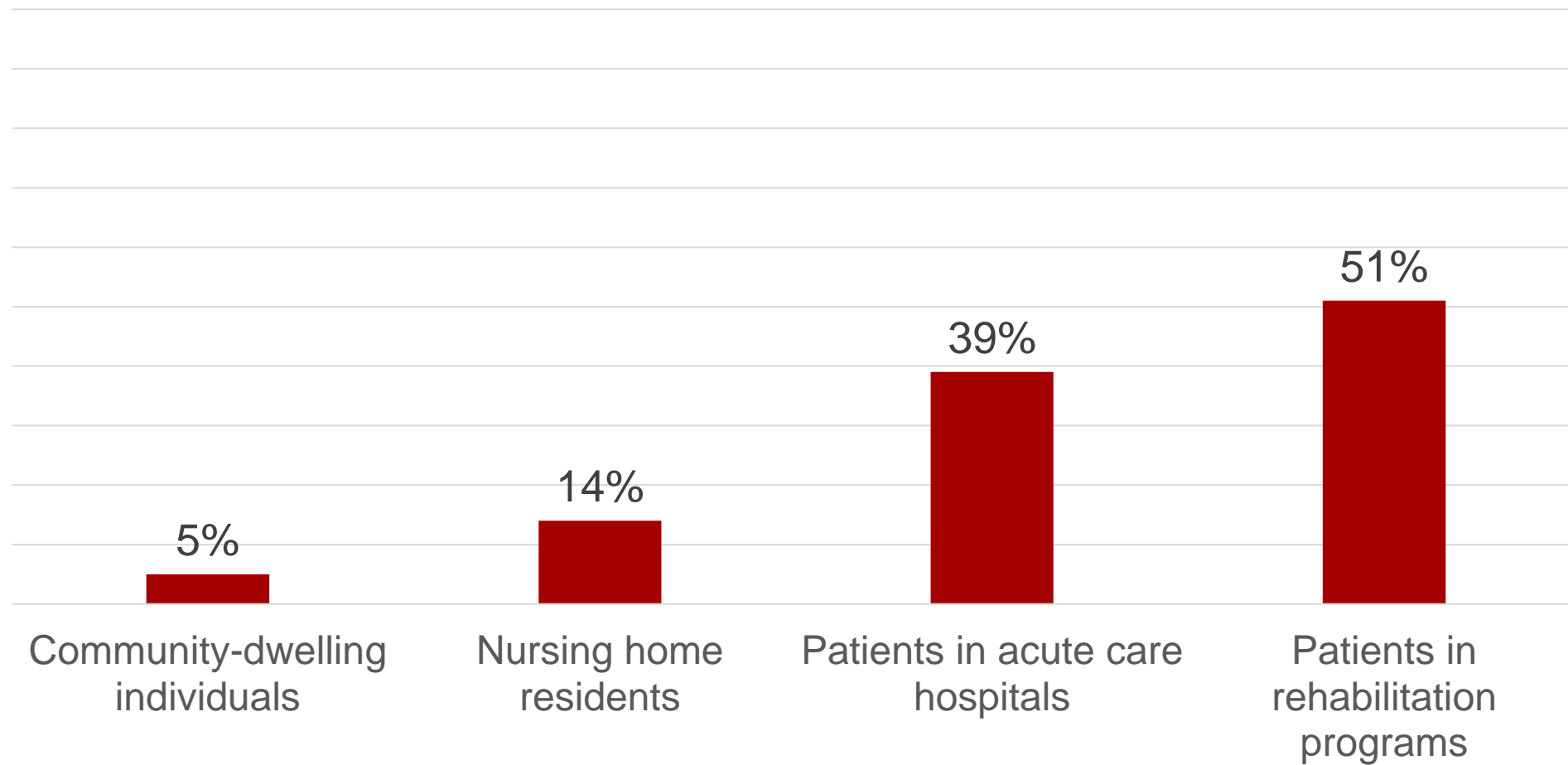




Sarcopenia prevalence in adults over 60 years old



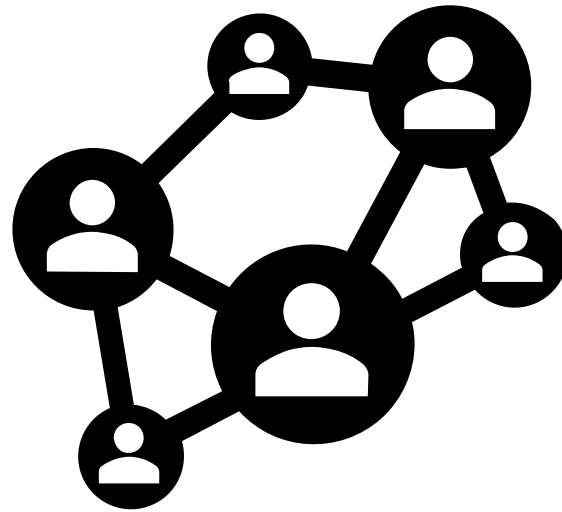
Malnutrition prevalence in adults 65 years old and older



Other risk factors for malnutrition in older adult

- Living alone increases the risk of malnutrition in older adults by 1.8 times
- Older adults living in rural settings had higher malnutrition risk, more malnutrition, and worse nutrition





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More Aging Baby Boomers Are Living Alone — How Do They Compare With Previous Generations?



Depression prevalence in older adults

- According to CDC, estimates of major depression in older people:
 - Living in the community - less than 1% to about 5%
 - Require home healthcare - 13.5%
 - Hospitalized patients - 11.5%



Impact of nutrition on depression in older adults

Multiple studies have found an association between proper nutrient intake and the reduction of depressive symptoms in older adults



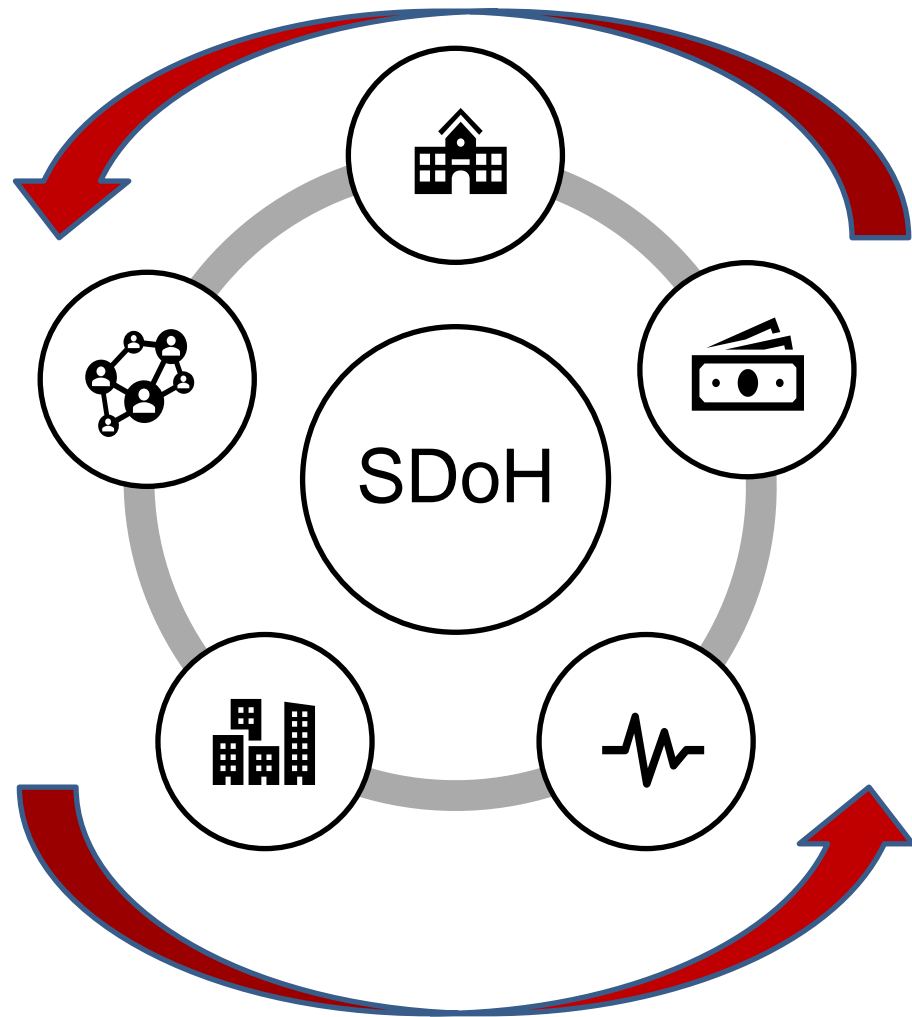
Meals on Wheels:

Social and Nutritional Benefits for the Aging Population in the U.S.



Supports over 2.4 million Older Adults across the U.S.





**Multi-level,
Multifaceted
Interventions are
Needed to Address
Social Determinants
of Health and Diet in
Older Adults**

Community Partnerships to Advance Science for Society



1. To catalyze, deploy, and evaluate **community-led** health equity **structural interventions** that leverage partnerships across multiple sectors to reduce health disparities
2. To develop a **new health equity research model** for community-led, multisectoral structural intervention research across NIH and other federal agencies



ComPASS

Community Partnerships to
Advance Science for Society

- Program duration: 10 years
- Planned budget: ~ \$153M over a 5-year period

OTA-22-007 (OTA)
Up to 25 awards, FY23



**Community-Led, Health Equity
Structural Interventions (CHESIs)**

RFA-RM-23-012 (U2C)
Up to 5 awards, FY24



Health Equity Research Hubs (Hubs)

RFA-RM-23-001 (U24)
1 award, FY23



ComPASS Coordination Center (CCC)

Thank You

If you have any follow-up questions, please contact me at alison.brown@nih.gov

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