Frailty is an important concept in the care of older adults, and there is great interest in incorporating user-friendly frailty assessments into research and clinical settings. In-home, sensor-based technologies may provide a more dynamic, sensitive, and accurate assessment of frailty measures. To investigate user perspectives for use of sensor-based technologies and mobile applications, we held five focus groups with community-dwelling older adults (n= 10), their informal caregivers (n=9), and medical professionals (n=8). We used qualitative inductive analysis to organize thematic content. Caregivers and care-recipients viewed the early identification of frailty as beneficial, but highlighted the need for secure data infrastructure and clear demonstration of how frailty assessment would improve care. They also expressed concerns that technology-based communication could reduce in-person interactions. Medical providers noted the utility of objective data for difficult conversations with caregivers of frail patients, but worried about resources for analyses and interpretation of sensor-based health information.

COLLABORATIVE AGING RESEARCH USING TECHNOLOGY: NEW PATHWAYS FORWARD

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A profusion of technologies and protocols have been developed to more effectively assess and deliver care to older adults with cognitive impairment, challenged health and declining function. These technologies take advantage of important developments in sensing and pervasive computing, wearable technologies, mobile and wireless communications, and "big data" analytics. Despite great promise challenges remain to realizing their full potential and achieving wider uptake and dissemination in research and practice. This presentation will review and provide an overview of major technologies, their integration, and their use-cases, as well as key challenges present in the current landscape. The presentation will highlight ongoing developments addressing these challenges with particular attention to the Collaborative Aging Research using Technology (CART) initiative supported by the NIH and VA, an initiative directed toward providing an open technology research platform to be used by diverse investigators across the U.S. to facilitate and improve aging research using technology.

SESSION 4170 (PAPER)

UPDATES ON CURRICULAR INNOVATIONS IN GERONTOLOGY EDUCATION

AFU PRINCIPLES IN ACTION: ENGAGING STUDENTS THROUGH HANDS-ON AGE-RELATED ACTIVITIES

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The Age-Friendly University (AFU) Initiative is a global network of universities working to embrace and promote the growing population of older adults (OAs) on campuses. Integrating inter-generational learning is a proven benefit to share knowledge (Gerpott, Lehmann-Willenbrock, & Velopel, 2017) and to mutually benefit both older and more traditional learners (Pstross, Corrigan, Knopf, et al., 2017). To thoughtfully develop AFU initiatives on their campus, one midwestern university created an educational activity for students to better understand the needs of OAs. This presentation will cover results of this activity and offer suggestions for aging-focused learning activities. In winter 2019, 23 undergraduate students from 5 disciplines participated in a guided sensory activity with 5 Masters in Social Work (MSW) students that simulated impaired vision, hearing, and dexterity. Afterwards, using the AARP walking audit, they walked campus to understand challenges those with limitations might face. Students then completed a guided reflection and thought of ways to advocate for anyone with physical challenges, both off and on campus. This activity resulted in several successful learning outcomes and provided concrete experiences, establishing grounds to think about advocacy in a practical way. First, the undergraduate students presented their experiences at a campus-wide activism and advocacy event. They aimed to 1) increase awareness of the challenges those with visual and physical challenges and 2) promote the AFU initiatives. MSW students further analyzed their experience from a policy perspective and presented to the AFU steering committee with recommendations to influence policy in alignment with the AFU principles.

KNOWLEDGE OF AGEISM AND ATTITUDES ABOUT AGING AS A CORE COMPETENCY FOR HEALTH PROFESSIONALS

Sarah Marrs,[1] Tracey Gendron,[1] Leland Waters,[1] Jenny Inker,[1] and Maddie McIntyre[1], *1. Virginia Commonwealth University, Richmond, Virginia, United States*

Senior mentoring programs have been established that provide medical students exposure to a community-dwelling older adult mentor with whom they meet multiple times throughout the program. The goal of these programs is to expose students to healthy older adults, increase knowledge of geriatrics, and prepare them to care for an aging population. However, even while participating in a senior mentoring program, health professions students still demonstrate some discriminatory language towards older adults (e.g., Gendron, Inker, & Welleford, 2018). In fact, research suggests ageist practices occur, intentionally or not, among health professions in disciplines such as medicine, nursing, and social work and even within assisted and long-term care facilities (e.g., Bowling, 1999; Dobbs et al., 2008; Kane & Kane, 2005). We evaluated a senior mentoring program to gauge the impact of a new pedagogical approach and to gain a deeper understanding of the learning gained in relation to ageism and elderhood. This qualitative content analysis explored first-year medical students' opinions of their own aging and attitudes towards caring for older adults. Students (n = 216) participating in a brief curriculum model of a senior mentoring program responded to the following open-ended prompts before and after the program: 1) How do you feel about your own aging?; 2) How do you feel about working with older adult patients after you complete your

medical training? Responses suggest that students' views of their own aging and views towards towards working with older patients are positively impacted by their experiences in the senior mentoring program.

LEARNING LIFE COURSE CONCEPTS THROUGH FILM

Lisa C. Hall[1], *1. Missouri State University, Springfield, Missouri, United States*

This paper explains how students learned foundational concepts through viewing a commercial film. The students (mostly social, behavioral, and biomedical sciences majors) were enrolled in a survey course for the gerontology major in a Program of Merit-certified Bachelor of Science program. Elements of the life course (transitions, counter-transitions, trajectory, age norms and timetables, sequence, duration, and social clock), and types of aging (biological, psychological, social, chronological, functional and subjective) are evident in the 2008 fictional film, The Curious Case of Benjamin Button. An adaptation of F. Scott Fitzgerald's short story by the same name, the film chronicles a man's life who was born physiologically old and dies as an infant with dementia. A multi-phased, active learning approach was used in which students (1) read about the abstract concepts from a textbook, (2) viewed the film while simultaneously identifying and applying concepts through notetaking, reflective writing prompts, and class discussion, (3) defined concepts and critically analyzed the contents in a written assessment, and (4) recalled definitions of concepts, eight weeks later, in a multiple choice final exam. Over three-quarters of students scored 80% or higher on the written assessment. Students under the active learning approach demonstrated higher recall on the final exam compared to students who were under the previous approach of standard lecture. Though these findings indicate that active learning through film is effective, they were realized retrospectively while attempting to improve a course's learning outcomes. A planned, cross-sectional study could better account for variability and yield more conclusive results.

USING AN INTERGENERATIONAL RELATIONSHIP TEACHING STRATEGY AND REFLECTION IN ON-GROUND AND ONLINE COURSES

Christine B. Thurlow[1], *1. Research College of Nursing, Kansas City, Missouri, United States*

Contact or experiences with older adults by college-level students is varied in nature and duration but is often reported as minimal and negative. By pairing groups from different generations, these relationships may influence established attitudes, beliefs, and behaviors of the groups. Research has shown that intergenerational relationships between older adults and college students through interviews within gerontology courses may influence college students' views on aging and older adults towards the more positive. Specific steps in the development of an intergenerational relationship teaching strategy begin with locating an elder to interview and guidance for how relationship development can change from beginning to end. Role play may help prepare for first interview. Interview questions correspond to course content. Reflections are represented via discussion board if online, and group process forums if on-ground. Intergenerational relationship strategies can be flexible in the amount of contact time with the elder and the student. Reflection strategies can be utilized in several ways: discussion board, journal entries, presentations to classmates, and a culminating paper/PowerPoint. The opportunity for students to tell stories of their own past experiences, relationships with their elders, care and concerns for their elders, and how personal views about older adults and aging may be changing supports the effectiveness of this teaching strategy. Further research into the amount of time needed for effective intergenerational relationship development between student and elder may assist in course planning. Need clearer understanding of the benefits for the elder mentors and if their views about young people have been altered.

SESSION 4175 (SYMPOSIUM)

THE GUT MICROBIOME AND AGING

Chair: Christy S. Carter, *University of Alabama at Birmingham, Birmingham, Alabama, United States*
Co-Chair: Michal Masternak, *University of Central Florida, Orlando, Florida, United States*
Discussant: Thomas W. Buford, *University of Alabama at Birmingham, Birmingham, Alabama, United States*

The human intestinal tract (i.e., "gut") is inhabited by over 100 trillion microorganisms; including over 1000 species of known bacteria. These organisms have co-evolved with humans over millennia to live together for mutual benefit. Though long overlooked in considerations of human health and disease treatment, gut microorganisms are highly involved in numerous metabolic reactions which influence normal host physiology. A variety of biologic, medical, and lifestyle factors appear to contribute to gut dysbiosis in late-life, and interventions specifically designed to target these factors may be useful in restoring microbial balance. Evidence from both clinical and preclinical studies suggests that gut dysbiosis is related to age-related inflammation as well as age-related conditions including frailty, Alzheimer's disease, and perhaps even longevity. Crosstalk between the gut and multiple organ systems (brain, heart, muscle etc.) may lead to the development of age-related diseases and loss of physiological function, although the signals are not well understood. In this symposium we address the broad topic of the Gut Microbiome and Aging by presenting evidence from multiple model systems (mice, rats and monkeys) and provide a forum to discuss critical areas of research for moving forward.

THERAPEUTIC DELIVERY OF ANG(1-7) VIA GENETICALLY MODIFIED PROBIOTIC: A DOSING STUDY

Christy S. Carter[1], *1. University of Alabama at Birmingham, Birmingham, Alabama, United States*

Aging is associated with loss of diversity in gut microbiota leading to dysbiosis; a condition linked with cognitive/physical frailty. Age-related health benefits have been ascribed to the renin-angiotensin system (RAS), mediated via the angiotensin-converting-enzyme-2 (ACE2)/angiotensin (1-7) or Ang(1-7) axis. A genetically modified probiotic secreting Ang(1-7) or GMP-A, targeting the gut, has