

based/merit pay and self-managing teams). Organizational culture consists of four types: clan culture (friendly working environment); adhocracy culture (dynamic/creative working environment); market culture (results-based organization); and hierarchy culture (formalized/structured work environment). This study used facility survey data from approximately 324 NH administrators (30% response rate) from 2017- 2018, merged with secondary data from LTCFocus, Area Health Resource File, and Medicare Cost Reports. The dependent variables consisted of RN, LPN, and CNA turnover rates (% voluntarily quit), while the independent variables comprised HRM practices and type of organizational culture. Control variables consisted of organizational (ownership, chain affiliation, size, occupancy rate, and payer mix) and county-level factors (Medicare Advantage penetration, income, education, unemployment rate, poverty, and competition). Generalized linear model results show that every unit increase in high-involvement HRM practices is associated with a reduction of 6%, 4%, and 2% in RN, LPN, and CNA turnover rates, respectively. Also compared to hierarchical cultures, nursing homes with a clan culture are associated with a reduction of 62%, 49%, and 33% in RN, LPN, and CNA turnover rates, respectively. HRM practices and organizational cultures that promote employee participation, engagement, and empowerment have the potential to reduce nurse staffing turnover rates among underresourced nursing homes.

#### NOT JUST HOW MANY BUT WHO IS ON SHIFT: THE IMPACT OF WORKPLACE INCIVILITY AND BULLYING AMONG RCAS ON RESIDENT CARE

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Much of the literature examining the link between care quality and staffing in long-term residential care focuses on staffing ratios and staffing mix; that is, how many staff are on shift. Far less attention has been devoted to exploring the impact of staff members' workplace relationships, or who is on shift, on care quality. Of increasing concern is the potential for peer incivility and bullying to disrupt the respectful, collaborative and effective working relationships considered key to residential care aides' (RCAs) care provision. This paper draws on data collected from a critical ethnography examining workplace incivility and bullying in a rural, not-for-profit care home. To date, more than 50 hours of participant observation, and 20 in-depth interviews with RCAs, licensed practical nurses, support staff, management and residents have been conducted. Thematic analyses identified three key themes: impact on resident safety; cutting corners; and impact on resident agitation and anxiety. Impact on resident safety highlights how incivility and bullying can result in non-adherence to two-person lift policies and procedures. Cutting corners outlines how RCAs' relationships with their co-workers dictates to what extent they provide the requisite care to a resident for whom another RCA is responsible. Impact on resident agitation and anxiety focuses on residents' reactions to the tensions that emerge between RCAs as a result of incivility and bullying. Findings highlight how peer incivility and bullying may indirectly influence certain

quality indicators (e.g., pressure sores, psychotropic medication use) thereby offering additional insight into the staffing-care quality link.

#### USING A UNIVERSAL SATISFACTION SCORE IN LONG-TERM CARE SETTINGS

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The CoreQ (not an acronym) consists of a limited number of satisfaction items (3-4 items, depending on setting) that are used to create an overall satisfaction score for long-term care facilities. This measure has been used in assisted living (AL) and skilled nursing facilities (SNFs) and has been endorsed by the National Quality Forum (NQF). Briefly, the development and psychometric testing of the CoreQ will be described, including the rationale for producing an overall satisfaction score and correlation with important quality indicators like Five-Star. Using data collected over the past 3 years, comprising more than 100,000 respondents, the use of the CoreQ measure will be described. For example, the CoreQ scores are used in MA to allow providers to benchmark their performance. The use of the scores in this way will be discussed including how providers have used the scores for quality improvement. Some states have elected to use CoreQ in pay for performance and other state initiatives. A case study of how New Jersey uses CoreQ with SNFs will be presented, including distribution of scores and addressing data collection challenges. CoreQ can be utilized as a short customer satisfaction measure to allow providers to benchmark their performance, residents and families in decision-making, and states and others to use for accountability.

#### VARIABILITY IN ACCESS TO VA'S AID AND ATTENDANCE PENSION BENEFIT: A MIXED-METHODS STUDY

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The Veterans Benefit Administration's (VBA) Aid and Attendance enhanced pension benefit (A&A) is available to older, low-income Veterans who require assistance meeting their daily needs. However, reports indicate that A&A is underutilized with only 1/3 of eligible Veterans receiving this benefit. The objective of this mixed methods study is to characterize the variability in A&A enrollment across VA Medical Centers (VAMCs) and determine factors attributable to the variation. Using VA administrative data, we calculated the rate of enrollment in A&A among Veterans receiving pension. We then purposefully sampled 16 Chiefs of Social Work at VAMCs with the highest (n=7) and lowest (n=9) rates of enrollment. Interviews were transcribed, coded, and analyzed using conventional qualitative research methods. The rate of enrollment in A&A varies from <1% to 23% across VAMCs. VAMCs that had higher rates of enrollment were larger and more likely to be located in the South and Mid-Atlantic regions. Respondents at sites with low rates of enrollment indicate that education around the eligibility criteria is needed

for VAMC staff. They also report that outreach to Veterans about this benefit is limited. Respondents at VAMCs with high rates of enrollment indicate that the relationships with VBA and Veterans Service Organizations facilitates access. Universally, respondents viewed the A&A benefit positively and note that it helps meet Veterans' long-term care needs. As the Veteran population continues to age, it is important that VA ensure equal access to A&A for eligible Veterans. Implications of these findings and next steps will be discussed.

## SESSION 3440 (SYMPOSIUM)

### INTEREST GROUP SESSION—GEROSCIENCE: METHODS FROM BENCH TO POPULATION SCIENCE TO INFORM CONSTRUCTION OF GEROSCIENCE CLINICAL TRIALS

Chair: Jason L. Sanders, *Brigham and Women's Hospital, Boston, Massachusetts, United States*

Discussant: Anne B. Newman, *University of Pittsburgh, Pittsburgh, Pennsylvania, United States*

We are on the cusp of a revolution in aging science. It has matured to the point where geroscience trials will test interventions in humans which alter aging mechanisms to lengthen healthspan and possibly lifespan. This goal is unprecedented in clinical trial design, and it requires retooling the clinical trial toolbox. Traditionally, trials are constructed around a single disease; interventions target a narrow part of a defined biological pathway involving only one molecule, tissue, or organ; events are well known intermediate endpoints and clinically-defined hard outcomes; and follow up may be short and historically informed based on prior trials. Geroscience trials by design target aging mechanisms which, when altered, are likely to have pleiotropic effects that modify several biologic pathways; efficacy and safety signals may require integration across multiple levels of biologic organization; intermediate endpoints are not agreed upon; and follow up timelines are undefined. In this symposium, we provide guidance on the design of geroscience trials using examples that span from bench to population science. Dr. LeBrasseur will discuss screening senolytic compounds across models of age-associated decline and advancing their candidacy as interventions. Dr. Justice will detail a framework for biomarker selection in geroscience trials, focusing on a trial of metformin as an example. Dr. Sanders will illustrate how observational data can inform phenotype use in clinical trials. Dr. Levine will explain translating omics data for use in geroscience trials, focusing on epigenomics. We expect additional discussion to hasten development of well-designed geroscience trials.

### USING OBSERVATIONAL DATA TO INFORM CANDIDATE PHENOTYPES FOR GEROSCIENCE TRIALS

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Geroscience trials will manipulate aging mechanisms which may have pleiotropic effects and alter multiple biologic processes and clinical outcomes. Determining an intervention's efficacy and safety will require measuring several aspects of aging and intermediate endpoints with less regard to specific diseases. Picking the right measurements will significantly impact a trial's cost-effectiveness and chance of success. Observational studies are ideal resources to test candidate phenotypes before investing in trials. We present a decade's worth of results from the Cardiovascular Health Study as examples of using observational data to inform measurement in geroscience trials. Specifically, we illustrate the underlying theory, construction, operational characteristics, and inter-relationships of candidate phenotypes spanning circulating biomarkers, tissue and organ structure, and functional status, all of which can be used in geroscience trials depending on the intervention's target and predicted outcome.

### SENOLYTIC DRUGS: DISCOVERY, TRANSLATION, AND APPLICATION

Nathan LeBrasseur<sup>1</sup>, 1. *Robert and Arlene Kogod Center on Aging, Mayo Clinic, Rochester, Minnesota, United States*

Diverse forms of molecular and cellular stress trigger senescence, a state of growth arrest in proliferation-competent cells that is often accompanied by a robust secretory phenotype. Senescent cell burden increases with age in multiple tissues and, plausibly, contributes to the pathogenesis of age-related diseases and geriatric syndromes. Discovery science efforts have identified druggable targets in senescent cells, including key nodes in anti-apoptosis pathways, that distinguish them from non-senescent counterparts and enable pharmacological approaches for their selective elimination. The therapeutic potential of senolytic interventions to improve health- and lifespan has been supported by translational research studies, including murine models of aging, atherosclerosis, osteoporosis, neurodegeneration, pulmonary fibrosis, and frailty. These studies have informed the design of first-in-human clinical trials of senolytic drugs, which have recently begun. The objective of this lecture is to highlight both the progress and challenges of advancing interventions targeting senescent cells from bench to bedside.

### BIOMARKER STRATEGIES FOR GEROSCIENCE- GUIDED CLINICAL TRIALS

Jamie N. Justice,<sup>1</sup> George A. Kuchel,<sup>2</sup> Nir Barzilai,<sup>3</sup> and Stephen Kritchevsky<sup>1</sup>, 1. *Wake Forest School of Medicine, Winston-Salem, North Carolina, United States*, 2. *University of Connecticut, Farmington, Connecticut, United States*, 3. *Albert Einstein College of Medicine, Bronx, New York, United States*

Significant progress in the biology of aging and animal models supports the geroscience hypothesis: by targeting biological aging the onset of age-related diseases can be delayed. Geroscience investigators will test this hypothesis in a multicenter clinical trial, to determine if interventions on biological aging processes can prevent accumulation of multiple age-related diseases and aging phenotypes in older adults. Prodigious activity is underway to develop markers of biological aging, but currently there is no aging biomarker consensus to support geroscience-guided clinical trial outcomes.