

Frailty is often described as being an increased vulnerability to the effects of stressors. There is little research investigating how frailty may act as either a mediator or participate in interactions in the associations between risk factors and chronic disease. We will present novel analyses of the Canadian Longitudinal Study on Aging, focusing on the 30,000 study participants who underwent serial physical evaluations at one of 11 data collection sites between 2011 and 2018. Using the 4-way decomposition method elaborated by Vanderweele, we investigate the role of grip strength, as a component of physical frailty, in the effect of cardiovascular risk factors on the atherosclerotic burden of individuals (measured using carotid intima media thickness). Our findings clarify the mechanisms underlying of grip strength in the associations between cardiovascular risk factors and carotid intima media thickness.

THE FRAILTY SYNDROME: AN EMERGENT PROPERTY OF PARALLEL DYSREGULATION IN MULTIPLE PHYSIOLOGICAL SYSTEMS?

Alan Cohen,¹ Ahmed Ghachem,¹ Linda Fried,² Véronique Legault,³ Karen Bandeen-Roche,⁴ Nancy Presse,³ and Pierrette Gaudreau,⁵ 1. *Université de Sherbrooke, Sherbrooke, Quebec, Canada*, 2. *Mailman School of Public Health, New York, New York, United States*, 3. *Université de Sherbrooke, Sherbrooke, Quebec, Canada*, 4. *Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, United States*, 5. *Université de Montréal, Montreal, Quebec, Canada*

Despite its widespread presence in older adults, frailty etiology is still unclear, being associated with dysregulation in diverse physiological systems. Here, we show evidence that frailty emerges from broad loss of homeostasis integrated through complex systems dynamics. Using the NuAge and WHAS cohorts, we calculated Mahalanobis distance-based physiological dysregulation in six systems and tested the breadth, diffuseness, and nonlinearity of associations between frailty and system-specific dysregulation. We found clear support for breadth of associations, but only partial support for diffuseness and nonlinearity: 1) physiological dysregulation is positively associated with frailty in many or all systems, depending on analyses; 2) the number of dysregulated systems or the total amount of dysregulation are more predictive than individual systems, but results only partially replicated across cohorts; 3) dysregulation trends are exponential, but not always significant. These results suggest, but do not fully prove, that frailty is an emergent property of complex systems dynamics.

Session 3490 (Symposium)

EAST MEETS WEST: HOME AND COMMUNITY BASED CARE TO ENHANCE AGING IN PLACE

Chair: Takashi Amano

Co-Chair: Megumi Inoue

Although the magnitude and rate of aging in Japan and the United States differ, the drastic change in population structure has resulted in common challenges in both countries. One challenge is assisting older people in staying in the community. Enhancement of home- and community-based care allows older people to remain in their homes or spaces

of their choice without moving into an institution to receive necessary care. This symposium includes four presentations (two from Japan and two from the U.S.) examining various efforts surrounding home- and community-based care designed to strengthen older people's abilities to stay in the community. The presenters will cover a wide range of strategies that have been implemented in both countries. The first presenter will describe the development and delivery of a project to expand Arizona's dementia capable system. The second presenter will describe initiatives of a professional association of geriatrics to promote the concept of aging in place. The third presenter will discuss the Home Hazard Removal Program (HARP), a new home hazard removal and fall risk self-management program delivered in the home by occupational therapists. The fourth presenter will discuss Japan's national policy priority of promoting the use of home health care within the community-based integrated care system. The symposium will conclude with a review of similarities and differences of various efforts, summarize common goals and challenges, and identify best practices.

EXPANDING ARIZONA'S DEMENTIA CAPABLE SYSTEM

DAVID Coon, *Arizona State University, Phoenix, Arizona, United States*

Currently, 5.8 million US adults live with Alzheimer's disease (ADRD); the number is expected to double by 2050. Arizona will experience the greatest percent increase in ADRD by 2025. This project targeted three underserved groups in order to expand Arizona's dementia capable system: people living alone with ADRD; people with Down Syndrome or another intellectual/developmental disability (DS/IDD) aging with ADRD and their family caregivers; and people with ADRD and their caregivers in the Latino community. This presentation describes the development and delivery of the project's educational workshops, case management services, and evidence-based programs. Over 2,220 participants have participated in workshops to date with the largest percentage being case managers, care coordinators, and discharge planners. Evaluations have been extremely positive with 86.1% being "very likely" to recommend the project to others. The presentation concludes with findings and lessons learned regarding the delivery of the project's evidence-based programs and case management services.

GERIATRICS PERSPECTIVES FROM JAPAN

Masahiro Akishita,¹ and Satoru Mochizuki,²

1. *The University of Tokyo, Bunkyo-ku, Tokyo, Japan*,

2. *Hino-Nozomi Clinic, Hino, Tokyo, Japan*

In 2025, Japan's baby boomers will cross the threshold of 75 years of age; a phenomenon that has been referred to as "the 2025 crisis", resulting in a significant burden on the healthcare system. To address this issue, the Japanese government is establishing the Integrated Community Care System, to provide comprehensive medical and long-term care services in each community. In cooperation with government and affiliated organizations, the Japan Geriatrics Society (JGS) has been working to develop the Integrated Community Care System. As a result of this effort, geriatric medicine is being integrated into the health care system through incentives for practitioners. For instance, medical