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 EMERGING PROPERTY OF PARALLEL DYSREGULATION IN MULTIPLE PHYSIOLOGICAL SYSTEMS?
Alan Cohen,1 Ahmed Ghachem,1 Linda Fried,2 Véronique Legault,1 Karen Bandeen-Roche,1 Nancy Presse,1 and Pierrette Gaudreau,1 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
facilities can be reimbursed if they perform comprehensive geriatric assessments (CGA) and CGA-based management care. Additionally, home care medicine and polypharmacy are emerging issues of interest to the government. In this symposium, I will discuss how JGS has been trying to achieve “Aging in Place” in Japan.

**A HOME HAZARD REMOVAL PROGRAM TO REDUCE FALLS IN COMMUNITY-DWELLING OLDER ADULTS**

Susy Stark, Washington University, St Louis, Missouri, United States

The majority of falls experienced by older adults occur in the home with home hazards associated with an increased risk of falling. Low-income older adults, who have more disability and live in substandard housing, need feasible interventions to help them safely age in place. The Home Hazard Removal Program (HARP) is a new home hazard removal and fall risk self-management program delivered in the home by occupational therapists to prevent falls. To evaluate the program, a randomized control trial was conducted with 310 community-dwelling older adults receiving aging services in the community. HARP had high acceptability with older adults and was feasible to deliver in the community. Adjusted for fall risk, individuals in the HARP group fell 1.4 times versus 2.2 times in the control group over 12 months. This low-cost home hazard removal program demonstrated acceptability, feasibility, and a significant reduction in falls for at-risk community-dwelling older adults.

**JAPAN’S NEW FRAMEWORK ON DEMENTIA CARE**

Kenji Toba, Tokyo Metropolitan Institute for Geriatrics and Gerontology, Tokyo Metropolitan Institute for Gerontology, Tokyo, Japan

The number of people with dementia in Japan is ever-increasing. In 2020, 6 million people lived with dementia. The number is expected to increase to 9 million in 2040. This means that a person with dementia will be supported by three working people. To prepare for the big wave of dementia, Japan released the New Orange Plan in January 2015. In 2019, the Framework for Promoting Dementia Care was issued by the Japanese cabinet in which prevention and the opportunity for persons with dementia to age in place were set as the main goals. This framework requires all ministries to promote people’s awareness about individuals with cognitive impairment. The educational targets include taxi drivers, retail shop clerks, bankers, police, and people working in the criminal justice system. I will discuss the New Framework which has potential to assist the country in supporting people living with dementia.

**Session 3495 (Symposium)**

**IRVING S. WRIGHT AWARD OF DISTINCTION LECTURE, VINCENT CRISTAFALO AWARD LECTURE, AND TERRIE FOX WETLE AWARD LECTURE**

Chair: Nir Barzilai Co-Chair: Terrie Fox Wetle

The Irving S. Wright Award of Distinction Lecture will feature an address by the 2021 recipient Malene Hansen, PhD of the Buck Institute for Research on Aging. The Vincent Cristofalo Rising Star Award in Aging Research lecture will feature an address by the 2021 recipient, Morgan Levine, PhD, of Yale University. The Terrie Fox Wetle Award lecture will feature an address by the 2020 recipient, Kali Thomas, PhD, FGSA of Brown University and an address by the 2021 recipient, Andrea Gilmore-Bykovskyi of the University of Wisconsin, Madison. These awards are given by the American Federation for Aging Research, Inc.

**TERRIE FOX WETLE AWARD (2021): ADVANCING MULTIDISCIPLINARY HEALTH SERVICES SCIENCE: DEVELOPMENTS IN A DEMENTIA-FOCUSED PROGRAM OF RESEARCH**

Andrea Gilmore-Bykovskyi, University of Wisconsin-Madison, Madison, Wisconsin, United States

The Terrie Fox Wetle Rising Star Award in health Services and Aging Research is an award named in honor of Fox Wetle, PhD, who is internationally recognized for her contributions to aging, public health, and health care research. The award recognizes health services researchers in early or middle-career phases who have made significant contributions that embody the value of multidisciplinary health services science and are likely to have a sustained, high impact on practice and research. This aware lecture will be presented by the 2021 Award Recipient, Andrea Gilmore-Bykovskyi, PhD, RN, and will highlight emergent findings and foci in her dementia-focused health services research program. In particular, the award lecture will discuss progress in investigating social and behavioral communication patterns among individuals with moderate to advanced dementia; and the role of temporally situated observational measures and inclusion of persons with dementia and their caregivers in this line of research. The lecture will conclude with a discussion of next steps for this area of investigation surrounding assessment of episodes of lucidity in advanced dementia; and considerations for strengthening progress in outcome evaluation among persons living with dementia through multidisciplinary and community-informed health services research.

**IRVING S. WRIGHT AWARD: CELLULAR RECYCLING IN AGING AND DISEASE: THE IMPORTANCE OF TAKING OUT THE TRASH**

Malene Hansen, Sanford Burnham Prebys Medical Discovery Institute, La Jolla, California, United States

Aging is greatly influenced by quality-control processes that keep the materials inside our cells in proper shape and function. One of these processes is called autophagy, which means "self-eating". This cellular recycling process can digest damaged components to provide new and better parts for the cell. Autophagy plays important roles in many age-related diseases and has been directly linked to aging. In our laboratory, we use the microscopic soil-dwelling round worm C. elegans to understand how autophagy is linked to aging and disease. In this Wright Award seminar, I will discuss our progress on understanding how autophagy is regulated during normal aging and how it may promote a long and healthy lifespan.

**TERRIE FOX WETLE AWARD (2020): THE ROLE OF HOME-DELIVERED MEALS PROGRAMS IN IMPROVING HEALTH AND PROMOTING COMMUNITY INDEPENDENCE FOR OLDER ADULTS**

Kali Thomas, Brown University, Brown University/Providence, Rhode Island, United States