design approach in the development of technology-solutions will be emphasized.

A TRANSDISCIPLINARY TEAM APPROACH TO TECHNOLOGY DEVELOPMENT TO SUPPORT HEALTH AND WELL-BEING
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Diverse disciplinary and experiential knowledge is required to understand the challenges and develop workable solutions to support the health and wellbeing of a rapidly aging population. We are developing a theory-based, digital therapeutic for self-management of hypertension medication adherence for older adults; namely, the Medication Education, Decision Support, Reminding, and Monitoring (MEDSReM) system. This development process has necessitated a transdisciplinary approach with members co-learning and working collaboratively to advance the MEDSReM system. Our group includes complementary expertise in pharmacy, nursing, human factors, cognitive aging, gerontology, and technology development. We describe the challenges of transdisciplinary teamwork, our collaborative processes, and strategies that led to successful integration of expertise in advancing MEDSReM. Lastly, we discuss useful approaches to technology conceptualization, and digital therapeutic development and implementation, as well as lessons learned in effective communication and coordination among the diverse team members to ensure that the MEDSReM goals are achieved.

INITIAL EFFICACY OF AN APP-BASED MINDFULNESS MEDITATION FOR BEREAVED KOREAN OLDER ADULTS DURING THE PANDEMIC
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Given the onset of COVID-19, older adults who recently lost their significant others feel more stressed. There yet exist a study utilizing smartphones for web-based delivery of mindfulness intervention among bereaved older adults. Therefore, this study aimed to test the initial efficacy of an app-based mindfulness-meditation (AMM) to alleviate stress and depressive symptoms and improve stress resistance, social support, and self-esteem in Korean older adults experiencing bereavement. Participants included 22 Korean older adults who had been bereaved within the preceding year. AMM involved sound therapy, breathing exercises, and narrated meditation sessions, and the program was conducted over eight weeks. The linear regression results showed that stress level among participants was significantly lower after the intervention, with decreased scores from the baseline. By confirming that AMM is an effective way of reducing stress, more active usage of devices like smartphones should be promoted to develop mental health interventions for older adults.

SELF-MONITORING OF LIFESTYLES FOR DISEASE MANAGEMENT IN OVERWEIGHT DIABETIC SENIORS WITH/WITHOUT KIDNEY DISEASE
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Overweight/obesity, diabetes, and chronic kidney disease (CKD) are common multiple chronic conditions (MCCs) in seniors. Fitbit fitness trackers were used to track physical activity and food intake over 12-week in 15 overweight/obese diabetic seniors (age=70.5±4.8) with/without CKD. The associations of percentage of days with tracked steps (PDWTS), percentage of days with food logs (PDWFL) and 7-day mean step count with body mass index, fasting glucose, HbA1c and renal function were examined using Pearson Correlation analysis. Qualitative data assessing perceived factors related to self-monitoring and lifestyle behaviors was collected and analyzed using content analysis. At week 12, PDWTS and PDWFL was positively and negatively associated with renal function (P<0.05) and HbA1c (P<0.05), respectively. Motivation and perceived benefits of self-monitoring were frequently cited facilitators for self-monitoring. Self-monitoring might help seniors manage MCCs. Motivating self-monitoring and providing health education on the benefits of self-monitoring in lifestyle interventions to manage MCCs are warranted.

MOBILE INTERVENTION FOR FAMILY DEMENTIA CAREGIVERS: FROM FOCUS GROUPS TO SMARTPHONE PLATFORM
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There is growing recognition that in-person delivery of caregiver interventions limits scalability due to distance from locations where interventions are available, and costs associated with locating substitute care for the person living with dementia. Internet-based interventions are often not optimized for smartphones, which are more accessible than desktops to minoritized populations and those of lower socioeconomic status. In this study, focus groups were conducted with 17 English language and 12 Spanish language family dementia caregivers regarding needs for smartphone-based technological intervention. We employed an inductive and deductive driven mixed method analytic approach. Identified needs included psychoeducation regarding dementia, provision of caregiver skills information, activities for the person living with dementia, and relaxation techniques. Similarities and differences among preferences between the two populations were identified. Family dementia caregivers endorsed
several needs for mobile intervention. The development of a new mobile application platform to meet these needs will be described.

SESSION 4200 (SYMPOSIUM)

THE BALTIMORE LONGITUDINAL STUDY OF AGING: READY TO SHARE
Chair: Eleanor Simonsick Discussant: Luigi Ferrucci

Beginning January 2023, the new National Institutes of Health (NIH) Data Sharing Policy for NIH-funded and conducted research is scheduled to go into effect. In anticipation of this requirement, scientists and staff of the Baltimore Longitudinal Study of Aging (BLSA) launched a comprehensive effort to create a user friendly well-documented accessible database scheduled for a “soft” release just in time for GSA. The BLSA, established in 1958 to study normative aging, continues to advance knowledge and understanding of aging mechanisms and their impact on and response to disease processes. During a 3-day clinic visit, the 1200+ BLSA participants undergo comprehensive evaluation covering the full range of physical functional and cognitive performance capacity as well as extensive imaging studies, biological sample collection and clinical examination. In this symposium, Dr. Griswold will introduce the data sharing platform and demonstrate its facility. Dr. Simonsick will elaborate on development of a fitness percentile-based approach to define exceptional aging and the factors associated with maintaining exceptional status. Dr. Moore will provide findings on life-course physical activity and CT derived muscle parameters and homeostatic regulation in later life. Dr. Tian will share her ongoing work aimed at identifying metabolomic signatures of brain atrophy and Alzheimer’s disease risk. Dr. Tanaka will report on her work analyzing the metabolomic profile of different dietary patterns and their association with frailty. Our Discussant, Dr. Ferrucci will briefly share future directions for the BLSA and invite attendees to comment on the BLSA data sharing platform and scientific priorities.

FAIR SHARING OF THE BLSA DATA ECOSYSTEM
Michael Griswold1, James Henegan2, Chad Blackshear2, Ann Moore3, Thomas Smith4, Deric McGowan4, Eleanor Simonsick5, and Luigi Ferrucci1, 1. The MIND Center at UMMC, Jackson, Mississippi, United States, 2. UMMC MIND Center, Jackson, Mississippi, United States, 3. TGB NIA NIH, Baltimore, Maryland, United States, 4. NIA, Baltimore, Maryland, United States, 5. National Institute on Aging, Baltimore, Maryland, United States

The BLSA is an invaluable resource for the study of human aging with uniquely rich measures taken longitudinally on a continuous replenishment cohort since 1958. Tremendous interest has been expressed by the United States and international research communities in expanded access to and use of BLSA data to address emerging scientific questions. Here, we will describe recent study leadership initiatives into: (1) making the BLSA data more FAIR (Findable, Accessible, Interoperable, and Reusable), (2) growing a BLSA data ecosystem that enables scalable sharing, and (3) leveraging and developing platforms for accessing the ecosystem. Lastly, we will demonstrate current platform functions that empower researchers to find and access BLSA data, metadata, protocols, code and supporting materials to make new discoveries.

CORRELATES OF PHYSICAL ACTIVITY HISTORY IN PARTICIPANTS OF THE BALTIMORE LONGITUDINAL STUDY OF AGING
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Physical activity across the life course contributes to physical function and health in later life. Here we characterize a measure of physical activity history, newly implemented in participants of the Baltimore Longitudinal Study of Aging (n = 690). Participants selected one of four levels to describe activity during each decade of life from age ten to the present. Recalled levels of physical activity are positively associated with activity assessed in current and prior decade study visits, suggesting that the recalled estimates are consistent with historic activity. A summary measure based on ranking activity patterns was associated with measures of physical performance, muscle and fat areas quantified from computed tomography images as well as some indicators of homeostatic dysregulation (p <.05). The observed associations suggest that an estimate of physical activity across decades provides complementary information to estimates of current activity and reemphasizes the importance of consistently engaging in physical activity.

METABOLOMIC SIGNATURES OF BRAIN ATROPHY PATTERNS IN AGING AND ALZHEIMER’S DISEASE
Qu Tian1, Brendan Mitchell1, Guray Erus1, Christos Davatzikos2, Susan Resnick2, and Luigi Ferrucci2, 1. National Institutes on Aging, Baltimore, Maryland, United States, 2. National Institute on Aging, Baltimore, Maryland, United States, 3. University of Pennsylvania, Philadelphia, Pennsylvania, United States

Can plasma metabolomics reveal mechanisms of brain aging? We investigated metabolomic signatures of brain atrophy patterns related to cognitive decline and Alzheimer’s disease(AD) risk. Relationships between metabolomics(Biocrates-p500) and annual rates of change in two neuroimaging-based brain atrophy patterns(SPARSE-BA indexing brain aging, SPARE-AD indexing AD-related atrophy) were examined using multivariable linear regression in 477 Baltimore Longitudinal Study of Aging participants aged 60+, adjusted for demographic variables and BMI. Higher concentrations of sarcosine, triglycerides, diglycerides, and ceramides and lower concentrations from phosphatidylcholines and cholesteryl ester were associated with faster rates of SPARE-BA increase longitudinally. Higher concentrations of diglycercer and alpha-amino-butyric acid and lower concentrations of tryptophan, hippuric acid, cholesteryl ester, phosphatidylcholine and sphingomyelin were associated with faster rates of SPARE-AD. Metabolites have differential associations with age-related and AD-related brain atrophy patterns, which may provide new insights into preventive and therapeutic interventions.