

WE-THRIVE measures in one residential long-term care setting in a frontier community in the rural Midwest, and the capacity for administrative leadership to draw upon results of measures to implement person-centered care post-pandemic. During the COVID-19 pandemic, early efforts to advance person-centered care in the setting were displaced by a focus on infection control and containment. WE-THRIVE measures assess person-centered care following immunization distribution, and are discussed in terms of how to develop a dashboard to 'de-escalate' a COVID-19 focus and rebuild momentum towards person-centered care. Particular attention is given to the context of measurement, including data sharing and measurement burden, to inform advancing person-centered long-term care in other frontier communities.

PERSPECTIVES TOWARD LONG-TERM CARE MEASUREMENT FROM FRONTLINE WORKERS IN BRAZIL

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The Brazilian long-term care (LTC) sector remains poorly structured and underdeveloped. COVID-19 did not bring unprecedented focus to the sector just because of the high mortality; it also affected the quality of care. In this pilot study, we evaluated the perspectives toward WE-THRIVE LTC measurements from Brazilian frontline workers in five long-term care facilities. For the four WE-THRIVE domains of LTC measurement (workforce and staffing, person-centered care, organizational context, and care outcomes), respondents used a 4-point Likert scale to rate their importance and answered open-ended questions about how these aspects of care changed since COVID-19. With few exceptions, respondents rated these aspects of LTC as extremely important or very important. Qualitative results highlighted concerns about and impacts of COVID-19, such as challenges related to the isolation of residents. The assessed measurement domains are confirmed to be important by frontline staff in Brazil. Measurement adoption must account for current issues.

PERSPECTIVES TOWARD PERSON-CENTERED LONG-TERM CARE IN CHINA

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Health care aides provide direct care for older residents with advanced dementia in long-term care facilities. This study aims to understand care aides' perceptions of what

is 'good' care, what is person-centered care, and how to provide person-centered care for older residents with advanced dementia, as preparatory work of the WE-THRIVE consortium's efforts to develop internationally-relevant common data elements of person-centered dementia care and launch comparative research in LMICs. Semi-structured interviews were conducted with health care aides (N=35) from 2 government-owned and 2 private long-term care facilities in urban China. Directed and conventional content analysis were used, drawing upon core constructs of person-centered dementia care and Nolan's (2006) senses framework. We found that although care aides were not trained in person-centered care, they did incorporate person-centeredness in their work by tailoring their care to the needs of older residents and facilitating interactions with residents and their peers through communication cues.

Session 2105 (Symposium)

MOBILITY PERFORMANCE IN OLD AGE: A WINDOW INTO BRAIN INTEGRITY

Chair: Qu Tian Co-Chair: Andrea Rosso Discussant: Caterina Rosano

Over two decades of research has established brain aging as a critical component of mobility decline. Studies consistently report that motor slowing predicts cognitive decline and neurodegenerative diseases, but reported associations are often modest. Both mobility and brain aging are complex processes and steady-state assessments are typically used (usual pace gait and structural MRI). We aim to elucidate the complex relations between brain aging and mobility by considering (a) strategies to maintain function such as interlacing periods of activity and rest (fractionation), (b) interventions that target brain and body (motor skill training), (c) multimodal neuroimaging (functional connectivity and cerebral small vessel disease (cSVD)), (d) challenged walking (dual-tasks, uneven surfaces), and (e) reduced resources (hearing loss). This symposium focuses on community-dwelling older adults from observational and intervention studies using state-of-the-art and real-life assessments of gait (quality and fragmentation by tri-axial accelerometry) and brain (near-infrared spectroscopy (fNIRS), resting-state functional MRI). First, we examine activity strategies that modify the relation between slow gait and AD risk (Tian). Second, using fNIRS, we investigate the extent to which motor skill training increases automaticity of gait (Chen). Third, we examine how functional connectivity may compensate for the detrimental effects of cSVD on mild parkinsonian signs (Hengenius). Fourth, we investigate the effects of challenged walking on gait quality and the relation with cognitive function (Suri). Finally, we demonstrate relations of hearing and cognition with mobility (Pupo). We seek to generate discussions on shared pathways underlying motor slowing and the aging brain and future prevention and intervention strategies.

ACTIVITY FRACTIONATION MODERATES THE RELATIONSHIP OF GAIT SPEED WITH ALZHEIMER'S DISEASE RISK

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Older adults with slow gait have a modestly elevated risk of Alzheimer's disease (AD). Whether strategies to maintain function, such as interlacing periods of activity and rest, modify this relationship is unknown. We analyzed 577 initially cognitively normal participants aged 50+ (53% women, 26% Black) who had baseline data on gait speed and fractionation via ActiHeart. Diagnoses of mild cognitive impairment (MCI)/AD were adjudicated during an average 7.3 years follow-up. We examined gait speed, fractionation, and their interaction with MCI/AD risk using Cox proportional-hazards models, adjusted for demographics and APOE-ε4. Each 0.2m/sec faster gait speed was associated with 24% lower risk of MCI/AD ($p=0.04$). Fractionation was not associated with MCI/AD risk ($p>0.05$). There was a significant gait*fractionation interaction ($p=0.013$). At high fractionation, gait was not predictive of MCI/AD. Slow gait speed is less predictive of future MCI/AD in individuals who fractionate their activity to maintain function, possibly indicating brain function that drives such compensatory strategy is still conserved.

MILD PARKINSONIAN SIGNS ARE RELATED TO LOWER CORTICO-STRIATAL CONNECTIVITY IN EXECUTIVE NETWORKS

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Mild Parkinsonian signs (MPS) affect up to 24% of community-dwelling older adults. We hypothesize that MPS are associated with Parkinson's-like alterations of functional connectivity (FC) in sensorimotor, executive, and reward cortico-striatal networks. Participants ($N=266$; mean age=83; 57% female) without Parkinson's completed resting-state fMRI and Unified Parkinsonian Disease Rating Scale (UPDRS). FC between striatum and cortex was measured within each network. Logistic regression tested associations of each network's FC with MPS (UPDRS>0), adjusted for MPS risk factors, then including white matter hyperintensities (WMH). MPS was associated with lower cortical-striatal FC in the left executive cortico-striatal network (OR [95%CI]: 0.188 [0.043,0.824]). Association survived adjusting for risk factors (0.162 [0.030,0.874]) but was attenuated after including WMH (0.209 [0.036, 1.200]). In stratified analyses, left executive cortico-striatal FC was associated with MPS only for those with higher WMH (0.077 [0.010,0.599]). Future work should examine whether higher FC protects against the influence of WMH on MPS.

MOTOR SKILL TRAINING EFFECT ON REAL-TIME PREFRONTAL CORTEX ACTIVATION DURING WALKING

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We aimed to test the effects of motor skill training (MST) on gait automaticity measured by changes in prefrontal cortex (PFC) activation during actual walking. We used data from a 12-week trial of older adults (mean age=75.5, 60.5% women) randomized to standard physical therapy and standard+MST in a 1:1 ratio. Functional near infrared spectroscopy (fNIRS) measured PFC activation during simple and dual task walking. We will apply linear mixed models to assess effects of task, time, and MST on PFC activation. We will compare the PFC activation 1) during dual task walking compared to simple walking; 2) across visits after intervention; and 3) between participants receiving MST compared to standard physical therapy. These results will demonstrate whether gait automaticity, as evidenced by PFC activation during walking, is affected by MST.

ASSOCIATION BETWEEN DUAL-TASK GAIT AND COGNITIVE FUNCTION IN OLDER ADULTS

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Community mobility involves walking with physical and cognitive challenges. In older adults ($N=116$; results here from initial analyses: $N=29$, Age=75±5 years, 51% females), we assessed gait speed and smoothness (harmonic-ratio) while walking on even and uneven surfaces, with or without an alternate alphabetizing dual-task (ABC). ANOVA assessed surface and dual-task effects; Pearson correlations compared gait with global cognition and executive function composite z-scores. The four conditions (even, uneven, even-ABC and uneven-ABC) affected speed (m/s) ($0.97±0.14$ vs $0.90±0.15$ vs $0.83±0.17$ vs $0.79±0.16$). Smoothness ($2.19±0.48$ vs $1.89±0.38$ vs $1.92±0.53$ vs $1.7±0.43$) was affected by only surface (controlled for speed). Greater speed was associated with better global cognition ($p=0.47$ to 0.49 , $p<0.05$) for all conditions and with better executive function for even-ABC ($p=0.39$, $p=0.04$) and uneven-ABC ($p=0.40$, $p=0.03$). Executive function was associated with smoothness during even ($p=-0.42$, $p=0.03$) and uneven ($p=-0.39$, $p=0.04$) walking. Type of walking challenge differentially affects gait quality and associations with cognitive function.

COGNITION MODERATES THE RELATIONSHIP BETWEEN HEARING AND MOBILITY IN COGNITIVELY NORMAL OLDER ADULTS

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