

components such as videos, audio and animations designed to educate and enhance screening for EM. Patients who screen positive are then guided through an automated Brief Negotiated Interview (BNI) that uses motivational interviewing to help them self-identify and self-disclose. Our tool will help identify cases of EM that otherwise may go undetected and overcomes major challenges associated with traditional methods of screening.

#### USE OF TECHNOLOGY IN AN INTERNET-DELIVERED INTERVENTION FOR OLDER ADULTS WITH MILD COGNITIVE IMPAIRMENT

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Internet-based interventions using technology can promote access to treatment and reduce participant burden for sleep disorders. However, preliminary studies examining technology use and compliance in older adults with mild cognitive impairment (MCI) are needed prior to undertaking large-scale interventions. Older adults with MCI were recruited from hospital-based memory and sleep disorders clinics and enrolled in a single-arm intervention pilot study. An Internet-delivered cognitive behavioral therapy for insomnia program collected daily sleep diary data and delivered the automated intervention over nine weeks. Sleep diaries and wrist-worn actigraphs collected sleep data for 14 days, pre- and post-intervention. Descriptive statistics for participant technology use are presented. We have recruited 12 subjects with MCI. Most subjects with MCI accessed the intervention program daily; however, actiwatch compliance varied. Incorporating technology for intervention delivery and data collection in this population is promising, and future work should consider using reminders with wearable technology to increase compliance.

### SESSION 7060 (SYMPOSIUM)

#### DOPAMINERGIC SIGNALING: DRIVER OF MOBILITY RESILIENCE AND MODERATOR OF RESPONSE TO PHARMACOTHERAPY

Chair: Caterina Rosano

Co-Chair: Andrea Rosso

Discussant: Nicolaas Bohnen

Although effective mobility is the end result of the functional capacity of multiple systems, some adults appear resilient and maintain higher mobility later in life. Epidemiological studies suggest up to 20% of adults aged 65 and older maintain fast walking speed in the presence of multi-system impairments. What could be the reason for such mobility resilience? In this symposium, we focus on the brain dopaminergic signaling as a potential driver of mobility resilience. We examine the genetic val158met polymorphism of catechol-O-methyltransferase (COMT), an enzyme regulating dopaminergic signaling in the brain. The Met allele results in higher tonic dopamine levels; the Val allele results in lower tonic dopamine levels. The influence of COMT polymorphism on mobility is known for Parkinson's disease (PD) and neurodegenerative conditions, but it not

clear for asymptomatic adults aged 65 living in the community. We present data from the Cardiovascular Health Study, the Health Aging Body Composition Study, and several neuropharmacological studies with extensive information on PD ascertainment, medications, and health characteristics. We test the hypothesis that the Met allele of the COMT gene is associated with a) lower fall risk (Rosso), b) slower decline in gait reserve (Sprague), c) less gait slowing due to frailty (Mannon), d) more favorable response to pharmacotherapy in older adults without PD (Bohnen). Our results suggest a unique modulatory capacity of dopaminergic-related genes that may favor mobility resilience and predict better response to therapy. Our data provide clues for novel targeted interventions to delay physical disability in older adults.

#### ANTICHOLINERGIC MEDICATION USE, DOPAMINERGIC GENOTYPE, AND RECURRENT FALLS

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Anticholinergic medications (A-chol) increase risk for falls; higher dopaminergic signaling may provide resilience to these effects. In 2489 older adults (mean age=74; 52% women) with 10 years of data on medication use, falls, and dopaminergic genotype (catechol-O-methyltransferase (COMT)), we assessed the association of A-chol use with recurrent falls ( $\geq 2$ ) over the subsequent 12 months using generalized estimating equations. Effect modification by COMT (met/met, higher dopamine signaling, n=473 vs val carriers, lower dopamine signaling, n=2016) was tested; analyses were then stratified by COMT and adjusted for demographics and A-chol use indicators. During follow-up, 843 people reported recurrent falls. A-chol use doubled the odds of recurrent falls (OR [95%CI]=2.13[1.74, 2.60]), with a suggested effect modification by COMT (p=0.1). The association was present in val carriers (adjusted OR [95%CI]=1.93[1.36, 2.73]) but not in met/met (adjusted OR [95%CI]=1.30[0.53, 3.22]). Higher dopaminergic signaling may provide protection against the effects of A-chol use on fall risk.

#### DOPAMINE-RELATED GENOTYPE PREDICTS TRAJECTORIES OF GAIT RESERVE IN OLDER ADULTS

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The capacity to increase one's gait speed is critical for maintaining safe community ambulation. There is limited work on the longitudinal changes in this capacity and its predictors. Because lower dopamine is associated with lower task adaptation and motivation, we hypothesized that lower dopamine