and maintaining the capacity of the Clinic, especially in the setting of the pandemic during which caregivers’ use of psychosocial care at MSK is notably higher than in years past. Several current adjunct approaches to address capacity needs currently being piloted will be discussed.

THE RUSH CAREGIVER INITIATIVE: A MODEL FOR CAREGIVER HEALTH AND WELLNESS IN AGE-FRIENDLY HEALTH SYSTEMS

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The Rush Caregiver Health and Well-Being Initiative (Caregiver Initiative) draws together evidenced-based practices into a single framework to improve care for older adults and caregivers. The Caregiver Initiative has two components: system-level and caregiver-level interventions. The complexities of system change take place within leadership, data management, and provider teams throughout the health care system, and solutions to resistance have been developed. Caregiver-level interventions start with an assessment using evidence-based tools, and offer an opportunity to participate in a Teach-Back Clinic, Family Care Planning sessions, and/ or Goals of Medical Care meetings, all connected to the 4Ms of an Age-Friendly Health System. Contact and follow-up issues were addressed, and as of February 2021, 191 caregivers have enrolled. Outcomes to date show statistically and clinically significant reductions in depression, anxiety, and caregiver burden. This presentation will highlight lessons learned in the development of the model and caregiver outcomes to date.

Session 3170 (Symposium)

CHALLENGES OF IMPLEMENTING THE PRISM 2.0 TRIAL FOR SUPPORTING SOCIAL CONNECTIVITY THROUGH TECHNOLOGY

Chair: Walter Boot Co-Chair: Sara Czaja
Discussant: Dana Plude

Following the success of the Personal Reminder Information and Social Management (PRISM) trial, which found that a specially designed computer system for older adults can enhance social connectivity and reduce loneliness among older adults at risk for social isolation, the PRISM 2.0 trial sought to replicate and extend these results to a new technology platform (tablet computer) with expanded social features and diverse populations of older adults, including older adults living in rural areas, assisted living communities, and senior housing. This symposium discusses the aims of the trial conducted by the Center for Research and Education on Aging and Technology Enhancement (CREATE), challenges encountered (including challenges related to the COVID-19 pandemic), and solutions to those challenges. S. Czaja will begin with an overview of the PRISM 2.0 system and the trial. J. Sharit will discuss challenges encountered working within the context of assisted living facilities and with impaired participants. This will be followed by a discussion of technical challenges encountered during the course of the trial presented by N. Charness. W. Rogers will present training issues involved (both with respect to participants and assessors). Finally, W. Boot will describe challenges encountered with measuring and quantifying technology use during the trial. Lessons learned are applicable to many types of technology interventions administered in diverse contexts.

D. Plude, Deputy Director in the Division of Behavioral and Social Research of NIA, will serve as discussant.

PRISM 2.0: A TECHNOLOGY SYSTEM TO SUPPORT RESOURCE ACCESS AND SOCIAL AND COGNITIVE ENGAGEMENT

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Social isolation and lack of engagement are common among older adults and present a risk for emotional, physical and cognitive decline. Technology offers the potential of remediating these risks and enhancing opportunities for connectivity. In this paper we present an overview of the PRISM 2.0 multi-site RCT, which evaluated a simple to use Personalized Reminder Information and Social Management System (PRISM) among a sample of two hundred and forty-eight adults age 65+ in diverse contexts (Rural Locations, Assisted Living Communities and Senior Housing). PRISM 2.0 is a tablet-based system, intended to provide support for access to resources and information, new learning, social and cognitive engagement, and memory. We describe the goals and content of PRISM, the user-centered design process, and measurement strategies. We also discuss the challenges of conducting the trial during the COVID-19 pandemic and the strategies used to adapt the trial protocol within the three contexts.

CHALLENGES OF IMPLEMENTING THE PRISM 2.0 CLINICAL TRIAL WITH ASSISTED LIVING AND IMPAIRED PARTICIPANTS

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The PRISM 2.0 clinical trial examined the benefits of a software system, implemented on a computer tablet, which was designed to support access to information, engagement, and social connectivity among older people. Participants across three sites were recruited from rural locations, senior living housing facilities, and assisted living facilities (ALFs) and correspondingly randomized into either the PRISM or control (tablet computer without the PRISM system) conditions. In this talk, we focus on the challenges associated with including ALF participants at key stages of the trial. These stages included telephone prescreening, baseline assessment, training on the system, and 6-, 12-month follow-up assessments. Inability to meet inclusion criteria related to
cognitive and sensory-motor considerations was a common problem, as was the ability to sustain attention during the training sessions. Recommendations for recruitment and retaining older adults in ALFs for these types of studies will be offered.

PRISM 2.0: TECHNICAL CHALLENGES

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PRISM 2.0 was designed to run on Android tablets and made use of both customized apps that relied on Google’s browser and e-mail functionality as well as commercial apps, such as Microsoft’s Skype for videoconferencing. We also made use of functionality provided by our partner AT&T, such as their sim cards to provide cell-based internet connectivity to participants who did not have access to Wi-Fi internet services to their home (cable, DSL), as well as tablet management software to deploy updates. The Miami site provided central management and tablet deployment and redeployment services and support as well as coordinating locally provided tech support at the three sites. We discuss some of the technical challenges associated with these arrangements. We focus on how changes to the operating system broke some of our apps necessitating substitution of other apps and provision of new training, and how Covid-19 affected technical support.

TRAINING CHALLENGES FOR EFFECTIVELY IMPLEMENTING A TECHNOLOGY CLINICAL TRIAL: A SNAPSHOT FROM PRISM 2.0

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Technology interventions can only be adequately assessed for efficacy if participants are adequately trained to use the technology. Only then can an evaluation be made about whether the technology intervention affects the outcome of interest. In the PRISM study, our goal was to teach inexperienced older adults to use either a tablet computer (control) or the PRISM 2.0 system. In this presentation we will discuss the training processes we used for both groups (e.g., segmenting sessions, providing homework, observations), to enable us to evaluate the relative benefits of PRISM for social connectedness. We will describe the training challenges and the need for assessors to be able to troubleshoot technology issues. We will evaluate individual differences in training success and drop-outs to provide insights for other technology intervention studies. Understanding these individual differences can provide guidance for the deployment of new technologies that may benefit health, social interaction, or cognitive engagement.

CHALLENGES OF QUANTIFYING PRISM 2.0 AND TABLET USE

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As with the PRISM 1.0 trial, an important outcome of the PRISM 2.0 trial is use of the PRISM system and use of the PRISM system compared to the control condition (a standard tablet without the PRISM software). Frequent use over time is an important measure of system success. Further, use data provide key measures of system usefulness and usability. What features do participants use most and how often? Within those features, what activities do they engage in? What are the patterns of use throughout the trial, and how does PRISM system use compare to the control condition? However, quantifying use is not an easy task. This talk presents the challenges of quantifying use of a complex, multi-faceted system, and of making meaningful comparisons in use between two very different systems. Analysis approaches and solutions are discussed.

Session 3175 (Paper)

COGNITIVE AGING I

COGNITION-MORTALITY ASSOCIATIONS ARE STRONGER WHEN ESTIMATED JOINTLY IN LONGITUDINAL AND TIME-TO-EVENT MODELS

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Objectives: With aging populations worldwide, there is growing interest in links between cognitive decline and elevated mortality risk—and, by extension, analytic approaches to further clarify these associations. Toward this end, some researchers have compared cognitive trajectories of survivors vs. decedents while others have examined longitudinal changes in cognition as predictive of mortality risk. A two-stage modeling framework is typically used in this latter approach; however, several recent studies have used joint longitudinal-survival modeling (i.e., estimating longitudinal change in cognition conditionally on mortality risk, and vice versa). Methodological differences inherent to these approaches may influence estimates of cognitive decline and cognition-mortality associations. These effects may vary across cognitive domains insofar as changes in broad fluid and crystallized abilities are differentially sensitive to aging and mortality risk.

Methods: We applied each of the above analytic approaches to data from a large-sample repeated-measures study of older adults (N = 5,954, of whom 4,453 deceased; ages 50–87 years at assessment).

Results: Cognitive trajectories indicated worse performance in decedents and when estimated jointly with mortality risk, but this was attenuated after adjustment for health-related covariates. Better cognitive performance predicted lower mortality risk, and, importantly, cognition-mortality associations were stronger when estimated in joint models.

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