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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-, 9-, and 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