

O110 A new option for remote assessment with PROMIS: Mobile Toolbox and the MyCap app

Richard Gershon, Cindy J. Nowinski, Aaron J. Kaat, Zahra Hosseinian, Elizabeth Dworak

Northwestern University Feinberg School of Medicine, Chicago, USA

Objective: The Mobile Toolbox (MTB) is a growing library of brief, validated, and sensitive measures delivered through REDCap's free MyCap Mobile App. This powerful tool allows for the low-burden assessment of health and functioning on a participant's own smartphone in English or Spanish. In addition to self-administered versions of performance-based cognitive measures derived from the NIH Toolbox, the Mobile Toolbox library recently was expanded to include hundreds of fixed length and computer adaptive self-report PROMIS measures. This presentation introduces the MTB/MyCap app and its new PROMIS integration, highlighting its potential to amplify patient voices in research, clinical decision-making, and policy by enabling scalable, remote assessment.

Methods: The MyCap platform was developed in 2018 to support decentralized clinical trials and longitudinal research through seamless REDCap integration. MyCap enables participant recruitment, study set-up and monitoring, measure administration and automatic scoring. MTB's validated cognitive measures were incorporated into MyCap in 2024 with PROMIS integration occurring in 2025. The system employs automated surveys (CATs and fixed forms), active tasks (e.g., executive function), and is expanding to provide greater support for ecological momentary assessment (EMA) designs.

Results: MyCap has been deployed across 919 institutions in 80 countries, supporting 5,968 projects with over 22,000 participants. Users have access to Mobile Toolbox's eight validated cognitive measures of memory, language (vocabulary and spelling), processing speed, and executive function and over 1000 PROMIS and other PROMs assessing mental, physical, and social health and function, along with symptoms, well-being, and life satisfaction. All measures can be self-administered remotely and offline on participants' own smartphones (iOS and Android) in English and Spanish.

Conclusions: MTB/MyCap addresses various scientific, practical, and technical challenges in assessment. Free to eligible REDCap users, the system allows comprehensive evaluation of critical health outcomes and facilitates data collection from hard-to-reach populations by reducing barriers to participation. By leveraging MyCap's global REDCap reach, this platform can democratize access to high-quality PROs, enhance ecological validity through remote assessment, and increase participation of diverse communities. Future directions include expanding multilingual support to further inclusivity.