

A COMPUTER ADAPTIVE TESTING (CAT) APPROACH TO PATIENT REPORTED OUTCOMES (PROS) FOR MOBILE DEVICES

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ABSTRACT

The NIH PROMIS system consists of validated measures and software for assessing a patient's health status across physical, mental and social well-being domains.

Assessment Center, the accompanying software developed by PROMIS utilizes computer adaptive testing techniques that tailor respondent's questions based on their previous responses. This results in reliable, flexible and precise scores with low patient burden when compared to traditional static PRO measures.

The software was written by developers at the Department of Medical Social Sciences (MSS) at Northwestern University Feinberg School of Medicine. It was initially designed as a turn-key solution for patient-reported outcomes research. In an effort to better target mobile devices, we have recently 'wrapped' the adaptive technology and workflow of Assessment Center in a REST API that permits developers and researchers to write applications for any connected mobile device.

This presentation will provide a background and history of the PROMIS measures, describe the REST API, demonstrate a smartphone application that utilizes the REST API and conclude with a look at the impact and future use of mobile applications that provide broader distribution of PROMIS tools.