

Transforming patient-reported outcome assessment: the role of adaptive tests and tailored feedback

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Patient-reported outcome measures (PROMs) allow clinical staff and medical researchers to quantify a wide range of patient outcomes including pain, depression, fatigue and quality of life (QoL). As a clinical intervention that can improve patient involvement and satisfaction with care, PROMs show good potential but their uptake may be impaired by the time- and resource-consuming issues of administration, data storage, dealing with missing data and providing timely and comprehensible feedback.

This talk will demonstrate how the application of cutting-edge psychometric methods can transform PROMs from lengthy paper-based questionnaires to efficient computer-administered assessments that can intelligently target questions and instantaneously provide meaningful feedback for both patients and clinicians.

Aside from increasing the practicality of PRO assessment, modern psychometric methods can help advance the standardisation of between-group assessments. An example of this approach, known as item-anchoring is given using cross-cultural quality of life data from England, Zimbabwe, Russia and India.

The novel implementation of a method to accurately predict responses to unseen questions will be introduced, alongside examples of how this technique may be leveraged to provide additional clinical information from a brief assessment.

The talk will end with a brief summary of the cutting-edge psychometric research using personality, big data and artificial intelligence and speculate about how such advances could benefit clinical practice and research in the near future.