**Summary of research proposal LROI**

**Title:**

Comparing measurement precision and smallest detectable change of PROMIS Computer Adaptive Tests and traditional patient reported outcome measures used in the Dutch Arthroplasty Registry.

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**Abstract:**

Patient reported outcome measures (PROMs) are increasingly used in clinical practice to monitor symptoms and functioning from the patient's perspective. The PROMs currently used, however, in the Dutch Arthroplasty Registry, are not optimal for use in the consultation room. They have several problems regarding their quality and interpretation of scores. We aim to evaluate the use of Computerized Adaptive Tests (CAT). With CAT, questions are presented that are more relevant for patients and they need to complete less questions to get a reliable score compared to the currently used PROMs.

Patients on the waiting list for a total hip or knee arthroplasty and patients who underwent arthroplasty will be asked to participate. Patients will be asked to fill out an online questionnaire twice with a two-week interval including the currently used PROMs, CATs and PROMIS short-forms about pain and physical functioning. We will compare the measurement precision and the smallest change that can be detected of the CATs, PROMIS short-forms to the currently used PROMs. Furthermore we will analyse the construct validity and the floor and ceiling effects of the currently used PROMS and the PROMIS CATs and short-forms.

This study will contribute to optimizing the use of PROMs in routine clinical practice in orthopaedic patients. More reliable measurements can ensure more accurate individual patient monitoring, improve reliability of study results and can contribute to increase the use of patient reported outcome measures in the consultation room.

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