

# FEASIBILITY OF WEB-BASED PATIENT-REPORTED OUTCOME ASSESSMENT AFTER ARTHROSCOPIC KNEE SURGERY: THE PATIENTS' PERSPECTIVE

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## Introduction

Patient-reported outcome (PRO) assessment has become an important cornerstone to evaluate outcomes in orthopaedics. Today's wide availability of smart phones and tablets allow for very efficient questionnaire completion in hospital and at home. Once a suitable database system has been set-up, this assessment mode allows for swift and simple data acquisition. However, it is controversial how patients feel about this novel electronic follow-up in clinical practice.

## Methods

Consecutive patients undergoing arthroscopic knee surgery of the meniscus at a large teaching hospital in Switzerland were included. The Computer-based Health Evaluation Software (CHES, Fig. 1) was used for data collection and presentation. Electronic questionnaires included the Knee Injury and Osteoarthritis Outcome Score (KOOS), the Forgotten Joint Score-12 (FJS-12) and the Tegner Activity Scale. Questionnaires were electronically administered at baseline preoperatively, 6 and 12 weeks, 6 and 12 months postoperatively. In case of no response, patients received a phone call (Fig. 2). Questionnaire completion was timed for every single score and item. At the end of the follow-up period, a questionnaire was sent out to evaluate various aspects of the process of electronic data acquisition from the patients' perspective.

## Results

102 patients were eligible for study inclusion. Mean age was 50 years. 30 patients refused participation: 9 because of language barrier, 7 because of a lack of internet access (study period 2015-2017), 14 refused without reason. One patient died after baseline assessment. 71 patients (69.6%) participated in the study. Regarding questionnaire completion times a substantial learning effect through subsequent follow-ups was observed already after 3 months (2<sup>nd</sup> repetition) – Fig. 3. Mean completion time was 5.5 minutes for the KOOS and 1.8 minutes for the FJS-12. 46 patients returned the evaluation questionnaire at the end of the study. 36 patients (78.3%) reported to have no problems using the tablet computer at baseline assessment. 54.3% stated, that they didn't need any further instructions from an available study nurse to use the questionnaire. 45.7% of patients needed some help for questionnaire completion at baseline assessment at outpatient clinics. After these initial instructions 95.7% reported to have no problems filling out the questionnaire at home during the study period (identical web interface). 86.9% of patients were satisfied or very satisfied with the whole process of electronic PRO assessment over the 12 months period. 22 patients (47.8%) stated that they would appreciate direct feedback after every questionnaire completion. 75% prefer the feedback in electronic form (secure patient portal or email). The majority of patients (48.9%) considered 3 months to be a good interval for regular electronic follow-ups. 82.2% considered 5-15 minutes favourable for this effort.

CHES.SURVEY



Welcome to CHES.Survey!

This is a platform for electronic administration of the Forgotten Joint Score and other patient-reported outcome scores.

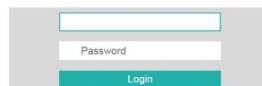


Fig. 1: CHES Survey

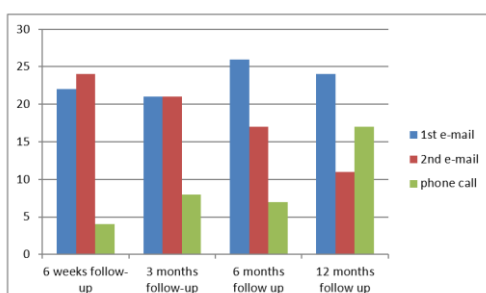


Fig. 2: Number of patients with response to e-mail and phone call

## Conclusion

Electronic PRO assessment was very well accepted in this age group. Repeat follow-ups resulted in reduced completion times. Most patients had no problems with questionnaire completion after some initial instructions. Patients clearly expressed an interest in direct feedback as an added benefit for their efforts.

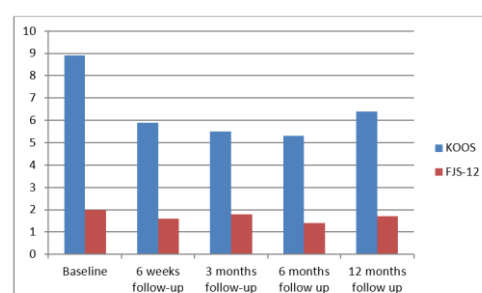


Fig. 3: Completion times for KOOS and FJS-12 (minutes)