Final report

Feasibility and costs of implementing the ICHOM Standard Set for Hip and Knee Osteoarthritis: A mixed-methods evaluation in public and private hospital settings

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December 2017

HCF RESEARCH FOUNDATION

The Royal Melbourne Hospital

MONASH University

THE UNIVERSITY OF MELBOURNE

Executive summary

There is growing momentum in Australia and internationally for standardising patient outcome assessment and using patient-reported outcome measures (PROMs) to capture outcomes that matter to patients, with significant interest from clinicians, healthcare organisations and health funders. The International Consortium for Health Outcomes Measurement (ICHOM) is promoting a transition to 'value-based healthcare', which focuses on providing high-quality care and achieving optimal patient outcomes. Achieving these goals requires mechanisms for consistently capturing and reporting healthcare outcomes, and this has led to the development of standardised measurement sets, or ICHOM Standard Sets. The ICHOM Standard Set for Hip and Knee Osteoarthritis was designed to capture outcomes of care for osteoarthritis (OA), including joint replacement surgery. The ICHOM Standard Set for Hip and Knee Osteoarthritis was launched in mid-2015 and is freely available; however, until now there have been no reports of its implementation or performance in clinical settings.

Our study aimed to test the feasibility of implementing the ICHOM Standard Set for Hip and Knee Osteoarthritis in real world public and private clinical settings. A mixed-methods design was used to capture comprehensive data on patient outcomes, implementation costs, and the implementation experiences of patients, clinicians and administrative staff. The study was led by a multidisciplinary team with expertise in health services and mixed-methods research, and clinical orthopaedics and physiotherapy. External implementation support was provided by ICHOM. The ICHOM Standard Set was implemented in May 2016, with data collection continuing until September 2017. Patients undergoing primary hip or knee replacement for OA were recruited from pre-admission clinics at The Royal Melbourne Hospital and from a private orthopaedic clinic within the Melbourne Private Hospital. Baseline Standard Set data were collected within 3 months prior to surgery, with follow-up data collected at 6 weeks, 3 months, 6 months and 12 months post-operatively. Data on the costs of Standard Set implementation were also collected during the study period. Semi-structured interviews were conducted with 15 key stakeholders (comprising patients, orthopaedic surgeons, physiotherapists, and hospital executive and administrative staff) to evaluate the ease of implementation, and explore barriers and enablers to implementation and sustainability.

This report describes in detail our approach to Standard Set implementation, and provides an overview of the key challenges faced and the main learnings from this study. Based on our experiences, the Standard Set can be feasibly implemented in real world hospital settings but with a number of important caveats. These include the need for adequate staffing and technical support, consideration of patient data collection preferences and promotion of active clinician engagement. Our preference data revealed strongly that most participants preferred paper-based questionnaire completion or web-based data collection, with only a small proportion preferring

iPad-based completion. Despite a strong commitment to patient follow-up, non-returned questionnaires were a significant problem and considerable staff time was required to address this. However, missing item responses were ultimately infrequent and this suggests that the patient-reported items were well-tolerated by study participants. Additionally, a number of the PROMs contained within the Standard Set were responsive to change, with significant improvements in important health outcomes identified as early as 6 weeks after joint replacement surgery. In particular, simple measures of knee pain and the EQ-5D index were very responsive to change. The cost of Standard Set implementation and ongoing data collection (for 17 months) totalled $94,955. Costs related predominantly to administrative tasks, direct patient contact (including follow-up of missing data), information technology (IT) liaison, database management, IT costs for the development and refinement of electronic data capture interfaces, and ICHOM implementation support. The key themes arising from the staff interviews included: that PROMs are perceived to be valuable; dedicated personnel are required to support data collection; gaps in IT resources must be addressed; and that there are benefits associated with using the ICHOM Standard Set for Hip and Knee Osteoarthritis. The patient interviews revealed a variable understanding of why patient-reported data collection is undertaken; however, patients did perceive that PROMs provided relevant information to treating clinicians and the hospital, and that the burden of questionnaire completion was minimal.

Adequate consideration of factors affecting the sustainability of Standard Set data collection is essential, and the pertinent factors are outlined in this report. Our study has highlighted that appropriate resourcing and strong clinician engagement are critical for implementation success. Ideally, 'real-time reporting' for clinicians will be most valuable, providing access to patient scores at the point of care so that this information can be used to guide shared decision-making and plan clinical care. It is likely that feedback from Standard Set users will contribute to the refinement and modification of these measurement sets, and shortening the Standard Set to focus on key patient-reported and clinical items would further facilitate its use in busy clinical settings. Future translation of the Standard Set into languages other than English is also critical to ensure that data can be collected from representative patient populations.

As a direct outcome from the current study, the Department of Orthopaedic Surgery at RMH has now secured additional funding from hospital management to support the ongoing collection of PROMs data and the implementation of a web-based PROMs platform. It is envisaged that these data will be used to support quality improvement activities (including benchmarking) and for organisation-level reporting. Liaison with the technical provider is now underway, to ensure that the new platform contains all the required capabilities for data capture and reporting.

This study was supported by a research grant from the HCF Research Foundation.