
Using Patient-Reported Outcome Measures to Improve the Use of Elective Orthopaedic Surgeries: Development and Evaluation of a Treatment Decision Support Intervention for Patients with Knee Osteoarthritis

Faculty:

Assoc Professor Luo Nan

Email: ephln@nus.edu.sg

Project Description:

The global burden of knee osteoarthritis (OA) is escalating due to rising obesity and aging populations, leading to an increase in total knee replacement (TKR) surgeries worldwide. Patient decision support interventions (PDSIs) integrating patient-reported outcomes (PROs) have the potential to enhance clinical decisions, patient care experiences, outcomes, and resource utilization. This PhD project will adopt a mixed-methods approach to develop a Patient-Reported Outcome Measure-Based Decision Support Intervention for Total Knee Replacement surgery (PRECEDE-TKR). The project includes four studies:

1. **Qualitative interviews:** Conduct interviews with knee OA patients and orthopaedic surgeons to explore their perspectives on treatment decision-making and the use of PROs to enhance this process.
2. **Retrospective study:** Analyse data from a local PROs registry to establish prediction models for post-operative PROs following TKR surgery.
3. **Prototype development:** Develop and alpha-test a PRECEDE-TKR prototype application and implementation plan.
4. **Cluster randomized controlled trial:** Evaluate the effects of PRECEDE-TKR on decision quality, patient outcomes, and experiences in routine clinical practice.

Interested students please send your CV and official transcripts to Associate Professor Luo Nan (email: ephln@nus.edu.sg).