

Appropriateness for Hip and Knee Replacement

A system based perspective

Background

Hip and knee replacement is an effective treatment for individuals who are experiencing the pain and disability of end stage arthritis in their knee or hip. These procedures reduce pain and increase function. However, there is concern that these procedures may be performed in patients for whom there will be little or no benefit. Significant work has been undertaken to attempt to identify patients who will benefit from joint replacement surgery. This is a very complex problem as there is no widely accepted definition of a “good” outcome since outcome includes a number of variables (pain, function, patient satisfaction) and there are a number of confounding factors (patient characteristics, clinical findings, pre-surgical function, patient expectations, comorbidities). Further complicating this process is the role of the primary care provider (family physician or primary care nurse practitioner) who have the longitudinal relationship with their patients and the responsibility for their medical management including the management of other medical and psychosocial comorbidities. As such they are critical to the identification of appropriate patients, including the resources needed to support the patient post surgery. The intake process for patients undergoing consultation for a hip and knee replacement also often involves individuals with additional training (such as a physiotherapist or nurse) to undertake clinical assessment in order to identify the patients’ readiness for surgical consultation. In order to promote effective decision-making on surgery therefore the system needs to be designed to ensure each professional has the information and ability to effectively perform their role and that this is aligned so that each individual is providing value to the patient and the system.

System factors

The following provides an overview of the factors that have been identified as important to facilitate effective decision-making in the discussion on surgery that occurs between the surgeon and the patient.

- **Standardized process throughout surgery and recovery built on best clinical practices**

In order to make the decision regarding surgery the patient and surgeon need to be certain of the clinical processes that will be undertaken including pre operative, surgical and post operative procedures. All care should follow the best practices identified in the literature including appropriate use of diagnostic imaging (x-rays/MRI/CT etc.), prosthesis matching for patient age, activity and bone quality, medical management and rehabilitation. Processes should be updated as evidence emerges.

- **Patient education to address expectations**

In order for the patient to make the decision regarding surgery they need to have accurate information on what will happen to them including pre operative, surgery and postoperative procedures including medical management and rehabilitation. Patients undergo the surgery for their own personal reasons. The patient must therefore be provided with the information on how the surgery will address their needs and expectations to allow them to make an informed decision. The education information should be:

- *Multi modal education available including written, electronic and verbal*
- *Clear and realistic about the potential outcomes including limitations of surgery based on best available evidence*
- *Consistent between all providers*
- *Include information about the surgery but also about the patient experience (e.g. pain) and the rehabilitation process*

- **Effective and respectful patient decision making process**

Although the final decision is made in a short meeting with the surgeon the decision making process for patients requires them to consider their options. This process varies per individual and needs to be respected. The following can assist with the process:

- *All necessary information is available*
- *Trained individuals available with time to answer patients’ questions*
- *Use of decision aids to consider other options*
- *Readiness assessment including social circumstances*

- **Evidence of failed conservative management (physical)**

Patients should have undergone a program of conservative management that is specific to the management of degeneration of the knee or hip joint. This program should:

- *Include active exercise*
- *Provide self management strategies*
- *Be accessible to all (including affordable)*

- **Effective intake process**

The intake process needs to be designed to provide the necessary information to the surgeon and to the patient as well as use the best practice in wait times management. This process should include:

- *Standardized process that offers the ability to see the surgeon of choice or the surgeon with shortest wait list*
- *Central intake to ensure patients receive equitable access which addresses complexity*
- *Referral tracking to manage the patients who are waiting*
- *Active management of the wait lists based on changes related to both patient and resource factors*
- *Re entry option*

- **Timely access and active management of resources**

In order to effectively make a decision on undergoing surgery there needs to be the availability of timely resources. The patient needs to undertake a consultation with a surgeon and have access to the surgery within a pre designated time line that allows for them to prepare and is not so long that their condition deteriorates and they experience an increase in symptoms, which can lead to poorer outcomes. The resources that are required and need to be coordinated are:

- *Consultation (assessment program and surgeon)*
- *Surgery*
- *In patient bed*
- *Rehabilitation for optimal outcomes*

- **Standardized communication with primary care**

Primary care physicians have made the consultation for the surgery and as such are critical to the identification of appropriate patients. The system needs to be designed to promote effective primary care to provide medical management (pain management, referral to appropriate programs and interdisciplinary health care services to support exercise and self-management) and ongoing supportive communication with patient through their wait time for surgery. The system also needs to provide feedback on referral appropriateness for surgery to educate primary care on the management of hip and knee arthritis for future patients.

- **Data system that effectively promotes decision making**

The management of patients through a systems approach requires data to be available including information on volumes of referrals, surgical yield and wait times to consultation as well as to surgery. In order to be used effectively data should be tracked at a provincial, regional, local and surgeon level and reported to all relevant stakeholders including public reporting where appropriate.

- **Funding aligns with program and incents the system to performance**

Hip and knee replacement surgery has positive long-term outcomes for patients including a reduction in their pain and disability as well as an increase in function. The management of hip and knee replacements requires a coordinated approach to funding that facilitates the system to manage the volumes of appropriate patients. The funding should be open and transparent and incent positive patient outcomes.