Best Practices Across the Continuum of Care for Total Joint Replacements (TJR): A Review of the Literature

— QUICK REFERENCE GUIDE —

PURPOSE AND APPROACH:

Through a grant from The Change Foundation and Government of Ontario,[1] the GTA Rehab Network retained two content experts[2] to conduct a review of the literature on best practices related to total hip replacements (THR) and total knee replacements (TKR). This document is a quick reference to the key findings.[3] Over 250 articles were reviewed. The evidence was categorized as suggestive or emerging/insufficient.

What's suggestive evidence?	What's emerging/ insufficient evidence?
≥ 1 Randomized Controlled Trials rated good/excellent	≥ 1 Randomized Controlled Trials rated fair
≥ 1 systematic reviews rated good/excellent	≥ 1 systematic reviews rated fair
≥ 4 other types of research fair/above average	≥ 1 other types of research fair/above average

Key Words Searched: *anaesthesia, best practice, evidence based practice, primary healthcare, preoperative care, postoperative care, peri-operative care, patient expectations, complications, inpatient, outcomes measures, outcome assessment, practice guidelines, patient education, teaching continuum passive motion, occupational therapy, physical therapy, physiotherapy, rehabilitation, blood loss, blood transfusion, autologous, and patient satisfaction.*

RESULTS:

Results: Surgical Procedures

- For minimally-invasive knee replacement surgeries, the extensor mechanism and the suprapatellar pouch are not violated. There is **insufficient evidence** to provide consensus on what is minimally-invasive for hip replacement patients.
- There is **insufficient evidence** to distinguish between mobile bearing and fixed bearing prosthesis on outcomes.
- Using incidence of wound infections, haematomas and wound dehiscence, there is **insufficient evidence** to support the use of closed-over, open-suction drainage.

Results: Patient Education

- **Suggestive evidence** in literature of positive impact of pre-operative education on patient-related factors (anxiety, satisfaction, and pain management) & episode-of-care-related factors (LOS and cost-effectiveness).

[1] The views expressed here do not reflect those of The Change Foundation or the Government of Ontario.
[2] The GTA Rehab Network gratefully acknowledges Leslie Soever and Crystal MacKay for conducting the research.
[3] This quick reference guide summarizes the full literature review which is contained in Chapter 2 of *Best Practices Across the Continuum of Care for Total Joint Replacement*, available at www.gtarehabnetwork.ca/publications.asp

Results: Pain Management

There is **suggestive evidence** to support any of the various options including:

- Intravenous patient-controlled analgesia (PCA)
- Epidural catheter
- Intramuscular morphine injections
- Oral medication and Lumbar plexus blockade

Results: Blood Loss

There are multiple options but **insufficient evidence** to recommend one as optimal:

- Allergenic or donor blood
- Autologous blood
- Erythropoietin alfa
- Hypotensive epidural anaesthesia

Concerns related to risk of infection, availability of blood, and associated costs are motivating the medical community to set "bloodless surgery" as gold standard.

Results: Venous Thromboembolism Prophylaxis[4]

There are multiple options but **insufficient evidence** to recommend one as optimal.

Pharmacological methods include:

- Low-molecular-weight heparin
- Adjusted-dose vitamin K antagonist

The sole use of acetylsalicylic acid, dextran, low-dose unfractionated heparin, graduated compression stockings, intermittent pneumatic compression, or venous foot pump is not recommended for THR patients.

Results: Clinical Pathways

- Studies have addressed the impact of clinical pathways on: LOS; cost; outcomes (e.g., pain and function); complications; and patient satisfaction.

Evidence is **suggestive** for use of clinical pathways to **reduce hospital LOS and costs**.

Results: Rehabilitation

- Rehabilitation programs focus on the following: education; organization of home resources; mobility/function; strength and range of motion (ROM); pain reduction; activities of daily living (ADLs).

There is **suggestive evidence** of improved outcomes for patients receiving rehab at each stage of the continuum.

Results: Discharge Destinations

- Specific factors are associated with discharge to inpatient rehabilitation, including older age, co-morbidity and social supports.
- In the available literature, outcomes following TJR are similar for patients who are discharged to home care or inpatient rehabilitation.

There is **insufficient evidence** to justify the use of inpatient rehab over home care rehabilitation.

Costs of inpatient rehab are substantially higher than for rehabilitation in the home.

[4] Prevention of blood clots in superficial and deep veins.

550 University Avenue, Room 920 Toronto, ON M5G 2A2 Tel: 416-597-3057 info@gtarehabnetwork.ca www.gtarehabnetwork.ca