Outpatient Rehab Process Maps for Total Knee and Total Hip Replacements

Separate process maps for Total Knee and Total Hip Replacements have been developed to schematically describe the rehabilitative care processes that are recommended to occur in the Pre-Operative Phase, Acute Admission Phase and the Outpatient Rehab phase. (See Figure 1.1 and 1.2)

**Components of Outpatient Rehab following Total Knee Replacement**

<table>
<thead>
<tr>
<th>Model of Outpatient Rehab following Total Knee Replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>For patients discharged home following Total Knee Replacement:</td>
</tr>
<tr>
<td>• 90% of patients will require, on average:</td>
</tr>
<tr>
<td>» 1 assessment visit (1 hour)</td>
</tr>
<tr>
<td>» Up to 2 hour class, 2x per week for 6 weeks² ³</td>
</tr>
<tr>
<td>» Class format, run by PT/PTA</td>
</tr>
<tr>
<td>• 10% patients discharged home will require:</td>
</tr>
<tr>
<td>» 1 assessment visit <strong>and</strong></td>
</tr>
<tr>
<td>» 1:1 treatments instead of a class format and will need, on average, up to 15 treatment visits (30 minute treatment visit plus 15 minute documentation time)</td>
</tr>
</tbody>
</table>

Of the patients who first received Home and Community Care, some may require additional outpatient treatment.

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1 This model has been updated in conjunction with a review of the Rehabilitative Care Alliance’s *Rehabilitative Care Best Practice Framework for Patients with Primary Hip and Knee Replacements* (March 2017), which can be accessed at: [http://rehabcarealliance.ca/uploads/File/Initiatives_and_Toolkits/QBP/RCA_TJR_Rehab_Best_Practice_Framework__March_2017_.pdf](http://rehabcarealliance.ca/uploads/File/Initiatives_and_Toolkits/QBP/RCA_TJR_Rehab_Best_Practice_Framework__March_2017_.pdf)


Components of Outpatient Rehab following Total Hip Replacement

Given differences in surgical practices, patient profiles and other environmental factors (e.g. degree of familiarity with the patient in the Outpatient Rehab setting; patient’s geographical proximity for surgical follow-up etc.), flexibility has been built into this guideline regarding how and when outpatient rehab should be provided following elective, primary total hip replacement. The guideline is intentionally not rigidly prescriptive in order to meet the varying post-acute rehab needs of patients and allow for application across settings.

<table>
<thead>
<tr>
<th>Model of Outpatient Rehab following Total Hip Replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>For patients discharged home following Total Hip Replacement:</td>
</tr>
<tr>
<td><strong>Class or 1:1 Session:</strong></td>
</tr>
<tr>
<td>» Scheduled at approximately 2-6 weeks post-acute care discharge</td>
</tr>
<tr>
<td>» To assess patient, review education, help patient progress his/her home exercise program, and address any concerns.</td>
</tr>
<tr>
<td>» Class format: 60 – 90 minutes (education and treatment); class size of 4-6 patients; class run by PT/PTA. The length of time for an individual session will vary based on patient need and whether additional sessions are recommended.</td>
</tr>
<tr>
<td><strong>Follow-up session(s) - Stream 1:</strong></td>
</tr>
<tr>
<td>In large volume centres that treat their own patients and have standardized guidelines among the surgeons, a one visit model will often be sufficient. For outpatient rehab programs that treat patients from other centres, a two visit (or more) model is the preferred approach. The length of these subsequent sessions will vary depending on patient needs.</td>
</tr>
<tr>
<td>» Scheduled after restrictions are lifted [6-12 weeks post-THR] or at an earlier/later time based on the physiotherapist’s first assessment of the patient’s needs</td>
</tr>
<tr>
<td>» The 2nd session will address helping the patient to progress his/her exercise program, assessing the need for gait aid(s) and other functional needs.</td>
</tr>
<tr>
<td><strong>1:1 Treatment - Stream 2:</strong> Approximately 20 - 25% of the patients referred to outpatient rehabilitation may require 1:1 treatment, up to 8 sessions after the initial class/session or 2nd follow-up session. These sessions are provided to support progression of the patient’s exercise program, provide re-checks, and to assess the need for gait aid(s) and other functional needs.</td>
</tr>
</tbody>
</table>

Triaging into Class Model versus Individual Treatment Session

The triage of patients into the class model vs. 1:1 treatment sessions is based on the assessment of the treating physiotherapist with consideration of the following factors:

- Pre-surgical status:
  » Longstanding contractures or muscle imbalances (e.g. hip dysplasia, severity of postural/muscle compensations;
Co-morbidities/other conditions (e.g. polio, CP, stroke, severe back pathology, RA, Alzheimer, dementia);

- Surgical complexity:
  - Fractures during surgery, compromised abductors (excised, repositioned);
  - Osteotomy (femoral shortening/lengthening; extended trochanteric osteotomy, acetabular cup repositioning);
  - Bone graft reconstruction of femur/acetabulum with extra restrictions;
  - Delayed follow-up secondary to continued restrictions beyond 6 weeks;

- Social/Cultural Factors (e.g. language barriers; difficulty following instructions)

**Discharge from Outpatient Rehab**

Discharge from an outpatient rehab program is determined by the patient’s functional mobility and ability to function safely in his/her environment, his/her knowledge of the prescribed home exercise program and how to progress his/her prescribed home exercise program.
Pre-operative Phase

- Pre-op education
  - Information on acute care stay & pain management
  - Prepare patient for discharge to home
  - Teach pre-op exercises
  - Provide written material
  (See Appendix A: A Patient Guide – Preparing for Surgery)

- Referral to Inpatient Rehab for small % of patients

Acute Care Admission

- TKA Surgery
- Discharge home with independent exercise program or private PT
- Confirmation of referral to OPR. Complete Post-Op outpatient rehab referral form, if applicable

Change in Care Plan

- Discharge to Inpatient Rehab**
- Discharge home with CCAC**
  (See Appendix D: CCAC Criteria)

Outpatient Rehabilitation

Within 7 Business Days Post Discharge

- Week 1
- Week 2
- Week 3
- Week 4 - 5
- Week 6
- Week 10

- TKA Class
  - On average, 2/wk x 6 weeks (90% of patients)

- 1:1 PT Assessment
  - For complex care
  - Up to 15 visits (10% of patients)

- 1:1 MD Assessment
  - (if required by OPR hospital)

- PT Re-assessment
  - to determine if progress is adequate for current treatment plan or additional sessions required (class or 1:1)

- Aquatic PT Class
  - If indicated
  - incision is healed/dry
  - medically appropriate

- Communication with Orthopod’s Team at patient’s follow-up appointment
  - re: patient’s progress or sooner if problems identified with ROM, infection etc.

- D/C from program*^ (May be earlier/later depending on patient’s progress)

- 1:1 PT follow-up

*If surgery cancelled, Acute Care to notify OPR program

**If change in care plan, Acute Care to notify OPR program or Home and Community Care (if referral initiated)

Pre-op education

- Information on acute care stay & pain management
- Prepare patient for discharge to home
- Teach pre-op exercises
- Provide written material
  (See Appendix A: A Patient Guide – Preparing for Surgery)

- Referral to Inpatient Rehab for small % of patients

Discuss transportation options with patient
  (See options in Appendix B)

Discharge to Home

- (90% Target)

Referral to Inpatient Rehab

- for small % of patients

OPR to:

- Contact patient with a tentative date of 1st OPR appointment.
- If tentative date is >7 business days of projected discharge date, OPR to notify acute care team.

Patient to arrange private PT

*If surgery cancelled, Acute Care to notify OPR program

Figure 1.1 Outpatient Rehab (OPR) Care: Process Map for Patients with Elective Knee Arthroplasty
Figure 1.2 Outpatient Rehab (OPR) Care: Process Map for Patients with Elective Hip Arthroplasty

Pre-Operative Phase

See Guideline for Pre-Admission Processes: Primary, Elective, Unilateral Total Joint Replacement (GTA Rehab Network 2014)

Pre-op education
- Information on acute care stay & pain management
- Prepare patient for discharge to home
- Teach pre-op exercises
- Provide written material
- Physiotherapy, social work and/or occupational therapy assessments, if required for patients identified as high risk

(See (i) Appendix A: A Patient Guide – Preparing for Surgery; (ii) QBP Clinical Handbook Primary, Unilateral Hip Replacement, MOHLTC, June 2012)

Acute Triage Decision (See Appendix C)

THA Surgery

Discharge with CCAC* (See Appendix D: CCAC Criteria)

Discharge to Home (90% Target)
- A referral for OPR may be initiated in the pre-op phase.
- Timing of 1st OPR visit may vary* however, an initial OPR visit for assessment/class at 2-3 weeks post-op meets the needs of most patients.

Referal to Inpatient Rehab for a small % of patients

Discharge to Inpatient Rehab* (10%)

If change in care plan, Acute Care to notify OPR program or CCAC (if referral initiated)

Change in Care Plan

Discharge to Inpatient Rehab* (5%)

Surgical Follow-Up Timing of surgical follow-up varies amongst surgeons

Patient Follow-up Appointment - weight bearing status & update restrictions as needed

Refferal to OPR (as indicated)*

Discharge home with independent exercise program and referral to Outpatient Rehab

Outpatient Rehabilitation Appointment provided within 1 week of receiving referral

Post-Op Week 2-6

1st OPR Session
- For assessment, education, address questions/concerns and to progress home exercise program.

Follow-Up 2nd Session
- May occur at 6-8 weeks post-op to progress patient after restrictions are lifted orearlier if to address other patient functional need(s)

Post-Op Week 6-12

1:1 PT
- For Complex Care up to 8 visits

1:1 MD/RN Assessment (if indicated available)

Inpatient rehab or Home and Community Care

No outpatient rehab

D/C from program determined by patient’s functional mobility and ability to function well in his/her environment, their knowledge of the prescribed home exercise program and how to progress program

* Timing may vary due to patient’s ability to engage in home-exercise program, need for mobility aid (e.g. walker vs. cane) or ROM restrictions

1The triage of patients into the class model vs. 1:1 treatment sessions is based on the assessment of the treating physiotherapist.

2In large volume centres that treat their own patients and have standardized guidelines among the surgeons, a one visit model will often be sufficient. For OPR rehab programs that treat patients from other centres, a two visit model is the preferred approach.

3A % of patients may need referral to OPR after Inpatient rehab or Home and Community Care.
**Acute Care Rehab Responsibilities in the Referral Process for Outpatient Rehab**

<table>
<thead>
<tr>
<th>Phase of Care</th>
<th>Responsibilities: Acute Care</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Pre-Operative Phase</strong> (Also see Guideline for Pre-Operative TJR Processes)</td>
</tr>
<tr>
<td></td>
<td>• <strong>Meet with patient pre-operatively</strong> for pre-op education, medical workup, discharge planning and to initiate referral to Outpatient Rehab</td>
</tr>
<tr>
<td></td>
<td>• <strong>Use Discharge Triage Considerations</strong> to determine most appropriate post-acute referral:</td>
</tr>
<tr>
<td></td>
<td>› Outpatient Rehab</td>
</tr>
<tr>
<td></td>
<td>› Independent Home Exercise Program</td>
</tr>
<tr>
<td></td>
<td>› Inpatient Rehab</td>
</tr>
<tr>
<td></td>
<td>› Home and Community Care</td>
</tr>
<tr>
<td></td>
<td>• For the small minority of patients (i.e. &lt; 10%)(^4) who may require inpatient rehab, the “<strong>Rehab Pre-Admission Form: Elective Hip and Knee Surgery</strong>” can be completed to provide an initial notification to an inpatient rehab program of a potential need for admission of a patient from acute care due to the complexity of a patient’s needs. The use of this form does not reserve an inpatient bed for the patient.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Confirm patient has transportation arranged for outpatient rehab</strong></td>
</tr>
<tr>
<td></td>
<td>• <strong>Complete GTA Rehab Network’s Outpatient Rehab Referral Form – Elective Knee or Hip Replacement</strong> (if referring to a Rehab/CCC hospital) and fax to outpatient rehab hospital prior to patient’s surgery.</td>
</tr>
<tr>
<td></td>
<td>› Acute Care will have a communication mechanism in place to ensure that the inpatient acute care team is aware of the referral to outpatient rehab.</td>
</tr>
<tr>
<td></td>
<td>• <strong>If patient’s surgery is cancelled, notify Outpatient Rehab Program</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Acute Care Admission</strong> After patient’s surgery and prior to patient’s acute care discharge:</td>
</tr>
<tr>
<td></td>
<td>• For patients discharged to home, send to outpatient rehab program: a discharge summary note that includes relevant post-op information (PT and/or MD note) and discharge date; treatment restrictions; a discharge medication list (preferred) and date of follow-up appointment.</td>
</tr>
<tr>
<td></td>
<td>• For the small minority of patients discharged to inpatient rehab due to patient complexity: complete the GTA Rehab Network Integrated Acute Care to Inpatient Rehab/CCC Referral Form (paper-based or via RMR) and send it to the inpatient rehab program(s) to which the patient is being referred.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Educate patient</strong> re: discharge destination and confirm the outpatient rehab appointment date/details and whom to contact re: cancellations</td>
</tr>
<tr>
<td></td>
<td>› Discharge patient with date for scheduled follow-up appointment with surgeon</td>
</tr>
<tr>
<td></td>
<td>• <strong>If there is a change in the patient’s care plan</strong> (i.e. patient re-routed to inpatient rehab or discharge date delayed), notify Outpatient Rehab Program or Home and Community Care (if referral initiated)</td>
</tr>
</tbody>
</table>

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The following schematic outlines key components to support the referral process and reduce the risk of a breakdown in the referral process:

**Strengthening Acute Care / OPR Communication and Referral Follow Up for TJR OPR Referrals**

- **Ensure early referral to OPR**
  - Send referral in pre-op phase at least 4-6 weeks in advance of surgery so that OPR can be arranged within the recommended timeline.

- **Establish acute care key referral contact**
  - Point of contact for OPR re: status of referral

- **Monitor Referral Responses**
  - Acute care to monitor RM&R referral responses and paper-based referrals to determine if referral is declined

- **Provide follow-up for declined referrals**
  - Acute care to contact patient to determine other OPR referral options and submit referral as applicable

*To be considered in conjunction with the recommendations in the GTA Rehab Network’s Guideline for Pre-admission TJR Rehab Processes and the Outpatient Rehab Process Maps for Total Knee and Total Hip Replacements.

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**Outpatient Rehab Responsibilities in the Referral Process for Outpatient Rehab**

<table>
<thead>
<tr>
<th>Phase of Care</th>
<th>Responsibilities: Outpatient Rehab</th>
</tr>
</thead>
</table>
| **Pre-Operative Phase**| • Schedule and hold an initial outpatient rehab appointment within recommended guidelines for the TJR patient following receipt of the GTA Rehab Outpatient Rehab Referral Form – Elective Knee or Hip Replacement from acute care  
  » Outpatient rehab appointment to be scheduled according to recommendations within the model of care (i.e. for TKR within 7 business days of anticipated discharge from acute care and at 2-3 weeks post-operatively for most THR patients)  
  • Communicate the date/details of the tentative first outpatient rehab appointment to the patient  
  • Send an appointment confirmation letter to the patient  
  • Notify acute care contact/team as soon as possible if the tentative date of the first outpatient rehab appointment cannot be scheduled within the recommended timeline as per the TJR model of care. |
<p>| <strong>Acute Care Admission</strong>| • If the referral to outpatient rehab is initiated during/after the acute care admission, notify acute care contact/team as soon as possible if the date of the first outpatient rehab appointment cannot be scheduled within recommended timeline within model of care, |</p>
<table>
<thead>
<tr>
<th>Phase of Care</th>
<th>Responsibilities: Outpatient Rehab</th>
</tr>
</thead>
</table>
| **Outpatient Rehab** | - Follow-up with the patient if the date of the 1st appointment (already communicated to the patient in the pre-operative phase via a letter from the OPR program) is changed because of a change in the patient’s status/dischage date.  
- Outpatient rehab program to incorporate the GTA Rehab Network’s TJR Outpatient Rehab Model of Care, including groups/classes as per process map  
- Outpatient rehab team will send any necessary progress note/treatment updates to referring MD/surgeon/family MD as requested/indicated  
- The treating physiotherapist may opt to use the GTA Rehab Network’s TJR Follow-Up Form on an “as needed” basis at his/her discretion to communicate with the patient’s surgeon on the patient’s progress at the time of the patient’s 1st post-surgical follow up visit (i.e. to report on the client’s progress for cases that are more complex; to ask the surgeon for comment on a particular question).  
- Outpatient rehab team will send outpatient rehab discharge summary to referring MD/surgeon/family MD  
- Outpatient rehab team will liaise with key stakeholders should patient be deemed not appropriate for outpatient rehab (i.e., Home and Community Care, inpatient rehab) |