

CLINICAL PATHWAY
TOTAL KNEE REPLACEMENT

Expected LOS: 4 days

Clinical Pathways are not considered a substitute for professional judgement.

Phase:	Physician's Office	Physio Preop Class	Pre-Surg Assessment Clinic
Date:			
PATIENT OUTCOMES	Patient introduced to plan of care Surgery booked Appointments to be made by patient: - Blood Conservation Clinic - Pre-Admission Clinic (up to 28 days preop) - Preop Physio class (2-3 weeks preop)	Patient/family will be knowledgeable of preop preparations and postop care. Patient to fill out questionnaire, providing information about home environment, current list of equipment used, family supports, and activity level. Clinical Indicator #1: Attended preop physio class? Yes _____ No _____ (initial) If NO, reason: _____	Patient/family will be knowledgeable of pre & postop care. Verbalizes acceptance with d/c plans PO day 4 Verbalizes understanding of active role in hospital and need to modify activities at home
TEACHING	Physician initiates pathway with patient/family. Patient is given preop package Patient to book history & physical with family physician within 28 days prior to surgery or internal medicine arranged by surgeon Book Geriatrician appointment if indicated	Patient brings preop package Review the following information: Patient pathway booklet Exercises, walking with equipment (walker and/or crutches), practicing stairs, general safety, clothing and footwear Pain management DB&C, F&A exercises Functional transfers, home set up/ safety and accessibility	Patient brings preop package. Preop video viewed. Patient Pathway reviewed (Hemovac, CSM, anticoagulation tests & meds, use of heel protectors bilaterally, LOS) Patient/family learning needs identified & addressed Patient reminded to notify other ancillary physicians eg: cardiologist, endocrinologist
DISCHARGE PLANNING CRITERIA	ELOS reviewed - 4 days	ELOS reviewed -4 days Vendor's list provided and required equipment needs in home prior to discharge on POD 4 List of equipment (mobility aid, bathroom safety equipment, dressing aids, walker / crutches or cane) Follow-up according to CCAC (PT pathway) and/or outpatient PT appointment Patient to arrange for Transhelp or other means of transportation (family or friends) for appointments	ELOS reviewed - 4 days Review and contract with pt/family: Need to arrange for a caregiver to stay with pt up to 2 wks or until pt feels support is no longer needed. Alternately, pt may choose to stay at the home of a family member where support can be provided. Identify barriers for discharge Provides information on resources for orthopedic respite
Pathway Reviewed with Patient/Family (Initial):	_____ Yes _____ No	_____ Yes _____ No	_____ Yes _____ No
Patient/Family Satisfied with Progress?	YES <input type="checkbox"/> NO <input type="checkbox"/> if NO, see progress notes	YES <input type="checkbox"/> NO <input type="checkbox"/> if NO, see progress notes	YES <input type="checkbox"/> NO <input type="checkbox"/> if NO, see progress notes
Signatures:	_____ Initials _____ _____	_____ Initials _____ _____	_____ Initials _____ _____



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Date:			
INTERVENTIONS:			
Assessments	Consent(s) initiated in office	Questionnaire completed by patient or family member Assess for appropriate assistive devices and equipment needs	Data Base completed, including assessment for delirium, dementia, cognition, hx of post op nausea and vomiting (PONV) & other surgical risk factors. Consents reviewed CCAC home assessment prn
Consults	Internal Medicine if indicated Geriatrician if indicated	Physiotherapist (PT)	Preop Anaesthesia consult as indicated according to: Level of risk, anxiety, lack of knowledge.
Tests			CBC, lytes, urea, creat Chest xray, ECG +/- xray of affected knee including standing AP +/- PT, PTT, INR +/- Sickle Cell test +/- Group & Reserve
Treatments		Patient to attend physiotherapy class	Review pts role in actively participating in care pathway
Medications	Discontinuation of ASA, NSAIDS, warfarin (Coumadin), clopidogrel (Plavix) and herbal meds 7 days prior to surgery and ticlopidine (Ticlid) 14 days prior to surgery as directed by physician		Reconcile medications and meds to take a.m. of surgery. Review d/c ASA, NSAIDS, warfarin (Coumadin), ticlopidine (Ticlid), clopidogrel (Plavix) and herbal meds COX-2 agents day prior to surgery if applicable Review potential need for home INR monitoring
Nutrition			ONE DAY PREOP NPO after midnight.
Activity/ Safety		Review activity and safety as per PT class content	
Elimination			<i>Assess bowel routine/function</i>
Pain Management		Review pain management as per PT class content	Review pain management Consider prophylaxis for PONV with dexamethasone or ondansetron if 2 or more risk factors



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Phase:	Day of Surgery Surgical Check-in	Day of Surgery Postop	Postop Day 1
Date:			
PATIENT OUTCOMES	Patient will be prepared for surgery Verbalizes understanding of postop care requirements	Patient/family will be informed of postop condition _____ HR, BP +/- 20% pre-op value RR +/- 10% pre-op value +/- O2 Temperature less than or equal to 38.4 Patient will verbalize pain control, pain score less than or equal to 4 _____ Verbalizes understanding of postop care requirements	HR, BP +/- 20% pre-op value RR +/- 10% pre-op value +/- O2 Afebrile CSM within normal range Patient will: Verbalize pain control _____ Transfers with assistance to/from bed/chair _____ Ambulates greater than or equal to 1 and prn _____ Achieves functional mobility targets as per PT P&P Demonstrates proper positioning
TEACHING	Review information as per patient and family needs Review length of time in PACU: - Approximately 2 + hours Review pathway and activity participation while in hospital	Orient to room, nursing unit AND care routines _____ DB&C _____ F&A exercises _____ PCA/epidural _____ Repositioning _____ Review drain, IV _____ CSM _____ Dressing _____	Review: Post op care, pain management, monitoring, positioning, activity, diet, elimination, dressings, drains, catheter, IV and medications. DB&C, F&A exercises Teaching complete _____ Begin Self administration of sc injections if applicable _____ Ambulation/Knee Exercises (PT)
DISCHARGE PLANNING CRITERIA		Planned discharge date is written on bedside communication board	ELOS reviewed 4 days Pt and family informed of postop condition Discuss any outstanding discharge needs if applicable Outpatient PT referral if applicable
Pathway Reviewed with Patient/Family (Initial):	_____ Yes _____ No	_____ Yes _____ No	_____ Yes _____ No
Patient/Family Satisfied with Progress?	YES <input type="checkbox"/> NO <input type="checkbox"/> if NO, see progress notes	YES <input type="checkbox"/> NO <input type="checkbox"/> if NO, see progress notes	YES <input type="checkbox"/> NO <input type="checkbox"/> if NO, see progress notes
Signatures:	Initials _____ _____	Initials _____ _____	Initials _____ _____



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Phase:	Day of Surgery Surgical Check-In	Day of Surgery Postop	Postop Day 1
Date:			
INTERVENTIONS:			
Assessments	Reconfirm consents and Data Base Vital signs Complete preop checklist	VS q2hx4, then q4h x 3 and prn OR as per APS PCA or Neuraxial orders CSM q4h Pain score, sedation score/sensory & motor if spinal anesthetic Falls / delirium assessment Fluid balance q4h Bowel sounds q8h +/- Hemovac output q4h - notify surgeon if greater than 300 mL/4h	VS q4h OR as per APS PCA/Neuraxial orders CSM and pain score q4h Fluid balance Bowel sounds q8h Dressing site +/- Hemovac output q8h Call surgeon if Hgb less than 80 Falls / delirium assessment
Consults		PT OT prn RT prn <i>Acute Pain Service prn</i>	PT OT prn RT prn Internist prn Acute pain service prn
Tests	MRSA results Other tests as ordered/or as per protocol (e.g. Diabetic)	X-ray - AP/lateral of affected knee as ordered (PACU) As per physician specific orders	CBC, lytes, urea, creat +/- PT/INR if on warfarin Other tests as ordered or as per protocol (e.g. Diabetic)
Treatments	Warm blankets	Warm blankets IV as per physician order O2 as per orders/protocol DB&C, F&A, q1h while awake & prn Falls and delirium interventions if applicable Apply ice No pillow under operative knee	IV as per physician orders, decrease TKVO if po intake is greater than 400 mL/8h and urine output greater than 30 mL/h x 8h. O2 as per orders/protocol DB&C, F&A q1h while awake & prn Falls and delirium interventions if applicable Apply ice No pillow under operative knee Ambulation/Knee exercises (PT) CPM as ordered
Medications	Identify meds taken a.m. of surgery Pre op medications as ordered	Antiemetics/PONV prophylaxis as per orders Antibiotics & VTE prophylaxis as per orders Other medications as per surgeon	Antiemetics/PONV prophylaxis as per orders Antibiotics & VTE prophylaxis as per orders Other medications as per surgeon
Nutrition	Reconfirm & reinforce NPO	Sips to DAT as per patients specified diet	DAT as per pts specified diet
Activity/ Safety		Weight bearing status as ordered Assist to sitting position Stands at bedside with assistance Reposition q2-4h and prn If spinal, safety precautions Heel protectors bilateral	Weight bearing status as ordered Up in chair/side of bed for meals as tolerated Ambulates greater than or equal to 1 with gait aid as per PT BR by commode/walker with assist Exercises/ROM (PT)
Elimination		Bedpan/urinal/commode Catheterize as per orders	Bedpan/urinal/commode Catheterize as per orders Initiate bowel routine
Pain Management		PCA or epidural OR IV/po analgesia as ordered If pain or PONV not controlled, notify MD	PCA or epidural OR IV/po narcotics APS to assess route of analgesia +/- D/C PCA/Epidural as per orders



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Phase:	Postop Day 2	Postop Day 3	Postop Day 4 D/C Goals
Date:			
PATIENT OUTCOMES	VS stable (see day 1) _____ Afebrile, CSM normal _____ Patient will: Verbalize pain control _____ Ambulates greater than or equal to 1 and prn _____ Achieves functional mobility targets as per PT P&P Demonstrates proper positioning Verbalizes understanding of pain management and bowel routine	Patient will: Verbalize pain control _____ Participate in ADL, progress to independence _____ Up for meals _____ IV d/c & tolerating DAT _____ +/- Hemovac drain d/c if output less than 300 mL/4h _____ Walks greater than or equal to 2 x to BR with gait aid _____ Verbalize understanding of teaching requirements _____ Demonstrates self adm of sc injections _____	Patient will: Verbalize pain control _____ Complete ADL's independently _____ Verbalize understanding of teaching requirements _____ Knee exercises independently (PT) Understands no pillow under operative knee (PT) Has had a BM _____
TEACHING	Review: Post op care, pain management, monitoring, positioning, activity, diet, elimination, dressings, drains, catheter, IV and medications. DB&C, F&A exercises Importance of VTE prophylaxis Teaching complete _____ Begin Self administration of sc injections if applicable _____ Ambulation/Knee Exercises (PT)	Review: Post op care (day 2) Self administration of sc injections if applicable Danger signals (DVT/PE, UTI, wound infection) Medication side effects/interactions Coping strategies for home Staple removal, follow-up MD Teaching complete _____ Ambulation/Knee Exercises (PT)	Review: Self administration of sc injections if applicable _____ Danger signals (DVT/PE, UTI, wound infection) _____ Meds - side effects/interactions _____ Pain management _____ Wound care _____ Bowel routine _____ Coping strategies for home _____ Staple removal, follow-up MD appointments _____ CCAC home visit _____ Pt has information booklets _____ Ambulation/Knee Exercises (PT)
DISCHARGE PLANNING CRITERIA	ELOS reviewed 4 days Notify CCAC of expected d/c date (POD 4); indicate first home PT visit within 24 hrs of arrival home & if wound care required Confirm discharge arrangements complete Out pt PT referral arranged if applicable Plans in place for INR monitoring if d/c on warfarin	ELOS reviewed 4 days Update bedside communication board with d/c time and transportation arrangements Follow up appointments are booked and given to pt/family Confirm CCAC order on chart and plans complete If patient meets criteria for rehabilitation, initiate transfer process	Independent with basic self care _____ Follow-up appt. arranged (staple removal 7-14 days) _____ RX for analgesia & anticoagulation _____ Ambulates independently Climbs stairs if applicable Equipment arranged CCAC-PT / outpatient PT arranged / OR Arrange orthopedic respite OR Transfer Rehab (see criteria)
Pathway Reviewed with Patient/Family (Initial):	_____ Yes _____ No	_____ Yes _____ No	_____ Yes _____ No
Patient/Family Satisfied with Progress?	YES <input type="checkbox"/> NO <input type="checkbox"/> if NO, see progress notes	YES <input type="checkbox"/> NO <input type="checkbox"/> if NO, see progress notes	YES <input type="checkbox"/> NO <input type="checkbox"/> if NO, see progress notes
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Phase:	Postop Day 2	Postop Day 3	Postop Day 4 D/C Goals
Date:			
INTERVENTIONS:			
Assessments	VS/CSM q8h Fluid balance q8h until IV d/c'd Bowel status Pain score Skin integrity Call surgeon if Hgb less than 80 Falls / delirium assessment +/- DC hemovac as per orders	VS/CSM q8h Wound status Bowel status Pain score Skin integrity S&S of DVT Assess mobility for safe discharge home	Wound status Bowel status Pain score Skin integrity S&S of DVT Assess mobility for safe discharge home
Consults	CCAC Pharmacy if applicable	CCAC Pharmacy if applicable	
Tests	CBC, lytes, urea, creat as ordered +/- PT/INR Other tests as ordered or as per protocol (e.g. Diabetic)	Monitor INR if on warfarin Other tests as ordered or as per protocol (e.g. Diabetic)	Home monitoring of INR if on warfarin
Treatments	IV as per physician orders, decrease TKVO if po intake is greater than 400 mL/8h and urine output is greater than 30 mL/h x 8h or d/c as per orders Cont. DB&C, F&A exercises Falls and delirium interventions if applicable Ambulation / Knee exercises (PT) CPM as ordered	D/C IV as per orders Dressing change: clean with N/S, strip dressing Cont. DB&C, F&A exercises Ambulation / Knee exercises (PT) CPM as ordered	Daily dressing change DB&C, F&A exercises Ambulation / Knee exercises (PT)
Medications	Antiemetics/PONV prophylaxis as per orders Antibiotics & VTE prophylaxis as per orders Other medications as per surgeon	As per orders Review medication side effects/interactions for new medications (e.g. warfarin, codeine)	Pt's own medications returned if applicable Rx given (as per orders) Review medication side effects/interactions for new medications
Nutrition	DAT as per pts specified diet	DAT as per pts specified diet	DAT as per pts specified diet
Activity/ Safety	Up in chair/side of bed for meals as tolerated Ambulate with gait aid (assistance as required) as per PT Participate in ADL's	Progress to independent ambulation with gait aid (PT) Progress to independent functional transfers Participate in ADL's Begin stairs if applicable	Shower (+/- waterproof dressing) with assistance Independent ADL's and functional transfers Independent ambulation with gait aid (PT) Manages stairs safely if applicable Achieves approximately 60 degrees flexion or has an appropriate level of knee joint function to go home i.e. performs sit-to-stand
Elimination	Up to BR with assistance Bowel routine	Progress to independent use of washroom Bowel routine, if no BM give suppository/enema prn	Independent use of washroom Bowel routine Assess for BM
Pain Management	D/C PCA/Epidural as per orders Oral analgesia q4-6h regularly, coordinated with activity	Oral analgesia q4-6h regularly, coordinated with activity	Oral analgesia prn



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Regular Rehabilitation (must have 2 or more of the following):

- Unable to ambulate greater than 5-10 m by POD 4
- Patient does not achieve appropriate level of knee function to go home
- Decreased exercise tolerance such that patient would not be able to tolerate CCAC Physiotherapy
- Other medical conditions contributing to slow recovery
- Patient does not have support/assistance from family and/or friends available and Orthopedic Respite not an option
- Patient must be willing to participate in therapy and agree to transfer

Estimated Length of Stay:

- Discharged from Acute: LOS 4 days
- Regular Rehab: Rehab LOS 5-7 days

REFERENCE

