

MOTIV™

MUSCULOSKELETAL OUTCOMES AND
TRACKING INTELLIGENCE VAULT

TOTAL KNEE ARTHROPLASTY PROTOCOL

Version: 9 November 2025

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This document provides PDF versions of each survey utilized to create a longitudinal Case for the current version of the MOTIV™ Total Knee Arthroplasty Observation Protocol.

Circles surveys are provided to patients and clinicians in electronic form, with responsive logic questions, and other elements ensuring an efficient and modern user experience. Any survey can be completed by an authorized user at any time, from any device. Each survey is designed to require no more than thirty seconds to complete.

PATIENT PRE-OPERATIVE SURVEY

Who is completing this survey? *

- Patient/self
- Caregiver

Date of birth: *

Sex: *

- Female
- Male

Race: *

- | | |
|---|--|
| <input type="checkbox"/> American Indian or Alaska Native | <input type="checkbox"/> Asian |
| <input type="checkbox"/> Black or African American ("Haitian" or "Negro") | <input type="checkbox"/> Hispanic or Latino ("Spanish origin") |
| <input type="checkbox"/> Native Hawaiian or Other Pacific Islander | <input type="checkbox"/> White |
| <input type="checkbox"/> Do not want to specify | |

At the moment, what is your back pain? *

- 0 = None
- 1 = Very Mild
- 2 = Moderate
- 3 = Fairly severe
- 4 = Very severe
- 5 = Worst imaginable

Do you experience pain in the following joints? *

Do not include the joints that will be operated on during your upcoming surgery.

- | | |
|-------------------------------------|--------------------------------------|
| <input type="checkbox"/> Left hip | <input type="checkbox"/> Right hip |
| <input type="checkbox"/> Left knee | <input type="checkbox"/> Right knee |
| <input type="checkbox"/> Left ankle | <input type="checkbox"/> Right ankle |

What amount of pain have you experienced in the last week in your other knee? *

- 0 = None
- 1 = Mild
- 2 = Moderate
- 3 = Severe
- 4 = Extreme

How comfortable are you filling out medical forms by yourself? *

- 0 = Not at all
- 1 = A little bit
- 2 = Somewhat
- 3 = Quite a bit
- 4 = Extremely

Patient Catastrophizing Score - Short Form (PCS-4)

Everyone experiences painful situations at some point in their lives. Such experiences may include headaches, tooth pain, joint or muscle pain. People are often exposed to situations that may cause pain such as illness, injury, dental procedures or surgery.

We are interested in the types of thoughts and feelings that you have when you are in pain. Listed below are four statements describing different thoughts and feelings that may be associated with pain. Using the following scale, please indicate the degree to which you have these thoughts and feelings when you are experiencing pain.

When I'm in pain ... *

0 – not at all; 1 – to a slight degree; 2 – to a moderate degree; 3 – to a great degree; 4 – all the time.

0 1 2 3 4

It's terrible and I think it's never going to get any better.

I become afraid that the pain will get worse.

I anxiously want the pain to go away.

I keep thinking about how badly I want the pain to stop.

Visual Analogue Scale (VAS)- Right Knee

Please indicate the level of pain that you feel on average during the day at your RIGHT knee. *

VAS is a measurement instrument that measures the amount of pain you are experiencing. Scores range across a continuum from none to an extreme amount of pain. A higher score refers to greater pain.

No pain  Unbearable pain

Visual Analogue Scale (VAS)- Left Knee

Please indicate the level of pain that you feel on average during the day at your LEFT knee. *

VAS is a measurement instrument that measures the amount of pain you are experiencing. Scores range across a continuum from none to an extreme amount of pain. A higher score refers to greater pain.

No pain  Unbearable pain

KOOS, JR

This survey asks for your view about your knee. This information will help us keep track of how you feel about your knee and how well you are able to do your usual activities. Answer every question by selecting ONLY one appropriate variant. If you are unsure about how to answer a question, please give the best answer you can.

Stiffness

The following question concerns the amount of joint stiffness you have experienced during the last week in your knee. Stiffness is a sensation of restriction or slowness in the ease with which you move your knee joint.

How severe is your knee joint stiffness after first wakening in the morning? *

- None
- Mild
- Moderate
- Severe
- Extreme

Pain

What amount of knee pain have you experienced the last week during the following activities?

Twisting/pivoting on your knee *

- None
- Mild
- Moderate
- Severe
- Extreme

Straightening knee fully *

- None
- Mild
- Moderate
- Severe
- Extreme

Going up or down stairs *

- None
- Mild
- Moderate
- Severe
- Extreme

Standing upright *

- None
- Mild
- Moderate
- Severe
- Extreme

Function, Daily Living

The following questions concern your physical function. By this we mean your ability to move around and to look after yourself. For each of the following activities please indicate the degree of difficulty you have experienced in the last week due to your knee.

Rising from sitting *

- None
- Mild
- Moderate
- Severe
- Extreme

Bending to floor/pick up an object *

- None
- Mild
- Moderate
- Severe
- Extreme

Veterans RAND 12 Item Health Survey (VR-12)

This instrument is used to measure health related quality of life. Please choose one option for each questionnaire item.

In general, would you say your health is: *

- Excellent
- Very good
- Good
- Fair
- Poor

The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf. *

- Yes, limited a lot
- Yes, limited a little
- No, not limited at all

Climbing several flights of stairs. *

- Yes, limited a lot
- Yes, limited a little
- No, not limited at all

During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

Accomplished less than you would like. *

- No, none of the time
- Yes, a little of the time
- Yes, some of the time
- Yes, most of the time
- Yes, all of the time

Were limited in the kind of work or other activities. *

- No, none of the time
- Yes, a little of the time
- Yes, some of the time
- Yes, most of the time
- Yes, all of the time

During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

Accomplished less than you would like. *

- No, none of the time
- Yes, a little of the time
- Yes, some of the time
- Yes, most of the time
- Yes, all of the time

Didn't do work or other activities as carefully as usual. *

- No, none of the time
- Yes, a little of the time
- Yes, some of the time
- Yes, most of the time
- Yes, all of the time

During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)? *

- Not at all
- A little bit
- Moderately
- Quite a bit
- Extremely

These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling.

How much of the time during the past 4 weeks:

Have you felt calm and peaceful? *

- All of the time
- Most of the time
- A good bit of the time
- Some of the time
- A little of the time
- None of the time

Did you have a lot of energy? *

- All of the time
- Most of the time
- A good bit of the time
- Some of the time
- A little of the time
- None of the time

Have you felt downhearted? *

- All of the time
- Most of the time
- A good bit of the time
- Some of the time
- A little of the time
- None of the time

During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)? *

- All of the time
- Most of the time
- Some of the time
- A little of the time
- None of the time

Now, we'd like to ask you some questions about how your health may have changed.

Compared to one year ago, how would you rate your physical health in general now? *

- Much better
- Slightly better
- About the same
- Slightly worse
- Much worse

Compared to one year ago, how would you rate your emotional problems (such as feeling anxious, depressed or irritable) now? *

- Much better
- Slightly better
- About the same
- Slightly worse
- Much worse



RegenMed

CLINICIAN PRE-OPERATIVE EVALUATION SURVEY

BMI:

lb/(in)² x 703

Has the patient taken a daily or regularly intermittent dose of opioids (morphine equivalent) for 90 days prior to surgery?

- Yes
 No

Chronic opioid maintenance:

*This question will become visible if the answer to question Has the patient taken a daily or regularly intermittent dose of opioids (morphine equivalent) for 90 days prior to surgery? is equal to "Yes"

- | | |
|--|--------------------------------------|
| <input type="checkbox"/> Morphine | <input type="checkbox"/> Codeine |
| <input type="checkbox"/> Oxycodone | <input type="checkbox"/> Hydrocodone |
| <input type="checkbox"/> Hydromorphone | <input type="checkbox"/> Oxymorphone |
| <input type="checkbox"/> Tramadol | <input type="checkbox"/> Tapentadol |
| <input type="checkbox"/> Fentanyl | <input type="checkbox"/> Methadone |
| <input type="checkbox"/> Buprenorphine | <input type="checkbox"/> Meperidine |

Morphine dosage:

*This question will become visible if Question Chronic opioid maintenance: includes answer/s: "Morphine"

mg

Codeine dosage:

*This question will become visible if Question Chronic opioid maintenance: includes answer/s: "Codeine"

mg

Oxycodone dosage:

*This question will become visible if Question Chronic opioid maintenance: includes answer/s: "Oxycodone"

mg

Hydrocodone dosage:

*This question will become visible if Question Chronic opioid maintenance: includes answer/s: "Hydrocodone"

mg

Hydromorphone dosage:

*This question will become visible if Question Chronic opioid maintenance: includes answer/s: "Hydromorphone"

mg

CLINICIAN PRE-OPERATIVE EVALUATION SURVEY

Oxymorphone dosage:

*This question will become visible if Question Chronic opioid maintenance: includes answer/s: "Oxymorphone"

mg

Tramadol dosage:

*This question will become visible if Question Chronic opioid maintenance: includes answer/s: "Tramadol"

mg

Tapentadol dosage:

*This question will become visible if Question Chronic opioid maintenance: includes answer/s: "Tapentadol"

mg

Fentanyl dosage:

*This question will become visible if Question Chronic opioid maintenance: includes answer/s: "Fentanyl"

mg

Methadone dosage:

*This question will become visible if Question Chronic opioid maintenance: includes answer/s: "Methadone"

mg

Buprenorphine dosage:

*This question will become visible if Question Chronic opioid maintenance: includes answer/s: "Buprenorphine"

mg

Meperidine dosage:

*This question will become visible if Question Chronic opioid maintenance: includes answer/s: "Meperidine"

mg

Knee Range of Motion

Knee motion is measured in degrees of range of motion, or ROM. Fill in the values for flexion and extension knee ROM measurements.

Range of Motion: Flexion?

°

CLINICIAN PRE-OPERATIVE EVALUATION SURVEY

Range of Motion: Extension?

Please select from the provided list. Document hypertension as a negative value.

- 10°
- 9°
- 8°
- 7°
- 6°
- 5°
- 4°
- 3°
- 2°
- 1°
- 0°
- 1°
- 2°
- 3°
- 4°
- 5°
- 6°
- 7°
- 8°
- 9°
- 10°
- 11°
- 12°
- 13°
- 14°
- 15°

Primary diagnosis leading to total knee arthroplasty:

- Osteoarthritis (OA)
- Inflammatory arthritis
- Post-traumatic arthritis
- Avascular necrosis (AVN)
- Crystalyn
- Hemophilic arthropathy
- Pigmented villonodular synovitis
- Charcot neuroarthropathy

Specify the inflammatory arthritis diagnosis:



*This question will become visible if the answer to question Primary diagnosis leading to total knee arthroplasty: is equal to "Inflammatory arthritis"

- Rheumatoid arthritis
- Psoriatic arthritis
- Ankylosing spondylitis
- Reactive arthritis

CLINICIAN PRE-OPERATIVE EVALUATION SURVEY

Specify the crystalyn diagnosis:

*This question will become visible if the answer to question Primary diagnosis leading to total knee arthroplasty: is equal to "Crystalyn"

- Gout
- Pseudogout/calcium pyrophosphate deposition disease

Comorbidities:

- | | |
|---|--|
| <input type="checkbox"/> Hypertension | <input type="checkbox"/> BMI >30 and <35 |
| <input type="checkbox"/> BMI >35 and <40 | <input type="checkbox"/> BMI >40 |
| <input type="checkbox"/> Hiperlipidemia | <input type="checkbox"/> Non-insulin requiring diabetes |
| <input type="checkbox"/> IDDM | <input type="checkbox"/> Reflux |
| <input type="checkbox"/> Anemia | <input type="checkbox"/> Chronic anticoagulation |
| <input type="checkbox"/> Gi bleed hx | <input type="checkbox"/> Atrial fibrillation |
| <input type="checkbox"/> Hx of DVT/PE | <input type="checkbox"/> Previous knee surgery |
| <input type="checkbox"/> Hypothyroidism | <input type="checkbox"/> Renal insufficiency |
| <input type="checkbox"/> Pacemaker | <input type="checkbox"/> Defibrillator |
| <input type="checkbox"/> Hx of heart attack | <input type="checkbox"/> Hx of cardiac stents |
| <input type="checkbox"/> Sleep apnea | <input checked="" type="checkbox"/> Nocturia >2x/night |
| <input type="checkbox"/> Gastric bypass | <input type="checkbox"/> Asthma |
| <input type="checkbox"/> COPD | <input type="checkbox"/> Gout |
| <input type="checkbox"/> Anxiety hx | <input type="checkbox"/> Depression hx |
| <input type="checkbox"/> Has used narcotics in the past 3 months | <input type="checkbox"/> Has been to ER in the last 3 months |
| <input type="checkbox"/> BPH | <input type="checkbox"/> Tobacco use |
| <input type="checkbox"/> Alcohol dependency | <input type="checkbox"/> Active substance abuse |
| <input checked="" type="checkbox"/> Psychiatric or neurocognitive disorders | <input type="checkbox"/> Dental care within the past 12 months |
| <input type="checkbox"/> History of Staph or other infections | <input type="checkbox"/> DM2 with HgbA1C over 7.5 |
| <input checked="" type="checkbox"/> High risk medications (anticoagulation, insulin, rheum modulators, GLP1s) | <input type="checkbox"/> Chronic opiates |
| <input type="checkbox"/> MI or stent within past 12 months | <input type="checkbox"/> CV or pulmonary disease flare within past 12 months |
| <input type="checkbox"/> Home O2 requirement | <input type="checkbox"/> Peripheral vascular disease or lymphedema |
| <input type="checkbox"/> History of VTED | <input type="checkbox"/> Albumin <3.5 |
| <input type="checkbox"/> Anemia (13 for men and 12 for women) | <input type="checkbox"/> OSA without a CPAP |
| <input type="checkbox"/> Urology issues within past 12 months | <input type="checkbox"/> Allergies to antibiotics |

CLINICIAN PRE-OPERATIVE EVALUATION SURVEY

Is the patient currently utilizing a mobility assistive device (MAD)?

- Yes
- No

Mobility assistive device (MAD):

 *This question will become visible if the answer to question Is the patient currently utilizing a mobility assistive device (MAD)? is equal to "Yes"

- | | |
|-------------------------------------|-----------------------------------|
| <input type="checkbox"/> Wheelchair | <input type="checkbox"/> Walker |
| <input type="checkbox"/> Cane | <input type="checkbox"/> Crutches |

Date of birth:

Medicare provider number:

 no.

Medicare beneficiary identifier (MBI):

Date of hospital admission/surgical episode:

Procedure type:

Please provide the clinical code used by your facility to designate the procedure (your TKA procedure code).

What was the patient's pre-operative ASA Physical Status Classification?

- ASA I
- ASA II
- ASA III
- ASA IV
- Unknown

CLINICIAN OPERATIVE SURVEY

Instructions: This survey captures key data relevant to the patient's anatomy, diagnosis, product and treatment. It is intended to be completed by a healthcare professional, and should only take 30-60 seconds.

Date of birth:

Medicare provider number:

no.

Medicare beneficiary identifier (MBI):

Date of hospital admission/surgical episode:

Procedure type:

Please provide the clinical code used by your facility to designate the procedure (your TKA procedure code).

Which knee was treated?

- Right
 Left

Pre-operative pharmaceuticals:

COX-2 inhibitor

Dexamethasone

Zofran

Gabapentinoid

Suzetrigine

Acetaminophen

Specify the COX-2 inhibitor pharmaceutical:

*This question will become visible if Question Pre-operative pharmaceuticals: includes answer/s: "COX-2 inhibitor"

Meloxicam

Celebrex

Specify the Gabapentinoid pharmaceutical:

*This question will become visible if Question Pre-operative pharmaceuticals: includes answer/s: "Gabapentinoid"

Gabapentin

Lyrica

Meloxicam dose?

*This question will become visible if Question Specify the COX-2 inhibitor pharmaceutical: includes answer/s: "Meloxicam"

mg

Celebrex dose?

*This question will become visible if Question Specify the COX-2 inhibitor pharmaceutical: includes answer/s: "Celebrex"

mg

Gabapentin dose?

*This question will become visible if Question Specify the Gabapentinoid pharmaceutical: includes answer/s: "Gabapentin"

mg

Lyrica dose?

*This question will become visible if Question Specify the Gabapentinoid pharmaceutical: includes answer/s: "Lyrica"

mg

Dexamethasone dose?

*This question will become visible if Question Pre-operative pharmaceuticals: includes answer/s: "Dexamethasone"

mg

Suzetrigine dose?

*This question will become visible if Question Pre-operative pharmaceuticals: includes answer/s: "Suzetrigine"

mg

Zofran dose?

*This question will become visible if Question Pre-operative pharmaceuticals: includes answer/s: "Zofran"

mg

Acetaminophen dose?

*This question will become visible if Question Pre-operative pharmaceuticals: includes answer/s: "Acetaminophen"

mg

Anesthesia:

- General
- Spinal
- Epidural
- Combined spinal-epidural (CSE)

Nerve blocks:

- | | |
|---|----------------------------------|
| <input type="checkbox"/> Adductor canal | <input type="checkbox"/> IPACK |
| <input type="checkbox"/> Femoral nerve | <input type="checkbox"/> Sciatic |
| <input type="checkbox"/> Genicular | |

Who manufactures the implant?

- Zimmer Biomet
- Stryker
- DePuy Synthes
- Smith & Nephew
- Exactech
- DJO Global (Enovis)
- Medacta
- MicroPort Orthopedics

Which Zimmer Biomet product are you using?

*This question will become visible if the answer to question Who manufactures the implant? is equal to "Zimmer Biomet"

- Persona® The Personalized Knee® System
- NexGen® Complete Knee Solution
- Vanguard® Knee System

PERSONA® THE PERSONALIZED KNEE® SYSTEM

*This question will become visible if the answer to question Which Zimmer Biomet product are you using? is equal to "Persona® The Personalized Knee® System"

NEXGEN® COMPLETE KNEE SOLUTION

*This question will become visible if the answer to question Which Zimmer Biomet product are you using? is equal to "NexGen® Complete Knee Solution"

VANGUARD® KNEE SYSTEM

*This question will become visible if the answer to question Which Zimmer Biomet product are you using? is equal to "Vanguard® Knee System"

TRIATHLON® KNEE SYSTEM

*This question will become visible if the answer to question Who manufactures the implant? is equal to "Stryker"

Which Depuy Synthes product are you using?

*This question will become visible if the answer to question Who manufactures the implant? is equal to "DePuy Synthes"

- ATTUNE® Knee System
- LCS® Complete Knee System

ATTUNE® KNEE SYSTEM

*This question will become visible if the answer to question Which Depuy Synthes product are you using? is equal to "ATTUNE® Knee System"

LCS® COMPLETE KNEE SYSTEM

- *This question will become visible if the answer to question Which Depuy Synthes product are you using? is equal to "LCS® Complete Knee System"

Which Smith & Nephew product are you using?

- *This question will become visible if the answer to question Who manufacturers the implant? is equal to "Smith & Nephew"

- LEGION™ Total Knee System
 JOURNEY™ II Knee System

LEGION™ TOTAL KNEE SYSTEM

- *This question will become visible if the answer to question Which Smith & Nephew product are you using? is equal to "LEGION™ Total Knee System"

JOURNEY™ II KNEE SYSTEM

- *This question will become visible if the answer to question Which Smith & Nephew product are you using? is equal to "JOURNEY™ II Knee System"

Which Exactech product are you using?

- *This question will become visible if the answer to question Who manufacturers the implant? is equal to "Exactech"

- Optetrak Logic® Knee System
 Truliant® Knee System

OPTETRAK LOGIC® KNEE SYSTEM

- *This question will become visible if the answer to question Which Exactech product are you using? is equal to "Optetrak Logic® Knee System"

TRULIANT® KNEE SYSTEM

- *This question will become visible if the answer to question Which Exactech product are you using? is equal to "Truliant® Knee System"

EMPOWR™ KNEE SYSTEM

- *This question will become visible if the answer to question Who manufacturers the implant? is equal to "DJO Global (Enovis)"

Which Medacta product are you using?

- *This question will become visible if the answer to question Who manufacturers the implant? is equal to "Medacta"

- GMK® Sphere
 GMK® Primary
 GMK® SpheriKA

GMK® SPHERE

- *This question will become visible if the answer to question Which Medacta product are you using? is equal to "GMK® Sphere"

GMK® PRIMARY

- *This question will become visible if the answer to question Which Medacta product are you using? is equal to "GMK® Primary"

GMK® SpheriKA

*This question will become visible if the answer to question Which Medacta product are you using? is equal to "GMK® SpheriKA"

EVOLUTION® MEDIAL-PIVOT KNEE SYSTEM

*This question will become visible if the answer to question Who manufacturers the implant? is equal to "MicroPort Orthopedics"

Enabling technology:

- None (i.e., manual instruments)
- Navigation
- Robotics
- PSI jigs
- Augmented reality

Surgical exposure:

- Medial parapatellar
- Lateral parapatellar
- Subvastus
- Midvastus
- Other

If other, please specify:

*This question will become visible if the answer to question Surgical exposure: is equal to "Other"

Was a tourniquet used during the total knee arthroplasty procedure?

- Yes
- No

If a tourniquet was used, what was the approximate duration of inflation?

*This question will become visible if the answer to question Was a tourniquet used during the total knee arthroplasty procedure? is equal to "Yes"

min

Tourniquet pressure:

*This question will become visible if the answer to question Was a tourniquet used during the total knee arthroplasty procedure? is equal to "Yes"

mmHg

Was the patella resurfaced during the total knee arthroplasty?

- Yes
- No

What primary alignment strategy was targeted during the total knee arthroplasty?

- Mechanical alignment (neutral hip-knee-ankle axis)
- Kinematic alignment (restoring the patient's pre-arthritis joint line)
- Restricted kinematic alignment
- Inverse kinematic alignment
- Functional alignment
- Other

If other, please specify:

*This question will become visible if the answer to question What primary alignment strategy was targeted during the total knee arthroplasty? is equal to "Other"

How was the posterior cruciate ligament (PCL) managed during the procedure?

- Retained
- Sacrificed
- Other

If other, please specify:

*This question will become visible if the answer to question How was the posterior cruciate ligament (PCL) managed during the procedure? is equal to "Other"

Were any specific ligament releases performed to achieve balanced flexion and extension gaps?

- | | |
|--|---|
| <input type="checkbox"/> None | <input type="checkbox"/> Not documented |
| <input type="checkbox"/> Superficial MCL | <input type="checkbox"/> Deep MCL |
| <input type="checkbox"/> Complete MCL | <input type="checkbox"/> Semimembranosus (medial) |
| <input type="checkbox"/> Posteromedial corner | <input type="checkbox"/> Pes anserinus |
| <input type="checkbox"/> Iliotibial band | <input type="checkbox"/> LCL |
| <input type="checkbox"/> Popliteus tendon | <input type="checkbox"/> Posterolateral corner |
| <input type="checkbox"/> Semimembranosus (posterior) | <input type="checkbox"/> Posterior capsule |
| <input type="checkbox"/> Gastrocnemius heads | <input type="checkbox"/> Lateral retinaculum |
| <input type="checkbox"/> Vastus lateralis | |

Intra-operative Complications

Intra-operative complication(s):

- | | |
|--|--|
| <input type="checkbox"/> None | <input type="checkbox"/> Bony |
| <input type="checkbox"/> Soft tissue | <input type="checkbox"/> Neurovascular (popliteal artery injury) |
| <input type="checkbox"/> Breach in sterile field / Contamination | <input type="checkbox"/> Anesthetic / Medical |

Specify the bony complications:

*This question will become visible if Question Intra-operative complication(s): includes answer/s: "Bony"

Femoral fracture

Tibial fracture

Patellar fracture

Femoral cortical perforation

Tibial cortical perforation

Notching of distal femur

Specify the soft tissue complications:

*This question will become visible if Question Intra-operative complication(s): includes answer/s: "Soft tissue"

MCL injury

LCL injury

Patellar tendon injury

Quadricep tendon injury



CLINICIAN POST-OPERATIVE SURVEY

IMMEDIATE POST-OP RANGE OF MOTION

Knee Range of Motion

Knee motion is measured in degrees of range of motion, or ROM. Fill in the values for flexion and extension knee ROM measurements.

Range of Motion: Flexion?

 °

Range of Motion: Extension?

Please select from the provided list. Document hypertension as a negative value.

- 10°
- 9°
- 8°
- 7°
- 6°
- 5°
- 4°
- 3°
- 2°
- 1°
- 0°
- 1°
- 2°
- 3°
- 4°
- 5°
- 6°
- 7°
- 8°
- 9°
- 10°
- 11°
- 12°
- 13°
- 14°
- 15°

POST-OPERATIVE/DISCHARGE

Were opioids prescribed at discharge?

- Yes
- No

PAIN MEDICATIONS

Which pain management medications were prescribed?

Choose all that apply.

- | | |
|--------------------------------------|--|
| <input type="checkbox"/> None | <input type="checkbox"/> Oxycodone |
| <input type="checkbox"/> Hydrocodone | <input type="checkbox"/> Acetaminophen |
| <input type="checkbox"/> Tramadol | <input type="checkbox"/> Tapentadol |
| <input type="checkbox"/> Gabapentin | <input type="checkbox"/> Suzetrigine |

CLINICIAN POST-OPERATIVE SURVEY

Oxycodone dose?

*This question will become visible if Question Which pain management medications were prescribed? includes answer/s: "Oxycodone"

mg

Oxycodone number of pills prescribed?

*This question will become visible if Question Which pain management medications were prescribed? includes answer/s: "Oxycodone"

pills

Hydrocodone dose?

*This question will become visible if Question Which pain management medications were prescribed? includes answer/s: "Hydrocodone"

mg

Hydrocodone number of pills prescribed?

*This question will become visible if Question Which pain management medications were prescribed? includes answer/s: "Hydrocodone"

pills

Acetaminophen dose?

*This question will become visible if Question Which pain management medications were prescribed? includes answer/s: "Acetaminophen"

mg

Acetaminophen number of pills prescribed?

*This question will become visible if Question Which pain management medications were prescribed? includes answer/s: "Acetaminophen"

pills

Tramadol dose?

*This question will become visible if Question Which pain management medications were prescribed? includes answer/s: "Tramadol"

mg

Tramadol number of pills prescribed?

*This question will become visible if Question Which pain management medications were prescribed? includes answer/s: "Tramadol"

pills

CLINICIAN POST-OPERATIVE SURVEY

Tapentadol dose?

*This question will become visible if Question Which pain management medications were prescribed? includes answer/s: "Tapentadol"

 mg

Tapentadol number of pills prescribed?

*This question will become visible if Question Which pain management medications were prescribed? includes answer/s: "Tapentadol"

 pills

Gabapentin dose?

*This question will become visible if Question Which pain management medications were prescribed? includes answer/s: "Gabapentin"

 mg

Gabapentin number of pills prescribed?

*This question will become visible if Question Which pain management medications were prescribed? includes answer/s: "Gabapentin"

 pills

Suzetrigine dose?

*This question will become visible if Question Which pain management medications were prescribed? includes answer/s: "Suzetrigine"

 mg

Suzetrigine number of pills prescribed?

*This question will become visible if Question Which pain management medications were prescribed? includes answer/s: "Suzetrigine"

 pills

NSAIDS/ANTI-INFLAMMATORY

Which NSAIDS were prescribed?

Choose all that apply.

- | | |
|------------------------------------|--|
| <input type="checkbox"/> None | <input type="checkbox"/> Celebrex |
| <input type="checkbox"/> Meloxicam | <input type="checkbox"/> Oral steroids |

BLOOD CLOT PREVENTION

Were any blood clot prevention(s) prescribed?

Choose all that apply.

- | | |
|---|---|
| <input type="checkbox"/> None | <input type="checkbox"/> Aspirin 81 mg BID start of night of surgery x4 weeks |
| <input type="checkbox"/> Xarelto 10 mg q day start morning after surgery and continue 12 days | <input type="checkbox"/> Xarelto 10 mg q day start morning after surgery and continue 5 days then resume regular dosing |

CLINICIAN POST-OPERATIVE SURVEY

Eliquis 2.5 mg PO BID start morning after surgery and continue for 12 days

Coumadin

Other

Eliquis 2.5 mg PO BID start morning after surgery and continue 5 days then resume regular dosing

Lovenox

If other, please specify:

*This question will become visible if Question Were any blood clot prevention(s) prescribed? includes answer/s: "Other"

The length of stay (LOS):

days

Did the patient require an initial prescription for formal outpatient Physical Therapy?

Yes

No (adherence to therapy-free protocol)

ADVERSE EVENTS

Did any adverse events occur day of surgery?

Yes

No

Please describe AE:

*This question will become visible if the answer to question Did any adverse events occur day of surgery? is equal to "Yes"

Date of birth:

Medicare provider number:

no.

Medicare beneficiary identifier (MBI):

Date of hospital admission/surgical episode:

Procedure type:

Please provide the clinical code used by your facility to designate the procedure (your TKA procedure code).

CLINICIAN POST-OPERATIVE EVALUATION SURVEY

Repeated at: 2 w/ 6w/ 6 m/ 12m

BMI:

lb/(in)² x 703

Knee Range of Motion

Knee motion is measured in degrees of range of motion, or ROM. Fill in the values for flexion and extension knee ROM measurements.

Range of Motion: Flexion?

°

Range of Motion: Extension?

Please select from the provided list. Document hypertension as a negative value.

- 10°
- 9°
- 8°
- 7°
- 6°
- 5°
- 4°
- 3°
- 2°
- 1°
- 0°
- 1°
- 2°
- 3°
- 4°
- 5°
- 6°
- 7°
- 8°
- 9°
- 10°
- 11°
- 12°
- 13°
- 14°
- 15°

Is the patient currently undergoing any of the following adjunct therapies?

- | | |
|--|---|
| <input type="checkbox"/> None | <input type="checkbox"/> Acupuncture |
| <input type="checkbox"/> Blood Flow Restriction (BFR) Therapy | <input type="checkbox"/> TED |
| <input type="checkbox"/> EdemaWear | <input type="checkbox"/> Reparel |
| <input type="checkbox"/> Compression Garment | <input type="checkbox"/> SCDs |
| <input type="checkbox"/> Continuous Passive Motion (CPM) Machine | <input type="checkbox"/> Cryotherapy (Cold Therapy) |

CLINICIAN POST-OPERATIVE EVALUATION SURVEY

Repeated at: 2 w/ 6w/ 6 m/ 12m

Elevation

Lymphatic Drainage Massage

Protein Supplementation

Transcutaneous Electrical Nerve Stimulation (TENS)

Low-Level Laser Therapy (LLLT) / Photobiomodulation

Massage Therapy

Shockwave

Other

If other, please specify:

*This question will become visible if Question Is the patient currently undergoing any of the following adjunct therapies? includes answer/s: "Other"

COMPLICATIONS

Post-OP complications:

Choose all that apply.

None

Visit to ER

Chest pain

Fall

Saw doctor

Other

If other, please specify:

*This question will become visible if Question Post-OP complications: includes answer/s: "Other"

PAIN MEDICATIONS

Were any opioids prescribed?

Yes

No

Which pain management medications were prescribed?

*This question will become visible if the answer to question Were any opioids prescribed? is equal to "Yes"

Choose all that apply.

Oxycodone

Acetaminophen

Tapentadol

Suzetrigine

Hydrocodone

Tramadol

Gabapentin

CLINICIAN POST-OPERATIVE EVALUATION SURVEY

Repeated at: 2 w/ 6w/ 6 m/ 12m

Oxycodone number of pills taken?

*This question will become visible if Question Which pain management medications were prescribed? includes answer/s: "Oxycodone"

pills

Hydrocodone number of pills taken?

*This question will become visible if Question Which pain management medications were prescribed? includes answer/s: "Hydrocodone"

pills

Acetaminophen number of pills taken?

*This question will become visible if Question Which pain management medications were prescribed? includes answer/s: "Acetaminophen"

pills

Tramadol number of pills taken?

*This question will become visible if Question Which pain management medications were prescribed? includes answer/s: "Tramadol"

pills

Tapentadol number of pills taken?

*This question will become visible if Question Which pain management medications were prescribed? includes answer/s: "Tapentadol"

pills

Gabapentin number of pills taken?

*This question will become visible if Question Which pain management medications were prescribed? includes answer/s: "Gabapentin"

pills

Suzetrigine number of pills taken?

*This question will become visible if Question Which pain management medications were prescribed? includes answer/s: "Suzetrigine"

pills

Is the patient currently utilizing a mobility assistive device (MAD)?

- Yes
 No

CLINICIAN POST-OPERATIVE EVALUATION SURVEY

Repeated at: 2 w/ 6w/ 6 m/ 12m

Mobility assistive device (MAD):



*This question will become visible if the answer to question Is the patient currently utilizing a mobility assistive device (MAD)? is equal to "Yes"

Wheelchair

Walker

Cane

Crutches

Date of birth:

Medicare provider number:

no.

Medicare beneficiary identifier (MBI):

Date of hospital admission/surgical episode:

Procedure type:

Please provide the clinical code used by your facility to designate the procedure (your TKA procedure code).



PATIENT POST-OPERATIVE FOLLOW-UP SURVEY

Repeated at: 2w/3m/9m

Who is completing this survey? *

- Patient/self
- Caregiver

Date of birth: *

Visual Analogue Scale (VAS)- Right Knee

Please indicate the level of pain that you feel on average during the day at your RIGHT knee. *

VAS is a measurement instrument that measures the amount of pain you are experiencing. Scores range across a continuum from none to an extreme amount of pain. A higher score refers to greater pain.

No pain  Unbearable pain

Visual Analogue Scale (VAS)- Left Knee

Please indicate the level of pain that you feel on average during the day at your LEFT knee. *

VAS is a measurement instrument that measures the amount of pain you are experiencing. Scores range across a continuum from none to an extreme amount of pain. A higher score refers to greater pain.

No pain  Unbearable pain

KOOS, JR

This survey asks for your view about your knee. This information will help us keep track of how you feel about your knee and how well you are able to do your usual activities. Answer every question by selecting ONLY one appropriate variant. If you are unsure about how to answer a question, please give the best answer you can.

Stiffness

The following question concerns the amount of joint stiffness you have experienced during the last week in your knee. Stiffness is a sensation of restriction or slowness in the ease with which you move your knee joint.

How severe is your knee joint stiffness after first waking in the morning? *

- None
- Mild
- Moderate
- Severe
- Extreme

Pain

What amount of knee pain have you experienced the last week during the following activities?

Twisting/pivoting on your knee *

- None
- Mild
- Moderate
- Severe
- Extreme

PATIENT POST-OPERATIVE FOLLOW-UP SURVEY

Repeated at: 2w/3m/9m

Straightening knee fully *

- None
- Mild
- Moderate
- Severe
- Extreme

Going up or down stairs *

- None
- Mild
- Moderate
- Severe
- Extreme

Standing upright *

- None
- Mild
- Moderate
- Severe
- Extreme

Function, Daily Living

The following questions concern your physical function. By this we mean your ability to move around and to look after yourself. For each of the following activities please indicate the degree of difficulty you have experienced in the last week due to your knee.

Rising from sitting *

- None
- Mild
- Moderate
- Severe
- Extreme

Bending to floor/pick up an object *

- None
- Mild
- Moderate
- Severe
- Extreme

Veterans RAND 12 Item Health Survey (VR-12)

This instrument is used to measure health related quality of life. Please choose one option for each questionnaire item.

In general, would you say your health is: *

- Excellent
- Very good
- Good
- Fair
- Poor

PATIENT POST-OPERATIVE FOLLOW-UP SURVEY

Repeated at: 2w/3m/9m

The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf. *

- Yes, limited a lot
- Yes, limited a little
- No, not limited at all

Climbing several flights of stairs. *

- Yes, limited a lot
- Yes, limited a little
- No, not limited at all

During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

Accomplished less than you would like. *

- No, none of the time
- Yes, a little of the time
- Yes, some of the time
- Yes, most of the time
- Yes, all of the time

Were limited in the kind of work or other activities. *

- No, none of the time
- Yes, a little of the time
- Yes, some of the time
- Yes, most of the time
- Yes, all of the time

During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

Accomplished less than you would like. *

- No, none of the time
- Yes, a little of the time
- Yes, some of the time
- Yes, most of the time
- Yes, all of the time

Didn't do work or other activities as carefully as usual. *

- No, none of the time
- Yes, a little of the time
- Yes, some of the time
- Yes, most of the time
- Yes, all of the time

PATIENT POST-OPERATIVE FOLLOW-UP SURVEY

Repeated at: 2w/3m/9m

During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)? *

- Not at all
- A little bit
- Moderately
- Quite a bit
- Extremely

These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling.

How much of the time during the past 4 weeks:

Have you felt calm and peaceful? *

- All of the time
- Most of the time
- A good bit of the time
- Some of the time
- A little of the time
- None of the time

Did you have a lot of energy? *

- All of the time
- Most of the time
- A good bit of the time
- Some of the time
- A little of the time
- None of the time

Have you felt downhearted? *

- All of the time
- Most of the time
- A good bit of the time
- Some of the time
- A little of the time
- None of the time

During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)? *

- All of the time
- Most of the time
- Some of the time
- A little of the time
- None of the time

PATIENT POST-OPERATIVE FOLLOW-UP SURVEY

Repeated at: 2w/3m/9m

Now, we'd like to ask you some questions about how your health may have changed.

Compared to one year ago, how would you rate your physical health in general now? *

- Much better
- Slightly better
- About the same
- Slightly worse
- Much worse

Compared to one year ago, how would you rate your emotional problems (such as feeling anxious, depressed or irritable) now? *

- Much better
- Slightly better
- About the same
- Slightly worse
- Much worse



PATIENT POST-OPERATIVE FOLLOW-UP SURVEY

Repeated at: 6w/6m/12m

Who is completing this survey? *

- Patient/self
- Caregiver

Date of birth: *

Visual Analogue Scale (VAS)- Right Knee

Please indicate the level of pain that you feel on average during the day at your RIGHT knee. *

VAS is a measurement instrument that measures the amount of pain you are experiencing. Scores range across a continuum from none to an extreme amount of pain. A higher score refers to greater pain.

No pain  Unbearable pain

Visual Analogue Scale (VAS)- Left Knee

Please indicate the level of pain that you feel on average during the day at your LEFT knee. *

VAS is a measurement instrument that measures the amount of pain you are experiencing. Scores range across a continuum from none to an extreme amount of pain. A higher score refers to greater pain.

No pain  Unbearable pain

KOOS, JR

This survey asks for your view about your knee. This information will help us keep track of how you feel about your knee and how well you are able to do your usual activities. Answer every question by selecting ONLY one appropriate variant. If you are unsure about how to answer a question, please give the best answer you can.

Stiffness

The following question concerns the amount of joint stiffness you have experienced during the last week in your knee. Stiffness is a sensation of restriction or slowness in the ease with which you move your knee joint.

How severe is your knee joint stiffness after first waking in the morning? *

- None
- Mild
- Moderate
- Severe
- Extreme

Pain

What amount of knee pain have you experienced the last week during the following activities?

Twisting/pivoting on your knee *

- None
- Mild
- Moderate
- Severe
- Extreme

PATIENT POST-OPERATIVE FOLLOW-UP SURVEY

Repeated at: 6w/6m/12m

Straightening knee fully *

- None
- Mild
- Moderate
- Severe
- Extreme

Going up or down stairs *

- None
- Mild
- Moderate
- Severe
- Extreme

Standing upright *

- None
- Mild
- Moderate
- Severe
- Extreme

Function, Daily Living

The following questions concern your physical function. By this we mean your ability to move around and to look after yourself. For each of the following activities please indicate the degree of difficulty you have experienced in the last week due to your knee.

Rising from sitting *

- None
- Mild
- Moderate
- Severe
- Extreme

Bending to floor/pick up an object *

- None
- Mild
- Moderate
- Severe
- Extreme

Forgotten Joint Score - 12

A healthy joint is not something you are aware of in everyday life. However, even the smallest problems can raise one's awareness of a joint. This means that you think of your joint or have your attention drawn to it. The following questions concern how often you are aware of your affected knee joint in everyday life.

Please choose the most appropriate answer for each question.

PATIENT POST-OPERATIVE FOLLOW-UP SURVEY

Repeated at: 6w/6m/12m

Are you aware of your knee joint... *

On the 5-point scales below, mark one of five options, where "Never aware" = 0, "Almost never" = 1, "Seldom" = 2, "Sometimes" = 3, "Mostly" = 4.

	0	1	2	3	4
... in bed at night?	<input type="radio"/>				
... when you are sitting on a chair for more than one hour?	<input type="radio"/>				
... when you are walking for more than 15 minutes?	<input type="radio"/>				
... when you are taking a bath/shower?	<input type="radio"/>				
... when you are traveling in a car?	<input type="radio"/>				
... when you are climbing stairs?	<input type="radio"/>				
... when you are walking on uneven ground?	<input type="radio"/>				
... when you are standing up from a low-sitting position?	<input type="radio"/>				
... when you are standing for long periods of time?	<input type="radio"/>				
... when you are doing housework or gardening?	<input type="radio"/>				
... when you are taking a walk/hiking?	<input type="radio"/>				
... when you are doing your favorite sport?	<input type="radio"/>				

Veterans RAND 12 Item Health Survey (VR-12)

This instrument is used to measure health related quality of life. Please choose one option for each questionnaire item.

In general, would you say your health is: *

- Excellent
- Very good
- Good
- Fair
- Poor

The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf. *

- Yes, limited a lot
- Yes, limited a little
- No, not limited at all

Climbing several flights of stairs. *

- Yes, limited a lot
- Yes, limited a little
- No, not limited at all

PATIENT POST-OPERATIVE FOLLOW-UP SURVEY

Repeated at: 6w/6m/12m

During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

Accomplished less than you would like. *

- No, none of the time
- Yes, a little of the time
- Yes, some of the time
- Yes, most of the time
- Yes, all of the time

Were limited in the kind of work or other activities. *

- No, none of the time
- Yes, a little of the time
- Yes, some of the time
- Yes, most of the time
- Yes, all of the time

During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

Accomplished less than you would like. *

- No, none of the time
- Yes, a little of the time
- Yes, some of the time
- Yes, most of the time
- Yes, all of the time

Didn't do work or other activities as carefully as usual. *

- No, none of the time
- Yes, a little of the time
- Yes, some of the time
- Yes, most of the time
- Yes, all of the time

During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)? *

- Not at all
- A little bit
- Moderately
- Quite a bit
- Extremely

These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling.

How much of the time during the past 4 weeks:

PATIENT POST-OPERATIVE FOLLOW-UP SURVEY

Repeated at: 6w/6m/12m

Have you felt calm and peaceful? *

- All of the time
- Most of the time
- A good bit of the time
- Some of the time
- A little of the time
- None of the time

Did you have a lot of energy? *

- All of the time
- Most of the time
- A good bit of the time
- Some of the time
- A little of the time
- None of the time

Have you felt downhearted? *

- All of the time
- Most of the time
- A good bit of the time
- Some of the time
- A little of the time
- None of the time

During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)? *

- All of the time
- Most of the time
- Some of the time
- A little of the time
- None of the time

Now, we'd like to ask you some questions about how your health may have changed.

PATIENT POST-OPERATIVE FOLLOW-UP SURVEY

Repeated at: 6w/6m/12m

Compared to one year ago, how would you rate your physical health in general now? *

- Much better
- Slightly better
- About the same
- Slightly worse
- Much worse

Compared to one year ago, how would you rate your emotional problems (such as feeling anxious, depressed or irritable) now? *

- Much better
- Slightly better
- About the same
- Slightly worse
- Much worse



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