



Netcare Healthcare UK Ltd

Extended Choice Network

Procedure Patient Care Pathway

H21 – Muscle, Tendon or Ligament Procedure

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Other Notes

Reference to one gender can be interpreted to imply as belonging to either gender.

This HRG covers a range of procedures, all of which are found in Version 3.5 of the HRG Reference Manual, however these are examples of the types of procedures and this is not an exhaustive list.

Examples of procedures:

- T791 Plastic repair of rotator cuff of shoulder
- W721 Primary prosthetic replacement of multiple ligaments
- W726 Primary replacement of extra-articular ligament
- W741 Reconstruction of multiple ligaments

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SECTION ONE

Generic Clinical Pathway

1.1 Entry Point – Referral

The patient's journey begins when they are referred by a GP, (or RHSB), to a BMI hospital of their choice for a specific type of treatment selected from the Directory of Service.

The referral will consist of a provisional appointment made on the Choose and Book System supported by a referral letter detailing information of relevant past medical history, current medication and clinical symptoms.

The referral will be submitted via Choose and Book as a directly bookable service. There will also be provision to accept referrals either electronically or paper based using safe haven fax or secure email.

An initial clinical triage of the referral must be performed within 24 hours to ensure that the patient's referral is appropriate for the services offered in the Directory of Service and there are no obvious exclusions.

The patient will then have their referral either accepted or rejected.

If the referral is rejected, this will be recorded on all the appropriate information systems detailing the reason for rejection and, where appropriate, offering advice and guidance to the GP, (or RHSB), on an alternative care pathway.

If the referral is accepted, the appointment will be confirmed on the appropriate information systems and the patient will be notified of their appointment. The patient will then attend their outpatient appointment.

Where possible at the first outpatient appointment all appropriate tests and investigations should be undertaken. This will include a nurse pre-admission assessment should surgery be required.

RHSB = Referring health service body.

1.2 First Outpatient Appointment (Consultant Led)

Each patient will undergo a full clinical assessment including:

- Clinical History;
- Clinical Examination;
- Appropriate diagnostics, (recommended by the Radiological Test Guidelines from the Royal College of Radiologists).

Diagnosis will be made and a care pathway will be discussed with the patient.

In line with IRMER unnecessary investigations should be avoided and therefore recent copies of results can be accepted to support a diagnosis.

There will be occasions when additional diagnostics of a more complex nature will be required, i.e. CT/ MRI scan, and it will be necessary for the patient to book an appointment to undergo this specific diagnostic test. They will then be required to revisit the consultant to discuss further the findings and conclude the clinical pathway.

Should surgical intervention not be required the patient will exit the pathway at this point and be referred back to the GP, (or the RHB), offering advice and guidance on an alternative care pathway where appropriate.

Written, informed consent will be obtained from the patient, and in addition written consent for the disclosure of any clinical data for the purpose of research or audit.

Once a diagnosis has been confirmed and surgery deemed appropriate the patient will receive a detailed patient information leaflet on the intended procedure.

The patient can now book a date for surgery.

1.3 Pre-Admission Clinic (Nurse Led)

This can take place in one of three ways:

- At time of first appointment;
- By telephone;
- Or at a second outpatient attendance.

The requirement at a pre-admission clinic will vary dependant upon the procedure for which the patient attends however in all cases any outstanding information required for the patient documentation will be collected and any information already recorded will be validated.

All pre-operative tests are as per NICE guidance for pre-operative investigations.

MRSA screening will be undertaken as local Policy dictates.

Where there are social, community, cultural or disability support requirements these should be identified in advance of admission to facilitate timely discharge.

1.4 Hospital Discharge

The patient will only be discharged if the treating Surgeon is satisfied that the recovery pathway has progressed to a level that is safe and there is minimal risk of complications should the patient be discharged from hospital.

Patients will be discharged in the majority of cases to their own homes under the supervision of district nursing and community services. However, in some circumstances they will be discharged to supported nursing care. This requirement will have been identified at the assessment as part of the pre-admission clinic.

On discharge patients will receive all information regarding use of medication, where appropriate, mobilisation techniques and helpful hints will be explained by the staff. This information will be contained in the relevant patient information brochure. Patients will receive advice and date/s of follow up appointments, suture removal if applicable or additional tests or X-rays that may be necessary during the follow-up part of their pathway.

An emergency out of hours contact number will be issued to the patient to allow support should any adverse clinical incident occur. This contact information is reinforced in the patient information leaflet. This does not however prevent the patient from attending their nearest Accident and Emergency department. However, should this occur patient's repatriation will be promoted to facilitate ongoing clinical governance.

On leaving the hospital the nurse responsible for the patient's discharge will ensure the patient is provided with a discharge summary detailing the procedure that they have undergone, their condition on discharge and their clinical requirements and medication expected during the recovery period.

Subsequent to this the GP, (and the RHSB), will receive a full doctor to doctor discharge letter.

Where necessary, discharge medication will be provided for a minimum of 7 days.

At the point of discharge from the hospital patients will be asked to complete a Patient Satisfaction questionnaire. On completion the questionnaire will be captured in the relevant information system.

1.5 Post Discharge Complications

Most elective surgery is successful but inevitably, from time to time complications can occur. Any associated postoperative complications that occur are the responsibility of the BMI hospital to treat and/ or manage in accordance with the specific clinical pathway. This will be for a minimum of 28 days and up to a maximum of 1 year, procedure specific.

Education of the patient during their hospital stay is important to ensure that they are able to identify complications when they do occur. They should be made aware of the likely signs and symptoms of both major and minor complications and be advised on what action to take should these occur. In addition the patient must be assured that they can call the hospital for advice and assistance at any time, day or night.

When a patient is discharged, they are given a contact number that will allow them easy 24 hour access to clinical advice from a healthcare professional. A patient who calls for advice with a clinical question will always have the opportunity to speak to a member of the clinical staff and also the RMO where appropriate. All such triage calls are documented to ensure a consistent audit trail for the care of these patients. Every patient who makes such a call will have the opportunity of attending the hospital to be seen by the RMO, although in most situations this will not be necessary.

If it is clear from the conversation that the patient is presenting an acute clinical emergency they will either be advised to come to the hospital immediately or to call 999 depending on what is most appropriate.

Whilst the majority of complications will be treated in a BMI hospital on occasions dependant on the clinical presentation and the specific BMI facility it may be necessary to refer on to the nearest acute NHS facility, i.e. where ICU/ CCU is not available.

1.6 Follow up Assessment – Final Exit

On discharge the patient will have been given an appointment for a follow up assessment. Every patient will receive one follow up appointment as a minimum and for the majority of procedures these will normally occur at 6 weeks however specific pathways will indicate otherwise, e.g. vasectomy – 12 weeks due to post vasectomy testing. The frequency of subsequent follow up appointments will be determined by the clinical outcome.

Following attendance at a follow-up appointment and satisfaction that the patient is fully recovered and the condition for which they were referred has now been successfully treated the patient will be discharged complete back the GP.

In the event that the patient requires additional procedures or ongoing care or an ongoing care plan, guidance and support will be given to the GP and patient.

SECTION TWO

Clinical Pathway

H21 - MUSCLE, TENDON OR LIGAMENT PROCEDURE

2.1 Anaesthetic Assessment

A Muscle, tendon or ligament procedure patient will require a general anaesthetic and/or a special regional block; the anaesthetist will complete a full anaesthetic history to determine whether the patient is fit for surgery and anaesthesia. The preferred anaesthetic options will be discussed and explained. After it has been confirmed that the patient, his/ her partner and/ or family understand the concept of anaesthesia, the patient will be given a choice of which type of anaesthetic is most appropriate for them.

The anaesthetist will assess the batch of investigations that were conducted prior to the assessment clinic. Should the Anaesthetist feel that a test requires repeating in order for a suitable assessment of the anaesthetic risk to the patient, s/he will request this by referral to pathology and radiology services.

In some cases, depending on the time taken to perform these confirmatory investigations, a second pre-operative appointment may be scheduled. For example if the patient requires a cardiac assessment and is being seen at the pre-operative clinic at the weekend or out of consulting hours.

Therefore, prior to being booked for surgery the patient may undergo additional tests and investigations relevant to the procedure and the patient's risk factors.

Patients will be classified by the Anaesthetist based on their anaesthetic risk profile as follows:

- ASA 1 – No systemic disease;
- ASA 2 – Mild systemic disease;
- ASA 3 – Major systemic disease;
- ASA 4 – Incapacitating systemic disease; and
- ASA 5 – Emergency surgery.

Patients in ASA 3 will be assessed as to their suitability for surgery in conjunction with the type of surgery to be performed. Patients in ASA 4 and 5 will be considered unsuitable for the surgery at a BMI hospital.

The patient's suitability for surgery will be assessed as:

1. Suitable for surgery;
2. Provisionally suitable for surgery pending results of additional tests or specialist assessments or pending resolution of current flare up of systemic disease, i.e. uncontrolled Hypertension or diabetes. These patients will be referred back to the referrer or if necessary NHS consultant for resolution of the current illness or additional testing prior to surgery. Should the patient have a minor medical illness such as a urinary tract infection or an upper respiratory tract infection or mild dermatitis which will settle with minor treatment, they can be treated by the GP, with a deferred date for surgery agreed with the patient;
3. Unfit or unsuitable for type of surgery proposed.

The anaesthetist will assess the patient's chronic medication status and will advise the patient regarding adjustment or cessation of medication prior, during or after surgery as necessary.

Methods of invasive intra operative monitoring or post operative analgesia will be discussed.

2.2 Allied Healthcare Professional Assessment

Consultation with the physiotherapist will occur to assess the patient's functionality and assist in the preparation of the patient's rehabilitation and home care plans.

BMI staff will take this into account when assessing the patients at the pre-admission clinic. It will assist them in determining the rehabilitation plan and any equipment requirements that the patient might have on discharge. BMI staff will liaise with their colleagues in the community to assist with the planning for the patient's discharge back into the community. This will occur after the pre-operative admission clinic assessment and followed up during the inpatient stay. Prior to discharge the BMI hospital team will ensure that all is in place for the patient to go home, including physiotherapy, nursing, equipment and referral letters.

2.3 Admission and Pre-Operative Preparation

Patients for Muscle, tendon or Ligament procedures will arrive at the BMI hospital a minimum of 2 hours prior to surgery.

The patient's preoperative assessment and the results of any tests or X-rays will accompany the patient and will be available to the medical team on request. Nursing staff will welcome and orientate the patient to the Ward, identify the patient, check the patient's information and history and complete the procedures indicated on a pre-operative checklist in order to prepare the patient for theatre.

The medical team will review the pre-operative consultation, assess medication and prescribe pre-medication (if applicable).

The written informed consent form will be signed as confirmed with the patient by the surgeon.

1. The nurse will confirm that the patient understands the basic concepts of what is to follow and what he/ she can expect in the period after discharge.
2. The patient is measured for Crutches/ walker and Thromboembolic

- stockings (if no contraindications) and these are issued to the patient.
3. The Orthopaedic surgeon will undertake a preoperative visit; examine the patient, confirm diagnosis, explain the procedure to be undertaken, mark the knee to be operated on with a permanent marker and answer any additional questions that the patient and his/ her partner/ family might have.
 4. The Anaesthetist will make a preoperative visit, examine the patient, again explain the type of anaesthetic to be administered and answer any questions that the patient and his/ her partner/ family might have. The Anaesthetist will also prescribe any chronic and protocol related medication that the patient will need.
 5. Anticoagulation – Clexane
Medium Risk patients (None Orthopaedic patients) 20mgs of Clexane will be administered preoperatively followed by a daily dose to complete a 7 day course.
High Risk (Orthopaedic patients) 40mgs will be administered preoperatively followed by a daily dose to complete a 7 day course.

REF: Use of Enoxaparin Sodium” Chapter 2 - 2.8.1 British National Formulary 49 2005

2.4 Surgery

The nursing staff should confirm that the patient has not eaten for 6 hours and stops clear fluids orally 2 hours ahead of the operating time.

An Intravenous cannula should be established in the arm opposite to the side of surgery by the RMO or a suitably qualified person.

A signed pre-operative check-list will be completed by the escort nurse to ensure all preoperative preparation has been undertaken.

The ward nursing staff will accompany the patient to theatre and hand the patient over to theatre staff according to local protocol.

2.4.1 Theatre

Anaesthetic room staff will receive the patient from the ward personnel and will again check and sign the preoperative check-list.

Confirm site of surgery with the patient while the ward personnel are still present and sign on consent as checked and correct.

Inform the anaesthetist of the patient's arrival in theatre.

Report any information from the ward concerning the patient's status, to the anaesthetist.

The anaesthetist will assess the patient and explain the anaesthetic procedure to them while they are in the anaesthetic room. Intravenous access will be established and oxygen given to sedated patients with pulse oximetry monitoring. The Consultant Anaesthetist will induce the patient according to the intra-operative protocol. All procedures, vital signs, drugs, consumables and instrument usage will be recorded, together with the Surgeon's operating notes.

The patient will be monitored throughout the procedure. Besides physiological parameters, blood loss will be monitored and fluid appropriately replaced.

Perioperative care:

Intra-op in theatre (before surgery);

Patient to be positioned according to the Orthopaedic best practice guideline. Preparation of the theatre, instruments and packs will be defined by rigid aseptic techniques and protocols. The same will apply to scrubbing, theatre attire and draping of the patient.

The surgical procedure will be carried out in accordance with best current clinical practice. The surgeon will comply with the guidance issued by the Royal College of Surgeons of England "Guidance on Surgical Practice" – The surgeon will be on the relevant specialist register of the GMC and be registered as a consultant on BMI hospitals Register.

The surgeon or anaesthetist can use local anaesthetics to block locally around the incision area of the surgical field before dressing the wound according to best practice guidelines.

Postoperative in theatre (after surgery):

Post Operative Management;

Post-operatively the patient will be transferred to the recovery room where monitoring and documentation will continue.

- A formal handover between the operating scrub nurse and the recovery nurse will take place.
- The patient will be placed on oxygen and vital signs will be monitored and the level of consciousness assessed.
- The operation site is checked for major bleeding.
- The patient's pain levels monitored.
- Medication will be administered as per the doctor's prescription.

The patient will only be discharged from the recovery room in theatre to the Ward when the patient achieves a total score of 4 or less on the following Post Anaesthesia Discharge score:

<p><u>Level of Consciousness Score</u></p> <p>0 Alert 1 Drowsy 2 Asleep (rousable) 4 Asleep (unrousable)</p>	<p><u>Airway Score</u></p> <p>0 Own 1 Support needed 3 Support device needed</p>
<p><u>Pain Score</u></p> <p>0 No pain 1 Mild pain 2 Moderate pain 3 Severe pain</p>	<p><u>Nausea Score</u></p> <p>0 None 1 Mild 2 Persistent nausea 3 Vomiting</p>
<p><u>Wound/ Dressing Score</u></p> <p>0 Dry intact 1 Slight bleeding/ discharge 2 Heavy bleeding/ discharge</p>	<p><u>Circulation</u></p> <p>0 BP & pulse +/- 20% of pre-op norm 1 BP & pulse +/- 21% - 39% of pre-op norm 2 BP & pulse +/- 40% of pre-op norm</p>

Complications:

Should an intra-operative or post-operative complication arise that warrants referral to a secondary acute facility, transfer will be arranged according to the protocol negotiated with the Local Acute NHS trust.

2.5 Ward

Postoperative care:

On arriving in the post-operative ward, the patient will be admitted according to local protocol and the following will specifically be confirmed:

- The patients operated limb will be elevated.

The post operative patient will be cared for by the named nurse and the multidisciplinary team.

Patients will be monitored in accordance with postoperative care ward protocols and standards as determined best clinical practice. An on-duty on-site Resident Medical Officer (RMO) may be responsible for the general management of all post-operative patients, under the direction of the consultant surgeon and anaesthetist. The RMO will have the necessary experience within the specialty as well as Advanced Life Support, (ALS) Training, and a valid certificate.

The operation site will be checked at each observation time, to check for bleeding. Where Plaster cast is in situ this will be examined for blood loss and

for adequate 'finger space' being present at both ends of the plaster.

Oral fluids and diet will be offered when awake.

Pain will be assessed; analgesia will be titrated and administered accordingly.

All patients will be seen post operatively by the surgeon or RMO.
The Consultant Surgeon will remain on call but an on-duty, on-site RMO will oversee all general daily clinical aspects of the patient's care post operatively in conjunction with the nursing staff.

The patient will remain in the ward until discharge.

2.6 Clinical Discharge

The following criteria will be used to establish whether a patient can be discharged:

- The wound dressing is dry and intact;
- Normal vital signs consistent with the patient's age and stable pre-surgical levels;
- Able to ambulate without help. This will include being able to walk independently with confidence;
- The patient will be afebrile;
- No vomiting at proposed time of discharge;
- No indication of thrombo-embolic disease;
- Minimal dizziness. Patient should not experience dizziness – however if the patient does experience dizziness it should be only present upon standing and should not interfere with mobilization consistent with what they could achieve pre-operatively;
- No unusual bleeding or discharge related to the procedure;
- No excessive wound oedema;
- No signs of respiratory distress, stridor or croup cough;
- Able, alert, aware of surroundings and aware of what has taken place;
- Pain-free or pain adequately controlled by oral analgesics;
- Able to void urine.

Nursing documentation will include a discharge check-list.

The hospital's multidisciplinary health team will prepare the patient for the rehabilitative phase at home and feel confident in the patient's level of independence with activities of daily living.

TTO's will include:

- Co Codamol 30/500mg, 6 to 8 hourly PRN.
- Ibuprofen. Dosage 400mg PO every 8 hours (max 1.2g in 24hrs) and only if not contraindicated.

Actions taken after discharge:

1. Wound/ Plaster care according to instructions received on discharge.
2. The patient should concentrate on exercising his/ her operated limb according to the post operative information received in the ward from the physiotherapist and the information available in the patient information leaflet received in the ward, before surgery.
3. Sutures to be removed in OPD as indicated by the consultant and best practice guidelines.

Clinical Follow Up:

On discharge the patient will be advised of when and how their follow up assessment will occur and any other post operative care requirements i.e. wound dressings, suture removals.

The patient will receive a minimum of one follow up appointment occurring no later than 6 weeks post operative procedure.

It is recognised, there will be some procedures within this HRG group that will require more than one follow up appointment. Therefore additional follow up appointments will occur as dictated by the procedure undertaken in line with best clinical practice guidelines to ensure a successful clinical outcome.

On satisfaction that the patient is fully recovered from the condition for which they were referred and successfully treated, the patient will be discharged back to the G.P.

All outcomes will be monitored through standard KPIs (Key performance indicators) returns.

In the event that the patient requires additional procedures or ongoing care, guidance and support will be given to the G.P. and patient.

2.7 Outcomes to be Measured

- Patient satisfaction;
- Complications - Infection rates;
- Readmission rates;
- Quasar Nursing Audit;
- Additional KPIs required for the contract.