

Rehabilitation Pathway for Complex Musculoskeletal Trauma - June 2016

To date, there has been no rehabilitation pathway written for multi-trauma patients with complex musculoskeletal (MSK) injuries in the Wessex Region. In fact, the paucity of services for this particular patient group has been highlighted nationally by the Trauma CRG . These patients often fall into levels 2a or 2b as outlined in the BSRM definitions (2009, 2010) and as such do not qualify for specialist funding. They cannot therefore access specialist rehabilitation services. These patients are a priority in terms of clinical need, cost to the NHS and lost tax to the exchequer if they are not managed well, and do not return to their former vocation. This document has been written in conjunction with local health / social workers, patients and commissioners, and in reference to the evidence base as it exists. The pathway aims at ideal care irrespective of whether it exists currently.

(These patients generally have multiple limb fractures - often with significant external fixation - and often requiring plastic surgery input. Many of them have peripheral nerve injuries. Internal injuries and / or minor head injuries increase patients ISS scores. However, the rehabilitation community generally reports ISS scores bear no correlation with rehabilitation needs. These patients cover all age groups.)

Pathway

Acute Care

Patients following a traumatic injury are taken to either:

a/ University Hospitals Southampton (UHS) as the Multi-trauma Centre (MTC), or

b/ a local Trauma Unit (TU). The patient may then be transferred to the MTC as a secondary transfer, and possibly on to Salisbury District Hospital which leads on Plastic Surgery across the WTN.

Patients with these types of injuries are invariably sited in an Intensive Care Unit (ITU) whether at the MTC or TU. This can be as a result of the MSK injury or associated internal injuries to the lungs, spleen etc. A Rehabilitation Prescription, or equivalent document, should be filled in within 72 hours by a Rehabilitation Specialist (either Rehabilitation Consultant or Rehabilitation trained AHP – Band 7 or upwards) as per national trauma guidelines. If possible / appropriate, an holistic assessment should be undertaken including family members / carers as appropriate. This should include physical, cognitive, communication, psychological and social needs and relevant history. If this is not appropriate at this point, it is expected that this would be done within the first 10 days and patients with, or expected to have, complex needs be identified.

The rehabilitation specialist should have access to the full multi-disciplinary team (MDT) for their expertise as needed including nurses, Physiotherapists, Occupational Therapists, Consultants in Rehabilitation Medicine, Orthopaedics and / or Plastics, Psychologist, Psychiatrist, Dietetics, etc. The MDT should meet regularly to discuss the changing needs of patients in the acute setting.

Acute rehabilitation should start as soon as clinically safe following medical protocols. Reassessment should occur regularly, at least weekly, as patient status changes quickly at this point in their journey. It is recommended that a Consultant and AHP 'injury list' and 'management plan' are written within 72 hours of arrival and that excellent communication between both groups occurs concerning them.

It is likely that MSK patients will be transferred to a Trauma, Orthopaedic or Plastic ward at an appropriate point. Their acute rehabilitation would continue at this point. When the patient is medically stable, the rehabilitation team should consider onward referral. Services are currently limited at this point (this is the national picture). This pathway recommends that there should be appropriate referral options at this point depending on the patients need:

- specialist intensive rehabilitation
- Specialist community and / or outpatient management

Referral should occur as early as possible with patient and carer involvement in all decision making. Complex MSK patients should be reviewed within one week of discharge from acute services.

Intensive Rehabilitation Input

There are currently very few intensive MSK rehabilitation facilities nationally. However, it is generally accepted, both locally and at national level, that complex MSK injuries require more input than most outpatient / community departments can offer. There are already clear guidelines for rehabilitation facilities and many of these are transferable to a MSK centre (See BSRM 2002, 2009, 2012). The armed forces and police / fire services are already employing such centres / services.

Services must be patient focused and goal driven. They must have a strong, well trained and full MDT which meets regularly and can demonstrate evidence of regular training / CPD. Rehabilitation centres should be patient friendly in terms of environment, resources and culture. They must have all the resources / equipment requisite for providing appropriate treatment. These should include PT (Physiotherapy), OT (Occupational Therapy), early access to psychology, regular hydrotherapy (i.e. available > once per week), access to pain specialists and vocational rehabilitation facilities. Strong links with local orthotics and prosthetics Departments are recommended with lower limb expertise in the team. Similarly, excellent communication with relevant Orthopaedic and / or Plastic Consultants.

On arrival at a rehabilitation centre, appropriate, patient driven SMART goals should be set with the patient / carers and the MDT within the first week. These goals should be reviewed on a regular basis – two to four weekly. The patient / carers should receive regular feedback from these meetings as should the patient's GP and relevant commissioners. The RP, or equivalent, should be repeated at appropriate time frames as part of this process.

Nursing care needs vary for MSK patients. Initially, patients may require more intense nursing care but later they may be able to manage with minimal assistance e.g. staying in hostel type accommodation without nursing care. Services should reflect this changing need. MSK patients may also require further follow-up surgery and so move in and out of an intensive centre as their needs change over several years. It is essential that there is flexibility in planning and treatment so that patient programmes can be tailored to individual patient needs rather than service needs.

Initial programme planning should be holistic addressing all needs identified on the RP or equivalent. Goals should be both long and short term. Length of stay in the centre should be agreed between the MDT and family at an early point – although this might be revised later. Vocational goals should be set at an early stage and appropriate communication with employers to facilitate return to normal activities if possible, or plans for alternative employment. Patients may spend time in and out of the service as their rehabilitation progresses.

It is recommended that therapy assistants (or fitness instructors / equivalent) are utilised regularly in intensive centres.

Specialist community / outpatient services

Currently, local outpatient departments and community services are the default referral option for most MSK injuries. It is recommended that complex trauma patients require management by specialists with MSK trauma expertise – see below.

Therapists should use a goal setting approach both with short term and long term goals.

Services should be able to see patients as their therapy requires i.e. multiple times in a week if their level of injury requires it. Similarly, hydrotherapy should be available for multiple sessions per week if the patient requires it.

Specialists should have access to appropriate rehabilitation equipment e.g. parallel bars, gymnasium equipment, supports, splints etc.

There is clear data that the number of frail patients has increased in the recent past. It is also evident that the number varies geographically. It is important that such patients have access to appropriate input to manage co-morbidities. Services managing such patients should have expertise both in frailty and MSK trauma.

All services should have access to timely vocational rehabilitation input.

General Recommendations

It is recommended that all complex MSK patients have a named key worker at all points through the rehabilitation journey.

It is recommended that all complex MSK patients are managed by someone with relevant trauma expertise i.e. someone with upper or lower limb expertise (whether in intensive, community or outpatient services).

It is recommended that rehabilitation services are within 45 minutes travel time (whether community, outpatient or intensive centres).

It is recommended that complex MSK patients meet all relevant surgical teams at one appointment with relevant rehabilitation specialists to discuss / agree plans. Patients have reported at local and national meetings that multiple appointments are not helpful to efficient rehabilitation.

In a similar vein, it is recommended that services should provide rehabilitation experts in all relevant limbs at one session rather than requiring patients to attend different appointments for different limbs' management / treatment.

It is recommended that rehabilitation specialists use appropriate outcome measures e.g. EQ5D5L (a quality of life measure), LEFS (lower extremity functional scale), QDASH (functional tool for 'disability assessment of the shoulder and hand'), etc. to demonstrate effective input to patients, clinicians, family members and commissioners.

Appropriate seating should be easily available. Easy access to appropriate transport is essential.

Current Services

There is currently one intensive MSK service in the area fitting most of the above criteria, namely the Wessex Rehabilitation Centre in Salisbury. The centre treats patients from 9.30 – 4.45 Monday to Thursday (assessments can be on a Friday). The centre has access to regular hydrotherapy, Physiotherapy in a custom built gymnasium, and Occupational Therapy including an industrial workshop and bungalow. The centre also has regular weekly input from a Specialist Nurse and Pain Consultant. Psychology is standardly included in treatment for appropriate patients and their input guides therapy programmes. There is hostel type accommodation for patients staying mid week. The Trauma Specialist Plastic Surgeons are partly based at Salisbury and therefore accessible. Patients are given a key therapist and are involved in goal setting from first assessment. The service has good links with the Trauma Centre in Southampton. There are agreements with commissioning bodies across the Wessex Network that mean complex trauma patients are able to access the service with a rehab prescription. Patients can be referred by Consultants, GPs or AHPs.

Quality Indicators

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| RP or equivalent filled in by Rehab Specialist (Cons or AHP B7), within 72 hrs | Y / N / NE |
| Holistic r/v – multiple professionals including psychosocial ax by 10/7 | Y / N / NE |
| Evidence of reassessment (at least weekly) in acute setting (if appropriate) | Y / N / NE |
| Evidence of daily rehabilitation (if appropriate) input by MDT: PT, OT, SLT, Psychology etc. ? | |
| ----- | |
| Clear involvement of patient in decision making concerning rehab options? | Y / N / NE |
| Patient reviewed within one week of discharge from acute service | Y / N / NE |
| Evidence of goalsetting, with patient involved, at regular time frames | Y / N / NE |
| Access to psychology available if necessary? | Y / N / NE |
| Access to vocational rehabilitation services if necessary? | Y / N / NE |
| Regular access to hydrotherapy available? | Y / N / NE |
| Service able to see patient multiple times weekly if necessary? | Y / N / NE |
| Evidence of clearly assigned Key Worker at 1/52, 4/52, 10/52? | Y / N / NE |
| Could the patient's injuries be rehabilitated in one setting? | Y / N / NE |
| Did rehabilitation workers have relevant expertise? | Y / N / NE |
| Evidence of use of relevant clinical and QOL outcome measures | Y / N / NE |
| Evidence of communication with GP, relevant consultants and local services. | Y / N / NE |
| Evidence of rehabilitation services being less than 45 minutes away | Y / N / NE |
| Patient able to see orthoplastic team at one appointment | Y / N / NE |

NE = no evidence

Quality Measures

1. RP or equivalent filled in by Rehab Specialist (Cons or AHP B7), within 72 hrs y / n / NE
2. Holistic r/v – multiple professionals including psychosocial ax by 10/7 y / n / NE
3. Evidence of reassessment (at least weekly) in acute setting (if appropriate) y / n / NE
4. Evidence of daily rehabilitation (if appropriate) input by MDT PT, OT, SLT, Psychology etc. ?

1. Date of medical stability clearly recorded y / n / NE
2. Re-assessment of RP or equivalent within few days of above date? Y / n / NE
3. Evidence of communication to Rehab Centre within 2 days of above date? Y / n / NE
4. Evidence of involvement of family / carers in above decision making process concerning rehab centre? Y / n / NE
5. Evidence of goal setting in acute setting if not transferred y / n / NE

1. Patient accepted at rehab centre within 2/52 of medical stability date y / n / NE
2. Evidence of goal setting with patient / family / carer involvement, in first week y / n / NE
3. Evidence of long term and short term goals y / n / NE
4. Evidence of review of goals and RP within 4/52 and 8/52 y / n / NE
5. Evidence of voc rehab consideration (if appropriate) y / n / NE

6. Evidence of clearly assigned key worker at 1/52, 4/52, 10/52 y / n / NE

7. Evidence of relevant clinical and QOL Outcome measures at rehab centre y / n / NE

8. Evidence of communication with: GP, Social Worker, Voluntary agencies. y / n / NE

NE = no evidence