SCOTTISH TRAUMA NETWORK – MINIMUM REQUIREMENTS

Minimum Requirement for Regional Networks (Adult & Paediatric) & Local Emergency Hospitals	
All hospitals and NHS Boards participating in the regional networks are required to:	1. Commit to being part of a trauma network with designated representation at network meetings 2. Participate fully in STAG reporting 3. Have robust clinical governance and performance programmes in place to ensure quality assurance and improvement 4. Play an active role in relevant research, education and injury prevention programmes that support trauma care across the region 5. Engage patients, carers and families in developing services to meet patient need 6. Participate in major incident planning locally, regionally and nationally 7. Have robust whole hospital business continuity arrangements
Local Emergency Hospitals (LEHs)	
Facilities:	1. Emergency Department; 2. Access to Blood Bank and haemorrhage control medication; 3. A major haemorrhage protocol; 4. The ability to provide Level 2 care for a limited period of time; 5. The ability to provide Level 3 care prior to retrieval; 6. The ability to provide in-hospital rehabilitation; 7. Access to 24/7 CT imaging and timely reporting; 8. Access to 24/7 Plain film radiology imaging and timely reporting; 9. Contingency plan for local based transfer where retrieval is not possible; 10. Consistent and robust submission to STAG; and **11.** Commit to being part of a trauma network with designated representation at network meetings.

Skills:	**1.** Skills necessary for resuscitation are accessible 24/7: • initial assessment/emergency care skills; • anaesthetic skills; • non-operative haemorrhage control skills; and transfusion capability. **2.** Have the capability and readiness to provide initial life saving care/ resuscitation of MT patient before transferring to MTC/TU. 3. Have skills to provide in-hospital rehabilitation, with access to support from specialist rehabilitation professionals when and as required.

Minimum Requirement for Adult MTC plus rehabilitation requirements

Requirements:

- A dedicated major trauma service.
- A role in providing clinical leadership and support throughout the patient pathway to ensure patients receive co-ordinated, appropriate and definitive care quickly.
- All surgical & support services (emergency medicine, general surgery, orthopaedic surgery, haemorrhage control surgery and imaging, along with services such as critical care and anaesthesia) provide consultant led care.
- Early access to specialist rehabilitation assessment and treatment services.
- A role in supporting other hospitals in the Scottish network in optimising the major trauma patient pathway.
- Robust clinical governance and performance programmes in place to ensure quality assurance and improvement.
- Active role in relevant research, education and injury prevention programmes that support trauma care across the region.
- Commit to being part of a trauma network with designated representation at network meetings
- Participate in regional and national network major incident planning and be prepared to take patients from out with the local catchment area at times of strain on the system.

1. **A consultant led multi-speciality trauma team 24/7**	Consultant led model delivered by having a dedicated Emergency Medicine (EM) Consultant in the role of Trauma Team Leader (TTL) 24/7/365 for both adults and children. • There is a tiered approach to the reception and assessment of all trauma patients (adults and children) • A Trauma Call System activates a multi-disciplinary Trauma Team to attend the Emergency Department (ED) immediately.

	• Specialty Consultant attendance is required for the most seriously injured patients at all times (supported by trainees). • The Trauma Call System is linked to Scottish Ambulance Service (SAS) procedures for triaging and pre-alerting trauma patients. • Accurate and timely pre-alert of trauma patients to the ED by the SAS is essential to ensure the appropriate Trauma Team response is activated.
2. Immediate on-site access to:	**a. Emergency Medicine Consultants** • Dedicated EM Consultant in the role of Trauma Team Leader resident 24/7/365
	b. Anaesthetics/Critical Care Consultant (at senior trainee level) • Consultant Anaesthetist attends trauma calls in-hours • Anaesthetic senior trainee (ST4 and above) are resident out of hours and respond to trauma calls with Consultant Anaesthetist providing virtual support until they arrive in< 30 minutes
	c. Haemorrhage Control Surgery (at senior trainee level) • Consultant attends trauma call in-hours • Senior trainee (ST4 & above) are resident OOH and respond to trauma calls with Consultant providing virtual support until they arrive in <30 minutes
	d. General /Orthopaedic Surgery (at senior trainee level) • Consultant attends trauma call in-hours • Senior trainee (ST4 & above) are resident Out of Hours and respond to trauma calls with Consultant providing virtual support until they arrive in <30 minutes
	e. Imaging services • Consultant Radiologist attends trauma call in and out of hours • Radiology team available with on-call Out of Hours team • Emergency imaging services available in / Out of Hours with exception to MRI
3. **Ability to perform resuscitative thoracotomy immediately**	
4. An operational Major Haemorrhage Protocol (MHP)	

5. Dedicated emergency operating theatre immediately accessible	
6. **Access to appropriate consultants within 30 minutes**	a. Cardiothoracic Surgery * b. ENT * c. General Surgery * d. Intensive Care * e. Interventional Radiology * f. Maxillofacial Surgery * g. Medicine of Elderly * h. Neonatal Medicine * i. Neurosurgery * j. Obstetrics * k. Ophthalmology * l. Orthopaedic Surgery * m. Paediatric Medicine * n. Paediatric Surgery * o. Plastic Surgery * p. Psychiatry * q. Spinal Surgery * r. Vascular Surgery *
7. Immediate access to CT and CT reporting - access to MRI **Access to IR within 30 minutes of decision**	
8. A specialist multi-disciplinary major trauma inpatient team/service which includes:	a. A Major Trauma Consultant and a Major Trauma Co-ordinator b. Rehabilitation specialists that are tailored to meet the individual patient's needs (views sought rom National Rehab group)
9. Major trauma ward	

10. Consistent and robust participation in STAG audit	
11. Robust clinical governance and quality improvement programmes. These should include:	a. Regular multi-disciplinary case reviews (Trauma M&Ms, regionally / locally) • Monthly MTC M&M meetings led by MTC Governance lead • Regular/Bi-monthly Network M&M meetings led by NoS Clinical Lead for Trauma b. Local review of performance (KPIS / Exception reporting) • Monthly MTC Governance meetings led by MTC Governance lead which will feed into Network Governance structures c. Quality Improvement Programme • Quality Improvement Programme for MTC (linked to NoS & national networks) which supports delivery of KPI's and any other key measures which highlight key areas for improvement d. Annual Formal Review Meetings to discuss performance against the Scottish Trauma Network KPIs • MTC to comply with requirements for annual formal review meeting • Further clarity required from STN re this
	e. Agreed national governance process for management of hospital whose trauma mortality is statistically higher than the Scottish mean (using Tarn Ps and W Statistic methodology) • National governance process to be confirmed and any outlier MTCs to follow agreed process
	f. Benchmarking of standard for a MTC, TU and LEH and other aspects for the Scottish Trauma Network regionally and nationally • Benchmarking of standards for MTC • STN will guide and support benchmarking of MTCs within Scotland and wider as appropriate
12. **Single point of contact to clinical expertise for, and support to, the MT Network to ensure patients receive the highest standards of care**	
13. Collaborative programme of multi-disciplinary education and research within MTC and across the national/ regional trauma network.	

14. A defined service for early specialist intensive multi-disciplinary rehabilitation (led by rehab consultant/suitable specialist). **Access to specialist rehabilitation assessment and treatment services 7 days a week which included active coordination function which oversees rehabilitation care and support network colleagues in the provision of ongoing rehabilitation for repatriated patients**	a. Defined early acute rehab services is part of inpatient specialist team who provide assessment and written rehab plan within 72 hours b. Provision of treatment services 7 days a week based on individual needs c. Co-ordinator in place to support minimum requirements d. Psychiatry e. Twenty-four hour access to respiratory physiotherapy f. Orthotics, surgical appliances, from Orthotists and Prosthetists, assistive technology, communication aids, and seating and wheelchair services g. Other services which may be required for the rehabilitation and care of patients who have suffered major trauma are specialist nursing teams (for the management of issues such as external fixators, stoma care), pharmacy, pain management, audiology, optometry and podiatry h. MTC specialist rehabilitation staff should be able to offer advice local clinicians who are supporting major trauma patients across the pathway when required; i. Vocational rehabilitation

Minimum Requirement for Paediatric MTC plus rehabilitation requirements

Requirements:

- A dedicated major trauma service.
- A role in providing clinical leadership and support throughout the patient pathway to ensure patients receive co-ordinated, appropriate and definitive care quickly.
- All surgical & support services (emergency medicine, general surgery, orthopaedic surgery, haemorrhage control surgery and imaging, along with services such as critical care and anaesthesia) provide consultant led care.
- Early access to specialist rehabilitation assessment and treatment services.
- A role in supporting other hospitals in the Scottish network in optimising the major trauma patient pathway.
- Robust clinical governance and performance programmes in place to ensure quality assurance and improvement.
- Active role in relevant research, education and injury prevention programmes that support trauma care across the region.
- Commit to being part of a trauma network with designated representation at network meetings
- Participate in regional and national network major incident planning and be prepared to take patients from out with the local catchment area at times of strain on the system.

1. A Paediatric trained consultant led multi-specialty trauma team available 24/7	
2. Consultant Trauma Team Leader available immediately between 08:00 and 24:00	
3. Immediate in-hours access, and out-of hours access, to following Paediatric trained Consultants available within 30 minutes of the initiation of the Pre-alert by the Scottish Ambulance Service or pre-hospital team:	• Emergency Medicine • Anaesthetics/Critical Care (at senior trainee level where appropriate) • Haemorrhage Control Surgery (at senior trainee level where appropriate) • General/Orthopaedic Surgery (at senior trainee level where appropriate) • Imaging services including CT and CT reporting
4. The ability to perform a resuscitative thoracotomy immediately 24/7.	
5. A Major Haemorrhage protocol for trauma patients	
6. Dedicated emergency operating theatre immediately accessible	
7. Access to the following paediatric trained consultants within 30 minutes of initiation of the Pre-alert by the Scottish Ambulance Service or pre-hospital team:	a. Cardiothoracic Surgery b. ENT c. General Surgery d. Intensive Care e. Interventional Radiology f. Maxillofacial Surgery g. Neonatal Medicine h. Neurosurgery i. Obstetrics j. Ophthalmology k. Orthopaedic Surgery l. Paediatric Medicine m. Plastic Surgery n. Psychiatry o. Spinal Surgery

	p. Vascular surgery q. On site access to MRI 7 days per week.
8. A Major Trauma inpatient service based around a multi-disciplinary team which will include rehabilitation specialists that are tailored to meet the individual patients' needs.	
9. All categorised Major Trauma patients are cohorted within one clinical area.	
10. Consistent and robust participation in the STAG audit	
11. Robust clinical governance and quality improvement programmes. These should include:	a. Regular multi-disciplinary case reviews (at trauma/appropriate M&M meetings, locally/regionally/nationally). b. Local review of performance (KPIs/ exception reporting). c. Quality improvement programmes (related to KPIs). d. Annual Formal Review Meetings to discuss performance against the Scottish Trauma Network KPIs. e. Agreed national governance process for the management of hospitals whose trauma mortality is statistically higher than the Scottish mean (using Tarn Ps and W Statistic methodology). f. Benchmarking of paediatric standards for a MTC, TU and LEH and other aspects of the Scottish Trauma Network regionally and nationally.
12. Single point of contact to clinical expertise for, and support to, the MT Network.	
13. Collaborative programme of multi-disciplinary education and research within the MTC and across the national and regional Trauma Networks.	
14. A defined service for early specialist intensive multi-disciplinary rehabilitation (led by rehab consultant/suitable specialist as defined by national standards such as BSRM).	i. Provision of treatment services 7 days a week based on individual needs ii. Rehabilitation Co-ordinator, to facilitate rehabilitation planning and delivery, and the movement of patients from the MTC through the entire rehabilitation pathway iii. Psychiatry/psychology/neuropsychology services iv. Twenty-four hour access to respiratory physiotherapy

	v. Orthotics, surgical appliances, from Orthotists and Prosthetists, assistive technology, communication aids, and seating and wheelchair services vi. Other services which may be required for the rehabilitation and care of patients who have suffered major trauma are specialist nursing teams (for the management of issues such as external fixators, stoma care), pharmacy, pain management, audiology, optometry and podiatry vii. MTC specialist rehabilitation staff should be able to offer advice local clinicians who are supporting major trauma patients across the pathway when required; viii. Vocational rehabilitation

Minimum Requirements for TU plus rehabilitation (all apply to Adults & Paediatrics unless specified)
a. Manage injured patients from its local catchment area (adults, young adults and children) b. Provide initial care and resuscitation of MT patients c. If skills and expertise are present in TU, care will be provided with input as required by MTC d. (Adult) Have a system in place to identify and transfer under-triaged and self presenting patients to MTC, including availability of clinical escort where required e. (Paediatric) Manage under-triaged and self-presenting paediatric major trauma patients by liaising with the Paediatric MTC and Specialist Services Desk to facilitate urgent retrieval/transfer which may include Modified Primaries by adult or paediatric ScotSTAR teams f. (Paediatric) Accept repatriations from Paediatric MTC and provide acute rehabilitation and has access to specialist rehabilitation as part of a regional approach g. Participate/lead upon research and education and participate in national injury prevention programmes h. Have robust clinical governance and performance systems in place to ensure quality assurance and improvement as part of the network governance programme
i. Provide support to LEHs within their catchment area j. Provide training and education to staff in the management of the trauma patient. This will be linked to the wider network programme where appropriate. k. Participate in MDT M&M/governance meetings as per the MTC l. Commit to being part of a trauma network with designated representation at network meetings

m. Consistent and robust participation in the STAG audit n. Participate in the network's major incident planning and be prepared to take patients from out with the local catchment area at times of strain in the system	
1. Accept and manage the following patients 24 hours a day, seven days a week	1. Patients who did not fulfil the SAS criteria to transfer directly to an MTC. 2. Patients who fulfilled the criteria for MTC care but were further than 45 minutes away. 3. Patients who fulfilled the criteria for MTC care, but were not deemed safe for direct transfer due to SAS concerns.
2. Patients assessed in the TU may either	1. Require an automatic acceptance transfer directly from the TU Emergency Department to the MTC Emergency Department. 2. Require transfer to the MTC within 24 hours 3. (Paediatric) Time to secondary transfer to a MTC for patients who have suffered major trauma is minimised to: • Referral to mobilisation of transfer team is<60 mins • Referral to team arrival with patients <3 hours (road/mainland responses) • Referral to team arrival with patients <4 hours (island/air response) 3. Be definitively managed in the TU.
3. Major Haemorrhage protocol for trauma patients	
4. (Paediatric) 24/7 access to physician with paediatric experience	
5. Access to appropriate consultants within 30 minutes	a. ED Consultant (with paediatric experience for Paediatric TU) b. Anaesthetic consultant (with paediatric experience for Paediatric TU) c. General Surgery Consultant (with paediatric experience for Paediatric TU)
6. Access to appropriate consultants within 60 minutes	a. Orthopaedic consultant (with paediatric experience for Paediatric TU)
7. A specialist multi-disciplinary trauma team consisting of	a. Trauma team leader

	b. Anaesthetist c. General surgeon
8. Access to CT and CT reporting 24 hours a day (within 60 minutes)	
9. 24/7 access to emergency theatre	
10. 24/7 access to critical care	
11. There should be a multidisciplinary specialist rehabilitation service (as defined by national standards such as BSRM) (Adult & Paediatric)	
12. Suitably skilled named lead for trauma rehabilitation (Adult & Paediatric)	
13. There should be a named person to support coordination of rehabilitation, to facilitate rehabilitation planning and delivery, and the movement of patients from and to the TU and across the trauma network (Adult & Paediatric)	
14. The Trauma Unit should accept patients being transferred from MTCs without delay where those patients have needs which do not exceed the capability of the Trauma Unit in accordance with the timeframe of standards to be set by the STN Rehabilitation and Repatriation Working Group (Adult & Paediatric)	
15. Outreach sessions should be provided to Trauma Units by rehabilitation medical consultant staff from the linked Major Trauma Centre. These sessions should provide support and assist in the management of patients with complex rehabilitation needs. (Adult & Paediatric)	

Minimum Requirement for Rehabilitation and Repatriation Service Adult & Paediatric	
1 – 3 Suitably skilled named	1. Trauma Network Rehabilitation Lead 2. Clinical Lead for Acute Trauma Rehabilitation Services in every MTC 3. Clinical Lead for Paediatric Acute Trauma Rehabilitation Services in every Paediatric MTC
4. **Rehabilitation coordinator roles throughout the network for adult and paediatric patients available 7 days a week**	Patients should have an identified key worker to be a point of contact for them, their carers or GP, and to ensure delivery of their personal plan for rehabilitation.

5 – 6 A rehabilitation plan should be developed by the multi-disciplinary team in conjunction with the patient and their family/carers.	5. The plan should reflect the complexity of need to inform the most appropriate rehabilitation input and initiated within 3 days of the patient being admitted to the MTC or TU. 6. The rehabilitation plan must accompany the patient throughout the entire rehabilitation journey and be updated to reflect ongoing rehabilitation requirements.
7. **Patient and/or their families should be provided with appropriate written information about (Adult & Paediatric):**	• The MTC facilities • The care which is tailored to the individuals needs • Rehabilitation services
8. Directory of services and resources should be developed relating to rehabilitation and ongoing care to facilitate referral and access to these services. (Adult & Paediatric)	
9. Integrated Joint Boards and H&SCPs must be integral partners in the planning and delivery of rehabilitation services across the network. (Adult & Paediatric)	
10. The regional network should have in place an agreed policy and Standard Operating Procedure for the repatriation and discharge of patients (adults and paediatrics) developed in conjunction with the SAS.	
11. The regional network should have in place agreed referral pathways for access to rehabilitation services (adults and paediatrics).	
12. The regional network should have a collaborative programme in place of multi-disciplinary education and research within the MTC and across the regional trauma network (Adult & Paediatric)	
13. Quality Improvement Programme	The regional network should have a quality improvement programme in place across the network which includes participation in the STAG audit, the implementation of rehabilitation outcome measures and subsequent learning and service improvement objectives.
15b. Specialist Rehabilitation Service	i. There should be a multidisciplinary specialist rehabilitation team (as defined by national standards, such as BSRM)

	ii. There should be clearly defined responsible clinician for each patient iii. Specialist Rehabilitation Services should accept patients being transferred from Major Trauma Centres where those patients have needs which do not exceed the capability of the Specialist Rehabilitation Service in accordance with the timeframe of standards to be set by the STN Rehabilitation and Repatriation Working Group;
15c. Local Emergency Hospitals	Where a LEH is routinely providing early step down care for patients, they should meet the requirements of a TU. Where the LEH is a Rural General Hospital and receives patients on an ad hoc basis, rehabilitation will be supported by network specialist rehabilitation services.
i. There should be a key worker/lead professional for each patient when needed	
ii. There should be access to technology enabled care to enable support within community hospitals and patient's home according to their needs	
iii. The Rehabilitation Plan should be updated to reflect ongoing rehabilitation requirements	
15d. Community Hospitals and Health &Social Care Partnerships (H&SCPs)	
i. H&SCPs should have in place strategic and commissioning plans for rehabilitation services for patients following major trauma which meet national standards	
ii. H&SCPs should have in place strategic and commissioning plans that address the social care needs of patients following major trauma i.e. supported accommodation, housing, personal care psychological support and out of area provision etc.	
iii. There should be a key worker/lead professional for each patient when needed	
iv. There should be access to technology enabled care to enable support within community hospitals and patient's home according to their needs	
v. The Rehabilitation Plan should be updated to reflect ongoing rehabilitation requirements	