NHS England

D15/S/a

NHS STANDARD CONTRACT
FOR MAJOR TRAUMA SERVICE (ALL AGES)

SCHEDULE 2- THE SERVICES A. SERVICE SPECIFICATIONS

Service Specification No.	D15/S/a
Service	Major Trauma
Commissioner Lead	
Provider Lead	
Period	12 months
Date of Review	

1. Population Needs

1.1 National/local context and evidence base

Major trauma is the leading cause of death in people under the age of 45 and as such is a serious public health problem. Over a number of years the level of care in England for these patients has been shown to be poor, with lack of regional organisation and a poor consultant level involvement in decision-making (National Confidential Enquiry into Peri-Operative Deaths(NCEPOD) "Trauma who Cares" 2007, National Audit Office "Major Trauma Care in England 2010"). The National Audit Office report estimated that there are 20,000 cases of major trauma per year in England.5,400 people die of their injuries with many others sustaining permanent disability. Many of these deaths could be prevented with systematic improvements to the delivery of major trauma care.

The NHS Operating Framework for England 2011 – 2012 reiterated a commitment to ensure the implementation of regional trauma networks across England. Regions will have implemented trauma systems in 2011/12 and will commit to on-going delivery and implementation in 2013/14.

A vast number of standards exist in relation to the delivery of individual aspects of trauma care such as National Institute for Health and Clinical Excellence (NICE) guidance on management of head injury and the British Orthopaedic Association Standards for

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Trauma (BOAST) guidelines for open fractures and pelvic fractures. A number of these, together with additional expert opinion, are been assimilated into a performance management framework which will be based on a dashboard and a quarterly report which will drive the management of care quality within the networks.

The NHS Clinical Advisory Group (CAG) provides recommendations on the regionalisation of trauma care, setting out service standards for the provision and delivery of major trauma care. It states that regionalising trauma services involves developing Inclusive Trauma Systems through Trauma Networks, which include all providers of Trauma Care, from pre-hospital care through to rehabilitation[1]

Seriously injured adults and children[2] are described as having suffered from major trauma. This is measured on a scale known as the Injury Severity Score (ISS) which scores injuries from 1 to 75, the latter being the most serious. Patients who have an ISS>15 are defined as having suffered from major trauma. In addition, patients with an ISS of 9-15 have moderately severe trauma.

It is not possible to determine the ISS at the time of injury as it requires a full diagnostic assessment and often surgical intervention in hospital. For these reasons a system of triage is used which identifies those patients who are most likely to have had major trauma, these patients are referred to as ”candidate major trauma” patients .Pre-hospital emergency services have developed major trauma decision protocols for use by crews to determine the most appropriate destination of injured patients. Those with potential major trauma injuries (“candidate” major trauma patients) will be taken directly to a Major Trauma Centre (MTC) where travel times allow, otherwise to the nearest Trauma Unit (TU) for rapid stabilisation and transfer to the MTC where those injuries exceed the capability of a Trauma Unit and in line with local protocols.

The scope of this specification relates to patients who have been triaged as major trauma patients (adult or child) with an ISS>8 using a major trauma triage tool and treated in a Major Trauma Centre. A number of these patients will be found to have ISS>15 and a further cohort an ISS of 9 - 15. The exact score will not be known until the data is submitted at a later stage to the Trauma Audit Research Network (TARN) database for ISS coding.

Evidence Base and Key Publications

- Regional Networks for Major Trauma NHS Clinical Advisory Groups Report; http://www.excellence.eastmidlands.nhs.uk/welcome/improving-care/emergency-urgent-care/major-trauma/nhs-clinical-advisory-group/
- Department of Health Operating Framework 2011-12; http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_122738

[1] Regional Networks for Major Trauma NHS Clinical Advisory Groups Report
[2] Throughout this specification we will use the phrase ‘patients’ this is intended to mean both adults and children

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2. Outcomes

2.1 NHS Outcomes Framework Domains & Indicators

Domain		
Domain 1	Preventing people from dying prematurely	✓
Domain 2	Enhancing quality of life for people with long-term conditions	
Domain 3	Helping people to recover from episodes of ill-health or following injury	✓
Domain 4	Ensuring people have a positive experience of care	✓
Domain 5	Treating and caring for people in safe environment and protecting them from avoidable harm	✓

3.1 Aims and objectives of service

The aim of the service is to provide care to major trauma patients (ISS>8) who are delivered to the Major Trauma Centre. The Major Trauma Centre has all the services available to receive and manage seriously injured adults and/or children. Patients who have been incorrectly triaged or have self- presented at a Trauma Unit (TU) with serious injury which exceeds the resources and capability of the TU will be rapidly transferred to a MTC. In addition, some patients will need treatment in the MTC (for example for pelvic fracture surgery) which will require transfer in within the first 2 days following injury.

There are three types of MTC – those that treat only adults, those that treat only children and those who can treat both adults and children. The service is designed to deliver high quality specialist care to patients of all ages starting from admission to the relevant MTC, with full assessment and diagnostics in the emergency department. This may be followed by operative treatment and an episode in the critical care unit and ward. Rehabilitation is required for a number for patients, and this rehabilitation will start in the MTC and continue through specialist rehabilitation units or locally through a variety of commissioned providers defined in the network. This specification covers the period of treatment within

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the MTC until discharge or transfer to another provider.

Overall the service aims are, to provide a comprehensive system of specialist care for people who have suffered serious injury (major trauma) through the delivery of a regional trauma network. The components of this are:

- A system of initial triage to enable conveyance by the local ambulance service to the most appropriate destination according to agreed criteria.
- One or more Major Trauma Centres (MTCs) linked into local Trauma Units (TUs), working with Local Emergency Hospitals (LEH), local general rehabilitation services and Specialist Rehabilitation (SR) providers.
- Services for children including specialist rehabilitation will be provided at a children's MTC or in a combined adult/children's MTC.
- To deliver a system based on a pathway of care from the pre-hospital phase including rehabilitation and a return to socio-economic functioning.
- To ensure the quality of the system is monitored and subject to a process of continuous quality improvement.
- To reduce avoidable deaths in the population of patients who would previously have died of their injuries.
- To reduce avoidable deaths and life limiting injuries through an injury prevention programme
- To improve the functionality, health and psychological wellbeing, in those patients who survive their traumatic injuries; increasing their quality of life

3.2 Service description/care pathway

Service Description:

Service Delivery

Major Trauma care is delivered through an inclusive Trauma Network delivery model. A Trauma Network includes all providers of trauma care, particularly: pre-hospital services, other hospitals receiving acute trauma admissions (Trauma Units), and rehabilitation services. The network has appropriate links to the social care and the voluntary/community sector.

Major Trauma Centres (MTCs) (covered by this specification) sit at the heart of Trauma Networks as the centres of excellence providing multi-specialty hospital care to seriously injured patients, optimised for the provision of trauma care. They are the focus of the Trauma Network and manage all types of trauma but specifically have the lead for managing candidate major trauma patients, providing consultant-level care and access to tertiary and specialised level services. Within the Trauma Network the MTC:

- Is optimised for the definitive care of injured patients. In particular it has an active, effective trauma Quality Improvement programme. It also provides specialist early/hyper acute rehabilitation as well as a managed transition to rehabilitation and the community.
- Takes responsibility for the care of all patients with Major Trauma in the area covered by the Network. It also supports the Quality Improvement programmes of other

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hospitals in its Network.

It provides all the major specialist services relevant to the care of major trauma, i.e. general, emergency medicine, vascular, orthopaedic, plastic, spinal, maxillofacial, cardiothoracic and neurological surgery, specialist early/hyper acute rehabilitation and interventional radiology, along with appropriate supporting services, such as critical care.

The whole specialised pathway of care for major trauma patients is described in Figure 1

See Appendix 1

The elements which will be commissioned under the contract, relate to those described below. Under the contract MTCs will be required to work with partners (detailed in Appendix 2) such as the ambulance service, Trauma Units, Local Emergency Hospitals and specialist and general rehabilitation providers to ensure delivery of the whole pathway including the specialised component described here.

As part of this pathway, the MTCs themselves deliver services that can be described as acute care and surgery, on-going care and reconstruction and acute/early phase rehabilitation.

Due to the very nature of major trauma care and its system, network and interspecialty delivery model; there are also a number of interdependent services and specialties required to work in partnership to deliver seamless and high quality care, these are described in section 2.5.

Services are to be delivered in line with the standards of the Regional Networks for Major Trauma NHS Clinical Advisory Groups Report (2010).

When treating children, the service will additionally follow the standards and criteria outlined in the Specification for Children's Services (attached as Annex 1 to this Specification).

Care Pathway

Referral
Trauma Networks will comprise one or more MTCs linked to a number of TUs. Patients will be triaged to a MTC if they trigger tool and secondary transfer protocol; these may differ across regions and systems. MTCs will have a policy of automatic acceptance for patients requiring MTC care from within the network who have been correctly triaged to a TU, under triaged or self- presented. Networks will work together collaboratively ensuring patients have seamless access to care and transfer back to their locality hospital or host TU when medically fit.

Emergency Care

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Major Trauma Centre (MTC)

A MTC (adult, child or combined) has all the facilities and specialties required to be able to treat patients with any type of injury in any combination. Patients who have ISS greater than 8 and are treated in a MTC are covered by this specification. Examples of such patients, are patients who have suffered traumatic amputation of one or more limbs, patients with a serious head injury and patients who have suffered a number of injures (known as polytrauma) such as a combination of abdominal and chest injuries. Elements of the service to manage these patients will include:

Emergency Care and Surgery:

- 24/7 consultant available on site to lead the trauma team
- The trauma team should be appropriately trained and competent to deliver their role (Appendix 6)
- Trauma team present 24 hours a day for immediate reception of the patient;
- Ability to undertake resuscitative thoracotomy in the emergency department (ED);
- A massive haemorrhage protocol in place for patients with severe blood loss which includes the administration of tranexamic acid within 3 hours of injury, and transfusion specialist advice should be available 24 hours a day;
- 24/7 immediate availability of fully staffed operating theatres;
- All emergency operative interventions performed within the first 24 hours should have evidence of consultant involvement, and consultant presence in the operating room for life- or limb-threatening injuries. A consultant will be involved in surgical decision making; Emergency trauma surgery will be undertaken or directly supervised by consultants (Annex 2);There will be a network protocol in place and operational at the MTC for assessing the whole spine in Major Trauma patients;
- Consultants available on site within 30 minutes when required; Neurosurgery; Spinal and spinal cord surgery; Vascular surgery; General surgery (adult or child); Trauma and Orthopaedic surgery; Cardiothoracic surgery; Plastic surgery; Maxillofacial surgery; Ear nose and throat surgery; Anaesthetics; Interventional radiology; Intensive care.
- For Children's MTC, where the incidence of major trauma overnight is demonstrably low, a consultant should be immediately available on site to lead the trauma team between 8am to midnight. They should be available on site within 30 minutes of receiving an alert call at all other times.

Diagnostics and Radiology

- Immediate (defined as within a maximum of 60 minutes, ideally within 30 minutes) access to computerised tomography (CT) scanning and appropriate reporting within 60 minutes of scan;
- Availability of interventional radiology within 60 minutes of referral.

On-going Care and Reconstruction

- Immediate access to critical care or high dependency care (adult or paediatric) when

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required

- A defined team to manage on-going patient care, including a key worker (also referred to as trauma and rehabilitation co-ordinator) to support patients through the pathway and into rehabilitation. Model for the key worker may vary in centres.
- Specialist nursing and allied health professional trauma roles.
- Access to cross speciality supporting services which will include pain management, rehabilitation medicine (which usually includes management of disturbed behaviour) and neuropsychology and neuropsychiatry.
- A defined ward for major trauma patients.
- A ward environment suitable for people with disability to practice and maintain their activities, specifically having enough space for people to get up and dress with some privacy, having toilets and baths/showers safely accessible for assisted or independent use by patients, and having facilities to allow the making of snacks and hot drinks.
- A nursing team in the ward, who are able to facilitate practice of and independence in functional activities by the patient, and undertake activities with the patient as advised, by the rehabilitation team.

Early/Hyper Acute Phase Rehabilitation

- A defined service for early/hyper acute trauma rehabilitation which meets the needs of patients with ISS >8.
- Review within 3 calendar days by a Rehabilitation Medicine consultant or alternative consultant with skills and competencies in rehabilitation[3] (allowing up to 4 calendar days if seriously at risk of dying or if review prior to 4 calendar days is not clinically possible), with the output being an initial formulation (analysis of relevant factors) and plan to complete and inform the initial rehabilitation prescription.
- The prescription for rehabilitation reflects the assessment of the physical, functional, vocational, educational, cognitive, psychological and social rehabilitation needs of a patient.
- An initial assessment by the relevant members of a specialist rehabilitation team (including nurses) to add to the medical review.
    - The output of the above two actions will be that all patients covered by this specification (without exception) have an initial rehabilitation prescription within 2-4 calendar days of presentation. Note that the prescription may identify no further need for rehabilitation, or may simply recommend monitoring or may require full active engagement of the wider rehabilitation team.
    - All patients to receive early phase rehabilitation as indicated by the Rehabilitation prescription, and all other actions identified in the rehabilitation prescription to be undertaken; if action or input cannot be delivered, the reason should be recorded and intervening action to be undertaken.
    - All patients needing rehabilitation input or monitoring to be under the care of a Consultant-delivered team that includes rehabilitation nurses, allied health professionals and a consultant in rehabilitation medicine or alternative

[3] For example, for children and elderly patients with significant co-morbidities

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consultant with skills and competencies in rehabilitation. This team will meet weekly to discuss all patients within the scope of this specification in the MTC (Including those in Intensive Care Units (ICU) and ward areas); a speciality trainee registrar (StR) at St4 or above in rehabilitation may deputise for a consultant on occasion but a consultant should attend over 80% of meetings and continue to provide supervision and support to the team.

Psychiatry

Patients who suffer Major Trauma due to self-harm must have access to acute psychiatric services in Major Trauma Centres with a 24/7 on-call consultant psychiatrist/child psychiatrist & liaison mental health service available on site to provide timely advice and support. Where necessary, access to a neuropsychiatric assessment should be available, Staff on major adult or paediatric trauma units should be provided with training to help them identify the common mental health disorders which occur in response to major trauma, and to manage the related risk behaviours. This service should be available with equity for adults and children

Burns

Where burn injury occurs in isolation or alongside less serious injury then patients should be transported in accordance with local pre-hospital triage protocols. Ideally this would be to an Emergency Department associated with a Specialised Burn Service of the appropriate level. This would ensure that burns expertise is available on site and thus reduce the potential need for a secondary transfer. Where this is not possible, transfer to an appropriate specialised burn service should occur as early as possible after injury.

Network Delivery:

- MTCs will provide clinical advice to other providers within the network. This will include; in pre-hospital stage and whilst patients are awaiting transfer to the MTC for definitive treatment or following acute care when the patient is discharged to on-going specialised or local rehabilitation services.
- For major trauma patients triaged to a TU (due to local geographical or triage tool arrangements) requiring secondary transfer, this will occur within 48 hours of referral. For those patients that require definitive care at the MTC and those with a serious head injury, they will be transferred to the MTC without delay.
- MTC will commit to being actively engaged and contributing to the Trauma Network, particularly in operational requirements, training, governance and audit.
- Deliver care and access to treatment in line with locally agreed network protocols and guidelines.

MTCs will deliver/provide the roles, functions and responsibilities of leading a network as set out by the Operational Delivery Network guidance and according to the operational delivery network service specification.

Discharge planning, Continuing Care and Rehabilitation (from the acute service).

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Communication
There will be effective communication between all those responsible for the patient's care, the patient and where appropriate their family and other carers.

Patients will be provided with a full range of condition-specific information in appropriate formats.

ODN for Major Trauma will take an active role in supporting network-wide communication.

Audit, Data Management, Governance and Quality Improvement

- Full data submission to TARN within 25 calendar days following a patient's discharge
- MTC will be responsible for drawing down from TARN their report and ensuring the ISS is confirmed within the Commissioning data set as per the information algorithm for Major Trauma (described in appendix 3)
- MTCs will be responsibility for their clinical governance, and collaborate in a quality improvement programme using TARN data as its basis as members of the Network.

Networks will meet regularly to examine performance through formal governance processes. Performance improvement will be undertaken through regular mortality and morbidity meetings which will generate action plans for improvement.

Oversight of the network will be undertaken according to local structures and processes, MTCs may be responsible for the management of the operational network in the future

Where an MTC has key services located across more than one site, an operational plan will be available that describes how major trauma patients are treated and patient outcomes delivered.

The MTC takes responsibility for the care of all patients referred with major trauma in the area covered by the Network; as defined by local protocols and capabilities of local Trauma Units and transfer arrangements to a MTC for under triage and secondary transfer protocols. It also supports the Quality Improvement programmes of other hospitals in its Network

Education and Training
See APPENDIX 6

Referral processes and sources

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The major trauma patient pathway is an emergency pathway with patients triaged through the local ambulance service or referred on by TUs. The nearest MTC may be in a network which is in a different SHA cluster to that from where the incident occurred. Cross-boundary discussions need to take place to ensure patients pathways are clarified in this situation.

Some patients who are triaged into a MTC may require immediate onward referral. These patients include burns patients and those with spinal cord injury. The appropriate guidelines for each condition will be used in this situation.

Discharge criteria and planning

Patients may be discharged to a number of on-going destinations. A number will be discharged home from the MTC following assessment in the emergency department or after a period of in-patient treatment. Others will require on-going management and will be transferred to an appropriate healthcare provider within the same or a different network.

A few patients will be transferred rapidly for further acute specialist care – this includes children, patients with severe burns, spinal cord injury, those requiring reconstructive surgery and children with head injuries requiring a paediatric neurosciences centre. Some patients will require admission to specialist rehabilitation centre such as those for neurological rehabilitation. It may also include onward referral for amputee rehabilitation, equipment and prosthetics and to local general rehabilitation services.

Patient-Centred Services

Across networks there will be a focus on delivery of patient centred services which consider all of the health and well-being needs of people who have sustained traumatic injuries. The important role of family and friends will be acknowledged and actively supported. Services will ensure;

- Routine involvement of the patient and their family/carers – including early and repeated case meetings – wherever possible, to discuss all care and injury management decisions, including coordination and planning of interventions.
- A "patient-welfare-centred" framework that permeates all stages of care for trauma patients. This will start with training of all medical and non-medical staff regarding the ethos of such a service and how it relates to personnel infrastructure.
- All patients will have a patient held record which continues their clinical information and treatment plan from admission through to specialised or local rehabilitation (supported by the prescription for rehabilitation). In the case of paediatrics, this can be an age related hand held record for the patient and a full hand held record for the parent or career.
- A framework where all aspects of patients health, well-being, medical
- and non-medical needs are overseen by one team, and specifically coordinated by one member of this team.
- Consideration of the impact of the physical environment and care processes (ward rounds, discussions about medical and non-medical requirements) on patients, with paramount importance given to promotion of patient privacy, dignity and

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independence in functional activities.

- Evaluation of services must go beyond mortality rates and focus more on assessing patients well-being in the hospital environment and achievement of optimum function in the context of their personal preferences. A holistic trauma care framework which includes parents/family/carer in service design, to include:
  - Flexible visiting hours (according to local hospital protocols)
    Addressing transport and accommodation needs of Parents/family/ carer (e.g. providing car parking, kitchen facilities and accommodation for close relatives who have to travel a reasonable distance to the Trauma Centre.
  - Making available information for support services of relevant voluntary sector organisations in individual care plans from the outset which may include access to counselling, psychological and pastoral service for patients and family members.
  - Providing access to patient and carer support groups with other patients, carers, parents who have been through the major trauma pathway.
  - Coordination of medical, nursing and rehabilitation packages of care.
  - The Trauma and Rehabilitation team will have understanding of the psychological and social impact of disfigurement and impact of traumatic injuries sustained
  - Early involvement of continuing care or social care where assessments for funding are required to facilitate onward referral and placement.
  - Patient, parent and carer information to describe patient pathway and likely treatment and recovery process (e.g. behaviour). This will also include facilities and maps for any likely future discharge destination within the network

General Paediatric care

When treating children, the Service will additionally follow the standards and criteria outlined in the Specification for Children's' Services (attached as Annex 1 to this Specification)

Operational Deliver Network (ODN)

MTCs will either be the host or network organisation part of an operational delivery networks, the service standards, roles are responsibilities are defined within the service specification for Trauma Operational Delivery Networks (ODNs). ODNs will ensure quality standards and networked patient pathways are in place. They will focus on an operational role, supporting the activity of Provider Trusts in service delivery, improvement and delivery of a commissioned pathway, with a key focus on the quality and equity of access to service provision. This will allow for more local determination, innovation and efficiency across the pathway. ODNs support the delivery of 'Right Care' principles by incentivizing a system to manage the right patient in the right place.

3.3 Population covered

The service outlined in this specification is for patients ordinarily resident in England*; or otherwise the commissioning responsibility of the NHS in England (as defined in Who

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Pays?: Establishing the responsible commissioner and
other Department of Health guidance relating to patients entitled to NHS care or exempt from charges).

*Note: for the purposes of commissioning health services, this EXCLUDES patients who, whilst resident in England, are registered with a General Practitioner (GP) Practice in Wales, but INCLUDES patients resident in Wales who are registered with a GP Practice in England.

Specifically, this service is for adults and children with major trauma injuries (as defined by ISS>8) requiring specialised invention and management in a Major Trauma Centre, as outlined in this specification.

3.4 Any acceptance and exclusion criteria and thresholds

Acceptance Criteria

The MTC will accept patients who have been triaged using local triage tool and secondary transfer protocols and arrive by direct primary transfer, emergency secondary transfer from a TU or self-presentation. Patients within the network who require secondary transfer because of under-triage, self-presentation or because initial travel times to specialist MTC are greater than the agreed network protocols, will be transferred to the MTC using an "automatic acceptance" policy. Children may either be treated in a combined MTC or a Children's MTC.

MTCs will be responsible for delivering the services as defined by this specification for the catchment population of their MTC. Catchment areas are defined by network configuration and by commissioners in the designation of MTCs and major trauma flows, this will include flows that cross the previous SHA boundaries. Patients will be returned to receive care closer to home as soon as it is clinically appropriate.

This specification covers the commissioning of activity for TARN eligible major trauma patients ISS >8 treated within an MTC.

NHS England Clinical Commissioning policies and Statements

Exclusion Criteria

All patients who trigger the networks major trauma triage tool will be taken to a MTC will be “candidate” major trauma patients – in practice some patients will turn out not to have major trauma. Patients with ISS <9 will not be commissioned under this contract. In some networks ‘candidate’ major trauma patients will be taken to a TU first as agreed as part of those regional network arrangements. In these networks, any patient whose needs exceed the capability of a TU will be transferred to an MTC as detailed in 2.2.

Eligible patients are those who meet with the TARN eligibility criteria and have an ISS >8 and are treated in a designated Major Trauma Centre.

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NHS England Clinical Commissioning policies and Statements

3.5 Interdependencies with other services/providers

Major Trauma generates complex clinical problems and injuries; successful management involves a number of specialties and agencies. Each MTC is required to describe how a service which crosses specialty boundaries is delivered to produce a comprehensive trauma service, and to commit to a comprehensive governance framework.

Co-located Services

- Emergency Medicine
- Radiology
- Interventional Radiology
- Neurosurgery
- Spinal Cord Injury Services (acute)
- Vascular Surgery
- General Surgery
- Cardiothoracic Surgery
- Trauma and Orthopaedic Surgery
- Plastic Surgery
- Maxillo-Facial Surgery
- Ear nose and throat surgery
- Transfusion Services
- Pathology services
- Anaesthetics
- Theatres
- Intensive Care
- Early/Hyper Acute Phase Rehabilitation Services
- Clinical Psychology
- Organ Donation

Interdependent Services

Interdependencies with other clinical networks are;

- Neurosurgery and Neurosciences Networks
- Spinal Cord Injury Services
- Burns Operational Delivery Networks
- Critical Care Operational Delivery Networks

Interdependencies with CCG commissioned pathways and services are;

- Patients with a ISS 1 – 8 and patients who do not meet the TARN criteria for inclusion
- Patients with an ISS 1-75 treated in a provider other than an MTC. (NB. Trauma Networks should be maturing and using governance arrangements to ensure that patients with high ISS are triaged as either primary or secondary transfers to an MTC in line with local protocols)

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- Ambulance Services
- Rehabilitation, Re-ablement and Recovery services in non MTC providers i.e. TU, LEH
- Mental Health and Psychology services
- Continuing Care commissioned pathways

Related Services: *Services either at the preceding or following stage of the patient journey*

- Ambulance Services (including pre-hospital helicopter and other car services)
- Mountain and Cave Rescue, Voluntary Rescue Services
- Trauma Unit services
- Local hospital and community rehabilitation services
- Specialised rehabilitation services
- Spinal cord injury rehabilitation services
- Primary care
- Burns services
- Voluntary support services

Data Submission is in line with the standards set out by TARN, section 2.2, appendix 3 and Best Practice Tariff (BPT) guidance**.**

NHS England Clinical Commissioning policies and Statements
None

4. Applicable Service Standards

4.1 Applicable national standards e.g. NICE

See Appendix 2

A number of protocols and standards will be developed and used, including a (locally defined) triage tool for the ambulance service and local protocols for management of specific conditions.

Phasing of any standards described in Section 2.2 will be agreed locally in line with regional Trauma Network/System implementation plans. Implementation plans will be monitored through the Service Development and Improvement Schedule (SDIP) schedule within this contract.

Quality standards specific to the service:

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Quality Requirement	Threshold	Method of Measurement	Consequence of breach
Domain 1: Preventing people dying prematurely			
Improving chances of surviving Major Trauma	Probability of the number of additional patients surviving	TARN	General conditions 8 and 9
Domain 2: Enhancing the quality of life of people with long-term conditions			
Domain 3: Helping people to recover from episodes of ill-health or following injury			
Severely Injured patients (>ISS15) will be seen by a Consultant within 5 minutes Rehabilitation Prescription will be initiated within 2-4 calendar days of admission Adherence to Boast 4 Standards Involvement in HQUIP rehabilitation Audit	>90% 20% improvement on previous year baseline CQUIN 13/14	TARN TARN TARN	General conditions 8 and 9
Domain 4: Ensuring that people have a positive experience of care			
Commitment to PROMS			General conditions 8 and 9
Domain 5: Treating and caring for people in a safe environment and protecting them from avoidable harm			
Operational Delivery Networks should have in place appropriate governance systems to allow the continual review of patients with an ISS >15 who are not transferred to the MTC Appropriate severely	No of high ISS in Trauma Units Maintenance of previous year	ODN dashboard TARN	General conditions 8 and 9

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injured patients will be transferred to a Major Trauma Centre within 48 hours of referral.	position		

4.2 Applicable standards set out in Guidance and/or issued by a competent body (e.g. Royal Colleges)

As above. Include in here developmental, aspirational guidance.
List out and reference here but provide the detail in the quality standard template for inclusion in the Quality Schedule.

5. Applicable quality requirements and CQUIN goals

Applicable quality requirements (See Schedule 4 Parts A-D)To be inserted following agreement of 14/15 CQUIN Schemes

5.1 Applicable CQUIN goals (See Schedule 4 Part E)

14/15 dashboard measures and Outcome Framework and 14/15 Best Practice Tariff will be inserted criterion when agreed and finalised

Full implementation of Major Trauma Care into regional Trauma Care Systems

6. Location of Provider Premises

The Provider's Premises are located at:

- Addenbrooke's Hospital, Cambridge (Cambridge University Hospitals NHS Foundation Trust)
- Frenchay and Southmead Hospitals, Bristol (North Bristol NHS Trust)
- James Cook University Hospital, Middlesbrough (South Tees Hospitals NHS Foundation Trust)
- John Radcliffe Hospital, Oxford (Oxford Radcliffe University Hospital NHS Trust)
- Leeds General Infirmary, Leeds (The Leeds Teaching Hospitals NHS Trust)
- Queen's Medical Centre, Nottingham (Nottingham University Hospital NHS Trust)
- Royal Victoria Infirmary, Newcastle (The Newcastle upon Tyne Hospitals NHS Foundation Trust)
- Southampton General Hospital, Southampton (University Hospital Southampton

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NHS Foundation Trust)

- Derriford Hospital, Plymouth (Plymouth Hospitals NHS Trust)
- Hull Royal Infirmary (Hull and East Yorkshire NHS Trust)
- Northern General Hospital, Sheffield (Sheffield Teaching Hospitals NHS Foundation Trust)
- Queen Elizabeth Hospital, Birmingham (University Hospitals Birmingham NHS Trust)
- Royal Preston Hospital, Preston (Lancashire Teaching Hospitals NHS Foundation Trust)
- Royal Sussex County Hospital, Brighton (Brighton and Sussex University Hospitals NHS Trust)
    a. Hurst Wood Park Neurosciences Centre
- University Hospital Coventry (University Hospitals Coventry Warwickshire NHS Trust)
- University Hospital of North Staffordshire NHS Trust Stoke on Trent
- St Mary's Hospital, London
- St George's Hospital, London
- The Royal London Hospital
- King's College Hospital
- St Jame's University Hospital, Leeds
- Alder Hey Children's Hospital NHS Foundation Trust, Liverpool
- Birmingham Children's Hospital NHS Foundation Trust
- Royal Manchester Children's Hospital, Manchester (Central Manchester University Hospitals NHS Foundation Trust)
- Sheffield Children's Hospital, Sheffield (Sheffield Children's NHS Foundation Trust)
- Manchester collaborative Major Trauma Centre
  a. Salford Royal NHS Trust
  b. Manchester Royal Infirmary
  c. University Hospital South Manchester
- Liverpool Collaborative Major Trauma Centre
  a. Aintree University Hospital
  b. Walton Centre for neurology
  c. Royal Liverpool University Hospital

7. Individual Service User Placement

N/a

ANNEX 1 TO SERVICE SPECIFICATION:

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PROVISION OF SERVICES TO CHILDREN

Aims and objectives of service

This specification annex applies to all children's services and outlines generic standards and outcomes that would fundamental to all services

The generic aspects of care:

- The Care of Children in Hospital (HSC 1998/238) requires that:
- Children are admitted to hospital only if the care they require cannot be as well provided at home, in a day clinic or on a day basis in hospital.
- Children requiring admission to hospital are provided with a high standard of medical, nursing and therapeutic care to facilitate speedy recovery and minimise complications and mortality.
- Families with children have easy access to hospital facilities for children without needing to travel significantly further than to other similar amenities.
- Children are discharged from hospital as soon as socially and clinically appropriate and full support provided for subsequent home or day care.
- Good child health care is shared with parents/carers and they are closely involved in the care of their children at all times unless, exceptionally, this is not in the best interest of the child; Accommodation is provided for them to remain with their children overnight if they so wish.

Service description/care pathway

All paediatric specialised services have a component of primary, secondary, tertiary and even quaternary elements.

The efficient and effective delivery of services requires children to receive their care as close to home as possible dependent on the phase of their disease.

Services should therefore be organised and delivered through "integrated pathways of care" (National Service Framework for children, young people and maternity services (Department of Health & Department for Education and Skills, London 2004)

Interdependencies with other services

All services will comply with Commissioning Safe and Sustainable Specialised Paediatric Services: A Framework of Critical Inter-Dependencies – Department of Health

Non-Accidental Injury

Non-accidental injury represents a small but significant component of the caseload of any trauma service providing care for children at any point of the trauma pathway.

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The presentation of this type of injury is often less than straightforward and this can potentially lead to difficulties in management particularly in the context of a busy clinical practice. Once this diagnosis has been considered, clinicians will have local procedures they should follow to alert relevant agencies, but this relies on recognition in the first instance. For this reason, the issue of non-accidental injury should be included in all trauma protocols so the specific needs of this patient group can be reinforced at every available opportunity

Imaging

All services will be supported by a 3 tier imaging network (”Delivering quality imaging services for children” Department of Health 13732 March 2010). Within the network:

- It will be clearly defined which imaging test or interventional procedure can be performed and reported at each site
- Robust procedures will be in place for image transfer for review by a specialist radiologist, these will be supported by appropriate contractual and information governance arrangements
- Robust arrangements will be in place for patient transfer if more complex imaging or intervention is required
- Common standards, protocols and governance procedures will exist throughout the network.
- All radiologists, and radiographers will have appropriate training, supervision and access to CPD
- All equipment will be optimised for paediatric use and use specific paediatric software

Specialist Paediatric Anaesthesia

Wherever and whenever children undergo anaesthesia and surgery, their particular needs must be recognised and they should be managed in separate facilities, and looked after by staff with appropriate experience and training[4]. All UK anaesthetists undergo training which provides them with the competencies to care for older babies and children with relatively straightforward surgical conditions and without major co-morbidity. However those working in specialist centres must have undergone additional (specialist) training[2] and should maintain the competencies so acquired[3]*. These competencies include the care of very young/premature babies, the care of babies and children undergoing complex surgery and/or those with major/complex co-morbidity (including those already requiring intensive care support).

As well as providing an essential co-dependent service for surgery, specialist anaesthesia and sedation services may be required to facilitate radiological procedures and interventions (for example MRI scans and percutaneous nephrostomy) and medical interventions (for example joint injection and intrathecal

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chemotherapy), and for assistance with vascular access in babies and children with complex needs such as intravenous feeding.

Specialist acute pain services for babies and children are organised within existing departments of paediatric anaesthesia and include the provision of agreed (hospital wide) guidance for acute pain, the safe administration of complex analgesia regimes including epidural analgesia, and the daily input of specialist anaesthetists and acute pain nurses with expertise in paediatrics.

*The Safe and Sustainable reviews of paediatric cardiac and neuro- sciences in England have noted the need for additional training and maintenance of competencies by specialist anaesthetists in both fields of practice

References

1. Guidelines for the Provision of Anaesthetic Services (GPAS) Paediatric anaesthetic services. Royal College of Anaesthetists (RCoA) 2010 www.rcoa.ac.uk
2. Certificate of Completion of Training (CCT) in Anaesthesia 2010
3. CPD matrix level 3

Specialised Child and Adolescent Mental Health Services (CAMHS)

The age profile of children and young people admitted to specialised CAMHS day/in-patient settings is different to the age profile for paediatric units in that it is predominantly adolescents who are admitted to specialised CAMHS in-patient settings, including over-16s. The average length of stay is longer for admissions to mental health units. Children and young people in specialised CAMHS day/in-patient settings generally participate in a structured programme of education and therapeutic activities during their admission.

Taking account of the differences in patient profiles the principles and standards set out in this specification apply with modifications to the recommendations regarding the following

- Facilities and environment – essential Quality Network for In-patient CAMHS (QNIC) standards should apply (http://www.rcpsych.ac.uk/quality/quality,accreditationaudit/qnic1.aspx)
- Staffing profiles and training - essential QNIC standards should apply.
- The child/ young person's family are allowed to visit at any time of day taking account of the child / young persons need to participate in therapeutic activities and education as well as any safeguarding concerns.
- Children and young people are offered appropriate education from the point of admission.
- Parents/carers are involved in the child/young person's care except where this is not in the best interests of the child / young person and in the case of young people who have the capacity to make their own decisions is subject to their

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consent.
- Parents/carers who wish to stay overnight are provided with accessible accommodation unless there are safeguarding concerns or this is not in the best interests of the child/ young person.

Applicable national standards e.g. NICE, Royal College

Children and young people must receive care, treatment and support by staff registered by the Nursing and Midwifery Council on the parts of their register that permit a nurse to work with children (Outcome 14h *Essential Standards of Quality and Safety*, Care Quality Commission, London 2010)
- There must be at least two Registered Children's Nurses (RCNs) on duty 24 hours a day in all hospital children's departments and wards.
- There must be an Registered Children's Nurse available 24 hours a day to

advise on the nursing of children in other departments (this post is included in the staff establishment of 2RCNs in total).

Accommodation, facilities and staffing must be appropriate to the needs of children and separate from those provided for adults. All facilities for children and young people must comply with the Hospital Build Notes *HBN 23 Hospital Accommodation for Children and Young People* NHS Estates, The Stationary Office 2004.

All staff who work with children and young people must be appropriately trained to provide care, treatment and support for children, including Children's Workforce Development Council Induction standards (Outcome 14b *Essential Standards of Quality and Safety*, Care Quality Commission, London 2010).

Each hospital who admits inpatients must have appropriate medical cover at all times taking account of guidance from relevant expert or professional bodies (National Minimum Standards for Providers of Independent Healthcare, Department of Health, London 2002)."*Facing the Future*" Standards, Royal College of Paediatrics and Child Health.

Staff must carry out sufficient levels of activity to maintain their competence in caring for children and young people, including in relation to specific anaesthetic and surgical procedures for children, taking account of guidance from relevant expert or professional bodies (Outcome 14g *Essential Standards of Quality and Safety*, Care Quality Commission, London 2010).

Providers must have systems in place to gain and review consent from people who use services, and act on them (Outcome 2a *Essential Standards of Quality and Safety*, Care Quality Commission, London 2010). These must include specific arrangements for seeking valid consent from children while respecting their human rights and confidentiality and ensure that where the person using the service lacks capacity, best interest meetings are held with people who know and understand

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the person using the service. Staff should be able to show that they know how to take appropriate consent from children, young people and those with learning disabilities (Outcome 2b) (*Seeking Consent: working with children* Department of Health, London 2001).

Children and young people must only receive a service from a provider who takes steps to prevent abuse and does not tolerate any abusive practice should it occur (Outcome 7 *Essential Standards of Quality and Safety*, Care Quality Commission, London 2010 defines the standards and evidence required from providers in this regard). Providers minimise the risk and likelihood of abuse occurring by:

- Ensuring that staff and people who use services understand the aspects of the safeguarding processes that are relevant to them.
- Ensuring that staff understand the signs of abuse and raise this with the right person when those signs are noticed.
- Ensuring that people who use services are aware of how to raise concerns of abuse.
- Having effective means to monitor and review incidents, concerns and complaints that have the potential to become an abuse or safeguarding concern.
- Having effective means of receiving and acting upon feedback from people who use services and any other person.
- Taking action immediately to ensure that any abuse identified is stopped and suspected abuse is addressed by:
  - having clear procedures followed in practice, monitored and reviewed that take account of relevant legislation and guidance for the management of alleged abuse
  - separating the alleged abuser from the person who uses services and others who may be at risk or managing the risk by removing the opportunity for abuse to occur, where this is within the control of the provider
  - reporting the alleged abuse to the appropriate authority reviewing the person's plan of care to ensure that they are properly supported following the alleged abuse incident.
- Using information from safeguarding concerns to identify non-compliance, or any risk of non-compliance, with the regulations and to decide what will be done to return to compliance.
- Working collaboratively with other services, teams, individuals and agencies in relation to all safeguarding matters and has safeguarding policies that link with local authority policies.
- Participates in local safeguarding children boards where required and understand their responsibilities and the responsibilities of others in line with the Children Act 2004.
- Having clear procedures followed in practice, monitored and reviewed in place about the use of restraint and safeguarding.
- Taking into account relevant guidance set out in the Care Quality Commission's

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Schedule of Applicable Publications

- Ensuring that those working with children must wait for a full CRB disclosure before starting work.
- Training and supervising staff in safeguarding to ensure they can demonstrate the competences listed in Outcome 7E of the *Essential Standards of Quality and Safety*, Care Quality Commission, London 2010

All children and young people who use services must be

- Fully informed of their care, treatment and support.
- Able to take part in decision making to the fullest extent that is possible.
- Asked if they agree for their parents or guardians to be involved in decisions they need to make.

(Outcome 4I *Essential Standards of Quality and Safety*, Care Quality Commission, London 2010)

Key Service Outcomes

Evidence is increasing that implementation of the national *Quality Criteria for Young People Friendly Services* (Department of Health, London 2011) have the potential to greatly improve patient experience, leading to better health outcomes for young people and increasing socially responsible life-long use of the NHS. Implementation is also expected to contribute to improvements in health inequalities and public health outcomes e.g. reduced teenage pregnancy and Sexually Transmitted Infections (STIs), and increased smoking cessation. All providers delivering services to young people should be implementing the good practice guidance which delivers compliance with the quality criteria.

Poorly planned transition from young people's to adult-oriented health services can be associated with increased risk of non-adherence to treatment and loss to follow-up, which can have serious consequences. There are measurable adverse consequences in terms of morbidity and mortality as well as in social and educational outcomes. When children and young people who use paediatric services are moving to access adult services (for example, during transition for those with long term conditions), these should be organised so that:

- All those involved in the care, treatment and support cooperate with the planning and provision to ensure that the services provided continue to be appropriate to the age and needs of the person who uses services.

The *National Minimum Standards for Providers of Independent Healthcare*, (Department of Health, London 2002) require the following standards:

- **A16.1** Children are seen in a separate out-patient area, or where the hospital does not have a separate outpatient area for children, they are seen promptly.
- **A16.3** Toys and/or books suitable to the child's age are provided.

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- **A16.8** There are segregated areas for the reception of children and adolescents into theatre and for recovery, to screen the children and adolescents from adult patients; the segregated areas contain all necessary equipment for the care of children.
- **A16.9** A parent is to be actively encouraged to stay at all times, with accommodation made available for the adult in the child's room or close by.
- **A16.10** The child's family is allowed to visit him/her at any time of the day, except where safeguarding procedures do not allow this
- **A16.13** When a child is in hospital for more than five days, play is managed and supervised by a qualified Hospital Play Specialist.
- **A16.14** Children are required to receive education when in hospital for more than five days; the Local Education Authority has an obligation to meet this need and are contacted if necessary.
- **A18.10** There are written procedures for the assessment of pain in children and the provision of appropriate control.

All hospital settings should meet the *Standards for the Care of Critically Ill Children* (Paediatric Intensive Care Society, London 2010).

There should be age specific arrangements for meeting Regulation 14 of the Health and Social Care Act 2008 (Regulated Activities) Regulations 2010. These require:

- A choice of suitable and nutritious food and hydration, in sufficient quantities to meet service users' needs;
- Food and hydration that meet any reasonable requirements arising from a
- service user's religious or cultural background
- Support, where necessary, for the purposes of enabling service users to eat and drink sufficient amounts for their needs.
- For the purposes of this regulation, "food and hydration" includes, where
- applicable, parenteral nutrition and the administration of dietary supplements where prescribed.
- Providers must have access to facilities for infant feeding, including facilities to support breastfeeding (Outcome 5E, of the Essential Standards of Quality and Safety, Care Quality Commission, London 2010)

All paediatric patients should have access to appropriately trained paediatric trained dieticians, physiotherapists, occupational therapists, speech and language therapy, psychology, social work and CAMHS services within nationally defined access standards.

All children and young people should have access to a professional who can undertake an assessment using the Common Assessment Framework and access support from social care, housing, education and other agencies as appropriate

All registered providers must ensure safe use and management of medicines,

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by means of the making of appropriate arrangements for the obtaining, recording, handling, using, safe keeping, dispensing, safe administration and disposal of medicines (Outcome 9 *Essential Standards of Quality and Safety*, Care Quality Commission, London 2010). For children, these should include specific arrangements that:

- Ensure the medicines given are appropriate and person-centred by taking account of their age, weight and any learning disability
- Ensure that staff handling medicines have the competency and skills needed for children and young people's medicines management
- Ensure that wherever possible, age specific information is available for people about the medicines they are taking, including the risks, including information about the use of unlicensed medicine in paediatrics.

Many children with long term illnesses have a learning or physical disability. Providers should ensure that:

- They are supported to have a health action plan
- Facilities meet the appropriate requirements of the Disability Discrimination Act 1995
- They meet the standards set out in *Transition: getting it right for young people. Improving the transition of young people with long-term conditions from children's to adult health services.* Department of Health Publications, 2006, London

ANNEXE 2 For review by neurosurgery CRG

Neuro surgical Intervention (from CAG);

Neurosurgery consultants should be available for consultation to the Trauma Network 24 hours a day;

Patients with severe head or spinal cord injury should be managed in a neurosciences centre irrespective of the need for surgical intervention;

Patients with spinal cord injury should be managed in a neuroscience or Spinal Cord Injury Centre according to clinical need.

A consultant should be involved in all decisions to operate for traumatic brain injury;

There should be a network protocol for assessing the whole spine in patients with Major Trauma;

Patients requiring immediate neurosurgical intervention should have surgery commencing within 2 hours of arrival in the major trauma centre (or within 2 hours of deterioration), depending on the state of resuscitation, haemodynamic and coagulation status, and management of other injuries;

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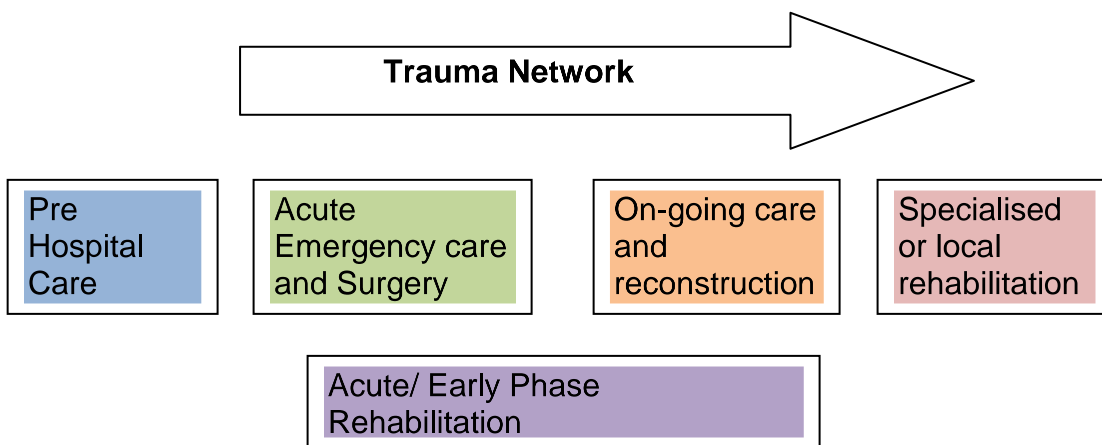
Where current workload practice is for neurosurgical trainees to operate without direct supervision in theatre the responsible consultant must ensure the trainee is appropriately trained and signed-off by a consultant in terms of decision-making and emergency operative management of neurotrauma.

APPENDIX 1- FIGURE 1 THE TRAUMA PATHWAY

The diagram below displays the stages along the Major Trauma care pathway.



APPENDIX 2 – NON NHS COMMISSIONING BOARD COMMISSIONED SERVICES INTERDEPENDENCIES TO AREAS OF THE MAJOR TRAUMA PATHWAY AND NETWORK

Ambulance Services

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The first point of contact with healthcare providers for the majority of seriously injured patients will be through the ambulance service. Each ambulance service will have agreed protocols for the recognition and conveyance of candidate major trauma patients to a MTC or a TU dependent upon the network agreed model for each region. Optimally, the aim of the triage tool in operation in a system will be to ensure that it is sufficiently sensitive to identify all candidate major trauma patients and ensure they access a Major Trauma Service. The ambulance service will pre-alert the MTC that a "candidate"major trauma patient is being transferred in. Patients who trigger the protocol but need immediate access to time critical interventions at a closer hospital will be taken to the nearest TU before rapid secondary transfer to a MTC for definitive care. Those who do not trigger the protocol for MTC direct transfer will be taken to a TU to receive their treatment. A small number of patients will not trigger the protocol but are later found to have injuries requiring MTC care; this group will also undertake rapid secondary transfer to a MTC.

It is widely accepted that access and travel times by ambulance to a major trauma centre should be within 45 minutes, unless the patient is too unstable and requires a more immediate optimisation at a TU prior to a secondary transfer to an MTC.

Secondary transfers from a TU to a MTC will occur within an hour of the request for transfer; this is to minimise the patient's time from injury to accessing definite treatment.

Ambulance service response times also apply to the trauma care system

- Arrival at the scene of a Category A incident within 8 minutes;
- Arrival of a vehicle able to convey at the scene of a Category A incident within 19 minutes;
- Time (in secs) for a qualified health professional dispatched by the ambulance service to arrive at the scene of a Category A call. Measured from T3/Call Connect + 60 seconds or Vehicle assigned (whichever is first);
- Transfer within an hour of request for critical transfer from TU to MTC;
- Reverse transfer to TU /rehabilitation facility should be up to 48 hours maximum of the request for on-going care.

Ambulance services will develop communication links between cross boundary ambulance services to ensure that the trauma/control/dispatch desk are notified and alerted.

Ambulance services within a region will be responsible and accountable for the governance of the whole pre-hospital pathway and providers; this will include UK search and rescue providers, voluntary response services and air ambulance providers

Trauma Unit (TU)

The role of a trauma unit will depend upon its agreed function within each region's implemented system and is largely related to the geography and agreed triage tool in operation to identify and transfer a "candidate" major trauma patient to a network

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provider and the availability and level of provision of services within each region. The role of a Trauma Unit in each region will be to accept and manage, at any time, arrival of patients from the following two groups:

- Those considered to have injuries not requiring expertise of MTC
- Those critically injured for whom direct transfer to MTC could adversely affect outcome (with subsequent plans to transfer).

At the TU, if a patient following assessment is then deemed as no longer requiring management by the trauma team, they will then come under the care of the appropriate specialty.

A TU could be the primary receiver of seriously injured patients and are responsible (for up to 2 days when patients should refer on to an MTC is required) for resuscitating and caring for such patients who require optimisation as they were too unstable and therefore are unable to cope with a 45 min transfer to MTC. A TU may also receive local trauma patients with less serious injuries, which will include simple fractures of one limb, lacerations and minor head injuries. In addition, trauma units need to have the expertise to recognise patients who are beyond their capability to treat, and to be able to transfer them rapidly to the MTC. The elements a TU needs to have in place include;

A trauma team (as described in the service specification for TUs) which includes:

- A trauma team leader of agreed level of seniority and training
- An airway competent doctor
- A doctor capable of recognising patients who require damage control surgery and can deliver damage control surgery in line with network protocols to "candidate" major trauma patients they receive.
- Senior nursing staff
- Protocols for telephoning and calling in the consultant to assist in decision-making when a patient may have been under-triaged and will need treatment or transfer
- Network secondary transfer protocols agreed with MTC and ambulance service for response times
- ED and surgical consultants on call 24/7 Immediate (within 30-60 minutes) access to computerised tomography
- (CT) scanning and appropriate reporting within 60 minutes of referral
- 24/7 availability of NCEPOD theatre
- Access to critical care or high dependency care when required
- Protocols for accepting patients back from the MTC
- A rehabilitation service (as described in the service specification for TUs)
- All patients needs will be assessed and recorded using the rehabilitation prescriptions generated and delivered for all patients for whom one is deemed appropriate.
- Submission of a core data set to TARN within 40 days of discharge.

Local Emergency Hospital (not designated as TU)

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The Local Emergency Hospital (LEH) is a hospital in a Trauma Network that does not routinely receive acute trauma patients (excepting minor injuries that may be seen in an MIU). It has processes in place to ensure that should this occur patients are appropriately transferred to an MTC or TU. It may have a role in the rehabilitation of trauma patients and the care of those with minor injuries.

APPENDIX 3 Major Trauma Clinical Standards

Organisation	Guideline	Year
NICE	Head injury Triage, assessment, investigation and early management of head injury in infants, children and adults	2007
Brain Trauma Foundation	Guidelines for the pre-hospital management of Traumatic brain injury	2007
Brain Trauma Foundation	Guidelines for the treatment of traumatic brain injury 3rd edition (edn)	2007
Brain Trauma Foundation	Guidelines for the surgical management of brain injury	2006
Brain Trauma Foundation	Guidelines for the acute medical management of brain injury in infants children and adolescents 2nd edn	2012
Brain Trauma Foundation	Early Indicators of prognosis in severe traumatic brain injury	2000
British Society of Rehabilitation Medicine	Specialist Rehabilitation in the Trauma Pathway: BSRM core standards	2012
Royal College of Radiologists	Standards of Practice and Guidance for Trauma Radiology in Severely Injured Patients	2011
British Orthopaedic Society Standards for Trauma BOAST 2	Spinal Clearance in the Trauma Patient	2008
BOAST 3	Pelvic and Acetabular Fracture Management	2008
BOAST 4	Management of severe lower limb fractures	2009
European Urological	Guidelines on urological trauma	2009

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Society		
American College of Surgeons	Evaluation and management of the injured child	
American College of Surgeons	Evaluation of abdominal trauma	
American College of Surgeons	Guidelines for initial evaluation of urogenital trauma	
American College of Surgeons	Initial evaluation of maxillofacial injuries	
American College of Surgeons	Initial management of pelvic fractures	1997
American College of Surgeons	Managing life-threatening thoracic injuries	2002
American College of Surgeons	Management of complex extremity trauma	1994
American College of Surgeons	Management of hand injuries	2005
American College of Surgeons	Management of head injury	1994
American College of Surgeons	Management of the mangled extremity	1998
American College of Surgeons	Management of peripheral vascular trauma	2002
American College of Surgeons	Management of spinal cord injury	2002
American College of Surgeons	Prevention of thromboembolitic complications in injured patients	1998
American College of Surgeons	Thoracotomy in the emergency department	2002
National Academy of Clinical Biochemistry	Laboratory guidelines for screening diagnosis and monitoring of hepatic injury	2004
American College of radiologists	Appropriateness criteria – blunt abdominal trauma	2000
NHS Clinical Advisory Groups Report	NHS Clinical Advisory Groups Report; http://www.excellence.eastmidlands.nhs.uk/welcome/improving-care/emergency-urgent-care/major-trauma/nhs-clinical-advisory-group/	2011

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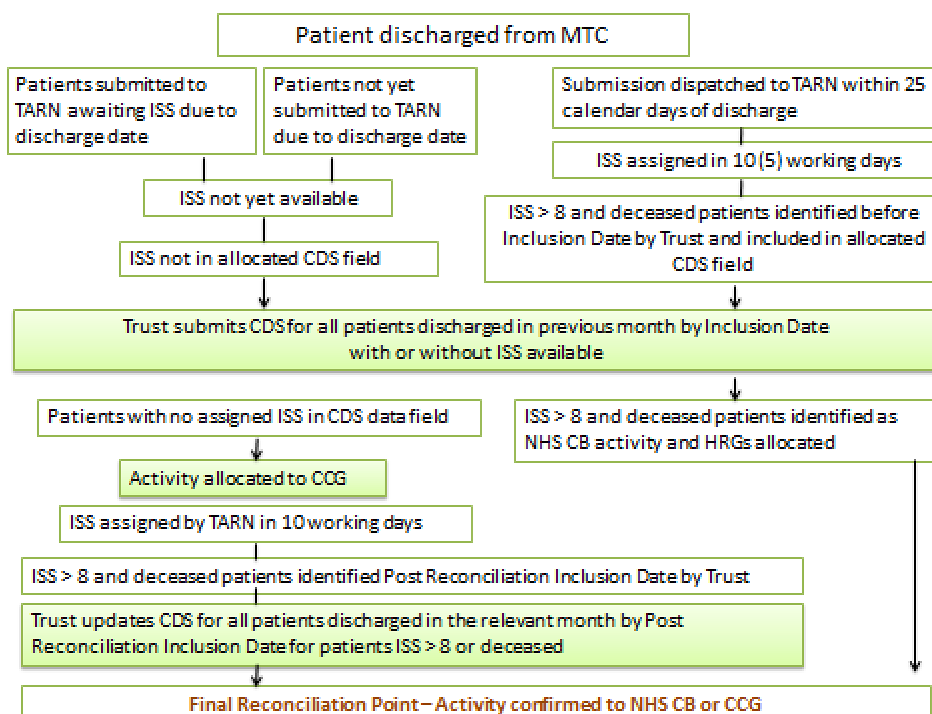
Eastern Association for Surgery in Trauma (EAST)	Selective non-operative management of penetrating trauma http://www.east.org/resources/treatment-guidelines http://www.east.org/resources/traumacast	2010
Eastern Association for Surgery in Trauma (EAST)	Geriatric trauma	2010
Eastern Association for Surgery in	Long bone fracture stabilisation in polytrauma patients	
NSCISB	The Initial Management of Adults with Spinal Cord Injuries (SCI). Advice for Major Trauma Networks and SCI Centres on the Development of Joint Protocols, With Advice for Clinicians in Acute Hospitals.18th May 2012	
www.nscisb.nhs.uk (under construction)	SCI protocols and pathways	

APPENDIX 4

Information Algorithm for identification with SUS of Major Trauma Activity from 1st April 13



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The confirmed ISS is required to be documented within the NHS_SERVICE_AGREEMENT_LINE_NUMBER field of the CDS record with the National service line code of NCBPS34t_xx (where xx is the ISS).

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1 “A qualitative study of the experiences of people who identify themselves as having adjusted positively to a visible difference” (Egan et al, 2012)

2 The relationships between objective and subjective ratings of disfigurement severity, and psychological adjustment” (Moss, 2005)

3 Exploring the psychological concerns of outpatients with disfiguring conditions” (Rumsey et al, 2003);

4 Identifying the psychosocial factors and processes contributing to successful adjustment to disfiguring conditions” (Rumsey et al, 2009).

APPENDIX 5 Glossary of Terms

Injury Severity Score- The Injury Severity Score (ISS) is an anatomical scoring system that provides an overall score for patients with multiple injuries

Hyper-acute Rehabilitation -This refers to rehabilitation of patients who have been stepped down from critical care or high dependency units, and no longer need to be under the direct care of orthopaedics, neurosurgery, general surgery etc, but still require these specialties to be immediately available for advice or management of complications. Patients tend to be medically unstable, or have the potential to become so. In the past such patients have been inappropriately repatriated into non-specialist, non-rehabilitation beds, often in a different hospital; this practice is inappropriate for patients following major trauma, because neither their specialist rehabilitation nor trauma needs can be met. There are 2 recommended modes of service delivery; some Major Trauma Centres may have both:-

- **A dedicated hyper-acute / acute rehabilitation unit, led by a Consultant in Rehabilitation Medicine, and with a dedicated multi-disciplinary rehabilitation team. This is located in, or very close to, the Major Trauma Centre; in some Major Trauma Networks this could be in a Trauma Unit, dependent upon service models, and availability of prompt access to the relevant surgical speciality. For patients following head injury, spinal and spinal cord injury, hyper-acute rehabilitation should be in the Neurosciences Centre, with the transfer of patients to appropriate on-going rehabilitation services being determined by individual clinical need.**

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- **Dedicated rehabilitation beds within the acute major trauma ward in the Major Trauma Centre, with rehabilitation patients being under the direct care of a Rehabilitation Medicine consultant, sharing nurses and AHPs with acute specialities.**

Hyper-acute rehabilitation services must be able to manage patients with confusion and agitation following head injury (post-traumatic amnesia), and patients with severe physical neurological impairments, including tracheostomy care and the early assessment/management of patients who have Prolonged Disorders of Consciousness (vegetative and minimally conscious states).

APPENDIX 6

Education Principles

1. Recommend 8 hrs minimum face to face trauma education per year for all nursing and allied health professional staff who are part of the trauma team.

   This trauma education package can be delivered in a manner to suit individual MTCs. It can be delivered as part of recognised trauma courses (ATLS, ATNC, TNCC, ETC, etc.). It can also be delivered by bespoke packages designed and monitored by trauma networks for quality and delivery. Any bespoke trauma education packages should be multidisciplinary as far as possible. The content must include as a minimum:

   1. Crew resource management (human factors) in the trauma resuscitation room

   2. Catastrophic haemorrhage management including: mass blood transfusion / rapid infusers, TXA and novel haemostatics. Recognition of shock.

   3. Airway management including the indications for rapid sequence induction anaesthesia and role of the skilled assistant

   4. Recognition of and key interventions in life threatening chest injuries: blast injury, tension pneumothorax, open pneumothorax, Massive haemothorax, flail chest, cardiac tamponade, management of chest drains and emergency thoracotomy

   5. Intravenous access: central, peripheral & IO

   6. Head injury management – including prevention of secondary insult

   7. Pelvic and long bone injuries including: pelvic binder and long bone traction devices

   8. Pain management

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9. Packaging and moving injured patients

10. The management of the confused, agitated & aggressive patient. They should receive education/training in behavioural management.

11. The early management of the spinal cord injured patient.

12. The management of spinal fracture patients

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Change Notice for Published Specifications and Products developed by Clinical Reference Groups (CRG)

Amendment **to the Published Products**

Product Name Major Trauma

Ref No D15/S/a

CRG Lead Adam Brooks

Description of changes required

Describe what was stated in original document	Describe new text in the document	Section/Paragraph to which changes apply	Describe why document change required	Changes made by	Date change made
	Put the previous year's specification in the new specification template, this has created a new section that needed populated linked to the National Outcome Framework and domains	section 2 and section 4.2	To ensure consistency of specification formatting	CRG	November 2013
	To ensure consistency of format across our specification through using common sub headings, ensuring words of scope and IR are included in the exclusion and acceptance area. Clarity added on population covered.	section 3.4 and 6.0 and section 3.3	To ensure consistency of specification formatting	CRG	November 2013

	Removal of examples of accredited courses for education and training of the Trauma Team and added education principles.	Section 3.2 and Appendix 6	Further clarity	CRG	November 2013
	New sections on Burns (3.1), Mental Health service in relation to self-harm (3.2), and non-accidental injury (Annexe 1). Additions made to glossary of terms (Appendix 5) to align wording with BSRM standards 2012.	Section 3.1 and 3.2 Annexe 1 and Appendix 5	Further clarity	CRG	November 2013
	Clarity on the specification for Consultant presence/attendance in relation to out of hours management of severely injured children.		Further clarity	CRG	November 2013

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