NHS
England

National Peer Review Report:

Major Trauma 2015

An overview of the findings from the 2015 National
Peer Review of Trauma Networks, Centres and Units in England

NHS England INFORMATION READER BOX

Directorate		
Medical	Commissioning Operations	Patients and Information
Nursing	Trans. & Corp. Ops.	Commissioning Strategy
Finance		

Publications Gateway Reference:	04017
Document Purpose	Guidance
Document Name	National Peer Review Report: Trauma Services 2015
Author	National Peer Review Programme
Publication Date	29 September 2015
Target Audience	CCG Clinical Leads, CCG Accountable Officers, Care Trust CEs, Foundation Trust CEs , Medical Directors, Directors of Nursing, Local Authority CEs, NHS England Regional Directors, NHS England Area Directors, NHS Trust Board Chairs, Allied Health Professionals, GPs, Directors of Children's Services, NHS Trust CEs, DH Policy Officials, Royal Colleges, NPRP User steering group, Voluntary Sector
Additional Circulation List	
Description	This document is an overview of the findings from the 2015 round of peer review for Trauma services in England, which was undertaken between Jan 2015 and March 2015.
Cross Reference	
Superseded Docs (if applicable)	N/A
Action Required	N/A
Timing / Deadlines (if applicable)	**N/A**
Contact Details for further information	Radhika Rajani-Project Assistant Nationa Peer Review Programme 6th Floor, Skipton House 80 London Road London SE1 6LH 0113 8249 249

Document Status

This is a controlled document. Whilst this document may be printed, the electronic version posted on the intranet is the controlled copy. Any printed copies of this document are not controlled. As a controlled document, this document should not be saved onto local or network drives but should always be accessed from the intranet

FOREWORD

From the National Clinical Director for Trauma

I am delighted to introduce this overview of the findings from the 2015 round of peer review for Major Trauma Networks in England, which was undertaken between January 2015 and March 2015.

I would like to express my heartfelt thanks to everyone who has contributed to the success of the programme whether as a reviewer, a member of the network/provider management team or as a member of the service being reviewed.

This was the third annual round of the peer review, the second round where the National Peer Review Programme has supported the process and the first to review Trauma Units. This has allowed major trauma the opportunity to continue to draw upon the vast experience in peer review of cancer services and use this to ensure a more robust, consistent and fair process for the review of major trauma services.

Major trauma has excellent, long-term audit data from the Trauma Audit and Research Network (TARN) and this independent data has allowed the development of objective benchmarks to inform the peer review process.

Most importantly, the TARN analysis has confirmed our clinical impression: trauma care is getting better throughout England and the probability of survival has significantly improved over the past three years.

The high compliance rates demonstrated by the peer review are remarkable, given that the new trauma system represents a new paradigm in the provision of trauma care and has only been operational for three years. This is a great credit to all, clinicians and managers alike, whom have worked so hard to improve the system. It has been a system wide change from pre-hospital care through to rehabilitation and return home. The process used for the review has ensured that all parts of the patient's journey have been reviewed by a quality assurance program.

The programme reviewed 22 Major Trauma Networks, 26 Major Trauma Centres (Adults and Children) –including 5 dedicated Paediatric Major Trauma Centres (of which Alder Hey and Manchester Children's form the North West children's collaborative), 105 Trauma Units and 11 Ambulance Trusts. An additional 15 Trauma units in two trauma networks did not receive national peer review programme visits although they were subject to their network's own review process.

I have been greatly impressed at the holistic view that all the centres have taken to patient care, putting the patient and their relatives at the centre of the process. We have come a long way in a short period of time but there is still work to do - we can always get better and improve the service for patients. It is hoped that the data in this report will allow local teams to improve their system by identifying areas that have achieved good compliance with standards and then sharing good practice.

Chris Moran
National Clinical Director for Trauma

Contents

1.0 Introduction

This report summarises the findings of the third round of peer review to Major Trauma Services during 2014/2015. The findings are based on Peer Review visit reports and were completed between January 2015 and March 2015. All services undertook a self-assessment of their own service and were then subject to an external peer review visit by the National Peer Review team. There were 15 TUs in 2 networks that were not reviewed as part of this process.

The report principally summarises the numerical data contained within the Trauma Quality Improvement Network System (TQuINS) which records the level of compliance by individual services against the measures for the following areas:

- Network governance
- Pre Hospital Care
- Adult Major Trauma Centres
    - Reception and Resuscitation
    - Definitive Care
    - Rehabilitation
- Children's Major Trauma Centres
    - Reception and Resuscitation
    - Definitive Care
    - Rehabilitation
- Trauma Units
    - Reception and Resuscitation
    - Definitive Care
    - Rehabilitation

In addition, the peer reviewers' specific comments are referenced regarding the qualitative information gathered from the peer review visits. The identification of good practice for dissemination and

recommendation is a vital positive component of the peer review process. This report therefore highlights examples of good practice that have been identified during this programme. The report also identifies the key messages that have emerged from the reviews and highlights some of the challenges facing the Major Trauma Networks, Major Trauma Centres (MTCs), Trauma Units (TUs), providers of services for patients of major trauma, and commissioners, as they strive to ensure the delivery of effective and high quality care.

1.1 National Peer Review of Major Trauma Centres 2015

This was the third annual round of peer review of Major Trauma Centres, the second round supported by the National Peer Review Programme and the first round to include the review of Trauma Units.

The aims of the National Peer Review Programme were to:

- develop national quality standards for major trauma networks;
- to develop a quality assurance methodology aligned with the emerging health environment and meet the needs of the key stakeholder s;
- provide timely information for commissioning;
- validated information which is available to other stakeholders

.

1.2 Background of the Major Trauma Review

This is the third round of trauma peer reviews which have taken place across Major Trauma Centres and Major Trauma Networks and has been commissioned by NHS England. There have been two rounds previously, the first of which was commissioned by the Department of Health and transferred to NHS England and the second commissioned by NHS England.

The second and third rounds utilised the experience and knowledge gained through the National Peer Review Programme. There are many principals and quality assurance processes that can be directly transferred to the quality assurance of Trauma services.

1.3 The Major Trauma Network Measures

All services self-assessed against a set of defined measures based on the National Service Specification for Major Trauma (NHS England D15/S/a 2014) and the NHS clinical advisory group report on Major Trauma Workforce (CFWI March 2011). The measures covered the whole organisation of adult and children's major trauma services including sections for major trauma networks, pre hospital care via ambulance services and HEMS (Helicopter Emergency Medicine Services), reception and resuscitation, definitive care and rehabilitation. In addition, outcome data from the Trauma Audit and Research Network (TARN) dataset was used to review clinical outcomes.

The measures are available on request or can be found of the resources page the TQUINS site:

 www.tquins.nhs.uk

1.4 The National Peer Review process

The National Peer Review Programme aims to improve care for patients involved in trauma and their families by:

- ensuring services are as safe as possible;
- improving the quality and effectiveness of care;
- improving the patient and carer experience;
- undertaking independent, fair reviews of services;
- providing development and learning for all involved;
- encouraging the dissemination of good practice.

The outcomes of the National Peer Review Programme are:

- confirmation of the quality of services;
- speedy identification of major shortcomings in the quality of services where they occur so that rectification can take place;
- published reports that provide accessible public information about the quality of services;
- timely information for local commissioning as well as for specialised commissioners;
- validated information which is available to other stakeholders.

The details of the process are provided in the handbook for peer review which is available on request or on the resources page of the TQuINS website: www.tquins.nhs.uk

2. National Major Trauma Centre Summary

This report presents an overview of the peer review visit findings from the National Peer Review Programme for Major Trauma Networks.

The programme reviewed 22 Major Trauma Networks, 26 Major Trauma Centres (Adults and Children) including 5 dedicated Paediatric Major Trauma Centres (of which Alder Hey and Manchester Children's form the North West children's collaborative), 105 Trauma Units and 11 Ambulance Trusts. An additional 15 Trauma units in two trauma networks (Wessex and South West London) did not receive national peer review programme visits although they were subject to their network's own review process.

There were 18 services that achieved 100% overall compliance, which were in the following services:

- 3 in Pre-Hospital Care Services
- 2 in Adult Major Trauma Services
- 1 in Children's Major Trauma Centre Services
- 12 in Trauma Unit Services

There were also 33 services which achieved ≥ 90%

There were 64 services where compliance was 50% or below, which were in the following areas;

- 4 in Network Governance
- 5 in Adult Major Trauma Centre Services
- 2 in Children's Major Trauma Centre Services
- 53 in Trauma Unit Services

A number of teams had Immediate Risks and Serious Concerns identified at peer review. These have been reported to the Trust Chief Executive and have been acted upon immediately.

- Immediate Risks
  - 4 in Network Governance
  - 2 in Adult Major Trauma Centre Services
  - 13 in Trauma Unit Services
- Serious Concerns
  - 12 in Network Governance
  - 2 in Pre Hospital Services
  - 47 in Adult Major Trauma Centre Services
  - 19 in Children's Major Trauma Centre Services
  - 137 in Trauma Unit Services

Last year, in the peer review of the major trauma networks, 1 centre had an immediate risk and 12 centres had serious concerns identified in their peer review reports.

Figure 1- Peer Review Compliance by Trauma Measures Section 14/15: Network and Pre-Hospital Measures
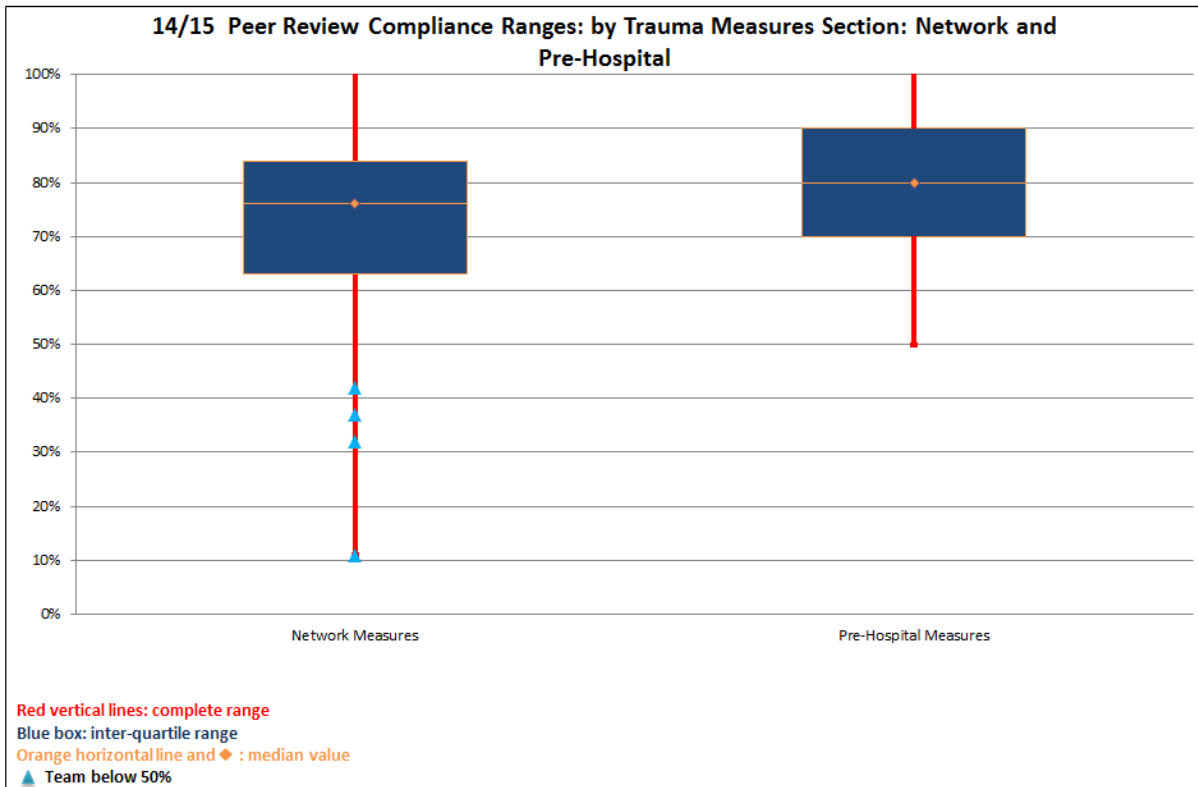

Figure 2- Peer Review Compliance by Trauma Measures Section 14/15: Adult Major Trauma Centre Measures
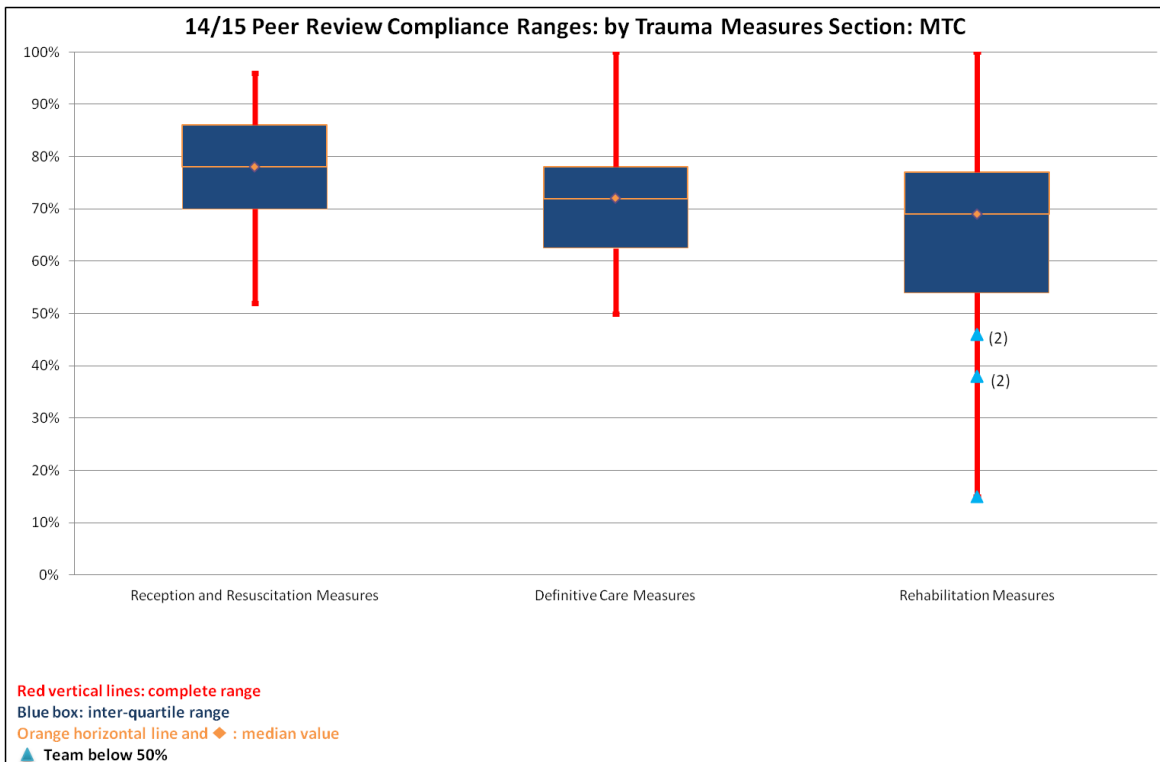
Figure 2- Peer Review Compliance by Trauma Measures Section 14/15: Children's Major Trauma Centre Measures
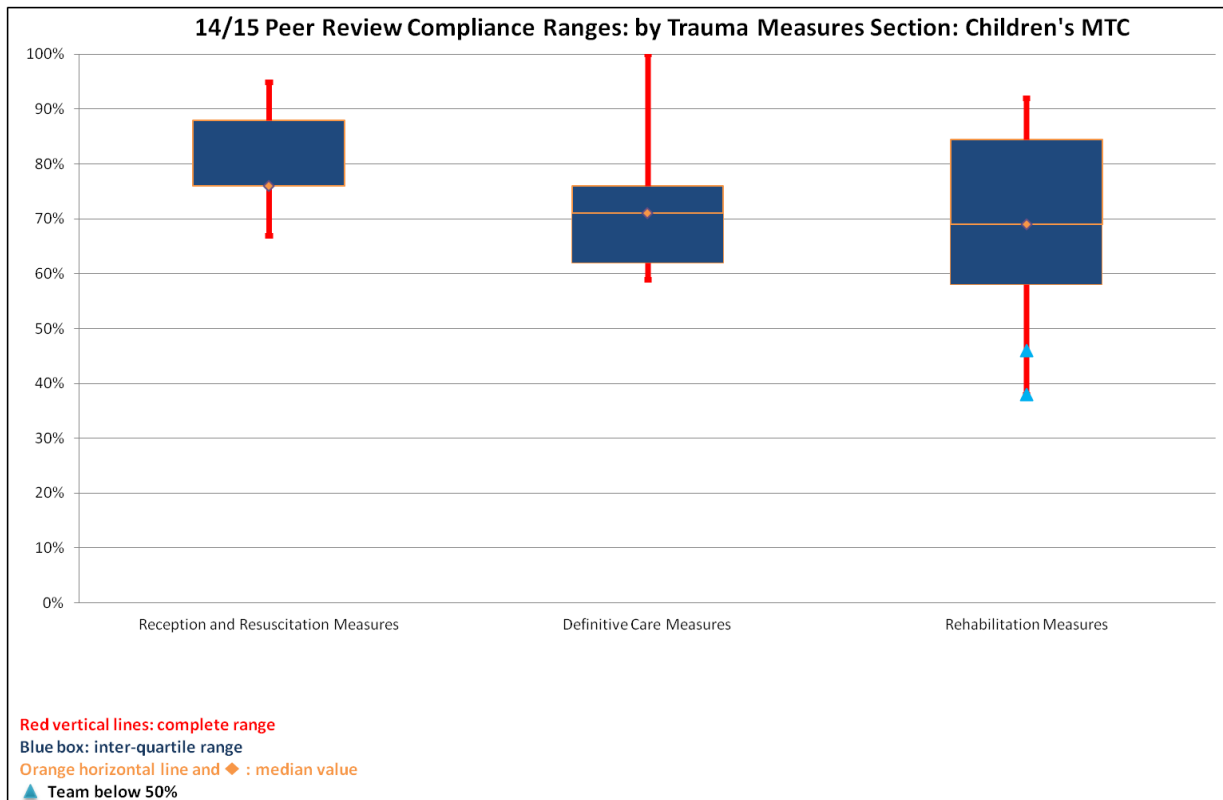
Figure 2- Peer Review Compliance by Trauma Measures Section 14/15: Trauma Unit Measures
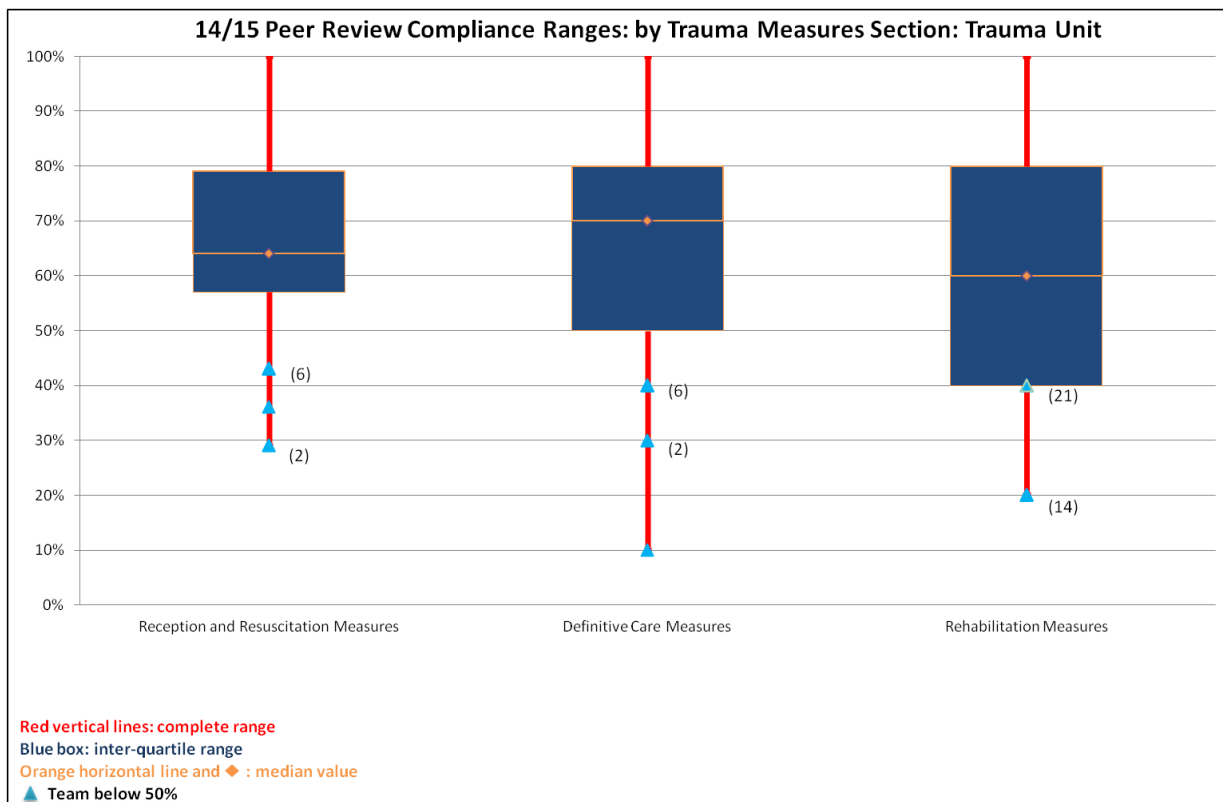
3. Compliance with measures

3.1 Network Governance Measures

22 Major Trauma Networks were assessed against these measures.

For the Network Governance measures, the overall median compliance was 76%.

11 Networks (50%) assessed at or above the median. The highest level of compliance was 95% which was achieved by 1 Network:

> ➢ East of England

7 Networks (32%) achieved ≥ 80% compliance

4 Networks (18%) had compliance of 50% or under

Network Measures Compliance

Teams compliance	PR
100%	0
90-99%	1
80-89%	6
70-79%	6
60-69%	4
50-59%	1
40-49%	1
0-39%	3
Median	76%
Range	11% - 95%
Interquartile Range	59% - 84%

Network Measures Good Practice

The main themes related to good representation at Network Governance meetings, particularly from pre-hospital care teams; dedicated network teams with positive clinical leadership; good collaboration and engagement from all network Trauma Units; Risk Register reviewed on a regular basis; on-line Directory of Rehabilitation and education & training initiatives.

Individual good practice included;

- A network wide training programme for TARN administrators to improve data collection
- A comprehensive rehabilitation toolkit
- Establishment of a trauma and Rehabilitation Coordinators Forum
- Participation in a pilot study looking into patient related outcomes measures (PROMS) following major trauma

- A network funded annual trauma conference, with patients presenting their journey through the pathway to enhance shared learning
- Good partnership working demonstrated with the third sector and with the Academic Health Sciences Network who were leading a sector-wide review and pilot innovations to address current concern in relation to rehabilitation capacity
- Network engagement with primary prevention, including participation in the Learn2Live programme
- Presence of a Trauma Research Nurse.

Immediate Risks and Serious Concerns

No. of services with IR at PR	% of Services with IR at PR	No. of services with SC at PR	% of Services with SC at PR
4	18%	12	55%

Network Measures Immediate Risks

The main areas of immediate risk related to

- Paediatric management, pathways and guidelines
- Severely injured patients remaining in trauma units for definitive treatment and rehabilitation
- Monitoring of safe transfer of patients
- Inequity of access to rehabilitation services.

Network Measures Serious Concerns

The main areas of serious concern related to
- Pathways for rehabilitation and access to specialist rehabilitation beds
- Capacity and pathways for those with spinal injuries
- Severely injured patients remaining in trauma units for definitive treatment and rehabilitation
- Network funding, leadership and governance impacting on development of network guidelines and audit programme, potentially leading to variation in clinical practice.

Individual serious concerns included;
- Complexity of patient pathway across multiple sites, with no clear single receiving site
- Network TARN data quality and completeness sporadic or incomplete
- Teleradiology facilities between MTC and Trauma Unit not compatible to allow immediate image transfer 24/7, potentially compromising patient care and outcomes
- Formal process for escalating and recording clinical incidents onto network risk register was inadequate.

3.2 Pre-Hospital Care Measures

11 Ambulance Services were assessed against the measures.

For the Pre-Hospital Care measures, the overall median score was 80%.

7 Ambulance Services (64%) assessed at or above the median. The highest level of compliance was 100% which was achieved by 3 Ambulance Services:

> ➢ London Ambulance Service NHS Trust
> ➢ West Midlands Ambulance Service NHS Foundation Trust

7 services (64%) achieved ≥ 80% compliance.
2 services (18%) had compliance of 50% or under.

Pre-Hospital Care Measures Compliance

Teams compliance	PR
100%	3
90-99%	2
80-89%	2
70-79%	2
60-69%	0
50-59%	2
40-49%	0
0-39%	0
Median	80%
Range	50% - 100%
Interquartile Range	70% - 95%

Pre-Hospital Care Good Practice

The main themes related to good clinical leadership; engagement with key stakeholders; cross-network engagement & communication and excellent training.

Individual good practice included;

- Initiatives to improve access to time critical interventions
- Paediatric focus
- World class enhanced pre-hospital care provided by London's Air Ambulance Team
- Online application to assist in clinical decision making for those patients who are borderline triage tool positive
- Trauma Review Group E-learning packages
- Audit portfolio and provision of a full time Clinical Audit Assistant
- Mapping exercise to identify trauma hotspots
- Follow up nurse funded by charity.

Immediate Risks and Serious Concerns

No. of services with IR at PR	% of Services with IR at PR	No. of services with SC at PR	% of Services with SC at PR
0	0%	2	18%

Pre-Hospital Care Immediate Risks

There were no Immediate Risks highlighted for the pre-hospital measures.

Pre-Hospital Care Serious Concerns

There were two services with Serious Concerns. These Serious Concerns were;

- The ambulance control room did not have 24 hour access to consultant medical advice or a critical care paramedic
- Lack of an enhanced care team availability 24 hours a day.

3.3 Adult Major Trauma Centre Measures

22 Major Trauma Centres were assessed against the Adult Major Trauma Centre Measures

3.3.1 Reception and Resuscitation Measures
For the Reception and Resuscitation measures, the overall median score was 78%.

13 MTCs (59%) assessed at or above the median. The highest level of compliance was 96% which was achieved by 1 centre:

> ➢ Oxford University Hospitals NHS Trust

8 (36%) centres achieved ≥ 80% compliance.

No centres had compliance of 50% or under.

Reception and Resuscitation Compliance

Teams compliance	PR
100%	0
90-99%	3
80-89%	5
70-79%	11
60-69%	2
50-59%	1
40-49%	0
0-39%	0
Median	78%
Range	52% - 96%
Interquartile Range	70% - 86%

Reception and Resuscitation Good Practice

The main themes related to training, particularly simulation trauma training and resuscitative thoracotomy training; facilities and layout of resuscitation area; excellent completion of TARN data; good communication with the Trauma Units; good protocols; cross-speciality clinical engagement and support for damage control surgery training.

Individual good practice included;

- Collaborative working to develop an obstetric pathway with an outreach service to the MTC
- Weekly 'Wednesday Workout' simulation training
- Appointment of a Simulation Fellow
- Code red room which allows additional privacy
- Process of trauma peer review which takes place when the trauma team is activated
- Trauma lead training which is observed by peers with feedback through the weekly governance meeting

- Involvement of blood bank and transfusion nurses as part of the trauma team to help with blood product resuscitation
- Single access phone line for use of Trauma Units for advice and potential transfer
- Excellent written information for patients
- Appointment of a pain management nurse.

Immediate Risks and Serious Concerns

No. of services with IR at PR	% of Services with IR at PR	No. of services with SC at PR	% of Services with SC at PR
2	9%	18	82%

Reception and Resuscitation Immediate Risks

There were two services with Immediate Risks. These Immediate Risks were;
- Interventional radiology was not available within 60 minutes of request 24/7 and compounded by the below issues with pelvic surgery at this particular centre, this was raised as an immediate risk.
- Absence of robust pelvic emergency service

Reception and Resuscitation Serious Concerns

There were 18 services with Serious Concerns. The main themes related to;

- Availability of surgical expertise
  - Insufficient surgeons undergone training in damage control surgery
  - Middle grade orthopaedic surgeons not resident 24/7
  - Lack of emergency pelvic surgery available 24/7
- The seniority and availability of the trauma team
  - Consultant trauma team leader not available within 5 minutes 24/7
  - Trauma team nurses not having attended Advanced Trauma Nurse Course (ATNC) or equivalent
  - Multiple specialties responding to major trauma calls with medical staff below ST4 level
- Issues with CT reporting, including delays in availability of reports, seniority of reporting and transfer of images from Trauma Unit to Major Trauma Centre (MTC).

Other individual Serious Concerns included;

- Interventional radiology service not available within 60 minutes of request 24/7
- Layout of resuscitation area and space available for reception and treatment of major trauma patients not adequate.

3.3.2 Definitive Care Measures

For the Definitive Care measures, the overall median score was 72%.

13 MTCs (59%) assessed at or above the median. The highest level of compliance was 100% which was achieved by 1 centre:

> ➢ Queen's Medical Centre Nottingham

5 centres (80%) achieved ≥ 80% compliance.

2 centres (9%) had compliance of 50% or under.

Definitive Care Compliance

Teams compliance	PR
100%	1
90-99%	0
80-89%	4
70-79%	8
60-69%	7
50-59%	2
40-49%	0
0-39%	0
Median	72%
Range	50% - 100%
Interquartile Range	63% - 78%

Definitive Care Good Practice

The main themes related to strong clinical leadership; Spinal Cord Injury Centre outreach nursing service, facilitating transfer of patients to the centre; development of facilities, in particular establishment of major trauma wards; collaboration between all specialties; completion of TARN data; improvement in BOAST 4 compliance; and the commitment of the trauma coordinators.

Individual good practice included;

- Forums held to gather patient feedback
- The 'Message of the Week' to facilitate shared learning
- TARN office located on trauma ward
- Trauma teams ability to move, which allows them to receive patients in other areas such as CT
- Peer support for families in place, funded by the Spinal Injuries Association
- Ortho-geriatrician involved in reviewing trauma patients on a weekly basis at a Medicine for the Elderly MDT meeting
- 24/7 advice line for patients following discharge.

Immediate Risks and Serious Concerns

No. of services with IR at PR	% of Services with IR at PR	No. of services with SC at PR	% of Services with SC at PR
0	0%	18	82%

Definitive Care Immediate Risks

There were no Immediate Risks highlighted for the Definitive Care measures.

Definitive Care Serious Concerns

There were 18 services with Serious Concerns. The main themes related to;

- Inadequate provision of Major Trauma Service
  - Lack of a major trauma service led by consultants who take responsibility for the holistic care and co-ordination of management of every individual major trauma patient on a daily basis
  - No single daily trauma MDT taking place to discuss the care, treatment and ongoing rehabilitation of all appropriate patients
  - Inadequate provision of a major trauma coordinator service, therefore it is not possible to ensure that all major trauma patients have their multiple needs managed throughout the care pathway, including current and future rehabilitation. This includes the transfer and repatriation of patients to and from the trauma units and associated specialist services
  - Absence of dedicated ward to cohort major trauma patients
  - MTC team trauma team leader with insufficient dedicated time within job plan to undertake the role
- Patients with open limb fractures requiring orthoplastic surgery are not always receiving initial coverage within 72 hours, as recommended by the BOAST 4 guidelines. This may result in increased risk of wound infection and may significantly compromise patient outcomes.

Other individual Serious Concerns included;

- Time critical surgery for intracranial bolts and craniotomy significantly outside the national range
- Not possible to ensure that an Oro Maxillofacial surgeon (OMFS) available on site during normal working hours; no access to dedicated maxillofacial trauma lists; insufficient allocation in the OMFS consultant job plans to accommodate surgical treatment of trauma cases
- No formal tertiary survey protocol agreed
- Inadequate systems in place for recording and collecting TARN data
- No documented network pathway or protocol for managing patients with spinal cord injuries, including communication between the trauma unit, major trauma centre and the spinal cord injury centre

- Patients with non-operative head injuries are currently located on Orthopaedic wards under the care of a Consultant Orthopaedic Surgeon with no neurosurgical input.

3.3.3 Rehabilitation Measures

For the Rehabilitation measures, the overall median score was 69%.

13 MTCs (59%) assessed at or above the median. The highest level of compliance was 100% which was achieved by 1 centre:

- ➢ Queen's Medical Centre Nottingham

4 centres (18%) achieved ≥ 80% compliance.

5 centres (23%) had compliance of 50% or under.

Rehabilitation Measures Compliance

Teams compliance	PR
100%	1
90-99%	2
80-89%	1
70-79%	6
60-69%	4
50-59%	3
40-49%	2
0-39%	3
Median	69%
Range	15% - 100%
Interquartile Range	54% - 77%

Rehabilitation Good Practice

The main themes related to the commitment of the clinical rehabilitation leads; early commencement of the rehabilitation pathway and integration of rehabilitation into the major trauma service; good facilities for families; implementation of rehabilitation prescriptions and good access to psychological provision.

Individual good practice included;

- The one-stop clinic for all patients with head injuries, which is also available to patients with mild head injuries from across the network
- Plans to develop satellite multidisciplinary rehabilitation clinics in the community
- Development of the 'aftertrauma.org' website
- Engagement of the Network Director for Rehabilitation in the multi-disciplinary ward round on the Major Trauma ward

- Rehabilitation patient forum, where the MTC takes feedback from patients and their families
- Proactive Ortho Geriatrician.

Immediate Risks and Serious Concerns

No. of services with IR at PR	% of Services with IR at PR	No. of services with SC at PR	% of Services with SC at PR
0	0%	11	50%

Rehabilitation Immediate Risks

There were no Immediate Risks highlighted for the Rehabilitation measures.

Rehabilitation Serious Concern

There were 18 services with Serious Concerns. The main themes related to;

- An integrated trauma rehabilitation service is not in place, which leads to an inequitable service provision with not all patients receiving the appropriate level of support. In particular this included;
  - The absence of specialist rehabilitation facilities, including the provision of level 1 hyperacute rehabilitation beds. This was particularly true for patients with complex musculoskeletal trauma but no head injury.
  - No rehabilitation coordinator in post
  - No consultant in rehabilitation medicine to lead the service.

Other individual Serious Concerns included;

- Rehabilitation prescriptions are not being used as a tool to communicate patient's rehabilitation needs.

3.4 Children's Major Trauma Centre Measures

15 Major Trauma Centres, including 5 dedicated Paediatric Major Trauma Centres (of which Alder Hey and Manchester Children's form the North West children's collaborative), were assessed against the measures.

3.4.1 Reception and Resuscitation Measures

For the Reception and Resuscitation measures, the overall median score was 76%.

12 MTCs (80%) assessed at or above the median. The highest level of compliance was 95% which was achieved by 1 centre:

> ➢ Oxford University Hospitals NHS Trust

6 (40%) centres achieved ≥ 80% compliance.

No centres had compliance of 50% or under.

Reception and Resuscitation Compliance

Teams compliance	PR
100%	0
90-99%	4
80-89%	2
70-79%	7
60-69%	2
50-59%	0
40-49%	0
0-39%	0
Median	76%
Range	67% - 95%
Interquartile Range	76% - 88%

Reception and Resuscitation Good Practice

The main themes related to training, particularly simulation trauma training specific to paediatrics; excellent completion of TARN data; cross-specialty clinical engagement; pain management; paediatric surgeons undergoing damage control surgery training.

Individual good practice included;

- KIDS (Kids Intensive Care and Decision Support) transfer and support service
- Separate paediatric resuscitation room
- Separate consultant led trauma and orthopaedic rotas for paediatrics and adults
- Establishing quarterly multidisciplinary meetings to review pathway of patients whose details have been submitted to TARN.

Immediate Risks and Serious Concerns

No. of services with IR at PR	% of Services with IR at PR	No. of services with SC at PR	% of Services with SC at PR
0	0%	5	33%

Reception and Resuscitation Immediate Risks

There were no Immediate Risks highlighted for the Reception and Resuscitation measures.

Reception and Resuscitation Serious Concerns

There were 5 services with Serious Concerns. The main themes related to;

- The seniority and availability of the trauma team
  - Consultant trauma team leader not available within 5 minutes 24/7
  - Trauma team nurses not having attended Advanced Trauma Nurse Course (ATNC) or equivalent
  - Multiple specialties responding to major trauma calls with medical staff below ST4 level
- No agreed network trauma management guidelines for paediatrics and in their absence no local guidelines available. This may lead to variations in clinical practice which could compromise the quality of patient care and outcomes.

Other individual Serious Concerns included;

- Interventional radiology service not available within 60 minutes of request 24/7
- Inadequate seniority of reporting on 'Hot' and 'detailed' CT reports
- Significant delays in accessing theatre.

3.4.2 Definitive Care Measures

For the Definitive Care measures, the overall median score was 71%.

10 MTCs (67%) assessed at or above the median. The highest level of compliance was 100% which was achieved by 1 centre:

- Queen's Medical Centre Nottingham

3 centres (20%) achieved ≥ 80% compliance.

No networks had compliance of 50% or under.

Definitive Care Compliance

Teams compliance	PR
100%	1
90-99%	1
80-89%	1
70-79%	7
60-69%	1
50-59%	4
40-49%	0
0-39%	0
Median	71%
Range	59% - 100%
Interquartile Range	62% - 76%

Definitive Care Good Practice

The main themes related to strong leadership; excellent BOAST 4 compliance; completeness of TARN data; collaborative working between specialties; commitment and collaboration of Trauma Coordinators.

Individual good practice included;

- Indoor and rooftop outdoor play facilities
- Formal comprehensive tertiary survey, due to be rolled out to other children's major trauma centres nationally
- Daily trauma ward round MDT that includes paediatric ward and PICU
- Funding for rehabilitation cubicles
- Dedicated physiotherapist on PICU
- 24/7 advice line for patients following discharge.

Immediate Risks and Serious Concerns

No. of services with IR at PR	% of Services with IR at PR	No. of services with SC at PR	% of Services with SC at PR
0	0%	8	53%

Definitive Care Immediate Risks

There were no Immediate Risks highlighted for the Definitive Care measures.

Definitive Care Serious Concerns

There were 8 services with Serious Concerns. The main themes related to;

- Inadequate provision of Major Trauma Service
  - Lack of a major trauma service led by consultants who take responsibility for the holistic care and co-ordination of management of every individual major trauma patient on a daily basis
  - Inadequate provision of a major trauma coordinator service, therefore it is not possible to ensure that all major trauma patients have their multiple needs managed throughout the care pathway, including current and future rehabilitation. This includes the transfer and repatriation of patients to and from the trauma units and associated specialist services
  - Absence of dedicated ward to cohort major trauma patients
  - Designated trauma team lead for paediatrics with insufficient dedicated time within job plan to undertake the role
- Patients with open limb fractures requiring orthoplastic surgery are not always receiving initial coverage within 72 hours, as recommended by the BOAST 4 guidelines. This may result in increased risk of wound infection and may significantly compromise patient outcomes.

3.4.3 Rehabilitation Measures

For the Rehabilitation measures, the overall median score was 69%.

10 MTCs (67%) assessed at or above the median. The highest level of compliance was 92% which was achieved by 4 centres;

- Queen's Medical Centre Nottingham
- North West Children's Major Trauma Centre Collaborative
- Birmingham Children's Hospital
- Southampton General Hospital

4 centres (27%) achieved ≥ 80% compliance.

2 centres (13%) had compliance of 50% or under.

Rehabilitation Measures Compliance

Teams compliance	PR
100%	0
90-99%	4
80-89%	0
70-79%	2
60-69%	5
50-59%	2
40-49%	1
0-39%	1
Median	69%
Range	38% - 92%
Interquartile Range	58% - 85%

Rehabilitation Good Practice

The main themes related to excellent facilities for families; development and use of rehabilitation prescription; early commencement of the rehabilitation pathway and integration of rehabilitation into the trauma team; availability of good quality information for patients and families and access to psychological support.

Individual good practice included;

- Mobile phone app for evaluating patient experience
- Plans to develop a paediatric rehabilitation network involving lead paediatricians from the Trauma Units
- Family and carer access to residential facilities, which includes weekend leave accommodation which allows children to have time away from the ward environment
- North West stakeholder event on rehabilitation in children after major trauma, enabling the sharing of good practice.

Immediate Risks and Serious Concerns

No. of services with IR at PR	% of Services with IR at PR	No. of services with SC at PR	% of Services with SC at PR
0	0%	6	40%

Rehabilitation Immediate Risks

There were no Immediate Risks highlighted for the Rehabilitation measures.

Rehabilitation Serious Concern

There were 6 services with Serious Concerns. The main themes related to;

- An integrated trauma rehabilitation service for children is not in place, which leads to an inequitable service provision with not all patients receiving the appropriate level of support. In particular this included;
  - The absence of specialist rehabilitation facilities, including neuro-rehabilitation facilities with limited space
  - No rehabilitation coordinator in post
  - No consultant in rehabilitation medicine to lead the service
- No documented evidence relating to the provision of rehabilitation services for paediatric patients, therefore it was not possible to determine whether paediatric major trauma patients were receiving co-ordinated high quality patient care.

3.5 Major Trauma Measures for Trauma Units

105 Trauma Units were assessed against the measures.

3.5.1 Reception and Resuscitation Measures

For the Reception and Resuscitation measures, the overall median score was 64%.

66 Trauma Units (63%) assessed at or above the median. The highest level of compliance was 100% which was achieved by 1 Trauma Unit:

> ➢ Countess of Chester Hospital NHS Foundation Trust

17 (16%) Trauma Units achieved ≥ 80% compliance.

21 (20%) of Trauma Units had compliance of 50% or under.

Reception and Resuscitation Compliance

Teams compliance	PR
100%	1
90-99%	8
80-89%	8
70-79%	33
60-69%	16
50-59%	30
40-49%	6
0-39%	3
Median	64%
Range	29% - 100%
Interquartile Range	57% - 79%

Reception and Resuscitation Good Practice

The main themes related to timely access to CT; cross-specialty engagement; excellent clinical leadership; increased workforce; new build facilities; good paediatric support; ongoing training; involvement and communication with trauma network; radiographer part of trauma team activation; use of prompts e.g. action cards, display of protocols and checklists.

Individual good practice included;

- Commitment to research and a nominated site for CRASH-3 trial
- Bereavement recall policy shows holistic approach to care
- Appointment of clinical educator for Emergency Department
- Establishing four month secondment of nursing staff to the resuscitation room

- Trauma pack containing all appropriate documentation including blood bottles
- Nurses empowered to activate the trauma team
- Some of consultant radiologists able to access images at home, which facilitates a timely response
- Paediatric nurse practitioner trained in the principles of APLS.

Immediate Risks and Serious Concerns

No. of services with IR at PR	% of Services with IR at PR	No. of services with SC at PR	% of Services with SC at PR
9	9%	66	63%

Reception and Resuscitation Immediate Risks

There were 9 services with Immediate Risks. The main themes related to;

- Seniority and availability of trauma team
  - Not all trauma team leaders had been trained in ATLS, and not always a nurse on duty who has been trained in ATLS, leading to a number of cases where the principles of advanced trauma life support were not followed
  - Key members of the trauma team, including consultants within the Emergency Department, do not always attend when the trauma team has been activated to a major trauma patient
- Access and availability of CT scanning and reporting
  - Trust with access to only one CT scanner, which had been unavailable more than once in the previous 5 months due to technical faults. Contingency access to CT scanning is at a distance of 30 miles
  - Potential out of hours delay of 40 minutes before arrival of on-call radiographers to perform emergency CT scans for trauma patients. Additionally, reporting of CT scans out of hours was not available within 60 minutes.
- Issues with transfer of patients to MTC
  - Trauma Unit with significant challenges in accessing referral pathways to the MTC for patients with spinal injury, leading to significant adverse event
  - Significant delays in transferring of patients that self-present with major traumas
  - A trauma unit, which lies at a significant distance from the children's major trauma centre, does not have immediate access to appropriate ventilation equipment for the safe transfer of children.
  - Insufficient on-call anaesthetists to facilitate all transfers out of the trust.

Other individual Immediate Risks included;

- Local massive transfusion policy stating 'Platelets take up to 2 hours to arrive', causing delays in treatment for this group of patients

- Wording on local guidance on use of tranexamic acid amended from that agreed by the network, leading to concerns that clinicians may be deterred from administering tranexamic acid to patients who require this treatment urgently
- Lack of consultant general surgeon engagement and buy-in to the trauma process.

Reception and Resuscitation Serious Concerns

There were 66 services with Serious Concerns. The main themes related to;

- The seniority and availability of the trauma team
    - Trauma team nurses not having attended Advanced Trauma Nurse Course (ATNC) or equivalent
    - Inadequate cover or attendance by adequately trained Emergency Department Consultants which could compromise the quality of care delivered
    - No assurance Trauma Team Leader trained in ATLS or equivalent
- CT availability and reporting
    - CT scanning not available within 30 minutes of request due to equipment availability, staffing resources, protocol and location of CT facilities
    - Delays in reporting of CT scans; provisional report not available within 60
- No assurance with regard to the correct and timely administration of tranexamic acid for patients at risk of significant haemorrhage
- No agreed network trauma management guidelines for paediatrics and in their absence no local guidelines available.
- Issues with transfer to MTC
    - Lack of senior anaesthetic support at grade ST3 or above, also impacting on ability to transfer patients in a timely manner
    - In the absence of a network wide Trauma Unit to MTC transfer policy, concern over the arrangements for the time critical transfer of paediatric patients
    - Trauma booklet and transfer guidelines out of date, which may lead to delays in undertaking patient transfer to the MTC
- Concern that not all trauma calls are not made for all the appropriate patients
- No agreed network trauma management guidelines for paediatrics and in their absence no local guidelines available. This may lead to variations in clinical practice which could compromise the quality of patient care and outcomes.

Other individual Serious Concerns included;

- Lack of clarity on the process and availability of accessing transfusion advice 24/7
- Trust not participating in TARN audit due to lack of personnel to input the data
- No general surgeon of at least grade ST3 available within 30 minutes 24 hours a day
- Lack of engagement with the Trauma Network, including unfamiliarity with the Network pathways and policies

3.5.2 Definitive Care Measures

For the Definitive Care measures, the overall median score was 70%.

59 Trauma Units (56%) assessed at or above the median. The highest level of compliance was 100% which was achieved by 6 Trauma Units:

➢ Taunton and Somerset NHS Foundation Trust
➢ Yeovil District Hospital NHS Foundation Trust
➢ Derby Hospital NHS Foundation Trust (Royal Derby Hospital)
➢ Chelsea and Westminster Hospital
➢ Southport and Ormskirk Hospital NHS Trust
➢ Warrington and Halton Hospitals NHS Foundation Trust

35 Trauma Units (33%) achieved ≥ 80% compliance.

29 Trauma Units had compliance of 50% or under.

Definitive Care Compliance

Teams compliance	PR
100%	6
90-99%	9
80-89%	20
70-79%	24
60-69%	17
50-59%	20
40-49%	6
0-39%	3
Median	70%
Range	10% - 100%
Interquartile Range	50% - 80%

Definitive Care Good Practice

The main themes related to completeness of TARN data and TARN data outcomes; strong clinical leadership; good discharge summaries and discharge summaries copied to patients; robust trauma coordinator services; discussion of morbidity and mortality data at governance meetings; good engagement with the MTC and the Network and excellent local guidelines in place, in particular for multiple rib fractures.

Individual good practice included;

• Involvement in region wide reducing violence initiative
• HECTOR research initiative for elderly people
• Thoracotomy and Quality Improvement Study day
• 24 hour a day trauma coordinator service in place

- Introduction of a daily checklist to ensure clearly defined process for coordination of patient care
- Brain injury specialist nurse in place
- Lead Clinician undertakes clinical duties at the MTC on a weekly basis
- Development of key performance indicators which are used to proactively address any issues via exception reporting
- Use of trauma folders, ensuring that all relevant protocols and policies are easily accessible in relevant area
- Involvement of care of elderly in management of trauma patients, facilitating a holistic approach to care
- Use of telemedicine for remote assessment of burn patients by the specialist centre
- Burns educational training package.

Immediate Risks and Serious Concerns

No. of services with IR at PR	% of Services with IR at PR	No. of services with SC at PR	% of Services with SC at PR
3	3%	53	50%

Definitive Care Immediate Risks

There were 3 services with Immediate Risks. These Immediate Risks were;

- No designated specialty for trauma patients to be admitted under, leading to 'orphaned patients' i.e. without a designated specialty consultant on a number of occasions, causing delays in the patient pathway
- Significant challenges in accessing referral pathways to the MTC for patients with spinal injury, with one case cited that resulted in a significant adverse event
- Provision of spinal surgery at a Trauma Unit, in isolation and without support, which could have a direct impact on patient safety and outcomes.

Definitive Care Serious Concerns

There were 53 services with Serious Concerns. The main themes related to;

- Issues in care and management of patients with Spinal injuries
  - Significant challenges in accessing referral pathways to the MTC
  - Difficulties in arranging MRI scans out of hours for patients with spinal cord injuries
  - Patients with spinal cord injuries admitted locally to non-specialist wards
  - No evidence to show collaborative working between the emergency and orthopaedic departments, resulting in lack of clarity of pathways for patients with spinal cord injuries
  - A lack of trained nurses to provide appropriate care for patients with spinal injuries admitted onto the orthopaedic ward for 24 hour observation

-
  - Trauma team not conversant with referral process for spinal injuries to regional centre within 4 hours
- Poor capture of TARN dataset
- No overall trauma coordinator service, therefore it is not possible to establish where all trauma patients are located within the trust or where they are on their pathway, and no assurance that all major trauma patients have their multiple needs managed through the pathway, including current and future rehabilitation
- Concerns with regard to the governance structure of the service ; absence of meetings to discuss governance issues, therefore no opportunity to discuss morbidity and mortality, and with no audit of service components; no robust process in place to address external concerns or serious incidents raised by the Network or the MTC
- Lack of lead clinician and / or managerial leadership for trauma services, impacting on delivery of effectiveness and governance structure for major trauma
- Patients with open limb fractures requiring combined orthoplastic surgery are not always receiving initial coverage within 72 hours
- Patients with AIS3+ head injury who do not require surgery are managed locally even if they require intensive care, this results in not all neuro-critical care needs being addressed
- Lack of cross speciality engagement and fragmented pathways.

Other individual Serious Concerns included;

- TARN mortality data showed an excess number of deaths compared with similar populations
- Only one surgeon to deliver emergency damage control surgery over two trauma units
- Patients admitted after 8pm with orthopaedic injuries are not regularly reviewed by orthopaedic staff
- Referral of patients for rib-fixation, spinal and neuro-surgery to an MTC outside the Network.

3.5.3 Rehabilitation Measures

For the Rehabilitation measures, the overall median score was 60%.

70 Trauma Units (67%) assessed at or above the median. The highest level of compliance was 100% which was achieved by 5 Trauma Units;

- ➢ Warrington and Halton Hospitals NHS Foundation Trust
- ➢ United Lincolnshire Hospitals NHS Trust (Lincoln County Hospital)
- ➢ University Hospitals of Morecambe Bay NHS Foundation Trust (Royal Lancaster Infirmary)
- ➢ Wirral University Teaching Hospital NHS Foundation Trust
- ➢ United Lincolnshire Hospitals NHS Trust (Pilgrim Hospital, Boston)

31 Trauma Units (30%) achieved ≥ 80% compliance.

35 Trauma Units (33%) had compliance of 50% or under.

Rehabilitation Measures Compliance

Teams compliance	PR
100%	5
90-99%	0
80-89%	26
70-79%	0
60-69%	39
50-59%	0
40-49%	21
0-39%	14
Median	60%
Range	20% − 100%
Interquartile Range	40% - 80%

Rehabilitation Good Practice

The main themes related to 7 day access to integrated therapy services; responsive repatriation process; proactive robust rehabilitation coordinators; good management of tracheostomy patients; implementation of rehabilitation prescriptions; establishment of, or good links with, community rehabilitation services; availability of ortho-geriatricians; dedicated AHP workforce

Individual good practice included;

- Weekly rehabilitation outpatient clinic
- Joint therapy manager working across acute and community settings
- Weekly report about Spinal Cord Injury patients sent to the rehabilitation coordinator at the Network
- Ward nurses trained to undertake swallow assessments
- Use of comment cards to collate patient experience of rehabilitation services
- Specialist amputee rehabilitation service with specialist status for military amputees
- Emergency care therapy team that can be accessed by trauma patients not requiring admissions
- Therapy Assisted Discharge Service (TADS) which ensures that patients receive rehabilitation in the most appropriate setting
- Separate identification of a paediatric therapy team.

Immediate Risks and Serious Concerns

No. of services with IR at PR	% of Services with IR at PR	No. of services with SC at PR	% of Services with SC at PR
1	1%	18	17%

Rehabilitation Immediate Risks

There was one service with an Immediate Risks. The Immediate Risks associated with this service were;

- Access to rehabilitation specialists limited, and no access to on-site SALT provision
- Lack of complete information documentation on discharge summaries, which could result in delays in patients accessing appropriate rehabilitation, impacting on patient outcomes and morbidity.

Rehabilitation Serious Concern

There were 18 services with Serious Concerns. The main themes related to;

- An integrated trauma rehabilitation service was not in place, which leads to an inequitable service provision with not all patients receiving the appropriate level of support.   In particular this included;
    - The absence of specialist rehabilitation facilities, with patients admitted to general wards where they will not receive the specialist rehabilitation required
    - No rehabilitation coordinator in post
    - No assurance that all trauma patients admitted locally were having their rehabilitation needs assessed and documented
- Lack of provision of emergency chest physiotherapy service available 24 hours a day. This may result in patients with acute respiratory conditions, out of hours, not receiving appropriate support and the patient's condition may deteriorate.

3.5.4 External Verification of Trauma Units

There were 15 Trauma units across 2 networks that did not participate in the peer review process but 13 agreed to have a desktop assessment against their documentation.

The outcome of the desktop evidence review shows that, as with the peer reviews, rehabilitation is the main outlier in terms of compliance with the measures. Below gives the average compliances across the 13 TUs and also the average % gap between SA and the QST desktop assessment.

Measures	SA	QST	Difference
T14-2B-3 - Reception and Resuscitation Measures	92%	75%	-17%
T14-2C-3 - Definitive Care Measures	90%	78%	-12%
T14-2D-3 - Rehabilitation Measures	72%	62%	-10%
Average Totals	**85%**	**72%**	**-13%**

4.0 Measures with 50% or Below Compliance

Network Governance Measures

Measure Number and Short Description		PR
T14-1C-111	Trauma Management Guidelines	27%
T14-1C-112	Management of Severe Head Injury	41%
T14-1C-113	Management of Spinal Injuries	45%

Pre Hospital Care Measures: No measures below 50% compliance

Adult Major Trauma Measures:

Reception and Resuscitation Measures

Measure Number and Short Description		PR
T14-2B-116	Trauma Management Guidelines	27%
T14-2B-119	24/7 Specialist Acute Pain Service	32%
T14-2B-101	Trauma Team Leader	36%

Definitive Care Measures

Measure Number and Short Description		PR
T14-2C-103	Major Trauma Coordinator Service	14%
T14-2C-107	Protocol for Formal Tertiary Survey	26%
T14-2C-110	Management of Spinal Injuries	32%
T14-2C-104	Major Trauma MDT Meeting	48%

Rehabilitation Measures

Measure Number and Short Description		PR
T14-2D-102	Rehabilitation Coordinator Post	14%
T14-2D-103	Specialist Rehabilitation Service	45%
T14-2D-108	Patient Information	48%
T14-2D-109	Referral Guidelines to Rehabilitation Services	48%

Children's Major Trauma Measures

Reception and Resuscitation Measures

Measure Number and Short Description		PR
T14-2B-214	Trauma Management Guidelines	20%
T14-2B-211	Damage Control Training for Emergency Trauma Consultant Surgeons	47%

Definitive Care Measures

Measure Number and Short Description		PR
T14-2C-203	Major Trauma Coordinator Service	13%
T14-2C-207	Protocol for Formal Tertiary Survey	27%
T14-2C-210	Management of Spinal Injuries	40%
T14-2C-201	Major Trauma Centre Lead Clinician	47%

Rehabilitation Measures

Measure Number and Short Description		PR
T14-2D-202	Rehabilitation Coordinator Post	13%
T14-2D-201	Clinical Lead for Acute Trauma Rehabilitation Services	40%
T14-2D-209	Referral Guidelines to Rehabilitation Services	47%

Major Trauma Measures for Trauma Units

Reception and Resuscitation Measures

Measure Number and Short Description		PR
T14-2B-310	Trauma Management Guidelines	21%
T14-2B-301	Trauma Team Leader	27%
T14-2B-305	CT Reporting	42%
T14-2B-304	24/7 CT Scanner Facilities	47%
T14-2B-306	Network CT Protocols	49%

Definitive Care Measures

Measure Number and Short Description		PR
T14-2C-303	Trauma Coordinator Service	36%
T14-2C-301	Major Trauma Lead Clinician	42%
T14-2C-304	Management of Spinal Injuries	48%

Rehabilitation Measures

Measure Number and Short Description		PR
T14-2D-305	Rehabilitation Prescriptions	11%
T14-2D-301	Rehabilitation Coordinator	46%

5.0 National Overview

Summary of peer review compliance for each section of the Major Trauma Measures

Network Governance Measures

Team	Network Governance PR %	IR	SC	Link to Report
South East London and Kent and Medway	74%			Report
East Midlands Major Trauma Network	89%			Report
Cheshire and Mersey Trauma ODN	89%			Report
East of England	95%			Report
North Yorkshire and Humberside Major Trauma ODN	11%		Y	Report
Thames Valley	63%			Report
Central England	84%			Report
North West Midlands and North Wales	84%			Report
Wessex	79%	Y	Y	Report
South Yorkshire Trauma ODN	32%	Y	Y	Report
North East London and Essex	68%		Y	Report
Northern Trauma Network	42%	Y	Y	Report
Birmingham, Black Country, Hereford and Worcester	74%		Y	Report
Peninsula	79%		Y	Report
Sussex	53%			Report
North West London	68%		Y	Report
Lancs and South Cumbria Trauma Network	79%		Y	Report
Severn	78%			Report
South West London and Surrey	63%		Y*	Report
West Yorkshire	37%	Y	Y	Report
Greater Manchester Major Trauma Network	89%		Y	Report
North West Children's Major Trauma Network	89%			Report

*=Resolved

Pre-Hospital Measures

Team	Pre-Hospital PR %	IR	SC	Link to report
London Ambulance Service NHS Trust	100%			[Report](#)
East Midlands Ambulance Service NHS Trust	50%		Y	[Report](#)
North West Ambulance Service NHS Trust	80%			[Report](#)
East Of England Ambulance Service NHS Trust	70%			[Report](#)
South Central Ambulance Service NHS Foundation Trust	80%			[Report](#)
North East Ambulance Service NHS Foundation Trust	90%			[Report](#)
South East Coast Ambulance Service NHS Foundation Trust	90%			[Report](#)
West Midlands Ambulance Service NHS Foundation Trust	100%			[Report](#)
Yorkshire Ambulance Service NHS Trust	50%		Y	[Report](#)
South Western Ambulance Service NHS Foundation Trust	70%			[Report](#)

*=Resolved

Adult Major Trauma Measures

Reception and Resuscitation

Team	Reception and Resuscitation PR %	IR	SC	Link to Report
University Hospitals Coventry and Warwickshire NHS Trust (University Hospital)	70%		Y	Report
Lancashire Teaching Hospitals NHS Foundation Trust	70%	Y	Y*	Report
Hull and East Yorkshire Hospitals NHS Foundation Trust	70%		Y	Report
University Hospitals of North Midlands NHS Trust	91%			Report
Queen Elizabeth Hospital Birmingham	78%		Y	Report
Plymouth Hospitals NHS Trust	70%		Y	Report
Brighton and Sussex University Hospitals (Royal Sussex County Hospital)	52%		Y	Report
Sheffield Teaching Hospitals NHS Foundation Trust	78%	Y	Y	Report
Kings College Hospital NHS Foundation Trust	83%			Report
North Bristol NHS Trust	91%		Y	Report
Southampton General Hospital	61%		Y	Report
Queen's Medical Centre Nottingham	78%		Y	Report
Oxford University Hospitals NHS Trust	96%			Report
Imperial College Healthcare NHS Trust (St Mary's Hospital)	78%		Y	Report
Cambridge University Hospitals NHS Foundation Trust	87%		Y	Report
Newcastle upon Tyne Hospitals NHS Foundation Trust	87%		Y	Report
Leeds Teaching Hospitals NHS Trust	74%		Y	Report
South Tees Hospitals NHS Foundation Trust	65%		Y	Report
St George's Healthcare NHS Trust	83%		Y	Report
Barts Health NHS Trust (Royal London Hospital)	78%		Y	Report
Cheshire and Merseyside Collaborative MTC	87%			Report
Greater Manchester Major Trauma Centre Collaborative	70%		Y	Report

*=Resolved

Definitive Care

Team	Definitive Care PR %	IR	SC	Link to report
University Hospitals Coventry and Warwickshire NHS Trust (University Hospital)	83%		Y	Report
Lancashire Teaching Hospitals NHS Foundation Trust	61%			Report
Hull and East Yorkshire Hospitals NHS Foundation Trust	50%		Y	Report
University Hospitals of North Midlands NHS Trust	78%			Report
Queen Elizabeth Hospital Birmingham	67%		Y	Report
Plymouth Hospitals NHS Trust	72%		Y	Report
Brighton and Sussex University Hospitals (Royal Sussex County Hospital)	67%		Y	Report
Sheffield Teaching Hospitals NHS Foundation Trust	67%		Y	Report
Kings College Hospital NHS Foundation Trust	83%		Y	Report
North Bristol NHS Trust	72%		Y	Report
Southampton General Hospital	61%		Y	Report
Queen's Medical Centre Nottingham	100%			Report
Oxford University Hospitals NHS Trust	78%		Y	Report
Imperial College Healthcare NHS Trust (St Mary's Hospital)	89%		Y	Report
Cambridge University Hospitals NHS Foundation Trust	72%		Y	Report
Newcastle upon Tyne Hospitals NHS Foundation Trust	78%		Y	Report
Leeds Teaching Hospitals NHS Trust	78%		Y	Report
South Tees Hospitals NHS Foundation Trust	61%		Y	Report
St George's Healthcare NHS Trust	89%		Y	Report
Barts Health NHS Trust (Royal London Hospital)	78%		Y	Report
Cheshire and Merseyside Collaborative MTC	61%			Report
Greater Manchester Major Trauma Centre Collaborative	50%		Y	Report

*=Resolved

Rehabilitation

Team	Rehabilitation PR %	IR	SC	Link to report
University Hospitals Coventry and Warwickshire NHS Trust (University Hospital)	69%			Report
Lancashire Teaching Hospitals NHS Foundation Trust	77%		Y	Report
Hull and East Yorkshire Hospitals NHS Foundation Trust	15%		Y	Report
University Hospitals of North Midlands NHS Trust	77%			Report
Queen Elizabeth Hospital Birmingham	92%			Report
Plymouth Hospitals NHS Trust	77%			Report
Brighton and Sussex University Hospitals (Royal Sussex County)	38%		Y	Report
Sheffield Teaching Hospitals NHS Foundation Trust	46%		Y	Report
Kings College Hospital NHS Foundation Trust	69%			Report
North Bristol NHS Trust	54%		Y	Report
Southampton General Hospital	54%			Report
Queen's Medical Centre Nottingham	100%			Report
Oxford University Hospitals NHS Trust	69%		Y	Report
Imperial College Healthcare NHS Trust (St Mary's Hospital)	85%			Report
Cambridge University Hospitals NHS Foundation Trust	92%			Report
Newcastle upon Tyne Hospitals NHS Foundation Trust	62%		Y	Report
Leeds Teaching Hospitals NHS Trust	54%		Y	Report
South Tees Hospitals NHS Foundation Trust	38%		Y	Report
St George's Healthcare NHS Trust	77%		Y*	Report
Barts Health NHS Trust (Royal London Hospital)	46%		Y	Report
Cheshire and Merseyside Collaborative MTC	77%			Report
Greater Manchester Major Trauma Centre Collaborative	77%			Report

*=Resolved

Children's Major Trauma Measures

Reception and Resuscitation

Team	Reception and Resuscitation PR %	IR	SC	Link to report
North West Children's Major Trauma Centre Collaborative	67%			Report
Birmingham Children's Hospital	86%			Report
Sheffield Children's NHS Foundation Trust	67%			Report
Kings College Hospital NHS Foundation Trust	76%			Report
Southampton General Hospital	90%			Report
Queen's Medical Centre Nottingham	76%		Y	Report
Oxford University Hospitals NHS Trust	95%			Report
Imperial College Healthcare NHS Trust (St Mary's Hospital)	76%			Report
Cambridge University Hospitals NHS Foundation Trust	81%			Report
Newcastle upon Tyne Hospitals NHS Foundation Trust	90%		Y	Report
Leeds Teaching Hospitals NHS Trust	76%		Y	Report
South Tees Hospitals NHS Foundation Trust	76%		Y	Report
St George's Healthcare NHS Trust	76%		Y	Report
Barts Health NHS Trust (Royal London Hospital)	90%			Report
University Hospitals Bristol NHS Foundation Trust - Bristol Children's Hospital	71%			Report

*=Resolved

Definitive Care

Team	Definitive Care PR %	IR	SC	Link to report
North West Children's Major Trauma Centre Collaborative	76%			[Report](#)
Birmingham Children's Hospital	59%			[Report](#)
Sheffield Children's NHS Foundation Trust	59%		Y	[Report](#)
Kings College Hospital NHS Foundation Trust	82%			[Report](#)
Southampton General Hospital	94%		Y*	[Report](#)
Queen's Medical Centre Nottingham	100%			[Report](#)
Oxford University Hospitals NHS Trust	71%		Y	[Report](#)
Imperial College Healthcare NHS Trust (St Mary's Hospital)	82%			[Report](#)
Cambridge University Hospitals NHS Foundation Trust	59%			[Report](#)
Newcastle upon Tyne Hospitals NHS Foundation Trust	65%		Y	[Report](#)
Leeds Teaching Hospitals NHS Trust	71%		Y	[Report](#)
South Tees Hospitals NHS Foundation Trust	59%		Y	[Report](#)
St George's Healthcare NHS Trust	76%		Y	[Report](#)
Barts Health NHS Trust (Royal London Hospital)	76%			[Report](#)
University Hospitals Bristol NHS Foundation Trust - Bristol Children's Hospital	71%		Y	[Report](#)

*=Resolved

Rehabilitation

Team	Rehabilitation PR %	IR	SC	Link to report
North West Children's Major Trauma Centre Collaborative	92%			[Report](#)
Birmingham Children's Hospital	92%			[Report](#)
Sheffield Children's NHS Foundation Trust	54%		Y	[Report](#)
Kings College Hospital NHS Foundation Trust	69%			[Report](#)
Southampton General Hospital	92%			[Report](#)
Queen's Medical Centre Nottingham	92%			[Report](#)
Oxford University Hospitals NHS Trust	69%		Y	[Report](#)
Imperial College Healthcare NHS Trust (St Mary's Hospital)	77%			[Report](#)
Cambridge University Hospitals NHS Foundation Trust	62%			[Report](#)
Newcastle upon Tyne Hospitals NHS Foundation Trust	46%		Y	[Report](#)
Leeds Teaching Hospitals NHS Trust	54%		Y	[Report](#)
South Tees Hospitals NHS Foundation Trust	38%		Y	[Report](#)
St George's Healthcare NHS Trust	69%		Y*	[Report](#)
Barts Health NHS Trust (Royal London Hospital)	77%			[Report](#)
University Hospitals Bristol NHS Foundation Trust - Bristol Children's Hospital	69%			[Report](#)

*=Resolved

Major Trauma Measures for Trauma Units

Reception and Resuscitation

Team	Reception and Resuscitation PR %	IR	SC	Link to report
Bedford Hospital NHS Trust	64%		Y	[Report](#)
Mid Essex Hospital Services NHS Trust	86%			[Report](#)
Colchester Hospital University NHS Foundation Trust	71%		Y	[Report](#)
James Paget University Hospitals NHS Foundation Trust	64%		Y	[Report](#)
East and North Hertfordshire NHS Trust	79%			[Report](#)
Luton and Dunstable University Hospital NHS Foundation Trust	64%		Y	[Report](#)
Norfolk and Norwich University Hospitals NHS Foundation Trust	86%			[Report](#)
Peterborough and Stamford Hospitals NHS Foundation Trust	71%		Y	[Report](#)
The Princess Alexandra Hospital NHS Trust	43%		Y	[Report](#)
Ipswich Hospital NHS Trust	79%		Y	[Report](#)
The Queen Elizabeth Hospital, King's Lynn NHS Foundation Trust	64%		Y	[Report](#)
West Suffolk Hospital NHS Foundation Trust	86%		Y	[Report](#)
Gloucestershire Hospitals NHS Foundation Trust	79%			[Report](#)
Great Western Hospitals NHS Foundation Trust	64%			[Report](#)
Taunton and Somerset NHS Foundation Trust	79%		Y	[Report](#)
Royal United Hospital Bath NHS Trust	71%		Y	[Report](#)
University Hospitals Bristol NHS Foundation Trust	79%			[Report](#)
Yeovil District Hospital NHS Foundation Trust	86%			[Report](#)
County Durham and Darlington NHS Foundation Trust - Darlington Memorial Hospital	57%		Y	[Report](#)
North Tees and Hartlepool NHS Foundation Trust	64%		Y	[Report](#)
Milton Keynes Hospital NHS Foundation Trust	50%		Y	[Report](#)
Royal Berkshire NHS Foundation Trust	71%			[Report](#)
Buckinghamshire Healthcare NHS Trust	71%			[Report](#)
Frimley Health - Wexham Park	71%			[Report](#)
East Kent Hospital University NHS Foundation Trust (William Harvey Hospital)	64%			[Report](#)
Medway NHS Foundation Trust	57%			[Report](#)
Kings College Hospital NHS Foundation Trust (Princess Royal University Hospital)	50%		Y	[Report](#)
Lewisham and Greenwich NHS Trust (Queen Elizabeth Hospital)	57%			[Report](#)
Guys and St Thomas NHS Foundation Trust (St Thomas Hospital)	79%			[Report](#)
Maidstone and Tunbridge Well NHS Trust (Tunbridge Wells Hospital)	57%			[Report](#)
Lewisham and Greenwich NHS Trust (Lewisham Hospital)	57%			[Report](#)
Airedale NHS Foundation Trust	43%		Y	[Report](#)

Bradford Teaching Hospitals NHS Foundation Trust	57%		Y	Report
Harrogate and District NHS Foundation Trust	57%		Y	Report
Calderdale and Huddersfield NHS Foundation Trust	43%		Y	Report
Mid Yorkshire Hospitals NHS Trust	50%		Y	Report
Chesterfield Royal Hospital NHS Foundation Trust	93%			Report
Derby Hospital NHS Foundation Trust (Royal Derby Hospital)	93%			Report
Sherwood Forest Hospital NHS Foundation Trust (King's Mill Hospital)	93%			Report
United Lincolnshire Hospitals NHS Trust (Lincoln County Hospital)	86%		Y	Report
University Hospitals of Leicester NHS Trust (Leicester Royal Infirmary)	79%		Y	Report
Royal Free London NHS Foundation Trust (Barnet Hospital)	64%			Report
Basildon and Thurrock University Hospitals NHS Foundation Trust	57%		Y	Report
Homerton University Hospital	71%		Y	Report
Barts Health NHS Trust (Newham University Hospital)	50%	Y		Report
North Middlesex University Hospital NHS Trust	79%		Y	Report
Barking, Havering and Redbridge University Hospitals NHS Trust (Queens Hospital)	29%	Y	Y	Report
Royal Free London NHS Foundation Trust (Royal Free Hospital)	71%		Y	Report
Southend University Hospital NHS Foundation Trust	64%		Y	Report
University College London Hospitals NHS Foundation Trust	64%		Y	Report
Barts Health NHS Trust (Whipps Cross University Hospital)	71%	Y	Y	Report
The Whittington Hospital NHS Trust	57%		Y	Report
North Cumbria University Hospitals NHS Trust	36%	Y	Y	Report
County Durham and Darlington NHS Foundation Trust - University Hospital of North Durham	50%		Y	Report
Northumbria Healthcare NHS Foundation Trust - North Tyneside General Hospital	43%		Y	Report
Gateshead Health NHS Foundation Trust	57%			Report
South Tyneside NHS Foundation Trust	29%		Y	Report
City Hospitals Sunderland NHS Foundation Trust	71%			Report
Northumbria Healthcare NHS Foundation Trust - Wansbeck General Hospital	43%		Y	Report
Chelsea and Westminster Hospital	86%			Report
London North West Healthcare NHS Trust (Ealing Hospital)	71%		Y	Report
Hillingdon Hospital	71%			Report
London North West Healthcare NHS Trust (Northwick Park Hospital)	64%			Report
West Hertfordshire Hospitals NHS Trust (Watford General Hospital)	79%	Y	Y	Report
West Middlesex University Hospital	79%			Report
Northern Devon Healthcare NHS Trust	71%		Y	Report
Royal Cornwall Hospitals NHS Trust	93%		Y	Report
Royal Devon and Exeter NHS Foundation Trust	79%		Y	Report
South Devon Healthcare NHS Foundation Trust	93%			Report

Northern Lincolnshire and Goole NHS Foundation Trust - Diana Princess of Wales Hospital	57%		Y	[Report](#)
York Teaching Hospital NHS Foundation Trust - Scarborough Hospital	50%		Y	[Report](#)
Northern Lincolnshire and Goole NHS Foundation Trust - Scunthorpe General Hospital	50%		Y	[Report](#)
York Teaching Hospital NHS Foundation Trust - York Hospital	43%		Y	[Report](#)
Barnsley Hospital NHS Foundation Trust	71%			[Report](#)
Doncaster and Bassetlaw Hospitals NHS Foundation Trust	50%			[Report](#)
Rotherham Hospital NHS Foundation Trust	57%		Y	[Report](#)
Worcestershire Acute Hospitals NHS Trust (Alexandra Hospital Redditch)	79%		Y	[Report](#)
Heart Of England NHS Foundation Trust (Heartlands Hospital)	57%		Y	[Report](#)
Sandwell and West Birmingham Hospitals NHS Trust (City Hospital)	50%	Y	Y	[Report](#)
Wye Valley NHS Trust (The County Hospital)	57%	Y	Y	[Report](#)
The Royal Wolverhampton NHS Trust (New Cross Hospital)	57%		Y	[Report](#)
The Dudley Group NHS Foundation Trust (Russells Hall Hospital)	79%			[Report](#)
Sandwell and West Birmingham Hospitals NHS Trust (Sandwell District General Hospital)	64%		Y	[Report](#)
Walsall Healthcare NHS Trust (Manor Hospital)	64%		Y	[Report](#)
Worcestershire Acute Hospitals NHS Trust (Worcestershire Royal Hospital)	64%		Y	[Report](#)
Blackpool Teaching Hospitals NHS Foundation Trust	50%		Y*	[Report](#)
University Hospitals of Morecambe Bay NHS Foundation Trust (Furness General Hospital)	50%	Y*	Y*	[Report](#)
East Lancashire Hospitals NHS Trust	71%		Y*	[Report](#)
University Hospitals of Morecambe Bay NHS Foundation Trust (Royal Lancaster Infirmary)	57%		Y*	[Report](#)
East Sussex Healthcare (Conquest Hospital)	71%			[Report](#)
Western Sussex Hospitals (St Richards Hospital, Chichester)	64%			[Report](#)
Western Sussex Hospitals (Worthing Hospital)	71%			[Report](#)
Mid Cheshire Hospitals NHS Trust	64%		Y	[Report](#)
Shrewsbury and Telford Hospitals NHS Trust	57%		Y	[Report](#)
Kettering General Hospital NHS Foundation Trust	50%		Y	[Report](#)
Northampton General Hospital NHS Trust	86%			[Report](#)
St Helens and Knowsley Teaching Hospitals NHS Trust	93%			[Report](#)
Wirral University Teaching Hospital NHS Foundation Trust	93%			[Report](#)
Countess of Chester Hospital NHS Foundation Trust	100%			[Report](#)
Southport and Ormskirk Hospital NHS Trust	86%		Y*	[Report](#)
Warrington and Halton Hospitals NHS Foundation Trust	93%			[Report](#)
Pennine Acute Hospitals NHS Trust (Royal Oldham Hospital)	79%		Y	[Report](#)
Stockport NHS Foundation Trust	71%		Y	[Report](#)
Wrightington, Wigan and Leigh NHS Foundation Trust	57%	Y	Y	[Report](#)
United Lincolnshire Hospitals NHS Trust (Pilgrim Hospital, Boston)	71%		Y	[Report](#)

*=Resolved

Definitive Care

Team	Definitive Care PR %	IR	SC	Link to report
Bedford Hospital NHS Trust	70%			[Report](#)
Mid Essex Hospital Services NHS Trust	60%			[Report](#)
Colchester Hospital University NHS Foundation Trust	70%		Y	[Report](#)
James Paget University Hospitals NHS Foundation Trust	70%		Y	[Report](#)
East and North Hertfordshire NHS Trust	80%			[Report](#)
Luton and Dunstable University Hospital NHS Foundation Trust	70%			[Report](#)
Norfolk and Norwich University Hospitals NHS Foundation Trust	60%			[Report](#)
Peterborough and Stamford Hospitals NHS Foundation Trust	70%			[Report](#)
The Princess Alexandra Hospital NHS Trust	30%	Y	Y	[Report](#)
Ipswich Hospital NHS Trust	50%			[Report](#)
The Queen Elizabeth Hospital, King's Lynn NHS Foundation Trust	80%			[Report](#)
West Suffolk Hospital NHS Foundation Trust	70%			[Report](#)
Gloucestershire Hospitals NHS Foundation Trust	70%		Y	[Report](#)
Great Western Hospitals NHS Foundation Trust	50%			[Report](#)
Taunton and Somerset NHS Foundation Trust	100%			[Report](#)
Royal United Hospital Bath NHS Trust	70%		Y	[Report](#)
University Hospitals Bristol NHS Foundation Trust	80%			[Report](#)
Yeovil District Hospital NHS Foundation Trust	100%			[Report](#)
County Durham and Darlington NHS Foundation Trust - Darlington Memorial Hospital	50%		Y	[Report](#)
North Tees and Hartlepool NHS Foundation Trust	80%		Y	[Report](#)
Milton Keynes Hospital NHS Foundation Trust	90%			[Report](#)
Royal Berkshire NHS Foundation Trust	90%			[Report](#)
Buckinghamshire Healthcare NHS Trust	80%			[Report](#)
Frimley Health - Wexham Park	80%			[Report](#)
East Kent Hospital University NHS Foundation Trust (William Harvey Hospital)	50%			[Report](#)
Medway NHS Foundation Trust	80%			[Report](#)
Kings College Hospital NHS Foundation Trust (Princess Royal University Hospital)	50%		Y	[Report](#)
Lewisham and Greenwich NHS Trust (Queen Elizabeth Hospital)	60%		Y	[Report](#)
Guys and St Thomas NHS Foundation Trust (St Thomas Hospital)	50%			[Report](#)
Maidstone and Tunbridge Well NHS Trust (Tunbridge Wells Hospital)	60%			[Report](#)
Lewisham and Greenwich NHS Trust (Lewisham Hospital)	70%		Y	[Report](#)
Airedale NHS Foundation Trust	50%		Y	[Report](#)
Bradford Teaching Hospitals NHS Foundation Trust	50%		Y	[Report](#)
Harrogate and District NHS Foundation Trust	50%		Y	[Report](#)

Calderdale and Huddersfield NHS Foundation Trust	50%		Y	Report
Mid Yorkshire Hospitals NHS Trust	50%		Y	Report
Chesterfield Royal Hospital NHS Foundation Trust	80%			Report
Derby Hospital NHS Foundation Trust (Royal Derby Hospital)	100%			Report
Sherwood Forest Hospital NHS Foundation Trust (King's Mill Hospital)	80%			Report
United Lincolnshire Hospitals NHS Trust (Lincoln County Hospital)	90%			Report
University Hospitals of Leicester NHS Trust (Leicester Royal Infirmary)	80%			Report
Royal Free London NHS Foundation Trust (Barnet Hospital)	80%			Report
Basildon and Thurrock University Hospitals NHS Foundation Trust	40%		Y	Report
Homerton University Hospital	60%		Y	Report
Barts Health NHS Trust (Newham University Hospital)	10%		Y	Report
North Middlesex University Hospital NHS Trust	80%			Report
Barking, Havering and Redbridge University Hospitals NHS Trust (Queens Hospital)	70%		Y	Report
Royal Free London NHS Foundation Trust (Royal Free Hospital)	40%		Y	Report
Southend University Hospital NHS Foundation Trust	40%		Y	Report
University College London Hospitals NHS Foundation Trust	80%			Report
Barts Health NHS Trust (Whipps Cross University Hospital)	50%	Y	Y	Report
The Whittington Hospital NHS Trust	60%		Y	Report
North Cumbria University Hospitals NHS Trust	50%		Y	Report
County Durham and Darlington NHS Foundation Trust - University Hospital of North Durham	60%		Y	Report
Northumbria Healthcare NHS Foundation Trust - North Tyneside General Hospital	70%			Report
Gateshead Health NHS Foundation Trust	50%		Y	Report
South Tyneside NHS Foundation Trust	40%		Y	Report
City Hospitals Sunderland NHS Foundation Trust	40%		Y	Report
Northumbria Healthcare NHS Foundation Trust - Wansbeck General Hospital	70%			Report
Chelsea and Westminster Hospital	100%			Report
London North West Healthcare NHS Trust (Ealing Hospital)	80%		Y	Report
Hillingdon Hospital	80%			Report
London North West Healthcare NHS Trust (Northwick Park Hospital)	50%		Y	Report
West Hertfordshire Hospitals NHS Trust (Watford General Hospital)	60%		Y	Report
West Middlesex University Hospital	80%			Report
Northern Devon Healthcare NHS Trust	80%			Report
Royal Cornwall Hospitals NHS Trust	60%		Y	Report
Royal Devon and Exeter NHS Foundation Trust	70%		Y	Report
South Devon Healthcare NHS Foundation Trust	60%		Y	Report
Northern Lincolnshire and Goole NHS Foundation Trust - Diana Princess of Wales Hospital	70%		Y	Report
York Teaching Hospital NHS Foundation Trust -	70%		Y	Report

Scarborough Hospital				
Northern Lincolnshire and Goole NHS Foundation Trust - Scunthorpe General Hospital	70%		Y	Report
York Teaching Hospital NHS Foundation Trust - York Hospital	70%		Y	Report
Barnsley Hospital NHS Foundation Trust	60%		Y	Report
Doncaster and Bassetlaw Hospitals NHS Foundation Trust	60%		Y	Report
Rotherham Hospital NHS Foundation Trust	60%		Y	Report
Worcestershire Acute Hospitals NHS Trust (Alexandra Hospital Redditch)	70%		Y	Report
Heart Of England NHS Foundation Trust (Heartlands Hospital)	40%		Y	Report
Sandwell and West Birmingham Hospitals NHS Trust (City Hospital)	30%	Y	Y	Report
Wye Valley NHS Trust (The County Hospital)	50%		Y	Report
The Royal Wolverhampton NHS Trust (New Cross Hospital)	50%		Y	Report
The Dudley Group NHS Foundation Trust (Russells Hall Hospital)	90%			Report
Sandwell and West Birmingham Hospitals NHS Trust (Sandwell District General Hospital)	50%		Y	Report
Walsall Healthcare NHS Trust (Manor Hospital)	50%		Y	Report
Worcestershire Acute Hospitals NHS Trust (Worcestershire Royal Hospital)	70%		Y	Report
Blackpool Teaching Hospitals NHS Foundation Trust	70%		Y*	Report
University Hospitals of Morecambe Bay NHS Foundation Trust (Furness General Hospital)	50%		Y*	Report
East Lancashire Hospitals NHS Trust	80%			Report
University Hospitals of Morecambe Bay NHS Foundation Trust (Royal Lancaster Infirmary)	60%		Y*	Report
East Sussex Healthcare (Conquest Hospital)	80%			Report
Western Sussex Hospitals (St Richards Hospital, Chichester)	60%			Report
Western Sussex Hospitals (Worthing Hospital)	60%			Report
Mid Cheshire Hospitals NHS Trust	70%			Report
Shrewsbury and Telford Hospitals NHS Trust	70%		Y	Report
Kettering General Hospital NHS Foundation Trust	80%			Report
Northampton General Hospital NHS Trust	90%			Report
St Helens and Knowsley Teaching Hospitals NHS Trust	90%			Report
Wirral University Teaching Hospital NHS Foundation Trust	90%			Report
Countess of Chester Hospital NHS Foundation Trust	90%			Report
Southport and Ormskirk Hospital NHS Trust	100%			Report
Warrington and Halton Hospitals NHS Foundation Trust	100%			Report
Pennine Acute Hospitals NHS Trust (Royal Oldham Hospital)	70%			Report
Stockport NHS Foundation Trust	70%			Report
Wrightington, Wigan and Leigh NHS Foundation Trust	60%			Report
United Lincolnshire Hospitals NHS Trust (Pilgrim Hospital, Boston)	90%			Report

*=Resolved

Rehabilitation

Team	Rehabilitation PR %	IR	SC	Link to report
Bedford Hospital NHS Trust	60%			[Report](#)
Mid Essex Hospital Services NHS Trust	80%			[Report](#)
Colchester Hospital University NHS Foundation Trust	60%			[Report](#)
James Paget University Hospitals NHS Foundation Trust	20%			[Report](#)
East and North Hertfordshire NHS Trust	60%			[Report](#)
Luton and Dunstable University Hospital NHS Foundation Trust	60%			[Report](#)
Norfolk and Norwich University Hospitals NHS Foundation Trust	60%			[Report](#)
Peterborough and Stamford Hospitals NHS Foundation Trust	40%			[Report](#)
The Princess Alexandra Hospital NHS Trust	20%			[Report](#)
Ipswich Hospital NHS Trust	80%			[Report](#)
The Queen Elizabeth Hospital, King's Lynn NHS Foundation Trust	60%			[Report](#)
West Suffolk Hospital NHS Foundation Trust	80%			[Report](#)
Gloucestershire Hospitals NHS Foundation Trust	20%			[Report](#)
Great Western Hospitals NHS Foundation Trust	40%			[Report](#)
Taunton and Somerset NHS Foundation Trust	60%			[Report](#)
Royal United Hospital Bath NHS Trust	40%			[Report](#)
University Hospitals Bristol NHS Foundation Trust	40%			[Report](#)
Yeovil District Hospital NHS Foundation Trust	60%			[Report](#)
County Durham and Darlington NHS Foundation Trust - Darlington Memorial Hospital	60%			[Report](#)
North Tees and Hartlepool NHS Foundation Trust	60%			[Report](#)
Milton Keynes Hospital NHS Foundation Trust	60%			[Report](#)
Royal Berkshire NHS Foundation Trust	60%			[Report](#)
Buckinghamshire Healthcare NHS Trust	80%			[Report](#)
Frimley Health - Wexham Park	60%			[Report](#)
East Kent Hospital University NHS Foundation Trust (William Harvey Hospital)	40%			[Report](#)
Medway NHS Foundation Trust	20%			[Report](#)
Kings College Hospital NHS Foundation Trust (Princess Royal University Hospital)	20%			[Report](#)
Lewisham and Greenwich NHS Trust (Queen Elizabeth Hospital)	60%			[Report](#)
Guys and St Thomas NHS Foundation Trust (St Thomas Hospital)	40%			[Report](#)
Maidstone and Tunbridge Well NHS Trust (Tunbridge Wells Hospital)	60%			[Report](#)
Lewisham and Greenwich NHS Trust (Lewisham Hospital)	60%			[Report](#)
Airedale NHS Foundation Trust	40%		Y	[Report](#)
Bradford Teaching Hospitals NHS Foundation Trust	60%			[Report](#)
Harrogate and District NHS Foundation Trust	60%			[Report](#)
Calderdale and Huddersfield NHS Foundation Trust	60%		Y	[Report](#)
Mid Yorkshire Hospitals NHS Trust	40%		Y	[Report](#)
Chesterfield Royal Hospital NHS Foundation Trust	60%			[Report](#)

Hospital	%			
Derby Hospital NHS Foundation Trust (Royal Derby Hospital)	60%			[Report](#)
Sherwood Forest Hospital NHS Foundation Trust (King's Mill Hospital)	60%			[Report](#)
United Lincolnshire Hospitals NHS Trust (Lincoln County Hospital)	100%			[Report](#)
University Hospitals of Leicester NHS Trust (Leicester Royal Infirmary)	60%			[Report](#)
Royal Free London NHS Foundation Trust (Barnet Hospital)	80%			[Report](#)
Basildon and Thurrock University Hospitals NHS Foundation Trust	80%			[Report](#)
Homerton University Hospital	80%			[Report](#)
Barts Health NHS Trust (Newham University Hospital)	40%		Y	[Report](#)
North Middlesex University Hospital NHS Trust	80%			[Report](#)
Barking, Havering and Redbridge University Hospitals NHS Trust (Queens Hospital)	40%	Y		[Report](#)
Royal Free London NHS Foundation Trust (Royal Free Hospital)	80%			[Report](#)
Southend University Hospital NHS Foundation Trust	40%			[Report](#)
University College London Hospitals NHS Foundation Trust	60%		Y	[Report](#)
Barts Health NHS Trust (Whipps Cross University Hospital)	40%		Y	[Report](#)
The Whittington Hospital NHS Trust	80%			[Report](#)
North Cumbria University Hospitals NHS Trust	40%			[Report](#)
County Durham and Darlington NHS Foundation Trust - University Hospital of North Durham	60%			[Report](#)
Northumbria Healthcare NHS Foundation Trust - North Tyneside General Hospital	80%			[Report](#)
Gateshead Health NHS Foundation Trust	60%			[Report](#)
South Tyneside NHS Foundation Trust	40%		Y	[Report](#)
City Hospitals Sunderland NHS Foundation Trust	60%			[Report](#)
Northumbria Healthcare NHS Foundation Trust - Wansbeck General Hospital	80%			[Report](#)
Chelsea and Westminster Hospital	80%			[Report](#)
London North West Healthcare NHS Trust (Ealing Hospital)	80%			[Report](#)
Hillingdon Hospital	80%			[Report](#)
London North West Healthcare NHS Trust (Northwick Park Hospital)	60%			[Report](#)
West Hertfordshire Hospitals NHS Trust (Watford General Hospital)	20%			[Report](#)
West Middlesex University Hospital	80%			[Report](#)
Northern Devon Healthcare NHS Trust	40%			[Report](#)
Royal Cornwall Hospitals NHS Trust	20%		Y	[Report](#)
Royal Devon and Exeter NHS Foundation Trust	40%			[Report](#)
South Devon Healthcare NHS Foundation Trust	40%		Y	[Report](#)
Northern Lincolnshire and Goole NHS Foundation Trust - Diana Princess of Wales Hospital	20%		Y	[Report](#)
York Teaching Hospital NHS Foundation Trust - Scarborough Hospital	20%		Y	[Report](#)
Northern Lincolnshire and Goole NHS Foundation Trust - Scunthorpe General Hospital	20%		Y	[Report](#)
York Teaching Hospital NHS Foundation Trust - York Hospital	20%		Y	[Report](#)
Barnsley Hospital NHS Foundation Trust	40%			[Report](#)
Doncaster and Bassetlaw Hospitals NHS Foundation Trust	60%		Y	[Report](#)

Rotherham Hospital NHS Foundation Trust	40%			Report
Worcestershire Acute Hospitals NHS Trust (Alexandra Hospital Redditch)	80%			Report
Heart Of England NHS Foundation Trust (Heartlands Hospital)	60%			Report
Sandwell and West Birmingham Hospitals NHS Trust (City Hospital)	80%			Report
Wye Valley NHS Trust (The County Hospital)	60%			Report
The Royal Wolverhampton NHS Trust (New Cross Hospital)	60%			Report
The Dudley Group NHS Foundation Trust (Russells Hall Hospital)	60%			Report
Sandwell and West Birmingham Hospitals NHS Trust (Sandwell District General Hospital)	80%			Report
Walsall Healthcare NHS Trust (Manor Hospital)	60%			Report
Worcestershire Acute Hospitals NHS Trust (Worcestershire Royal Hospital)	60%			Report
Blackpool Teaching Hospitals NHS Foundation Trust	40%			Report
University Hospitals of Morecambe Bay NHS Foundation Trust (Furness General Hospital)	60%			Report
East Lancashire Hospitals NHS Trust	80%			Report
University Hospitals of Morecambe Bay NHS Foundation Trust (Royal Lancaster Infirmary)	100%			Report
East Sussex Healthcare (Conquest Hospital)	20%			Report
Western Sussex Hospitals (St Richards Hospital, Chichester)	20%			Report
Western Sussex Hospitals (Worthing Hospital)	20%			Report
Mid Cheshire Hospitals NHS Trust	80%			Report
Shrewsbury and Telford Hospitals NHS Trust	40%		Y	Report
Kettering General Hospital NHS Foundation Trust	80%			Report
Northampton General Hospital NHS Trust	80%			Report
St Helens and Knowsley Teaching Hospitals NHS Trust	80%		Y*	Report
Wirral University Teaching Hospital NHS Foundation Trust	100%			Report
Countess of Chester Hospital NHS Foundation Trust	80%			Report
Southport and Ormskirk Hospital NHS Trust	80%			Report
Warrington and Halton Hospitals NHS Foundation Trust	100%			Report
Pennine Acute Hospitals NHS Trust (Royal Oldham Hospital)	60%		Y	Report
Stockport NHS Foundation Trust	60%		Y	Report
Wrightington, Wigan and Leigh NHS Foundation Trust	60%			Report
United Lincolnshire Hospitals NHS Trust (Pilgrim Hospital, Boston)	100%			Report

*=Resolved

6.0 Recommendations

A number of common themes were identified in the national peer review process and the recommendations are summarised here.

Peer Review

The peer review process provides quality assurance to commissioners and provider organisations and also has a valuable educational and communication role in spreading good practice. Peer review of Major Trauma Services should continue in the future.

The Major Trauma Centres and Networks have now had 3 consecutive annual peer review visits. For 2016 it is not anticipated that any of these will require a formal peer review visit, provided immediate and serious concerns have been addressed. The facility for a peer review visit "on request" will be available.

In 2016, Major Trauma Centres should undertake a self-assessment against national peer review measures. This will be a streamlined set of measures developed following feedback from the 2015 peer review round and should be available by December 2015.

The first round of peer review of Trauma Units has been successful and identified many areas of good practice. It is recommended that all Trauma Units have a further formal peer review in 2016 and that this is coordinated and administered by the Major Trauma Networks. The national peer review measures will be revised following feedback from the recent visits and should provide the core of the Trauma Unit reviews with local modification allowing for geography etc. The Quality Surveillance Team should be able to provide some assistance in this task. It is recommended that these reviews include at least clinician from a different Network.

Formal training of the members of the peer review team has been successful and helped to reduce variation between the review teams. The facility to train members of the peer review team must remain in place as the system develops.

In 2017, it is anticipated that all parts of the Major Trauma Service will undertake a self-assessment exercise with the facility for a formal peer review "on request". However, depending upon the outcome of the responses to immediate and serious concerns, together with the results of the self-assessment process and Trauma Unit review, it is likely that a small number of providers will require a formal peer review.

Clinical Services

Numerous areas of good practice were identified around the country and clinical services should consider adapting these to their local system. The Quality Surveillance Team can be contacted to identify areas where these practices have been successful so that teams can exchange ideas. Areas that should be considered by all adult and paediatric services include:

Networks

- Providing an on-line Directory of rehabilitation and education & training initiatives.

- Establishment of a Trauma and Rehabilitation Coordinators Forum

- Hold a network annual trauma conference, with patients presenting their journey

- Ensure that paediatric management pathways and guidelines are in place

- Audit all severely injured patients remaining in trauma units for definitive treatment

- Review pathways for rehabilitation and access to specialist rehabilitation beds

Pre-Hospital

- Continue to focus on cross-network engagement and good communication

- Develop further clinical decision tools patients who are borderline triage positive

- Maintain excellent training of all clinical staff

- Ensure that ambulance control rooms have 24 hour access to consultant medical or a critical care paramedic

Reception and Resuscitation

- Continue to develop training for Trauma Team members and leaders. Training should include surgical skills and paediatrics where required

- Ensure that Trauma Team nurses have appropriate trauma training

- Use Trauma Team briefings and debriefings as an educational tool

- Provide a single access phone line for Trauma Units to call for advice and potential transfer

- Provide written information for patients, relatives and carers at an early stage

- Ensure that all clinicians attending a trauma call have sufficient experience

- Audit CT reporting including time-lines and seniority of radiological report

Definitive Care

- Establish Major Trauma Wards and a consultant-led Major Trauma Service that includes a major trauma coordination service and a daily MDT

- Ensure that a tertiary survey is undertaken and recorded

- Produce a 'Message of the Week' to facilitate shared learning

- Improve links to the Spinal Cord Injury Centre with regular visits of the outreach nursing service for both patient care and nurse education.

- Include regular input from physicians in health care of the elderly

- Provide peer support for patients and carers and establish a 24/7 advice line for patients following discharge.

- Hold forums to gather patient feedback

Rehabilitation

- Integrate rehabilitation into the Major Trauma Service

- Implement rehabilitation prescriptions and ensure these are followed after return to the Trauma Unit or community

- Specialist rehabilitation facilities need more investment and development and this must include provision for complex musculoskeletal trauma without head injury.

- Engagement of the Network Director for Rehabilitation in the multi-disciplinary ward round on the Major Trauma ward

- Develop one-stop clinics for all patients with head injuries, which is also available to patients with mild head injuries from across the network

- Consider satellite multidisciplinary rehabilitation clinics in the community

- Provide information to patients and carers including access to appropriate websites that can aid their rehabilitation

- Hold a rehabilitation patient forum, where the MTC takes feedback from patients and their families

Trauma Units

- Trauma Team Leaders should be trained in ATLS or the equivalent

- Should ensure that doctors of the appropriate specialty and seniority always attend trauma calls

- Provide appropriate training for nurses involved in the trauma team

- Have timely access to CT and where possible use agreed network guidelines for scanning

- Have staff with appropriate training available to transfer patients to the Major Trauma Centre

- Have a Massive Transfusion Protocol in place

- Use trauma folders, ensuring that all relevant protocols and policies are easily accessible in relevant area

- All Trauma Units should contribute to TARN and have robust data collection with quality assurance

- Patients requiring intensive care for a traumatic brain injury (TBI) should be managed in a neuro-critical intensive care in the Major Trauma Centre, unless their care is palliative.

- Trauma Units must ensure that patients with severe open fractures are managed according to BOAST-4 guidelines

- Trauma Units must be actively involved in the Major Trauma Network clinical governance structure

- Rehabilitation prescriptions should be followed and good links with community rehabilitation services established

- Provide 7-day access to integrated therapy services

- Involve physicians in health care of the elderly

7.0 Future of Peer Review as Quality Surveillance Team

The QST and programme is the output of a taskforce review project initiated as part of NHS England's Organisational Alignment Change Programme (OACP) / Specialised Commissioning Review with the aim of ensuring all elements of quality are considered across the system and utilised effectively to inform clinically driven change and improvement. The aims of the project were to:

- review existing NHS England quality assurance functions and regulatory functions
- design a streamlined quality assurance mechanism for specialised services that:
    - Includes critical event recording
    - Measures performance against quality standards
    - Provides a seamless interface to the statutory and regulatory quality functions

The project worked with multiple stakeholders both nationally and regionally to design an appropriate quality assurance mechanism for NHS England specialised services and all of cancer services. The programme has taken the best elements of the former National Peer Review Programme and other NHS functions to develop an integrated process for quality assurance which covers all aspects of quality in particular; patient safety, patient experience, clinical effectiveness and outcomes.

The QST is part of the Specialised Commissioning Directorate within NHS England Commissioning Operations. The local review units of the QST will align and formally engage with specialised services teams in the four NHS England Regions; North, Midlands & East, London and South.

Where services covered by the programme are locally commissioned through CCGs, the identified local quality leads working with the specialised commissioning regional director of nursing will work with partners to share information and intelligence.

The process for determining which services will be visited by the QST is currently being developed including how they are selected and prioritised. However, it is expected that this will include alignment with both the National Programmes of Care and the Strategic Service & Market Review Programme. Priorities for service review will be agreed by the Clinical Leadership Senior Management Team (SMT) within Specialised Commissioning.

Peer review visits to clinical services that have been identified either nationally or through the local quality assurance cycle will take place between January and July each year. The total number of visits will be divided between national and regional priorities. There will also be a small number of rapid response visits to be undertaken outside the planned schedule of visits. Annual visit programmes will be developed and agreed each October by the commissioners in each region and signed off by the Specialised Commissioning Clinical Leaders SMT.

January 2016 and Beyond

During 2015 the QST will be working with the programme of care boards to determine the priorities for a phased introduction of all cancer and specialised services into the new programme and working with CRGs to identify the quality indicators. Development of the interactive portal will continue, establishing summary pages and Quality Profiles by the end of March 2016. It is expected that the

functionality to support the day to day monitoring of services and the annual assessment process will be established during 2016 with a view to full functionality in 2017.

Equality Statement

"Promoting equality and addressing health inequalities are at the heart of NHS England's values. Throughout the development of the policies and processes cited in this document, we have:

• Given due regard to the need to eliminate discrimination, harassment and victimisation, to advance equality of opportunity, and to foster good relations between people who share a relevant protected characteristic (as cited under the Equality Act 2010) and those who do not share it;

• Given regard to the need to reduce inequalities between patients in access to, and outcomes from, healthcare services and in securing that services are provided in an integrated way where this might reduce health inequalities."

Appendix 1: Compliance against all Major Trauma Network Measures

Network Governance Measures

Measure Number and Short Description		PR
T14-1C-101	Network Configuration	82%
T14-1C-102	Network Governance Structure	86%
T14-1C-103	Network Audit of the Pre-Hospital Phase of Trauma	73%
T14-1C-104	Individual Pre-Hospital Provider Feedback	82%
T14-1C-105	Network Transfer Protocol from Trauma Units to Major Trauma Centres	68%
T14-1C-106	Network Transfusion Protocols for Trauma Units	77%
T14-1C-107	Teleradiology Facilities	91%
T14-1C-108	Network CT Protocol for Adults	57%
T14-1C-109	Network Imaging Protocol for Children	70%
T14-1C-110	The Trauma Audit and Research Network (TARN)	91%
T14-1C-111	Trauma Management Guidelines	27%
T14-1C-112	Management of Severe Head Injury	41%
T14-1C-113	Management of Spinal Injuries	45%
T14-1C-114	Emergency Planning	68%
T14-1C-115	The Trauma Network Director of Rehabilitation	59%
T14-1C-116	Directory of Rehabilitation Services	82%
T14-1C-117	Referral Guidelines to Rehabilitation Services	55%
T14-1C-118	Patient Transfer	73%
T14-1C-119	Network Patient Repatriation Policy	82%

Pre-Hospital Care Measures

Measure Number and Short Description		PR
T14-2A-101	T14-2A-105 - Enhanced Care Teams available 24/7	55%
T14-2A-102	T14-2A-104 - 24/7 Paramedic Advice in the Control Room	64%
T14-2A-103	T14-2A-103 - 24/7 Consultant Medical Advice for the Ambulance Control Room	70%
T14-2A-104	T14-2A-106 - Pain Management Protocol for Adult Patients	73%
T142A-105	T14-2A-107 - Pain Management Protocol for Children	73%
T14-2A-106	T14-2A-108 - Pre-Hospital Administration of Tranexamic Acid for Adult Patients	82%
T14-2A-107	T14-2A-109 - Application of Pelvic Binders	88%
T14-2A-108	T14-2A-110 - Hospital pre-alert and handover	91%

| T14-2A-109 | T14-2A-101 - Pre-Hospital Care Clinical Governance | 94% |
| T14-2A-110 | T14-2A-102 - Trauma Triage Tool and Immediate Transfer Policy | 100% |

Adult Major Trauma Measures
Reception and Resuscitation Measures

Measure Number and Short Description		PR
T14-2B-101	Trauma Team Leader	36%
T14-2B-102	Trauma Team Leader Training	77%
T14-2B-103	Trauma Team Activation Protocol	95%
T14-2B-104	24/7 Surgical and Resuscitative Thoracotomy Capability	82%
T14-2B-105	24/7 CT Scanner Facilities and on-site Radiographer	73%
T14-2B-106	CT Reporting	64%
T14-2B-107	24/7 MRI Scanning Facilities	87%
T14-2B-108	24/7 Interventional Radiology	77%
T14-2B-109	Interventional Radiology Facilities	82%
T14-2B-110	24/7 Access to Emergency Theatre and Surgery	86%
T14-2B-111	Damage Control Training for Emergency Trauma Consultant Surgeons	55%
T14-2B-112	24/7 Access to On-site Surgical Staff	59%
T14-2B-113	24/7 Access to Consultant Specialists	77%
T14-2B-114	Dedicated Orthopaedic Trauma Operating Theatre	91%
T14-2B-115	Provision of Surgeons and Facilities for Fixation of Pelvic Ring Injuries	95%
T14-2B-116	Trauma Management Guidelines	27%
T14-2B-117	On-site Intensive Care Unit	100%
T14-2B-118	Audit of the Intensive Care Unit	91%
T14-2B-119	24/7 Specialist Acute Pain Service	32%
T14-2B-120	Transfusion Lead Clinician	95%
T14-2B-121	24/7 Specialist Transfusion Advice	100%
T14-2B-122	Massive Transfusion Protocol for the Major Trauma Centre	95%
T14-2B-123	Administration of Tranexamic Acid	95%

Definitive Care Measures

Measure Number and Short Description		PR
T14-2C-101	Major Trauma Centre Lead Clinician	91%
T14-2C-102	Major Trauma Service	65%
T14-2C-103	Major Trauma Coordinator Service	14%
T14-2C-104	Major Trauma MDT Meeting	48%
T14-2C-105	MDT Conference Facilities	96%
T14-2C-106	Dedicated Major Trauma Ward or Clinical Area	65%
T14-2C-107	Protocol for Formal Tertiary Survey	26%
T14-2C-108	Management of Neurosurgical Trauma	70%
T14-2C-109	Management of Craniofacial Trauma	91%
T142C-110	Management of Spinal Injuries	32%
T14-2C-111	Management of Musculoskeletal Trauma	64%
T14-2C-112	Management of Hand Trauma	95%
T142C-113	Management of Complex Peripheral Nerve Injuries	100%
T14-2C-114	Management of Maxillofacial Trauma	82%
T14-2C-115	Vascular and Endovascular Surgery	91%
T14-2C-116	Designated Specialist Burns Care	95%
T14-2C-117	Nutritional Management Policy	91%
T14-2C-118	Discharge Summary	73%

Rehabilitation Measures

Measure Number and Short Description		PR
T14-2D-101	Clinical Lead for Acute Trauma Rehabilitation Services	57%
T14-2D-102	Rehabilitation Coordinator Post	14%
T14-2D-103	Specialist Rehabilitation Service	45%
T14-2D-104	Key Worker	70%
T14-2D-105	Rehabilitation Prescriptions	91%
T14-2D-106	Rehabilitation for Traumatic Amputation	77%
T14-2D-107	Facilities for Family / Carers	78%
T14-2D-108	Patient Information	48%
T14-2D-109	Referral Guidelines to Rehabilitation Services	48%
T14-2D-110	Patient Transfer	64%
T14-2D-111	Network Patient Repatriation Policy	86%
T14-2D-112	Clinical Psychologist for Trauma Rehabilitation	65%
T14-2D-113	24/7 Access to Psychiatric Advice	96%

Children's Major Trauma Measures
Reception and Resuscitation Measures

Measure Number and Short Description		PR
T14-2B-201	Trauma Team Leader	53%
T14-2B-202	Trauma Team Leader Training	87%
T14-2B-203	Trauma Team Activation Protocol	100%
T14-2B-204	24/7 Surgical and Resuscitative Thoracotomy Capability	80%
T14-2B-205	24/7 CT Scanner Facilities and on-site Radiographer	67%
T14-2B-206	CT Reporting	53%
T14-2B-207	24/7 MRI Scanning Facilities	93%
T14-2B-208	24/7 Interventional Radiology	73%
T14-2B-209	Interventional Radiology Facilities	80%
T14-2B-210	24/7 access to Emergency Theatre and Surgery	80%
T14-2B-211	Damage Control Training for Emergency Trauma Consultant Surgeons	47%
T14-2B-212	24/7 Access to Consultant Specialists	93%
T14-2B-213	Provision of Surgeons and Facilities for Fixation of Pelvic Ring Injuries	93%
T14-2B-214	Trauma Management Guidelines	20%
T14-2B-215	On-site Intensive Care Unit	100%
T14-2B-216	Audit of the Intensive Care Unit	87%
T14-2B-217	24/7 Specialist Acute Pain Service	73%
T14-2B-218	Transfusion Lead Clinician	93%
T14-2B-219	24/7 Specialist Transfusion Advice	100%
T14-2B-220	Massive Transfusion Protocol for the Major Trauma Centre	100%
T14-2B-221	Administration of Tranexamic Acid	100%

Definitive Care Measures

Measure Number and Short Description		PR
T14-2C-201	Major Trauma Centre Lead Clinician	47%
T14-2C-202	Major Trauma Service	80%
T14-2C-203	Major Trauma Coordinator Service	13%
T14-2C-204	Major Trauma MDT Meeting	60%
T14-2C-205	MDT Conference Facilities	100%
T14-2C-206	Dedicated Major Trauma Ward or Clinical Area	60%
T14-2C-207	Protocol for Formal Tertiary Survey	27%
T14-2C-208	Management of Neurosurgical Trauma	87%
T14-2C-209	Management of Craniofacial Trauma	100%
T14-2C-210	Management of Spinal Injuries	47%
T14-2C-211	Management of Musculoskeletal Trauma	60%
T14-2C-212	Management of Hand Trauma	93%
T14-2C-213	Management of Complex Peripheral Nerve Injuries	100%
T14-2C-214	Management of Maxillofacial Trauma	93%
T14-2C-215	Designated Specialist Burns Care	100%
T14-2C-216	Nutritional Management Policy	93%
T14-2C-217	Discharge Summary	87%

Rehabilitation Measures

Measure Number and Short Description		PR
T14-2D-201	Clinical Lead for Acute Trauma Rehabilitation Services	40%
T14-2D-202	Rehabilitation Coordinator Post	13%
T14-2D-203	Specialist Rehabilitation Service	60%
T14-2D-204	Key Worker	93%
T14-2D-205	Rehabilitation Prescriptions	87%
T14-2D-206	Rehabilitation for Traumatic Amputation	100%
T14-2D-207	Facilities for Family/Carers	100%
T14-2D-208	Patient Information	67%
T14-2D-209	Referral Guidelines to Rehabilitation Services	47%
T14-2D-210	Patient Transfer	64%
T14-2D-211	Network Patient Repatriation Policy	87%
T14-2D-212	Clinical Psychologist for Trauma Rehabilitation	73%
T14-2D-213	24/7 Access to Psychiatric Advice	80%

Major Trauma Measures for Trauma Units
Reception and Resuscitation Measures

Measure Number and Short Description		PR
T14-2B-301	Trauma Team Leader	27%
T14-2B-302	Trauma Team Activation Protocol	95%
T14-2B-303	Agreement to Network Transfer Protocol from Trauma Units to Major Trauma Centres	79%
T14-2B-304	24/7 CT Scanner Facilities	47%
T14-2B-305	CT Reporting	42%
T14-2B-306	Network CT Protocols	49%
T14-2B-307	Teleradiology Facilities	94%
T14-2B-308	24/7 Access to Surgical Staff	90%
T14-2B-309	Dedicated Orthopaedic Trauma Operating Theatre	67%
T14-2B-310	Trauma Management Guidelines	21%
T14-2B-311	Transfusion Lead Clinician	93%
T14-2B-312	24/7 Specialist Transfusion Advice	96%
T14-2B-313	Network Transfusion Protocol	64%
T14-2B-314	Administration of Tranexamic Acid	59%

Definitive Care Measures

Measure Number and Short Description		PR
T14-2C-301	Major Trauma Lead Clinician	42%
T14-2C-302	Designated Specialty	84%
T14-2C-303	Trauma Coordinator Service	36%
T14-2C-304	Management of Spinal Injuries	48%
T14-2C-305	Management of Multiple Rib Fractures	50%
T14-2C-306	Management of Musculoskeletal Trauma	75%
T14-2C-307	Facilities for Fixation of Fractures	98%
T14-2C-308	Designated Specialist Burns Care	94%
T14-2C-309	Discharge Summary	57%
T14-2C-310	The Trauma Audit and Research Network (TARN)	81%

Rehabilitation Measures

Measure Number and Short Description		PR
T14-2D-301	Rehabilitation Coordinator	46%
T14-2D-302	Trauma Unit Agreement to the Network Repatriation Policy	78%
T14-2D-303	Physiotherapy Services	80%
T14-2D-304	Access to Rehabilitation Specialists	70%
T14-2D-305	Rehabilitation Prescriptions	11%