



Major Trauma Dashboard Measures

SUPPORT DOCUMENT

June 2021

TO BE READ IN CONJUNCTION WITH THE MTC DASHBOARD

Introduction

This document addresses key questions relevant to the Major Trauma Dashboard and assists in the understanding of the measures. It explains the numerators and denominators in detail and should be read in conjunction with the Dashboard.

The Dashboard measures were drawn up and agreed by clinical experts on the Clinical Reference Group (CRG) to allow effective benchmarking in relation to specific measures between Major Trauma Centres. The Trauma Audit & Research Network has agreed to analyse and format the information ONLY.

Some measures are based on objective evidence. Others reflect experience from senior clinicians in the trauma networks. Some relate to the quality of data submitted to TARN or to process measures such as time to CT scan or frequency of Consultant-led trauma team.

None of the indicators has an associated target and performance may not be 100%. The measures are divided into 3 groups:

- **Data Quality:** 100% may be expected
- **Evidence Based Measures:** Performance may not be 100% and should be viewed in comparison with other Major Trauma Centres.
- **System Indicators:** Performance may not be 100% and should be viewed in comparison with other centres.

Where values of zero are shown on the caterpillar plots, this is likely to represent sites with a very low number of cases for that measure.

Detailed information on Dashboard Measures

Where patient numbers are low, one year of data is used. For measures using time of incident where this is not recorded, best pre-hospital time is used, selected in the following order: 999 call, ambulance dispatch, ambulance arrival, ambulance departure from scene, time of first attendant or first pre-hospital intervention.

MTC 01a - Data Accreditation

Period:	Current Reporting Period
Numerator:	Number of Data accreditation fields fully completed for patients submitted to TARN
Denominator:	Number of expected Data accreditation fields for the patients submitted to TARN and approved
Type:	Data quality
Data Accreditation fields:	<ul style="list-style-type: none">• If the patient is seen in the Emergency Department then Grade of ED Attendants, Date/Time of ED Attendants, Speciality of ED Attendants data fields are expected to be completed. If the patient is not seen in the ED then these data fields are not expected to be completed.• Glasgow Coma Scale (GCS) should be recorded for all patients.• If the patient has no GCS recorded in ED or Pre-Hospital then a recording of intubation or ventilation is expected in the relevant data fields. If details of intubation or ventilation are also missing then no score is applied.• If patient is Intubated at any point in hospital: Intubation Date/Time.• Arrival Date/Time at hospital.• Arrival Date/Time at ED. [Please note that Arrival Date/Time at hospital and Arrival Date/Time in the 1st location should be the same values].• Incident Date/Time• Ambulance call Date/Time• If the patient is referred for further care or transferred in the following data fields are counted:, Transfer in reason, Transfer out reason. <i>Other</i> or <i>Not known</i> responses are not counted.• If the patient has a CT scan then the following data fields are counted: CT Date/Time; CT report Date/time; CT report review Date/Time.• If patient is given TXA in Pre-Hospital or hospital: TXA Date/Time.• If the patient is treated in theatre and has an operation/procedure then the following data fields are counted: Operation Date/Time, Grade of Surgeon, Speciality of Surgeon, Grade of Anaesthetist• Full injury descriptions (no description should need to be coded with a <i>Not Further Specified</i> AIS code due to incomplete injury descriptions).• Pre-existing medical conditions: if the submission uses the options <i>Other</i> and <i>Not known</i>, these will not be counted.• Pupil reactivity, required for those head injured patients (AIS 3+ in head)
Notes:	The number of core data fields that are relevant for each patient is dependent on the patient's injuries and their treatment. It is not, for example, expected that CT date and time should be recorded where the patient did not have a CT scan.

MTC 01b - Case Ascertainment

Period:	Current Reporting Period
Numerator:	All TARN approved patients completed and dispatched to TARN
Denominator:	Number of patients in the latest HES dataset that fulfil the TARN inclusion criteria for this quarter. If the hospital has fed back to TARN with the number of truly eligible cases, the updated exact denominator is used. If not, the average between the lower and the higher percentage of completeness is used (range)
Type:	Data quality
Notes:	Denominator is based on previous years HES data, gained from NHS-Digital. Therefore Trust &/or National values may be 100+% if there has been an increase in cases.

MTC 02 - BPT Compliance with level 1*

Period:	Current Reporting Period
Numerator:	All TARN approved patients completed and dispatched to TARN within 25 days of discharge or death with ISS>8 who meet ALL criteria for Level 1 BPT payment
Denominator:	All TARN approved patients who are eligible for Level 1 BPT payment (ISS>8)
Type:	Data quality
Notes:	If a patient is also eligible for BPT level 2 then they are included in this measure too. *For full details on current BPT inclusion and compliance criteria please refer to the Major Trauma Best Practice Tariff 2019-20 document available on the resources tab of the TARN website or Appendix 3 below.

MTC 03 - BPT Compliance with level 2*

Period:	Current Reporting Period
Numerator:	All TARN approved patients completed and dispatched to TARN within 25 days of discharge or death with ISS>15 who meet ALL criteria for Level 2 BPT payment
Denominator:	All TARN approved patients who are eligible for Level 2 BPT payment (ISS>15)
Type:	Data quality
Notes:	*For full details on current BPT inclusion and compliance criteria please refer to the Major Trauma Best Practice Tariff 2019-20 document available on the resources tab of the TARN website or Appendix 3 below.

MTC 04a - BOAST open lower limb long bone fractures: Orthopaedics & Plastics consultants present at first debridement.

Period:	Rolling Year
Numerator:	Where Orthopaedics Consultant & Plastics consultants are both present at first debridement.
Denominator:	Open fractures of lower limb long bones (regardless of Gustilo grade)
Type:	Evidence based
Data fields:	Operations; Operation date and time, Speciality and Grade of surgeons.
Notes:	<p>Surgeon 1 and Surgeon 2 must be the most senior orthopaedic surgeon the most senior plastic surgeon in the room.</p> <p>Patients transferred for repatriation, transferred in directly from abroad, who died within 72 hours of incident, had surgical amputation within 72 hours of incident or best available pre-hospital time are missing are excluded from this measure. For further details of this measure, see appendix 1.</p> <p>Lower limb long bones: Femur, Tibia or Fibula.</p> <p>Only Primary fixation (internal or external) selected from the BOAST surgical stabilisation dropdown will be used in this numerator and debridement is inherent in these codes.</p> <p>If fixation selected from generic Limbs dropdown, these will not be included in the numerator.</p> <p>Note: Not to be measured until Quarter 2 (July 2020 admissions onwards).</p>

MTC 04b – BOAST open lower limb long bone fractures: Soft tissue coverage within 72 hours of incident

Period:	Rolling Year
Numerator:	Soft tissue coverage performed within 72 hours of incident
Denominator:	Open fractures of lower limb long bones (regardless of Gustilo grade)
Type:	Evidence based
Data fields:	Date and time of incident, or best available pre-hospital time if not recorded; Operation; Operation date and time: AIS code.
Notes:	<p>Patients transferred for repatriation, transferred in directly from abroad, who died within 72 hours of incident, had surgical amputation within 72 hours of incident or best available pre-hospital time are missing are excluded from this measure. For further details of this measure, see appendix 1. Lower limb long bones: Femur, Tibia or Fibula.</p> <p>Only Soft tissue coverage chosen from the BOAST Soft Tissue coverage dropdown will be used in this numerator. If chosen from the generic Skin dropdown, these will not be included in the numerator.</p> <p>Note: Not to be measured until Quarter 2 (July 2020 admissions onwards).</p>

MTC 05 - MTC's deliver surgical evacuation of a significant SDH / EDH <4 hours

Period:	Rolling Year
Numerator:	All directly admitted patients with a SDH / EDH where a surgical evacuation is performed within 4 hours of the recorded hospital arrival time.
Denominator:	All directly admitted patients with a SDH / EDH who have had a surgical evacuation performed.
Type:	System indicators
Data fields:	Date and time of arrival, or best available pre-hospital time if not recorded; Operation; Operation date and time; AIS code.
Notes:	A significant SDH/EDH is defined as AIS 4+. Cut off is operation within 24 hours to ensure emergency evacuations. 'Surgical evacuation' includes recording of: SDH/EDH Evacuation, Open Craniotomy or Craniectomy. Inpatient fallers excluded

MTC 06 – Under Review

In Conjunction with the CRG, this indicator is under review and further details will be circulated as soon as they are available.

MTC 07 - Proportion of patients with ISS>8 with trauma scan <30 minutes

Period:	Current Reporting Period
Numerator:	Directly admitted patients with ISS >8 who receive a trauma scan within 30 minutes of arrival
Denominator:	Directly admitted patients with ISS >8
Type:	System indicator
Data fields:	Transfer type; Hospital arrival date and time; ED date and time; Date and time of CT scan; Date and time of MRI; ISS
Notes:	A trauma scan is defined as a CT or MRI. Cut off 12 hours from arrival. Inpatient fallers excluded If ED arrival time is not recorded, hospital arrival time is used. <i>[NB: hospital arrival and 1st location date/time should be the same].</i>

MTC 08 - Proportion of patients with ISS>15 with trauma scan <30 minutes

Period:	Current Reporting Period
Numerator:	Directly admitted patients with ISS >15 who receive a trauma scan within 30 minutes of arrival
Denominator:	Directly admitted patients with ISS >15
Type:	System indicator
Data fields:	Transfer type; Hospital arrival date and time; ED date and time; Date and time of CT scan; Date and time of MRI; ISS
Notes:	A trauma scan is defined as a CT or MRI. Cut off 12 hours from arrival. Inpatient fallers excluded If ED arrival time is not recorded, hospital arrival time is used. <i>[NB: hospital arrival and 1st location date/time should be the same]</i>

MTC 09 – Under Review

In Conjunction with the CRG, this indicator is under review and further details will be circulated as soon as they are available.

MTC 10 – MTC's Reverse transfer <48 hrs after decision to transfer

Period:	Current Reporting Period
Numerator:	Patients transferred from MTC to TU within 48 hours of referral out request by MTC.
Denominator:	Patients transferred from MTC to TU for Reverse transfer
Type	System indicator
Data Fields:	Transfer type; Next hospital; Date/time of referral request out, or best available date; Date /time of transfer out
Notes:	Reverse transfer/Repatriation equates to any patient who requires transfer back to a TU prior to discharge whether they were directly conveyed to the MTC or were transferred in. Use date and time of referral request to calculate <48 hrs. <i>Referral out dates and times are selected in the following order: referral out as recorded by MTC, referral in as recorded by TU, first hospital arrival as recorded by MTC, first hospital arrival as recorded by TU, incident as recorded by MTC, incident as recorded by TU.</i>

MTC 11 - Documented tertiary survey (or consideration of for unfit patients) within 24 hours

Period:	Current Reporting Period
Numerator:	Directly admitted patients with a documented tertiary survey completed or considered within 24 hours of arrival in hospital.
Denominator:	Directly admitted patients
Type:	System indicator
Data Fields:	Transfer type; Hospital arrival date and time; ED date and time; Date and time of tertiary survey completed; Consideration of Tertiary survey
Notes:	Note: Consideration must be within 24 hours of arrival. 'Unfit' patients include: Intubated on arrival/within 24 hours or DNAR cases. Inpatient fallers excluded. Any patient who is transferred out from ED or who dies in ED is excluded from this measure.

MTC 12 – Geriatrician review of frail patients within 72 hours of admission

Period:	Current Reporting Period
Numerator:	Patients aged > 64 with a Clinical Frailty Scale (CFS) of 5+ who have their CFS administered by a ST3+ geriatrician within 72 hours of admission.
Denominator:	Patients aged > 64 with a CFS of 5+
Type:	System indicator
Data fields:	Hospital arrival date and time; ED date and time; Date and time of CFS; CFS score; Grade of assessor; Speciality of assessor.
Notes:	All elderly frail patients included (no ISS filter) confirmed by CRG.

Appendix 1: further information for standard MTC 04: BOAST open lower limb long bone fractures

Operative procedures defined as first Debridement, with OPCS Classification codes:

Description	Group	OPCS codes
BOAST- Internal fixation: Nail & Debridement	BOAST Fixation/Stabilisation	W19.2 W19.3
BOAST- Internal fixation: Plate & Debridement	BOAST Fixation/Stabilisation	W20.1
BOAST - Internal fixation: Other & Debridement	BOAST Fixation/Stabilisation	W19.8
BOAST - External fixation: Application of Circular frame & Debridement	BOAST Fixation/Stabilisation	W30.8
BOAST - External fixation: Application of Monolateral (Non-circular) frame & Debridement	BOAST Fixation/Stabilisation	W30.8
BOAST - POP & Debridement	BOAST Fixation/Stabilisation	X48.1

Operative procedures defined as definitive soft tissue coverage, with OPCS Classification codes:

Description	Group	OPCS codes
BOAST- Direct closure	BOAST Soft tissue coverage	S42.1
BOAST- Split Thickness Skin Graft	BOAST Soft tissue coverage	S39.9
BOAST- Local or perforator base skin/fascia flap	BOAST Soft tissue coverage	S25.8
BOAST- Local Muscle / musculocutaneous flap	BOAST Soft tissue coverage	Y64.9
BOAST- Free Tissue Transfer	BOAST Soft tissue coverage	Y64.9
BOAST- Other	BOAST Soft tissue coverage	T96.9

2019-20 Best Practice Tariff criteria

A level 1 BPT is payable for all patients with an ISS of 9 or more, providing that:

- The patient is treated in a major trauma centre.
- Trauma Audit and Research Network (TARN) data are completed and submitted within 25 days of discharge.
- A rehabilitation prescription is completed for each patient and core components recorded on TARN with documented evidence in patient notes of a copy to the patient, GP and ongoing care provider if applicable.
- Any coroners' cases are flagged within TARN as being subject to delay to allow later payment.
- If the patient is transferred as a non-emergency they must be admitted to the major trauma centre (MTC) within two calendar days of referral from a trauma unit (TU).
- Patients with a Glasgow Coma Scale (GCS) <9 have documented evidence of intubation being considered within 30 minutes of arrival at the MTC.

A level 2 BPT is payable for all patients with an ISS of 16 or more, providing all level 1 criteria are met and that:

- If the patient is admitted directly to the MTC or transferred as an emergency, they must be received by a trauma team led by a consultant in the MTC; the consultant can be from any specialty, but must be present within five minutes.
- Patients admitted directly to a major trauma centre with a head injury abbreviated injury scale (AIS) 1+ and a GCS score of less than 13 (or intubated pre-hospital), and who do not require emergency surgery or interventional radiology within one hour of admission, receive a head CT scan within 60 minutes of arrival.
- Tranexamic acid is administered within one hour of arrival at scene (or arrival at the MTC for self-presentations) for patients with at least one injury associated with significant bleeding.
- All patients 65 years or older have a Clinical Frailty Scale completed within 72 hours of admission by a geriatrician (defined as Consultant, Non-Consultant Career Grade (NCCG) or Specialist Trainee ST3+).