



Trauma Unit Dashboard Measures

SUPPORT DOCUMENT

TO BE READ IN CONJUNCTION WITH THE TU DASHBOARD



Introduction

This document addresses key questions relevant to the Trauma Unit 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 a working group of Trauma Unit clinicians to allow effective benchmarking in relation to specific measures between Trauma Units. The Trauma Audit & Research Network has agreed to analyse and format the information ONLY.

Some measures are based on objective evidence, such as NICE guidance. 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 Trauma Units.
- **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.

TU 01 - Quality of patient data submitted to TARN

Period: Current Reporting Period

Numerator: Number of core data fields fully completed for patients submitted to TARN

Denominator: Number of expected core data fields for the patients submitted to TARN and approved

Type: Data quality

Data fields: • 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 the Critical Care Unit 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.
- 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 (if missing the 999 call Date/Time is used)
- If the patient is referred for further care or transferred in the following data fields are counted: Previous hospital, Next hospital, Transfer in reason, Transfer out reason. *Other* or *Not known* responses are not counted.
- If the patient has a CT scan then the following data fields are counted: CT 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 *Not Further Specified* AIS code due to incomplete injury descriptions).
- Pre-existing medical conditions: if the submission uses the options *Other* and *Not known*,

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.

TU 02a - All TARN eligible patients submitted

Period: Current Reporting Period
Numerator: TARN approved patients
Denominator: Patients in the 2016/17 HES dataset that fulfil the TARN inclusion criteria
Type: Data quality

TU 02b - All TARN eligible patients submitted within 40 days of discharge or death (excluding coroner's cases)

Period: Current Reporting Period
Numerator: TARN approved patients submitted within 40 days of discharge or death
Denominator: Patients in the 2016/17 HES dataset that fulfil the TARN inclusion criteria
Type: Data quality
Notes: If a patient submission is returned and then re-dispatched, the initial dispatch date is used.

TU 03 - Proportion of patients meeting NICE head injury guidelines that receive CT within 60 minutes of arrival

Period: Rolling Year
Numerator: Directly admitted patients receiving CT scan within 60 minutes of arrival
Denominator: Directly admitted patients with GCS <13 on arrival in ED or intubated pre-hospital, with a head injury and received CT scan, with date and time of CT scan recorded
Type: Evidence based
Data fields: Date and time of hospital arrival; ED date and time; Date and time of CT scan

TU 04 - Tranexamic Acid within 3 hours of incident for patients receiving blood products within 6 hrs. of incident

Period:	Rolling Year
Numerator:	Directly admitted patients who received blood products within 6 hours of injury and were given Tranexamic Acid within 3 hours of injury
Denominator:	Directly admitted patients who received blood products within 6 hours of injury
Type:	System indicator
Data Fields:	Date and time of incident, or best available pre-hospital time if not recorded; Blood product type; Date and time of blood products; Tranexamic acid date and time.
Notes:	Patients with isolated head injuries (AIS severity 3+ head injury with no AIS 3+ severity injury to another body area) and those receiving Beriplex only are excluded from the denominator. Included blood products: FFP, Fibrinogen, Platelets, Cryoprecipitate, Blood/plasma reduced cells, If Tranexamic Acid or blood products are recorded at pre-hospital/scene with no associated time then the time of arrival at hospital is used for these interventions. If Tranexamic Acid or blood products are recorded in ED with no associated time then the time of departure from ED is used for these interventions.

TU 05a - TUs deliver Consultant led trauma teams within 30 mins ISS > 15 patients with TT Activated &/or Pre-alert

Period:	Current Reporting Period
Numerator:	Directly admitted patients with ISS greater than 15 with Consultant present within 30 minutes of arrival in the ED
Denominator:	Patients with ISS greater than 15 directly admitted from the scene to ED. Patients with recording of pre-alert and/or trauma team only. Deaths or transfers out within 60 minutes of ED arrival excluded.
Type:	System indicator
Data Fields:	Hospital arrival date and time; ED date and time; Grade of doctor; Date and time of doctor
Notes:	Consultants recorded at any in hospital location are eligible. 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>

TU 05b - TUs deliver Consultant led trauma teams within 30 minutes for patients with an Injury Severity Score greater than 15

Period:	Current Reporting Period
Numerator:	Directly admitted patients with ISS greater than 15 with Consultant present within 30 minutes of arrival in the ED
Denominator:	Patients with ISS greater than 15 directly admitted from the scene to ED. Deaths or transfers out within 60 minutes of ED arrival excluded.
Type:	System indicator
Data Fields:	Hospital arrival date and time; ED date and time; Grade of doctor; Date and time of doctor
Notes:	Consultants recorded at any in hospital location are eligible. 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>

TU 06a - TUs deliver grade STR 3 or above led trauma teams on arrival for patients with TT Activated &/or Pre-alert

Period:	Current Reporting Period
Numerator:	Directly admitted patients with presence of STR 3 or higher within 5 minutes of arrival in the ED
Denominator:	Patients directly admitted from the scene to ED. Patients with recording of pre-alert and/or trauma team only. Deaths or transfers out within 60 minutes of ED arrival excluded.
Type:	System indicator
Data Fields:	Hospital arrival date and time; ED date and time; Grade of doctor; Date and time of doctor
Notes:	Doctors recorded at any in hospital location are eligible. 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>

TU 06b - TUs deliver grade STR 3 or above led trauma teams on arrival

Period:	Current Reporting Period
Numerator:	Directly admitted patients with presence of STR 3 or higher within 5 minutes of arrival in the ED
Denominator:	Patients directly admitted from the scene to ED. Deaths or transfers out within 60 minutes of ED arrival excluded.
Type:	System indicator
Data Fields:	Hospital arrival date and time; ED date and time; Grade of doctor; Date and time of doctor
Notes:	Doctors recorded at any in hospital location are eligible. 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>

TU 07a - Rapid access to specialist MTC care - patients transferred to MTC within 12 hours of referral request

Period:	Current Reporting Period
Numerator:	Patients transferred from TU to MTC within 12 hours of referral
Denominator:	Patients transferred from TU to MTC
Type:	System indicator
Data Fields:	Referral date and time; transfer type; next hospital; discharge date and time from TU
Notes:	Time from referral to transfer out is measured. Referral out dates and times are selected in the following order: referral in as recorded by MTC, referral out 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.

TU 07b – Rapid access to specialist MTC care - patients transferred to MTC within 2 days of referral request

Period:	Current Reporting Period
Numerator:	Patients transferred from TU to MTC within 2 days of referral
Denominator:	Patients transferred from TU to MTC
Type:	System indicator
Data Fields:	Referral date and time; transfer type; next hospital; discharge date and time from TU
Notes:	Time from referral to transfer out is measured. Referral out dates and times are selected in the following order: referral in as recorded by MTC, referral out 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.

TU 08 - Proportion of patients with GCS <9 with definitive airway management within 30 minutes of arrival in ED

Period:	Rolling Year
Numerator:	Directly admitted patients with a GCS < 9 on arrival in ED who are intubated or have a definitive surgical airway within 30 minutes of arrival in ED
Denominator:	Directly admitted patients admitted to ED with GCS < 9 or intubated pre-hospital.
Type:	System indicator
Data Fields:	GCS in ED; Airway Status, Airway Support, Breathing Status and Breathing Support pre-hospital
Notes:	Intubation or ventilation is identified using one of the following procedures: Intubation, Cricothyroidotomy, Tracheostomy.

TU 09 - Proportion of directly admitted patients receiving CT scan within 60 minutes of arrival at TU

Period:	Current Reporting Period
Numerator:	Directly admitted patients receiving CT scan within 60 minutes of arrival
Denominator:	Directly admitted patients receiving CT scan within 12 hours of arrival and date/time of CT recorded
Type:	System indicator
Data Fields:	Transfer type; arrival date and time; ED date and time; CT date and time
Notes:	<p>Time to CT calculated from the time of arrival in the ED to the time of the scan. If ED arrival time is not recorded, hospital arrival time is used. However, please note that ED date/time should be the same as hospital arrival date/time.</p> <p>Patients taken to theatre within 2 hours of arrival and before any CT scan are not included in the denominator.</p>

TU 10 - Proportion of patients with an ISS of more than 8 that have a rehabilitation prescription completed

Period:	Current Reporting Period
Numerator:	Patients with ISS > 8 with rehabilitation prescription recorded or where it was impossible to assess rehabilitation needs
Denominator:	Patients with ISS > 8
Type:	System indicator
Data fields:	Have rehabilitation needs been evaluated; Are there rehabilitation needs; Has a rehabilitation prescription been completed
Notes:	<p>This measure reports the total number of patients assigned an ISS of more than 8 who have had a rehabilitation prescription completed, or whose rehabilitation needs were impossible to assess.</p> <p><i>See flow diagram on next page</i></p> <p>Any patients that died within 2 days of arrival at the TU are excluded from the denominator.</p>

