

Paediatric Evaluation of the London Major Trauma System (PELoTS)

Instructions to Investigators

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Thank you for taking part in the Paediatric Evaluation of the London Major Trauma System. The Please use these instructions for authors in conjunction with the project protocol.

Introduction

Trauma is the leading cause of morbidity and mortality on children. Current data regarding children’s trauma is extremely limited. This service review is being performed to fill this gap in our knowledge. This project has been approved by the London Major Trauma Steering Group and the Pan-London Children’s Trauma Group.

The service evaluation aims to capture data from all four London Trauma networks and aims to be as inclusive as possible, we aim to involve as many trauma units as possible. Involvement is completely voluntary. Involvement of the Major Trauma Centre’s (MTC’s) and Trauma Units (TU’s) has been sought, however should a unit/hospital not wish to take part this is fully understood.

Specific aims:

* 1. **Quality:** Has there been an overall increase in quality of care both from a clinical and organisational perspective since the inception of the London Major Trauma System?
  2. **Inclusiveness:** Does the system provide *appropriately* equitable care to children at MTC and TU?
  3. **Outcomes:** mortality, length of stay. Days from school, work days missed, return to normal activities.

Global aims:

* 1. **Understanding:** creating an accurate picture of the demographics and burden of paediatric trauma across the London Major Trauma System.
  2. **Quality:** how are we managing these injured children?
  3. **Basis for future research:** creation of a robust database as a platform for future research including:
     + - Targeted injury prevention schemes
       - Rehabilitation
       - Access to database for local use

Data Capture

All paediatric trauma patients meeting the inclusion criteria below at a London network MTC or TU from 1st February 2018 to the 30th April 2018 inclusive will be included. Patients will be identified via trauma activations and those deemed as trauma by the local emergency teams. All patients under the age of 16 will be included. In a small number of hospitals paediatric teams care for those under the age of 18. In these instances, data will be captured for all patients cared for by the paediatric service. Data will be stratified for age and analysed accordingly.

Inclusion criteria:

1. All paediatric patients for whom a trauma call/activation is put out
2. All paediatric patients with trauma who are admitted to hospital or transferred to another hospital due to injury
3. All paediatric patients with head injury meeting NICE guidelines for CT head (including those discharged home with a normal scan).

Exclusion criteria:

1. Non-paediatric trauma cases (those >16 or 18 years of age as per the local policy)
2. Paediatric patients for whom a trauma activation is not put out and who do not require admission to hospital (this includes simple fractures and those brought back for sedation lists or simple plastics cases e.g. nail bed repairs). Fractures requiring admission are to be included.
3. Minor head injury not requiring admission and not meeting NICE criteria for CT head.

Initial Actions

As the local investigator you will be responsible for the day to day running of the project in your centre. Please ensure you have make with the trauma lead for your unit.

1. Register the project as a local audit.
2. Determine the best way to capture all eligible patients. Each unit works differently so you will need to determine the best way to ensure you are capturing all eligible children for your centre. If you are working in ED or not, make contact with the children’s ED teams to ensure they are aware the project is taking place and discuss with them the best way to identify patients through their department. As numbers are likely to be small it may be possible to ask a member of the ED team for each shift to document patient details on a list of children’s trauma patients for you. This may not be possible in all units and so a few examples of other ways to capture are below.
   1. Switchboard should keep records of the number of trauma activations which have been out and so this may be a good point of contact to ensure you capture all children for whom a trauma activation is activated. Switchboard will not have access to patient identification but this is a good source of the number of paediatric trauma activations the hospital has seen.
   2. Remember that although the primary inclusion criteria is a paediatric trauma activation, in a number of units the actual trauma activation itself is not put out and the child may be managed appropriately by ED without being flagged as a trauma case. To ensure we capture these cases you will need to liaise with the ED and paediatric teams.
   3. If children are admitted due to trauma you should be able to capture these through the acute paediatric take, providing paediatrics are involved in the care.
   4. Those who have a CT head may be identified through the local imaging system.
   5. Those who are transferred out are likely to be low in volume and my not be captured on acute take lists and so this information will need to be directly from ED. Transfers out will also be transfers in to another hospital, this is most likely to be your network MTC (although a small number of cases will be transferred to quaternary centre’s such as burns). Please ensure you capture data at the presenting and transfer hospital so this can be amalgamated for analysis.
3. Register for a SLACK account. This is a secure online platform hosted for us by the Healthy London Partnership. Invitations to register for the project will be sent to your email and you can follow the instructions to register for the necessary channels. You will be able to chat with other investigators from your network on this platform. (See below)

The Case Report Form (CRF)

We have created a short video which details each section of the CRF. The video can be found through the following link:

[https://www.dropbox.com/s/wuhgplppjywn7cy/Patient%20case%20report%20form%20by%20Ceri%20Elbourne.mov?dl=0](https://webmail.bartshealth.nhs.uk/owa/redir.aspx?C=H_n4cf7uKUW9nj-OoPdfL0DBLy6uZNUIA7FvXXr9gY7-OnWZrHxcb12fXxoIq0CRIjLq8e5DMuw.&URL=https%3a%2f%2fwww.dropbox.com%2fs%2fwuhgplppjywn7cy%2fPatient%2520case%2520report%2520form%2520by%2520Ceri%2520Elbourne.mov%3fdl%3d0)

Hospital and Patient Identification Numbers

Each hospital will be assigned a code. This code is to ensure the anonymity of the hospital.

*For example, in the North-West London Trauma Network the major trauma centre, St Mary’s, may be coded as MTC A. The Trauma Units in this network may then be coded as TUA1, TUA2, TUA3 etc.*

Thus, the hospital will only be identifiable as its designation as an MTC or TU. You will be sent the code for your hospital separately. Please ensure the code is included on the top of the CRF. Please keep your code confidential to ensure anonymity.

Please allocate a number to each patient you record data for.

*For example, the first patient in hospital TUA1 will be patient 0001.*

Each patient should have a single complete CRF file (see below for transferred patients). Please save their case report form as follows: Hospital code-patient number.

*For example: TUA1-0001.*

Please keep a local record of the patients details and their allocated number. Only you will have this record so please ensure it is kept in a safe and secure manor.

The forms will be used by an expert panel to determine the quality of care delivered to the patient, therefore please ensure as much detail as possible is included. There are free text boxes for comments throughout and a large free text box at the end of the form for any other comments, please use this to give a short narrative of what has happened to the patient. Please also comment on the context i.e. if the patient is sedated and thus the GCS is low please comment on this so it is clear this is an appropriate score. Please comment on any delays and include as much detail as possible as to why, for example in a stable child it may not be deemed clinically appropriate to site an inter-osseous needle after two failed IV cannula attempts but this may delay time to CT. Please use this section to list any further injuries which have not been captured elsewhere in the form.

Please include the length of stay and discharge destination information. If known, please include the injury severity score (ISS). For TARN eligible patients (>72hour admission) this may be calculated by the TARN database for you. There is a lag time for this information so we will ask you to follow this up with the TARN data submitter in your hospital for those who are eligible. If this is not possible we will calculate the ISS independently therefore, please ensure as much detail as possible about the injuries is included on the form.

Transfers

If a patient is transferred out the team at the initial hospital should please complete the form as normal for all relevant sections and allocate a local identification number. Please include as much detail regarding the care at the initial hospital as possible and comment where the patient was transferred to (e.g. to MTC or burns centre) and upload the form as normal to your hospital channel.

If the patient is transferred in please allocate a local identification number as usual and fill out the grey section on the form regarding the initial management in the accepting hospital. Please fill out all sections of the form relevant to your care including the basic demographics so that we can identify this form continues from another. As the numbers will be low, we may be able to amalgamate the records from these forms alone, however, if we are not able to clearly identify this we will ask the relevant hospitals to communicate directly to identify the patient and send us the appropriate identification numbers. This is to prevent others from being able to identify the hospital via investigator names on the upload platform.

**Please try to ensure the data is as complete as possible.** On reviewing the forms we may ask you to go back and find additional information if it is not clear on the form.

SLACK Platform

SLACK is a secure online platform for communicating and sharing documents between project teams.

You will be invited to join the London Paediatric Trauma Page.

Within this there are a number of channels which you will be able to access.

The **#generalinformation** channel can be used to communicate with everyone taking part in the review. Any messages posted here will be visible by everyone taking part across London.

There are separate channels for each network to allow you to communicate with other data collectors from your network. These messages will only be visible to those within your trauma network.

You will also be invited to a separate channel which is just for your hospital. This channel will be named as the hospital identifier. This is the channel into which you will need to upload your completed case report forms. Please only upload the forms here when they are complete. **Please only upload the forms to this channel to avoid identification of the unit based on your name.**

If you have any questions please send them via the email below.

Data Use

All data collected will be inputted into an amalgamated database for analysis.

The case report forms will be reviewed by a panel of experts from outside of the network providing the care for the patient. The hospitals and patients will remain anonymised. The case will be assessed against the NCEPOD criteria as documented in the project protocol.

Preliminary and final data will be fed back via the network leads.

Contacts:

Please send any questions to:

[Ceri.elbourne@bartshealth.nhs.uk](mailto:Ceri.elbourne@bartshealth.nhs.uk)

Thank you very much for taking the time to take part in this review. We hope this project will be an excellent starting point for improving care to injured children in our region.

