



This is a repository copy of *01 Major trauma triage tools study (MATTS) triage tools summary*.

White Rose Research Online URL for this paper:  
<http://eprints.whiterose.ac.uk/167791/>

Version: Accepted Version

---

**Proceedings Paper:**

Holt, C., Fuller, G., Keating, S. et al. (3 more authors) (2020) 01 Major trauma triage tools study (MATTS) triage tools summary. In: Emergency Medicine Journal. 999 EMS Research Forum Conference 2020 : Quality and risk in 999 healthcare: A balancing act?, 03-04 Mar 2020, Brighton, UK. BMJ Publishing Group , e2.1-e2.

<https://doi.org/10.1136/emered-2020-999abs.1>

---

© 2020 The Author(s). This is an author-produced version of an abstract subsequently published in the Emergency Medicine Journal. Available under the terms of the Creative Commons Attribution-NonCommercial Licence (<http://creativecommons.org/licenses/by-nc/4.0/>). No commercial re-use.

**Reuse**

This article is distributed under the terms of the Creative Commons Attribution-NonCommercial (CC BY-NC) licence. This licence allows you to remix, tweak, and build upon this work non-commercially, and any new works must also acknowledge the authors and be non-commercial. You don't have to license any derivative works on the same terms. More information and the full terms of the licence here:  
<https://creativecommons.org/licenses/>

**Takedown**

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing [eprints@whiterose.ac.uk](mailto:eprints@whiterose.ac.uk) including the URL of the record and the reason for the withdrawal request.



[eprints@whiterose.ac.uk](mailto:eprints@whiterose.ac.uk)  
<https://eprints.whiterose.ac.uk/>

## 999 EMS RESEARCH FORUM

**TITLE OF ABSTRACT: Major Trauma Triage Tools Study (MATTS) triage tools summary**

### Introduction

The aim of this project is to identify major trauma triage tools currently in use by ambulance services in England, Wales and internationally and subsequently complete a detailed document analysis of these tools. The review will aim to detect the most commonly used predictors of major trauma whilst identifying the evidence behind them.

### Methods

A variety of triage tools used internationally were acquired through analysis of systematic reviews freely available on PubMed. The 46 identified tools included: 40 adult/general, 4 paediatric-specific and 2 geriatric-specific tools. Following the acquisition of all triage tools, they were analysed by diagnostic criteria and a detailed spreadsheet produced. Each row of the spreadsheet represented a different triage criterion and each cell was colour coded to suggest the correct course of action for patient management.

### Results

In total, 63 separate clinical features and triaging criteria were identified. These were categorised into five major groups (most common variables):

- Physiology (GCS, Low BP).
- Anatomy (Chest trauma, traumatic amputation).
- Mechanism of injury (Falls, high speed RTC).
- Modifiers for high risk groups (Age >55/65, pregnant)
- Time limit to the nearest MTC (>45 minutes).

Additionally, crew concern is a potential predictor in 14 tools. Despite many tools using similar predictors, their respective predictor cut-points varied widely (e.g. from GCS  $\leq 14$  to  $< 9$ ).

From the tools assessed, two basic tool structures were discerned:

1. A flowchart style format (34 tools)
2. A points-based scoring system (7 tools)

### Conclusions

The various major trauma triaging tools currently in use in the NHS and worldwide are highly varied. Although there are commonly used domains variable cut-points often varied.

Given this significant difference between services' tools, and variability of clinician interpretation of those criteria, large variations in standards of major trauma triaging are likely.