

Introduction and background

How it all began

There is a prelude to the development of the Manchester Triage System (MTS) that has never been acknowledged or documented and as this fourth edition is published, and 30 years of MTS celebrated, it is only right and proper the full story be told.

In 1993, Jill Windle and Kevin Mackway-Jones worked together in the Accident and Emergency (A&E) Department at Stockport Infirmary, Manchester. The previous year the UK government had published 'The Patient's Charter', an initiative to raise standards within the NHS. Included in this national standard was the waiting time for an initial assessment in A&E, which stated 'patients would be seen immediately and their need for treatment assessed'. Sitting in the coffee room, Jill shared her frustration with Kevin as to how an initiative that was supposed to raise standards, had become little more than a 'Hello nurse'. The initial assessment was reduced to merely a quick glance at patients to meet the time-sensitive target of an initial assessment within 5 minutes of arrival. She discussed her ideas to develop a more robust triage system, one that could be taught to all nurses. The objective was that no matter who was making the assessment, the decision making would be safe and reproducible; despite the new standard, triage was still intermittent, with no consistency in prioritisation. During these discussions Kevin began to sketch out a rough algorithm on the back of a napkin, with just four priorities at this stage. They quickly realised if they could further develop these charts all patients would have a standard assessment, aiding the triage nurses to assign a priority.

During the next few months, a small working party of senior nurses and doctors at Stockport Infirmary developed and implemented a robust triage system rather than merely replacing triage with an initial assessment. The triage nurse's role was detailed and for the first time became a designated role allocated per shift.

Initially, five algorithms were developed and implemented:

- Immediate (life threat)
- Conscious level
- Limbs
- Wounds
- Eye

As can be seen from Figure 1.1, the first 'discriminators' were formed, although they were not titled as such during this phase.

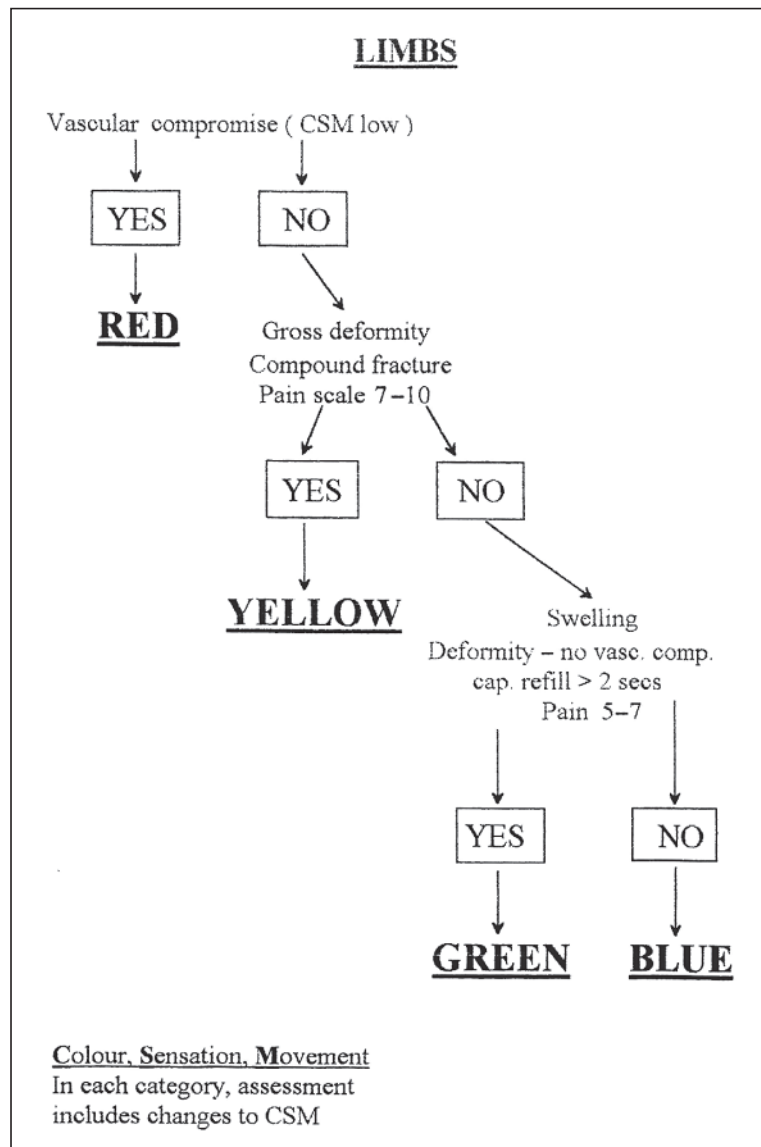


Figure 1.1 Limbs algorithm

Alongside the first charts, other developments included:

- Documentation to quickly and accurately record the triage event
- Pain assessment added as a key component
- A training programme devised and rolled out
- Audit established, with many of the original criteria still in use today
- Patient satisfaction surveys conducted

This impromptu discussion during a coffee break would become the basic premise of the Manchester Triage System.

Background and overview

Triage is one of the most important clinical risk management tools. Employed in urgent and emergency care worldwide, triage is used to safely manage patient flow when clinical need exceeds capacity. Triage systems are intended to ensure care is defined according to patient need, not departmental management, and that it is delivered in a timely manner by trained triage practitioners.

Early emergency department triage was intuitive rather than methodological, and was therefore neither reproducible between practitioners nor auditable. The Manchester Triage Group was first set up in November 1994 with one notable member being Professor Janet Marsden. The aim of the group was to establish consensus amongst senior emergency nurses and emergency physicians about triage standards. It soon became apparent that the group's aims could be set out under five headings that required development:

- Common nomenclature
- Common definitions
- A robust triage methodology
- A training programme
- An audit guide

Nomenclature and definitions

A review of the sparse triage nomenclature and definitions in use at the time revealed considerable differences across emergency departments, but despite this variation, it was apparent there were common themes running through the different triage systems.

Collating commonalities, the group agreed on a new common nomenclature and definition system. Each of the five categories, now referred to as priorities, was given a number, a colour and a name and was defined in terms of ideal maximum time to first contact with the treating clinician. At meetings between representatives of emergency nursing and emergency medicine nationally, this work informed the derivation of the UK triage scale shown in Figure 1.2.

Number	Colour	Name	Timeframe
First	Red	Immediate	0 minutes
Second	Orange	Very urgent	10 minutes
Third	Yellow	Urgent	60 minutes
Fourth	Green	Standard	2 hours
Fifth	Blue	Non-urgent	4 hours

Figure 1.2 UK triage scale

As practice has developed over the past 30 years, five-part triage scales have been established around the world and acknowledged as the gold standard. The target times themselves are locally set, being influenced by politics as much as by medicine, particularly at lower priorities, but the concept of varying clinical priority remains current.

Triage methodology

In broad terms, triage methods vary in their focus, with any of the following being predominant:

- Diagnosis
- Resource allocation
- Disposal
- Clinical priority

The Manchester Triage Group quickly decided that this triage methodology would be designed to allocate a clinical priority – a decision based on three major tenets. First, the aim of the triage encounter is to aid clinical management of the individual patient, which is best achieved by accurate allocation of a clinical priority. Second, the length of the triage encounter is such that any attempts to accurately diagnose a patient are doomed to fail, as this activity requires a consultation rather than a rapid and focused triage assessment. Finally, it is apparent that diagnosis is not accurately linked to clinical priority. Priority reflects several aspects of the patient's presentation, not just the diagnosis; for example, patients with a final diagnosis of ankle sprain can present with severe, moderate, mild or no pain, and their clinical priority will differ to reflect this finding.

In outline, the MTS requires practitioners to select from a range of patient presentations, then starting at the highest priority to seek a limited number of signs and symptoms as they move down each level. The signs and symptoms that discriminate between the clinical priorities are termed *discriminators* and they are set out in the form of algorithms known as *presentation flowcharts*. Discriminators that indicate higher levels of priority are sought first, and to a large degree patients who are allocated to the standard/4/green clinical priority are selected by default (see Chapter 2).

Priority and management

It is easy to become confused between the clinical priority and the clinical management of a patient. Priority requires enough information being gathered to enable the patient to be placed into one of the five defined triage priorities. Management often requires a much deeper understanding of the patient's needs, and may be affected by many extraneous factors such as time of day, the state of staffing and number of beds available. Furthermore, the availability of services for patients will fundamentally affect individual patient flow. Separately staffed 'streams' of care for particular patient groups will run at different rates but this must not alter underlying clinical priority which affects the order of care within, rather than between, streams in such a system.

Triage in practice

The fourth edition of *Emergency Triage* offers detailed advice on how to successfully implement and sustain the MTS. At times it may read more like a manual than a reference book, with the inclusion of case studies to enhance understanding and clearly setting out the 'how to use MTS in practice'.

This book, in conjunction with the accompanying Manchester Triage System Provider Course, provides the baseline knowledge, confidence and competence necessary to facilitate the introduction of a standard triage method. The process has been highly successful, not only in the UK where the system originated, but across the world where many countries, seeking a standard for triage in their healthcare systems, have implemented the MTS. Reading this book and attending a

course will not produce instant expertise in triage – rather, this process will introduce the method and allow practitioners to develop confidence in using MTS as a first step towards competence (see Chapter 3). Once initial training and subsequent supervision of practice is completed it must be followed up by regular audit of individual triage practitioners and evaluation of their use of the system.

Beyond triage in the emergency department

The MTS was originally designed specifically for emergency departments but has proved over time to be applicable in numerous settings. Across a range of clinical areas, for example medical, surgical or paediatric assessment units, the system is implemented in exactly the same way as in an emergency department and as such provides all the benefits of a robust triage system.

Many users of the MTS have recognised that the outcome of selecting a presentation flowchart and reaching a priority has further utility when used to direct patients to a particular part of the service. The chart selection/priority assignment process results in the placement of individual patients into one of the 54 charts across five priorities, essentially providing 266 slots or possible streams. These designations can be used to drive pathways of care in systems that have taken to 'streaming' by developing a presentation priority matrix. Particular presentation–priority combinations, for example wounds–green or chest pain–orange, may be appropriate to designated streams, in this instance minor injuries and resuscitation room, respectively (see Chapter 5).

Triage audit

The original triage group spent considerable time trying to pin down 'sentinel diagnoses'; that is, a diagnosis that could be identified retrospectively and used as a marker of accurate triage. However, it became apparent that even retrospective diagnosis could not accurately predict actual clinical priority at presentation.

Successful introduction of a robust audit method is essential to the future of any standard methodology since reproducibility between individual practitioners and departments must be shown to exist (see Chapter 7).

Worldwide use of MTS and International Reference Groups

The MTS is recognised throughout the world as a gold standard for triage. The spread of MTS across the globe has been truly remarkable as an ever-increasing number of countries seek a triage system that is both safe and reproducible. With a conservative estimate of over 150 million patients triaged using MTS worldwide per year (and rising), it is undoubtedly the most widely used triage system in the world.

Governance of the MTS is a fundamental part of the work of the Manchester Triage Group Executive Board, based within the Advanced Life Support Group (ALSG), a registered charity dedicated to saving lives by providing training. The Manchester Triage Group support the many teams of clinicians who introduce and maintain MTS in their designated countries. These groups, known as International Reference Groups (IRGs), abide by a set of roles and responsibilities and are an integral part of the MTS family. In return the IRGs contribute to the ongoing development of the system, the body of evidence and the exemplary patient safety record that MTS upholds.

Triage pearls



When this symbol appears within the chapters it denotes a sharing of facts about MTS and tried and tested methods to improve the use of the system in practice. These 'triage pearls' are taken from the training programme and often provide useful insights and examples that aid understanding of the system. Also, the triage pearls set the record straight, busting the various myths and misunderstandings about MTS that circulate and are unhelpful to triage practitioners.

Summary

Triage is a fundamental part of clinical risk management in all settings where clinical load exceeds clinical availability. Emergency triage promulgates a system that delivers a teachable, auditable method of assigning clinical priority within urgent and emergency care settings. It is not designed to judge whether patients are appropriately in the correct setting, but to ensure that those who need care receive it. The MTS has been shown to have functions beyond the initial concept of prioritisation when used to monitor patients and signpost to streams of care determined by local provision and actual availability.

For the most up to date information on the Manchester Triage System visit the triage website at **www.triagenet.net**.