




CJEM Debate Series: #TriageAgain—are current triage methods dangerous?... if we cannot actually treat those triaged as *urgent* within a safe time frame?

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Introduction

Paul Atkinson (@PaulAtkinsonEM)

In a previous CJEM Debate, we explored whether our current triage tools help us to safely sort patients, or if they add unnecessary complexity and delays to the initial assessment process [1]. Much has changed since 2018. In our post-pandemic emergency care crisis, we face staffing pressures, crowding, burnout, long wait times, and many other pressures in our emergency departments (EDs) [2]. Perhaps the emergency care system's most shocking failures have been the reported mortality increases directly associated with long ED stays—usually because of access-block [3]. Under these circumstances, it would seem logical that a sorting, prioritization, or triage system would be vital and a major focus, yet currently triage targets are not being met in the majority of hospitals, the majority of the time. Our current triage tools use the ideal maximum waiting times for patients to define “Triage categories”, such as full medical

assessment *immediately, within 15 min, within 30 min, 2 h or 4 h*, but then places each patient in a single queue, with a fixed score, which is problematic when patient flow stalls. As Emergency Medicine has matured, Emergency Departments have become bigger and have sub-sections, so how does a triage score based on maximum waiting time have relevance, when for example, patients triaged to an area such as a minor injuries or low acuity area could theoretically wait indefinitely when resources are severely stretched. Should we formally separate streams for each category, ensuring some degree of flow for all, or does that fly in the face of the core purpose of emergency medicine of treating life and limb threats first? Can a fixed five-point scale be meaningfully used in practice [4]?

Is the current system too simplistic (assuming a single queue, or that demand is met by capacity) or too old-fashioned (for example, assuming few interventions are initiated until full medical assessment?). Is the full initial medical assessment the holy grail, if it risks doctors paying less attention to ongoing care of unstable patients stuck in the ED? Or should we be completely rethinking how we sort patients at the front door? Does strict attention to triage time stifle innovation?

In this CJEM debate, we have veered away from our usual Oxford style of confrontational debate and have provided more of a conversation-style debate on some of these issues. Ffion Davies, Consultant in Emergency Medicine in the UK and President of the International Federation for Emergency Medicine, Patrick Ballesteros, a medical undergraduate from the University of Leicester, Larry Melniker Vice Chief, Quality Management, Dept of Emergency Medicine, New York-Presbyterian Hospital Brooklyn Methodist Hospital,

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and Paul Atkinson, Professor and Department Head, Emergency Medicine, Saint John, New Brunswick explore the issues raised.

This series of editorials provides *CJEM* readers with the opportunity to hear differing perspectives on topics pertinent to the practice of emergency medicine. The debaters have been allocated opposing arguments on topics where there is some controversy or perhaps scientific equipoise.

Readers can follow the debate on Twitter and vote for either perspective, by going to @CJEMonline or by searching #CJEMdebate and #TriageAgain.

The conversation: keeping it moving: why current triage tools can still be used but should be used differently

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Triage is a complex exercise that relies on an individual's clinical experience and judgment to make rapid decisions with limited information. Through the years, there have been many developments in the tools and systems used to aid and support triage in the emergency department [5]; yet the essence of triage has remained the same, with its fundamental principle being “getting the *right patient* to the *right place* at the *right time*.”

The necessity of triage is glaringly obvious in the face of the landscape of modern emergency medicine. Limited by resources and staff available, the challenges of having to handle a large volume of patients and sort through complex presentations are amplified. Indeed, much like finding the proverbial needle in a haystack, the challenge of identifying the sickest individuals and treating them promptly to prevent deterioration and harm is exacerbated by the increase of people coming to the emergency department for care [6].

To mitigate these risks, many systems utilize triage tools to assign patients a *triage score* that indicates the degree of urgency for the patient to be seen. Common examples of such tools include the Canadian Triage and Acuity Scale (CTAS), the Manchester Triage System (MTS), and the Emergency Severity Index (ESI) [7, 8]. While the evidence exploring the impact of these tools on patient outcomes varies, there is strong evidence to support the concurrent use of validated triage tools in conjunction with sound clinical experience to identify unwell patients [7]. Furthermore, the use of these tools is further supported by evidence of good inter-rater reliability [9–11]. Included in most of the commonly used tools, is a collective understanding among clinicians that there is a clear relationship between the score

and how quickly someone ought to be seen. For instance, a patient who is triaged to have a priority score of 2 must be seen sooner than someone allocated a priority score of 3.

Weighting for the wait?

Typically, individuals with a less urgent priority score have longer wait times [12]. The causes of long wait times are multifactorial and are a result of a complex interplay between many areas of a healthcare system [13]. However current trends show that wait times are now *so prolonged* that people with a more urgent priority score are seen just as slowly as those with lower priority scores. Moreover, those allocated an urgent priority score can wait many hours longer than the brief delay (30–60 min) that an urgent score recommends. This presents a challenge, as the delay in seeing those assigned a high-priority score may lead to late identification of those with urgent presentations. The problem is that most current triage systems fall into the trap of allocating each patient to a static position on a list of patients within each priority score. In addition, sicker patients may arrive and be allocated to the same priority category. Or worse still even sicker patients may present and be allocated to a more urgent category, and be seen before our patient previously identified as requiring urgent medical assessment. As such, our urgent patient seems to move backward in the queue, further away from any urgent assessment or treatment, resulting in them waiting longer than was ever intended, without any recourse to an appeal or change in their score. This undoubtedly harms patient safety, as longer wait times increase the risk of a person deteriorating in the waiting room without having any investigations or being seen by a clinician. In addition, long wait times also negatively impact those with a lower priority score. Such individuals must wait for all with higher priority to be seen and often leave the emergency department without being seen. Some will subsequently return, requiring additional treatment, due to their condition being more serious than was initially recognized at triage [14, 15]. It is therefore evident that the link between triage and wait times presents a complex challenge in managing risk and patient safety.

Enhancing triage granularity

Another concern with current triage systems is the lack of granularity. Traditional scales, while effective for broad categorization, often fail to capture subtle but clinically significant differences among patients within the same category. For instance, the informal distinction between a “2A” and a “2B” patient could mean critical differences in clinically required response times, yet most systems treat these categories as equivalent. While it is clear that a more detailed triage scale would allow emergency department staff to prioritize

patients more accurately based on the severity of the condition, any further sub-division of the categories would also add more complexity to the allocation of resources and perhaps increase the risk of individual variation.

Don't get stuck

The current CTAS guidelines offer a structured approach to triage [4] but have been criticized for their prohibition against changing a triage score once it has been assigned. This static approach contradicts the dynamic nature of emergency care, where a patient's condition can quickly change, necessitating a reassessment and potential adjustment of their priority level. At times what was a “4” can quickly become a “2” in terms of clinical need. By re-examining the perceived contradictions within the CTAS documentation and the implications for patient care, perhaps there is a need for a more flexible triage system that accommodates re-triage and score adjustments as necessary. Some hospitals use a “priority score” which stays with the patient throughout their ED stay and can reflect changes in their status or in the status of the whole department if a senior member of staff has good situational awareness and can oversee priority scoring. For example, a patient arrives with chest pain, and receives a triage/priority score of 1 until the ECG is done, then can be downgraded if it is normal. If blood tests are sent before a full medical assessment is completed, and reveal a raised troponin, the score is upgraded back to 1.

Here or there? Integrating emergency and primary care processes

A significant challenge in emergency care is the integration of ED processes with primary care. Often, issues that could be addressed in a primary care setting escalate to the emergency department due to accessibility barriers. How can we work to enhance primary care access and integrate it more seamlessly with emergency services? Such an approach could alleviate ED congestion, improve patient outcomes, and reduce healthcare costs. Should each healthcare system have a unified triage score and resource allocation process for unscheduled healthcare needs, that operates seamlessly across both primary and emergency care [16]?

But rather than labelling current triage tools as unfit for purpose or unsafe, perhaps we should reflect on how we use them currently, and look at changing how we use them, which might offer some solutions to our current challenges...

So where do we go next?

There are two main problems with triage scores. First; they are often not “dynamic” (being fixed, or not reviewed

frequently enough). Second; mixing patients into a single queue is a recipe for failure. Triage must be accompanied by “streaming”. Let's address these problems one at a time.

A triage score is only as good as the first hour or two of the patient journey. As soon as the waiting time exceeds the “ideal maximum” they become defunct and even deadly (when patient decompensation is not identified). As such, a team of appropriately qualified staff should repeat vital signs and check in with each patient who is waiting on a regular (e.g. hourly) basis. This may sound like a significant strain on resources, but consider the consequences of not doing this... In many jurisdictions, such basic skills can be taught and delivered (subject to local or national policy) via some form of patient care assistant or nursing assistant role.

Streaming is a form of “triage plus” suitable for all but the smallest emergency departments. An experienced staff member (typically a senior nurse) can identify patients pre- or post-classical triage, and direct them into the appropriate stream. This role is often known as a *patient flow co-ordinator*. Patients tend to fall into one of three groups:

1. Clear, simple direction (by a clinical decision maker to the most appropriate and available facility or service, an urgent care clinic, or an agreed fast-track within the healthcare system—ideally as part of a unified system-wide triage and registration process). This can include patients suitable for a quick “see and treat” by a practitioner funded and ring-fenced for this role (e.g. non-suture wound closure, easy diagnoses such as shingles). Freeing up the ED of such patients decreases overall workload and crowding.
2. High priority, being immediately allocated to care within a specific area of the ED (e.g. the resuscitation room, an acute care area, or to a member of staff, often a pre-allocated senior doctor role, to deal with time-critical interventions that are not life-threatening, such as suspected testicular torsion, peripheral arterial occlusion, significant limb injury).
3. Unclear: these patients may require further assessment, or point-of-care testing such as an ECG, venous blood gas, etc., to be allocated to “the right queue”.

This further risk stratification is often included in the triage and assessment (CTAS) approach, but can also be provided in a flow centre, or secondary assessment area.

These additional interventions add complexity and therefore appear to add work, but they add so much value that they “are worth it”. They ultimately save time and costs by “getting it right the first time” and safety-netting.

We will be faced with long wait times in our EDs for the foreseeable future, due to the many constraints on other parts of the healthcare system. We must reflect on our front-door assessment processes and adapt them to the current realities.

Prolonged waiting and crowding increase mortality [3] and it is incumbent on us in emergency medicine to try to limit that impact. In a recent systematic review on crowding, one of the few actions that was found to be effective, and that lies within the remit of emergency medicine is the idea of enhanced triage [17].

In short, most triage and triage scoring systems do what they are designed to do—they sort patients into general risk categories—but they fail as soon as target times for further assessment are exceeded. As such, currently, they fail most of the time. Instead of throwing them out though, two things are needed: regular reassessment of the patient and their score, and the integration of patient streaming into the process to get the right patient to the right place at the right time.

Declarations

Conflict of interest The authors declare that there is no conflict of interest.

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