CORRESPONDENCE

Modern Triage in the Emergency Department

by Prof. Dr. med. Michael Christ, Florian F. Grossmann MSc,
Dipl.-Pflegerin Daniela Winter, Prof. Dr. med. Roland Bingisser,
Dr. med. Elke Platz in volume 50/2010

3. Christ M, Grossmann F, Winter D, Bingisser R, Platz E: Modern triage in the emergency department. *Dtsch Arztebl Int* 2010; 107(50): 892–8.

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Lack of Resources

Christ et al justify the need for triage in Emergency Departments with the rising volumes and unpredictability of patient numbers. The review article describes triage systems which influence patient management processes by assessing how urgently treatment is needed. A critical issue in such systems is the lack of medical specification.

Triage in theory provides a poorly evidence-based “harm free” waiting period until first contact with a doctor, but, for example, when applying the widely used Manchester Triage System (MTS) in acute stroke, patients are often allocated to category 3, “yellow”, with a permitted waiting time of 30 minutes. In reality, however, acute stroke is recognized in the ambulance (1), reported to the hospital before arrival, and the patient will be looked after by an emergency team immediately on arrival. In this context, using the MTS is not only superfluous but potentially dangerous. The same holds true for patients with chest complaints, who require an ECG within 10 minutes (2) even if they were triaged only as “yellow”.

The second critical aspect of triage is the mere fact that it is even necessary. This evidence of a lack of resources in clinical emergency medicine will not solve the issue but emphasizes it. Furthermore, triage is so far not included in the health insurance reimbursement schemes and has to be provided in addition to the usual services. In actual fact we have observed that when patient volumes are high, the triage times of the medium categories 3–5 cannot be adhered to and triage personnel is then often needed for immediate patient care.

Christ et al rightly state that patients increasingly choose the low-threshold emergency admission as their primary access route into healthcare services. Introducing regular “triage” of all emergency patients is a symptom of the problem of lacking resources in acute medicine.

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Easily Done Without Triage Models

The conclusions of the review article are not acceptable for emergency patients. Patients want to have the severity of their illness assessed primarily not by caregiving doctors but by competent doctors. This applies even when patient volumes in emergency departments are high.

The situation may be different in times of war and in disaster situations, when many people are severely injured simultaneously. Even then the term used is not that of triage (which comes from military medicine) but pre-triage, or, rather, primary survey on scene, with guiding times for examinations per patient of 20–60 seconds (vision, hearing, thinking). These short surveys do not allow for extensive documentation nor assessment according to the established triage models, which no population would accept in times of peace. This particularly applies to the triage argument used by the authors—namely, of shorter waiting times in the emergency admission setting. Clinically experienced doctors are required in this setting, who can assess patients in the minimum amount of time, with regard to their need for treatment (sending patients away on the basis of their triage scores without them seeing a doctor at all would pose legal and forensic problems).

Regarding the evidence for triage (6 of 7 studies included only 15–30 subjects), no absolute numbers were reported, such as reduced mortality and unnecessary transfer to intensive care.

The triages performed by non-doctors in Canada and Australia (where long distances need to be covered in order to see a doctor) do not apply to Germany.

The author has 35 years of experience at university gynecology hospitals, with 2400 births every year managed excellently without triage models, in spite of unplanned high volumes of patients simultaneously in the delivery suite and outpatient clinics. How that worked can be found in Germany's Science Book of the Year (Wissenschaftsbuch des Jahres) 2007. The neurological insights sketched out there also apply to

doctors' thoughts and actions (on the basis of high competence) in situations with many emergency patients simultaneously.

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No System Should Be Preferred

The topic of triage systems is becoming increasingly important in the setting of emerging interdisciplinary emergency departments in Germany. The authors thus deserve thanks for their review article.

However, readers of the article might reach the conclusion that the German version of Emergency Severity Index (ESI) triage is recommended as triage instrument for German-speaking emergency departments. This is explained with a study that was published online in 2010 (1). But the current review article was written on the basis of a selective literature search in early 2009. At least 2 more important studies on triage systems in emergency admission were published in 2009 (online publication in 2008), in addition to the one mentioned above:

- A Portuguese study on the Manchester Triage System MTS with >300,000 patients showed significant results regarding category of triage and survival and hospital admission respectively (2).
- A study comparing the reliability of the MTS and the ESI showed higher kappa values for the MTS (0.76 vs 0.46) (3).

In my opinion, no unequivocal recommendation for preferring either of the two systems is therefore possible on the basis of the current literature.

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In Reply:

We thank our colleagues for their comments. The studies cited by Wasser on the Manchester Triage System (MTS) were unfortunately published after our own literature search. These studies display relevant methodological problems (Martins et al: 91.7% self presentations, patients with admissions were excluded; Storm-Versloot et al: peracute and mild cases were excluded). The quality and reliability of the mentioned instruments depend on the prevalence of the disease and the relevant language and culture. This means that it is problematic to use them without adaptation to one's own system (linguistic and cultural adaptation) and subsequent scientific validation. The MTS was developed at a time when mainly trauma patients were treated in emergency departments. In the United Kingdom, the MTS is now used in a modified version, since the patient cohorts have changed substantially and the MTS in its original form has relevant weaknesses, especially for elderly patients or patients with comorbidities. We therefore think it is necessary to evaluate instruments that are to be introduced de novo according to objectifiable criteria. This was done with the German translation and validation of the "Emergency Severity Index" (1).

Drawing comparisons to one's own subjective experiences in obstetric practice is not helpful because such experiences are not objectifiable, and the range of possible diseases/injuries and the short time intervals between admissions (often every minute in our institutions) are not being considered. Clinical emergency medicine ranges from outpatient treatment by the general practitioner to complex care administered to severely injured patients including resuscitation. Excellent clinical emergency care can therefore be achieved only by division of labor and interdisciplinary working.

The term "triage" has been used and evaluated as a scientific term in emergency medicine for more than 30 years. Triage has always been linked to the overriding aim to optimize medical treatment (4), and not in order for triage staff to discharge or even refuse emergency patients. We showed that specially trained triage staff is able to perform their tasks correctly (no emergency patient of triage categories 4 or 5 has died [1]), and that this modern scientific concept has contributed to reducing mortality in outpatient acquired pneumonia (2).

We agree with Möckel that in view of rising patient volumes and increasing demands on emergency admissions, the current structures in Germany are placed under too much strain. If capacities for admissions exist then triaging is not strictly necessary. Triage will therefore often be used only when volumes reach a critical mass (3). Equipping staff and rooms adequately, and adapting processes in emergency departments continually is a *conditio sine qua non*, with or without professional nurse-driven triage.

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