Patient experience of the triage encounter in a Swedish emergency department

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Introduction

Emergency department (ED) triage is widely used in the western world (Fernandes et al., 2005). During the last
decades, research on ED triage has focused more on the
development of triage scales (Australasian College for
Emergency Medicine, 2000a; Gilboy et al., 2003; Manchester
Triage Group, 2006; Bullard et al., 2008) and less on patient
perspective of the triage process (Topacoglu et al., 2004).

Background

Since the development of the Australasian Triage Scale in
the 1990s (Australasian College for Emergency Medicine,
2000b), three other major scales have been introduced
worldwide (Gilboy et al., 2003; Manchester Triage Group,
2006; Bullard et al., 2008). Only the Manchester Triage Sys-
tem (Manchester Triage Group, 2006) has evolved based on
the needs of an European emergency unit.

In addition to these scales, local triage scales have been
developed in several European countries. Within the Euro-
pean Union (EU), a variety of both European (Göransson
et al., 2005; Rutschmann et al., 2006; Parenti et al.,
2009; Taboulet et al., 2009) and non-European scales are
in use (van Gerven et al., 2001, Jiménez et al., 2003, Elsh-
ove-Bolk et al., 2007; van der Wulp et al., 2008). Moreover,
no country in the EU has as yet implemented a mandatory
triage scale (Elshove-Bolk et al., 2007) in contrast to e.g.
Australia and Canada.

New triage scales are continuously being developed and
tested, mostly within the Western world (Maningas et al.,
2006; Rutschmann et al., 2006; Stockholm County, 2007;
Parenti et al., 2009; Taboulet et al., 2009; Widgren and Jou-
rak, in press) with South Africa (Gottschalk et al., 2006) as a
notable exception.

Many of these newer scales use vital signs (respiratory
rate, oxygen saturation and heart rate) with defined cut
off levels for each parameter for assessing the acuity level
and allocation to the proper triage category. Several studies
of reproducibility and validity of the various triage scales
have been published (Considine et al., 2000; Dong et al.,
2006; van der Wulp et al., 2008). The American College of
Emergency Physicians and the Emergency Nurses Associa-
tion recommend that EDs in the US implement either the
Canadian Triage and Acuity Scale (CTAS) or the Emergency
Severity Index (ESI), based on a review of available evidence
(Fernandes et al., 2005).

The triage assessment, irrespective of which triage scale is
being used, is often conducted in one or two steps. In a
one-tier system, triage is carried out by one triage nurse
while in a two-tier system, it is performed in two steps by
two triage nurses. In addition, the amount of actions taken
during triage range from a simple visual assessment (spot
check) to a more thorough assessment where vital signs
may be taken (comprehensive triage) (Gerber Zimmerman
and McNair, 2006, Göransson, 2006).

The research on ED triage during the past decades has fo-
cused mainly on the effectiveness and safety of different
scales, and only to a lesser extent on the perspective of
the patients and the role of the triage nurse (Raper et al.,
1999; Elder et al., 2004; Topacoglu et al., 2004; Chan and
Chau, 2005; Dello Stritto, 2005; Göransson et al., 2008).
One study (Raper et al., 1999) found that patients were less
satisfied both with the medical knowledge of the triage
nurse and his/her ability to explain the procedures and show
care for the patient while in another study (Chan and
Chau, 2005) the patients were generally satisfied with the
caring and teaching aspects of care received from the triage
nurse.

Studies of the entire ED visit, i.e. not confined to triage
as such, indicate that information about medical procedures
and, in particular, about expected waiting time, are prereq-
usites for patient satisfaction (Björvell and Stieg, 1991;
Thompson et al., 1996; Watt et al., 2005). Other important
factors for patient satisfaction are nurse — patient com-
unication, the physical environment in the ED and the behav-
iour and attitude of other members of the staff (Bruce
et al., 1998; Boudreaux et al., 2004; Boudreaux and
O’Hea, 2004; Topacoglu et al., 2004; Watt et al., 2005).

Those few studies investigating patient satisfaction with
general ED care as well as triage specific care have mainly
been conducted outside the EU. Considering the paucity of
European studies on the topic, (Topacoglu et al., 2004; Pi-
trou et al., 2009), we wished to study patient experience
of the triage encounter in a Swedish context. Swedish EDs
are divided into several areas, based on medical speciali-
ties, and not, as in many Anglo-Saxon countries, based on
triage level. Most EDs treat patients with medical and surgic-
problems, and patients may arrive by ambulance or pri-
ivate means. The EDs are open for everyone and a referral
letter is normally not required. The encounter with the tri-
age nurse is for many patients their first encounter with the
ED and the impression the nurse gives is therefore likely to
influence the patient’s experience of the ED visit.

Methods

Design

This was a descriptive and observational cross-sectional sin-
gle site study.

Participants and setting

The Karolinska University Hospital in Solna is a level one
trauma centre. The ED treats approximately 70,000 adult
patients presenting with non-psychiatric complaints annu-
ally. A two-tier triage system is used that includes spot
check and comprehensive triage. The triage decisions are
based on a five level triage scale called Adaptive Process
Triage (ADAPT) developed at the Sahlgrenska University
Hospital in Gothenburg, Sweden (Stockholm County, 2007)
(Table 1).

The present study population comprised adults seeking
care at the ED at the Karolinska University Hospital Solna.
The sample was a convenience sample of patients arriving
by own means or ambulance and who registered at the ED
during three day shifts (8 am—4 pm) and three evening shifts
(4 pm—2 am) during a two week period in March 2008. Inclu-
sion criteria were as follows: 18 years of age or above, tria-
ge level 3–5 according to ADAPT (i.e. not severely ill or
injured but to be seen by a doctor within 120 min), Swedish
speaking and finally, with no alteration of mental status.

An assistant nurse who normally worked in the ED but
who at the time of the study, did not take part in the clinical
work in the ED, included patients by reading the patients’
A study was considered a quality improvement project. Verbal Ethical permission was obtained from the patients. Patients were informed of the voluntary nature of the study, and their right to refuse or to withdraw at any time was emphasized. It was also stressed that their care would not be influenced by their decision to take part or not in the study. The medical director of the ED approved the study.

Results

Demographic information

A total of 695 patients presented at the ED during the data collection period, of which 601 (87%) fulfilled the inclusion criteria. Of the eligible patients, 165 (28%) were invited to participate in the study, 146 (88%) agreed to participate, of which 83 (59.5%) patients were women. Age ranged from 19 to 97, with a median age of 49.5 years. The majority, 117 (83%) were native Swedish speakers and just over half, 78 (53.1%) were accompanied by someone.

Time issues in the ED

In total, 58.7% of the patients perceived that they were triaged immediately upon arrival to the ED. Of the remaining 41.3%, the waiting time to triage was perceived as acceptable by 43.9% of the patients while 56.1% felt the waiting time to triage was somewhat or much too long. Only 30.9% of all the patients were given an estimate of the waiting time before being seen by the doctor, and only 22.4% of the participants were informed that the waiting time was dependent on their triage category.

Medical condition and triage information

A total of 23.9% of the patients did not request any information about their medical condition by the triage nurse. Of the 105 (76.1%) patients that wished to be informed, 56.5% considered the information adequate or partly adequate. Of the 94 (68.1%) patients that wished to be informed, 90.3% received answers that were clear or relatively clear while one patient chose not to ask because of fear of disturbing the nurse.

Triage nurse

Nearly all (97.8%) patients felt that the triage nurses were competent in performing triage, while slightly fewer (87.7%) felt confidence in their triage nurse. The great majority (94.8%) of the patients felt that the triage nurses fully or partly listened to them and that their complaints were taken seriously. While 36.8% did not experience a need to talk to the triage nurse about anxiety regarding their condition, 85.7% of those who did have such a need, felt completely or partially that they were given the opportunity to do so.

Of the two thirds (66.9%) of the patients who needed assistance from the triage personnel at some stage during their waiting time, 94.4% received the required help. A total of 96.3% of the patients felt that they were treated with respect and consideration, and 90.8% rated the reception by the triage nurse as very good or good.

<table>
<thead>
<tr>
<th>Triage levels</th>
<th>Time to doctor</th>
</tr>
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<tbody>
<tr>
<td>Red</td>
<td>Immediately</td>
</tr>
<tr>
<td>Orange</td>
<td>Within 15 min</td>
</tr>
<tr>
<td>Yellow</td>
<td>Within 120 min*</td>
</tr>
<tr>
<td>Green</td>
<td>Within 120 min*</td>
</tr>
<tr>
<td>Blue</td>
<td>Within 120 min*</td>
</tr>
</tbody>
</table>

* Patients with yellow, green and blue triage levels are seen in order of arrival time and not by level of acuity.

Table 1 Time objectives associated with the triage levels of the Adaptive Process Triage.
Privacy in the ED

The majority (74.8%) of the patients felt that the respect for their personal integrity in the waiting room was good or very good.

Discussion

This study aimed to investigate patient experience of ED triage. As many as 76% of the patients either underwent triage shortly after their arrival in the ED (n = 84) or found the time to triage acceptable (n = 25). Since any kind of queue for triage is a potential threat to the safety of the patients, time to triage ought to be kept to a minimum.

Even though it is known that information about time to first doctor assessment is important for patient satisfaction (Björvell and Stieg, 1991; Bruce et al., 1998; Watt et al., 2005), this information was given to less than one third of the patients in the current study. The fact that even fewer patients were informed about the relationship between their triage category and waiting time is notable, since estimated waiting time has been found to be more important than actual waiting time for patient satisfaction (Boudreaux and O’Hea, 2004). The percentage of patients in the present study asking for, but not receiving, adequate information was high, which may influence the overall impression of the visit to the ED in this hospital.

Previous research has shown that many patients seeking care at the ED are seriously concerned about their medical condition (Watt et al., 2005). It was therefore an unexpected result that almost a quarter (23.9%) of the patients did not ask for information about their medical condition from the triage nurse. One explanation might be that the patients preferred to discuss such questions with the doctor. Another study (Boudreaux et al., 2000) found that an important variable for overall patient satisfaction with the ED visit was that the patient felt cared for.

We found that nearly all (97.8%) patients regarded the triage nurse as fully or adequately competent for his/her task which is in agreement with a study by Raper et al. (1999). In this study a significant relationship between patient satisfaction and nurses’ level of education was found, indicating that patients were more satisfied with nurses having higher academic education. We did not collect data on the triage nurses in the current study, and hence, cannot make a similar analysis. The high proportion of patients (96.3%) reported being treated with respect and consideration is also in agreement with previous findings (Bruce et al., 1998). The high percentage of patients (90.8%) that rated the quality of the reception by the triage nurse as very good or good is concordant with a Turkish study (Topacoglu et al., 2004).

This study has some limitations: (a) since the perception of the triage encounter was not investigated in seriously ill and injured patients, generalization to that cohort can not be done; (b) patients completed the questionnaire during their ED visit before their first medical assessment, this may have influenced the rating in a false positive way although the anonymous participation may have reduced the risk for such bias; (c) the collection of data during a restricted amount of the patients. One suggestion is to routinely inform patients about their triage level, and their estimated waiting time before being seen by the doctor.

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