Why are we Waiting? A Study of the Patients' Perspectives about their Protracted Stays in an Emergency Department

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Abstract
The overcrowding of Emergency Departments compromises their critical function and the safety of patients and staff1. This study asked the patients how the wait in overcrowded conditions impacted on them and the care they received and what they believed the reasons for the overcrowding were. A prospective questionnaire based structured interview study was performed. Over half (57.7%) of patients felt that the lack of inpatient beds and wards was the main reason that they experienced delays. An overwhelming 85.9% felt that the Health Authorities were not doing enough to address the overcrowding issue. Overcrowding of Emergency Departments has been identified as a major problem the solution is to be found in increasing the capacity of the acute hospital system according to the majority of our study population.

Introduction
Emergency Department (ED) overcrowding in Ireland is, and has been, at crisis point for some time as evidenced by the ongoing 'Trolley Watch' performed by the Irish Nurses Organisation. Undoubtedly the fact that Ireland does not have enough beds in the acute hospital system contributes to this (we have 2.9 beds / 1,000 population compared to an OECD average of 4.1 / 1,000)[1].The Department of Health in 2001 recognised the need for an additional 3000 beds in acute hospitals most of which yet have to be delivered[2]. There have been studies on the perception of Medical staff as to the impact of overcrowding[3,4]. This study examined individual patient's experiences in the context of the ongoing crisis. The ED in which this study took place receives over 46,000 patient visits per year and serves a catchment population of 250,000 people. On average there are 20 admitted patients (range 0 to 45) housed in the ED pending availability of a bed on the wards or in Intensive Care. The Emergency Department has a 24% admission rate. 76% of patients are seen and treated and discharged home from the Emergency Department.This means that on average the Department has 105% occupancy of available clinical space, with admitted patients even before we attempt to see the 130 new patients that attend each day.

Methods
A prospective qualitative, descriptive study design was used. The questionnaire-based interview was constructed using forced choice and open ended questions. We used both free text answers and Likert scales. It was designed in consultation with the Emergency Department nursing and Medical staff. It took about 20 minutes to complete as evidenced by a brief pilot of 11 patients. The patients' feedback was used to further inform the questionnaire design.Patients with a stay in the ED of 12 hours or longer following a decision to admit were asked to participate.[12] hours was chosen arbitrarily. The patients were asked to give both verbal and written consent to involvement in the study.
A prospective non-randomised convenience sample of ED patients was obtained over an 11-day period in October of 2005. The two interviewers from the research team were medical students and had no particular bias regarding the overcrowding situation. The questionnaire was administered in interview format in the Emergency Department and in person by one of two of the research team (IS, VG).
The interviews were recorded on the questionnaire proforma. The data was entered into an Excel spreadsheet having had the answers themed by two members of the research team independently and crosschecked by a third member of the research team. The data was submitted to analysis according to qualitative interpretive methodology using the statistical software Stata Version 8.
Comparison of male and female patients was made for various responses relating to their stay in the ED. A further division of gender for older (>65 years) and younger patients was made for detailed comparisons. Testing for significance was conducted using Fisher Exact tests.

Results
114 patients were approached of whom 85 (75%) patients consented to involvement and completed the 17 item questionnaire. There was no significant difference in those who consented or refused to be involved in the study. The average age of the patients was 56.7 years old Std. Dev. 18.82 with a range of 17 to 89 years of age. 47 (55%) of the participants were female. The mean time they had spent in the Department following a decision to admit was17.2 hours (Std. Dev. 5.4 hours) with a range of 12 to 35.1 hours.
Those awaiting admission under the medical service accounted for 67% of the participants. In the study ED 58% of admissions come under the medical services.
Only 6.1% of the patients felt the prolonged stay was likely to adversely affect their health whilst 12.1% said it had an impact on their occupation and 21.2% felt it had affected their social life.
Over 65% of patients said that the standard of service provided by doctors, nurses, and the porters exceeded their expectations. Greater than 40% of patients said that the administration standard either exceeded (42.4%) or far exceeded their expectations (45.9%). Table 1 documents the emotional impact of the prolonged stay in the Emergency Department on admitted patients.

Table 1 State of mind

State of mind	Number of Patients (%)
Unhappy	33 (38.8)
Satisfactory	29 (34.1)
Uncomfortable	27 (31.8)
Anxious	13 (15.3)
Unsure	3 (3.5)
Concern about personal hygiene	2 (2.4)

24.7% of patients felt that during their stay, their privacy or dignity was violated. A higher proportion of female patients (32%), compared to male patients (16%), expressed feelings of violation of privacy and dignity (p value = 0.129). When gender was further broken down into age groups, it was the younger patient cohort of female patients (less than 65 years), that showed the highest discrepancy with their male counterparts for loss of dignity and violation of their privacy (38% versus 10%, p value = 0.047). Only 44.2% said that they had been told why they were delayed.

Table 2 shows the range of issues that were raised when the patients were asked about the worst aspect of the prolonged stay. Many patients highlighted more than one issue.

Table 2 Worst aspect of the prolonged stay

Worst aspect of stay in the ED	Number of Patients (%)
Waiting for results	28 (32.9)
Uncomfortable	28 (32.9)
Overcrowding	16 (19.5)
Don't mind	10 (11.8)
Maintaining hygiene	7 (8.2)
Unsure	7 (8.2)
Home sick	5 (5.9)
Poor facilities	4 (4.7)
Lack of personal attention	4 (4.7)
Poor communication	3 (3.5)
Poor food	3 (3.5)
Lack of privacy	3 (3.5)

Over half (57.7%) of patients felt that the lack of inpatient beds and wards was the main reasons that they experienced delays (Table 3).

Table 3 Reason for prolonged stay in the Emergency Department
(Answers were in free-text format and subsequently grouped under the relevant theme)

Reasons delayed	Number of patients (%)
Lack of beds	49 (57.7)
Staff shortage	15 (17.6)
Unsure	12 (14.2)
Bad management	10 (11.8)
Busy staff	9 (10.6)
Overcrowding	8 (9.4)
Lack of funding	4 (4.7)

An overwhelming 85.9% felt that the Health Authorities were not doing enough to address the overcrowding issue. Over half (54.1%) of patients recommended that facilities should be either increased or further improved, and more funds should be directed into the Health Service. 31.8% also suggested more staff should be hired, as well as having better financial management on the government's part. 67% felt that under 6 hours was an acceptable time period to be in the Emergency Department (Table 4).

Table 4 Acceptable time frame to wait in the Emergency Department

Acceptable time waiting in the ED	Number of Patients (%)
0 – 4 hours	33 (38.8)
4 – 6 hours	24 (28.2)
6 – 8 hours	10 (11.8)
8 – 12 hours	6 (7.1)
12 – 24 hours	12 (14.1)

Over 35% of patients stated that the prospect of an extended stay affected their willingness to come, and 37.4% said it would affect their willingness to come again in the future. Generally male patients scored more positively in their responses regarding their stay in the Emergency Department despite their more negative feelings prior to coming to the ED. For instance 74% of males versus 57% of females were reluctant to come to the ED (p value = 0.171). For older males this was more pronounced with 94% reluctant versus 67% reluctant females (p value = 0.088).
Despite the extended stay, 68.24% of patients did not consider leaving at any point in time. Once a decision that admission was required was made, males were less likely to consider leaving compared to females (26% versus 36%, p value = 0.359)

Discussion

Emergency Department overcrowding is a feature of a health service that is working beyond its available capacity, if this were not the case there would be acute hospital beds available for patients requiring emergency admission[1,3].
Health services research has noted patient satisfaction to be an important component in the evaluation of quality care[5]. Patient satisfaction has increasingly been recognized as an important emergency department (ED) service goal[6]. Research has identified three main determinants of patient satisfaction with ED care: physician – patient interaction, information and communication between the physician and patient, and waiting times[7]. In general research has shown that as wait times (either actual or perceived) increase, patient satisfaction decreases[7]. In this study there was a high level of satisfaction with the nursing and medical care patients received despite the overcrowded conditions. This finding is in keeping with previous ED satisfaction studies[8]. It is surprising in the context of numerous studies having indicated that patient perceptions of ED wait intervals are consistently associated with overall care satisfaction[6]. Hedges et al in their satisfaction study found that overall visit satisfaction rating was not associated with concurrent ED census (the number of patients in the Department at the time) but it is worth noting that their patients had a median total time interval in the ED of 142 (111 to 230) minutes and that the maximum total wait interval in the ED was 596 minutes as compared to our study population's mean stay following a decision to admit of 1033.8 minutes[6]. Previous studies looking at satisfaction with the service received in an ED have identified: interpersonal skills / staff attitudes; provision of information / explanation; and perceived waiting times as important[9]. A study found that patient
perceptions of the technical quality of care are more important than perceived timeliness of care or bedside manner in determining patient satisfaction[5]. Another found that the most important variable associated with overall satisfaction with the ED services was satisfaction with the amount of time it took before the patient was cared for in the ED[10]. Caring nurses was the next most important variable[10].
Waiting time has two distinct dimensions: actual (measured) waiting time and perceived (subjective) waiting time[11]. Previous researchers have noted that actual waiting time can increase if the resource capacity (physical plant, staffing) of an ED is exceeded. Patient satisfaction suffers in this situation because patients perceive inadequate attention from staff and reduction in service efficiencies[11].
As in other studies, information for the patients about the reasons they were waiting has been identified as deficient in this study[12]. Other studies have shown that timely information among patients in the Emergency Department is critical to patient satisfaction[12].
The American College of Emergency Physicians has noted the patients' right to appropriate privacy and confidentiality is essential if an effective physician – patient relationship is to form[13]. 24.7% of patients in our study felt their privacy or dignity had been violated during their stay in the ED. The indignity imposed on people in an overcrowded ED has previously been found to include (1) overhearing medical or personal information, (2) being overheard, (3) having private body parts exposed, (4) seeing others' body parts[3]. The longer patients are in Emergency Departments the more likely it is that they will experience privacy incidents[3]. Patients who have their conversations overheard are more likely to withhold information from staff[13]. A study has shown that patient perceived privacy breaches may occur in up to 45% of ED presentations[13]. Another study from the USA found that breaches of confidentiality occurred during 36 % of ED visits[14]. It is clear that shorter ED stays for admitted patients would result in fewer privacy breaches[13].
37.4% of those studied said the protracted stay in the Department following the decision to admit would impact on their willingness to return. Willingness to return is strongly predicted by overall satisfaction[15].
The fact that the study was conducted in the ED by the research team may have introduced bias but Ventura et al have noted that there is a tendency for patients to overestimate their satisfaction when they evaluate care after a period of time[16,17].
Overcrowding and prolonged stays in the Emergency Department are distressing and compromise the doctor patient interaction and patients' dignity and privacy[13]. The majority of patients when asked answered that the reason for overcrowding was insufficient hospital beds. There was support for increased resources being given to acute hospitals to address this huge social injustice. The solution to the crisis in healthcare in Ireland is more acute capacity and optimum use of that capacity. Part of optimising the use of acute hospitals is to ensure that their Emergency Departments are allowed to provide acute care in a safe setting with admitted patients being just that, admitted to a bed in a ward.

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