

Real-Time Patient Satisfaction of Emergency Department Services in a Tertiary-Care Hospital in Karachi, Pakistan

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Abstract

Background: In Emergency Department (ED), patient satisfaction is an important quality indicator. The aim of this study was to assess the patient satisfaction with ED services using real-time patient satisfaction survey.

Methods: The study was conducted for two weeks in the ED of Aga Khan University in December 2011. A structured questionnaire was used to capture patient's feedback on service quality in the ED. Patient response was recorded using five-level Likert scale; strongly agree, agree, neutral, disagree and strongly disagree. Respondents were either patients or their relatives.

Results: Total 348 real-time survey forms were completed. Of these 18.6% (n=61) were in P1 triage category, 32.6% (n=107) in P2 and 48.8% (n=160) were P3 patients. An overall satisfaction rate was 4.27 with satisfactory response from 84.6% patients with ED services. About 87.7% of patients were satisfied with time taken to be attended by the triage staff at the counter, Time taken to get an ED bed was 86.8% and time taken until beginning of treatment after getting an ED bed is 84.3%.

Conclusion: Patient satisfaction is an important quality indicator which enables to identify areas of improvement in ED so as to provide better care & services to patients.

Keywords: Patient satisfaction; Quality indicator; Emergency department; Pakistan

Abbreviations:

AKUH: Aga Khan University Hospital; ED: Emergency Department; ESI-IV: Emergency Severity Index-version IV; SPSS: Statistical Package for Social Sciences; CDU: Clinical Decision Unit; ICU: Intensive Care Unit; HDU: High Dependency Unit

Introduction

Patient satisfaction is considered as an important indicator of quality care provided in emergency departments (EDs) [1-3]. This satisfaction may not be the actual representation of technical quality of patient care as it is associated with the overall quality of care perceived by the patient [1,4]. It is this perception that can later become the future choice of ED for other patients [5]. By improving patient care we can also improve the job satisfaction of physicians and staff of ED that will motivate them and this will in turn create a positive work environment in already overwhelmed and stressed work setting [6].

Patient satisfaction refers to the feeling of patients whether their expectations and needs are taken care of or not [7,8]. It is a measure of equality of care perceived and the expected care by patients [9]. Patient satisfaction is usually determined by the surveys conducted with patients or their family members [10]. There are various methods by which the satisfaction based surveys can be conducted. These surveys can be done in person or via telephonic calls. Previously done, real-

time in-department surveys yield high response rates that vary between 51% to 84% [8,11-18]. However, real-time patient surveys may be associated with administration related bias [6]. The responder may respond positively to please the survey administrator [19]. Alternative methods used can be written survey but has inherent issue of selection bias or telephonic surveys which may have low response rate or recall bias. [6]

There are many factors affecting patient satisfaction like behavior of healthcare providers, hospital factors, wait time, level of experience of physician, perception of care and cost of treatment [3,7,20-22]. A study done by Edwin D et al showed a positive association between the acuity and satisfaction level with greater satisfaction among patients who visit ED due to high acuity [23].

Rationale to Select the Project

The Aga Khan University Hospital (AKUH), Karachi, Pakistan is committed to provide exemplary care that meets or exceeds the expectations of service users. Emergency Department (ED) is the gateway of the Institution and provision of quality assured services has a paramount importance for the department. Despite the best efforts, this is not reflected in the patient satisfaction surveys conducted via telephone by our Marketing Department on a regular basis. This issue was discussed in the Departmental Quality Assurance Committee and consensus decision was to have a satisfaction survey on a real-time basis, especially of high acuity patients like Priority1 (P1) patients who have life-threatening condition and can die if immediate management is not provided to them, Priority 2 (P2) patients who are at risk of

dying if initial ED management is not provided to them , and Priority 3 (P3) patients who are suffering from conditions that require work up and management on priority basis and cannot be sent back home [24].

The Marketing Department of AKUH conducts telephonic survey of the discharge patients from ED they are usually less critical and are supposed to wait longer to be seen by physicians. Asking their satisfaction level may give results which are not true reflection of ED performance because of the above mentioned factors. The patients of high acuity are given care in ED even if the ED is on diversion and this set of patients (P1, P2, P3) is not captured during the interviews conducted by the Marketing Department because of their policy of interviewing only the discharge patients from that department after a week of their visits. Another important concern is that the P1, P2 and P3 patients, that were stabilized by active intervention in the ED and then admitted and subsequently discharge from another service will take part in the satisfaction survey of that department, even though they received golden hour management in the ED. As the proportion of critically ill patients coming to ED has increased, it is our assumption that conducting a real-time survey with these patients will give us a better idea about the real ED patient satisfaction. As an ED operating in a low-and middle-income country (LMIC) it becomes important to understand the level of patient satisfaction to improve the service provided by the ED .Real-time survey also gives an idea of actual performance of ED that would be helpful in future policy-making. No study up to our knowledge has addressed it until present from Pakistan therefore this study will be first of its kind from the region.

Our objective was to access the satisfaction level of high acuity (P1, P 2 and P 3) patient with set quality indicators in the ED of Aga Khan University Hospital through real time survey.

Methods

Study design

It was a real-time survey of patients who were treated and managed in the ED of AKUH for two weeks in December 2011.

Setting

The AKUH is a tertiary care private teaching hospital and the ED provides care to approximately 49,000 patients per annum. It has an adult critical area, adult non- critical area, fast track clinic, clinical decision unit (CDU) and separate designated pediatric area. The AKUH - ED work on shift basis comprising of three shifts; morning 0700-1500hrs, evening 1500-2300hrs and night shift 2300-0700 hours. The ED has well-defined triage criteria using Emergency Severity Index-IV (ESI-IV) with an electronic patient's data base system [24]. Prior to March 2012, when all available beds in ED got occupied than ED went on diversion. During diversion hour only P4 and P5 patients are diverted while all the life-threatening and critically ill patients are continued to be accommodated, resuscitated and managed irrespective of ED diversion status. Waiting time is different for patients with different triage category such as 60 minutes, 120 minutes and 180 minutes for P3, P4 & P5 patients respectively.

Study participants

Patient satisfaction survey conducted on the high acuity patients (P1, P2 and P3). After triage these patients were taken in the treatment

area for management. Patients were selected by convenient sampling technique and enrolled as they consented to participate in the study. Patients from all the areas including Adult critical care area, Adult non-critical area and pediatric area were approached for participation in the study. Oral Informed consent was taken from the patients/ attendants for participation in the survey. The Aga Khan University Hospital ethical review committee approved the study.

Data collection and process

A structured questionnaire in real-time to ask patient's perspective for ED service was used to collect factual data. The questionnaire and methodology used in this study was the same that is used by the Marketing Department of AKUH. They conduct this survey on a regular basis for discharged patients. The questionnaire was used after taking permission from the Marketing Department.

The structured questionnaire has questions related to multiple dimensions of the service quality along with the overall satisfaction with the emergency service. Main areas focused in questionnaire were promptness of service, care provided by physician and nurses and communication. The responses were recorded based on the five level Likert scale; strongly agree (5), agree (4), neutral (3), disagree (2) and strongly disagree (1). Patients were asked to give their frank feedbacks/ comments in addition to the structured questionnaire.

The data was collected by a team of data collectors who were specifically trained for this survey by the research team in the department.

Data analysis

SPSS version 19 was used for analysis. Descriptive statistics were obtained and reported as mean and proportion for quantitative and qualitative data respectively. The strongly agree and agree components were merged into "satisfied" and strongly disagree and disagree components were merged into "dissatisfied" to get the exact percent of satisfaction.

Results

A total of 348 patients were interviewed during the real-time survey. The mean age of the studied participants was 41.3 ± 26.6 years. Majority of patients belongs to age group 60 and above i.e. 30.9% (n=107) followed by 22.5% (n=78) in 40-59 years, 10.4% (n=36) in age group of 30-39 years where as 14.5% (n=50) patients were of less than 5 years. Out of interviewed patients 57.8% (n=200) were females whereas the mean age of male and female respondents were 40.7 ± 26.7 and 43.3 ± 25.7 respectively. Table 1 gives patient demographics.

Demographic Indicators	n (%)
Gender (n=346)	
Male	146 (42.2)
Female	200 (57.8)
Age Group (n=346)	
< 5 years	50 (14.5)
5-9 years	17 (4.9)
10-19 years	27 (7.8)

20-29 years	31 (9.0)
30-39 years	36 (10.4)
40-59 years	78 (22.5)
60+ years	107 (30.9)
Mean±SD	41.3±26.6
Registration Time (n=324)	
0700 – 1500	181 (55.9)
1500 – 2300	69 (21.3)
2300 – 0700	74 (22.8)
Triage Category(n=328)	
P1	61 (18.6)
P2	107 (32.6)
P3	160 (48.8)

Of the patients interviewed 18.6% (n=61) were P1, 32.6% (n=107) were P2 and 48.8% (n=160) were P3 patients. Overall patient satisfaction was 4.27 out of 5 with 84.6% showing satisfaction with ED services while when overall satisfaction level was looked closely in terms of different triage categories the results turned out to be 79%, 83% and 88% in P1, P2 and P3 categories respectively.

The different questions related to satisfaction level comprised of diversified areas in provision of services during patients' stay in ED. When inquired about the "time taken to get an ED bed", 86.8% were completely satisfied while only 5.4% patients were not satisfied whereas 6.9% were those who have neutral opinion. For question related to "time taken until beginning of treatment after getting an ED bed" was satisfactory for 84.3% of the patients , 10.6% were not satisfied while only 5.1% were those who have neutral opinion. In terms of "doctors were caring and concerned" and "doctors listened to you" about 90% and 91% were satisfied, respectively whereas only 4% had an opinion of dissatisfaction for both services. Responses about "Nurses attended patient on every call" 86.3% patients showed their satisfaction, 6.1% remained neutral while 7.6% were not satisfied (Table 2).

Table 1: Patient Demographics (n=348)

Services Attribute	Dissatisfied	Neutral	Satisfied	Mean
Time taken to be attended by Triage staff at counter (n=317)	17 (5.4)	22 (6.9)	278 (87.7)	4.26
Time taken to get an ER bed (n=334)	25 (7.5)	19 (5.7)	290 (86.8)	4.23
Time taken until beginning of treatment after getting ER bed (n=331)	35 (10.6)	17 (5.1)	279 (84.3)	4.13
Your satisfaction with the time taken to be discharged/admitted (n=111)	41 (36.9)	20 (18)	50 (45)	3.07
Doctors were caring and concerned (n=335)	15 (4.5)	17 (5.1)	303 (90.4)	4.41
Doctors listened to you (n=334)	14 (4.2)	17 (5.1)	303 (90.7)	4.45
Doctors informed you on your health condition (n=310)	15 (4.8)	23 (7.4)	272 (87.7)	4.36
Doctors informed you of results of tests/investigations (n=222)	21 (9.5)	23 (10.4)	178 (80.2)	4.15
Doctors informed you about need for admission/follow up care (n=126)	12 (9.5)	18 (14.3)	96 (76.2)	4.05
Nurses showed care and concern (n=326)	14 (4.3)	26 (8)	286 (87.7)	4.39
Nurses attended to you on every call (n=314)	24 (7.6)	19 (6.1)	271 (86.3)	4.32
Nurses inserted cannula/IV lines skillfully (n=300)	16 (5.3)	35 (11.7)	249 (83)	4.22
Paramedical staff was friendly (n=340)	11 (3.2)	26 (7.6)	303 (89.1)	4.4
Paramedical staff was efficient (n=337)	16 (4.7)	28 (8.3)	293 (86.9)	4.34
Considering the care and service provided, charges were reasonable (n=135)	64 (47.4)	22 (16.3)	49 (36.3)	2.84
Overall Satisfaction (n=345)	17 (4.9)	36 (10.4)	292 (84.6)	4.27
You would recommend this service to family and friends, if needed (n=346)	21 (6.1)	41 (11.8)	284 (82.1)	4.17

Table 2: Patient satisfaction ratings on various dimensions of ED services (n=348)

When asked about promptness of service in terms of time limit following results were obtained. "After reaching ED attended by triage staff between 5-10 minutes" was calculated to be 16.1% whereas the information about "After being seen by the triage staff they got an ED bed within 5 minutes" the result was 70%. For the inquiry regarding

"After getting an ED bed their treatment started within 5 minutes" 61.8% of the patients were satisfied while 54% patient felt that it took more than sixty minutes for them to be admitted or discharge from ED (Table 3).

Promptness of the Service	n (%)
After reaching the ER, attended by the triage staff on the counter (n=317)	
0 - 5 minutes	215 (67.8)
5 - 10 minutes	51 (16.1)
More than 10 minutes	51 (16.1)
After seeing the triage staff on the counter, got an ER bed (n=335)	
0 - 5 minutes	235 (70.1)
5 - 10 minutes	39 (11.6)
More than 10 minutes	61 (18.2)
After getting an ER bed, your examination/treatment started (n=330)	
0 - 5 minutes	204 (61.8)
5 - 10 minutes	55 (16.7)
More than 10 minutes	71 (21.5)
To be discharged/admitted from ER (n=111)	
0-30 minutes	30 (27.0)
30-60 minutes'	21 (18.9)
More than 60 minutes	60 (54.1)

Table 3: Promptness of the service (n=348)

Discussion

Patient satisfaction is among the most important factors and indicators of quality in a hospital. Patient satisfaction surveys act as a means to measure the efficacy of a department worldwide [1]. It is also very important for future utilization of ED service, satisfied customers not only prefer to use same ED at the time of future need but also recommended it to friends and family members [25].

Our survey had shown that overall satisfaction was 4.27 out of 5 in real time survey which is comparable to a recent survey done in Iran in which 86.5% patients rated the services as above average [26]. At the same time our result also showed that patients with high acuity (P1) are more satisfied then less critical patients (P3) in term of their attended by the triage staff, getting ER bed and beginning of the treatment. These results are similar to the Boudreaux et al. that emergent patients are more satisfied than urgent or non-urgent patients in terms of ED visits [23]. Both Hansagi et al. and McMillan et al. found similar result with linear relation between acuity and patient satisfaction [1,27]. This could be because of the fact that these are high acuity patients which either have life threatening emergencies or are critically ill and are seen first if not immediately. For example if a P4 patient is waiting and a P1 arrives, the P1 regardless of situation will be taken straight into the treatment rooms. It is well proven fact that prolong wait can change the perspective of patient towards the services provided to them and may result in disappointment because of unmet expectations and anxiety [28].

Lengthy waiting times are inversely related to patient satisfaction [26,29]. This waiting may be either to get an ED bed after reaching to ED or this waiting could be for admission to hospital or discharge from ED. Our result showed that 86.8% patient reported their satisfaction for getting ED bed on time as these patients are high priority in the triage system (P1-P3), thus will receive beds first if not immediately upon arrival. Patients coming in as triage P1- P3 will immediately if not very soon upon arrival begin being treated. This is consistent with other studies which showed that “Emergent” and “Urgent” patients perceived their throughput times more favorably than non-urgent patients [23]. The patients with high acuity tends to be more satisfied as shown in our study with their ED care because of their less waiting time and more attention from ED providers [30,31].

Interestingly when the patient satisfaction was asked regarding the time taken to be discharged/admitted from the ED only 45 % patients showed their satisfaction as a whole with high acuity patients (P1) showed less satisfaction then patient with low acuity (P3). This may be due to fact that the process of admission and discharge of high acuity patients are somewhat prolong and cumbersome as compared to low acuity patients and at time high acuity patients have to wait longer in ED for bed in intensive care unit or high dependency unit [32,33].

Almost half of the patient in our survey showed their dissatisfaction regarding cost of care in ED. It is due to fact that healthcare insurance is not well established in Pakistan and most of the patients have to pay out of their pocket for the services they received [34]. This is in contrast to the western world where either government bears the expenses or is paid by the insurance company [35].

Nursing care and attitude can have significant impact on patient satisfaction. Our study showed that patients are well satisfied regarding nursing care. Similar results are shown in studies like Alfred Emergency and Trauma Centre of Australia surveyed found out that the satisfaction is being affected by the nurses attitude and moods irrespective of the management provided [10]. Wright et al. did also find similar result in their study that “nurses can influence patient satisfaction in the ED through communication and caring behaviors” [5].

Our conclusions are supported by numerous studies completed globally, although we were unable to compare them to anything published regionally or within Pakistan as this study is the first of its kind in our country (Figure 1).

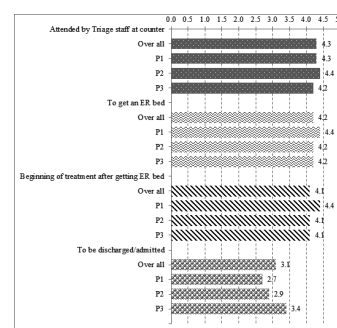


Figure 1: Patient satisfaction as per triage category

Conclusions

We found that patient satisfaction is a powerful quality improvement tool to measure the quality of care patient received. We also found that high acuity patients are more satisfied in terms of care and attention they received during their stay in emergency room.

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None

Author's Contribution

MK and JF contributed equally to the work. AF, AJ participated in the design, and data analysis. MK, JF, AF, AJ and NZ drafted the manuscript. MK, NZ and MB give the final review of the draft and approve the manuscript.

Competing Interest

The authors declare that they have no competing interest

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