

Effect of Patient Education in the Triage in Improving Patient Satisfaction in the Emergency Department of Manila Doctors Hospital

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Background: With the rising patients dissatisfying experiences and poor patient satisfaction rate accounted in the Emergency Department (ED) of Manila Doctors Hospital, the researcher was determined to alleviate these upsetting experiences without making huge and costly renovation on the part of the hospital management by educating the patients and guardians of pediatric patients of the ED processes and scenarios while at the triage.

Methods: This study was a randomized, controlled trial in which 70 acute care adult patients and guardians of pediatric patients that came in the afternoon shift (2-10pm) were enrolled and randomized to experimental and control groups, where the experimental group was educated of the ED processes and scenarios at the triage area and the control group was given no information. At the end of ED visit, participants were asked to give a patient satisfaction rating using a scale where 6 domains are rated (triage, patient safety, security, non-medical and medical staffs, facility and payments).

Results: The results showed no statistically significant differences between the experimental and the control groups. There was not enough power to detect a statistically significant difference between the two groups as to the level of patient satisfaction.

Conclusion: The experimental and control groups were comparable as to the level of patient satisfaction. Patient education in the triage is not an effective strategy in improving the patient satisfaction in the ED of Manila Doctors Hospital.

Keywords: Patient satisfaction, emergency department, patient education

INTRODUCTION

Emergency department has always been filled with patients that come in with different complaints and expectations. Hospital administrators encourage health care providers to improve patient satisfaction because of excessive complaints or disappointing patient satisfaction survey

results. Many emergency departments (ED) are overcrowded and resources are exhausted, making it seem unlikely that appreciable improvements in patient satisfaction can be achieved without major facility renovations, an increase in the number of beds, or a significant increase in staffing. Patient satisfaction is being increasingly used as a measure of health system performance.¹ ED crowding, waiting time

and delays may lower perceived quality of care and patient satisfaction.

Patient satisfaction with medical care is crucial to ensuring a healthy and productive physician-patient relationship and patient compliance with recommended therapies.² Wait times can have a huge influence, both positive and negative, on patient satisfaction.³ Patients who were very satisfied had shorter waiting time, while those that were not satisfied had longer waiting time.²

The mean waiting time for the patients to be visited was 24.15 min ranging between 35min as the maximum and 1 min as the minimum waiting time. For association analysis between the waiting time and satisfaction levels, $P = 0.03$ indicates that those with longer waiting time were dissatisfied.⁴ The emergency department (ED) has become the hospital's front door, now accounting for more than half of all admissions in the United States.⁵

This has placed considerable strain on many facilities, with the increasing demand for service - much of it inappropriate to the site of care-leading to long waiting times, crowded conditions, boarding patients in hallways, increased ambulance diversions, and highly variable care and outcomes.⁶

There are three service factors that influence satisfaction. These are interpersonal skills/perceived staff attitudes, provision of information/explanation, and aspects related to waiting time, particularly the perceived waiting time in relation to the patients expectation.⁷ According to the review by Boudreaux, et al., interventions providing information about ED waiting times and processes have received mixed support, with three studies finding gain in satisfaction and one not.⁸ The odds of reporting very poor, poor, or fair satisfaction with overall care also varied significantly among the triage nurses, fast track doctors, and fast track nurses, hence staff attitudes toward the patient greatly affects the satisfaction rate.⁹ Also noted in the study of Dr. Stephen W. Corbett, et al., patients waiting to be treated were randomized to view an informational videotape or to receive standard management (no videotape), it revealed statistically significant improvements in the intervention group on

questions about level of anxiety and appropriateness of delays.¹⁰

But not all studies yielded a positive result. The study of Phan S, et al., patients were given informational brochures regarding emergency department wait times on patient satisfaction and had no measurable impact on patient satisfaction or waiting time perception.¹¹

This research was determined to mitigate these upsetting experiences in the ED by informing them of the process and present scenarios without making huge and expensive refurbishment on the part of the hospital management. Patient satisfaction varies for every patient that comes in the ED, this satisfaction affects how they perceive the management or treatment to be effective, which may shadow/ mask the supposed outcome of the treatment and also the future follow-up visits. At the ED, diverse patients are encountered daily and patient education may both benefit physician-patient relationship and management. This study was conducted to determine the effectiveness of patient information given to ED patients in the triage area versus no information given so as to improve patient satisfaction.

MATERIALS AND METHODS

Study Design

This was a randomized, double blind, controlled trial of an information dissemination to assess changes in patient satisfaction. The Manila Doctors Hospital Institutional Review Board approved this study and the informed consent process.

Study Population

The study population had acute care adults and guardian of pediatric patients who came at the ED in the afternoon shift (2-10pm), from which 70 subjects were taken after obtaining their informed consent. This study excluded participants younger than 18 years of age, critical

patients, admitted patients and patients discharged with a primary psychiatric diagnosis.

Study Setting

The study was performed at the Department of Emergency Medicine Manila Doctors Hospital, a private tertiary hospital, with estimated monthly ED consults of 4000 patients and estimated ED consults of 50,000 patients annually. The study undertook during the 2–10 pm shift where patients sudden influx or surge is known to occur at a daily basis.

Sampling

In this study, simple random sampling was used to assign participants to the experimental group in which every patient was informed of the ED process and scenario while at the triage. No information was given to the control group.

Inclusion Criteria

Participants included in this study were acute adult patients and companions/guardians of pediatric patients who came to the emergency department of Manila Doctors Hospital during the afternoon (2pm-10pm) shift.

Exclusion Criteria

This study excluded participants younger than 18 years of age, critical patients, admitted patients, and patients discharged with a primary psychiatric diagnosis.

Data Collection

The principal investigator trained two research assistants to deliver the intervention to the randomized subjects while at the triage area, and administer surveys at the end of the ED visit.

Subjects were randomized into group A and group B, in which only the research assistants knew which group

is the experimental group. Subjects received appropriate treatment at the ED regardless whether they were in group A or B. The research assistants conveyed the script to the participants at the triage as follow:

- a. The research assistant informed the participants that the emergency room does not follow the principle of “first come, first served” basis mainly because triaging is based on life and death situation and they are expected to wait until they are seen by a doctor.
- b. The research assistant informed the participants of the ED bed capacity and if reached, they will be seated in a chair while being interviewed and be treated.
- c. The research assistant informed the participants that medication will take some time before it would be given owing to procurement and preparation.
- d. The participants were informed that laboratory results may come in after 2 hours or more from the time it was extracted or from the time they submitted the sample.
- e. The participants were informed that healthcare providers may not immediately take care of their of needs especially if there are patients at the ED needing more urgent care.
- f. The participants were informed that they will have to wait to be called when they are for discharge.
- g. After disposition, participants were given an in-house rating scale for their ED experiences.

The in-house ED customer satisfaction rating scale sheets were collected from patients in group A and group B upon discharge at the ED.

Patient Satisfaction Questionnaire

An in-house structured rating survey (Outpatient Customer Satisfaction Survey) for ED service was used to collect factual data. The survey method used in this study was also being used by the Human Resource Department of the Manila Doctors Hospital.

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 triaging, patient safety, security, medical and non-medical care provided, facility, and payment. The responses were recorded based on the 7-point scale: Strongly Agree (7), Agree (6), Moderately Agree (5), Neutral (4), Moderately Disagree (3), Disagree (2), Strongly Disagree (1). Patients were asked to give their frank feedbacks/comments in addition to the structured questionnaire. The survey was collected upon discharge.

Statistical Treatment of Data

Data were entered into a database and analyzed using STATA SE version 13, the minimum sample size required was at least 70 based on the assumed percent of satisfied subjects in the experimental group = 90% and control group 50% with power = 90%, alpha level 5%, dropout rate of 25%.

RESULTS

After the data collection period, a total of 70 patients were successfully enrolled into the study assigned randomly into two groups. Group A had 36 patients, while 34 were

randomized to Group B using a computer-generated randomization.

Simple comparison of basic patient characteristics for age and gender was performed. Mean age for the control group was 38.13 years (s.d.=12.41) and 38.64 years old (s.d.=12.32) for experimental group. No significant difference was found the between the two groups as to age (p=0.8641).

There was no significant difference found in the proportion of male and female patients in either group (p=0.525) with a 23:11 male to female ratio in control group and a 21:13 ratio in experimental group.

The questionnaire was divided into six domains: Triage, Patient Safety, Security, Medical and Non-Medical Staff, Facilities, and Payment. The mean scores per domain per group are reported and compared in Table 1.

No significant differences in mean satisfaction scores were seen between Group A and Group B. On the mean scores across all domains, no statistically significant differences were found between Groups A and B (p=0.8916). For the average of all dimension scores, groups A and B had average patient satisfaction scores of 4.78 and 4.72 respectively, which is equivalent to Moderately Disagree which means they were not satisfied with their ED visit to Neutral which means they were in between satisfied and not satisfied. Out of all the individual dimensions, only security was able to get an average score of 5 and higher, indicating a Neutral opinion, which means they were between satisfied and not

Table 1. Patient satisfaction scores per domain.

Domains	Group A (n=36)			Group B (n=34)			p-value
	mean	SD	CV %	mean	SD	CV %	
Triage	4.75	1.88	38	4.59	1.50	33	0.6947
Patient Safety	4.86	1.84	38	4.87	1.50	31	0.9774
Security	5.29	1.68	31	5.33	1.37	26	0.9202
Medical and Non-Medical Staff	4.77	1.58	33	4.55	1.85	41	0.5971
Facilities	4.62	1.83	40	4.59	1.90	41	0.9437
Payment	4.36	1.79	41	4.41	1.98	45	0.9110
All Dimensions	4.78	1.61	34	4.72	1.57	33	0.8916

Abbreviation: SD. = standard deviation; CV = coefficient of variation

satisfied with their ED experience, while the rest had scores equivalent to a Moderately Disagree opinion meaning they were not contented with their ED visit. The coefficients of variation of the average scores of all dimensions were the same except for the triage, patient safety and security which were slightly higher in the control group than the experimental group. This means that the variable with the larger coefficient of variation is more dispersed compared with the smaller coefficient of variation. It is evident that the dispersion or variation is higher for the triage, patient safety and security in the control group.

DISCUSSION

Failure to reject the null hypothesis statistically does not mean that patient education does not improve patient satisfaction at the ED. It may simply mean that there was just not enough power to detect a statistically significant difference in such. Factors such as the in-house questionnaire survey that is being used by the hospital to assess outpatient patient satisfaction in the ED may not be well-suited for ED assessment of patient satisfaction. There may have been some variables in the implementation of the intervention that were not thoroughly considered. The triage nurse was perhaps overwhelmed with patients coming in at the triage simultaneously or the ED was undermanned and the ED was loaded with patients waiting to be given medications/treatments or piles of orders waiting to be carried out, may be the beds/chairs for the patients and relatives in the ED were not enough to accommodate patient surge, may be the waiting time was long that the patient's need was not immediately addressed and staff were not able to give paramount patient care that affected the patient's perspective of ED care and satisfaction.

There are various reasons why emergency departments should strive to ensure that patients are satisfied of their ED visit. Satisfied patients are inclined to fill their prescriptions, keep their follow-up appointments, and have more effective understanding of their aftercare instructions. Information of patients in the triage may be used to educate about

emergency medical services, to reduce anxiety, and to improve satisfaction with the emergency department experience. Basic emergency department information can effectively inform and reassure patients in an awkward situation, and lay the groundwork to maximize effective health care provider and patient interactions. Information is crucial in reducing stress. The unknown is scary while the known is more manageable. Information fosters familiarity and moderates stress and fear by clarifying the treatment ahead and limiting patients' expectations. Improved patient education translates into improved patient satisfaction¹² and improved satisfaction results in improved patient care.

The use of a research-based instrument gave valuable information for quality improvement in clinical practice. Many of the identified areas for quality improvement are related to patient care. Therefore, the importance of patient care in the emergency department should be highlighted to nurses and physicians and they also need to be more attentive to the need of the individual patient. All staff should help patients feel that they have made the right decision at the right time to come to the ED and that they are important and should be given careful attention. Patients should not feel guilty or foolish of visiting the ED for their illness. There is no "wrong" reason for coming to the ED.

Patient satisfaction has also been related to other factors besides basic information given to the patient. Compassion shown by the staff, waiting time, organization of the staff, courteousness, and even the technical quality of care delivered have all been identified as important factors. If these are indeed contributing factors to patients' comfort with their use of emergency services then it is possible that some of these issues should also be addressed.

The benefits of providing information to patient and caregivers are obvious. There are minimal additional burdens on the emergency department staff, and it does not interfere with care in patients who are already waiting.

Of course the physical setting, roomy emergency facilities are more welcoming and have an impact on patient satisfaction with their ED experience. Increased staffing

during busier hours is helpful. Bedside registration is more convenient and having a lab and a radiology unit attached to the ED speeds up diagnosis.

CONCLUSION

The experimental and control groups were comparable as to the level of patient satisfaction. Patient education in the triage is not effective in improving the patient satisfaction in the ED of Manila Doctors Hospital.

RECOMMENDATION

The researcher recommends the use of a patient satisfaction rating scale specifically intended for ED assessment of patient satisfaction. Researchers also recommend a study on a larger population size or a multi-center study to gain a more reliable and valid understanding of the correlation of patient education and patient satisfaction. Different valid and reliable survey questionnaires may be employed in determining patient satisfaction.

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