

Time frame guide for emergency model of care and patient satisfaction in emergency facilities

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Abstract

Patient satisfaction in the emergency department is crucial for assessing the quality of care provided. Timely patient management enhances confidence in healthcare providers and the hospital. The Time Frame Emergency Model of Care is instrumental in ensuring timely service delivery and reducing adverse effects associated with prolonged patient stays (LOS) and overcrowding. The purpose of this study was to investigate the relationship between the time frame guide emergency model of care and patient satisfaction in the emergency room. This quantitative cross-sectional study employed accidental sampling, involving 95 respondents aged over 18 years with triage 4 classification in the emergency department. Questionnaires were used to collect data on the Time Frame Emergency Model of Care and patient satisfaction. The chi-square test was utilised for data analysis. The findings revealed a high level of patient satisfaction in the emergency department. The chi-square test demonstrated a significant relationship between the Time Frame Emergency Model of Care and patient satisfaction (p -value = 0.000, <0.05). Moreover, the correlation coefficient of 0.582 indicated a strong relationship. In conclusion, this study established a significant relationship between the Time Frame Emergency Model of Care and patient satisfaction at emergency room. These results emphasise the model's role in enhancing patient satisfaction and reducing adverse outcomes associated with extended patient stays and overcrowding.

Introduction

Hospitals play a vital role within the social and healthcare framework by offering comprehensive services for disease prevention, cure, and community well-being.¹ In particular, Emergency Departments (ED) and Emergency Room (ER) aim to deliver prompt, accurate, and integrated healthcare services to minimise the risks of disability and fatality, emphasising the preservation of life and limb.²

A study conducted in California, United States revealed that among 995,379 ER patients, overcrowded emergency rooms led to a 5% risk of death (95% CI).³ Conversely, a study in Kupang, Indonesia reported that 89% of patients expressed satisfaction with the Emergency Department's services.⁴ However, these findings suggest that the accuracy of patient management can decline in overcrowded emergency rooms. Based on data collected from August to November 2022 at Premier Hospital Surabaya's emergency room, the treatment duration for non-emergency patients ranges from 3 to 4 hours. This duration slightly exceeds the target time frame for emergency care, which is set at 4 hours, indicating that Premier Surabaya Hospital provides good patient care.⁵

Initial survey data from November 27, 2022, including interviews with five patient families visiting the ER, revealed that three patient families were dissatisfied with the service. The diverse backgrounds of patients in the ER, spanning socioeconomic, cultural, educational, and experiential differences, lead to varying patient and societal perceptions.⁶ Patients tend to be satisfied with nursing services in the ER when their expectations are met, which includes fast, responsive, courteous, friendly, and efficient service, as well as creating a comfortable atmosphere within the facility.^{7,8} However, some patients and the public perceive nurses as less independent and efficient in patient care in the ER, often due to their limited understanding of the patient management procedures followed by nurses in this specific setting.^{9,10}

The quality of hospital nursing services is shaped by several factors, encompassing input elements like medical personnel, funding, and facilities, as well as environmental factors such as management policies.^{11,12} Patient satisfaction is also influenced by characteristics like age, gender, education level, and occupation.¹³ Additionally, the quality of services relies on tangible, reliable, responsive, responsible, and considerate aspects.¹⁴

Premier Surabaya Hospital is dedicated to improving service quality with the goal of achieving the highest levels of patient satisfaction, particularly within the Emergency Room (ER). The Time Frame Guide Emergency Model of Care divides the 4-hour target for emergency patient care into three manageable time frames: 2 hours for ER assessment and the initiation of clinical management, 1 hour for consultation and/or inpatient bed allocation, and 1 hour for patient transfer to inpatient care, another hospital, or discharge planning. Given these considerations, this study aimed to investigate the relationship between the time frame guide emergency model of care and patient satisfaction in the emergency room.

Materials and Methods

This research employs a quantitative approach with a correlational design and a cross-sectional framework. The study was conducted among patients in the Emergency Room at Premier Surabaya Hospital. Ethical approval for this study was granted by the Ethics Committee of Premier Surabaya Hospital in Indonesia, and all procedures adhered to the principles outlined in the Helsinki Declaration. Written informed consent was duly obtained from all participants. The study comprised 95 respondents, selected from patients aged >18 years who presented at the emergency room with a triage level of 4, employing accidental sampling at Premier Hospital Surabaya.

The study included emergency patients aged >18 years with a triage level of 4 presenting at the emergency room of Premier Hospital Surabaya. Patients who declined to participate and pediatric patients were excluded from the study.

To measure the time guide for emergency care, a clock was used. In 2000, the United Kingdom initiated the “Four Hour Rule Program” as part of a national health reform agreement. This policy sought to enhance access to emergency care by reducing overcrowding and access blockages and their associated adverse outcomes. It mandated that ED patients should, whenever clinically possible, receive treatment, referral, or discharge within four hours of arrival. On April 20, 2010, this policy was adopted by the Australian government and termed the National Emergency Access Target (NEAT).

To improve patient throughput time in the Emergency Room and meet the four-hour target, the New South Wales Ministry of

Health introduced a guide/model of care known as the Emergency Model of Care. This model was developed based on the ideal patient journey through the ER.

For the dependent variable of patient satisfaction, a questionnaire comprising 20 questions was administered to the respondents. The questionnaire underwent rigorous validity and reliability testing. Each question’s validity was assessed by comparing the calculated correlation coefficient (r) results with the tabled correlation coefficient (r) for a given degree of freedom (df = n-2) at a 5% significance level. Since the result (r table) (0.374) was less than the calculated correlation coefficient (r count) (0.517), the questionnaire was considered valid. Moreover, the questionnaire demonstrated reliability, with a Cronbach’s alpha value of (0.844), surpassing the recommended threshold of 0.60.

Data analysis was conducted using the SPSS 25 for Windows software. Given that all the research data are on a nominal scale, the statistical test employed was the Chi-Square test with significant value of 0.05 (5%).

Results

The research results are categorised into general data and specific data. General data encompass variables such as gender, occupation, education, age, and insurance coverage. On the other hand, specific data pertains to response time and patient satisfaction within the emergency room at Premier Hospital Surabaya.

Based on Table 1, it is evident that the majority of respondents (patients), constituting 55 individuals (57.9%), were female. The results indicate that the highest proportion of respondents held a bachelor’s degree, with 75 individuals (78.9%). Furthermore, the data reveals that the largest segment of respondents, numbering 70 individuals (73.7%), were employed in the private sector. In terms of insurance coverage, 65 respondents (68.4%) were registered under insurance plans. The average age of the respondents was calculated to be 50.11 years. The youngest respondent was 40 years old, while the oldest was 60 years old.

Table 2 presents the relationships between the Time Frame Emergency Model of Care and patient satisfaction within the Emergency Room at Premier Hospital Surabaya. Among the

Table 1. Characteristics of Respondents (patients)

Variable	f(x)	Percentage (%)
Gender		
Man	40	42.1
Woman	55	57.9
Education		
Junior High School	5	5.3
Senior High School	15	15.8
Bachelor	75	78.9
Work		
Civil servants/TNI	25	26.3
Private	70	73.7
Health Insurance		
Uninsured	30	31.6
Insured	65	68.4
Age		
Min-Max	40-60	
Mean	50.11	
Median	50	
Mode	43	

respondents, 13 (13.7%) expressed dissatisfaction, 2 (2.1%) reported satisfaction, and 16 (16.8%) were very satisfied with this care model. In cases of dissatisfaction, 1 respondent (1.1%) found the care sufficient, while 19 respondents (20.0%) expressed satisfaction, and 2 (2.1%) were very satisfied. Interestingly, 1 respondent (1.1%) expressed dissatisfaction with patient satisfaction. The Chi Square statistical test results reveal a significant relationship between the Time Frame Emergency Model of Care and patient satisfaction, with a p value of 0.00, which is less than the significance level α of 0.05. This indicates that there is indeed a connection between the two variables in the context of Premier Hospital Surabaya's Emergency Room. Moreover, the correlation coefficient, with a value of 0.582, suggests a moderate-level relationship between these variables.

Discussion

In the context of the Time Frame Emergency Model of Care at the Premier Hospital Surabaya's emergency room, it is notable that 60.0% of respondents rated this model as good, whereas 23.2% found it adequate. However, 16.8% of respondents perceived it as poor. This observation aligns with Asplin's research, which emphasises the pivotal role of competent human resources in achieving efficient response times in the emergency room. The responsiveness of emergency room services to incoming patients significantly influences customer and patient satisfaction.¹⁵

The reliability of the medical staff, including both doctors and nurses at the Premier Hospital Surabaya's emergency room, underpins the effectiveness of this well-structured model of care. This can be attributed to various programs conducted periodically by the hospital, focusing on service development, excellence, and skill enhancement for nursing staff, including Basic Trauma and Cardiac Life Support (BTCLS) training. Mohtar's research further supports the idea that training, particularly in basic life support theory, correlates with nurses' improved understanding and response times to injured patients.^{11,16}

Research conducted in the United States points out that overcrowding issues in the emergency room typically arise due to unscheduled urgent care, safety net care, and emergency cases.¹⁵ This suggests that the factors affecting the Time Frame Emergency Model of Care's implementation may be linked to the growing demand for emergency room services, including increased patient visits and the severity of cases. However, these demands are not always matched by a proportional increase in medical personnel, leading to a primary focus on addressing emergency cases. Additionally, the presence of a triage system, prioritising patients based on the severity of their condition, can lead to discrepancies in service times.¹⁷

Consistent with Qureshi's research, nurses can play a critical role in enhancing the knowledge of patients categorised as "yellow label" about triage services. This proactive measure can help reduce anxiety and dissatisfaction among patients. Improved patient understanding of the triage process, particularly for "yellow label" patients, is crucial to elevating their satisfaction levels while waiting in the emergency room. It is important to acknowledge that time in this context is closely associated with feelings of boredom and anxiety, given that patients perceive themselves to be in a dangerous and life-threatening condition, even when immediate treatment by healthcare professionals may not be warranted.¹⁸

The researchers' observations regarding time frame 3 revealed several factors that influence processes within this time span. These factors encompass administrative procedures, ensuring the completeness of inpatient status, and the availability of necessary supporting tools. These findings emphasise the need for a well-structured Time Frame Emergency Model of Care in the emergency room, ensuring efficient and effective healthcare services for patients. Addressing the factors affecting each time frame is essential for improving the quality and timeliness of emergency care services.

Upon analysing the patient satisfaction questionnaires from respondents in the Emergency Room of Premier Hospital Surabaya, it is evident that the majority of respondents expressed satisfaction. Specifically, 15.8% of respondents indicated dissatisfaction, while 55.8% expressed satisfaction, and 28.4% conveyed being very satisfied with their experience. This observation corresponds with earlier research, underscoring the significance of trust within the work organisation. Trust is believed to be associated with an organisation's capacity to deliver quality services that can be relied upon.^{19,20}

Reliability, in this context, refers to the ability to consistently provide dependable service. This entails that every employee possesses the requisite knowledge, expertise, independence, mastery, and a high degree of professional conduct to ensure that service provision is satisfactory.^{21,22} It is essential for the services delivered to leave no room for complaints or negative impressions among the public. The competence and skills of the staff in providing these services play a vital role in influencing patient satisfaction. When staff members excel in their roles and execute their tasks correctly, patients experience satisfaction and are unlikely to raise concerns about the care they receive in a hospital's emergency room.^{23,24}

The results suggest a significant relationship between a good Time Frame Emergency Model of Care and patient satisfaction. These findings are consistent with a study conducted by Zulfa, where respondents who reported a good Time Frame Emergency Model of Care displayed very high satisfaction levels at 58.6%. Another 17.6% of respondents expressed satisfaction, while 23.8% conveyed dissatisfaction with the hospital's emergency room ser-

Table 2. Cross tabulation of Time Frame Emergency Model of Care and Patient Satisfaction.

Patient Satisfaction Variable	Not satisfied		Satisfied		Very satisfied		Total	
	N	%	N	%	N	%	N	%
Poor	13	13.7	2	2.1	1	1.1	16	16.8
Adequate	1	1.1	19	20.0	2	2.1	22	23.2
Good	1	1.1	32	33.7	24	25.3	57	60.0
Total	15	15.8	53	55.8	27	28.4	95	100.0

$p=0.000 \leq 0.05$

vices. This variance in satisfaction levels is influenced by several aspects within the hospital's emergency department concerning the Time Frame Emergency Model of Care. These aspects significantly impact the quality of service delivered to incoming patients.²⁵

Conclusions

Based on our research, it's clear that there's a strong connection between how well the Time Frame Emergency Model of Care works and how satisfied patients are in Premier Hospital Surabaya's emergency room. This means that when the Time Frame Emergency Model of Care is effective, it makes patients happier. For the broader population, these findings have implications for healthcare facilities and patients in general. Hospitals can consider adopting effective time management models like the one we studied to improve patient satisfaction. This approach isn't just beneficial for Premier Hospital Surabaya; it can be a valuable model for healthcare institutions worldwide to enhance the overall patient experience. Patients, on the other hand, can be more informed about the importance of efficient care models, which can guide their choices and expectations when seeking medical care. Ultimately, the focus on patient satisfaction can lead to improved healthcare experiences on a larger scale.

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