

# Factors Affecting the Patients' Decision in Selecting a Hospital in Medical Emergency

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**Abstract** - *Selecting a hospital in a medical emergency is a critical decision for any patient or patient's guardian. Though there are many researches done on this subject in developed countries, there have been no studies done in Sri Lanka. As Sri Lanka did not have a structured emergency medical care setup covering the entire island, it was quite interesting to explore the factors which influenced a patient or patient's guardian in selecting a hospital for a medical emergency. Generally, private hospitals in Colombo have better facilities for medical emergency patients than the state sector hospitals. In spite of facilities provided, many patients sought the services of state sector hospitals in medical emergencies. This study was done to establish the reasons for above mentioned situations. The patients admitted for medical emergencies to the National Hospital of Sri Lanka (NHSL) and Lanka Hospitals (LH) were considered for this study. Fifteen percent of the medical emergency patients of NHSL and LH in the first week of April 2014 were randomly selected for this study. Based on the above percentages, data was collected pertaining to 166 patients out of 1,036 emergency patients of NHSL and 40 patients out of 266 emergency patients of LH. The collected data was analyzed using SPSS version 16. Nominal and ordinal scale data were reported as absolute and relative frequency. The study revealed that a patient or patient's guardian considered several factors when selecting a hospital in medical emergencies. The study explains that the most important factor in choosing a hospital for medical emergencies was the reputation of the hospital in handling the medical emergencies. Further, non-availability of health insurance coverage and unaffordability for charges, were the other major reasons for selecting NHSL in medical emergencies. The study revealed that the patients preferred NHSL than private hospitals in Colombo when there was a medical emergency, due to the above mentioned factors. Further, the medical emergency patients of NHSL were satisfied with their treatment than the patients of LH. If a private hospital in Colombo*

*expects attracting more medical emergency patients, it should concentrate on the factors which improve the reputation of its' Emergency Department (ED). This can be achieved through research based interventions on the areas of patients' concerns in relation to the Emergency Department of the hospital.*

**Keywords:** patients' decision, medical emergency, reputation of Emergency Department

## I. INTRODUCTION

Selecting a hospital in a medical emergency is a critical decision as it has a direct bearing on the clinical outcome of the patient. One state owned hospital, namely National Hospital of Sri Lanka (NHSL) and one private hospital, namely Lanka Hospitals (LH), were selected for this study. These two hospitals can be considered as the hospitals that represented the salient features of the state healthcare sector and the private healthcare sector of Sri Lanka. More than 25% of inpatient admissions of NHSL and LH were considered as medical emergencies, and these patients were admitted through the Emergency Departments of these two hospitals. Generally, hospitals should have a dedicated clinical setup to accommodate medical emergency patients, as their requirements are very different to any other patient group. These special requirements include less waiting time, efficient ED processes, availability of on-call medical specialists, courtesy of physician and the standard nursing services and ED environment.

When a patient selects a hospital for an elective medical treatment, the patient or patient's guardian has the luxury of researching the standards of medical care of hospitals and make a rational selection. In a medical emergency, a patient or patient's guardian has a shorter duration in making a decision for their choice of a hospital. A dedicated Emergency Department setup in a selected number of hospitals covering all

geographies of the country is the ideal arrangement for handling medical emergencies for any country. This type of setup can be seen in developed countries. Although Sri Lanka has achieved a number of important healthcare goals in many areas including life expectancy, child mortality rate etc. the patient management in medical emergencies has not been developed to the required level. By considering this situation, it is quite interesting to know on what basis a patient or patient's guardian selects a hospital in a medical emergency, and whether they make a rational decision in selecting a hospital in medical emergencies.

Another salient feature is that the majority of the medical emergency patients prefer the state sector hospitals than the private hospitals. This is quite a different situation compared to any other healthcare segments such as primary health care, family healthcare service, diagnostic services, pharmacy and dental services, where private healthcare industry dominates over the state sector hospitals. By considering these ground realities, it is quite essential to establish the factors considered by a patient or patient's guardian in selecting a hospital in medical emergency and the failure of the private sector hospitals in Colombo in attracting the medical emergency patients, though they have better medical technologies, infrastructures and facilities than the state sector hospitals.

## II. LITERATURE REVIEW

Selection of a hospital in a medical emergency is a critical decision for a patient or patient's guardian in Sri Lanka as there is no structured emergency medical setup covering the entire island. Under this circumstance, patients may go to the nearest government or private hospital. The research failed to find any study done in Sri Lanka on the subject of a patients' decision in selecting a hospital in a medical emergency and why patients sought the services of state sector hospitals rather than private hospitals in a medical emergency. Calnan (2007) found that the social circumstances might be an important influence in selecting a hospital in a medical emergency. This study had covered all forms of hospitals including state owned, teaching, trust owned, military etc. Luft et al (1993) highlighted that quality standards played a major role in selecting a hospital in a medical emergency among several choices. This study did not

concentrate on important factors such as affordability and patients without health insurance cover.

Gowrisankaran (2003) found that the increasing competition among private hospitals in the United States of America might reduce the quality of medical care and welfare. This study explored the choice of selecting a hospital in a medical emergency from the point of view of clinicians. Puig-Junoy et al (1998) had mentioned that the demands by low and middle income groups for emergency medical services were highly sensitive to travelling and waiting times. Further, the demand for emergency services was highly elastic with respect to the waiting time in primary healthcare setups. The problem covered by this study was to identify the factors considered by the patient or patient's guardian in selecting a hospital in a medical emergency. Soleimnpour (2011) found that the hospitals would rely on research-based interventions in areas such as clinical care processes, nursing services, staff's behaviour and treatment of patients, physical environment and waiting time if a private hospital wanted to attract more emergency patients.

## III. METHODOLOGY

### *a. Sample*

A prospective, cross sectional, cohort study was conducted by covering the patients who visited the Emergency Departments of NHSL and LH. This study was carried out in the first week of April 2014 and covered all nursing shifts namely morning, afternoon and night. It was expected to nullify biasness in survey interviews by designing the survey setting based on the shift. Fifteen percent of the emergency patients who visited the two hospitals during the surveyed week were involved in the study. Data of 166 patients out of 1,036 emergency patients of NHSL and 40 patients out of 266 emergency patients of LH were collected. The quotas given for morning, afternoon and night shifts were 35%, 35% and 30% respectively.

### *b. Instrument*

The survey included three demographic questions and five scenario based questions, with multiple choices to be chosen. Last five questions were designed with the intention of understanding a patient's reason for selecting a particular hospital in a medical emergency.

*c. Data collection*

The patients were interviewed by an experienced research assistant, at the time of releasing the patients from ED, either as an inpatient or a discharged patient. The interviews were conducted either in Sinhala or English. The patients were briefed about the purpose of the study and they were given the freedom of participating for the survey.

*d. Data analysis*

The collected data were inspected, cleaned and modelled in order to generate meaningful information. The collected data was analysed using SPSS version 16. Nominal and ordinal scale data were reported as absolute and relative frequency. The data were analysed descriptively and the relationships between various variables were investigated by Pearson’s Chi Square test.

IV. RESULTS

The survey included 166 patients of NHSL and 40 patients of LH. The demographic details of the patients included in the survey are as follows.

*a. Demographic characteristics*

The first question of the questionnaire captured the gender of the interviewed patients. The patients selected for this study in both hospitals included 41.71% males and 58.29% females.

1) *Distance to the hospital from the place of medical emergency (Fig. 1):* It was clear that most of the patients were living or working at a location closer to the chosen hospital, and the flow of patients to ED reduced with increasing the distance from the hospital.

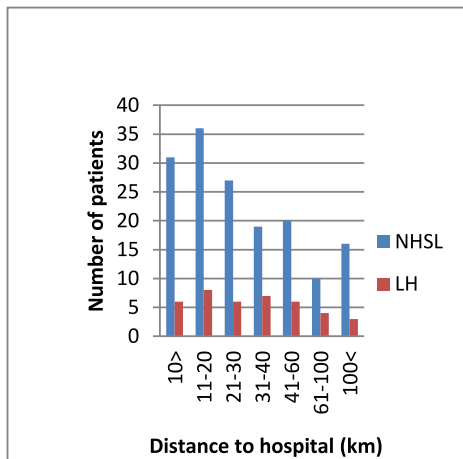


Figure 1. Distance to hospital

2) *Age of the patients (Fig. 2):* Irrespective of the hospital type, majority of the emergency patients belonged to the age group 0- 20 years. 44% of the emergency patients of NHSL were over 50 years. Only 23% of the emergency patients of LH were over 50 years.

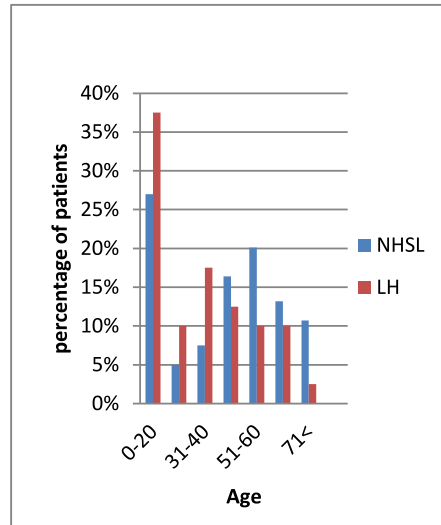


Figure 2. Age of patients

*b. Subject related findings*

3) *Reason for medical emergency (Fig. 3):* NHSL and LH receive patients with very similar disease related conditions. As NHSL did not accept paediatric and obstetric patients, data was not obtained for those disease conditions. The main cases for medical emergencies of NHSL and LH were for surgical, respiratory and gastrointestinal tract related diseases.

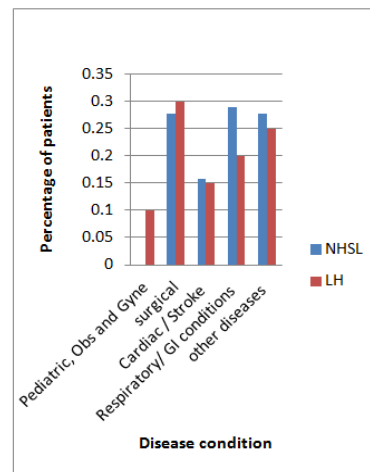


Figure 3. Reason for medical emergency

4) Choosing a hospital in a medical emergency (Fig. 4): Interestingly, the patients admitted to NHSL and LH believed that they had chosen the best hospital for their medical emergency. 35.2% and 30.0% of the patients of NHSL and LH respectively, believed that the chosen hospital was the best place for medical emergency respectively. 33.9% of the emergency patients of NHSL indicated that un-affordability and non-availability of health insurance coverage were the reasons for their choice in being admitted at NHSL. 37.5% of the patients of LH indicated that as they could afford or had health insurance cover for their emergency treatment at LH.

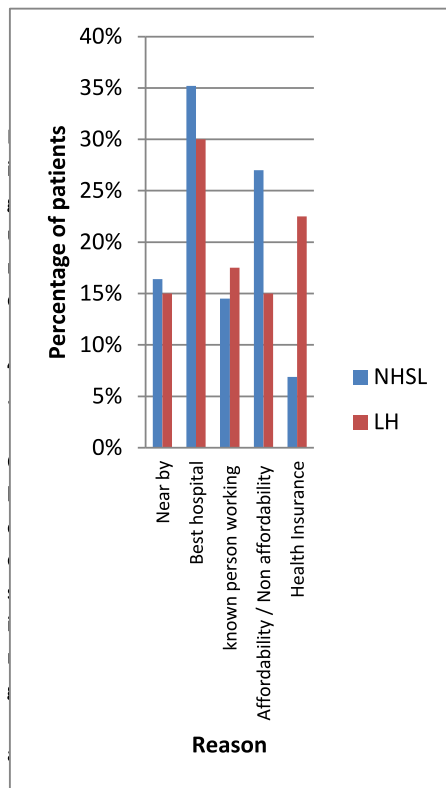


Figure 4. Choosing a hospital in medical emergency

Willingness to recommend a hospital (Fig.5): Only half of the patients of NHSL and LH indicated that they would recommend the hospital chosen for their medical emergency to others. 28% of emergency patients of LH indicated that they would not recommend LH as the best place for medical emergencies.

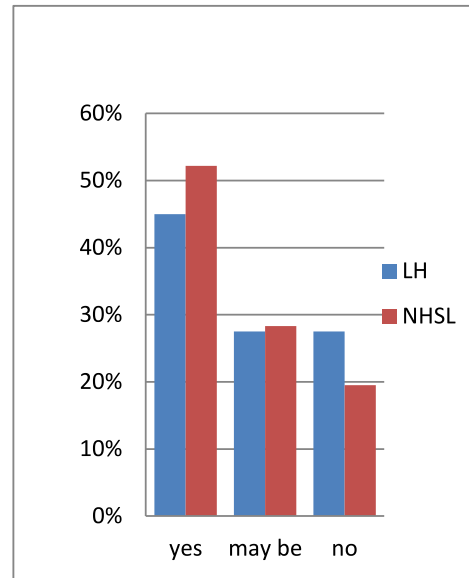


Figure 5. Willingness to recommend hospital

## V. DISCUSSION

This study clearly confirmed that the influx of emergency patients to a hospital decreases as the distance from the patients' residence or the place of accident to the hospital increases. This finding confirmed the study done by Puig-Junoy et al (1998) which explained that the demand by low and middle income groups for medical emergency services was highly sensitive to the distance of travel. Majority of the emergency patients of NHSL and LH were below the age group of 20 years. This was a significant difference from the general perception. Another finding was that LH receives a lower percentage of emergency patients of over 50 years when compared to NHSL. This might be due to the fact that the local insurance companies do not offer corporate health insurance policies for this age group. The surgical conditions were the main cause for medical emergencies in both NHSL and LH. The respiratory and intestinal tract related diseases were the second highest group of patients who visited the ED. Cause of medical emergencies as per the patients who visited NHSL and LH showed a similar pattern. These findings were very similar to the classification of emergency patients by Derlet (2011). More than half of the emergency patients admitted to NHSL and LH were reluctant to recommend the hospital chosen by them to others. The cause for this finding should be addressed by another study.

- 1) Association between the reason for choosing a particular hospital in medical emergency and the disease condition of the patient: A chi square test has been conducted using SPSS version 16 in order to investigate whether these two variables had an association.

**Table 1. Chi Square Test**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.946 <sup>a</sup>	12	0.117
Likelihood Ratio	17.490	12	0.132
Linear-by-Linear Association	.224	1	0.636
N of Valid Cases	199		

a. 3 cells (15.0%) have expected count less than 5. The minimum expected count is 3.12.

Since  $p$  value is greater than 0.05, the null hypothesis ( $H_0$ ) is not rejected. Therefore, there is no association between the reason for choosing a particular hospital in a medical emergency in relation to the disease condition of the patient.

- 2) Association between the reason for choosing a particular hospital in a medical emergency and the willingness to recommend the chosen hospital as the best place for medical emergency: A chi square test has been conducted using SPSS version 16 in order to investigate whether these two variables had an association.

**Table 2. Chi Square Test**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.429 <sup>a</sup>	8	0.711
Likelihood Ratio	5.323	8	0.723
Linear-by-Linear Association	.008	1	0.930
N of Valid Cases	199		

Since  $p$  value is greater than 0.05, the null hypothesis ( $H_0$ ) is not rejected. Therefore, it could be concluded that there is no association for the reason of choosing a particular hospital in medical emergency in relation to the willingness to

recommend the chosen hospital as the best place for medical emergency.

## VI. LIMITATIONS

The study has a few limitations. First of which is that the study was conducted only in two hospitals, namely National Hospitals of Sri Lanka and Lanka Hospitals. This limited the ability of the results to be related to other government and private hospitals in Colombo. Another limitation is that the data collected was done in a period of one week. If the duration of the data collected was extended further, the results could be generalized by removing the seasonality effect.

## VII. CONCLUSION

The findings show that a patient or patient's guardian considered the reputation of the hospital as the most important factor when choosing a hospital in a medical emergency. If a private hospital in Colombo wants to attract more emergency patients, it has to enhance the perception of its Emergency Department. This can be achieved through a research based intervention on the areas of the patients' concerns in the Emergency Department of that hospital.

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