

Prevalence of Leaving against Medical Advice (LAMA) from Paediatric Wards Patients of Al-Tibri Medical College and Hospital

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ABSTRACT

Objective: The aim of this study was to present the prevalent rate of LAMA among paediatric hospitalized patients.

Study Design: Retrospective observational study

Place and Duration of Study: This study was conducted at the Paediatric wards of Al-Tibri Medical College and Hospital, data was collected during 1 year from June 2018 to May 2019.

Materials and Methods: Both genders, from infants till 12 year olds, admitted ICU / NICU and ward paediatric patients were included. SPSS was used for analysis of data. Frequency and percentages were reported for qualitative variables and Chi-Square test was applied to test for significance.

Results: Total of 734 patients 107 (15%) patients Left Against Medical Advice among which 54 (50.5%) were males and most of them 74 (69.2%) being infants. Over half of the patients, i.e. A significant difference was reported in between type of discharge with age, month of admission and diagnosis.

Conclusion: Our study reported a 15 % prevalence of LAMA among paediatric population reported in various other studies from both developing as well as developed countries. The prevalence rate was in between the rates presented in researches. Effective communicating techniques, awareness of health care system and improving health care performance are needed to minimise the rates of LAMA among patients.

Key Words: LAMA, DAMA, Paediatrics, Health-care Indicator

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INTRODUCTION

Leave Against Medical Advice (LAMA) also known as discharge against medical advice (DAMA) is the discharge of a patient against the agreement of the treating physician, especially due to caregivers of the paediatric patients. It has become a serious issue in health care provision since it includes risks linked with inadequacy of treatment, leading to an increase in readmissions, disease burden, causing increase in mortality⁽¹⁾. This keeps patients from benefitting from maximum utilization of health care facilities⁽²⁾.

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Parent's decision regarding their child's health has a vital influence of the outcome of their child's illness. LAMA distresses the paediatrician and other health facilitators involved in the care of paediatric patients. Slowly but surely, LAMA has become a serious public health issue⁽³⁾.

The prevalence of LAMA has varied across the globe, from low 01 % to as high as 31 % in studies, depending upon the treating population⁽⁴⁻⁵⁾. Different reasons exist in developed countries as compared with developing countries. An increase rate in developing countries is seen where financial constraints play a huge part. Lack of quality care from patient's parents / guardian point of view, i.e. dissatisfaction with the care being received, lacking of achieving access to qualified and skilled physicians, inexperienced doctor / staff, lack of medical equipment / facilities and prolonged hospitalizations are some of the various reasons of parents / guardian are opting out for LAMA. Lack of health insurance in middle-lower income population also increases LAMA frequency⁽⁶⁾.

LAMA is termed as an indicator of health care facilitations⁽⁷⁾. It is potentially a negative indicator of health care system's performance that included increased frequencies of readmissions, increase in duration of hospital stay on readmission, thereby increasing health-care costs⁽⁸⁾. LAMA among

paediatric patients poses a difficult challenge since their both emotional as well as cognitive immaturity forms a barrier thereby being dependant on their parents / guardian for taking ethical and sound decisions about their child's health⁽⁹⁾.

Literature has reported that LAMA is likely to cause adverse health effects with LAMA patients being readmitted with a relatable first-time diagnosis within 30 days of first admission. The increase in health care costs, post-LAMA readmissions is stressful to the whole community from patients to physicians and overall health care system⁽¹⁰⁾. Countries have regulated a special law where a paediatric patient's parents can only discharge them after doctor's agreement (discharge on request) or if the parents agree to treat their child from another hospital under a specialized paediatrician. Such laws could aid in reducing LAMA related discharges from hospital⁽¹¹⁾. Paediatricians and other health professionals can significantly contribute in reducing LAMA patients but providing all relevant information to the parents regarding their child's health and also explain the possible negative health impact on the child's health in considering LAMA⁽¹²⁾. Many health professionals struggle to maintain a balance in keeping the paediatric child's health as a priority and at the same time, convincing the parents / guardian to provide the child with the best possible treatment facility⁽¹³⁾.

The purpose of this study is to present the prevalence of LAMA among paediatric patients, the common diagnosis at LAMA at Al-Tibri Medical College and Hospital, Karachi, Pakistan.

MATERIALS AND METHODS

Approval ethical review board's approval from Al-Tibri Medical College and Hospital Karachi, Pakistan, a retrospective observational study with the utilization of non-probability type of convenient sampling technique was carried out in the paediatric ward of the above respective hospital. Paediatric patients that were admitted from June 2018 to May 2019 with any diagnosis were included in the study after taking written and informed consent from the patient's parents / guardian. Emergency or ICU (Intensive Care Unit) / NICU (Neonatal Intensive Care Unit) paediatric patients, patients that were admitted but referred, surgical paediatric patients and those parents' / guardian who refused to give consent were excluded from the study. After applying inclusion and exclusion criterion, a total of 734 patients were enrolled in this study.

SPSS version 23.0 was utilized for analysis of data. Data was collected and kept confidential. Descriptive statistics of qualitative data such as age, gender, diagnosis and month of admission were presented as frequency and percentages. Chi-square test was applied to test the significance between LAMA patients and

patients discharged on attending doctor's advice keeping a p-value of ≤ 0.05 as statistically significant.

RESULTS

During the duration of study, 107 (14.6%) out of 734 patients Left Against Medical Advice (LAMA) and rest 627 (85.4%) were discharged on attending doctor's advice [Figure 1]. Out of the 734 paediatric patients in the study, 423 (57.6%) were males and 311 (42.4%) were females. 284 (38.7%) were infants, 289 (39.4%) between 1-4 years, 106 (14.4%) between 5-8 years and 55 (7.5%) were between 9-12 years.

According to month-wise admission, 55 (7.5%) of patients were admitted in June 2018, 95 (12.9%) in July 2018, 86 (11.7%) in August 2018, 51 (7.4%) in September 2018, 39 (5.3%) in October 2018, 26 (3.5%) in November 2018, 48 (6.5%) in December 2018, 56 (7.6%) in January 2019, 55 (7.5%) in February 2019, 70 (9.5%) in March 2019, 62 (8.4%) in April 2019 and 88 (12%) in May 2019.

357 (48.6%) of paediatric patients were diagnosed with acute gastroenteritis, 104 (14.2%) with Respiratory Disease, 86 (11.7%) with Viral Fever, 67 (9.1%) with Urinary Tract Infection, 36 (4.9%) with Neurological Disease, 25 (3.4%) with Enteric Fever, 29 (4%) with Protein Caloric Malnutrition, 20 (2.7%) with Haematological Disease and 10 (1.4%) with Sepsis [Table 1].

During the duration of study, 107 (14.6%) out of 734 patients were LAMA and rest 627 (85.4%) were discharged on attending doctor's advice. 54 (50.5%) of paediatric patients that were LAMA were male and 54 (49.5%) were female. An insignificant difference of 0.92 was reported between LAMA patients and patients discharged according to medical advice in relation to gender. As shown in Figure 1.1

74 (69.2%) of the LAMA Paediatric patients were infants, 19 (17.8%) were between 1- 4 years, 09 (8.4%) were between 5-8 years and 05 (4.7%) were between 9-12 years of age. A significant difference of <0.001 was reported between LAMA patients and patients discharged according to medical advice in relation with age.

Among LAMA patients, 05 (4.7%) paediatric patients were admitted in June 2018, 04 (3.7%) in July 2018, 07 (6.5%) in August 2018, 03 (2.8%) in September 2018, 12 (11.2%) in October 2018, 06 (5.6%) in November 2018, 16 (15%) in December 2018, 11 (10.2%) in January 2019, 07 (6.5%) in February 2019, 12 (11.2%) in March, April and May 2019 each respectively. A significant difference of <0.001 was reported between LAMA patients and patients discharged according to medical advice in relation with month of admission.

58 (54.2%) of the 107 LAMA Paediatric patients were admitted due to acute gastroenteritis, 15 (14.0%) due to respiratory disease, 04 (3.7%) due to viral fever, 03 (2.8%) due to urinary tract infection, 08 (7.5%) due to

neurological disease, 04 (4.7 %) due to enteric fever, 08 (7.5 %) due to protein calorie malnutrition and 07 (6.5 %) due to sepsis. A significant difference of <0.001 was reported between LAMA patients and patients discharged according to medical advice in relation with diagnosis. [Table 2].

Table No.1: Descriptive statistics of paediatric patients admitted in-between June 2018-May 2019

Variables		Frequency n=734	Percentage (%)
Age	Infants	284	38.7 %
	1-4 Years	289	39.4 %
	5-8 Years	106	14.4 %
	9-12 Years	55	7.5 %
Gender	Male	423	57.6%
	Female	311	42.4 %
Month of Admission	June 2018	55	7.5 %
	July 2018	95	12.9 %
	August 2018	86	11.7 %
	September 2018	54	7.4 %
	October 2018	39	5.3 %
	November 2018	26	3.5 %
	December 2018	48	6.5 %
	January 2019	56	7.6 %
	February 2019	55	7.5 %
	March 2019	70	9.5 %
	April 2019	62	8.4 %
	May 2019	88	12 %
Diagnosis	Acute Gastroenteritis	357	48.6 %
	Respiratory Disease	104	14.2 %
	Viral Fever	86	11.7 %
	Urinary Tract Infection	67	9.1 %
	Neurological Disease	36	4.9 %
	Enteric Fever	25	3.4 %
	Protein Calorie Malnutrition	29	4.0 %
	Haematological Disease	20	2.7 %
	Sepsis	10	1.4 %

■ Discharge according to medical advice ■ LAMA

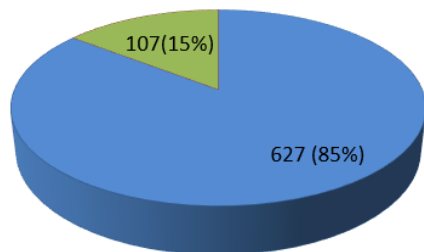


Figure No.1: Shows the frequency of discharged patients

Table No.2: Descriptive variables based on discharge type of hospitalized paediatric patients at Al-Tibri Medical College and Hospital

Variables		Discharge Type n=734		P-value
		Discharge on Medical Advice n=627	Leave Against Medical Advice n=107	
Age (Years)	Infants	210 (33.5 %)	74 (69.2 %)	<0.001
	1-4 Years	270 (43.1 %)	19 (17.8 %)	
	5-8 Years	97 (15.5 %)	09 (8.4 %)	
	9-12 Years	50 (8.0 %)	05 (4.7 %)	
Gender	Male	369 (58.9 %)	54 (50.5 %)	0.92
	Female	258 (41.1 %)	53 (49.5 %)	
Month of Admission	June 2018	50 (8.0 %)	05 (4.7 %)	<0.001
	July 2018	91 (14.5 %)	04 (3.7 %)	
	August 2018	79 (12.6 %)	07 (6.5 %)	
	September 2018	51 (8.1 %)	03 (2.8 %)	
	October 2018	27 (4.3 %)	12 (11.2 %)	
	November 2018	20 (3.2 %)	06 (5.6 %)	
	December 2018	32 (5.1 %)	16 (15 %)	
	January 2019	45 (7.2 %)	11 (10.2 %)	
	February 2019	48 (7.1 %)	07 (6.5 %)	
	March 2019	58 (9.3 %)	12 (11.2 %)	
	April 2019	50 (8.0 %)	12 (11.2 %)	
	May 2019	76 (12.1 %)	12 (11.2 %)	
Diagnosis	AGE	299 (47.7 %)	58 (54.2 %)	<0.001
	Respiratory Disease	89 (14.2 %)	15 (14.0 %)	
	Viral Fever	82 (13.1 %)	04 (3.7 %)	
	Urinary Tract Infection	64 (10.2 %)	03 (2.8 %)	
	Neurological Disease	28 (4.5 %)	08 (7.5 %)	
	Enteric Fever	20 (3.3 %)	04 (4.7 %)	
	Protein Calorie Malnutrition	21 (3.3 %)	08 (7.5 %)	
	Haematological Disease	20 (3.2 %)	00	
	Sepsis	03 (0.5 %)	07 (6.5 %)	

DISCUSSION

Leave Against Medical Advice (LAMA) especially among paediatric patients is a serious problem of health care in which the provider of health care is stuck between provision of complete health care to patient and decision of parents to leave against medical advice. As stated above, different countries have reported a different rate of LAMA where mostly decreased rates were observed in developed countries. The lower the rate of LAMA in a health care institution, the better is the performance of the hospital.

In our study the prevalence of LAMA from June 2018 till May 2019 was reported to be 107 (15%) from the total of 734 paediatric admissions during the months. The rest 627 (85%) of discharges were according to medical advice. Although over half of the admitted patients were male, i.e. 423 (57.6%), almost equal number of patients of either gender were observed in LAMA. Majority (69.2%) of LAMA patients were infants. Majority of the LAMA patients, i.e. 54.2% were of acute gastroenteritis, but owing to the fact that majority of the admitted patients were also of acute gastroenteritis. A highly substantial difference existed between discharge on medical advice and LAMA with regards to age, month of admission and diagnosis. Since equal number of LAMA patients were both male and female, hence the difference between them was not significant.

In a study in Iran, the prevalence of LAMA was reported to be 27 %, while another study in the same country reported a prevalence of LAMA at 8.4 % (14, 15). In another study done in Saudi Arabia, 04 % prevalence of LAMA was reported⁽¹⁶⁾. In a study from India, 3.8% prevalence of LAMA was reported⁽¹⁷⁾. A Nigerian study observed 2.3% prevalence of LAMA⁽¹⁸⁾. A study from Kuwait published a prevalence rate of LAMA Paediatric patients at 8.5 % (04). In a Pakistani study of a tertiary care hospital situated in Karachi, the prevalence among patients of all ages was 0.9 %⁽¹⁹⁾. Similar to this, in another Pakistani study on the epidemiology of paediatric emergency patients admitted in a hospital in Karachi, reported a prevalence rate of 11 % patients that left against medical advice⁽²⁰⁾. Our study reported a prevalence rate similar to the above study, i.e. 15 %. Variation of different rates of prevalence even in the same city might be possibly due to different facilities present at the hospital. Private vs public health sector facilitations vary from institution to institution. Community's socio-economic burden, literacy and awareness of health issues are vital for a health care institution to achieve lower rates of LAMA. Infants were the largest group of paediatric patients (55%) that were discharged against medical advice according to a study in Kuwait (04). Another study from Qatar reported 90 % infants being discharged against medical advice⁽²¹⁾. In a Nigerian study, 52.5%

of infants were discharged against medical advice⁽²²⁾. Studies have reported that 66 % infants were recorded to leave against medical advice^(1,3).

Although majority of studies have evaluated the causality of LAMA patients, keeping in mind the objectives of this study, only prevalence of LAMA among paediatric hospitalized patients was studied and reported that too from a single tertiary care private centre. None of the studies done in Pakistan have focused of paediatric population for reporting the frequency of LAMA patients. Further studies evaluating the cause and steps to improve the current situation of hospital discharges against medical advice through such researches would be beneficial not only to the health care system but also improve health care performance and overall patient's health outcome.

CONCLUSION

Our study reported a 15 % prevalence of LAMA among paediatric population reported in various other studies from both developing as well as developed countries. The prevalence rate was in between the rates presented in researches. Effective communicating techniques, awareness of health care system and improving health care performance are needed to minimise the rates of LAMA among patients.

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Concept & Design of Study:	Nighat Seema
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