

# Cause of Leave Against Medical Advice (LAMA) in Paediatric Wards in Chittagong Medical College Hospital

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Date of Submission : 28.05.2023  
Date of Acceptance : 15.06.2023

[www.banglajol.info/index.php/CMOSHMCJ](http://www.banglajol.info/index.php/CMOSHMCJ)

## Abstract

**Background:** Leaving Against Medical Advice (LAMA) is a common but undesirable clinical situation seen worldwide. This study aimed to determine the prevalence of LAMA in a pediatric setting in Bangladesh and to examine the characteristics of these patients and the reasons for their LAMA.

**Materials and methods:** This descriptive study was carried out between October 2022 and December 2022 and assessed LAMA children from pediatric wards at the Chittagong Medical College Hospital, Chattogram, Bangladesh. Patients' sociodemographic, disease characteristics, length of stay and reasons for their LAMA were recorded accordingly in a LAMA form.

**Results:** A total of 8,051 children were admitted in the three months period and 227 (3.4%) children got LAMA. Out of 227 LAMA cases, 111 patients (48.9%) were <1 year old, 86 patients (37.9%) were 1–5 years old and 30 patients (13.8%) were >5 years old, and 58.5% were male. The median hospital stay was 26 hours (Range: 2 hours-15 days). Social issues like having other small siblings at home followed by dissatisfaction with care like sharing one bed among multiple patients were the most cited reasons for LAMA (21.1% and 18.9%, respectively). Financial reasons were reported by 17 (7.5%) of the patients.

**Conclusion:** Though low observed prevalence of LAMA suggests good medical practice at the study site, the policy makers and service providers should be more responsive to initiate effective measures to further improve the quality of health care services.

**Key words:** Children; Leave against medical advice; Prevalence.

## INTRODUCTION

LAMA has been defined in the broadest terms as any patient who insists upon leaving against the expressed advice of the treating team.<sup>1</sup> LAMA conditions among the pediatric population poses a different challenge since children often are not considered to have the emotional and cognitive maturity as well as the legal rights to decide for themselves on such matters and therefore are dependent on their parents or legal guardians to decide whether to stay in the hospital or to be LAMA.<sup>2,3</sup> LAMA rates in the pediatric population vary between and even within a country.<sup>4-9</sup> The consequences of LAMA on the pediatric patient is well documented, with observed readmission rates considered high from 20.7% to 24.5%.<sup>10,11</sup> Readmission produces complications such as higher costs of medical care because of deterioration of the patient's clinical condition at home.<sup>12</sup> Often reasons cited for LAMA are multiple and variable. These include financial constraints, perceived improvement in the clinical state, preference for alternative therapy, levels of trust, and physician communications.<sup>13</sup> Some other reasons identified are patients' expectation of a shorter stay, patient feeling better and preference for another hospital.<sup>13</sup> There is a difference in reported reasons in developing and developed countries.<sup>14-16</sup>

The frequency of factors leading to the LAMA differs depending upon the type of hospital, region, and country. However, alarmingly studies on this issue were in extremely short supply from Bangladesh.<sup>17</sup>In-depth knowledge about the causes of LAMA could help researchers and policy makers in reducing the frequency of incomplete treatment, thus addressing vital issues like antibiotic-resistance and child mortality. In this context, present study aimed to determine the rate and causes of LAMA in hospitalized children in the Paediatric Department of a tertiary hospital in Bangladesh.

## MATERIALS AND METHODS

This descriptive study was conducted in the Department of Pediatrics, Chittagong Medical College hospital, Chattogram, Bangladesh from October 2022 to December 2022. Ethical approval was obtained from the Ethical Review Committee of Chittagong Medical College (date 03.10.22, number: 2022/267). Informed consent was obtained from the parents or caregivers of the patients.

All the children aged 1 month–12 years who had LAMA during the time period were included in the study. LAMA cases were excluded if their parents/care-giver did not fill out the LAMA

A predesigned structured LAMA form containing all the variables of interest (Age, sex, and residential location of the children; education, occupation and monthly family income of the family head, clinical conditions of the children during LAMA, cause of LAMA, length of hospital stay, and the diagnosis of the children) was used for data collection. At the time of the LAMA, parents or caregivers were requested by the hospital staff (Doctors or nurses) to fill-up the LAMA form.

Data processing and analysis were carried out using the Statistical Package for the Social Sciences (SPSS), Version 23.0 (IBM Corp., Chicago, Illinois, USA). Data were presented as median, range, frequency, and percentage. Only descriptive statistics were used in data analysis.

## RESULTS

Of the 8,051 admission in hospital's pediatric wards during the three months study period, 227 children left the hospital against medical advice, resulting in a LAMA prevalence of 3.4%. A total of 111 patients (48.9%) were <1 year old, 86 patients (37.9%) were 1–5 years old and 30 patients (13.8%) were >5 years old. Other sociodemographic characteristics were shown in Table I.

**Table I** Sociodemographic characteristics of the LAMA children (n=227)

Variables	Frequency	Percentage
Age of the children		
<1 year	121	53.3
1-5 year	76	33.5
>5 year	30	13.2
Sex of the children		
Male	132	58.1
Female	95	41.9
Locality of the children		
Urban	102	44.9
Rural	125	55.1
Religion		
Muslim	208	91.6
Hindu	19	8.4
Education of the family head		
No formal education	12	5.3
Class I-V	53	23.3
Class VI-X	112	49.3
Class XI or above	50	22.0
Monthly family income		
≤10,000 Tk	39	17.2
11,000-20,000 Tk	157	69.2
>20,000 Tk	31	13.7

In terms of diagnosis at discharge, 195 patients (85.9%) had only acute conditions, while 32 patients (14.1%) had chronic conditions. The length of stay ranged from 2 hours to 15 days with a median of 26 hours; 87 patients (38.3%) stayed in the hospital for less than one day, 133 (58.6%) stayed 1-5 days and 7 patients (3.1%) stayed for >5 days. Health status was deteriorating in 47 (20.7%) patients and static in 49 (21.6%) (Table II).

**Table II** Clinical characteristics of the LAMA children (n=227)

Variables	Frequency	Percentage
Disease condition		
Acute condition	195	85.9
Chronic condition	32	14.1
Health status at the time of LAMA		
Improving	131	57.7
Deteriorating	47	20.7
Static	49	21.6
Length of stay in hospital		
<1 day	87	38.3
1-5 days	133	58.6
>5 days	7	3.1

Table III shows that social issues like having other small siblings at home followed by dissatisfaction with care like sharing one bed among multiple patients were the most cited reasons for LAMA among these 227 patients (21.1% and 18.9%, respectively). Financial reasons were reported by 17 (7.5%) of the patients.

**Table III** Reasons for LAMA

Reasons for LAMA	Frequency*	Percentage
Patient has other small sibling in home	48	21.1
Sharing one bed among multiple patients	43	18.9
Lack of availability of PICU seat	40	17.6
Dissatisfaction about treatment	37	16.3
Patient does not rely on Treatment on Govt Hospital	33	14.5
Lack of care giver	31	13.7
No space of care giver,	28	12.3
Death/morbidity of any family members or close relative	20	8.8
Inadequate money for treatment:	17	7.5
Bed in the floor	16	7.0
Lack of privacy of mother/care giver	14	6.2
Lack of cleanliness of ward	10	4.4
Seduced by agent of private hospital.	7	3.1
Inadequate sanitation	4	1.8
Lack of one stop service like private hospital	4	1.8
Loss of money, mobile phone	2	0.7
Dissatisfaction about Health care worker	1	0.4

\*Included multiple responses

**DISCUSSION**

In this study, the LAMA prevalence (3.4%) was found to conform to reported rates in the literature; Okoromah et al. and Hong et al. reported a LAMA prevalence of 1.2% and 2% in Nigeria and Singapore, respectively.<sup>12,13</sup> In contrast, tertiary care government hospital in India reported much higher rate of LAMA (8.5% to 10.7%) among pediatric patients.<sup>18,19</sup> Abd El Malek et al. noted a surprisingly high prevalence of LAMA (8.49%) in a recent study carried out in Kuwait.<sup>14</sup>

In the current study, LAMA was more common for infants under one year of age (53.3%); a similar finding was reported by Al-Ghafri et al. (40.4%).<sup>20</sup> Comparable findings were also reported in other studies which could be partly attributed to the large number of cases admitted from this age group.<sup>12,13</sup> In addition, subtle clinical presentations among infants can put them at a higher risk of being admitted for further care.

The median length of hospital stay (26 hours) in the present study was shorter compared to that reported by a previous study (4 days).<sup>20</sup> Moreover, more than a third of patients (38.3%) in the current study stayed for less than 24 hours. Al-Ghafri et al. reported 31.7% patients stayed in the hospital for one day.<sup>20</sup> This finding might be attributed to non-critical reasons for admission, including diagnostic uncertainty. In addition, a short observation time in the emergency room along with the unavailability of a short-stay ward may have contributed to the LAMA cases that occurred during the first 24 hours after admission.

According to the LAMA form assessed in the current study, social issues like having other small siblings at home followed by dissatisfaction with care like sharing one bed among

multiple patients were the most cited reasons for LAMA among these 227 patients (21.1% and 18.9%, respectively). Hasan et al. conducted a study and identified false perceptions of wellbeing (28.7%), inadequate facilities for mothers (14.5%) and financial problems (14.1%) as the predominant factors contributing to leaving against medical advice (LAMA) at the Special Care Newborn Unit in CMCH. Additionally, the study revealed other reasons for LAMA, including dissatisfaction with treatment, the baby's ability to take oral feeding, lack of attendants, limited facilities for attendants, fear of witnessing the death of other sick neonates, and a sense of hopelessness regarding further improvement.<sup>26</sup> Dissatisfaction with treatment and the desire to seek a second opinion were the most cited reasons for LAMA in the study of Al-Ghafri et al.<sup>20</sup> Inadequate awareness of parents, limited role of welfare committees in hospital in convincing parents against LAMA, lack of time by treating health personnel in overcrowded hospital, anxiety about other children left at home, false parental perception of improved health condition, living away from home, frequent blood sampling and prolonged hospitalization have been implicated for LAMA in pediatric age group in studies conducted in similar setting like ours in India.<sup>18,19</sup> A cross-sectional study conducted in Iran studying 752 patients who opted for LAMA concluded that among top reasons for LAMA were personal problems and leaving to another facility.<sup>21</sup>

This present study confirms existing evidence that Bangladeshi patients have a growing concern with lower level of satisfaction in public healthcare services.<sup>22</sup> The respondents faced multi-dimensional problems, characterized by low level of overall service quality, low level of interpersonal service quality, low level of technical or treatment related quality at public hospitals, low level of confidence among the administrative services.

**LIMITATION**

Limitations in the current study include a lack of a control group to compare illnesses between patients who were discharged with the recommendation of the physician and those who left against medical advice; a lack of follow-up of the discharged children; and a relatively small sample size leading to an inability to generalize the results.

**CONCLUSION**

The LAMA rate in our study is comparable to some urban hospitals elsewhere. However, the leading reasons for this phenomenon are unacceptable in the current medical best practice.

Recommendation: The policy makers and service providers should be more responsive to initiate effective policy measures and programs to improve the quality of health care services. In addition, establishment of a short observation ward may lessen the LAMA cases. Further studies are recommended to assess the outcomes for children who leave Paediatric wards before the completion of their treatment.

**ACKNOWLEDGEMENT**

The authors would like to thank the doctors and nurses in the Paediatric Wards for their active participation in data collection.

**DISCLOSURE**

All the authors declared no competing interest.

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