

# Discharges against Medical Advice: A Study on Patient's Profile from the Emergency Ward of BPKIHS, Dharan in East Nepal

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## ABSTRACT

**Introduction:** Discharge against medical advice in the emergency department (ED) is particularly important as the patient may be threatening his life by choosing to leave and thus not receive adequate or timely medical care. Patients who leave against medical advice (LAMA) may be severely ill and at risk of experiencing adverse events and revisit to ED. Reasons for LAMA include, but are not limited to, family obligations or financial responsibilities. In Nepal, however, a paucity of data exists regarding LAMA and factors that might influence it. Therefore, this study will find out the characteristics of patients leaving LAMA and also identify factors and reasons behind LAMA discharges that might allow the physician to decrease such discharges and improve patient care. **Methods:** A semi-standardized questionnaire was used to record relevant demographic and clinical information's. The questionnaire included sociodemographic characteristics (age, sex, marital status, education status, occupation, etc.) and clinical and administrative elements (diagnosis, date of admission and discharges, length of stay, previous LAMA history, and hospital stay). They were also asked for a reason for LAMA, hospital as well as patient-related factors. **Results:** Out of 358 LAMA discharges, the mean age was 51 SD (21.73). The majority of patients had an Australian triage score of 2 (61.5%) at triage. The majority of the patients were married 79.6%, illiterate (40%), and uninsured as well (87.7%). About 50% of the patients stayed for 12–24 h in the ED before LAMA. Discharge diagnosis was mainly gastrointestinal (GI) (21.8%), poisoning (12%), neurologic (11.5%), and pulmonary (11.2%). Most of the patients who left against medical advice were due to patients related factors accounting 94.7% rather than hospital-related factors 16.8%. Critical conditions and patients not improving were the most common reasons 31.6% followed by feeling better (28.8%). **Conclusion:** Critical patients, mainly with GI diagnosis, non-critical patients with poisoning, and patients with a longer length of stay are high-risk patients for LAMA discharges.

**Keywords:** Discharge, Emergency department, Left against medical advice

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## INTRODUCTION

Discharge against medical advice (DAMA) or self-discharge is the status in which a patient chooses to leave the hospital willingly before it is medically advisable to do so. Different acronyms such as DAMA, against medical advice (AMA), and left against medical advice (LAMA) are used at discharges interchangeably however our hospital uses the term LAMA, so the acronym would be used in the following discussion.

LAMA discharges in the emergency department (ED) are important as the patient may be threatening his life by choosing to leave and thus not receive adequate or timely medical care.<sup>[1]</sup> LAMA disposition for ED patients is not uncommon yet poorly studied.<sup>[2]</sup> LAMA at the ED and acute care setting has been reported to be around 0.5–4.4% of admission.<sup>[3,4]</sup> Patients leaving AMA are 10 times more likely to initiate a litigation process against the emergency doctors and the hospital, with a rate of around 1 lawsuit/300 LAMA cases.<sup>[5]</sup>

The hospitalized patient who requests discharges against medical advice bothers physicians and health-care provider's. It is undoubtedly due to several factors including concern about the welfare of the patients as these patients get incomplete treatment and are at increased risk of threatening their health.

Reasons for leaving LAMA include, but are not limited to, family obligations or financial responsibilities.<sup>[6]</sup> However, patients who leave LAMA may be severely ill and at risk of experiencing adverse events.<sup>[7-9]</sup> It is also a very important issue as the prematurely discharged patient are prone to admission and higher mortality rates as shown in a study conducted by Weingart *et al.*<sup>[10]</sup>

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In Nepal, however, a paucity of data exists regarding patients who leave against medical advice and factors that might influence it. Therefore, this study will find out the characteristics of patients leaving LAMA and also identify factors and reasons behind LAMA discharges that might allow the physician to decrease such discharges and improve patient care.

## METHODS

The study was conducted in ED of the B.P. Koirala Institute of Health Science (BPKIHS), Dharan, Nepal, for a period of 1 year from September 2018 to September 2019. According to a previous study record, it was found that the percent of LAMA from the ED was approximately 10%. Therefore, the sample size becomes 900 at

95% CI and 80% power. Using the corrected sample, to estimate the actual sample size  $n = 225$ . However, the study enrolled all LAMA cases for a period of 1-year, therefore, we took sample 358. Ethical clearance was obtained from the ethical board of the institute. Patients who request for LAMA were included. Consent was taken from all the study subjects. For the study, LAMA was defined as patient leaving against medical advice, if they sign a form stating that they are discharging themselves against the advice of the physician or the key person taking care of the patient, signs for the patient bearing full responsibility for consequences. All the individuals not giving consent to be a part of this study and absconded (leaving without informing hospital staff on duty) were excluded from the study. A semi-standardized questionnaire was used to record relevant demographic and clinical information. The questionnaire included questions on sociodemographic characteristics (age, sex, marital status, education status, occupation, etc.) and clinical and administrative elements (diagnosis, date of admission and discharges, length of stay, previous LAMA history, and hospital stay). They were also asked for a reason for LAMA, hospital-related factors as well as patient-related factors.

Analyses were done using SPSS for Windows. Rates, proportion, and Chi-square were applied.

## RESULTS

There were 358 LAMA discharges enrolled in this study. Men and women were equally distributed. The mean age of the patients was 51 SD (21.73) years. The majority of patients had received the Australian triage score {ATS 2 (61.5%)} at triage followed by ATS 3. The majority of the patients were married 79.6% and illiterate (40%). Patients were uninsured as well (87.7). The majority of the patients did not consume alcohol (79%) and did not have a psychiatric illness (98%). About 50% of the patients stayed for 12–24 h in the ED before LAMA. Table 1 shows the characteristics of patients going into LAMA who were admitted in an emergency.

Discharge diagnoses were mainly gastrointestinal (GI) (21.8%), poisoning (12%), neurologic (11.5%), and pulmonary (11.2%), as shown in Figure 1. Miscellaneous symptoms included snakebite, physical assault, and hypoglycemia.

Several reasons for LAMA were elicited. There were hospital-related as well as patient's-related factors contributing to LAMA. Most of the patients who left against medical advice were due to patients related factors accounting for 94.7%. Hospital-related factors in those patients were 16.8%.

Table 2 represents reason and subreasons given for requesting the discharge against medical advice among ED patients.

Critical conditions and patients not improving were the most common reasons 31.6% followed by feeling better (28.8%) and financial obligation (28.5%) mentioned for LAMA in patients related factors. Among critical conditions, the discharge diagnosis was from GI diagnosis  $n = 27$  followed by neurological ( $n = 25$ ).

Patients who LAMA due to feeling better were those patients with an alleged history of ingestion of poison ( $n = 29$ ). Delay in diagnostic and therapeutic procedure was the most common reason mentioned in hospital-related factors (4.7%). Very few mentioned overcrowding (2%) as a reason for LAMA, in a segment dissatisfaction with the ED environment.

Association between patient's characteristics and LAMA are given in Tables 3 and 4.

There was no association between age, ATS score, the severity of the prognosis, and length of stay in LAMA. Patients who had a

**Table 1:** Characteristics of patients admitted to the emergency ward who left against medical advice

Characteristics	Categories	Number of patient	Percentage
Sex	Male	176	49.2
	Female	182	50.8
Age mean	51 SD (21.73)		
ATS score	1	8	2.2
	2	220	61.5
	3	116	32.4
	4 and 5	14	3.9
Marital status	Single	70	19.6
	Married	285	79.6
	Divorced	2	0.6
	Widowed	1	0.3
Literacy status of the patients	Illiterate	143	39.9
	Primary school	127	35.5
	Secondary school	73	20.4
Health insurance	Above 12	15	4.2
	Insured	44	12.3
History of alcohol	Uninsured	314	87.7
	Yes	75	20.9
History of psychiatry disorders	No	283	79.1
	Yes	6	1.7
History of LAMA before	No	352	98.3
	Yes	39	10.9
Length of stay in ED	No	319	89.1
	<12 h	85	23.7
	12–24	183	51.1
	>24	90	25.1

ATS: Australian triage score, LAMA: Left against medical advice, ED: Emergency department

history of LAMA before were associated with going LAMA again due to patients related factors.

## DISCUSSION

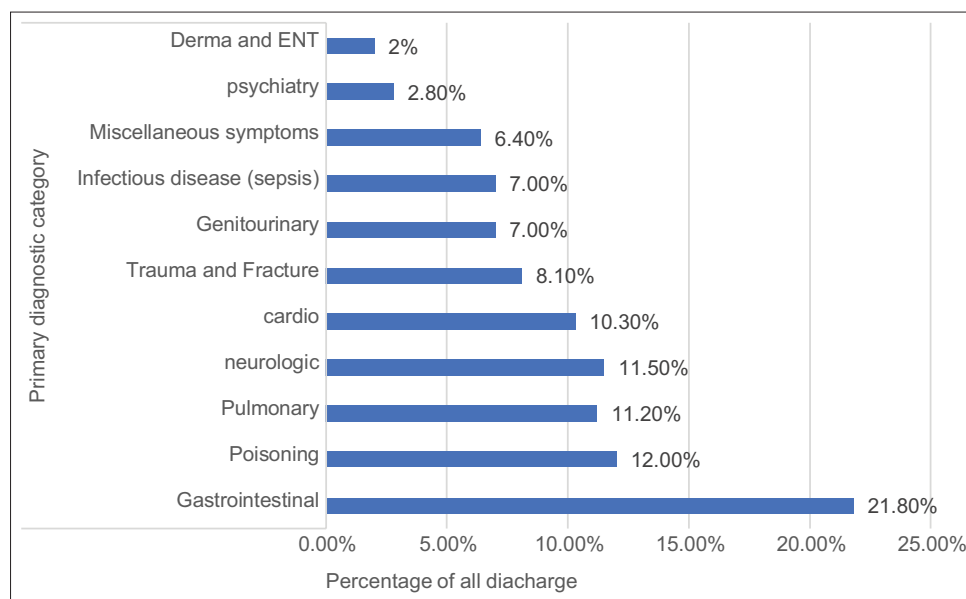
LAMA discharges impose a great challenge to the doctors who need to balance the respect of patient's autonomy and duty of care for those patients. Patients who LAMA require care resources as they often return with worsening symptoms. Hence, understanding the reason for LAMA is important to decrease such discharges.

Our study examined the characteristics of patients and the reason for LAMA from the ED. Similar to other studies, patients who left AMA were younger with a mean age of 51. The studies by Mazen<sup>[2]</sup> found a mean age of 46.7.

The majority of patients who left AMA were from the ATS 2 category indicating that they were critical. The majority were illiterate, uninsured, and had a length of stay 12–24 h.

The relative health literacy of patients as well as patient's attendant (for those who cannot give decision) is also likely to affect decision-making in patients with LAMA.<sup>[11,12]</sup> Although the majority of the patients were illiterate in this study 39% or attended only primary school (35%), the patients who LAMA due to feeling better were literate (attended primary and secondary school). The finding that the patient's LAMA discharges in our study mentioned "feeling better" as the reason for LAMA might warrant further investigation to know whether health literacy influences discharge decisions.

Studies have found that length of stay makes it difficult to predict which patients could go in LAMA as different studies have different results. A study done by Shirani<sup>[1]</sup> *et al.* found that LAMA patients were staying in the hospital for less than 12 h but in our study majority group of patients stayed for longer (12–24 h) before



**Figure 1:** The proportion of hospitalized patients leaving against medical advice by their primary diagnostic category

**Table 2:** Reasons and subreasons for requesting the discharge against medical advice among ED patients

Reasons and subreasons	Number of patients (%)
Dissatisfaction with the care and diagnostic or therapeutic procedures 56 (15.6)	
a. Disagreement with the diagnostic and therapeutic procedure	8 (2.2)
b. Delay in the diagnostic and therapeutic procedure	17 (4.7)
c. Lack of necessary medical equipment	5 (1.4)
d. Long stay in ED (not being transferred to the ward)	14 (3.9)
e. Insufficient attention from medical and nursing staff	6 (1.7)
f. Frequent blood sampling	4 (1.1)
g. Repeated X-rays	8 (2.2)
Dissatisfaction with the behavior of ED staff 0	
The dissatisfaction of the ED environment 12(3.4%)	
a. Overcrowding	7 (2)
b. Inadequate hospital welfare service (blanket, bed, ICU)	1 (0.3)
c. No privacy	5 (1.4)
d. Insufficient staff	1 (0.3)
Patient's-related factors: 94.7	
a. Feeling better	103 (28.8)
b. Personal or family matters	47 (13.1)
c. Critical condition/not improved	111(31.6)
d. Occupational problem	3 (0.8)
e. No companion	17 (4.7)
f. Financial obligation	102 (28.5)
g. No reason mentioned	9 (2.5)
h. Refused investigation	17 (4.7)
i. Wants to go to another center	9 (2.5)
j. Denied operation and admissions	15 (4.2)

\*Patients were allowed to choose more than one reason or subreasons in the questionnaire. ED: Emergency department

asking for LAMA. This decreases the likelihood that longer stay may contribute to a high prevalence of LAMA discharges.

Lack of health insurance has a high prevalence of going to LAMA in other studies as well.<sup>[11]</sup> The reason might be unable to afford hospital expenses by themselves, therefore, they choose to LAMA. In our country, the government has just launched a health insurance scheme. However, many are unaware of that program as shown by this study that 87% of the patients who LAMA was uninsured. Therefore, the government has to make aware of the insurance facility to the people.

Specific chief complaints and diagnoses mainly those with GI accounted for the majority of the cases (21.8%) for LAMA, which was similar to the study done by Mazen *et al.*<sup>[2]</sup> The second most category to LAMA was with an alleged history of poisoning.

Several reasons were identified for LAMA. There were hospital-related as well as patient's-related factors contributing to LAMA. Most of the patients who left against medical advice were due to patients related factors accounting for 94.7%. Most of the patients who left against medical advice were due to patients related factors accounting for 94.7%, rather than the hospital-related

**Table 3** Association between patient's characteristic and LAMA due to hospital-related factors

Characteristics	Categories	Hospital factors		P-value	Remarks
		Absent	Present		
Age in years		51.72±21.55	46.78±22.37	0.109	NS
Gender	Male	146 (83.0)	30 (17.0)	0.109	NS
	Female	152 (83.5)	30 (16.5)		
Disease category ATS score	1	7 (87.5%)	1 (12.5%)	0.842	NS
	2	185 (84%)	35 (15%)		
	3	94 (81%)	22 (19%)		
	4	11 (84.6%)	2 (15%)		
	5	1 (100%)	0 (60%)		
Severity/prognosis of the patients	good	154 (81%)	35 (18%)	0.88	NS
	bad	144 (85%)	25 (14%)		
History of LAMA	Yes	34 (87.2%)	5 (12.8%)	0.48	NS
	No	264 (82.8%)	55 (17.2%)		
Length of stay	<12 h	74 (87%)	11 (12.9%)	3.955	NS
	12–24 h	155 (84.7%)	28 (15.3%)		
	>24 h	69 (76.7%)	21 (23.3%)		

LAMA: Left against medical advice, ATS: Australian triage score

**Table 4:** Association between patient's characteristic and LAMA due to patients related factors

Characteristics	Categories	Patient factors		P-value	Remarks
		Absent	Present		
Age in years		51.72±21.55	46.78±22.37	0.109	NS
Gender	Male	10 (5.7%)	166 (94.3%)	.097 <sup>a</sup>	NS
	Female	9 (4.9%)	173 (95%)		
Disease category ATS score	1	0 (0.0%)	8 (100%)	6.6	NS
	2	7 (3.2%)	213 (96.8%)		
	3	11 (9.5%)	105 (90.5%)		
	4	1 (7.7%)	12 (92.3%)		
	5	0 (0%)	1 (100%)		
Severity/prognosis of the patients	Good	12 (6.3%)	177 (93%)	0.86	NS
	bad	7 (4.1%)	162 (95%)		
History of LAMA	Yes	2 (5.1%)	37 (94.9%)	0.003	Significant
	No	17 (5.3%)	302 (94.7%)		
Length of stay	<12 h	3 (3.5%)	82 (96.5%)	0.875	NS
	12–24 h	10 (5.5%)	173 (94.5%)		
	>24 h	6 (6.7%)	84 (93.3%)		

LAMA: Left against medical advice, ATS: Australian triage score

factors (16.8%). Critical conditions and patients not improving were the most common reasons 31.6% followed by feeling better (28.8%) and financial obligation (28.5%).

Among critical conditions, the discharge diagnosis was from GI diagnosis  $n = 27$  followed by neurological ( $n = 25$ ). From this, one can assume that patients coming with GI were more critical and have a high chance LAMA. Intervention should be made to decrease such patients to decrease LAMA discharges.

Surprisingly hospital-related factors were less contrary to other studies where dissatisfaction with care and diagnostic or therapeutic procedure mentioned often (38%) for LAMA discharges.

Patients who LAMA due to feeling better were those patients with an alleged history of ingestion of poison ( $n = 29$ ).

## SUMMARY AND CONCLUSION

This study raises many important issues. Physicians need to document the patient's capacity to understand this risk associated with the consequences of LAMA. From this study, we can predict that critical patients, mainly with GI symptoms and poisoning, the longer length of

stay are high-risk patients who request AMA discharges. Intervention should be made to decrease such premature AMA discharges.

## Limitation

We did not evaluate the revisit of LAMA patients and did not follow up on these patents, therefore, 30-day mortality could not be assessed. This was a single hospital-based study so the study could not be generalized.

## Recommendation

Early identification of those likely to LAMA might allow for interventions to reduce such discharges. Patients should have health insurance so that they do not have financial obligations and do not request a premature discharge.

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