



A Cross Sectional Study of Discharge Against Medical Advice Cases at a Tertiary Care Hospital of Central Gujarat Region

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Abstract

Background: Discharge Against Medical Advice (DAMA) is an obnoxious reality and dissatisfying event to both ends - patient and healthcare provider. It's pertinent that periodical survey at single or multicentre be done to identify the predictors and seek solutions and suggest recommendations. **Aim and Objectives:** Aim of this study was to analyze the predictors of DAMA cases. Objectives were to find out prevalence and predictors of DAMA cases. **Methodology:** A prospective cross sectional analytical study was done at a tertiary level multi super speciality hospital of central Gujarat. Participants were all those cases who seek DAMA for one other attribute and consented to participate in the study by non-randomised method. After consent, details from DAMA cases were collected in pre-validated questionnaire forms from patients and relatives. All data was analysed statistically for descriptive and analytical statistics. **Observations:** Maximum DAMA cases were of age group 20-59 years (55%). followed by 60-100 years (25%). Most common reason for obtaining DAMA (56%) was financial constraints. Most of DAMA patients who were having financial constraints (70 & 46) were admitted to Medical Intensive Care Unit (33.11%) and Male Medicine ward (21.22%) respectively. **Conclusion:** DAMA cases are damaging not only patient morbidity and mortality wise, but also burdens healthcare staff and resources negatively. The reasons for DAMA cases should be discussed and analysed at every healthcare facilities regularly to prevent this futile dissatisfying event.

Keywords: DAMA, Patient care, Prevalence of DAMA

Introduction

Discharge Against Medical Advice (DAMA) is a situation of concern in which a patient leaves the health care establishment before the healthcare provider recommends discharge [1]. It is also known by its other name, leave against medical advice (LAMA), or at-own-risk (AOR) discharge. An AOR discharge, LAMA or DAMA is understood to occur whereby a patient leave after consultation with a medical team but before assessment and or treatment have been completed. Studies have empirically demonstrated that patients who leave against medical advice have higher risks of adverse medical outcome [2,3]. Although, acceptance of DAMA by the medical practitioner can be seen as respecting patient autonomy, it not only raises clinical, ethical and legal issues

for the treating physician but also leads to adverse health outcomes thereby burdening the health system even more [4,5].

Clinical team of hospital and ancillary operations carries moral, ethical and legal responsibility to provide healthcare services starting from consultation, admission to end of the treatment. DAMA, very often than not also symbolises dissatisfaction of the patient on either all or few of the integral component of healthcare delivery system. Robust healthcare delivery schemes like Ayushman Bharat PM-JAY has been instituted by Government of India for their citizens.

The tertiary care hospital, with all broad and many multispecialty facilities where this study was carried out passes on the benefits to eligible patients. The Medical College affiliated hospital treats patients at very subsidized charges wherein it doesn't charge any patient for consultation, admission (even in ICU's),

surgeons and anaesthesia fees. Food is complimentary to all indoor patients.

It seems relevant to know the prevalence and predictors of this vexing problem in such hospital for better understanding, planning and potential interventions in effectively plugging the gaps as it surfaces after proper analysis of observations.

Aim

To analyse the predictors of DAMA cases

Objectives

In different areas of hospital to find out

1. The prevalence of Discharge against medical advice cases
2. The reasons for discharge against medical advice cases

Materials and Method

The present Prospective cross sectional analytical study was conducted in 2022 at a Medical College affiliated tertiary care multi-super speciality hospital in central Gujarat during a span of 6 months. The study population includes all those patients who seek DAMA during the specified period of research study. The Multi-super speciality hospital has rural location and has bed capacity of 1360.

Inclusion Criteria

All patients who seek DAMA and consented for participation in this study

Exclusion Criteria

- i. Those patients who are non-consenting for participation in this study.
- ii. Discharge On Request cases.

Sample Size: Previous year data of Dhiraj hospital shows that total 1555 cases took DAMA. Considering this data, sample size is calculated by using formula as below.

$$\frac{4PQ}{l^2}$$

Where, P = prevalence 25%
 Q = 1 – p 75%
 l = allowable error 5%
 Sample size n = 4 x 25 x 75 = 300
 5 x 5

This sample size calculation is based on one scientific research publication, reference study done by Theeb AAlkahtani & Shujaa Asaad.6

Data was collected in a pre: validated case report form.

Sampling method: Non-randomised sampling method was adopted to recruit the participants. All cases of DAMA consenting to participate in the study were recruited by census sampling of defined study period.

Study Method: Data was collected from patients who seek DAMA at Dhiraj Hospital during specified six months. Data was analysed statistically for various parameters of a cross sectional study – mean, median, mode, SD, frequency, range etc.

Ethical Clearance

After explaining the concept and context of study through documented Patient Information sheet (PIS) and their roles in the study, the participants were invited to participate voluntarily in the study and written Informed consent was obtained. PIS were handed over to the participants to have an in-depth understanding about the study and make competent decision to be in or opt out of the study. Participation was purely voluntary for which written informed consent was obtained before participation. Study was conducted after approval from Institutional Ethics Committee.

Observations and Results

From the 311(mean age 39.45 years with SD of 23.29) patients who left the treatment against medical advice higher percentage was observed in the age group of 20-29 years and 60 – 69 years; 16.07 and 16.72 per cent respectively with male preponderance of 64.30%.

Table1: Predictors of DAMA and sex wise distribution

| Variables | Female | % | Male | % | Total | % |
|--|--------|-------|------|-------|-------|-------|
| Diagnosed COVID19 Positive and opted for home isolation | 16 | 5.14 | 27 | 8.68 | 43 | 13.83 |
| Financial constraints | 59 | 18.97 | 115 | 36.98 | 174 | 55.95 |
| Patient condition is not improving | 7 | 2.25 | 22 | 7.07 | 29 | 9.32 |
| Preference for another hospital | 4 | 1.29 | 8 | 2.57 | 12 | 3.86 |
| Patient expected shorter stay | 11 | 3.54 | 13 | 4.18 | 24 | 7.72 |
| Others (Including Believed that the condition was terminal, Dislike for hospital environment, Diagnosed HIV positive, Insensitive Behaviour and Poor Communication of staff, Not understanding the need for further testing or treatment, Not willing to stay; unexpressed reason, Distance between residence and Hospital- inconvenience) | 14 | 4.5 | 15 | 4.82 | 29 | 9.32 |
| Total | 111 | 35.69 | 200 | 64.31 | 311 | 100 |

df 5, Chi-square value 5.076 and p value 0.40.

The study was conducted during fading phase of second wave of COVID 19 pandemic wherein patient with mild symptoms were allowed for home isolation, a sizeable number, nearly 14% of patients seek discharge against medical advice. However, nearly 56% took discharge due to financial constraints. Nearly 4 % showed

preference for another hospital. The mean stay of patient was 3 days with SD of 4.22; 7.71 % opted for discharge out of which a greater percentage (7.39) was expecting even shorter stay. Nearly 5.5% expressed their dissatisfaction for cumulative hospital environment. The prevalence of DAMA is 2.21%.

Table 2: Age of patient vis a vis reason for DAMA

| Age of Patient (Yrs) | 0-9 | 10-19 | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-100 | Total | % |
|---|-----|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|------|
| Variables | | | | | | | | | | | | |
| Believe that the condition was terminal | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0.32 |

| | | | | | | | | | | | | |
|---|----|----|----|----|----|----|----|----|----|---|-----|-------|
| Covid19 positive | 2 | 5 | 10 | 13 | 4 | 2 | 6 | 0 | 1 | 0 | 43 | 13.82 |
| Dislike the hospital environment | 5 | 5 | 1 | 0 | 1 | 3 | 1 | 1 | 0 | 0 | 10 | 3.21 |
| Distance between residence and hospital-Inconvenience | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0.32 |
| Financial constraints | 20 | 8 | 22 | 20 | 23 | 29 | 34 | 10 | 8 | 0 | 174 | 55.94 |
| HIV positive | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0.32 |
| Insensitive behaviour and poor communication | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.32 |
| Not understanding the need for further testing or treatment | 3 | 0 | 4 | 0 | 0 | 2 | 0 | 2 | 1 | 1 | 12 | 3.85 |
| Not willing to stay | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0.64 |
| Patient condition is not improving | 9 | 0 | 1 | 0 | 0 | 1 | 5 | 0 | 0 | 0 | 16 | 5.14 |
| Patient expected a short stay | 3 | 2 | 8 | 2 | 6 | 1 | 1 | 2 | 0 | 0 | 24 | 7.71 |
| Preference for another hospital | 2 | 0 | 2 | 4 | 2 | 1 | 1 | 0 | 0 | 0 | 12 | 3.85 |
| Total | 44 | 15 | 50 | 43 | 38 | 41 | 52 | 16 | 11 | 1 | 311 | 100 |

Frequency of discharge against medical advice in young, young adults and elderly was fairly equal. However 55% discharges was seen in the age group of 20-59 and 25% in the age group of 60-100.

Dual responsibilities of job and family in young age and avoidance of expenses on health affairs may be the assumed reasons.

Table 3: Far-reaching causes to seek DAMA

| Variables | Number of cases | % |
|--|-----------------|-------|
| Patient/ relatives believes that the condition was terminal | 6 | 2.08 |
| Dialysis services not functional when the moment patient was being treated for Covid19 | 1 | 0.35 |
| Sanitation issues | 8 | 2.78 |
| Other (unexplained) constraints | 1 | 0.35 |
| Poor General condition | 20 | 6.94 |
| Preference for Govt hospital | 20 | 6.94 |
| Inappropriate communication by Housekeeping and Nursing staff | 1 | 0.35 |
| Not affording | 170 | 59.03 |
| Not affording for covid treatment | 32 | 11.11 |
| Not understanding to further testing and treatment | 4 | 1.39 |
| Preference for other hospital | 3 | 1.04 |
| Patient attended by junior doctors only not by the senior doctors | 3 | 1.04 |
| Patient expected shorter stay | 2 | 0.69 |
| Patient himself not willing to continue the treatment due to poor prognosis | 1 | 0.35 |
| Relative feel that patient's condition doesn't require admission | 7 | 2.43 |
| Time consuming at MRI, Pharmacy | 5 | 1.74 |
| Want to attend social function | 3 | 1.04 |
| Wants to continue the treatment at native place | 1 | 0.35 |
| Total | 288 | 100 |

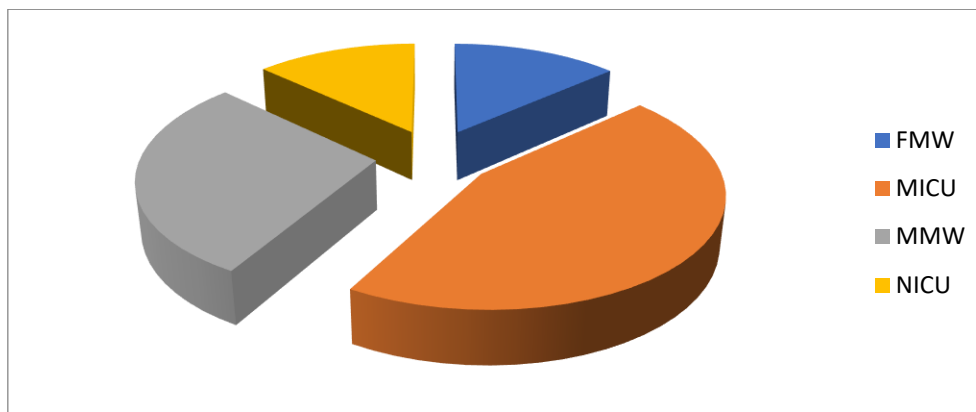
Even while attempting to explore the trivial reasons for seeking discharge, more or less the same variables emerges as the major elements; non affordability, poor general condition and preference

for government institutions. Though, other areas of concern also came into light which essentially was aim of the study.

Table 4: Most prevalent departments of hospital wards with DAMA vis a vis reason for DAMA

| Area | FMW | MICU | MMW | NICU | Total |
|---|-----|------|-----|------|-------|
| Believe that the condition was terminal | 0 | 1 | 0 | 0 | 1 |
| Covid positive | 2 | 3 | 7 | 1 | 13 |
| Dislike of hospital environment | 1 | 2 | 3 | 0 | 6 |
| Financial constraints | 18 | 70 | 46 | 11 | 145 |
| Not understanding the need for further tests or treatment | 1 | 5 | 0 | 2 | 8 |
| Not willing to stay | 0 | 2 | 0 | 0 | 2 |
| Patient condition is not improving | 0 | 10 | 4 | 14 | 28 |
| Preference for another hospital | 2 | 5 | 1 | 2 | 10 |
| Shorter stay expectation | 7 | 5 | 5 | 0 | 17 |
| Total | 31 | 103 | 66 | 30 | 230 |

Reasons for discharge against medical advice being the same; MICU constitute the highest frequency followed by Male Medicine ward.



*FMW: Female Medicine ward, MICU: Medical ICU, MMW: Male Medicine ward, NICU: Neonatal intensive care unit.

GRAPH 1: Most prevalent departments of hospital wards with DAMA vis a vis reason for DAMA

Discussion

Present study was aimed to analyse the predictors of DAMA and derive prevalence of it in a rural tertiary care multi super speciality hospital for a small duration of three months. With overshooting 1.3 billion populations, India is one of the most populous countries on this planet. Recent past has witnessed reasonable economic growth on global platform but expenditure on healthcare system still lag behind comparatively. Commendable efforts are being taken to strengthen public health care system in India which is offered free of cost treatment to the people living below poverty line. Just above poverty line and middle-class population constitute a reasonable percentage of Indian population where health care expense has to be coughed up from individual's pocket.

DAMA is a global and awkward situation in healthcare sector. The rate of DAMA varies among different hospitals, institutes and countries for multiple reasons. Furthermore, there are studies that have documented a higher rate in developed as compared to developing countries. In an Indian prospective study, the incidence has been reported to be 3.84% in the emergency department of a private hospital over 3 months [7]. Yet in another Indian study done for DAMA at a tertiary care hospital with attached medical college for neonates in ICU setting, it was found that prevalence was 25.4% [8]. In one retrospective study, it was found that, about 3.3% of patients left hospital against medical advice. Most of them were from ward followed by ICU [9]. In yet another study it has been documented that there is considerable variation in prevalence rates of DAMA ranging from 0.002% to more than 35% [10]. In the US, each year 1-2% of all hospital discharges (approximately 500,000 patients) are designated as DAMA [11]. Present study reflects prevalence of DAMA being 2.21 during the study period of 3 months which is far low in compared to other institutes and studies.

As this study was conducted during fading phase of 2nd wave of Covid19 pandemic; nearly 14% of DAMA cases were attributed to those who seek DAMA after diagnosed with Covid19 positive and opted for home isolation. This is understandable situation because it was recommended for mild cases.

Around 9.64 % cases of DAMA are attributed to unscientific reasons clubbed together- the relatives believed that the condition was terminal or patient condition was not improving and interestingly it was more sought by male counterpart (7.39%). This is in contrast to research similar to this one; women seeking DAMA was more apparent than men. It was presumed that women in India are denied access to health care and paternalistic attitude are being adopted in making decision by opposite gender, India still being recognised as Male dominant societal structure [12].

The most cited reason for DAMA was financial constraints (59%). This is a common scenario in developing countries [13]. However, this came as a surprise and an eye opener to review the

healthcare budget and burden on individual. The study site hospital offer treatment at much subsidised rates, only Government run hospital can be another choice in terms of financial component of treatment. Although laws in India indicate lifesaving treatments must be offered regardless of ability to pay, these are partially funded mandates, and the burden of free medical care falls on the provider or hospital. This would appear to be a substantial obstacle for obtaining care in non-governmental facilities [14].

Clubbed together, 73.94% DAMA was signed in four areas [Male and Female Medicine wards, Neonatal Intensive care unit (NICU) and Medical ICU 9MICU)]; MICU outnumbered all other departments and constitute 33.11%. There are literatures available projecting DAMA in NICU [15], Paediatric [16] and Emergency department [17] but are scarce in regard to MICU. The higher percentage of seeking discharge before completion of treatment can be attributed to singular (financial constraint) and bundle of multiple contributing attributes such as expectation of shorter stay, not giving due importance of understanding the requirement of further tests or treatment and making abrupt decision believing that patient condition is not improving.

In developing countries culturally, the patient's relatives constitutes the primary caregivers especially in government and low medical fee setting hospitals. Besides the anxiety of their sick admitted patient many errand they are burdened with. Lack of suitable counselling, patient- clinician simple communication, and decent support significantly add up in DAMA cases. Well informed patients and their caregivers are more likely to take rational health decisions.

Conclusion

Present and many other studies done at different times and region are in alignment that DAMA is an obnoxious reality. Evaluation of predictors has reflected both sides of the coin; lack of responsiveness, attitude, decent counselling and communication towards patients on one side and inability to pay the medical bills by the patient on the other sides. Increased burden on healthcare resources, morbidity and mortality rates which in turn contributes to false factor of medical futility and burden of medico legal issues will be the cumulative consequence of it. It suggests that steps are needed to ensure that the inability to pay prevent emergent care from being provided.

Ethics approval and consent to participate

Ethical clearance was taken from Institutional Ethics committee and written consent to participate was taken from the participants

Conflicts of Interest

None declared.

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