

# Studying the Rate and Causes of Discharge Against Medical Advice in Hospitals Affiliated to Mazandaran University of Medical Sciences

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## ABSTRACT

**Introduction:** Discharge against medical advice from the hospital is an important issue from point of view of treatment management, health costs as well as the side effects of treatment stop on patients and their accompanying. Therefore, health managers and planners should consider the predisposing factors that change patient's mind in this regard. Since, there has been no study to carefully assess the rate and causes of self-discharge in this province, so this study is aimed to fill this gap. **Methods and Materials:** This descriptive and cross-sectional study was carried out in 6 months period, from 23 July 2010 till 20 January 2011 in all public hospitals of Mazandaran province. A form was set out for data collection and those patients willing to self-discharge were asked to participate in the study. Patients' demographic information was filled using their medical record and by the help of department personnel. Furthermore, the form was completed by parents for patients over 18 year-old or by the help of first-rank relative for those having psychiatric disorders or anybody who wasn't able to complete the form. In order to identify the causes of self-discharge, 18 variables were determined which were categorized in three general items and five main groups. Data were entered into the SPSS15 and were analyzed using descriptive statistics indices. **Results:** According to the results, 94441 were discharged from the university hospitals which 7967 patients (8.4 %) of them were self-discharged during the 6 month study period. Regarding admission type, 269 (3.3 %), (54.5 %) were admitted into the hospital by pre-determined appointment and as usual patients, respectively, and the rest were admitted by emergency department. Also, 31.4 % (2504) were hospitalized in surgery ward, 63 % (5026) in medical ward, 4.6 % (374) in intensive care unit (ICU) and the rest were hospitalized in the psychiatric ward. The most important reasons for self-discharge were related to: 1-factors affecting patient illness (54.3%), 2-environmental issues as well as patients' accompanying (37.6%) and 3-managerial and medical reasons(7.9%), respectively. **Conclusion:** Our study showed the same results for Discharge against medical advice rate as the others. From the view point of treatment management, its causes should be considered and practices should be done to improve the conditions. Meanwhile, the current self-discharge form doesn't reflect the causes of the problem and it should be revised.

**Key words:** Discharge against medical advice, Hospital management, Patient reverence, Medical cost.

## 1. INTRODUCTION

Discharge against medical advice (AMA) depends on both patient population and hospital-related factors. The high prevalence of AMA discharges after emergency admission in a developing country such as Iran calls for effective approaches to reduce the prevalence as well as further investigation into the responsible factors. (1). Since children neither comprehended nor contribute to the decision, discharge against medical advice is a challenge of health care systems in the world (2). One in every 65 to 120 discharges from general hospitals are against

medical advice and have an expected increased risk of adverse consequences and subsequent litigation (3). Discharge against medical advice (AMA), in which a patient chooses to leave the hospital before the treating physician recommends discharge, is a problem for many physicians who treat hospitalized patients (4, 5). Honoring patients' wishes becomes difficult when doing so threatens their well-being (4). Every psychiatrist who treats voluntary inpatients has had or will have patients who leave the hospital against medical advice (AMA). Studies reveal that between 6 and 35 percent of voluntary psychiatric inpatients are

discharged AMA (6). Against Medical Advice, or AMA, sometimes known as DAMA, Discharge Against Medical Advice, is a term used in health care institutions when a patient leaves a hospital against the advice of their doctor (7).

Doctors of all specialties, during their hospital medical practice, periodically meet a patient who refuses their assistance for different reasons or circumstances and asks permission to leave the hospital against medical advice (AMA). This situation is potentially harmful for both doctor and patient, as the doctor may feel frustrated when unable to carry out his job, while the patient may be threatening his life by leaving the hospital (8).

It is estimated that as many as 2% of all US hospital discharges (approximately 500 000 per year) are designated as against medical advice (9); that is, a patient chooses to leave the hospital before the treating physician recommends discharge. The risks to these patients are significant. Compared with patients discharged conventionally, readmission rates for patients discharged against medical advice are 20% to 40% higher, and their adjusted relative risk of 30-day mortality may be 10% higher (10). Furthermore, physicians and other health care staff report feeling distressed and powerless when patients choose suboptimal care, and disagreement over a discharge against medical advice can cause patient-physician and conflict between teams (11). This can be a different outcome, that premature discontinuation of treatment started; further, it may cause complications or readmission and leads death of the patient (7, 9). In other words, while leaving before a medically specified endpoint may not promote the patient's health above their other values, there is widespread ethical and legal consensus that competent patients (or their authorized surrogates) are entitled to decline recommended treatment (12). Treatment synonymous with numerous reworking can impose costs on the healthcare system. This problem is not unique to our country (Iran) and in the world; there are numerous reports about patients' leaving that patients with discharge against medical advice, despite doctor's advice. In Iran, there are several studies conducted on DAMA reasons (13). Rangraz Jeddi et al in their study concluded that patients' personal problems, hospital staff, and hospital conditions were of the most important reasons for inpatients' DAMA. In other word, 865 patients left the hospitals against medical advice (14).

One in every 65 to 120 discharges from general hospitals are against medical advice and have an expected increased risk of adverse consequences and subsequent litigation (3). In another study showed that between 1% and 2% of all medical admissions result in an AMA discharge. Predictors of AMA discharge, based primarily on retrospective cohort studies, tended to be younger age, Medicaid or no insurance, male sex, and current or a history of substance or alcohol abuse. Interventions to reduce the rate of AMA discharges have not been systematically studied (7). In another study concluded that Prevalence rate of DAMA was 4.2%, comprising 110 of a total of 2,617 patients admitted during the study period (from January 2004 to December 2005). Male to female ratio was 3.8:1; the mean age was 30.0 years (range, 4–70 years) (15). Roodpeyma et.al. in their study concluded that The prevalence of DAMA was 5.3%, comprising 97 of 1842 children discharged (16). Some studies on discharge against medical advice (AMA) in general hospitals report prevalence between 0.7–7% with 11–42% of this population identified as psychiatric patients. A total of 142 patients left the hospital AMA during the two-year period (1998–1999), the

global discharge number in the same period being 41,648 (17).

In some sources, the reasons such as feeling well enough, dissatisfaction with treatment, lack enough staff to treat a patient's condition, Personal and family problems, marginalization living of patients, patients without insurance, psychiatric and addiction problems, general dissatisfaction with the Hospital referred the causes of Discharge with Discharge against medical advice (AMA) (1, 8, 17-21).

Afkham et.al concluded that there is a significant difference among the expectations (emotional support and the investigation and treatment) of the patients of the different clinics. Moreover, there was a significant correlation between patients' satisfaction and the fulfillment of "explanation" request. Also, a positive and significant relationship was found between satisfaction and adherence to medical prescriptions and change of the physician. In conclusion, physicians' knowledge of the patients' expectations and the factors affecting their satisfaction improve the patient-doctor relationship and the quality of health care which is the end goal of health system Dissatisfied Patients done less medical prescription, don't follow their treatment, then they show less result in improvement of symptoms; also more likely to alter their physician or health care system (22). However, patient may be dissatisfied because of the conditions of the environment, cleaning, doctor, medical team even treatment costs, and also conditions such as improvement feelings, patient may leave self cuts of treatment and leave the hospital. Of course, it may seem that everything said to be in the manifestation of patient satisfaction however, this idea was not so real and in some cases, reasons other than satisfying which mentioned previously are influenced.

Since the present questionnaire form designed about the patient's Discharge against medical advice (AMA) lacks any data about the discharge of patients, since there isn't prompt data about Discharge against medical advice in Mazandaran Province and also from the treatment management viewpoint, the medication cost and respecting to the patients, this issue is very important. Therefore, this study was defined to determine the factors contribute in deciding on Discharge against medical advice. The data of the present study could help university authorities and hospital administrators to prevent the recurrent work in the treatment cycle which improve costs to the health system of Iran and patient too.

Method: this prospective cross sectional study was done in 6 months period, from 23 July 2010 till 20 January 2011. It was done by surveying all of the patients Discharge against medical advice from 21 university affiliated hospitals (Apart from social security, private and Islamic Azad University affiliated hospitals). The data were collected in questionnaire comprising two sections, the first section includes information about the personal identity and the history of the patient prepared by the hospital unit staff and the second about the cause if the discharge against medical advice. The questionnaire was designed by preparing the review of the literatures and the aim of the present study which enjoys a presumptive and has validity. Data collection tool with the pilot study with 30 cases were modified and corrected. The variables of age, sex, marital status, education level (in case of children, the educations of their parents were considered).

The type of being admitted (emergency, with prior or regular appointment), the contemporary of admission or discharge day

Variable	F	%	Admission	F	%	Literacy level	F	%
Married	4740	59.5	Previous Appointment	269	4	Illiterate and under diploma	3621	45.5
Single	1511	18.9	ordinary	4345	54	Diploma	1545	19.4
Child	1716	21.6	Emergency	3353	42	AS degree and more	2801	35.1
Total	7967	100	Total	7967	100	Total	7967	100

Table 1. Some demographic characteristics of patients discharged from affiliated hospitals during from 23 July 2010 till 20 January 2011

Discharge against Medical Advice	F(%)	Discharge against Medical Advice	F(%)
Factors of class 1	-	Inappropriate behavior	51(0.6)
The relative improvement	3649(30.5)	Dissatisfaction with the quality of care	144(1.7)
Dissatisfaction with the progress of treatment	541(6.2)	Factors of class 4 (relatives)	-
Follow-up treatment at home	1125(13)	Unwillingness of patient's relatives for patient hospitalization	1285(14.9)
Follow-up of patient to his/her physician	387(4.5)	No relative with patient	96(1.2)
Factors of class 2		relatives willing to send patients	806(9.3)
The absence of a physician	116(1.4)	Factors of class 5 (Environmental)	
Lack of special consultation	58(0.6)	Patient is not a native people	432(5)
Delay in performance of physician visits	53(0.6)	Holidays	81(1)
Factors of class 3		Being forced to personal satisfaction.	288(3.4)
Unwillingness to complete a high risk consent form	17(0.19)	No credit of health note book	129(1.5)
Hospital noise	60(0.6)	The high cost of healthcare	
Lack of equipment and needed facilities (beds, paraclinical)	193(2.2)	Total(sum)*	8657(100)

Table 2. Characteristics and causes discharge of personal satisfaction in our sample \* Patient had the choice of several factors; therefore, there are more reasons than the patients.

with holiday, the living place (city, village), having health insurance and complementary insurance, the hospitalization period, treatment costs and discharge reason were documented. The reason of discharge against medical advice was studied in 18 sub category and 5 classes include: the first class related to the factors of the Patient's diseases) included first class (Factors related to patients) a) Feel remission; b) Lack of satisfactory improvement (treatment); c) Follow-up treatment at home; d) Feel free to visit your doctor (no doctor on duty), second class (Factors related to hospital). The two categories medical and managerial factors that medical factors: a) the absence of specialist services for business; b) lack of expert consultation. Delay of clinician in patient visit and management factors include: a) Not wanting to risk having completed consent form; b) hospital noise; c) Lack of equipment and needed facilities; d) inappropriate treatment and Dissatisfaction with the quality of care, third class (social factors) in two categories, i.e. Fellows and environmental factors which factors related to fellows include: a) Unwillingness of relatives to hospitalization; b) lack of relatives and c) relatives tend to send patients to other centers, environmental factors divided 1-Non-Indigenous patients, 2-holidays, 3-compels to personal satisfaction, 4-no credit insurance, and the high cost of treatment.

## 2. METHODS

Such as the data collection tools has sent to affiliated university hospitals by treatment vice chancellor for completing of all discharged against medical advice. Before completing of checklist and questionnaire, orally informed consent form took from patients and asked them to complete and fulfill them.

Sector in the form of discharge for patients less than 18 years, parents of patients with psychiatric disorders and or any person who was not able to explain their reasons, first degree relatives of a patient completed that had been with him/her. Limitations of this study were the lack of information on the readmission of patients encountered in other centers. Moral considerations

mentioned and avoided the names of patients, doctors and sector and after information analysis, it was published. For recording patient information from the records of the local business license was approved by the University Project. Data using SPSS version 15 and were analyzed using descriptive statistics. Relationships between variables were investigated by chi-square test at a significance level  $P < 0.05$ .

## 3. RESULTS

According to the results, 94441 were discharged from the university hospitals which 8.4 % of them (7967 patients) were self-discharged during the 6 month study period. The mean age and standard deviation were 34 and 23 years, and 3900 women (48.9%) and 4067 (51.1%) were male. Admission day 1334 patients (16.7%) and discharge day in 1404 patients (17.6%) coincided with holidays. 7816 patients had basic insurance and 3502(43.9%) had Supplementary insurance. Place of living of patients were 4436(55.7%) in city and patients were discharged 2268(28.4%) from teaching and treatment hospitals. Also, 2504 (31.4 %) were hospitalized in surgery ward, 5026 (63 %) in medical ward, 374 (4.6 %) in intensive care unit (ICU) and the rest were hospitalized in the psychiatric ward. Demographic characteristics and causes discharge of personal satisfaction was shown respectfully in Table 1 and 2.

Contingency table of gender and discharge against medical advice showed that the highest (%49.7) discharge's factor in men was relative improvement and the highest discharge in women was follow-up treatment at home.

There were significantly associated between Personal satisfaction with sex ( $P=0.000$ ) and insurance ( $P=0.000$ ).

There were significantly associated between Personal satisfaction with living place factor ( $P=0.000$ ) and 15.4% of

Villagers, and 10.2% of urban have announced to continue the treatment at home as discharge against medical advice. There were significantly associated between discharge factor and personal satisfaction ( $P=0.000$ ) and most (18.8%) personal

Discharge were from Imam Khomeini Hospital with the relative improvement and the lowest (0.1%) from Zareh hospital with same reason.

#### 4. DISCUSSION

As the results indicate, the rate of discharge against medical advice in our study was 8.4%, but, data given by Jeddi showed 10.3% (from 19660 cases understudy in 6 months period) (14), Paul and Remorin 2010 in 3 years, Kim 15684(4.8%), Roodpeyma et.al 2010, 1842(5.3%) cases, Vahadat 4107 (5.2%) cases in 3 months; Baptis 180(1.2%) cases in 4 years; Sastis 23198(1.2%) cases in one year; Banibook 139 (0.73%) cases in 3 months. (9, 12-16)

It was shown that the most reason of self-satisfaction was related to the better off feeling which contributed the most frequent reason. In the study of Jeddi, the reasons of discharge against medical advice were categorized into 3 groups: factors related to the disease of the patients, the hospital circumstances and the medical staff. Factors related to the diseases of the patient were observed in 207 cases. The main reason in these patients were feeling of relative improvement in 144 (28.4%) (14).

The same reason in case of Roodpeyma and Paul studies were observed in 3.9% and 20.5% respectively (16, 23). Perhaps one of the reasons could be lack of proper relation between the patient and the condition between patient and consultant physician and also lack of proper knowledge about the treatment period. Ebrahimi reported that expression of the situation to the patient is one of the predicting factor in the satisfaction of the patient (17). This happen in case of antibiotic medication in which with the first dose leads to recovery and in which with the second dose the fever subsides.

Anyway by improper description of the situation, it is possible that the patient stop having drug by relief of the symptoms. It seems that, change of the management from the viewpoint of treatment period is necessary.

One of the other reasons of discharge against medical advice is attributed to the patient accompaniments. Certainly, it is because the patient accompaniment could help meets the patient's primary needs as well as act as good advice in the severe diseases period. Since the patient's accompaniments have long term and close contact with the patient, therefore could influence the patient's decision on discharge against medical advice. Presence of the children patients' parents as to accompaniment is necessary for moral issues which lead to the helping of the patients (rooming in). In our study, the management factor placed the second effective factor in discharge against medical advice, with less frequency, and lack of equipment was the most influencing factor. The latter agrees with the data given by Vahdat indicating 12.7% which was the third reason of discharge (24), Study of Jeddi indicated 11 (1.3%) discharges against medical advice due to lack of hospital equipment (14), which is related to the hospital rendering general or specialized services. In some general hospitals, the primary services are given to the emergency patients, then being referred to the specialized hospitals. When the patient insists in transferring, necessary explanation should be given and the discharge against medical advice should be filled. Of course, it is not the reason to deny accepting the presence of dysfunctional equipment that their repairing delays a long term. Survey on the need of the bed and equipment in the provincial hospitals according to the type of the diseases of the

patients would be of the disease of the patients would be helpful. The other finding on the reason of discharge against medical advice was the dissatisfaction of the patient form the treatment procedure adopted by the consultant physician.

Data given by the Babtis indicated the discharge against medical advice in 23 (15.3%) patients (25) in the study of Nasir, out of 110 discharged patients 8 (7.3%) were dissatisfied on the medical equipment (15). It seems that if proper explanation about the treatment process and the possible complication be given to the patients, maybe the number of patients discharged against medical would decline. The third effective factor in the present study was the environmental factors.

Not being a local patient was the factor too. Anyway, if patient during traveling need hospitalization his/her accompaniment would face economic problem, etc. it seems that if the hospitals could provide facilities and services to the patient's accompaniments and the insurance services could cover the patient treatment, procedure could be covered in the expected periods. In this study, the lowest effective factor on the discharge against medical advice. It seems that, it is multi-factorial. First is the concept of no current need of patients to specialized physician and which not explained to the patients. The second, there was need of the specialized physician but did attend.

#### 5. CONCLUSION

The results of this study correspond with the other relevant data, and showed that the patients decide discharge against medical advice are due to different reasons. But, knowing the cause and obtaining the preventive strategies is difficult (25).

But, the university administration should initiate practical strategies in order to improve the situation. The periodic evaluation of the cause of discharge against medical advice and considering this issue in the evaluation process is helpful. Also, the available form about discharge against medical advice lacks determinations the causes of such discharge. Another questionnaire similar to the questionnaire for data collection should be used for the present study. Anyway, in cases when the patients face psychiatric problems, and in to are nervous, or threatening condition, the care giver staff should give sufficient explanation about the complication consequences of such discharge to the patients and their accompaniments. Because, sometimes the patient's disease is harmful both for himself/herself and for the society (3).

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CONFLICT OF INTEREST: NONE DECLARED.

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