

# The study of Number and Reasons of Discharge against Medical Advice Following the Implementation of Health Overhaul Plan

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## ABSTRACT

High health care costs and lack of insurance is one of the reasons for discharge against medical advice. Health Overhaul Plan reduces the costs paid by patients. One of the criteria of satisfaction with medical centers is discharge against medical advice. Therefore, this study was conducted in order to find the numbers and reasons of discharge against medical advice after the implementation of the Health Overhaul Plan in Sanandaj Tohid Hospital in 2014. This study is cross-sectional descriptive analytic which was conducted from early May to late March 2014. In this study the reasons of discharge against medical advice was investigated in 200 cases with their personal content. The data were collected using the special form of discharge against medical advice which was available in patients' cases. Collected data were analyzed using SPSS version 20, descriptive statistics (frequency and average) and chi-square test. The results indicated the rate of discharge against medical advice was (6.30%). The highest rate of discharge against medical advice was for emergency ward 893 patients (22.64%) and the lowest number was for the oncology ward 8 patients (8%). The reasons of discharge against medical advice included feeling better (51.1%), family problems (14.8%) and dissatisfaction with doctors (9.3%). Considering the results, it is necessary that the managers and administrators provide requisite solutions to inform the patients regarding the disease, the threatening problems of not completing the treatment process, and solve their family problems related to discharge against medical advice and other relevant reasons.

**KEY WORDS:** Hospital, patients, discharge against medical advice, Health Overhaul Plan.

## 1. INTRODUCTION

The philosophy of the health system is health production through the provision of health services to patients. Therefore, if the patients do not trust in the health organizations, health sector will lose its identity (Rasuli, 2011). Patient satisfaction is a crucial part of the trust in health organizations and quality of treatment in the hospital (Faraji, 2015; Onukwugha, 2009). In general, unsatisfied patients are less likely to comply with medical orders of doctors and are more likely to change their doctors and health care system (Devitt, 2000; Rafat, 2015). One of the problems which occur after patient's dissatisfaction is discharge against medical advice (Nguyen, 2002). This kind of a discharge is a process through which the patient prior to completing the treatment period and despite the recommendations of the medical team (doctors and nurses) leaves the hospital willingly (Gerbas and Simon, 2003; Valiee, 2012).

Besides the obstacles in the process of treatment, discharge against medical advice makes serious challenges for hospitals as well (Nguyen, 2002). It can be a serious threat to the patients' health because the life of the patient may be at risk due to inadequate and untimely receiving of treatment (Duno, 2003; Mahmodi and Valiee, 2015). Furthermore, the result of the studies indicated that discharge against medical advice can be the strongest predicting factor for readmission in the 15 days after discharge and not only can impose additional costs on the individual and the health system but also may result in delay in required measures and treatment especially for critical patients which can result in more mortality (Taifoori and Valiee, 2015; Valiee, 2014; Weingart, 1998).

Statistics has shown that discharge against medical advice in developed countries such as the USA is about 0.8% to 2.2% of the whole number of discharges especially in teaching hospitals (Saitz, 2000) whereas this type of discharge is reported to be 3 to 20 percent in Iran (Moridi, 2014; Shirani, 2009).

The issue of discharge against medical advice is a multidimensional phenomenon and includes patient related factors, structural factors and health care factors (Fathi, 2014; Jedi, 2011a). A study in Canada indicated that 28 percent of the reasons for the discharge against medical advice were due to dissatisfaction with the medical team, personal and family problems, feeling better to leave the hospital and hatred of the hospital environment (Hwang, 2003). In Iran, the results of studies showed that lack of satisfaction with medical diagnostic procedures (38.2%) resulted in discharge against medical advice. The other factor resulting in discharge against medical advice in Iran, cited in previous studies, was high health care costs (Seaborn and Osmun, 2004; Valiee, 2015).

The regulations of Health Overhaul Plan was notified to all governmental hospitals in 2014 in Iran based on which the costs for all Iranian patients would be decreased to 10 percent. This amount would be 5 percent in rural and tribal areas; while hospitalized in medical centers uninsured patients will be insured. Referring patients to buy medicines and diagnostic equipment and services outside of the hospital is forbidden and if required, it had to be done by the health care center in which the patient is hospitalized (Anonymos, 2015). Despite performing this plan,

discharge against medical advice still exists. As the annual cost of health overhaul plan is more than 2 billion dollar and the UK health system has considered the number of discharge against medical advice as one of the indicators of assessing quality of clinical care so determining the number of discharge against medical advice and awareness of the factors resulting in it can be a step for assessment and improvement of programs, decreasing discharge against medical advice and its negative consequences. Therefore, this study aims to investigate the number and reasons of discharge against medical advice from early May to the end of March in 2014 in the Sanandaj Tohid Hospital.

## 2. METHODS

This study is cross-sectional descriptive-analytic which was conducted from May to the end of March 2014. It analyzed the number of discharge against medical advice and its reasons in patients admitted to emergency ward and other wards including internal medicine ward, surgery ward, coronary and heart disease ward, burn ward, gastrointestinal ward, respiratory disease ward, infectious diseases ward, oncology ward, neurology ward, urology ward, ENT ward, and CCU in Sanandaj Tohid Hospital. After the approval of the Ethics Committee of Kurdistan University of Medical Sciences, Tohid Hospital archive center were referred to and using random numbers table, 200 cases were chosen among the 1800 cases available. In order to collect data, the special form of discharge against medical advice which was available in the cases was used and its validity was approved by 10 professors. This form includes demographic characteristics (age, gender, marital status, ward, number of days of hospitalization) and reasons of the discharge. In the case of incomplete information, the phone number available in the case was called to and after the introduction of the individual researcher and explaining the reasons to contact him or her and ensuring their confidentiality, the respondents were asked to introduce themselves and the reasons for their discharge against medical advice. If there was no phone number in the case, it would be replaced with another case. Furthermore, if no one answered the phone, the number of repeating phone call was up to 4 times. The collected data were analyzed using SPSS version 20, statistical tests (frequency, average) and chi-square test.

## 3. RESULTS

The results showed that since the beginning of June until the end of March 2014, 28554 patients were discharged from the Tohid hospital in Sanandaj of which 1800 (6.30%) were discharged against medical advice. The sample size was 200 patients and 183 people responded to the call and their questionnaires were completed. 111 patients were male (61%) and 71 patients were female (39%). The average age was  $53.86 \pm 21.17$  year; the youngest patient was 16 and the oldest was 93 years old. 128 patients (70.3%) were married and 54 patients (29.7%) were single. Average length of hospitalization was  $3.29 \pm 2.77$  days; the longest days of hospitalization were 15 and the shortest was 1 day. In making the phone call to complete the questionnaire, 9 persons (4.9%) of the responders were the patient and 173 people (95.1%) were their caretakers. Statistical test results showed that there was no significant relationship ( $p > 0.05$ ) between the demographic characteristics (age, gender, marital status and length of hospitalization) and discharge against medical advice (Table 1). The overall rate of discharge was 6.30%. The highest rate of discharge against medical advice was from the emergency ward, 893 patients (22.64%) and the lowest number for the oncology ward, 8 patients (8%) (Table 2). With regard to the reasons of discharge, feeling better by the patient or the caretakers 93 (1.51%) was the most frequent reason for discharge, disappointment with the treatment and transfer to other medical centers each with 6 person (3.3%) were the least reason of discharge (Table 3).

## DISCUSSION

In this study, the rate of discharge against medical advice was 6.30% whereas this rate was 1% in Canada (Smith and Telles, 1991). Furthermore, the results in UK and Nigeria were 1.8 and 4.2, respectively (Saitz, 2000). In a series of studies conducted by Barati (2011), before the implementation of the Health Overhaul Plan in some Hospitals in Tehran, the following results were obtained: Sina Hospital 3.6%, Bahrami Hospital 8.2%, Rozbeh Hospital 12.1%, Ami Alam Hospital 4.04%, Ziaeyan Hospital 3.5%, Baharloo Hospital 32.8%, Razi Hospital 1.8%, Shariaty Hospital 2.8%, Imam Hospital 2.3% (Barati and Sadagha, 2011). The comparison of the results of the discharge against medical advice in Iran before the implementation of the Health Overhaul Plan with the results of the present study showed compatibility. Thus, in general, the implementation of the Health overhaul plan after which the costs paid by patients had a substantial decrease could not have an effective influence on the rate of discharge against medical advice. However, it should be considered that the environment of the previous studies were different from the environment of this study.

The results showed that there was no significant statistical relationship between the demographic characteristics and reasons for discharge against medical advice. Previous studies, showed a negative correlation between gender, marital status and reasons for discharge against medical advice which is consistent with the results of the present study. However, a study in America indicated that the probability of leaving the hospital with personal satisfaction in men is 9.1 times more than women (Saitz, 2000).

With regard to the discharge from different wards, the results of this study indicated that the emergency ward had the highest rate of discharge against medical advice 64.22%. Previous studies also showed that the highest rate

of discharge against medical advice was related to the emergency ward; in other studies carried out on emergency ward by Vahdat (2010) 3.23%, Mashahdi 38%, Rangraz Jedi (2011) 28.30% had the highest rates of discharge against medical advice. Therefore, it seems that considering the critical condition of the patients referring to the emergency ward, it needs more attention in terms of health care provider, proficient doctors and nurses and facilities.

With regard to the reasons of discharge against medical advice, the results of the present study indicated that the highest rate was due to feeling better from the patient or the caretakers' viewpoint (1.51%), and the other rates includes personal and family problems (8.14%), dissatisfaction with doctors (3.9%), prolonged length of hospitalization (1.7%), dissatisfaction with the facilities and equipments (6%), dissatisfaction with the nurses (9.4%), disappointment with treatment and transfer to other health care centers each (3.3%). The results of other studies showed that the highest rates of discharge against medical advice was due to issues related to the patient (61.4%), health care provider (24.96%), and the condition of the hospital (13.99%). Also, in another study conducted by Babai (2011) the issues related to the patient was (56.04%), dissatisfaction with the health care provider was (23.96%) and dissatisfaction with the hospital facilities was (20%). The comparison of the results in this regard showed that just like the previous studies issues related to the patient was still the main reason for discharge against medical advice. Therefore, there is the probability that the patients are not informed clearly, by the nurses and especially by the physicians, about their diseases and the threatening complications they would face if their treatment process is not completed. Indeed, the decision of personal content to be discharged against medical advice was not made by full awareness. Thus, there is a necessity of informing the patients and their caretakers of the complications of the disease. On the other hand, considering the fact that if the treatment cycle is not completed entirely, there will be a high chance of re-hospitalization and additional costs will be imposed on the health care system. Therefore, it is necessary that supporting organizations attempt to solve the personal and family problems which have affected the discharge of patients.

The previous studies indicated that dissatisfaction with the health care providers was the second highest reason for discharge against medical advice. In the present study, it is 2.14% of which the ratio of dissatisfaction with health care providers for doctors is twice the nurses. Hence, the comparison of the results indicated that despite the increase in the wages and benefits of the health care providers especially doctors; the Health Overhaul Plan could not take a positive step toward enhancing the satisfaction of the patients in the health care system. Patients are the main axis in the hospital and all of the medical services are conducted for them. Patient's satisfaction is an indicator of proper service and such satisfaction cannot be achieved only by using advanced technology, but it is mostly due to the behavior of health care providers and their performance. Thus, it seems that further evaluation and monitoring is of them is required.

The limitation of this study was the lack of completion of the discharge against medical advice form and the lack of access to some of the participants due to not answering phone. It is recommended that future studies be conducted on a bigger sample; investigate the effect of educational interventions of patients and their relatives on the rate of discharge against medical advice and investigate the effect of personnel training workshops on the rate of discharge against medical advice.

**Table 1. Demographic Characteristics**

Cause discharge against medical advice	Age				Sex	
	16-35	36-55	56-75	76-95	Male	Female
Dissatisfaction with facilities	3	3	2	3	8	3
Dissatisfaction with Nurses	3	2	3	1	7	2
Dissatisfaction with Doctors	6	4	3	4	12	5
Hopeless of treatment	1	1	3	1	5	1
Feeling better	18	28	28	19	49	44
Prolonged Hospitalization	5	2	1	5	10	3
Transferred to other medical centers	1	1	2	2	2	4
Personal and family problems	11	7	7	2	18	9
Test results	$X^2= 17.31, P=0.69$				$X^2= 9.99, P=0.18$	

Cause discharge against medical advice	Marital status		Hospital stay (Day)			Interview	
	Single	Married	1-5	6-10	11-15	Patients	Relatives
Dissatisfaction with facilities	4	7	10	1	0	0	11
Dissatisfaction with Nurses	3	6	8	1	0	0	9
Dissatisfaction with Doctors	4	13	16	0	1	1	16
Hopeless of treatment	1	5	5	1	0	0	6
Feeling better	21	72	82	6	5	5	88
Prolonged Hospitalization	7	6	11	2	0	1	12
Transferred to other medical centers	3	3	4	2	0	0	6
Personal and family problems	11	16	22	3	2	2	25
Test results	X <sup>2</sup> = 9.74, P=0.20		X <sup>2</sup> = 10.83, P=0.69			X <sup>2</sup> = 2.29, P=0.94	

**Table.2.Frequency and the rate of discharge against medical advice in different wards**

Wards	Frequency (%)
Emergency	893 (22.64%)
Internal medicine ward (men)	128 (10.11%)
Coronary and heart disease ward (men)	102 (9.24%)
Gastrointestinal	90 (8.92%)
Internal medicine ward (women)	82 (8.04%)
Surgery	80 (7.82%)
Neurology	75 (7.26%)
Respiratory disease ward	70 (6.71%)
Infectious diseases	64 (6.05%)
Coronary and heart disease ward (women)	62 (6.00%)
C.C.U	48 (5.29%)
Urology	45 (4.96%)
ENT	29 (3.19%)
Burn	24 (2.64%)
Oncology	8 (8%)
Total	1800 (6.3%)

**Table.3.Reasons for discharge against medical advice**

(%)Frequency	Personal content
93(51.1%)	Feeling better
27 (14.8%)	Personal and family problems
17 (9.3%)	Dissatisfaction with doctors
13 (7.1%)	Prolonged hospitalization
12 (6%)	Dissatisfaction with the facilities
9 (4.9%)	Dissatisfaction with the nurses
6 (3.3%)	Hopelessness of treatment
6 (3.3%)	Transfer to other medical centers
183	Total

#### 4. CONCLUSION

The number of discharge against medical advice was similar to the studies prior to the implementation of Health Overhaul Plan and feeling better was the most common reason. This issue requires more attention of the officials and a stronger patient-doctor bound to inform the patient of his or her clinical status and process of treatment to prevent the negative consequences of discharge against medical advice.

#### Strategies and interventions to reduce discharge against medical advice:

- Effective communication between doctors and patients.
- Discharge against medical advice should be conducted while doctor and head nurse are present and the complications due to early discharge have to be reminded to the patient and his family or caretakers.
- The patient has to state and the reasons of discharge against medical advice in written and orally.
- The required medical equipment which are one of the reasons for discharge have to be listed and provided.

- In any case, doctors have no right to discharge the patient with personal content in order to abdicate any legal responsibility from them. This issue had to be declared to all the doctors in written.
- Considering the patient's right, in case the patient do not accept the medical orders, doctors should agree with him. Patients and their relatives should be asked to contact doctor in case of any problems. After 2 weeks the patient should refer to the hospital for follow up checkups.
- The ability of the patient for decision making should be considered by the doctors.
- Discharge against medical advice should be registered in the health information system of the hospital. The doctors who have higher number of discharges against medical advice should be informed.
- Holding educational classes accompanied by doctors in order to justify the consequences of discharge against medical advice.

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