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Discharged Against Medical Advice: Causes and Consequences

SUMMARY

Patients discharged against medical advice in a rural general hospital in Alberta were studied retrospectively. The rate of discharge against medical advice (AMA) was 1.4% and was found to be comparable to the rates for other rural and urban general hospitals in central Alberta. Fifty consecutive discharges AMA were compared with 50 randomly selected adult discharges by physician during the same period. Demographic, diagnostic, and therapeutic variables were compared, and the fate of patients discharged AMA after departure was studied. A diagnosis of substance abuse or psychiatric illness discriminated significantly between the groups and accounted for apparent differences in the demographic variables. Those discharged AMA stayed for a shorter time in hospital and were noncompliant while there. (*Can Fam Physician* 1990; 36:1495-1498.)

RÉSUMÉ

Les patients d'un hôpital général rural de l'Alberta ayant quitté l'hôpital sans avoir reçu au préalable l'autorisation de leur médecin ont fait l'objet d'une étude rétrospective. Le taux de congés non autorisés fut de 1.4% et jugé comparable à celui des autres hôpitaux généraux ruraux et urbains du centre de l'Alberta. Cinquante départs non autorisés consécutifs furent comparés avec 50 congés autorisés par le médecin et sélectionnés par randomisation pendant la même période de temps. Des variables démographiques, diagnostiques et thérapeutiques furent comparées, et l'évolution ultérieure des patients ayant quitté l'hôpital sans autorisation fut étudiée. Les diagnostics d'abus de drogues ou de maladie psychiatrique ont démarqué significativement les deux groupes et expliqueraient les différences manifestes dans les variables démographiques. La non-observance et un séjour hospitalier plus bref caractérisent ceux qui ont quitté sans autorisation.

Key words: family medicine, patient noncompliance, physician-patient relationship

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LEAVING HOSPITAL against medical advice (AMA) is an abrupt expression of noncompliance with therapy. Most of the literature on the subject focuses on patients who depart from psychiatric care against medical advice. They form a substantial part of the psychiatric in-patient population, with reported rates from 7% to 20%.¹⁻³

Reported rates of discharge AMA from general hospitals are substantially lower at 0.7% to 4.0%.⁴⁻⁸ Most studies agree that substance abuse and psychiatric diagnosis are important correlates of the decision to leave AMA, and this correlation probably accounts for some of the disparity in rates between psychiatric and general hospitals.

There is less agreement on the importance of demographic variables. Age, sex, race, socio-economic and marital status, and religion have variously been considered either significant^{1,4,6-8} or unimportant.^{5,9} Conclusions based on studies from the United States may not be relevant to the Canadian situation be-

cause of differences in demographics and in the availability and provision of health care.

It has also been suggested that variables in the therapeutic milieu, the doctor-patient relationship, and the preparation for hospitalization may be important,^{4,9,10} although these have not been extensively investigated.

This study examined comparative rates of discharge AMA from a number of rural and urban hospitals in Alberta. A retrospective chart review of 50 consecutive discharges AMA and 50 randomly selected adult discharges by physician during the same period from a rural hospital were compared with respect

to a number of demographic, medical, and therapeutic variables to define the significant determinants of discharge AMA.

Follow up of the fate of the patients discharged AMA was carried out by reviewing their general practice charts for the six months after discharge for any adverse consequences of the behaviour and subsequent consulting pattern.

Methods

This study was performed at St. John's Health Care Complex, a 51-bed general hospital in Edson, Alberta, which is attended by each of eight family physicians in town with on-call responsibilities shared equally. The annual rate of discharge AMA was calculated for the year April 1, 1987, to March 31, 1988, and compared with rates calculated for a 12-month period from the surrounding rural hospitals and both general and psychiatric city hospitals in Edmonton.

Charts were retrieved for 50 consecutive discharges against medical advice from September 1985 to April 1988. Fifty randomly selected adult discharges by doctor were retrieved for the same period.

For each patient the following data were collected: age, sex, race (whether white or Metis/Native Indian), employment status, marital status, religious affinity (any versus none declared), psychiatric diagnosis, evidence of substance abuse (intoxication, history of current abuse, or physical stigmata of such abuse), time of admission (09:00 to 17:00 versus other), duration of stay, number of doctors involved in care, compliance with ward regimens, and unpleasant therapy (intravenous lines, catheters, nasogastric tubes, restrictive diets, or side-effects of treatment).

A single group practice in town serves the entire population, making retrieval of follow-up family practice information relatively straightforward. The following data were sought on all patients discharged AMA: whether seen in follow-up examinations after discharge, which doctor visited (same as hospital versus another), and whether there was any evidence of adverse effects in the six months after discharge.

Variables were examined individually and compared subjects discharged AMA versus control subjects. Chi-square analysis of significance was used for differences in discrete variables, and Student's *t* test was used to test for sig-

nificant differences in age and duration of stay. Demographic variables positively associated with discharge AMA were controlled for the presence of substance abuse and re-analyzed using Chi-square analysis.

Results

Patient Differences

The patients discharged AMA were significantly younger and more likely to be living alone, have no religious affinity, and be of Native origin (Table 1). The diagnostic variables of substance abuse and psychiatric diagnosis were also positively associated with discharge AMA (Table 2). When the vari-

ables of ethnicity, marital status, and religious affinity were re-analyzed with substance abuse controlled for, they no longer achieved statistical significance.

The patients who were discharged AMA were significantly more likely to have been admitted out of regular hours through the emergency room and to have shown noncompliance with ward regimens during their stay. This took a variety of forms (e.g., not following instructions for diet, activity, smoking, visiting procedures, or other hospital procedures). There was no difference between the groups in the nature of treatment received involving expected unpleasant effects or in the number of

Table 1
Demographic Variables of Patients

Demographic Variables	AMA	Controls	P Value
Mean age	35 ± 14	43 ± 12	p < 0.01
Male	27	24	NS
Female	23	26	
White	38	50	
Native	12	0	p < 0.001
Single	26	16	p < 0.05
Religious affiliation	8	25	p < 0.001
Employed	14	20	NS

Table 2
Circumstances of Diagnosis and Treatment

	AMA	Controls	P Value
Diagnostic variables			
Substance abuse	28	2	p < 0.001
Psychiatric disorder	8	2	p < 0.05
Variables of therapeutic milieu			
Admission out of hours (17:00–09:00)	36	24	p < 0.02
Compliance with ward regimens	33	48	p < 0.001
Duration of stay (days)	2 ± 2	4 ± 3	p < 0.001
Discomfortable therapy	20	17	NS
More than 1 physician attending	17	22	NS

doctors attending. The patients who were discharged AMA spent a shorter time in hospital (on average two days, significantly less than their control counterparts).

Follow-up Procedures

Forty-four patients of the 50 discharged AMA resided in the area and therefore might be expected to use the medical centre for care. Fourteen of these patients attended for follow-up examinations immediately after discharge, and the majority (10) attended the same doctor.

The remaining 30 patients did not attend for follow up, but 21 did attend the medical centre again within six months of discharge. Most of these patients (20) attended a doctor different from the one who looked after them in hospital. In no case did any of the 35 patients subsequently seen exhibit any adverse effects of their precipitate discharge.

The rate of discharge AMA in Edson was 1.44% similar to the other rural hospitals in the area (Table 3). The overall range was 0.4% to 1.5%, with the urban hospitals having rates about half that of the rural hospitals. The rate of discharge AMA from the psychiatric hospital was, as expected, higher at 3.7%.

Discussion

The rates of discharge AMA noted in this study (Table 3) were generally lower than those reported in U.S. studies,⁴⁻⁸ especially in the case of the urban hospitals, which may be more directly comparable to their U.S. counterparts in terms of bed size and populations.

The differences between city and rural hospitals may reflect differences in patient population, admissions and discharge practices, or their position as re-

ferral hospitals. Pressure on available beds makes it more difficult to get admitted to hospital, possibly resulting in the selecting out of those who do not wish to be there, and early discharge practices may avoid the conflict of opinion about care that causes some patients to be labelled discharged AMA. The similarity in rates between different urban and rural hospitals suggests that these patients may form a consistent subgroup of the in-patient population not entirely subject to variations in medical care.

In previous studies⁴⁻⁸ the only variables consistently predictive of discharge AMA were substance abuse and a psychiatric diagnosis. Both these variables were also noted in this study to be significantly associated with discharge AMA. No convincing conclusions about demographic variables can be drawn from the literature.

Race was found by two groups to be predictive of discharge AMA, but Ochitill and colleagues⁵ in California found whites more likely to leave AMA, whereas Schlauch and associates⁸ in Boston found blacks to leave AMA more often. Chandrasena¹ in Ottawa found no significant differences between anglophones, francophones, or immigrants, but could not address possible differences between Native Indians and whites. Similarly, whether marital status and male sex are significant determinants seems to depend on the population studied.⁵⁻⁹

In this study being Native, single, and without religious affinity seemed to be significantly associated with discharge AMA. These differences, however, were no longer apparent when the groups were re-analyzed while controlling for substance abuse. The greater likelihood of Natives to leave AMA could, there-

fore, be explained as well by the fact that the majority were drug or alcohol abusers as by any cultural difference. Failure in previous studies to control confounding variables may account for the conflicting results that have been reported.

Aspects of patient care in hospital that were significantly associated with discharge AMA point out factors that could predict the event. Identification of patients at risk of premature departure may allow one to focus attempts on ensuring optimal follow-up care for this group. Those who left AMA were more likely to be admitted as an emergency after hours, supporting the suggestion that a patient who is poorly prepared for hospitalization may be more likely to leave AMA.⁴ They were generally noted to be noncompliant with ward rules and regimens and to make the decision to leave within 48 hours of admission. These behaviours are compatible with substance abuse. It was interesting to note, however, that those aspects of treatment labelled discomfortable, such as intravenous therapy, nasogastric intubation, indwelling catheters, restrictive diets, or side-effects, were not positively associated with discharge AMA.

The eight physicians with admitting privileges to St. John's Hospital share on-call responsibilities equally, and this was reflected in the number of patients each physician had in the two groups studied. No physician had a disproportionate number of discharges AMA. When patients are admitted from the emergency room, they are under the care of the doctor on call that day but are free to request another doctor to care for them subsequently. Requests usually occur because patients wish their personal physician to look after them or do not get along with the admitting doctor.

Table 3
Patients Discharged from Canadian Hospitals Against Medical Advice

Hospital Type	Facility	Period	Total Admissions	Discharged AMA	AMA%
Rural	Edson	Apr 1/87-Mar 31/88	1449	21	1.44
Rural	Hinton	Apr 1/87-Mar 31/88	1770	22	1.24
Rural	Drayton Valley	Apr 1/87-Mar 31/88	2326	27	1.16
Urban	Edmonton General	Apr 1/87-Mar 31/88	15 174	117	0.77
Urban	Misericordia	Apr 1/87-Mar 31/88	19 384	89	0.5
Urban	Royal Alexandra	Jan 1/87-Dec 31/87	43 707	188	0.4
Psychiatric	Alberta Hospital	Jan 1/87-Dec 31/87	1658	61	3.7

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Such requests are almost invariably granted. There was, however, no significant difference in the number of physicians providing care to patients who were discharged AMA compared with the control group. For those patients who leave AMA, unpleasant therapy and differences with their doctor do not seem to play a role in the decision.

When the fate of discharged patients was studied, however, there was some evidence of impact of the relationship with the physician on follow-up care. Forty-four (88%) of those discharged AMA resided in the Edson area and so might be expected to attend there for medical care and indeed had current charts on file at the Medical Centre. Because they discharged themselves against advice, one can assume that continued contact was thought necessary and follow up desirable.

Only 14 patients were seen in follow up for that illness episode, however, and 10 of those chose to attend the same doctor. It seems that agreement on the need for follow-up care was reached between doctor and patient in this group. Of the rest, 21 were seen within the following six months at the Medical Centre, and most chose to see a different doctor. It appears that, when patients disagreed with the physician on the need for follow up, they preferred not to see that physician the next time they were ill. This reluctance is understandable but has implications for continuity of care and might be important if a patient discharged AMA requires treatment for deterioration in the condition.

But do patients who discharge themselves AMA sustain harm? Two studies^{7,8} found on discharge assessment that most were in no apparent danger. This study did not include assessment of risk at discharge, but six months after initial hospitalization, no patients discharged AMA demonstrated adverse consequences of their premature departure. Only 35 of the group were seen, so follow up may not be complete enough to draw conclusions.

Physicians may counsel patients to stay in hospital to avoid bad outcomes that, although potentially serious, are quite uncommon. Absence of serious sequelae in this small group does not disprove such advice, though it would seem that these patients cause more disruption to their caregivers than harm to themselves. They seem to be willing to accept greater degrees of personal risk than their physicians. Agreement on

this decision may make them less reluctant to consult in follow up.

Conclusions

Those patients who leave hospital AMA form a small but fairly consistent subgroup of the in-patient population. The most important determinant of the decision to leave hospital AMA is evidence of substance abuse; other demographic variables may be important only as they reflect the presence of such abuse. Short duration of stay and behaviour in hospital may similarly reflect this abuse. Factors involved in the therapeutic regimen and the doctor-patient relationship do not influence the decision to leave AMA, but the latter may be important in ensuring continued contact following departure. ■

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