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Research Article

Discharge Against Medical Advice: A One Year Retrospective Study in District General Hospital

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Abstract

Discharge against medical advice (DAMA) is a major problem in health care system which may result in increasing readmissions, morbidities, inabilities, deaths and health care costs [1]. Hence this study aims at understanding the pattern of discharge against physician's advice and also it's probable association with patient sociodemographic details, disease and treatment characteristics which might aid in controlling wasteful expenditure due to readmissions following interrupted treatment, significant especially in a developing country like India.

Methodology: A retrospective cross-sectional survey of patients who left AMA was conducted at a government tertiary care hospital in India. Descriptive statistics and the chi-square test were used to identify associations between various sociodemographic factors, documentation and treatment details and DAMA.

Results: According to the results out of the 3,138 cases admitted to K.R Hospital, Mysore during the month of January 2017 628 (20.0%) cases were discharged against medical advice of which 378 (60.2%) were males and 250 (39.8%) were females. Highest incidence of DAMA recorded was in the *elderly (>60yr)* which accounted for 27.9% (175 cases) of the sum total.163 (26%) discharged from causality, 348 (55.4%) from medicine, 54 (8.6%) from surgery, 33 (5.3%) from orthopedic, 5 (0.8%) from psychiatry and 25 (4.0%) from other departments, showing that 90% of DAMA cases were mainly from the departments of medicine, causality and surgery. Furthermore, more discharges were seen with admissions during the non- working hours (58.6%) than working hours (41.4%), however time of discharge had no significance. Also, the duration of hospital stay before DAMA was mostly either 2 days (133 cases; 21.2%) or more than a week (116 cases; 18.5%).

Conclusion: The results suggest a significant high prevalence of DAMA (20%) more than the normal estimated value. Also, some associations of DAMA are found to be in contrary to normal trends as described in previous studies, thereby increasing scope for further research into the common reasons for DAMA in India so as to be able to intervene accordingly.

Keywords: Discharge against medical advice; In-patients; Tertiary hospital

Introduction

With nearly 1.3 billion people, India is one of the most populous countries in the world. Although India's rapidly growing economy has expanded its role in the global marketplace, the development of its health system appears to be lagging behind, which can be explained as one of the problems leading to the factors that dampen the advantages one can get from institutional care such as healthcare Acquired Infections (HAIs) and withdrawal from treatment by the patients also referred to as discharge against medical advice [2].

Definition

Discharge Against Medical Advice (DAMA) occurs when a patient decides to leave the hospital against the opinion of the managing physician. This form of discharge may be carried out by the patients, their relatives (in the case of adult patients with competency problems) or their parents (in the case of children).

Escape (absence without leave, absconding, or elopement), whereby the patient leaves the hospital without notification by escaping from an involuntary unit or walking out of a voluntary unit, also has been considered by some clinicians and researchers to be a form of discharge against medical advice [3].

How prevalent is DAMA?

Although, DAMA is sometimes a relatively rare occurrence, the reported incidence showed great variation depending upon patient population, type of treatment setting, and also from centre to centre and among cultures and social backgrounds [3].

Prevalence rates ranged from 0.7% to 2.2% [4,5] among general hospital patients, but may reach up to 25.9% [6]. Also, studies have documented a higher rate of DAMA in developing than developed countries [7]. As far as the Indian health care status is concerned, various studies have data on Against Medical Advice (AMA) discharge ranging from 4% to 15% in critically ill patients [8].

What are the consequences of DAMA?

The outcomes of DAMA for the patient can be deterioration of his/her situation, even up to the point of death or the entailing side effects which cannot be cured in long time and render the therapeutic result unsatisfactory [9]. So, it can be said that failure to complete a hospitalization is only leading to re- lapse of certain disease or illness, and hence re-admissions which most is likely to result in greater subsequent resource utilization, and perhaps greater costs for the subsequent care of an initially inadequately treated condition [10].

What are the legal and ethical issues to be addressed?

The conflict between the professional values (beneficence) of the physician and the autonomy (self-determination) of the patients is the most prominent ethical dilemma in DAMA. The Hippocratic Oath and the Declaration of Geneva recognise the importance of beneficence, i.e., doing good to patients or at least not leaving them worse off than before their contact with the physician [11].

The Professionalism Charter, the ethics of professional conduct for medical practitioners and the law both recognise the autonomy of the patients i.e., a patient is a mature individual who has the right to take a DAMA and consent to treatment, failing which the attending physician may be sued for an action in trespass under the law of torts if he opposes [12] (Quinlan and Majoros reported that 0.3% of DAMA cases led to litigation unlike 0.05% caused by regular discharges). In the exercise of such rights by patients, medical staff must avoid deficiencies in compliance to the DAMA process as they may be held liable in the event of morbidity or mortality.

The main ethical conflict that arises when a patient decides to leave the hospital against the consent of the managing physician is between these two principles of autonomy and beneficence. The question is, which of them takes precedence? There is no clear-cut answer but examining individual cases based on their peculiarities could help to make the most relevant decision. Important factors include the setting; cost implications for the healthcare system; and the patient's competence/decision making capacity, family support system and best interests [11].

Materials and Methods

Study type: Retrospective, cross-sectional study.

Study site: Study was carried out in Krishna Rajendra (KR) Hospital attached to Mysore Medical College & Research Institute (MMCRI), Mysore.

Data Collection: Data was collected by the primary investigator from 21.08.2018 to 15.10.2018 by a systematic review of past records consisting of all case sheets labelled as *DAMA* from the month of January 2017 using a self-designed questionnaire, in Medical records department of K.R Hospital, Mysore.

Instrument used: The required data was extracted using a self-designed questionnaire. The self-designed questionnaire used in the study consisted of three parts: Part 1 - patient sociodemographic details and hospital particulars during their time of stay in the hospital, Part 2 – documentation details (5 questions) and, Part 3 – details regarding course of management. (5 questions).

Statistical Analysis: Descriptive statistics and the chi-square test were used to identify associations between various sociodemographic factors, documentation and treatment details and DAMA.

Ethical Issues: Study was initiated after approval by the Institutional Ethical Committee MMCRI. Strict confidentiality of the data was maintained.

Results

A total of 3,138 made admissions to K.R Hospital, Mysore during the month of January 2017 out of which 628 (20.0%) cases were discharged against medical advice of which 378 (60.2%) were males and 250 (39.8%) were females. The results obtained, as shown above, has been depicted in three ways for best analysing it viz.

- Percentage of DAMA cases calculated w.r.t each detail in Part 1 (Table 1, Figure 1, Figure 3).
- Percentage of DAMA cases in every outcome of various Questions in Part 2 and Part 3 (only those questions which have shown significant association with selected Part 1 variables, with a p-value<0.05 by Pearson chi-square test are chosen for analysis) in each Speciality, different Age groups, various Diagnosis on admission and so on (Tables 2.1, 2.2,

2.3a, 2.3b and 2.3c).

- Percentage of DAMA cases of different specialities and diagnosis made on admission in age group, different sexes, occupation, socio-economic classes and other socio-demographic data and hospital particulars.

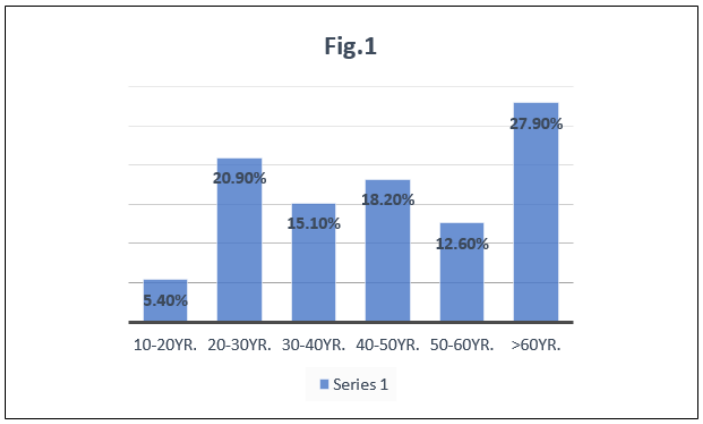


Figure 1: The age distribution of all DAMA cases.

	n	Percent
Age:		
1. 10-20yr	34	5.4
2. 20-30yr	131	20.9
3. 30-40yr	95	15.1
4. 40-50yr	114	18.2
5. 50-60yr	79	12.6
6. >60yr	--	27.9
Sex:		
1. Male	378	60
2. Female	250	40
Address:		
1. Within city limits	124	19.7
2. 10-20km from city	59	9.4
3. 20-40km from city	135	21.5
4. >40km from city	310	49.4
Religion:		
1. Hindu	571	90.9
2. Muslim	55	8.8
3. Christian	2	0.3
Marital status:		
1. Married	520	82.8
2. Unmarried	102	16.2
3. Widowed	6	1
Average income:		
1. BPL Holder	379	60.4
2. Non-BPL Holder	249	39.6
Time of admission:		
1. Working hours	260	41.4
2. Non-working hours	368	58.6
Duration of hospital stay:		
1. 1d	123	19.6
2. 2d	133	21.2
3. 3d	107	17
4. 4d	62	9.9
5. 5d	49	7.8
6. 6d	38	6.1
7. >/=7d	116	18.5
Time of discharge:		
1. Not recorded	559	89
2. Working hours	35	5.6
3. Non-working hours	34	5.4
History of previous hospitalization:		
1. Not recorded	515	82
2. Yes	83	13.2
3. No	30	4.8
Type of case:		
1. General	254	40.4
2. MLC	374	59.6

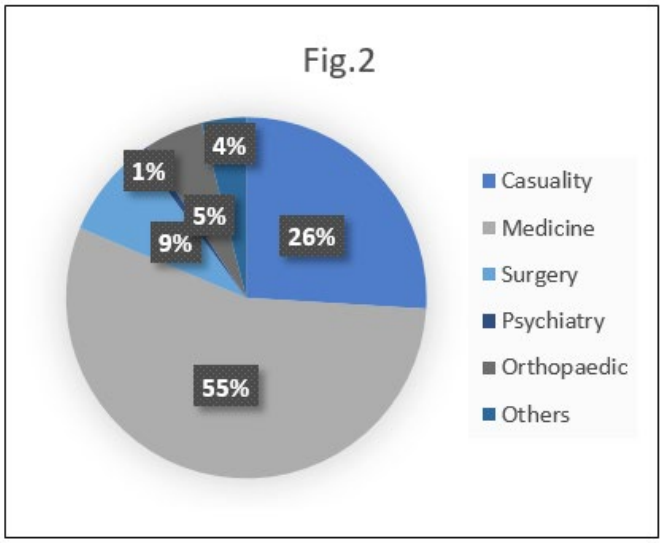
Table 1: Socio-Demographics'.

Table 1 describes the sociodemographic characteristics and hospital particulars of the patient availing DAMA. Most of the patients discharging AMA were over 60 yr. of age, the age distribution of all DAMA cases has been depicted as a bar chart in Figure 1. Patients coming from farther areas away from the city especially 40km and above had a DAMA incidence of approximately 50%. Hindus and Married patients showed a higher

incidence (Table 1). BPL card holders i.e., patients belonging to a lower socioeconomic class showed discharges AMA. Discharges are more common during the non-working hours and more common with medico-legal cases than general cases.

DAMA among various specialties is as depicted in Figure 2 which shows highest incidence in the medicine department followed by causality/ emergency care department and showing the least incidence in the department of psychiatry.

Diagnosis done on admission has been classified into four major disease types viz. Infectious disease, Non- communicable Disease, Trauma, Suicidal attempt/ poisoning (OP poisoning, Unknown substance consumption, Tablet overdose, Hanging, Burns) and Others. Incidence of DAMA in all each of these different categories has been depicted in Figure 3 showing highest incidence with patients diagnosed with Non-communicable diseases. Figure 3 also depicts the percentage of final diagnosis that was Same, Different and not yet diagnosed with each category.



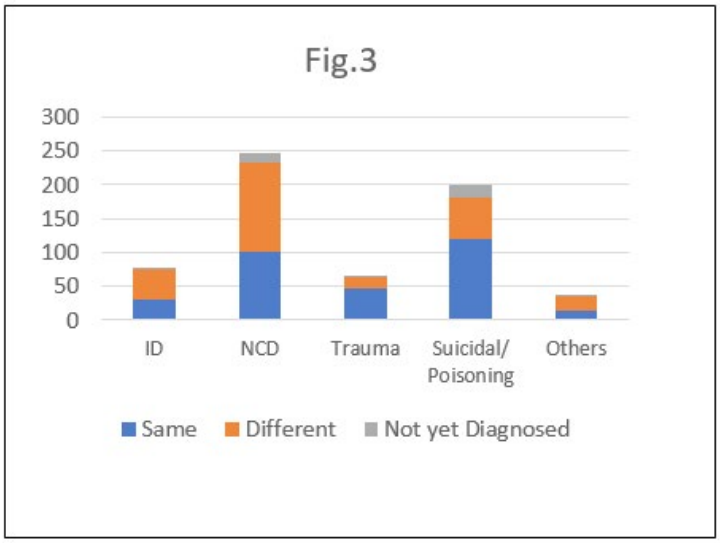


Figure 2: DAMA among various specialties; **Figure 3:** DAMA among various disease types.

The following tables compare a few variables that have shown a significant association by chi-square test (p-value<0.05) with the documentation and treatment details of the DAMA case sheets under study. This can used to evaluate the percentage of DAMA cases across appropriate documentation and treatment details recorded varying significantly with different specialties, age groups and so on. . This can used to evaluate the percentage of DAMA cases across appropriate documentation and treatment details recorded varying significantly with different specialties, age groups and so on.

		AGE					
		10-20yr.	20-30yr.	30-40yr.	40-50yr.	50-60yr.	>60yr.
Documentation of signature	Patient	2 (5.88%)	9 (6.87%)	12 (12.63%)	11 (9.65%)	2 (2.53%)	9 (5.14%)
	Spouse	4 (11.76	16 (12.21%)	20 (21.05%)	13 (11.40%)	6 (7.59%)	9 (5.14%)
	Siblings	2 (5.88%)	9 (6.87%)	7 (7.37%)	6 (5.27%)	0	3 (1.71%)
	Parents	14 (41.19%)	24 (18.32%)	7 (7.37%)	2 (1.75%)	1 (1.27%)	3 (1.71%)
	Children	0	1 (0.76%)	1 (1.05%)	9 (7.89%)	14 (17.72%)	49 (28%)
	Others	11 (32.36%)	69 (52.68%)	38 (40%)	62 (54.39%)	46 (58.23%)	91 (52%)
	Not signed	1 (2.94%)	3 (2.29%)	10 (10.53%)	11 (9.65%)	10 (12.66%)	11 (6.30%)
Did the doctor sought any consultation from other specialists?	Yes-seen	7 (20.59%)	55 (41.98%)	35 (36.84%)	31 (27.19%)	19 (24.05%)	36 (20.57%)
	Yes-not seen	6 (17.65%)	13 (9.92%)	16 (16.84%)	27 (23.68%)	21 (26.58%)	58 (33.14%)
	No	21 (61.76%)	63 (48.10%)	44 (46.32%)	56 (49.12%)	39 (49.37%)	81 (46.29%)
Whether there was ordering of laboratory/ radiological investigations?	At admission	20 (58.82%)	68 (51.91%)	51 (53.68%)	64 (56.14%)	59 (74.69%)	116 (66.29%)
	After admission	4 (11.77%)	30 (22.90%)	24 (25.27%)	28 (24.56%)	9 (11.39%)	21 (12%)
	No	10 (29.41%)	33 (25.19%)	20 (21.05%)	22 (19.30%)	11 (13.92%)	38 (21.71%)

Table 2.1: Age with documentation and treatment details of the DAMA case sheets under study.

		SPECIALITY					
		Causality	Medicine	Surgery	Psychiatry	Orthopaedic	Others
Are history, physical examination, diagnosis and treatment details available?	Yes	145	309	49	4	28	16
	No	18 (11.04%)	39 (11.21%)	5 (9.26%)	1 (20%)	5 (15.15%)	9 (36%)

Are the laboratory and radiography reports attached and entered in the record at appropriate place?	Yes	120 (73.62%)	279 (80.17%)	47 (87.04%)	4 (80%)	16 (48.48%)	12 (48%)
	No	43 (26.38%)	69 (19.83%)	7 (12.96%)	1 (20%)	17 (51.52%)	13 (52%)
Documentation of signature	Patient	10 (6.13%)	22 (6.32%)	7 (12.96%)	0	3 (9.09%)	3 (12%)
	Spouse	25 (15.34%)	32 (9.20%)	6 (11.11%)	1 (20%)	2 (6.06%)	2 (8%)
	Siblings	8 (4.91%)	16 (4.60%)	0	1 (20%)	0	2 (8%)
	Parents	23 (14.11%)	22 (6.32%)	3 (5.56%)	0	1 (3.03%)	2 (8%)
	Children	8 (4.91%)	51 (14.66%)	6 (11.11%)	0	6 (18.18%)	3 (12%)
	Others	78 (47.85%)	186 (53.44%)	24 (44.45%)	3 (60%)	16 (48.49%)	10 (40%)
	Not signed	11 (6.75%)	19 (5.46%)	8 (14.81%)	0	5 (15.15%)	3 (12%)
At admission was treatment plan indicated?	Yes	159 (97.56%)	339 (97.41%)	44 (81.48%)	4 (80%)	24 (72.73%)	21 (84%)
	No	4 (24.44%)	9 (2.59%)	10 (18.52%)	1 (20%)	9 (27.27%)	4 (16%)
Did the doctor sought any consultation from other specialists?	Yes-seen	78 (47.85%)	84 (24.14%)	16 (29.63%)	1 (20%)	2 (6.06%)	2 (8%)
	Yes-not seen	16 (9.82%)	91 (26.15%)	13 (24.07%)	1 (20%)	16 (48.48%)	4 (16%)
	No	69 (42.33%)	173 (49.71%)	25 (46.30%)	3 (60%)	15 (45.46%)	19 (76%)
Whether there was ordering of laboratory/ radiological investigations	At admission	84 (51.34%)	229 (65.80%)	38 (70.37%)	0	16 (48.49%)	11 (44%)
	After admission	41 (25.15%)	46 (13.20%)	12 (22.23%)	4 (80%)	9 (27.27%)	4 (16%)
	No	38 (23.31%)	73 (21%)	4 (7.40%)	1 (20%)	8 (24.24%)	10 (40%)

Any further advice documented after DAMA?	Yes	14 (8.59%)	37 (10.63%)	10 (18.52%)	3 (60%)	4 (12.12%)	1 (4%)
	No	149 (91.41%)	311 (89.37%)	44 (81.48%)	2 (40%)	29 (87.88%)	24 (96%)

Table 2.2: Specialty with documentation and treatment details of the DAMA case sheets under study.

		DIAGNOSIS ON ADMISSION				
		ID	NCD	Trauma	Suicidal attempt/ poisoning	Others
Documentation of signature	Patients	3 (3.80%)	15 (6.10%)	3 (4.60%)	17 (8.50%)	7 (18.40%)
	Spouse	5 (6.40%)	24 (9.70%)	6 (9.20%)	28 (14%)	5 (13.20%)
	Siblings	7 (9.00%)	8 (3.20%)	2 (3.10%)	10 (5%)	0
	Parents	3 (3.80%)	10 (4.00%)	5 (7.70%)	31 (15.50%)	2 (5.30%)
	Children	13 (16.70%)	37 (15.00%)	12 (18.50%)	9 (4.50%)	3 (7.90%)
	Others	38 (48.70%)	136 (55.10%)	31 (47.70%)	94 (47%)	18 (47.40%)
	Not signed	9 (11.60%)	17 (6.90%)	6 (9.20%)	11 (5.50%)	3 (7.80%)
At admission was treatment plan indicated?	Yes	75 (96.20%)	233 (94.30%)	56 (86.20%)	196 (98%)	31 (81.60%)
	No	3 (3.80%)	14 (5.70%)	9 (13.80%)	4 (2%)	7 (18.40%)
Did the doctor sought any consultation from other specialists?	Yes-seen	13 (16.60%)	48 (19.40%)	10 (15.40%)	99 (49.50%)	13 (34.20%)
	Yes-not seen	19 (24.40%)	73 (29.60%)	21 (32.30%)	21 (10.50%)	7 (18.40%)
	No	46 (59.00%)	126 (51%)	34 (52.30%)	80 (40%)	18 (47.40%)

Whether there was ordering of laboratory/ radiological investigations?	At admission	54 (69.20%)	159 (64.40%)	35 (53.80%)	107 (53.50%)	23 (60.50%)
	After admission	10 (12.80%)	33 (13.40%)	17 (26.20%)	48 (24%)	8 (21.10%)
	No	14 (20%)	55 (22.20%)	13 (20%)	45 (22.50%)	7 (18.40%)

Table 2.3a: Diagnosis on admission with documentation and treatment details of the DAMA case sheets under study.

		FINAL DIAGNOSIS		
		Same	Diff	Not Yet diagnosed
Are the records properly filled?	Yes	0	7 (2.60%)	0
	No	314 (100%)	265 (97.40%)	42 (100%)
Are the laboratory and radiography reports attached and entered in the record at appropriate place?	Yes	224 (71.30%)	230 (84.6%)	24 (57.10%)
	No	90 (28.70%)	42 (15.40%)	18 (42.90%)
Are the progress notes sufficient and relevant that the clinical course can be followed?	Yes	152 (48.40%)	172 (63.20%)	17 (40.50%)
	No	162 (51.60%)	100 (36.80%)	25 (59.50%)
Did the doctor sought any consultation from other specialists?	Yes-seen	89 (28.30%)	89 (32.70%)	5 (11.90%)
	Yes-not seen	54 (17.20%)	77 (28.30%)	10 (23.80%)
	No	171 (54.50%)	106 (39.00%)	27 (64.30%)

Whether there was ordering of laboratory/radiological investigations?	At admission	182 (58%)	179 (65.80%)	17 (40.50%)
	After admission	56 (17.80%)	53 (19.50%)	7 (16.60%)
	No	76 (24.20%)	40 (14.70%)	18 (42.90%)

Table 2.3b: Final diagnosis with documentation and treatment details of the DAMA case sheets under study.

		DURATION OF HOSPITAL STAY						
		1d	2d	3d	4d	5d	6d	>/=7d
Are the laboratory and radiography reports attached and entered in the record at appropriate place?	Yes	40 (32.50%)	100 (75.20%)	94 (87.90%)	56 (90.30%)	46 (93.90%)	38 (100%)	104 (89.70%)
	No	83 (67.50%)	33 (24.80%)	13 (12.10%)	6 (9.70%)	3 (6.15	0	12 (10.30%)
Are the progress notes sufficient and relevant that the clinical course can be followed?	Yes	3 (2.40%)	34 (25.60%)	83 (77.60%)	53 (85.50%)	44 (89.80%)	34 (89.50%)	90 (77.60%)
	No	120 (97.60%)	99 (74.40%)	24 (22.40%)	9 (14.50%)	5 (10.20%)	4 (10.50%)	26 (22.45
Did the doctor sought any consultation from other specialists?	Yes-seen	8 (6.50%)	27 (20.30%)	46 (43.00%)	27 (43.50%)	23 (46.90%)	19 (50%)	33 (28.40%)
	Yes-not seen	12 (9.80%)	18 (13.50%)	25 (23.40%)	14 (22.60%)	10 (20.40%)	10 (26.30%)	52 (44.80%)
	No	103 (83.70%)	88 (66.20%)	36 (33.60%)	21 (33.90%)	16 (32.70%)	9 (23.70%)	31 (26.80%)
Whether there was ordering of laboratory/radiological investigations?	At admission	38 (30.90%)	85 (63.90%)	74 (69.20%)	37 (59.70%)	38 (77.60%)	22 (57.90%)	84 (72.40%)
	After admission	2 (1.60%)	21 (15.80%)	23 (21.50%)	20 (32.20%)	10 (20.40%)	16 (42.10%)	24 (20.70%)
	No	83 (67.50%)	27 (20.30%)	10 (9.30%)	5 (8.10%)	1 (2.00%)	0	8 (6.90%)

Table 2.3c: Duration of hospital stay on admission with documentation and treatment details of the DAMA case sheets under study.

		SPECIALITY						DIAGNOSIS ON ADMISSION				
		Causality	Medicine	Surgery	Psychiatry	Orthopaedic	Others	ID	NCD	Trauma	Suicidal attempt / poisoning	Others
Age	10-20yr.	17(10.4%)	14(4.0%)	0	0	0	3(12%)	1(1.3%)	5(2.0)	2(3.1%)	25(12.5%)	1(2.6%)
	20-30yr.	73(44.8%)	42(12.1%)	4(7.4%)	0	7(21.2%)	5(20%)	13(16.7%)	12(4.9%)	15(23.1%)	85(42.5%)	6(15.8%)
	30-40yr.	32(19.6%)	44(12.6%)	10(18.5%)	3(60%)	2(6.1%)	4(16%)	12(15.4%)	29(11.7%)	6(9.2%)	42(21%)	6(15.8%)
	40-50yr.	21(12.9%)	66(19.0%)	13(24.1%)	1(20%)	10(30.3%)	3(12%)	14(17.9%)	49(19.8%)	17(26.2%)	27(13.5%)	7(18.4%)
	50-60yr.	9(5.5%)	53(15.2%)	10(18.5%)	0	3(9.1%)	4(16%)	15(19.2%)	41(16.7%)	7(10.8%)	10(5%)	6(15.8%)
	>60yr.	11(6.3%)	129(73.7%)	17(9.7%)	1(0.57%)	11(6.3%)	6(3.4%)	23(29.5%)	111(44.9%)	18(27.7%)	11(5.5%)	12(31.6%)
Occupation	Coolie	73(44.8%)	62(17.8%)	6(11.1%)	0	7(21.2%)	6(24%)	8(10.3%)	53(21.5%)	15(23.1%)	73(36.5%)	5(13.2%)
	Not recorded	90(55.2%)	286(82.2%)	48(88.9%)	5(100%)	26(78.8%)	19(76%)	70(89.7%)	194(78.5%)	50(76.9%)	127(63.5%)	33(86.8%)
Marital Status	Married	114(69.9%)	306(87.9%)	51(94.4%)	5(100%)	25(75.8%)	19(76%)	64(82.1%)	230(93.1%)	50(76.9%)	143(71.5%)	33(86.8%)
	Unmarried	49(30.1%)	37(10.7%)	2(3.7%)	0	8(24.2%)	6(24%)	12(15.4%)	14(5.7%)	15(23.1%)	57(28.5%)	4(10.6%)
	Widowed	0	5(1.4%)	1(1.9%)	0	0	0	2(2.5%)	3(1.2%)	0	0	1(2.6%)
Final Diagnosis	Same	93(57.1%)	151(43.4%)	24(44.5%)	4(80%)	25(75.8%)	17(68%)	30(38.5%)	101(40.9%)	47(72.3%)	121(60.5%)	15(39.4%)
	Different	48(29.4%)	183(52.6%)	26(48.1%)	0	8(24.2%)	8(32%)	45(57.7%)	132(53.4%)	16(24.6%)	58(29%)	21(55.3%)
	Not yet diagnosed	22(13.5%)	14(4.0%)	4(7.4%)	1(20%)	0	0	3(3.8%)	14(5.7%)	2(3.1%)	21(10.5%)	2(5.3%)
Duration of Hospital Stay	1d	35(21.5%)	74(21.3%)	4(7.4%)	0	4(12.1%)	6(24%)	12(15.4%)	55(22.3%)	8(12.3%)	43(21.5%)	5(13.2%)
	2d	35(21.5%)	77(22.1%)	10(18.5%)	0	5(15.2%)	6(24%)	19(24.4%)	48(19.4%)	13(20%)	40(20%)	13(34.2%)
	3d	37(22.7%)	57(16.4%)	5(9.3%)	1(20%)	5(15.2%)	2(8%)	13(16.6%)	36(14.6%)	8(12.3%)	47(23.5%)	3(7.9%)
	4d	17(10.4%)	36(10.3%)	6(11.1%)	0	2(6.1%)	1(4%)	6(7.7%)	24(9.7%)	6(9.2%)	22(11%)	4(10.5%)
	5d	14(8.6%)	28(8.0%)	2(3.7%)	0	3(9.1%)	2(8%)	7(9.0%)	18(7.3%)	6(9.2%)	17(8.5%)	1(2.6%)
	6d	15(9.2%)	17(4.9%)	3(5.6%)	1(20%)	0	2(8%)	7(9.0%)	10(4.0%)	3(4.7%)	16(8%)	2(5.3%)
	>/=7d	10(6.1%)	59(17.0%)	24(44.4%)	3(60%)	14(42.3%)	6(24%)	14(17.9%)	56(22.7%)	21(32.3%)	15(7.5%)	10(26.3%)
History of Previous Hospitalization	Not recorded	158(96.9%)	288(82.8%)	29(53.7%)	3(60%)	20(60.6%)	17(68%)	64(82.1%)	183(74.1%)	48(73.8%)	194(97%)	26(68.4%)
	Yes	2(1.3%)	47(13.5%)	19(35.2%)	2(40%)	8(24.2%)	5(20%)	11(14.1%)	52(21.1%)	10(15.4%)	2(1%)	8(21.1%)
	No	3(1.8%)	13(3.7%)	6(11.1%)	0	5(15.2%)	3(12%)	3(3.8%)	12(4.9%)	7(10.8%)	4(2%)	4(10.5%)

Table 3: Specialty and Diagnosis on admission with the patient's sociodemographic and hospital particulars which has shown significant association by chi-square test.

Discussion

One of the critical problems in hospitalization of patient in which a patient despite medical advice leaves the hospital earlier than due time is called Discharge against medical advice (DAMA) [13]. DAMA continues to be a highly prevalent problem of health care quality, representing as many as 2% of all hospital discharges [4]. Though DAMA is a universal problem, plaguing both rural and urban hospitals, occurring in both inpatient wards and emergency departments, majority of the studies in this area have been with in- patients with a general focus on specific patient groups, such as the general medicine service or psychiatric patients usually in large urban hospitals [3]. Also, Indian literatures available on DAMA are meagre and most of them limited their study to specific sub-specialty. Hence, carrying out a research is needed to create awareness for taking up measures to control DAMA and to prevent DAMA related risks and mortality.

Our study though only a descriptive one has enabled us to interpret the results as follows – DAMA cases are commonly seen with the department of medicine, emergency care, surgery, orthopaedics and psychiatry in that order. Though most studies usually were done in the department of psychiatry [4,14] and proved, risk of DAMA was high in the psychiatry department, our study speaks otherwise. However high incidence in the departments of emergency care and medicine is in accordance with most studies [1,15-17]. Furthermore, while medicine and orthopaedic cases were highest in the older adults (>60yr.) casualty cases were significantly high in young adults. Final diagnosis done in these DAMA cases also showed variability being mostly same in casualty but different with most medicine cases.

From the results we can say that DAMA incidence is the highest with the elderly (Figure 1) i.e., patients above the age of 60yr. which is not in accordance with most studies [16,18] where it is usually more in younger patients. The reason could definitely be due to greater health issues with the old, hence greater admissions and readmissions but one should also realise this might to some extent signify neglect towards this age group. Once they retire, elderly people find that their children are not taking advice from them and if a senior citizen is economically depended on children, the problem is likely to become even worse. The incidence was more in males in accordance to most studies [1,14,18] and also it was observed that the decision for DAMA although in most cases taken by *others* (unspecified relation to the patient) was taken by the patients' children in elderly patients, their spouse in middle-aged adults, parents in adolescent patients and patients themselves in middle-aged individuals (Figure 2). It is noted no documentation of any signature before leaving AMA has been observed mostly with those patients discharging from the departments of surgery and orthopaedics (Table 2.2).

Incidence is higher with the non-residents of Mysore (Table 1) i.e., those coming from farther areas especially more than 40km away from the city. The reason can probably be financial, as already published as one of the common reasons for DAMA [17,19-21], this is implicated in accordance with two other factors from the study results viz. more incidence in people with a BPL (below poverty line) card and in patients admitted during Non-working hours. Thus, we can say that patients especially those belonging to a lower socio-economic class coming from rural areas far from the city in search of better health service cannot afford to stay for longer as this only results in loss of daily wages which is of utmost importance for them, and hence they tend to visit during the Non-working hospital hours (evening) so as to receive the necessary care and leave back for their town as soon as possible.

It is also evident that in patients discharging against medical advice the duration of hospital stay was mostly just a day or two in accordance with most other studies [2,18], usually in patients who were diagnosed with a NCD or suicidal attempt/ poisoning cases. However, some studies showed there was no significant variation of DAMA with number of days stayed in hospital [19]. In our study it is also seen that patients with a longer duration of hospital stay (>/= 7 days) have also shown an almost equal tendency to leave AMA mainly from the surgery department and in patients admitted due to trauma (Table 3).

It is observed that the diagnosis on admission made for most these DAMA cases was- Non-communicable disease which can be attributed to the fact that greater percentage of cases was seen with the elderly and NCDs are most commonly seen in older age groups (Table 3). Suicidal attempt/poisoning cases also form a significant portion of the total DAMA cases. Furthermore, final diagnosis changed probably based on further investigations in most NCD and ID cases was different from diagnosis on admission but it remained the same in most cases of suicidal attempts or poisoning i.e., with most Medico-legal cases (MLC).

Our study not only helped us to study the prevalence of DAMA considerably varying with speciality, age groups, sexes, various diagnosis on admission etc. as discussed above but also helped us to analyse the association of DAMA cases with the various documentation and patient management details.

It is observed that the case sheets were filled adequately in most circumstances but slightly more efficiently in medicine and surgery but least efficiently in orthopaedic w.r.t. history/physical examination/diagnosis/treatment details, ordering and attachment of relevant reports (Table 2.2). Ordering of reports generally was done at admission and greater percentage has been recorded with the older age groups (>50yr.) and with patients diagnosed with infectious diseases (Table 2.3a).

Advice sought from other specialists regarding the case was not documented in most cases which might be attributed to shorter duration of hospital stay but with increased duration of

stay percentage of cases where other specialists were consulted increased, however whether the patient was actually seen by these specialists wasn't documented. Consultations were most commonly recorded in younger age groups (20-40yr.) (Table 2.1) and in patients admitted for emergency care (casualty) but least recorded with orthopaedic cases. The progress notes attached to the case sheet that needs to maintained to understand the disease progression, was more efficiently recorded when the final diagnosis was different from the diagnosis on admission than when the final diagnosis was the same. Also, the percentage of sufficient progress note recording increased with increasing duration of hospital stay up-to 5 days after which it decreased. Another general and important finding is that irrespective of the speciality, advice before the patient left AMA w.r.t. to medicines to be taken or advice indicating need for follow-up hasn't been documented in majority of the cases with the department of psychiatry being an exception.

Limitations

Though date and time of discharge can give a clue about the cause of discharge with regard to DAMA due to any vital events in patient's life or any festival or a holiday commenting about it isn't possible in our study because it hasn't been recorded adequately. The same reason has been a major limiting factor in the study w.r.t recording of occupation of patient, previous history of hospitalization mainly in emergency care and MLC cases which could give useful information about readmissions.

Conclusion

The rate of DAMA in Mysore, India in comparison with those of other countries is relatively high; thus, effective initiatives in this area are required. Furthermore, given the limited studies conducted in India and the lack of investigation into variables contributing to DAMA and also impacts of DAMA in Indian hospitals, more research is needed in this area.

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