

Temporal trends of discharge against medical advice among maxillofacial trauma patients at the Yaoundé Central Hospital, Cameroon (2009–2012): a retrospective study

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Abstract

Background

Discharge against medical advice (DAMA), also referred to as hospital elopement, is a recognised marker of the quality and accessibility of hospital care, particularly in low- and middle-income countries. This study analysed its temporal trend among patients admitted for maxillofacial trauma at the Yaoundé Central Hospital, Cameroon.

Methods

A retrospective descriptive study was conducted on twenty-four patients admitted for maxillofacial trauma following road traffic accidents who left against medical advice between 2009 and 2012. Socio-demographic, clinical and socio-economic variables were collected. The temporal trend was assessed using linear regression and the Cochran-Armitage trend test, with a significance threshold of 0.05. Reporting followed the STROBE guidelines.

Results

The annual number of DAMA episodes rose steadily from 1 case in 2009 (4.2%) to 3 in 2010 (12.5%), 8 in 2011 (33.3%) and 12 in 2012 (50.0%), a highly significant increasing trend ($p < 0.001$). Financial hardship accounted for 75.0% of departures and perceived clinical improvement for 25.0%. The mean age was 32.17 ± 7.39 years, with a male predominance (83.3%). The mean length of stay was 7.25 days, and in 91.7% of cases the decision originated from the patient. Bivariate comparisons showed no statistically significant difference between subgroups ($p > 0.05$).

Conclusions

The steady rise in DAMA reflects chiefly a lack of financial accessibility and a perfectible quality of therapeutic communication. Integrated strategies combining social support, improved patient communication, optimised care protocols and quality monitoring are warranted to reverse this trend.

Background

Discharge against medical advice (DAMA), understood as the departure of an inpatient contrary to the treating physician's advice before the recommended treatment is completed, is far from a trivial event. It is associated with an excess of complications, readmissions and mortality, and it undermines the efficiency of health-care systems [1, 2]. In the French-language literature, the term "hospital elopement" denotes its most abrupt form, when the patient leaves without informing the care team. Its frequency

varies widely across settings, from a few per cent in general medical wards to substantially higher proportions in certain emergency or resource-constrained situations [3].

Beyond its clinical dimension, DAMA acts as a revealing indicator: it exposes the tension between the supply of care and the real capacity of populations to access it. In sub-Saharan Africa, where out-of-pocket payment remains the rule, DAMA is a sensitive marker of the quality and financial accessibility of care [4]. Reference studies from the region consistently place economic barriers among the leading reasons for premature departure [4, 5].

Maxillofacial trauma, frequently caused by road traffic accidents, illustrates this tension acutely. It affects a young and economically active population, requires care that is often prolonged and costly, and combines functional impairment, aesthetic prejudice and economic pressure [6]. In Cameroon, where socio-economic determinants weigh heavily on the use of care [7], data on the evolution of DAMA remain scarce, particularly in specialised surgical services [8].

Understanding the temporal dynamics of these departures and the factors that drive them is a prerequisite for any intervention. The present study therefore aimed to analyse the evolution of DAMA in the otolaryngology and cervico-maxillofacial surgery department of the Yaoundé Central Hospital between 2009 and 2012, to identify associated factors, and to outline quality-of-care-centred improvement strategies.

Methods

Study design and setting

This was a retrospective descriptive and analytical study conducted in the otolaryngology and cervico-maxillofacial surgery department of the Yaoundé Central Hospital (Hôpital Central de Yaoundé), Cameroon, covering the period from 2009 to 2012. The design and reporting complied with the STROBE guidelines for observational studies.

Participants

Patients admitted for maxillofacial trauma following a road traffic accident, who left the department against medical advice and had an exploitable medical record, were included. Incomplete records, patients transferred to another department and in-hospital deaths were excluded. In total, twenty-four patients met these criteria.

Variables

The variables collected were age, sex, place of residence, marital status, level of education, length of stay, reason for the discharge against medical advice, initiator of the decision, and clinical status at the

time of departure.

Statistical analysis

Qualitative variables were expressed as counts and percentages, and quantitative variables as mean $\pm$ standard deviation. The temporal trend was assessed using linear regression and the Cochran-Armitage trend test. The significance threshold was set at 0.05.

Ethics

The study complied with the principles of the Declaration of Helsinki. Ethical clearance was granted by the Institutional Ethics and Research Committee (Comité Institutionnel d'Éthique et de la Recherche, CIER) of the Faculty of Medicine and Biomedical Sciences, University of Yaoundé I, and administrative authorisation was obtained from the administration of the Yaoundé Central Hospital. Verbal informed consent was obtained from patients during telephone interviews, and anonymity was preserved at all stages of data collection and analysis.

Results

General characteristics of the sample

The sample comprised twenty-four patients. Male predominance was marked (20 men, 83.3%) and the mean age was 32.17 ± 7.39 years. Most patients resided in urban areas (18 cases, 75.0%). The mean length of stay before departure reached 7.25 days. Socio-economically, patients were mostly single (15 cases, 62.5%) and most often had secondary education (13 cases, 54.2%). At the time of departure, the clinical status was judged stable in 18 cases (75.0%) and concerning in 6 cases (25.0%), underscoring the premature nature of the departure with respect to lesion healing. These characteristics are presented in Table 1.

Table 1
Socio-demographic and clinical characteristics of the sample (n = 24)

Characteristic	Count (n)	Proportion (%)
Male sex	20	83.3
Female sex	4	16.7
Mean age (years) – mean $\pm$ SD	32.17 $\pm$ 7.39	–
Urban residence	18	75.0
Rural residence	6	25.0
Marital status: single	15	62.5
Marital status: married	8	33.3
Marital status: widowed or divorced	1	4.2
Education: primary	6	25.0
Education: secondary	13	54.2
Education: tertiary	5	20.8
Clinical status at departure: stable	18	75.0
Clinical status at departure: concerning	6	25.0
Mean length of stay (days)	7.25	–

Temporal trend of discharge against medical advice

Over the study period, the annual number of DAMA episodes increased continuously: 1 case in 2009 (4.2%), 3 in 2010 (12.5%), 8 in 2011 (33.3%) and 12 in 2012 (50.0%). The Cochran-Armitage trend test confirmed the highly significant nature of this progression ($p < 0.001$). The shape of this evolution is shown in Fig. 1, and the detailed reasons are given in Table 2.

Reasons and initiator of the decision

Financial hardship was the dominant reason, accounting for 18 departures (75.0%); perceived improvement in health status motivated the remaining 6 cases (25.0%). The decision originated from the patient in 22 cases (91.7%) and from the family in 2 cases (8.3%).

Table 2
Temporal trend, reasons and initiator of discharge against medical advice (2009–2012)

Parameter	Count (n)	Proportion (%)
Year 2009	1	4.2
Year 2010	3	12.5
Year 2011	8	33.3
Year 2012	12	50.0
Reason: financial hardship	18	75.0
Reason: perceived improvement	6	25.0
Decision initiated by the patient	22	91.7
Decision initiated by the family	2	8.3

Cochran-Armitage trend test over the period: $p < 0.001$.

Comparative analyses

Bivariate comparisons between subgroups defined by sex, residence and reason for departure showed no statistically significant difference ($p > 0.05$), the limited sample size reducing the power of these analyses.

Discussion

The observed progression, from 4.2% of cases in 2009 to 50.0% in 2012, traces an upward trajectory confirmed by the trend test ($p < 0.001$). Compared with international series, where DAMA rates most often remain contained between 1% and 15% [9, 10], this internal dynamic reflects a deterioration in the accessibility and continuity of care rather than a mere statistical artefact. Recent African studies report variable proportions according to the level of care and the discipline, generally lower than those reached at the end of the period in the present series [4, 9, 10].

Financial difficulties, the reason for three out of four departures, confirm the central place of economic barriers in access to care. This predominance is consistent with studies conducted in out-of-pocket payment settings, where the cost of care ranks foremost among the reasons cited [4, 11]. The prolonged and costly nature of maxillofacial trauma care probably amplifies this mechanism, confronting young and often uninsured patients with an expense they cannot sustain [6].

That a quarter of patients left because of a perceived improvement in their condition shifts attention to the quality of therapeutic communication. This mistaken perception of recovery, common when pain subsides before consolidation, could be corrected by better-adjusted information on the natural course

of the lesions and the risk of complications [11]. Quality of care operates here on three complementary registers: a technical register, where optimising protocols shortens the length of stay and thus the financial burden [12]; a relational register, where empathetic communication adapted to the patient's socio-cultural level improves adherence [2]; and an organisational register, where systematic social consultation and support schemes for the most deprived prevent economically driven departures [13].

The male predominance (83.3%) and mean age close to 32 years reproduce the classic profile of road traffic accident victims [6]. This young, active population tolerates the prolonged interruption of its activity poorly, which may precipitate a premature departure. Urban over-representation, far from signalling better access, may conceal economic constraints specific to cities, where the cost of living aggravates financial vulnerability.

The levers for action follow the same registers. Technically, the standardisation of protocols, continuing training in minimally invasive techniques and coordinated care contribute to shortening the stay [12]. Relationally, training staff in therapeutic communication, providing adapted patient-information materials and involving families strengthen adherence [14]. Organisationally, social consultation on admission, the creation of support funds for indigent patients and follow-up of those who leave prematurely make it possible to measure and prevent the consequences [13]. A monitoring system incorporating the DAMA rate, patient satisfaction and periodic clinical audits would provide an evaluation framework for these measures.

The sustainable reduction of DAMA extends beyond the department alone: it calls for a systemic approach combining quality of care and financial protection. The deployment of broader health coverage, backed by continuous quality-improvement programmes, remains a decisive undertaking for resource-limited countries [15, 16].

This study has several limitations: a small sample size ($n = 24$), a monocentric and retrospective design that constrains the scope of the conclusions, and the absence of a direct assessment of patient satisfaction. A prospective multicentric study incorporating quality indicators would confirm these trends and test the effectiveness of the proposed interventions [17, 18, 19].

Conclusions

Over four years, discharges against medical advice in the department increased twelve-fold, tracing a worrying trend dominated by financial constraint, without erasing the role of perfectible therapeutic communication. Improving the quality of care — in its technical, relational and organisational dimensions — appears to be the most promising lever. Integrated strategies combining social support, patient information, optimised protocols and quality monitoring are needed to reverse this trajectory.

Abbreviations

DAMA

Discharge against medical advice

LMIC

Low- and middle-income countries

LOS

Length of stay

SD

Standard deviation

RTA

Road traffic accident

STROBE

Strengthening the Reporting of Observational Studies in Epidemiology.

Declarations

Ethics approval and consent to participate

The study was conducted in accordance with the Declaration of Helsinki. Ethical clearance was granted by the Institutional Ethics and Research Committee (Comité Institutionnel d'Éthique et de la Recherche, CIER) of the Faculty of Medicine and Biomedical Sciences, University of Yaoundé I (approval No. 2023/045/CIER-FMB/UY1). Administrative authorisation was obtained from the administration of the Yaoundé Central Hospital. Verbal informed consent to participate was obtained from patients during telephone interviews, and this consent procedure was approved by the above-mentioned ethics committee.

Consent for publication

Not applicable. The manuscript contains no individual person's identifiable data, images or details.

Availability of data and materials

The datasets used and analysed during the current study are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

FDNT conceived and designed the study, collected the data, performed the statistical analysis, drafted the initial manuscript and revised it critically. MJOE collected the data, analysed the medical records and contributed to the methodology and results. JGEB supervised data collection, validated the analysis and contributed to the discussion. ENE provided overall supervision, conceptual guidance and validation of the conclusions. All authors read and approved the final manuscript.

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Figures

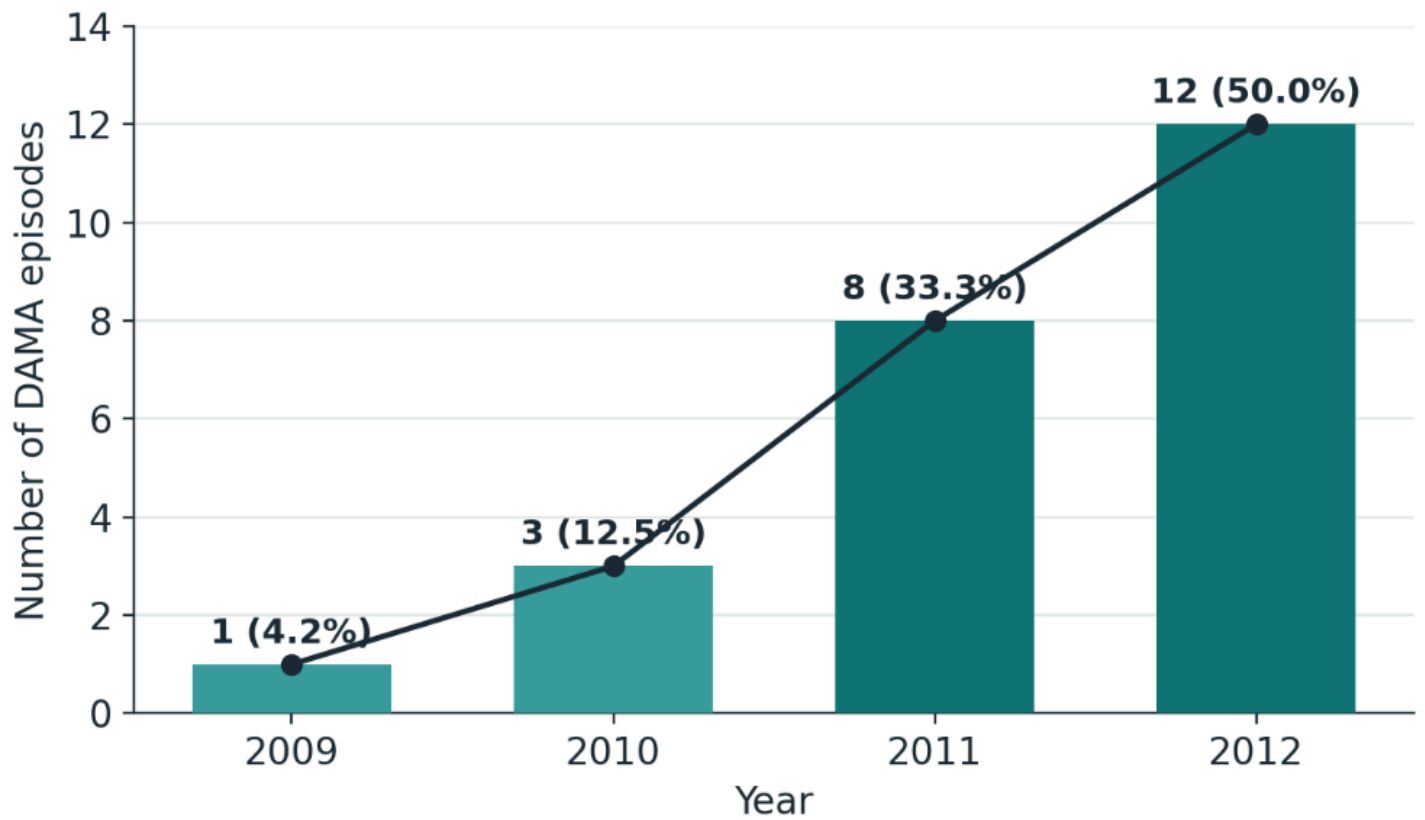


Figure 1

Annual number of discharges against medical advice (2009–2012).