ORIGINAL ARTICLE

EVALUATION OF DENTAL RECORD KEEPING AT HAMDARD UNIVERISTY DENTAL HOSPITAL

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ABSTRACT

An audit was conducted at Hamdard University Dental Hospital to assess the standard of clinical record keeping by undergraduate dental students, house officers and faculty members. Objective of this audit was to improve the quality of care of patients treated by the staff & students.

100 hospital notes were audited for this purpose. These records were randomly selected from the record room at HUDH. CRABEL score was used for assessing the quality of these notes.

Ten variables were measured in our study. Data analysis was done on SPSS version 16. Descriptive statistics were performed. Mean CRABEL score was found to be 50.

94% of the notes had readable writing. 87% of the clinical notes did not mention the chief complaint of the patient.98% of the clinical notes had no mention of consent in them, while 43% of the clinical notes did not mention the investigations performed. These inferences clearly suggest that the current standards of clinical notes need considerable improvements. Further studies are planned in the future after addressing the present deficiencies.

Key Words: *Dental record keeping, CRABEL score, Clinical audit, Medical records, History taking, Consent.*

INTRODUCTION

A dental record refers to the documents related to the history of present illness, clinical examination, diagnosis, treatment done and prognosis.[1] Record keeping has always been a fundamental requirement in healthcare.[2] According to Platt in 1947, a proper diagnosis depends upon three pillars, a strong medical history, signs and symptoms and laboratory investigations. Proper record keeping has been emphasized as a professional[3] as well as a legal obligation.[4]

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Medical and dental schools play a key role in developing a habit of record keeping among the future practitioners.[5] The record keeping helps the practitioner in devising a proper treatment plan and prevents loss of valuable information regarding patient's illness and treatment. It also prevents confusion regarding patient's illness and treatment even if it involves multiple visits or multiple operators. The adequacy of treatment plan can be evaluated at any time for professional as well as medicolegal reasons. It is a dilemma that although dental records can also be used for and have an important role in teaching and in research[6], a proper history taking and record keeping has always been ignored especially in dental schools and colleges. In UK, till 2004, only two proper reports were found in the literature, mentioning the quality of the history taking and record keeping.[4]

Proper dental records must include the date of patient reporting, patient's personal details and the referral source. In addition, it consists of information regarding presenting ailment, health history, clinical findings, imaging, tracings and measurements, photographs and models, lab reports, differential and working diagnosis and treatment plan.[7] The treatment should be started with a written consent of either the patient

or the substitute decision maker.[8] The operative and postoperative notes and the practitioner's details are also integral parts of dental records.

In order to improve the quality of dental records, a clinical audit should be performed regularly. Clinical audit is a quality improvement process through a systematic review of care against explicit criteria.[9]

In 2001, based on the guidelines of the Royal College of England, a system of assessing the medical record keeping was devised, known as the CRABEL score.[10] It has been proved to identify the grey areas in the administrative functions. This CRABEL score encompasses various aspects of history and data, and helps us analyze the quality of the record maintained among the different clinical areas.[11]

Keeping all these facts and figures, in view an audit of the quality of record keeping, among three different levels of operators, namely final year students, house officers and faculty members of different departments at Hamdard University Dental Hospital, Karachi was carried out.

METHODOLOGY

Case notes audit was done based on CRABEL score. History files were randomly selected from the record room of HUDH. Record room has a five year record of patients attending the OPDs at HUDH. Inclusion criteria included completely filled history files with allotted hospital OPD number. Exclusion criteria included incomplete files/records. Two examiners were given the job of auditing the history notes. Each clinical note was judged by both examiners and after coming onto a conclusion for each variable a score was given. This was done to minimize the chances of bias. 100 history files were audited for this purpose. A modified CRABEL score was prepared for this study. Initial audit was carried out with ten entries/variables, each having 10 points; therefore an initial score of 100 was allocated to each file. The variables assessed were legibility of writing, chief complaint, investigations, diagnosis, consent, details of procedure, postoperative notes, prescription, operator identification and supervisor identification. Subsequently, the CRABEL score was used to give a percent score to each file. All the entries were done on the SPSS version 16 and analysis was performed.

RESULTS

The overall CRABEL score for our study is depicted statistically in Table 1 and graphically in Fig 1. Only 23% of the clinical notes scored 60 on the CRABEL score. 94% of the clinical notes had readable writing (Table 2). Only 13% of the clinical notes mentioned the chief complaint of the patient (Table 3). 80% of the clinical notes did not mention the diagnosis of

TABLE 1: STATISTICAL DESCRIPTION OF CRABEL SCORE

Scores	Frequency	Percent	Valid Percent	Cumulative Percent
0	1	1.0	1.0	1.0
20	6	6.0	6.0	7.0
30	13	13.0	13.0	20.0
40	19	19.0	19.0	39.0
50	15	15.0	15.0	54.0
60	23	23.0	23.0	77.0
70	19	19.0	19.0	96.0
80	4	4.0	4.0	100.0
Total	100	100.0	100.0	—

TABLE 2: FREQUENCY OF READABLE HANDWRITING

Variables	Frequency	Percent	Valid Percent	Cumulative Percent
Not readable	6	6.0	6.0	6.0
Readable	94	94.0	94.0	100.0
Total	100	100.0	100.0	—

TABLE 3: CHIEF COMPLAINTS

Variables	Frequency	Percent	Valid Percent	Cumulative Percent
Not mentioned	87	87.0	87.0	87.0
Mentioned	13	13.0	13.0	100.0
Total	100	100.0	100.0	—

TABLE 4: FREQUENCIES OF CONSENT TAKEN FOR THE PROCEDURES

Variables	Frequency	Percent	Valid Percent	Cumulative Percent
Not taken	98	98.0	98.0	98.0
Taken	2	2.0	2.0	100.0
Total	100	100.0	100.0	—

TABLE 5: PROCEDURE PERFORMED DETAILS OF THE PROCEDURES PERFORMED

Variables	Frequency	Percent	Valid Percent	Cumulative Percent
Not written	37	37.0	37.0	37.0
Written	63	63.0	63.0	100.0
Total	100	100.0	100.0	—

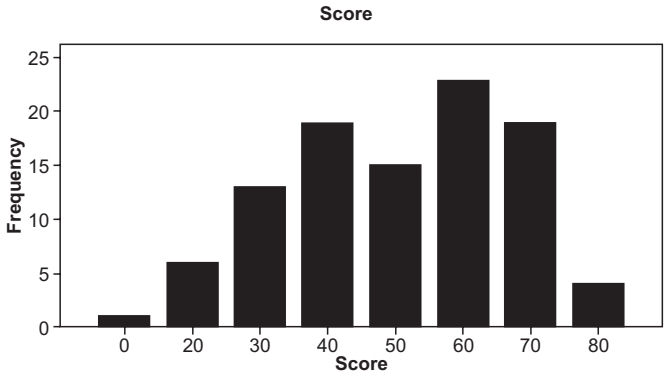

Fig 1: Graphic illustration of CRABEL score

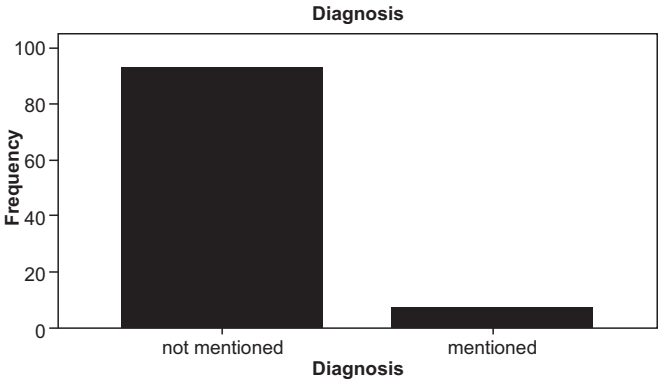

Fig 2: Mentioning of Diagnosis in clinical notes

the patients (Fig 2). Only 2% of the clinical notes had mentioned the consent of the patient (Table 4). 63% of the clinical notes declared clinical procedures (Table 5). 57% of the clinical notes mentioned the investigations performed while same percentage of the clinical notes had mentioned post-operative notes. Only 39% of the clinical notes had mentioned the prescribed medications. 90% of the clinical notes had clear identification of the clinician while 83% of the notes had the name of the supervisor.

DISCUSSION

The treatment record should be a clear summary of what you did and why rather than brief illegible graffiti which even the writer has trouble in deciphering at a subsequent visit. A readable dental record is essential for future reference by the attending dentist. The record may also be requested by a Dental Reference Officer of a patient or a patient's representatives in the event of a complaint.[12]

Using the method employed in this research we found out that, out of 100 records audited for this purpose only 23% of the clinical notes scored 60 on CRABEL score (Fig 1 and Table 1) which is far from the optimal. Mean CRABEL score was found to be 50. This indicates poor quality of clinical notes. In a study conducted by My Ho et al[10] to assess the CRABEL score of clinical notes at three health care facilities in UK, the average score was found to be 68%-89%.

Similar data on clinical notes in dentistry in Pakistan was searched but none were available. Hira et al[13] conducted a study to assess the operative notes at a tertiary care hospital in Pakistan and compared them to the standards set by Royal College of Surgeons of England.

The authors concluded that the operative notes lacked essential information, including the time of the procedure, type of surgery, instructions for post-operative care, operative diagnosis, findings, and complications during the procedure; indicating that the operative notes were incomplete and inadequate in many respects.

As the clinical notes are hand written at HUDH it was found that 94% of the record was readable (Table 2). This result is consistent with the result published in a report by J. Mark and Colin. A.[11] Although a separate scoring system was utilized in that report. But it highlights the importance of keeping records digitally as it minimizes the chances of any misinterpretation in the clinical notes. There are very few health care facilities in Pakistan where digital Hospital Management Systems are deployed. A short coming in maintaining records digitally is the initial cost of digitizing the system and maintenance.

It was observed in our study that the majority of the dentists 87% did not mention chief complaint of the patient on the history records (Table 3) although chief complaint is an integral part of clinical notes as it directs the clinician to address the main problem. Arishka Devadiga[14] in his article outlines the importance of mentioning chief complaint in dental records.

Our results show that 93% of the attending dentists failed to mention the diagnosis of the patient's condition (Fig 2). This can cause discrepancies later as the treatment was initiated based on assumptions which were not proven or mentioned.

This audit also established that the overwhelming majority (98%) of the clinical notes lacked any consent of the procedure from the patient or the substitute decision maker (Table 4). In contrast to the study conducted by My Ho et al[10] where the consent mentioned was 100%. This can be attributed to the general perception of the operators not to note down the consent, although verbal consent is sort for the treatment. It is suggested that a written consent form should be provided in each department at HUDH &further it will be verified by the attending dentist.

Present study also found out that 37% of the clinical notes had no declaration of the details of the procedure performed while 63% clinical notes mentioned it (Table 5). Importance of mentioning the procedure performed in post-operative note is an essential part of clinical

notes and their absence will lead to inaccuracy in further performing the treatment.

CONCLUSION

Considering that the records were filled by house officers and final year BDS students overseen by a supervisor, although level of supervision is provided at Hamdard University Dental Hospital while maintaining the records but discrepancies in record keeping were found widespread. It is planned that short comings will be discussed with the concerned departments and a series of lectures will be delivered to minimize the short comings noted in the present audit. Finally a second audit will be performed after six months to observe any difference in the outcomes.

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4 Muhammad Azeem:	Assisted in audit of history files.