Electronic clinical dental records: unintended consequences

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Key points

Highlights that record keeping is an important part of defending dentists when faced with claims, complaints and regulatory investigations.	Suggests that checklists and templates are a useful way of ensuring that contemporaneous clinical notes record what is important.	Suggests that these checklists and templates need to be used with caution to avoid unintended consequences and risk of the records being challenged subsequently.

Record keeping is an essential component of delivering safe and appropriate care. In an ever increasing climate of litigation and complaints contemporaneous record keeping has assumed increasing importance, but is time consuming to do well and cover the aspects of care necessary. Practitioners have started using templates and copy and paste notes which, whilst useful, have their limitations and create problems of their own.

Introduction

Most lectures or articles about dento-legal issues will mention the importance of record keeping at some point. This is both predictable and perhaps to some, almost tiresome, because many of us believe our record keeping achieves the required standard.

Reassuring as that thought is, it is only when we receive complaints, a challenge to our clinical decision making or an enquiry from a colleague about what treatment we actually provided for a patient, that we would pause to reflect on what we did or did not note down. It is only when dentists become the subject of a near-forensic scrutiny of their clinical notes by lawyers, other dentists or expert witnesses that they start to doubt the adequacy of their record keeping.

That is probably why there has been little in the way of published research evidence on the quality of record keeping[1–3] in literature, though one study did identify significant inaccuracies in dental charting.[4] The General Dental Council (GDC) makes it clear that clinical record keeping is important[5] and the Faculty of General Dental Practice (FGDP)

has issued guidance[6] which has been widely accepted and utilised, though not always in the way they were intended. The FGDP make it clear that their guidance contained many aspirational standards rather than baseline requirements.[7]

Other regulators such as the Care Quality Commission[8] and Regulation and Quality Improvement Authority (RQIA),[9] among, others have similar standards about record keeping to which healthcare providers must pay regard.

The Office of the Chief Dental Officer (OCDO), in conjunction with the NHS Business Services Authority (NHSBSA) and

the GDC, recently conducted a survey, with a report due in April 2018, attempting to develop guidelines on record keeping using the Delphi method to establish a consensus on what should be included in clinical records. It asked whether 36 specific items should be recorded at a new patient appointment, recall appointment or urgent treatment appointment. They included items such as name, date of birth, medical history and less obvious ones such as effect of dentition on quality of life and musical instruments played.

There are some essential components that ensure records serve a threefold purpose (Box 1):[10]

Box 1 Essential components of clinical dental records

Data to identify the patient

Medical history

Dental history

The results of an extra-oral examination

The results of an intra-oral examination

Charting of the teeth

Periodontal charting and BPE readings

Radiographic examination and the justification for taking radiographs

A report about the X-rays

Diagnosis recorded

Treatment plan developed

Consent process recorded

Details of any treatment

Recall period once treatment was completed

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- Helping us to understand the patient as an individual, so that we can personalise their care
- Enabling us to treat patients to an optimal standard, and contribute to patient safety
- Minimising the potential for errors and risks.

These components can be summarised by the mnemonic SOAP:
- Subjective: what the patient says
- Objective: what is detected, examination and report on special tests for example, radiographs
- Assessment: conclusions, the differential diagnosis
- Plan: how will treatment be provided.

Challenges

Foremost among these guiding principles is the need for records to be contemporaneous.

The adjective 'contemporaneous' when applied to dental records means, existing at or occurring in the same period of time. In the clinical setting, this might mean, while the patient is present or immediately after, and before the next 'period of time' or appointment commences.[11] Records that are written contemporaneously ensure that the relevant detail of the treatment provided is recorded because they rely on the clinician's working (short-term) memory. This working memory comprises auditory memory and visual-spatial memory; both of which are relevant to the practice of dentistry. Time delays may result in incomplete and/or inaccurate entries because the memory dulls. The longer the time delay, the greater the risk that more information will be forgotten.

Notes that are written at the end of a session, later in the day and/or after surgery hours may be incorrectly described as contemporaneous, but this view is open to challenge.

Record keeping has evolved considerably in recent decades. We saw the era where brevity was the imperative to avoid bulging record card pockets which were crammed tightly into filing cabinets. In contrast, the current era demands a detailed narrative. The use of computers to create electronic dental records (EDRs) has become more common place, and dental software has provided today's practitioners with a functionality that allows them to manage patient information and administrative tasks. This includes tools to facilitate the recording of the narrative, create templates, generate treatment plans and advice sheets and incorporate digital imaging. We use the term

EDR to mean the recording of patient information on electronic rather than physical media.

Adapting to change

Clearly, there are benefits. A small study carried out in an undergraduate environment concluded that computer-generated notes achieved a much higher compliance rate than handwritten notes.[12]

Many practices now invest heavily in electronic and digital technology and clinicians are looking to be more efficient in how they maintain contemporaneous and comprehensive clinical records.

One simple way is to utilise a third party to make the bulk of the records. A dental nurse, sufficiently trained at distilling the dialogue that takes place between the practitioner and the patient, can record events and discussions in real time. An alternative could be speech-to-text software that transcribes as you speak. There appears to have been little development or appetite to integrate this into the current dental software available, though there is voice recognition periodontal pocket charting software in use.[13] The research evidence of its effectiveness in the clinical arena is sparse.

To save time, a dentist may resort to many techniques for importing content to the clinical record to document the clinical encounter – including templates, macros, and cut and paste commands. The keyboards commands CTrl–C and Ctrl–V will copy any highlighted content from a document and allow it to be inserted into any part of a record. The source entry may be a separate document, a previous entry in the same record, or an entry from a different record.

Copying has been defined as matching phrases >4 words and 20 total characters.

A progress note was considered to contain copying if it contained ≥20% copied text from another document.[14]

Templates are also used and can be created with any number of pre-completed entries.

There is no doubt that this is time-saving but technology has a habit of biting back.[15]

While there are many advantages, there are some risks too (Box 2).

Dental Protection has dealt with many cases where such entries cast doubt on the authenticity of the clinical record with the result that the veracity of those entries that are legitimate is then also called into question. When the trustworthiness of the record is in doubt, any defence is compromised if the interpretation is that there is an intention to mislead. This brings connotations of dishonesty and potential associated professional ramifications. Allegations of fraud may also emerge from a scrutiny of the records.

Examples of entries that have been inappropriately utilised in pre-populated templates include:
- Smoking advice being recorded as given at an examination appointment to a patient who has never smoked
- Dietary advice about tooth wear and TMJ clicking when the patient has none of the signs or symptoms
- Warning patients of the possibility of an oral antral fistula when extracting a lower incisor
- Citing a referral of a patient undergoing NHS treatment to a hygienist privately on cosmetic grounds when the BPE scores are recorded as three in all sextants
- Discussing the effects of pregnancy on the periodontal tissues in a male patient.

These attentional errors can arise from the use of pre-populated templates or copy and paste methods where an edit is required but erroneously omitted.

Dental Protection has also received records that contained incomplete sentences, incomplete or unpopulated fields in templates, and repetitive and/or conflicting statements.

An interesting example is provided by a case where the patient's time in the surgery was less than ten minutes but the notes suggested

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Box 2 Risks

Inaccurate and/or irrelevant entries

Incomplete entries and editing of templates

Inappropriate template use for the clinical findings

Incorrect input leading to inappropriate intervention

Error perpetuation if previous erroneous information is copied

Unnecessarily lengthy notes distracting from key facts – so called 'note bloat'

Adverse impact on the utility of the notes

Inability to identify when the notes were first created

extensive discussions occurred which could not possibly have taken place in such a short appointment. We can envisage a scenario where metadata may be requested as well as copies of the records to learn more about the dentist-patient interaction. This creates a formidable dento-legal challenge.

There is no doubt that the appropriate use of imported content creates efficiencies for busy practitioners. For example, a past medical history, that can be verified as unchanged.

Templates can provide prompts which require either deletion of a series of answers or entry of response, and provide a 'read-do checklist' that prevents errors in clinical diagnosis and management.[16]

Conclusions

There are no studies on EDRs, but studies in the medical field suggest that more than half of all entries in electronic records have been generated by copy-and-paste. The clinician remains responsible for the total content of the clinical record, whether the content is original, copied/pasted, or a cloned entry from a previous record. The dento-legal risk stems from the potential for misuse and abuse of the technology.

The frequent and unrestrained use of copy-and-paste functions, macros, templates and other tools must be addressed because of the unintended consequences and the inherent dento-legal threats. The mantra that no records = no defence and poor-records = poor defence has helped to perpetuate so-called 'cloning' practices with some unintended consequences.

Copy-and-paste and the use of standardised text should be acceptable for certain aspects of the clinical record, but perhaps restricted in others.

We whole-heartedly support the use of checklists and templates as an aide-memoire. When applied correctly, they are the backbone of a comprehensive clinical record. However, we caution against the injudicious use of pre-populated templates in case incomplete editing leads a third party to question the trustworthiness of the entire clinical record.

There is a strong case for developing and promulgating best practice guidelines to reduce the risks associated with the technological functionality described in this article. Further research on the prevalence of these risks is needed.

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