CPD:
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A guide to clinical audit for the dental team

CPD questions

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What is clinical audit?

As dental professionals the safety and wellbeing of our patients is our number one priority. In modern practice clinical audit is not only a statutory requirement but an indispensable tool, enabling us to establish and improve standards, and moreover validate the trust and respect held in us.¹ Miller & Dowler (2005) simplified the definition of clinical audit to 'the systematic review of activity in practice against standards, in order to improve patient care'.² It is a means of demonstrating how a practitioner's personal activity compares with expected published standards. Subsequently acting as a mechanism for quality improvement,² enabling demonstration that significant efforts are being made in order to provide first-class professional care to patients.¹

Lokuarachchi (2006) defined there to be three different types of audits:³

1. Standards-based audits
2. Adverse occurrence screening and critical incident monitoring
3. Peer-review.

1. Standards-based audits

This type of audit involves collecting data regarding current practice and comparing them to defined standards. This allows any areas requiring improvement to be highlighted and addressed, bringing necessary changes into practice.³

2. Adverse occurrence screening and critical incident monitoring

This type of audit would be undertaken to evaluate occurrences with unanticipated results or special concern.⁴ It allows reflection of the dental team's performance and offers knowledge for future application.

3. Peer review

Peer review is recommended by the Regulation of Dental Services Programme Board as a method of preventing the emergence of poor practice and allowing the maintenance of good practice. The Care Quality Commission (CQC) deems peer review to be one of the hallmarks of well-led practice.⁵ Benefits of peer review include the sharing of knowledge between colleagues, individual learning and a method to support daily practice.⁶

Further to the above, audits can be either prospective or retrospective. Prospective audits permit collection of real-time data reflecting the current process of care. This type of audit is time-limited and provides more precise data, however increased awareness of the ongoing audit may impact performance. Retrospective audits act as a historical benchmark of practice; they can span a much longer time period and are not subject to corruption by the audit process.⁷

Why is it important?

Clinical audits are a quality improvement tool and form one of the seven pillars of clinical governance.⁸ The tool aids in identifying areas of practice which require improvement when compared to accepted standards. While highlighting any areas which may require improvement, it also identifies and reinforces areas of good practice.⁵ It acts as an essential tool for quality improvement and assurance of the safe and efficient operation of any clinic in order to sustain and maintain a greater standard of patient care.⁹

How do you carry out an audit cycle?

Audits are a cyclic multi-step process involving identifying an area of concern to measuring performance to implementing change (Fig. 1).

1. Identify a problem

The first stage of a clinical audit involves the selection of the topic to be audited. This is usually based on systematic prioritisation of clinical need,¹ an area of concern or one which may require improvement. It is crucial to select an area in which

Fig. 1 Flow diagram displaying the cyclic nature and multi-step process of a clinical audit

‘An audit can be carried out on an individual basis but more often than not it is a collaborative process, engaging as many of the dental team as possible.’

adherence to defined standards or criteria can be measured. The problem identified must be relevant to dental practice and be of importance to patient care.

2. Define standards and criteria

Once the problem has been identified and the topic for audit has been selected, published guidelines should be sought and from these a set of ideal, yet realistic standards can be formed.⁹ Standards could be based on guidance from decontamination in primary care dental practices (HTM 01-05) or the National Radiological Protection Board. Standards could also be set based on current evidence from published papers.

3. Collect data

This stage requires a clear protocol to ensure that the data collected are precise. In order

to achieve this the patient group, dental professionals involved and the period of time to which the criteria apply must be established. The patient group must be of an adequate sample size to provide an accurate representation of the patient base.

An audit can be carried out on an individual basis but more often than not it is a collaborative process, engaging as many of the dental team as possible.⁹ Therefore a clear and concise data collection tool or sheet should be formulated to enable any dental professionals involved to obtain the same data, facilitating simplicity of collection, collation and comparison of the data. To avoid the risk of bias, data collection should be randomised. The time period set must be realistic. It should not be too long as if there are any issues which may be highlighted by the audit these should be

addressed in a timely manner; if an audit is over a year long these issues may not be tackled and could be detrimental to patients. However, an audit should not last for only a few weeks as this may not be enough time to collect sufficient data.

4. Analyse data

The results obtained from the data collection stage are then compared to the criteria and standards set. It can then be established how well the results meet these standards and where the standards have not been met, the reasons why can then be understood.

It is worth remembering that the data gained from a clinical audit is not intended to be used for statistical analysis. While research aims to investigate clinical practice in a systemic way to support or disprove a hypothesis, audit seeks to improve healthcare and its data are not calculated to prove a hypothesis.¹ It should be used for direct comparison to establish if the data collected meet the earlier standards set.

should be analysed, changes implemented and then a re-audit should take place. If standards were far from being met or there was a concern for patient safety the time interval should be decreased.

Audit is an ongoing process and, therefore, as part of the ongoing process of care the data should be available perennially.¹ Changes should be monitored to ensure that they are being followed and standards are being upheld.

Which areas should I audit?

As mentioned earlier, any areas in which you feel improvements could be made would make a good audit topic. However, the CQC have deemed certain audit topics to be essential and others as desirable.

Essential topics

These include:

1. Infection prevention (decontamination) and control
2. X-rays
3. Accessibility.⁵

Criteria for Dental Radiography by the Faculty of General Dental Practice (FGDP) provides a comprehensive guide to completing a radiographic audit.¹³

3. Accessibility

Any organisation which provides services to the public must ensure they comply with the Equality Act 2010, of which dentistry is no exception.¹⁴ Dental practices must ensure that people with disabilities can access their services in a way as similarly as possible to that of a person without disabilities. They have a duty to aim to achieve equality by making reasonable adjustments in order to improve their access.

Access audits enable evaluation of the accessibility for disabled people to the service or building compared to the current best practice standards. They aid identification of any barriers to access, highlight reasonable options for removing these barriers and help service providers understand their obligations under the Equality Act 2010.¹⁵ Access audits are offered by a variety of commercial organisations; the National Register of Access Consultants provides a list of accredited auditors in different areas of the country.¹⁶

Desirable topics

1. Antimicrobial prescribing
2. Clinical record keeping
3. Audit topics suitable for your practice.⁵

1. Antimicrobial prescribing

The ever-increasing global problem of antimicrobial resistance holds serious consequences for everyone. Dentists play a vital role in reducing the unnecessary prescription of antibiotics and educating patients on how to take and dispose of them responsibly. A reduction in the number of prescriptions and inappropriate prescriptions was shown in clinical audits of antibiotic prescribing. These audits also found antibiotic prescriptions to have a marked improvement in the accuracy of the dose, frequency and duration. The FGDP and the British Dental Association have co-developed a self-audit tool for prescribing and management of dental infections designed to be used alongside the FGDP guidelines *Antimicrobial prescribing for general dental practitioners*.¹⁷

2. Clinical record keeping

The National Institute for Health and Care Excellence (NICE) provide guidance on

‘Clinical audit is the cornerstone of clinical governance and a universal tool with immense potential.’

5. Implement change

Following the data analysis stage an action plan can be formulated with the overarching goal of addressing any shortfalls. This can be done by putting into place effective measures to decrease the likelihood of a reoccurrence. A practice meeting can be held to discuss the findings of the audit; ideas for how to address these findings can be deliberated and suggested changes can then be implemented.

6. Re-audit

Clinical audit is a cyclic process; therefore, the final step of the audit cycle is arguably one of the most fundamental. The re-audit stage demonstrates that improvement in clinical practice and the quality of patient care has been achieved and sustained.¹

The audit should be repeated at an interval dependent on the outcome of the data analysis stage. Sometimes the changes put in place may not be enough to help achieve the standards set. In this case the audit cycle steps should be followed again, the data

1. Infection prevention

All practices must comply with HTM 01-05 with regards to decontamination and demonstrating that they have adequate quality assurance systems in place. Decontamination processes should be audited at a minimum of every six months with an appropriate review to be put in place dependent on the outcomes of the audit.⁵ The Infection Prevention Society have created a dental audit tool kit which is accessed through the department of health website. This can be used to calculate a ‘traffic light rating’ to indicate whether ‘Best practice’ has been achieved in accordance with the HTM 01-05 documents.¹⁰

2. X-rays

Both the Ionising Radiations Regulations 2017 and the Ionising Radiation (Medical Exposure) Regulations 2017 place a legal responsibility on dental practices to establish and maintain audits for dental radiography.^{6,11,12} Section 9.2 in Selection

intervals between oral health reviews and suggest that clinical audits may be undertaken in this area to check adherence to the guideline recommendations.¹⁸

The FGDP also provide suggestions for suitable topics in their *Clinical examination and record-keeping* publication; these include:

- Classification of patients based on risk status for a) Caries b) Periodontal Breakdown c) Oral mucosal health d) Likelihood of endodontic failure
- Minimum data set recorded for all dental examinations
- Currency of medical histories
- Currency and completeness of dental histories
- Quality of written reports on radiographs
- Quality and comprehensiveness of treatment plans.¹⁹

3. Audit topics suitable for your practice

Other audit topics could explore anything from patient waiting times to the longevity of fissure sealants. There are a plethora of topic ideas available from different dental sources such as those in *Methodologies for clinical audit in dentistry* by The Royal College of Surgeons of England.²⁰

Summary

Clinical audit is the cornerstone of clinical governance and a universal tool with immense potential which, when utilised effectively, can result in a multitude of benefits for both patients and practitioners.⁴ It offers a framework which facilitates the identification of areas requiring improvement and permits the implementation of changes ensuring efficient clinical practice and enhanced quality of patient care.²⁰ Regular monitoring and rejuvenation of audit projects is imperative to ensure that the short-term gains seen are not solely attributed to the Hawthorne effect*, and that the implemented changes have become commonplace in clinical practice.

*Wikipedia: "The Hawthorne effect refers to a type of reactivity in which individuals modify an aspect of their behaviour in response to their awareness of being observed."

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<https://doi.org/10.1038/s41407-020-0437-3>