Audit an Important Tool to Improve Dental Practise

Aim: To provide the participant with an understanding of clinical audit in dental practice and how it can be used to improve quality assurance, clinical practice and as a risk management tool.

Objectives: On completion of this verifiable CPD article the participant will be able to demonstrate, through completion of a questionnaire, the ability to:

- Define clinical audit
- Have knowledge of the aim of clinical audit
- Identify essential topics the CQC expect dental practices to have evidence of completing audits in
- Identify the stages of an audit cycle
- Identify ways to select a topic to audit
- Define a process audit
- Have knowledge of setting standards for an audit

Introduction

Clinical audit is a quality improvement process that was introduced to the NHS by the 1989 White Paper *Working for Patients*. Previously known as medical audit until a name change in the early 1990's, clinical audit involves reviewing the delivery of healthcare to ensure that best practice is being carried out.[1]

Clinical audit and quality improvement provide part of the quality assurance and risk management within dental practice. Clinical audit is a statutory requirement as well as a useful tool to help improve practice and to check that members of the dental team meet the required expected standards. It can be used for many procedures and is part of the required clinical governance for radiographs.[2]

The aim of clinical audits is to encourage dental professionals to become more critical and to structure how they analyse and learn from their experiences. It is a vital tool to measure the standard of patient care against recommended standards. It is also an indispensable tool that enables us as a profession to improve standards and validate the trust and respect held by the profession. Through auditing we can implement improvements when the need is identified and we can then re-examine, from time to

time, those areas which have been audited to ensure that a high-quality service is maintained and continually improved.[3]

General Dental Council Standards

The General Dental council standards state that:

"7.1 You must provide good quality care based on current evidence and authoritative guidance

7.2 You must work within your knowledge, skills, professional competence and abilities

7.3 You must update and develop your professional knowledge and skills throughout your working life"[4]

Carrying out clinical audits within practice will help the dental team to demonstrate that these standards are being met.

Care Quality Commission

The Care Quality Commission (CQC) state that:

"Clinical audit and quality improvement from part of a service's quality assurance and risk management."[5]

They consider audit to be important as it reviews current practice and compares this to expected published standards. It helps to identify areas of practice that need improvement and identifies and reinforces areas of good practice. It is considered a tool to improve the quality and efficiency of patient care. This is considered important as it allows real time change in current practice and provides opportunity to evaluate practice, promote teamwork and collaboration and ultimately prevents poor practice.[5]

Essential audits that the CQC expect to see evidence in dental practice are:

- Infection prevention (decontamination) and control: complying with HTM 01-05 (Decontamination in primary care dental practices) shows you have valid quality

assurance systems in place. As a minimum, audit decontamination processes every six months, with an appropriate review dependent on audit outcomes.

- X-rays: both Ionising Radiations Regulations (IRR17) and Ionising Radiation (Medical Exposure) Regulations 2017 IR(ME)R17place a legal responsibility on practices to establish and maintain audits for dental radiology.

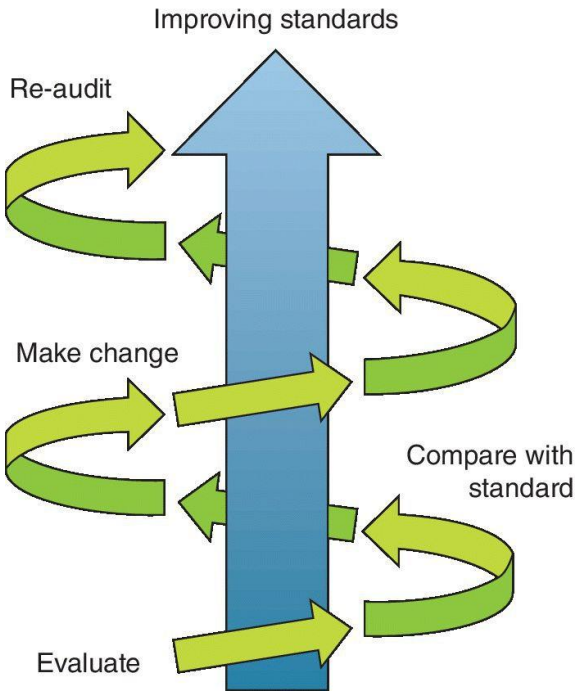
- Accessibility: All organisations providing services to the public must audit their facilities and ensure they comply with the Equality Act 2010.

The CQC also suggest that it is desirable to complete audits in:

- Antimicrobial prescribing
- Clinical record keeping
- Other audit topics suitable for your practice[5]

The Audit Cycle

Bucknall et al (1992) describe the audit cycle as a spiral, as the aim of a clinical audit is to evolve and not end up where you began. It is not a cycle. In healthcare, audit encourages a rise in standards and should be reviewed and repeated to improve standards as healthcare is always evolving.



The audit spiral:

- Measures performance against prescribed standards. Is change required?

- If so, perform a root cause analysis to ascertain any underlying cause or the problem.
- Draw up an action plan and decide who will implement it.
- Make changes.
- Re-measure.
- Repeat with any necessary adjustments for new developments.

Audit thus seeks to improve clinical practice.[6,7]

Planning a Clinical Audit

1. **What are the best ways to select a topic for audit?**

When you are choosing a topic to audit you need to consider if the topic will benefit the patient and make a change to the standards of patient care. It may arise from your own concerns in a particular area of your performance as a dental care professional or it may be decided following a significant incident, a complaint, a legal issue or a compliance issue.

You may want to audit something, which is being prioritised by your profession at present or a topic may be identified following a peer review meeting and you may want to compare your clinical work with other colleagues.

As a dental care professional, you may want to compare your clinical work to specific standards, guidelines, or protocols.

An audit topic may arise following a patient survey, which may identify urgent patient needs.

Team meetings may identify concerns, which can form the topic for an audit.

A useful tool to choose a topic to audit is a SWOT analysis of the practice or your own clinical practise.

Informal conversations with colleagues may identify a topic for audit.

2. **What is the difference between structural, process and outcome audits?**

    - A structural audit concerns resources such as equipment, premises, skills and people.
    - A Process audit focuses on what was done to the patient, such as clinical protocols and guidelines.
    - An outcome audit considers the impact of care or services on the patient, which may include patient satisfaction, health gains, and effectiveness of treatment or services.

3. **Why is it important to always set a standard?**

To ensure quality assurance (the measurement of actual quality of care against pre-established standards, followed by the implementation of corrective actions to achieve those standards), we need to have set standards to work within. These may be essential standards with which all practices must comply. Or, they may also be good practice standards or they may be desirable standards.

If standards are available in the form of guidelines or protocols, you should base your audit on the most widely applicable guidelines available, e.g., national guidelines rather than regional or local guidelines. Standards should always be based on the strongest, most up-to-date, evidence of what constitutes best practice. Using standards to define precisely the care that we are seeking to provide means that we can:

- ✓ Accurately inform anyone who might want to use our service, what service it is that we are offering.
- ✓ Identify the things we need to enable us to provide our service.
- ✓ Monitor and improve our performance[8]

4. **Consider the following when setting standards:**

- Use national standards and guidelines if they exist.
- Consider are the standards arbitrary by agreement with like-minded colleagues.
- Are they gold standards taken from published evidence of best practice?
- Are they minimum standards taken from nationally agreed levels?
- Are they average or median standards for attainment for the profession?
- Are they peer standards the level of performance acceptable to your peers.

Writing Audit Standards

Standards should be SMART.

Specific – Clear, unambiguous and jargon-free. A standard should only mean one thing to all people who read them.

Measurable – Is the information required to answer your standard available? For example, “information leaflet should be given to patients”. If data is collected retrospectively, how will you know if it is a failure of practice or a failure of documentation?

Agreed – By all concerned with delivering that aspect of care.

Relevant – To area of care being audited / concern that has been raised.

Theoretically sound – Based on evidence about best practice, reviewed and updated as new evidence becomes available.

5. **What are the best ways of ensuring that potential improvements highlighted by audit lead to long lasting changes in patient care/practice procedures?**

Evaluation of your audit is essential to ensure potential improvements highlighted by the audit lead to change in patient care/practice procedures.

You would need to look at the following:

- Each participant in the audit measured his or her performance.
- Everyone supported and adhered to the changes made as a result of the audit.
- The changes were implemented.
- Training needs identified were addressed.
- If any further audits were indicated.
- If they were then undertaken.
- Evaluate if the topic audited was important and justified the cost involved.
- The method used was appropriate.
- The quality of patient care improved.
- Repeat the audit later date to ensure changes are effective and have taken place.

An Audit Template

Title of audit	**Give a clear indication of what you are measuring in the title, and the objective.**
Background	Why is this audit worth doing? Is it an issue of concern, has it been identified as a problem or is it being done to improve quality? Consider the objectives of this audit – what would you like to achieve?
The cycle	
The standard	Decide on what agreed or recognised 'standard' this audit is comparing current practice against.
Performing the audit	

Identify and collect the data	• First decide who is to collect the data, and who else will be involved in this audit project in any capacity. • Next identify a set of patients, case notes, service users, events or situations for this audit – decide how you will identify this group. • Decide if the data are to be collected prospectively (collection of information about patients during their process of care) or retrospectively (using data that is already available). • Keep any patient-related information anonymous – you might give each patient a number or code rather than use their name and keep the list of codes or numbers in an information file in a secure place or in a password-protected file.
Number of cases	Decide on how many cases or items you would like to audit, or alternatively decide on a period of time over which to run your audit.
Compare with the standard	You have now collected your data. You are now able to calculate the degree to which the agreed 'standard' is being met. This should be expressed as a percentage, e.g. 64% of 'cases' met the standard.
Implement change	At this stage you will know whether there is a problem – is the standard being met? If not: First, try to analyse the reasons why the standard is not being met. Then decide on what change needs to be made and put this into action for a reasonable period of time.
Re-audit	This is the important part and is where you complete the 'audit cycle'. *It is not 'audit' until you have completed this phase of the project*. Repeat the same audit after change has been implemented. Repeat the same analysis of your results. Hopefully, you will find an improvement. Share and discuss the results – others may benefit from your findings.

Suggestions for Audits in Dental Practice

- Disability access audit
- GDPR access to information
- GDPR information
- Healthcare waste

- Infection Control
- Oral cancer risk factor
- Patient waiting times
- Radiography – quality
- Radiographs in dental caries
- Radiographs in periodontology diagnosis
- Record Keeping
- Medical emergency equipment
- Maintenance checks
- Antimicrobial prescribing

Reflective Account by a Clinician - Example of a Clinical Audit

Introduction

In consultation with the General Dental Practitioners (GDP's), Practice manageress, receptionist, and dental nurse, it was decided that we should carry out retrospective and prospective audits of patients that have had Basic Periodontal Examinations (BPE) by both the GDP and hygienist on the same day. As a dental hygienist, I take a BPE score regardless as to whether or not the GDP had taken the score on the same day during a check-up appointment. I had noted discrepancies in the results of the BPE charting and voiced my concern as to whether this may potentially affect the treatment plan and recall system that the patient is placed under, therefore potentially affecting the outcome of their periodontal treatment. From a medico- legal perspective on clinical record taking, The Faculty of General Dental Practitioners (2001, p. 9) state that "all records should be current, accurate, complete, logical, clear, concise, legible by anyone, and easily understood". The British Society of Periodontology (2001, p2) current best practice recommendations are that "special emphasis should be placed on careful periodontal evaluation as an essential pre-requisite in the planning and execution of all dental care". We decided that this was a priority for audit in order to increase accuracy and recording of the patient's periodontal status, to eliminate discrepancies between operators and to ensure that patients were placed in the correct level of complexity for treatment as defined by the British Society of Periodontology (2001)

Aims and Objectives of the audit

The aim of the audit was to evaluate the consistency of BPE charting between different clinicians with the objective to improve patient's diagnosis and therefore the management of their periodontal condition.

Setting a Standard

After discussing the standard BPE scoring system it was decided that all clinicians should use the same pressure sensitive BPE probe in order to conform to the recommended pressure being applied of no more than 20-25gm (British Society of Periodontology, 2001). We also decided to undertake retrospective and prospective outcome audits due to the fact that the meeting to decide the audit highlighted differences as to how the BPE scores were taken. In doing retrospective and prospective audits it was decided that this would be a form of double-loop learning. Argyris and Schon (1978, cited by Smith, 2001) state, "Double loop learning occurs when error is detected and corrected in ways that involve the modification of an organisations' underlying norms, policies and objectives".

The standards applied to these audits were 'arbitrary' standards, which were discussed and decided by all members of the dental team. It was decided that a higher percentage would be aimed for in the prospective audit after the BPE criteria for scoring was discussed. The standards and criteria applied to this audit are set out in the following table.

Rating	Standard Criteria	Target % of BPE for retrospective audit	Target % of BPE for prospective audit
A	BPE recorded in the correct format with no discrepancies between operators in score in any of the sextants.	65 %	**75%**
B	BPE recorded in the correct format with discrepancy between operators in two or fewer sextants.	35 %	**25 %**
C	BPE missing, recorded in an incorrect format or discrepancy between operators in 3 or more of the sextants.	**0 %**	**0 %**

In order to place the BPE scores into one of the above three classifications the following data needed to be collected in order that it could be assessed/analysed.

1) Date of examination and hygiene appointment
2) BPE marked as recorded in the correct format, recorded in an incorrect format or not recorded
3) Patient information. The audit needed to provide anonymity for the patients involved, but also required the means by which the information collected could be verified if necessary.
4) BPE scores recorded for GDP and Hygienist for comparison.

In order to be included in the audit the patient had to be dentate and aged 18 or over. The patient also had to be seeing or had to have seen the GDP and dentist on the same day.

Retrospective Audit

The dental receptionist chose a random sample of twenty-five patient notes that had seen the GDP and hygienist on the same day. The BPE score was marked as missing if both GDP and hygienist failed to record the BPE or if either of the scores were written in an incorrect format. The information was recorded on a data capture slip.

Prospective Audit

The dental nurse recorded the BPE scores taken by the GDP and hygienist for each sextant on a random sample of 25 patients over a 5-day period. As well as being marked on the notes the data capture slip was also completed in the same way as the retrospective audit.

Analysis and evaluation of the results

The slips were collected together and placed on the data capture forms for retrospective and prospective audit (see appendix 2a and 2b). This form allowed easy analysis as to how many of the sextants matched which would enable placement into one of the three classifications in the standards table.

The results were as follows:

Retrospective audit		Prospective Audit	
A	40 %	A	85 %
B	30 %	B	15 %
C	30 %	C	0 %

The retrospective audit showed disappointing results compared with the said standard that we had predicted whereas the prospective audit surpassed the said standards. An ideal standard to aim for would be 100 % of patients' BPE scores to be in the correct format and accurately documented on the patients' clinical records, however, because of the small numbers included in the sample for this audit, it was decided it would not give a true reflection of the situation.

Action Plan

The action plan will be discussed in more detail during the discussion part of this report, however the immediate action plan discussed as a direct result of these audits were as follows:

1) All clinicians are to use pressure sensitive probes when taking BPE scores- it was decided that one of the possible reasons for the differences in BPE scores between clinicians in the retrospective audit could have been due to operators using different amounts of pressure, which could potentially alter the reading.

2) A periodontal screening protocol will be devised so that clinicians are clear of the method used for BPE classification.

3) A patients' periodontal status will be recorded legibly in the notes at each appointment.

4) A retrospective audit will be carried out at random by the dental nurse within the next three months to assess the improvement in periodontal screening in the practice.

Discussion

I felt at the end of analysing the spread sheets that because the said standards were surpassed in the prospective audit that the audit had obviously been successful. The

ideal standard to be aiming for in the future will be that 100 % of patients will have their periodontal status screened and clearly marked on their clinical records.

The standard reached in the retrospective audit was disappointing and really highlighted the need for this audit to be carried out. The standard reached in the prospective audit was encouraging but could be further improved. One of the potential problems with collecting the data over such a short period of time and with the clinician's knowledge, is that the potential for missing or incorrectly recorded BPE screening was reduced, as clinicians were aware of the standard criteria. To address this issue it has been decided that the dental nurse will carry out a random audit within the next six months to ensure that consistency of correctly recorded BPE scoring on the patients' clinical records is maintained and improved.

The meeting, which was held to discuss topics for audit, went well. I was unsure of bringing up the topic of BPE scoring, as I did not want the GDP to think I was being critical of the screening process currently in place. Many subjects were considered as topics for audit and one of the reasons this was decided to be a priority is we now have a periodontist working at the practice. I felt that by standardising the BPE screening system the audit might then lead to discussion about appropriate care pathways for the patient. The Department of Health (2002, cited by Eaton, 2006) define a care pathway as "a documented sequence of effective clinical interventions, placed in an appropriate timeframe, written and agreed by a multidisciplinary team. They help a patient with a specific condition or diagnosis move progressively through a clinical experience to the desired outcome."

We also considered the principles of Clinical Governance whilst discussing the subjects for audit. Elsden and Sherwood (2008) state that "Clinical Governance has been defined as a framework through which NHS organisations are accountable for continuously improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish". In 2006 the 24 core standards and 12 developmental standards that the clinical governance framework is based on, were revised into the 12 core standards for dentistry by the Department of Health into the 'Primary Care Dental Services Clinical Framework' (Elsden and Sherwood, 2008). The outcome and improvements resulting from this audit fits in with theme 5 of this framework in that "Clinical Care is informed

by other evidence-based guidelines" and "existing care pathways and protocols are followed." Ratten, Chambers and Wakley (2002, p. 151) also suggest that when considering a topic we should "try to include as many of the principles of good practice in clinical governance as possible, which are to: - have input from colleagues as appropriate, consider the patient's perspective, be capable of achieving health gains and be based on evidence-based practice, policy or management principles." We felt that the audit subject we decided on met these principles.

One of the difficulties experienced with this audit was the limited time available to collect data and during the re-audit it has been agreed that a random one hundred patients will be chosen over a month period to enable more data to be analysed. Despite these factors, I felt that the main aim of the audit was achieved as the results themselves where not as important as the fact that the need for change was highlighted in order to improve the quality of care that the patient receives.

Completing this audit has also highlighted many other areas in which we can improve in terms of clinical record keeping and referral pathways. In view of the results we have devised a simple surgery protocol for periodontal screening and suggestion for the appropriate care pathway for the patient. The Faculty of General Dental Practitioners (2008, p. 24) states, "The starting point for all periodontal examinations should be a screening or BPE, to identify those patients who require a more detailed examination". By accurately recording the patients' periodontal status and formulating a tailored treatment plan to suit the individual patient, we will not only be following good practice on clinical record keeping, but most importantly we will be helping to ensure that the patient receives the best quality of care. ISO 9000 (cited by Toy, 2008) defines total quality management as being about "doing the right thing right, first time, every time". With regards to BPE screening we do need to be effective, efficient, and consistent, and if we do this, we can raise the care of the patient in the Primary Dental Care setting.

Another area in which the audit was successful was that all members of the team got involved in collecting and recording the information and this seemed to really boost team working. The General Dental Council (2008) state "teamwork means working together to provide good quality dental care". By involving all members of the dental team the motivation of staff really increased.

Following the success of this audit in both recognising the need for improvement and in the implementing of positive change within the practice, the members of the dental team are motivated to carry out another audit after our next re-audit of BPE screening. It has been decided that a random re-audit will take place over a month period sometime in the next six months.

This is the first audit that I have ever completed and I feel that audit can be a very important tool in raising the standard of care that the patient receives. I feel that completing this audit has had an extremely positive impact on improving the quality of care for the patient. ISO 9000 (cited by Toy, 2008) talks about the 'audit spiral' in that the "quest for quality incorporates the principle of continuous improvement".

Personal Development Plan and Reflective Learning

This CPD is linked to the following GDC Enhanced CPD Development Outcome:

C. Maintenance and development of knowledge and skill within your field of practice.

Reflective learning is now a requirement of the GDC Enhanced Professional Development Scheme. As such, you will now have the opportunity to answer some reflective learning questions, if you complete these now you will fulfil the requirements of the GDC. These will be:

1) What did you learn (or confirm) from the activity that was helpful or relevant to your daily work and patients?

2) Comment on any changes/updates needed in your daily work

3) How has completion of this CPD article benefitted your work as a DCP?

Further Reading:

https://www.infectionpreventioncontrol.co.uk/content/uploads/2018/12/Audit-Tool-Environmental-Cleanliness-Checklist-for-Dental-Practice.pdf

https://www.rcseng.ac.uk/library-and-publications/rcs-publications/docs/methodologies-for-clinical-audit-in-dentistry/

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6. Pocket Dentistry (2014) Available from: https://pocketdentistry.com/audit-in-dental-practice/ (Accessed 10/07/2024).

7. Coulter, A. (1992) Measures of Need and Outcome for Primary Health Care. Quality and Safety in Healthcare. Pp.143.

8. UHBristol Clinical Audit Team (2009) Available from: http://www.uhbristol.nhs.uk/files/nhs-ubht/4%20How%20to%20Aim%20Objectives%20and%20Standards%20v3.pdf (Accessed 10/07/2024).