Clinical Audit in Primary Care

demonstrating quality and outcomes

Ruth Chambers and Gill Wakley

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DEMONSTRATING QUALITY AND OUTCOMES

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and

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Preface

This book will help you to develop your expertise in clinical audit and collect evidence of your practice. Clinical audit should be an integral part of clinical practice. It can be a powerful tool for positive change, resulting in improved practice and outcomes for patients. Although clinical audit has been promoted and encouraged in the NHS for the last ten years, it is still not practised in a systematic way. Variations in practice between practitioners, or between different practices, may go unnoticed and unchecked if health professionals and managers do not have the knowledge or skills to practise clinical audit, nor the motivation to review their performance in a systematic way.

The umbrella term *clinical audit* includes all the non-clinical components of audit too. You cannot deliver good quality care in a clinical area without looking at access to and availability of care, how good the communication is between staff and with patients, the evidence for your clinical protocols and so on. Everyone in the practice team plays their part. They only operate effectively if they are working in a well connected way within the wider team across primary care and with others in the hospital or community.

This book will help you as a doctor, nurse, allied health professional, manager or other member of the general practice team to undertake clinical audit of any part of your daily practice, but especially in respect of chronic disease management. Clinical audit is key to the way that anyone working in primary care demonstrates that they are playing their part in providing a good service in relation to their role and responsibilities. Health visitors, physiotherapists, podiatrists, pharmacists and others attached to practices will find the information and worked examples in this book useful too.

Most practitioners and managers have patchy knowledge of and skills relating to the various methods of clinical audit and how to act on audit results. Increasing your expertise in clinical audit will help you to gather evidence of your performance and practice. You can use this evidence for improving your clinical or service provision and for the documentation for your appraisal, revalidation or re-registration of your professional qualifications.

Clinical audit helps you to review the way your practice organisation works as a whole – and make improvements. It will not only help you to improve the quality of care you provide but also increase your practice income by boosting reward points from the Quality and Outcomes Framework of the General Medical Services (GMS) contract. Primary care organisations[1] can use clinical audit to demonstrate what standards of care they provide; and how seamless their provision of clinical care is across the boundaries of primary and secondary care, or health and social care or with the voluntary sector.

Ruth and Gill, the authors, work at the 'coalface' of primary care as health professionals and in NHS management. Their positive approach to clinical audit will show you how easy it can be to plan and carry out audit, based on the many useful templates of common conditions included here. These focus on audit from the perspectives of individual members in the primary care team and as a general practice organisation.

Ruth Chambers
Gill Wakley
March 2005

We use the term primary care organisation (PCO) to include primary care trust (PCT) in England; local health group (LHG) in Wales; Health and Social Service Board (HSSB) in Northern Ireland; and the equivalent Local Health Care Co-operative (LHCC) in Scotland.

About the authors

Ruth Chambers has been a general practitioner (GP) for more than 20 years and is currently the head of the Stoke-on-Trent Teaching Primary Care Trust programme and clinical dean at Staffordshire University. Ruth has worked with the Royal College of General Practitioners to produce tools to enable GPs to gather evidence about their learning and standards of practice while striving to be excellent GPs. Ruth has co-authored several series of books with Gill, designed to help readers draw up their own personal development plans or workplace learning plans around key clinical topics, and demonstrate their competence.

Ruth has served as the Chairman of Staffordshire Medical Audit Advisory Group and been a GP trainer. She has scrutinised clinical governance in primary care trusts as a reviewer for the Commission for Health Improvement. Ruth has initiated and run all types of educational initiatives and activities.

Gill Wakley started in general practice in 1966, but transferred to community medicine shortly afterwards and then into public health. A desire for increased contact with patients caused a move back into general practice, together with community gynaecology. She has been combining the two, in varying amounts, ever since.

Throughout she has been heavily involved in learning and teaching. She was in a training general practice, became an instructing doctor and a regional assessor in family planning, and is a visiting professor at Staffordshire University. Like Ruth, she has run all types of educational initiatives and activities from individual mentoring and instruction, to small group work, plenary lectures, distance learning programmes, workshops, and courses for a wide range of health professionals and lay people.

Part 1

The infrastructure of audit

1

Introduction to clinical audit

Getting started with clinical audit

Audit is a technique used to maintain and improve the quality of care and services provided by an individual or by a practice. It is the method used by 'health professionals to assess, evaluate, and improve the care of patients in a systematic way, to enhance their health and quality of life'.[1] Clinical audit is central to clinical governance because:

- you can use it to review the quality of care you provide for patients with common conditions like asthma or diabetes, on an everyday basis
- it builds on the way that health professionals and others working in the NHS have traditionally reviewed case notes as part of quality improvement
- it provides a systematic approach to reviewing the quality of care and services
- it supplies reliable information to highlight the need for improvements
- it provides an impetus to upgrade the quality of care you provide.

Clinical audit is a quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and the implementation of change. Aspects of the structure, processes and outcomes of care are selected and systematically evaluated against explicit criteria. Where indicated, changes are implemented at an individual team or service level and further monitoring is used to confirm improvement in healthcare delivery.[2]

The steps of the audit cycle represented in Figure 1.1 are:

- prioritise and select the topic of your audit, working with others in your team or practice
- set objectives: relating to the reason(s) why the audit is being carried out
- review the literature for that topic and agree the criteria and standards that you think are reasonable
- design the way in which you will do the audit
- collect the data and look at them
- feed back the findings; meet with colleagues or your team to discuss the findings and determine the reasons for the results
- make a timetabled action plan to implement any changes that are needed
- review your standards – should you keep the standards you previously set, are they unrealistic or not challenging enough?
- re-audit – creating successive audit cycles.

Designing your clinical audit

The more time you spend planning and designing the clinical audit, the more likely it is that you can move easily through these various steps of the audit cycle and obtain useful information that everyone owns and agrees to act on. Write down your protocol and share the agreed version so that everyone can see the part they play.

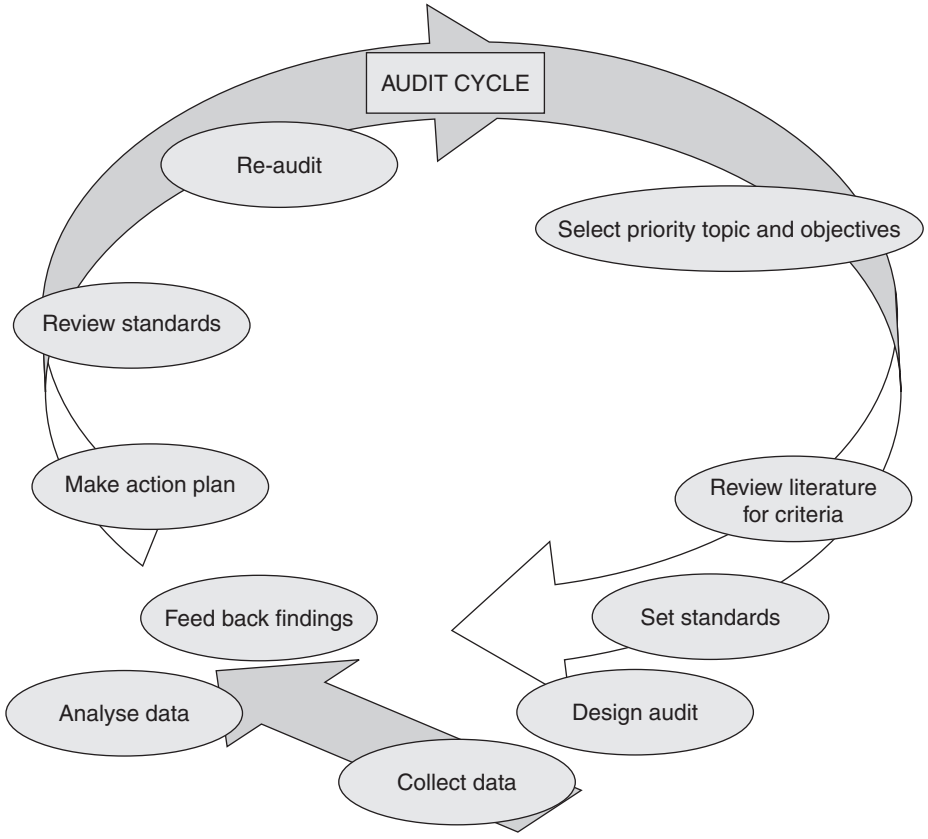

Figure 1.1: Steps in the audit cycle

Who will be involved?

Include those members of the practice team who are directly involved in the task being audited and those who will be collecting the data. Decide who is writing the audit protocol and who will search for evidence to enable you to set standards and criteria. Include in the team those who need to agree solutions or find resources if the audit shows that change is necessary. Appoint a lead if there is no-one in this role already. Link to others relevant to the audit who work in different settings: the local hospital, primary care organisation (PCO), community clinic, social services, etc.

Set simple, measurable, achievable, realistic and timely (SMART) objectives

You should be clear about the reason(s) for doing the audit, and the objective you set should link to that – to define the extent of potential risk areas, for example. The objectives should be relevant and understandable to everyone taking part. Keep in mind that the end result is making improvements to patient care. The quality and

nature of the end points of your audit should relate to the objective(s) you set for the audit. You need to have some idea of your endpoint when you set the objective(s). The audit will be most worthwhile if your objective is about:

- assessing whether or not standards are being met
- determining whether standards are improving
- monitoring the level of compliance or concordance with treatment or advice
- improving clinical effectiveness
- changing inadequate current practice.

Box 1.1: Example of objectives of an audit of local services, e.g. management of suspected myocardial infarction

Main objective: to audit the extent to which the following criteria were met and to identify reasons for failure to implement the policy for the management of suspected heart attack:

- the proportion of patients who receive thrombolytic therapy within six hours of the onset of chest pain and within 30 minutes of arrival at hospital
- the length of time patients wait from the onset of symptoms before calling emergency services
- the response time of emergency medical services
- whether aspirin is administered, by whom, and when.

Set criteria

These are items by which you will appraise the indicators of the level of care. The level of performance in your audit results will describe the extent to which these criteria are met. Criteria are explicit statements that define what is being measured; they represent elements of care that can be measured objectively.[2]

Set standards

Standards are indicators of the level of care that you want to achieve. They may be those that you have agreed as a practice team, are promoted by others such as in the Quality and Outcomes Framework,[3] or in other published literature, such as systematic reviews or national clinical guidelines.

Data collection

Decide what information you wish to collect and how to collect it in a reliable way, minimising bias as far as possible. You may need to pilot the collection of data to see how that works out, and solve any problems that arise. Decide if the data collection is retrospective, concurrent or prospective. The data collected must be valid and accurate. The data should be readily available on your computer system or from patient surveys. You will not have time or resources to track down hard-to-locate information.

Define the sample

See page 23 for how you might select your sample of who will be included and excluded from the audit. The number in your sample and the trouble you take to get a representative sample will depend on the accuracy or degree of confidence you need to have in the findings, and the extent to which you are limited by time, funds, staff skills etc.

Data analysis

Decide who will look at the data, how the analysis will be done and how the interpretations will be made.

Feed back the findings

Feedback should be to the people involved in the audit and anyone who will need to make changes. You might be feeding back findings further afield – in your appraisal or in your revalidation or re-registration portfolio, or to the PCO as part of the Quality and Outcomes Framework.

Draw up the action plan

The action plan needs to be timetabled and specific about who does what, how and when – and realistic. The need for any extra resources should be predicted and how they will be identified included in the action plan. If the actions or changes mean new responsibilities for staff, then you need to anticipate their training requirements and organise that training in work or paid time. *See* Chapter 4 for how you might facilitate the changes necessary.

Convene an implementation group

Everyone concerned in the action plan will need to discuss progress with someone taking the lead. If it is a complex audit or crosses more than one health setting, you will probably need an occasional group meeting to oversee progress and agree on re-auditing.

Re-audit

You will want to re-audit if your initial audit showed gaps in the care you are providing and you have made changes as a consequence, to see if you are now meeting, or approaching, the criteria and standards you have set.

Angle what clinical audit you do on:

- a clear patient focus
- greater multiprofessional working
- crossing primary, secondary and continuing or social care boundaries
- close links with education and professional development
- effectiveness – clinical effectiveness, cost-effectiveness, variations in practice, outcomes.

Selecting the topic for audit

You have little enough time to get your core work done in the NHS and you do not have time to waste on doing clinical audit unnecessarily. There must be obvious potential benefits for the audit to be worthwhile to repay the time, costs and effort invested. These benefits include improving the way you deliver care or manage services, or making changes to benefit:

- patients
- your professional practice or personal development
- colleagues
- the practice team
- the practice organisation as a whole
- the PCO or the NHS in general.

Box 1.2: Categories justifying selecting a clinical audit topic as a priority

An audit topic should concern an area that has at least one of the following characteristics:

- high risk
- high volume
- causes concern
- high cost

The topic or focus of the audit has to be important as in Box 1.2 – to you, your patients, your practice or the NHS in general, or central to local or national initiatives. If the audit is about a clinical condition, then it should concern a common problem, or be related to an aspect of practice with potentially serious consequences if there is underperformance. If it is about practice systems then choose to audit an issue where the audit exercise should help you to work more effectively or efficiently. There must be the potential to make improvements through the audit. There is no point in demonstrating that additional resources are needed to improve some process if there is no chance at all of gaining those additional resources, however hard you try.

The categories that an audit normally falls into include:

- assessing the frequency or volume of a service
- risks associated with aspects of providing care or a service
- problems associated with delivering care or a service
- effectiveness of aspect(s) of the delivery of care or a service
- cost of aspect(s) of delivering care or a service.

Consider if the problem underpinning a topic you are about to select is amenable to change. If not, is there any point in selecting it and carrying out the audit unless that is part of a business case to justify investing resources?

Structure, process and outcome

Performance is often broken down into the three aspects of structure (what you need), process (what you do) and outcome of care (what you expect), an approach recommended by Donabedian.[4] You may choose to focus on any of these three components,

or your audit might flow from one to another to include all three aspects in your design.

- *Structural audits* might concern you undertaking audit in relation to what resources you have got, such as diagnostic equipment, premises, access to support services, skills, staffing etc.
- *Process audits* focus on what was done to a patient or how the team operates, for instance how clinical protocols and guidelines work in practice, waiting times, patient recall for investigations, treatment, record keeping, communication etc.
- *Auditing outcomes* relates to the impact of healthcare or services on the patient: improvements, adverse events. You might audit endpoints of providing care such as the effectiveness of care or services on patients' health, patient satisfaction or convenience.

Using audit to monitor services

You could use audit to examine the standards of care or services you provide for any practice-based activities. Make it easy to undertake regular audit by getting into the habit of storing information on a computer in a way that is well coded, accurate and retrievable. Once the parameters for a computerised audit are set up, you can repeat the audit cycle to determine the impact of any changes you make after the initial audit. Be critical of the results, however. Just because you can count something, does not mean that the results are significant in their own right. You need to consider the results in the context from which they were obtained. If the results do not agree with what your common sense tells you is likely to be right, look at how you obtained the data. See if there are significant errors and omissions or biases in the way you organised the sampling, from which you can learn.

Practice-based systems and procedures require regular monitoring for good patient care and the smooth running of the practice organisation. You might monitor:

- systems for the purchase, servicing and maintenance of equipment. Make sure that the people who are responsible for checking equipment (such as the sterilising equipment in your treatment room) have deputies who know their role in case of staff absence or sickness
- staff health – for example, check that you have procedures for ensuring that immunisation against tetanus, rubella and hepatitis is checked before employment, and at recommended intervals thereafter
- confidentiality – to make sure that newly appointed or temporary staff are aware of the rules concerning patient confidentiality, and that breaches of confidentiality do not occur
- safety and maintenance of the premises – that they are clean and present no hazards to staff or patients. You might draw up a list of the statutory and mandatory training required by different practice staff groups, and audit that their training is up to date and that they are complying with health and safety legislation
- that systems and procedures for patient referrals – writing and sending letters and reports, notification of results of investigations to patients, etc are working. You could check that you are copying personal letters to patients according to your agreed practice approach
- waiting times – to see a health professional from the time of the patient request to attending an appointment in your practice, or in relation to time from referrals

being sent from the practice to request outpatient appointments or hospital admissions or investigation dates.

If you wish to extend your audit outside your immediate workplace where you have responsibility, involve colleagues there in the planning and process of the audit. For example, you might want to include services provided in secondary care or in a community department such as physiotherapy.

Setting criteria

The criteria describe the specific items of healthcare or services that you will measure as part of the audit focusing on structure, process or outcome (*see* page 8). For example, a criterion for diabetes is 'patients with diabetes (on your practice list) should have a record of HbA_{1c} or equivalent in the previous 12 months'. Or a criterion for hypertension is 'patients with hypertension (on your practice list) should have a maximum blood pressure (measured in the last 9 months) of 150/90 mmHg or less'.

Compare your performance against external criteria

Look carefully at the evidence for choosing criteria. Often the evidence for what is done is poor or does not exist. You may choose criteria for which there is agreement about 'best practice' from several sources.

Good Medical Practice for General Practitioners describes 'excellent' and 'unacceptable' performance.[5] This approach and most of the criteria and standards in the document can be generalised to all health professionals and managers, whatever their disciplines. An excellent practitioner meets the excellent criteria all or nearly all of the time; a good practitioner meets the excellent practitioner criteria most of the time; and a poor practitioner consistently or frequently provides care in the unacceptable criteria categories. The *Code of Professional Conduct* from the Nursing and Midwifery Council has similar criteria.[6]

You could compare your performance against criteria you select for any of the following components of your everyday work:

- clinical practice
- record keeping
- access and availability
- emergency treatments
- out-of-hours care
- keeping up to date
- providing information to patients and colleagues
- professional–patient relationships
- avoiding discrimination and prejudice
- teamwork
- referring patients
- professional ethics
- best practice in research
- effective use of resources
- conflicts of interest
- handling mistakes or complaints.

Setting standards

Standards may be relative, that is referenced to norms so that you are comparing your standards with those of other people, or absolute, that is referenced to criteria. The standard describes the level of care to be achieved for any particular criterion.[1] Some standards for knowledge, skills and attitudes are included in *Good Medical Practice for General Practitioners* and the *Code of Professional Conduct* (*see* above).[5,6] Some standards can be derived from those set out in the General Medical Services (GMS) contract,[3] which were in turn derived from a mixture of best practice sources.[3,7–9] For instance, a standard for diabetes is '90% of patients with diabetes (on your practice list) should have a record of HbA_{1c} or equivalent in the previous 15 months'. Or the standard for hypertension is '70% of patients with hypertension (on your practice list) should have a maximum blood pressure (measured in the last 9 months) of 150/90 mmHg or less'.[3]

Box 1.3: Standards should be:

- realistic
- measurable
- achievable
- agreed

You might adopt more challenging criteria or standards by being more specific. If you revised the criterion for diabetes given above to: 'patients with diabetes (on your practice list) should have an HbA_{1c} of 7.4% or below in the last 15 months', you might have more difficulty achieving these levels. Then you might revise your standard too as the criterion is so challenging. Perhaps you would lower the percentage to expect that only 50% of patients meet that criterion, rather than the 90% you expected to have had an HbA_{1c} measured in the same time period.

Sometimes special interest groups and specialist associations or societies disagree with the standards set by the National Institute for Clinical Excellence (NICE) or the Scottish Intercollegiate Guidelines Network (SIGN).[7,8] Then you will have to opt for whichever standard or source of evidence is most appropriate for the objective or purpose of your audit – to strive for improvement in standards of care in your practice or provide evidence of your performance for an external body, etc.

You may set minimum, ideal, optimum or arbitrary standards:

- a *minimum* standard is the lowest acceptable standard (this would be 25% for the quality indicators of the Quality and Outcomes Framework for example, before you achieve any reward points)[3]
- an *ideal*, *gold* or *aspirational* standard describes the care or services you would provide under ideal conditions. These ideal conditions might be where you had sufficient resources and patients followed your advice about healthy lifestyles and recommended treatment. In the example given for diabetes, you might then expect 100% of patients to have an HbA_{1c} of 7.4% or less
- an *optimum* standard involves a judgement about what is possible given the available resources and the patient population. The GMS contract indicator for at least 50% of patients with diabetes to have an HbA_{1c} of 7.4% or less to score maximum quality points reflects this balance[3]

- an *arbitrary* standard might be agreed by peers or members of the practice team, for instance. There may be no reliable source of evidence for the nature of your audit or the setting in which you are conducting it. A useful way of setting these standards is to discuss what you or your colleagues would find acceptable as standards. You may find internally set standards like these are more likely to be owned by those setting them, rather than external standards imposed by others, however well meaning. You and your colleagues should then be well motivated to achieve the standards they proposed and agreed.

Working as a practice team, you can compare your own knowledge and usual practice with others and with protocols or guidelines recommended by NICE or any or all of the National Service Frameworks for England or SIGN.[7,8]

Alternatively, you might compare your own practice against a protocol or guideline that is generally accepted at a national or local level. You could audit your practice to find out how often you adhere to such a protocol or guideline, and if you can justify why you deviate from the recommendations where you choose not to follow them.

Make a timetabled action plan for your audit protocol

You know that if you, or whoever is responsible for leading the audit, do not write down a plan as to how to do the audit and put down some timings against actions, it may never get done. So construct a timetable similar to that in Box 1.4 and note down who will do what and by when against the actions.

Box 1.4: Timetable for action: e.g. audit of repeat prescribing system

	May 06	August 06	November 06	February 07
Search for number of prescriptions	———	——→		
Literature and resource search for best practice	→			
Patient focus group to discover patients' suggestions for improvements to services		———	——→	
Practice manager oversees audit	———	———	———	——→
Practice meeting with team and colleagues from other settings to discuss results			———	——→
Make changes to practice systems				→

Working as a team

Everyone plays their part in the care given to individual patients, from the time they contact the practice for an appointment, to being seen, receiving treatment and investigations and after-care, recording details of their consultation and monitoring any chronic disease. So the design of your audit needs to reflect the way members of your team work together.