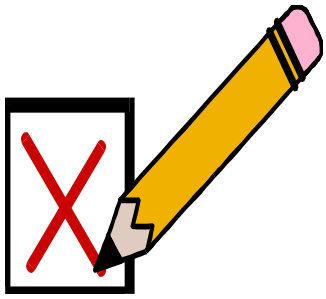
HOW TO COLLECT AUDIT DATA



In this guide we look at how to successfully plan and carry out data collection for clinical audit, ensuring that sufficient, but not excessive, data is collected, in order to measure against the audit standards.

Clinical Audit: "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"

A range of 'How To' guides have been produced by the UBHT Clinical Audit Central Office and are available on the UBHT Clinical Audit website, www.ubht.nhs.uk/clinicalaudit

Guides are cross-referenced using the insertion of the icon of other guides into the text to indicate where further information on the topic referred to can be obtained.

- What is Clinical Audit?
- How to choose and prioritise audit topics
- How to set audit objectives and standards
- How to select an audit sample
- How to analyse audit data
- How to write an audit report
- How to get your audit published
- How to do Clinical Audit – a brief guide
- How to involve patients in clinical audit
- How to apply ethics to clinical audit
- How to collect audit data
- How to give an effective audit presentation
- How to implement changes successfully

Further information about Clinical Audit can be obtained by contacting the UBHT Clinical Audit Central Office on tel. (0117) 928 3614 or e-mail Eleanor.Bird@ubht.swest.nhs.uk

You can also get advice and support on clinical audit from your divisional Clinical Audit Facilitator (contact details available from the Central Office or UBHT clinical audit website)

Clinical Audit Workshops can be booked through the Clinical Audit Central Office

Advice on **Clinical Effectiveness**, including how to write guidelines, is available from James Osborne, Clinical Effectiveness Co-ordinator, tel. (0117) 928 3827 or http://intranet/ce-net/ (UBHT network) or www.ubht.nhs.uk/ce-net (limited external version)

HOW TO COLLECT AUDIT DATA

Clinical Audit is usually concerned with gathering **quantitative** data ('hard facts', i.e. counting how many times certain things were done, how often and to what end) and linking it to standards of good practice (i.e. what *should* have been done and what *should* the outcome have been?). Depending on your audit topic, you may also want to collect some **qualitative** data - typically by using a questionnaire to gather capture patients' (or staff) subjective experience (feelings and opinions, sometimes called 'soft' data).

WHAT data should you collect?

You need to decide what data is necessary to be able to answer your audit question. Each '*data item*[1] should link to specific objectives and standards. Don't be tempted to collect information because it might be interesting or useful - it is unlikely to add anything to your project and will mean the project takes you more time. A good technique to ensure that your data items are necessary is to use a *data matrix*. The data items are listed in the first column and a tick is placed in the box(es) according to which standard the item relates. If you don't have a tick for any data item, don't collect it! (or consider whether you need to rewrite standard / write another standard)

An example of a data matrix

Data item	Standard 1	Standard 2	Standard 3	Standard 4
Sex	✓			
Age		✓		

WHERE will you find the data?

Is the data you want collected routinely? (on a computer system or in the notes?) If so, you can collect data **retrospectively** (i.e. data from the past). If not, you will need to collect data **prospectively** (i.e. for new patients as and when they are admitted). Both methods have advantages and disadvantages – retrospective audit can be quick but can turn into an audit of 'how well is care documented' rather than 'how well is care given'. Prospective audit can gather data you wouldn't otherwise have access to but may miss cases if you are relying on other people to know your audit is happening and fill in your forms.

WHO will collect the data?

It is usually the responsibility of the clinicians involved in the project to undertake the data collection (remember, audit should not be something that is "done to you"). However, staff not directly involved in designing the project often undertake data collection, for example, nursing staff may be asked to complete a data collection form for patients on their ward. For this reason, it is important to make sure that explicit instructions appear on the form, such as when to collect the data or what to do with the data collection form after completion (who should it be sent to for analysis?). Your questions shouldn't need any explanation!

WHICH cases to audit? How many?

See *'How to select an audit sample'*. Most process-based audits will look at a snapshot of care, say 20-50 cases, over a timeframe of a few weeks/months. Remember to look at current practice, as this is what you are aiming to assess, not what happened in the distant past - so that you can make any necessary changes to improve care for the future.

[1] The 'data item' is the data type/category (e.g. 'age', or maybe more specifically, 'age in years') rather than the data itself (e.g. '34 years old' or 'aged 20-30')

HOW TO COLLECT AUDIT DATA

DESIGNING A DATA COLLECTION FORM

You now need a data collection form to gather your information. In the world of clinical audit, data collection forms are also described as "audit forms" or "audit proformas". The word "questionnaire" is usually reserved for surveys, where patients or staff are being asked questions. Many of the pointers for designing data collection forms apply equally to questionnaires. Qualitative methods of data collection such as focus groups and in-depth interviews sometimes generate ideas for clinical audit projects, but are not usually employed as part of a clinical audit itself.

The term "audit tool" (which often confuses people) is a generic term covering any form or system used to facilitate the audit process.

Golden Rules

Points to remember when you come to design your data collection form:

- Include the title and date of the audit, for easy identification
- Include contact details of audit lead and instructions for returning the form
- Include instructions for completing form - if you offer options, give instructions to tick the box or circle the appropriate answer
- Questions should be clear and unambiguous
- Clarify what format you want data in, e.g. *Time of admission* ____:___ *(24 hr clock)*
- Questions should be well spaced out – don't clutter the form. Be careful with font sizes (not too small that it's unreadable)
- If you want opinions or views, allow space for these
- Keep as succinct as possible - try to keep to a single sheet of A4 paper

Complying with the Data Protection Act

You will probably want to be able to identify the patient somehow on the form. However, in order to comply with the Data Protection Act and to ensure patient anonymity, personal details (name, address, data of birth etc) should not be used. The best approach is to number your forms, e.g. 1 – 100, and have a separate piece of paper ('key') listing these numbers against actual hospital numbers and/or patient names. Without this list, data collection forms cannot be linked to specific patients.

E.g. Proforma

Caesarean Section Thromboprophylaxis Audit Audit Lead: Joe Bloggs, x1111. October 2004

ID No. 1

Please circle answers as appropriate

Pre-operative risk assessment done? (Y) / N

Post-operative risk assessment done? Y / (N)

Key ('code sheet')

ID	Hospital Number
1	1234567M
2	1456789M
3	1567891M
	etc

If an ID is necessary (e.g. a prospective data collection form that follows the patient through their pathway of care), the only details used should be hospital ID number (not name, date of birth, etc).

Other data protection issues to bear in mind are:

- Data collected must be adequate, relevant and not excessive
- Data should not kept any longer than necessary – destroy completed audit proformas once project complete
- Collected data should be kept securely, so that members of the public cannot access (both electronic and hard copies of data)

Always pilot your data collection form

Piloting your tool on a few cases is important before undertaking any audit. It will help you iron out any problems: were your instructions and questions clear? (if others are collecting the data); could you get the data you needed? (try analysing your pilot data against your standards). Now is the time to put right any problems so that when you do your audit proper, you end up with the right information, rather than a lot of unusable data.

Try not to use free text on data collection forms. This is where, rather than asking for a numerical or tick-box answer, you allow the person collecting the data (or filling in a questionnaire) to provide a description of something in their own words. This kind of data can be complex to analyse and is more suited to the kind of qualitative work (e.g. focus groups and in-depth interviews) which may precede an audit. So, for example, if your data collection form included the following open question about discharge delays from a day surgery ward:

"Enter the reason for delayed discharge" … you might get the answers:

- *TTAs not ready*
- *Waiting for pharmacy to do drugs*
- *Ambulance late*
- *Partner couldn't find anywhere to park*

Data from your pilot audit may help identify themes for tick boxes. Consider adding an "other" option with additional space to elaborate – there's usually at least one case that doesn't fit anywhere else!

Reason for delayed discharge: Awaiting prescription drugs (TTAs) ☐

Transport delays ☐

Other (please state) ☐

A FEW ADDITIONAL TIPS FOR DESIGNING PATIENT QUESTIONNAIRES

- If you are posting questionnaires, always send a covering letter explaining the purpose of the survey. Better still, send a separate letter in advance of the questionnaire explaining that you will be sending them a questionnaire and giving them the option to contact you if they don't want to receive it.
- Not everyone will return completed questionnaires (response rates of 60%+ are considered reasonably successful). If by post, include pre-paid envelopes for respondents to use (talk to your audit facilitator about this).
- If you are going to send follow-up letters to non-respondents, you will need to have coded your questionnaires (otherwise you won't know who's responded and who hasn't), although this does mean that forms are not truly anonymous. Some patients will notice the coding and might be deterred from responding. It might be best to acknowledge this in the covering letter and give them the option of erasing the code (with the understanding that they will then receive a follow-up letter) or consider providing a tear-off slip that they can return with their reasons for not completing the questionnaire. You could stress that although their responses won't be anonymous, it will be treated

confidentially (see *'How to apply ethics to Clinical* Audit'. It is generally not considered to be good practice to follow up non-response by telephone (puts people 'on the spot').

- Ask them if they would like to be sent a copy of the report once the audit is completed. Think about other ways you can feedback results to the patient population, e.g. write an article for Feedback magazine, or use noticeboards
- Keep the questionnaire concise – don't waste their time.
- Phrase questions in a language that the reader will understand – e.g. talk about "doctors", not "physicians"; "pain relief" rather than "analgesia"
- Make sure you avoid asking 'double-barrelled' questions – e.g. "how would you rate the efficiency and friendliness of staff?"
- Avoid leading questions - the way you phrase questions must not *suggest* an answer: "Waiting times in outpatients are very good, aren't they?" (!)
- Your questionnaire will probably consist of a mixture of 'open' questions ("what do you think about…?" and 'closed' questions ("Do you think A or B?"). Remember that answers to open questions can be complex to analyse
- Your questions should have **internal validity**. In essence, are the questions you're asking *really* measuring the thing you think they're measuring, or are questions phrased in such a manner that they're actually measuring something quite different (how are your questions being interpreted?).
- Your questions should also be **reliable**. This means that if you repeated the exercise on another day in a different setting, with another group of similar people, would the results be broadly the same? If the results are not reliable, we shouldn't be using them to inform changes in practice.
- Some questions may use scales to record feelings and opinions: typically of the 1-10 style or a variation on Agree/Neutral/Disagree (the latter are called 'Likert" statements). You may want to take advice from the Consumer Involvement Facilitator at UBHT on the most appropriate scale to use.

Using Likert Scales for question responses

Example 1

Strongly agree / Agree / Undecided / Disagree / Strongly disagree

(requiring respondents to circle their response)

or present as tick boxes:

Strongly agree ☐ Agree ☐ Undecided ☐ Disagree ☐ Strongly disagree ☐

With an odd number of choices, responses may tend towards the middle. With even number of choices you will force a decision towards a positive or negative answer - think whether this is what you want or not

Example 2

0 _____ 10

Ask respondents to place a mark on the line which represents their answer to the question. Make sure you tell them what the 0 and 10 ends stand for. Think how you will analyse responses – probably means measuring with a ruler and allocating a score to their response, which can be fiddly! You might want to use a scale of 0 to 10 but ask them to circle a number or to tick a box, as above.

