

Gathering Evidence

Key Message

Effective practice relies on robust, reliable and relevant evidence. This may come from a variety of sources. The first step in any project (audit, evaluation, service improvement) is to gather all the evidence available from sources such as:

- literature reviews - to outline what is known about the topic and any gaps in knowledge,
- audit, surveys, interviews, or focus groups.
- Data analysis follows data/evidence gathering to focus on the elicitation of findings, conclusions and recommendations for practice improvement.

What does this mean for the Effective Practitioner?

The Effective Practitioner requires a variety of skills and tools to gather robust evidence. These include database searching skills using for example Athens on the Knowledge Network to find peer-reviewed articles at the right level and nature of your project. It's important that a nurses, midwives and allied health professional is able to select the most suitable quantitative and qualitative methods to gather data and have the resources and skills to be able to analyse data either with a local clinical effectiveness department or through personally using data analysis tools such as MS Excel or SPSS.



Learning Activities



Reviewing the literature

It is important to review the literature when looking at evidence to inform your practice. The purpose of a literature review is to outline and examine what is already known about your topic. It should identify any potential gaps in knowledge about the area and provide you with a platform for presenting an argument that supports your proposed project.

The Knowledge Network provides you with comprehensive access to a wealth of online journals and resources on all aspects of health and social care.

- You will need to have good database searching skills when carrying out a literature review as this is essential for finding evidence-based information online. There are a number of ways in which you can develop your database searching skills:

- Knowledge Network: Access online help on how to use the [Knowledge Network](#).
- Flying Start NHS: Access the [Flying Start NHS Resources](#) on developing your database searching skills.
- 1:1 Support: Book an appointment with your local health service subject librarian/knowledge broker for 1:1 support or work with someone in your local team who has developed their database searching skills.
- Using your database searching skills, search the published literature on the Knowledge Network and local library for evidence regarding your research topic.
 - If you have an Athens account, log onto the NES Knowledge Network and identify the best databases for your clinical field.
 - If you don't have an Athens account, then contact your local NHS librarian/knowledge broker, or access the [Knowledge Network](#) to request one. It is well worth the effort!
 - If you don't have an Athens account and you are not an NHS employee, find out what online databases are available to you in your organisation and get the access rights to search the databases.
- Identify 2-3 keywords in your area of interest. Were you able to find useful evidence sources – was there too little or too much?
- Refine your search by identifying an appropriate time span.
- Review the results to ensure that you are retrieving peer-reviewed articles at the right level and nature for your project. Consider the following items when reviewing your findings:
 - What is the status of the authors?
 - Is there any bias in the study?
 - Are there any vested interests declared?
 - Are the dates recent?
 - Does the study build on previous research?
 - Is there a sound case argued in the literature review?
 - Are the methods used suitable for the research question?
 - If the research is quantitative, are the sampling techniques appropriate? Are the numbers used sufficient to produce significant results?
 - If the research is qualitative, is it of sufficient depth to produce significant results?
 - Are ethical standards adhered to?
 - Are there quality control measures evident?
 - Has the article/evidence been cited by others? Is it influential?
 - Has the evidence been used in national guidelines e.g. SIGN?
- Share your evidence findings with your colleagues.
- You could also construct a review of the literature available on your topic and if you have written a plan for your project, refine the rationale for your project and update your project plan as needed.

Record your learning in your professional portfolio.

KSF Core Dimensions: Personal and People Development, Quality

Notes



Questionnaire Design

There are many methods you could use for your project to gather evidence. We focus here on questionnaires but many of the principles can be applied to other methods of data collection e.g. focus group, structures or semi structured interview schedules. Questionnaires are frequently used in research and can vary in complexity. If you are using a quantitative approach for your project, then your questionnaire would use predominately structured questions where you are providing ranking and rating scales as your question responses. If you are adopting a qualitative methodology, you would use more semi-structured / unstructured questions which allow the respondents to write narrative answers which you will then analyse.

Whether you are using quantitative or qualitative approach, there are a number of key elements that you need to consider.

Getting Started

- Ethical issues: are there any ethical issues to be considered in the design, rollout and analysis of results? Remember ethical approval has to be sought and maintained throughout the project.
- Planning:
 - How are you going to create and distribute the questionnaire?
 - Will the questionnaire be paper-based and if so, how are you going to collate the results?

- If you plan to design an online questionnaire e.g. Using QuestBack, how are you going to protect anonymity and secure the data? Do you need to provide the survey in multiple formats e.g. for those who do not have access to the Internet?
- How long will the survey be open?
- Do you need to provide support to survey participants in completing the questionnaire?
- Resources: Agree the resources you need with your line manager. You'll need to consider who is going to help you design and build the questionnaire and analyse results. What are the cost implications?

Designing your questionnaire

- Create your questionnaire on paper first and pilot it with colleagues/a sample from the target audience.
- Elicit feedback on your draft questionnaire, particularly in relation to the following areas:
 - Layout of the questionnaire – is the font size appropriate, is it attractive and engaging and encourages respondents to complete all the questions?
 - Range of questions: have you ensured that you are no extraneous questions being asked and that you are gathering minimal demographical and biographical data and this will maintain confidentiality and meet the Data Protection guidelines. Find out more about [Data Protection Guidelines](#).
 - The sequencing of questions: is there a logical and clear flow to the questions.
 - Bias: Is there any implicit bias in the way you are phrasing the questions?
 - Number of questions: are there too many questions? Is there any repetition in the questions?
 - Are the questions clear and unambiguous?
 - Are appropriate ranking and rating scales used for quantitative type questions?
 - Have you ensured that mandatory and optional questions are clearly signposted?
 - Have you included clear guidance on how the data will be analysed and where the results will be published once it is analysed e.g. results will be anonymised.
 - Is the cover letter clear and encourages participation?
- Update the questionnaire based on the feedback and discuss the revised questionnaire with your line manager.
- Rollout your updated questionnaire based on your agreed approach.

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Find more work-based learning activities on the effective practitioner website at www.effectivepractitioner.nes.scot.nhs.uk

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Data Analysis

Having collected your data, the next step is to analyse the data to elicit findings, draw conclusions, highlight implications for practice, make recommendations, acknowledge limitations and reflect on personal learning through the process.

The choice of analytical tools will depend on the methods you have chosen to gather data and the type of data you have generated.

Qualitative methods will produce descriptive material which may lend itself to thematic analysis where you extract themes from your data. Quantitative approaches elicit responses which may more appropriately be analysed with a statistical package such as Microsoft Excel or SPSS.

- Match your methods and findings to an appropriate approach for analysis.
- Approach your clinical effectiveness department or local statistician for help with the analysis of your data.
- Present your data using appropriate diagrammatic formats such as pie charts, histograms, graphs where possible.
- Having gathered and analysed your data, relate your conclusions to your literature review and also the stated aims and objectives in your plan.
- Present and discuss the conclusions that you may reasonably draw from your data with colleagues and your line manager.

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