The NIHR Research Design Service for Yorkshire & the Humber

An Introduction to Qualitative Research

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1. Introduction

Common sense and research both involve an attempt to understand various aspects of the world. However research, but arguably not common sense, involves an explicit, systematic approach to finding things out, often through a process of testing out preconceptions. This process begins with deciding on a research question. It is then necessary to conduct a literature review and to decide on a research design which addresses the research question. Decisions made at this point include considering what kind of data will be collected, how they will be collected, who will be invited to participate and how the data will be analysed.

Researchers working in the social sciences: psychology, sociology, anthropology etc., interested in studying human behaviour and the social world inhabited by human beings, found increasing difficulty in trying to explain human behaviour in quantifiable, measurable terms. Measurements tell us how often or how many people behave in a certain way, so if a research question involves exploring how *much* or how *often* something happens, it's probably appropriate to use quantitative methods. Qualitative research attempts to broaden and/or deepen our understanding of how things came to be the way they are in our social world. If the research question involves exploring how people experience something, or what their views are, exploring a new area where issues are not yet understood or properly identified (e.g. before developing questionnaire items), assessing whether a new service is implementable, looking at 'real-life' context, or a sensitive topic where you need flexibility to avoid causing distress, your team probably needs to discuss using qualitative methodology.

The purpose of this resource pack is to enable health and social care professionals with little or no previous experience of research to gain a basic understanding of qualitative research and the potential for this type of research in health care.

The pack begins with a general introduction to the nature of qualitative research. This includes identification of the place of qualitative research in a brief comparison with quantitative research. There follow short descriptions of the main qualitative approaches and ways of collecting information. Clear and practical guidance is provided on techniques for analysing and presenting qualitative research. Theoretical information is reinforced through exercises and examples drawn from the fields of health and social care research.

The pack gives only a brief introduction to qualitative research and readers planning to undertake projects using one of the methods described should consult other texts (see suggestions at the end) and seek additional advice from experienced qualitative researchers. The NIHR RDS EM / YH offers a range of courses and gives advice clinics which at the time of updating this pack (Feb 2007) are free to NHS and social care researchers.

LEARNING OBJECTIVES

- To provide the reader with a basic understanding of qualitative research.
- To equip the reader with sufficient information to appreciate how qualitative research is undertaken.
- To enable prospective researchers to consider the appropriateness of a qualitative approach to their chosen field of investigation.
- To provide practitioners contemplating or undertaking qualitative research for the first time with guidance on the collection, analysis and presentation of data.

2. The Nature of Qualitative Research

All research, whether quantitative or qualitative, must involve an explicit (i.e. auditable), disciplined, systematic approach to finding things out, using the method most appropriate to the question being asked. Consideration should be given to these common goals, although the differences between qualitative and quantitative research have often been exaggerated in the past. The table below summarises some of the ways in which qualitative and quantitative research do differ:

Table 1

Qualitative research	Quantitative research
tends to focus on how people or groups of people can have (somewhat) different ways of looking at reality (usually social or psychological reality)	tends to focus on ways of describing and understanding reality by the discovery of general "laws"
takes account of complexity by incorporating the real-world context – can take different perspectives on board	takes account of complexity by precise definition of the focus of interest and techniques that mean that external "noise" can be discounted
studies behaviour in natural settings or uses people's accounts as data; usually no manipulation of variables	involves manipulation of some variables (independent variables) while other variables (which would be considered to be extraneous and confounding variables) are held constant
focuses on reports of experience or on data which cannot be adequately expressed numerically	uses statistical techniques that allow us to talk about how likely it is that something is "true" for a given population in an objective or measurable sense
focuses on description and interpretation and might lead to development of new concepts or theory, or to an evaluation of an organisational process	focuses on cause & effect - e.g. uses experiment to test (try to disprove) an hypothesis
employs a flexible, emergent but systematic research process	requires the research process to be defined in advance

Qualitative research is concerned with developing explanations of social phenomena. That is to say, it aims to help us to understand the social world in which we live and why things are the way they are. It is concerned with the social aspects of our world and seeks to answer questions about:

- Why people behave the way they do
- How opinions and attitudes are formed
- How people are affected by the events that go on around them
- How and why cultures and practices have developed in the way they have

In a health or social care setting, qualitative research is particularly useful where the research question involves one of the situations below and people's experiences and views are sought:

- exploration or identification of concepts or views
- exploration of "implementability"
- the real-life context
- sensitive topics where flexibility is needed to avoid causing distress

In the past the distinguishing features of qualitative and quantitative research have been used as criticisms by proponents of the "other" methodology. For example, one common criticism levelled at qualitative research has been that the results of a study may not be generalisable to a larger population because the sample group was small and the participants were not chosen randomly. However if the original research question sought insight into a specific subgroup of the population, not the general population, because the subgroup is "special" or different from the general population and that specialness is the focus of the research, the small sample may have been appropriate. This would be the case with some ethnic groups or some patient groups suffering from rare conditions, or patient or health care groups in particular circumstances. In such studies, generalisability of the findings to a wider, more diverse population is not an aim. Another example is the label of reductionism, based on the requirement of the experimental method to eliminate all but one measurable variable, which is used to imply criticism of quantitative methodology. The rigour involved in a well designed and executed experiment is a strength of quantitative research just as an alternative approach which engages with context is a strength of qualitative methodology.

Exercise 1

Look at the research projects listed below. In which projects would you expect to see a qualitative approach used and in which projects would you expect to see a quantitative approach? What features of each research question lead to your decision?

A) A comparison of the effectiveness of drug A versus drug B in the treatment of migraine.

B) An exploration of the role of the Practice Manager in the primary health care team: a study of four practices.

C) An examination of young people's and parents' accounts of communication about cancer in childhood.

D) A national survey of the public's knowledge of the nature and extent of abuse of older people.

3. Approaches to Qualitative Research

One source of potential confusion is that there are many different approaches to doing qualitative research. This is because not all qualitative research questions are of the same type, and because different qualitative researchers come from a wide range of researching traditions. It is important to understand this because different approaches imply different "world views", and adopting a particular approach can influence how or where you disseminate your findings (e.g. publication).

3.1 Research Questions

To take research questions first: Section 1 and Section 2 have already touched upon the kinds of questions that qualitative and quantitative research can address. Research questions are important because they guide the whole research process. A qualitative research project usually begins with a general overall area of investigation. Some examples of areas of interest in qualitative health services or social care research might be (a) what makes care from GPs feel "personal"; or (b) reasons why some women in Bangladesh might not get emergency obstetric care when they need it; or (c) professionals' views of self-neglect among older people. All these areas can involve identifying what is happening or being experienced, rather than measuring how much of something exists, or focussing on the way changing one thing produces a change in another, which is why qualitative approaches are appropriate.

However these areas of interest (a, b, and c) are quite vague. For the research to proceed, it is crucial to become more precise. A qualitative research question is unlike a quantitative research experimental hypothesis in that it does not make the same type of prediction, but in both approaches the research question and method are intimately linked: the method needs to be selected so as to address the question, while fitting with the resources and expertise of the researchers. As a qualitative study progresses, the research question should be refined and may be reformulated. In contrast, reformulation of a quantitative research question requires a new study.

In the examples given, more precise research questions might be developed such as (a) "what are patients', carers', nurses', GPs' and receptionists' views of what makes care feel "personal" in UK primary care?"[1] (b) "do poor women seeking emergency obstetric care get identified as being in need of financial support, and if so how; how are decisions made about who receives support, and what mechanisms (formal or informal) are in place to provide that support?"[2] and (c) "how do key informants from health and social care agencies describe dealing with problems they see as arising from older people's self-neglect?"[3] Each of these questions is precise enough for a research team to be able to decide and report on how they will go about answering it. Before proceeding you may like to check that you agree that the questions are still within the qualitative arena as described in the previous section: for instance is the area little researched, are they identifying or

defining new issues in a "real-life" context, do the researchers need to find out people's views or experiences of something, and/or might some flexibility be required while collecting data so as to avoid distress?

3.2 Qualitative Approaches

The research process will reflect the methodological approach which a team of researchers decides to adopt. Many methodological approaches are described in terms of the type of analysis they imply, as can be seen from the list of approaches below. Different approaches also involve different sets of assumptions about what sorts of information (or knowledge) are important. This diversity often gives rise to lively discussion among qualitative (and other) researchers. The list below gives examples, and is followed by more information about the first two on the list, plus brief details about others for those who are interested. At this stage, the most useful message to remember from this section is that there are many different types of qualitative research.

- Ethnography
- Grounded theory (or some component of this, such as constant comparative approaches)
- Interpretative phenomenological analysis
- Discourse analysis
- Conversation analysis
- Content analysis (this term can refer to a quantitative technique)
- Narrative analysis
- And others …..

3.21 Ethnography

Ethnography has a background in anthropology. The term means "portrait of a people" and it is a methodology for descriptive studies of cultures and peoples. The cultural parameter is that the people under investigation have something in common. Examples of parameters include:

- geographical - a particular region or country
- religious
- social / familial
- shared experience

In health care settings, researchers may choose an ethnographic approach because they suspect that learning about the prevailing culture will help us to understand the state of patient care (or its lack). For example, the culture which prevails on a hospital ward, in the way that staff habitually carry out their roles, may contribute to errors or other factors which affect patient safety. Ethnography helps researchers to elucidate the situation, uncovering practices and developing cultural awareness and sensitivity, thereby allowing the delivery of safer patient care. An ethnographic approach was adopted in example (b) above.

Ethnographic studies entail extensive fieldwork by the researcher. Data collection techniques include both formal and informal interviewing, often interviewing individuals on several occasions, and participant or non-participant observation. Ethnography is extremely time-consuming because it involves the researcher spending long periods of time in the field.

The researcher attempts to interpret data from the perspective of the participants (this is known as a *phenomenological* approach), at the same time as acknowledging that it is difficult to know just how far it is possible to give a "true" account of a perspective other than one's own. This could be particularly challenging when working in a setting where the researcher has difficulty understanding the language or accent – in which case good practice would be to be transparent about the issue; for instance in the study of emergency obstetric care in Bangladesh[2], the researcher published a paper on the difficulties of conducting research through an interpreter[4]. This challenge can be present even when both researcher and participant use the same language but use it differently. For instance one of the authors' adolescent children says that among some contemporary adolescents (in 2007) the word "dry" is an insult. If a social care researcher was doing an ethnographic study with adolescent subgroups they would need to know this sort of thing; interpretation from an "etic" perspective - an outsider perspective - could be a *mis*interpretation, causing confusion. (For this reason, the ethnographic researcher might return to the field to check some aspects of his or her interpretations; although the ethical and methodological implications of doing so need to be considered.) Instead, researchers try to adopt an "emic" approach. This means that the researcher attempts to interpret data from the perspective of the population under study. The results are expressed as though they were being expressed by the participants themselves, often using local language and terminology to describe phenomena.

Ethnography and case studies: Ethnography can include undertaking a "case study". A case study could involve studying a single person: if studying patient safety on a hospital ward, a researcher might document one patient's stay in the ward. More complex is the extended case study which traces events involving several people over a period of time, enabling the analysis to reflect changes and adjustments.

Case study research in health or social care has a range of uses. For example, a case study may be conducted of the development of a new service such as a hospital discharge liaison scheme jointly run by health and social services in one locality. One of the most common uses of the case study is the evaluation of a particular care approach. For example, an outreach teenage health service set up as an alternative to general practice based teenage clinics might be evaluated in terms of input, impact on the health of teenagers locally and the development of collaborative links with other groups involved in promoting teenage health.

One of the criticisms aimed at case study research is that the case under study is not necessarily representative of similar cases and therefore the results of the research are not generalisable. This reflects a misunderstanding of the purpose of case study research which is to describe *that particular case* in detail. It is particularistic and contextual. For example, the usefulness of an outreach teenage health service would be determined by a number of local factors and an

evaluation of the service would take those factors into account. If the service works well it does not automatically mean that the service would work equally well in another part of the country but the lack of generalisability does not lessen the value of the service in the area where it is based. The researchers or authors do however need to provide information about what they have done which is transparent enough to help readers to decide whether or not the case being described is sufficiently representative or similar to their own local situation.

3.22 Grounded Theory

This methodology originated with the work of Glaser and Strauss on the interactions between health care professionals and dying patients[5]. The main feature is the development of new theory through the collection and analysis of data about a phenomenon. It is phenomenological (this means it attempts to understand how participants make sense of their experiences and does not assume that participants' accounts refer to some verifiable reality); but it goes beyond phenomenology because the explanations that emerge are used to develop new theories. In health and social care settings, the new theories can then be applied enabling us to approach existing problems in a new way; for example, our approaches to health promotion or the provision of care.

One example of grounded theory with which many of us are familiar is theory about the grief process. Research revealed that people who were bereaved typically progressed through a series of stages and that each stage was characterised by certain responses: denial, anger, acceptance and resolution. This is not a new phenomenon, people have been going through these stages for as long as society has existed, but the research formally acknowledged and described the experience. Now we use our knowledge of *the grief process*, new knowledge derived from grounded theory, to understand the experience of bereavement and to help the bereaved to come to terms with their loss. We recognise when a person is having difficulty coming to terms with loss because we use the knowledge to recognise signs of "abnormal" grief and can offer help.

Various data collection techniques are used to develop grounded theory, particularly interviews and observation. Literature review and relevant documentary analysis also make important contributions. Some key features of grounded theory are:

- its focus on "emergence": in theory, research should start from a position where the researcher knows nothing about what they are studying so that all concepts truly "emerge" from the data. However, in reality, you are more likely to have specific objectives for a project, although these are unlikely to be formulated as an hypothesis.

- theoretical sampling: sampling is based on theoretically relevant constructs – for example in a study of patients' views of continuity of care, it emerged that having a history of consulting a known and trusted GP seemed important. However the researchers realised they had not talked to people who did not use GPs and were able to adjust their sampling procedure slightly to include such people. In reality you are quite constrained by conditions under which you are sampling and have to satisfy funders!

- data collection and analysis proceed concurrently: in theory, data analysis should occur at the same time as data collection to allow researchers to refine the research question and data collection procedures in the light of new findings, but in reality, this is hard to achieve (e.g. because transcribing recorded interviews takes time, and analysis takes even more time). However it is important to review transcripts as they are transcribed and to undertake informal modification of prompt guides.

- constant comparative method: this is a useful formulation of how to do qualitative analysis, and can be used separately from the other elements of grounded theory. Details are given in the section on analysis.

- theoretical sensitivity: this is the ability to recognise what is important in the data so that you can give it meaning. The pure grounded theory approach implies that you should not read any relevant literature before doing a research project; you should enter the field completely naïve. Reality is rather different, and there is no reason not to explore and test pre-existing theory, as long as you are sensitive to the possibility of emergent theory.

3.23 Interpretative Phenomenological Analysis (IPA)

IPA has two components. It is *phenomenological,* attempting to understand how participants make sense of their experiences (it does not assume that participants' accounts refer to some verifiable reality) but it recognises that this involves a process of *interpretation* by the researcher. It is an approach popular in psychology and in some areas of nursing. It looks at subjective states so takes an insider perspective. It is interpretative – it recognises negotiation between researcher and researched to produce the account of the insider's perspective, so both researcher and researched are "present". The data are accounts, which researchers then code for emergent themes, look for connections, and construct higher order themes e.g. "depersonalisation" arises as a consequence of illness. IPA is often combined with the constant comparison method and elements of content analysis.

3.24 Discourse Analysis

Some of its main exponents are based in Loughborough, but there are a number of different versions. It focuses on text and talk as *social practices*. Researchers from this tradition are interested in how discourses are organised to be persuasive, or to present a particular 'world view', and would search for these patterns in the words that are used (linguistic repertoire) and the way that they are utilised (rhetorical strategies). Discourse analysis is the study of language in use, and any language use (detailed transcripts of recorded speech for example, but also texts such as newspapers, policy documents, etc.) can be considered in this way. Researchers would also be interested in the *function* of discourse as well as its content. Discourse analysts might for example study the different ways that people view eating chocolate[6] – do we adopt a discourse which encourages us to see ourselves as helpless chocoholics who are victims of our cravings, or one which emphasises our ability to control the amount of chocolate we eat?

3.25 Conversation Analysis

This involves studying the social organisation of conversation and is concerned with establishing how that organisation is achieved; as such conversation analysis might only be used with 'naturally occurring' speech and it is not an appropriate way of considering interview data (where the organisation of talk is established by the formal interview process). Conversation analysis explores how social interactions are structurally organised and does this by analysing detailed transcripts of tape recordings, examining such things as turn-taking, lengths of pauses, inflections and so on.

3.26 Content Analysis

This term often refers to a technique rooted in quantitative approaches (although see the warning at the end of this section). The emphasis in conventional content analysis is on *counting/frequency* (usually absent from most other methodologies), where researchers would count occurrences of a word, phrase or theme. They would devise very specialised rules for coding (usually of a form that can be used by computers). This approach is particularly suitable when analysing documents e.g. newspaper texts, responses to open-ended questions.

3.27 Narrative Analysis

This focuses on people's narratives/stories either about themselves or a set of events. Instead of looking for themes that emerge from an account, it concentrates on the sequential unfolding of someone's story so there is an emphasis on emplotment and characters. It is time-consuming and usually includes a very small number of cases.

3.28 Summary and a Warning about Usage of Terms

Several types of qualitative research approaches have been outlined. They do not form an exhaustive list and some research methods can be applied with either a qualitative or a quantitative orientation. Many qualitative approaches involve looking for themes, unfortunately this means that when you are describing or reading about qualitative research you will often come across the term "thematic analysis" without knowing exactly what type of thematic analysis was involved – it covers a very wide a range of possible methodologies. Similarly, you may find that researchers use the phrase "content analysis" to refer to any sort of analysis of the content of e.g. an interview. Because of this potential confusion it is good practice to report exact details.

The differences between the various qualitative research designs can be difficult to understand at first. This is not helped by diversity in the use of terms among qualitative writers. The differences are quite subtle and are often concerned with the philosophical or other stance of the researchers and funders, the original research question, the people or situations being studied and the way the data are analysed, interpreted and presented. Readers of this resource pack should

not worry if they do not fully understand the approaches outlined. The main purpose of this section is to familiarise the reader with the notion that there are different qualitative methodologies and what some of the terms mean. There are further examples of studies adopting each of the approaches among the references for section 6.

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4. Pitchforth E, van Teijlingen E. (2005) International public health research involving interpreters: a case study from Bangladesh. *BMC Public Health*. Jun 28;5:71

5. (e.g.) Glaser BG, Strauss AL. (1966). The purpose and credibility of qualitative research *Nursing Research*. Winter;15(1):56-61

6. Benford R, Gough B. (2006) Defining and defending 'unhealthy' practices: a discourse analysis of chocolate 'addicts" accounts. *J Health Psychol*. May;11(3):427-40

Exercise 2

Consider the following list of research areas and consider which of the approaches above could be adopted, for each one. If you think that more than one approach would be appropriate, explain why.

A) You want to explore the challenges and benefits of prescribing morphine before it is needed, so that it is available in a terminally ill patient's home to avoid unnecessary delay in pain control.

B) You want to understand the workings of a primary health care service for the homeless in one city.

C) You want to gain insight into how people describe the experience of developing long term, limiting health problems.

D) You want to understand what goes on in telephone conversations between GP receptionists and patients who wish to arrange a consultation with a nurse or GP.

4. Qualitative Data Collection Methods

In this section, methods of qualitative research data collection are outlined. The main methods are:

1) interviews

2) focus groups

3) observation

4) collection of documented material such as letters, diaries, photographs

5) collection of narrative

6) open ended questions in questionnaires (other aspects of are covered in the resource pack *surveys and questionnaires*)

4.1 Interviews

Interviewing can, at one extreme, be structured, with questions prepared and presented to each interviewee in an identical way using a strict predetermined order. At the other extreme, interviews can be completely unstructured, like a free-flowing conversation. Qualitative researchers usually employ "semi-structured" interviews which involve a number of open ended questions based on the topic areas that the researcher wants to cover. The open ended nature of the questions posed defines the topic under investigation but provides opportunities for both interviewer and interviewee to discuss some topics in more detail. If the interviewee has difficulty answering a question or provides only a brief response, the interviewer can use cues or prompts to encourage the interviewee to consider the question further. In a semi structured interview the interviewer also has the freedom to probe the interviewee to elaborate on an original response or to follow a line of inquiry introduced by the interviewee. An example would be:

Interviewer: "I'd like to hear your thoughts on whether changes in government policy have changed the work of the doctor in general practice. Has your work changed at all?"

Interviewee: "Absolutely! The workload has increased for a start."

Interviewer: "Oh, how is that?"

Preparation for semi-structured interviews includes drawing up a "topic guide" which is a list of topics the interviewer wishes to discuss. The guide is not a schedule of questions and should not restrict the interview, which needs to be conducted sensitively and flexibly allowing follow up of points of interest to either interviewer or interviewee. In addition to the topic guide, the interviewer will probably want to approach the interview with written prompts to him/herself in order to make sure that the necessary preliminary ground is covered concerning such things as the information leaflet (has the interviewee understood it and got any questions?), the consent form (has it been signed?),

the voice recorder (is it switched on?). The semi-structured interview is possibly the most common qualitative research data gathering method in health and social care research as it is relatively straightforward to organise. That does not however mean that it is easy to conduct good qualitative research interviews. A good interviewer needs to be able to put an interviewee at ease, needs good listening skills and needs to be able to manage an interview situation so as to collect data which truly reflect the opinions and feelings of the interviewee concerning the chosen topic(s). A quiet, comfortable location should be chosen and the interviewer should give consideration to how s/he presents her/himself in terms of dress, manner and so on, so as to be approachable. Most commonly interviews are audio recorded. Digital voice recorders are excellent for this and easier to use and less intrusive than tape recorders. Interviews may also be video-taped if details such as non-verbal signals are needed for the analysis. In practice it may be more difficult to obtain the approval of the relevant ethics committee(s) for video-recording and it may be more difficult to get consent from interviewees (see Resource Pack *Ethical Considerations in Research*). A form of interview can be conducted by email. This will generate qualitatively different types of response from participants partly because they are able to delay responding until they have thought about what to say. Interesting research is being carried out on the special features of email communications.

As with all other research (qualitative and quantitative), audit trails are good practice. Therefore, a reflexive diary should be kept by the researcher. Part of this should take the form of field notes and it is good practice to enter observations and impressions about each interview into a notebook as soon as possible after the interview has taken place.

More information on interviewing can be found in the Resource Pack *Using interviews in a research project.*

4.2 Focus Groups

In a way focus groups resemble interviews, but focus group transcripts can be analysed so as to explore the ways in which the participants interact with each other and influence each other's expressed ideas, which obviously cannot happen with one-to-one interview material. In common with semi-structured interviews, focus group conveners use topic guides to help them keep the discussion relevant to the research question. Focus groups are not necessarily a cheaper and quicker means to an end than are interviews, as focus groups may be more difficult to manage and more difficult to convene simply because more people are involved. Focus groups are considered to work well with approximately 8 people, but this is not always easy to arrange – do you invite more in the expectation that one or two will not turn up? If so, how do you manage if 10 or 12 present themselves? or if not, what if only 3 or 4 turn up (as a courtesy to them you will probably have to proceed)? For issues concerning sampling and constitution of focus groups, see Section 5. Focus groups are ideally run in accessible locations where participants can feel comfortable and relaxed. The time of day and facilities offered will need to be appropriate for the particular target member: for example is a crèche

needed? Is there adequate car-parking space? It is better if the discussion is not interrupted and so it is a good idea to offer refreshments and to point out toilet facilities beforehand. Serving refreshments as people arrive also serves as a good "ice-breaker" and allows participants to meet each other before the focus group starts.

An important preliminary for conducting focus groups is laying down the "ground rules". One of these concerns confidentiality, and this needs careful planning at the proposal and ethics committee application stage. Members of a focus group may not speak openly unless they are comfortable that others present will treat their contributions as confidential. It could be laid down as a condition of the focus group that it is expected that the content of the discussion which is about to take place will only be known by those present. All participants should indicate their agreement to this. Alternatively, if this seems unrealistic, the facilitator could point out that there are ways of presenting ideas that avoid breaching confidentiality: for instance, a participant can say "I have heard on the grapevine that 'x' sometimes happens" rather than saying "'x' has happened to me", and that participants might adopt this policy.

Acting as facilitator of a focus group, the researcher must allow all participants to express themselves and must cope with the added problem of trying to prevent more than one person speaking at a time, in order to permit identification of the speakers for the purposes of transcription and analysis. This is something else which should be requested when laying down the "ground rules". Unless the proceedings are being videoed, it is a good idea to have an observer present. This person's role could be to note which participant is saying what, which can be done if each person is labelled with a number or letter and the relevant label is noted alongside the first word or two of his/her contribution. Another point to make clear at the outset is the planned completion time for the discussion.

4.3 Observation

Please note: epidemiologists also refer to observational studies but use the term quite differently from the sense in which we describe here.

Not all qualitative data collection approaches require direct interaction with people. Observation is a technique that can be used when data cannot be collected through other means, or those collected through other means are of limited value or are difficult to validate. For example, in interviews participants may be asked about how they behave in certain situations but there is no guarantee that they actually do what they say they do. Observing them in those situations is more valid: it is possible to see how they actually behave. Observation can also produce data for verifying or nullifying information provided in face to face encounters.

In some research observation of people is not required but observation of the environment. This can provide valuable background information about the environment where a research project is being undertaken. For example, an ethnographic study of a children's ward may need information about the layout of

the ward or about how people dress. In a health needs assessment or in a locality survey observations can provide broad *contextual* descriptions of the key features of the area: for example, whether the area is inner city, urban or rural, the geographical location, the size of the population. It can describe the key components of the area: the main industries, type of housing. The availability of services can be identified: the number, type and location of health care facilities such as hospitals and health centres, care homes, leisure facilities, shopping centres.

Techniques for collecting data through observation

Written descriptions. The researcher can record observations of people, a situation or an environment by making notes of what has been observed. The limitations of this are similar to those of trying to write down interview data as an interview takes place. First there is a risk that the researcher will miss out on observations because s/he is writing about the last thing s/he noticed. Secondly, the researcher may find her/his attention focusing on a particular event or feature because it appears to be particularly interesting or relevant and miss things which are equally or more important but their importance is not recognised or acknowledged at the time.

Video recording. This frees the observer from the task of making notes at the time and allows events to be reviewed repeatedly. One disadvantage of video recording is that the actors in the social world may be more conscious of the camera than they would be of a person and that this will affect their behaviour. They may even try to avoid being filmed. This problem can be lessened by having the camera placed at a fixed point rather than being carried around. In either case though, only events in the line of the camera can be recorded, limiting the range of possible observations and perhaps distorting conclusions.

Artefacts. Artefacts may be objects which inform us about a phenomenon under study because of their significance to the phenomenon. Examples would be doctors' equipment in a particular clinic or art work hung in residential care homes.

More information about observation can be found in the Resource Pack *How to use observations in a research project*.

4.4 Collection of Documented Material such as Letters, Diaries, Photographs

Documentation. A wide range of written materials can produce qualitative information. These can be particularly useful in trying to understand the philosophy of an organisation as may be required in ethnography. They can include policy documents, mission statements, annual reports, minutes of meetings, codes of conduct, web sites, series of letters or emails, case notes, health promotion materials, etc. Diary entries may be used retrospectively (it is reasonable to assume that diarists will enter things which were important to them at the time of the entry) or diaries may be given to research participants who are

asked to keep an account of issues or their thoughts concerning diet, medication, interactions with health care services or whatever is the subject of the research. Audio diaries may be used if the written word presents problems. Notice boards can also be a valuable source of data.

Photographs are a good way of collecting information which can be captured in a single shot or series of shots. For example, photographs of buildings, neighbourhoods, dress and appearance could be analysed in such a way as to develop theory about professional relationships over a given time period. Photographs may be produced for research purposes or existing photographs may be used for analysis.

As with every method of data collection, any ethical implications of collecting documents should be considered.

4.5 Collection of Narrative

A story told by a research participant, or a conversation between two or more people can be used as data for qualitative research (see Section 3). Data collected should be entirely naturally occurring, not shaped as in a semi-structured interview or focus group. Narrative data can however be collected in the course of a form of interview. The "narrative interview" begins with a "generative narrative question" which invites the interviewee to relate his/her account of his/her life history or a part of it. This could be an account of living with a chronic illness or with a child with special needs or as a carer for an elderly relative. During the first part of the interview, the interviewee should listen actively but should not interject with further questioning. When the narrator indicates that the narrative is completed, there follows a questioning phase where the interviewer elicits further information on fragments which have been introduced. This may be followed by a balancing phase where first "how" and then "why" questions are asked in order to gain further explanation of aspects of the narrative.

4.6 Open ended questions in questionnaires

Open ended questions, responses to which are to be analysed qualitatively, may be included in questionnaires even though the majority of the questionnaire will generate quantitative data. The open ended questions usually require that responses, which reflect the opinions of the respondents, be written in blank spaces. This form of data may give useful guidance to a researcher planning an interview or focus group study. The outcome by itself may be a source of frustration as there is no opportunity to ask for clarification of any point made.

5. Qualitative Sampling and Selection

In qualitative research, sampling can occur at several stages, both while collecting data and while interpreting and reporting on it.

Sampling while collecting data for qualitative research is not the same as sampling in quantitative research because researchers are not interested in being able to generalise at a statistical level – instead the key is **purposive or strategic sampling**. Many would therefore argue that probability-based sampling (e.g. random sampling) is inappropriate. Sampling strategies can be *determined in advance* and/or evolve during the research process (*gradual definition of sample structure*). Sampling issues differ depending on the approach being adopted: for example IPA and narrative analysis usually require relatively small samples.

5.1 Sampling Strategy Determined in Advance

Researchers might determine their strategy in advance by devising a sampling frame which has to be filled (this means drawing up a chart which lists the types of characteristics they wish their sample to include, such as a range of age-groups, a range of health status groups, a range of areas in terms of affluence/deprivation; then ensuring that recruitment continues until there is at least one "tick" against each characteristic). This is sometimes known as criterion/quota sampling because the researchers identify criteria that are important to study and select cases that meet these criteria. Another strategy determined in advance would be "complete collection": for instance a researcher who wanted to learn about what happened to middle aged men who had chronic renal failure in an area of SE Britain would try to recruit all patients who were male, aged 30-50, in all renal units in that particular area.

5.2 Gradual Definition of Sample Structure

There are many ways of gradually defining the sampling structure, some are listed below but you may come across others. It is important to remember that **practical constraints** are a particular issue in many qualitative research studies (because data collection is time-consuming for example): in practice you may find that many samples are "convenience samples". The important message to take away from this section is one about how to recognise good practice in sampling when you read about qualitative research, and how to make sure your own research is of high quality - document your sampling strategy, be able to describe the characteristics of those involved in the study, demonstrate that the sampling strategy contributes to a search for disconfirming evidence (i.e. show that you are not just collecting data that you hope will support a pre-conceived idea), and give a full and honest account of what was done. This applies to choosing illustrative quotations when reporting and disseminating research, as well as to sampling participants or events.

Theoretical sampling: here, sampling is directed towards making possible generalisations about theoretical propositions and new cases are selected for their potential in extending or testing emergent understanding.

Convenience sampling: here researchers select those who are available and likely to participate, perhaps over a specific period.

Typical case sampling: researchers decide on the characteristics of "typical" individuals and select the sample to fit the characteristics of typical cases in selecting people for focus groups etc.

Critical case sampling: researchers choose cases that they believe to be especially important because of the position they hold (e.g. because of their particular place within an organisation) or because they are especially well able to articulate a view (e.g. spokesperson for a medical charity).

Maximum variation sampling: here researchers identify cases with different characteristics to maximise diversity in the sample, usually to get the widest range of views possible. This is best done using quota methods (see "strategy determined in advance") and iteratively (e.g. refine your quotas based on the emergent analysis – you may decide you need to investigate one group in more depth). Any common themes that emerge can capture "core" experiences or views.

Intensity sampling: this is where researchers sample the same characteristics over and over. It tends to be used in interpretive phenomenological analysis.

Snowball sampling: relies on referrals, one participant recruits others. This can help researchers to capitalise on informal networks that might otherwise be difficult to access (e.g. sex workers, drug users, victims of domestic violence etc).

5.3 How do you Know When you Have an Adequate Sample?

Ideally this will occur when your quota (sampling frame) is full, and when you have reached theoretical saturation – in other words when additional cases do not modify your coding frame. It is a good idea to have some redundancy, and to be able to report on when you reached saturation and how. (Theoretical saturation occurs when new data from new cases do not contribute to the development of emerging theory even after you have tried to ensure that your new cases are those most likely to extend or challenge your ideas.) In practice, if you are applying for funding for a study, you will need to specify how many participants you are likely to need. As a rough guide, for interview studies analysed using constant comparative approaches, theoretical saturation will probably be reached after 20-60 interviews.

5.4 Samples for Focus Group Studies

There are some additional points that might help when arranging focus group studies. The recommended size of a group is 6 – 10 people, having fewer than this could limit the potential interaction, and having more than this could make it difficult for everyone to join in the discussion. A study using focus groups to collect data should include several groups, not just one, because any individual group is subject to internal or external factors of which the investigator may be unaware.

Also, on a practical level, there may be individual groups that do not go smoothly: the members may be reluctant to participate or not interact well with each other and limited insight will be gained. Enough groups should be run to provide adequate breadth and depth of information; there is a tendency for 10 to 15 groups per study but some studies may find that 4 or 5 are enough. There is no upper limit on the number of focus groups that could be held although this will be limited by resources.

The members of each focus group should usually have something in common: characteristics which are important to the topic of investigation. For example, they may all be members of the same profession or they may work in the same team. They may all be patients at a practice or have experienced a similar health problem or be receiving similar treatment. Participants might or might not know each other. There are advantages and disadvantages to both.

5.5 Sampling While Interpreting Data and Presenting the Findings

In some studies, researchers will need to make decisions about which data to analyse (for instance the amount of information collected in an ethnographic study may be so great that it would not be possible to analyse all of it before funding runs out). It is important that such decisions are made on the basis of relevance to the research question, and in discussion with the rest of the research team if there is one, and that they are reported.

Similarly, there a times when researchers must "sample" material when they are reporting their findings. For example, in an interview study authors may need to illustrate the emergent themes. There is always a temptation to choose the most extreme or memorable quotation; however quotations should be chosen because of how well they represent a theme. Furthermore the temptation to quote only one particularly articulate individual should be resisted – it is better to take quotations from a range of participants and to make all these choices clear in reporting. For example in a study of women's perceptions of consenting for surgery, the authors needed to illustrate several themes - some women perceived surgery as the fulfilment of a desire, some saw surgery as "rescue" from a problem, and some felt that surgery was imposed on them against their wishes[1]. These viewpoints are illustrated in the study by a range of quotations from *different* participants. You might like to check how well researchers explain their choice of illustrative quotations in other literature you read.

References:
1. Habiba M, Jackson C, Akkad A, Kenyon S, Dixon-Woods M. (2004) Women's accounts of consenting to surgery: is consent a quality problem? *Qual Saf Health Care*. Dec;13(6):422-7

6. Qualitative Analysis

Analysis of data in a research project involves summarising the mass of data collected and presenting the results in a way that communicates the most important features. In quantitative research, analysis involves things like summarising the frequencies of variables, differences between variables, and statistical tests designed to estimate the statistical significance of the results (i.e. the probability that they did not occur by chance). All this is done basically by counting how often something appears in the data and comparing one measurement with others. At the end of the analysis, not only do we have a mass of results but we also have what we might call "the big picture": the major findings.

In qualitative research we are also interested in discovering the big picture but use different techniques to find it. For the most part we are interesting in using the data to describe a phenomenon, to articulate what it means and to understand it. Different approaches require different types of analysis: in this introductory text we shall focus on constant comparison.

Most types of analysis involve the categorisation of verbal or behavioural data, for purposes of classification, summarisation and tabulation. The content can be analysed on two levels. The basic level of analysis is a descriptive account of the data: this is what was actually said, documented or observed with nothing read into it and nothing assumed about it. Some texts refer to this as the manifest level of analysis. The higher level of analysis is interpretative: it is concerned with what was meant by the response, what was inferred or implied. It is sometimes called the latent level of analysis.

"Content analysis" (see Section 3) is a phrase that is sometimes used in the literature to mean any type of analysis of the content of a transcript. However it also has a more precise use, which is in connection with a technique involving counting the frequency of occurrence of particular phrases, words, or concepts, and is probably therefore best avoided – like the term "thematic analysis" – unless the writer is specifying exactly what type of content analysis is meant.

6.1 Keeping Records and Being Organised

Whatever qualitative approach is involved, it is very important to be organised when keeping records of data or reflexive notes or memos, or documents. As in all (qualitative or quantitative) research it is crucial to maintain a good audit trail which could in theory be inspected by others. It is also important to ensure that any saved records are kept in accordance with data protection regulations. This often involves careful anonymisation procedures in labelling digital or analogue recordings or documents and text. All these issues should be discussed within a research team when drawing up the initial research protocol; ethics and research governance bodies will give feedback at an early stage.

6.2 Transcribing Qualitative Data

Transcribing is the procedure for producing a written version of an interview (e.g. in narrative, or grounded theory-based research) or conversation (e.g. if using conversation analysis). It is a full "script" of the interview or conversation. Transcribing is a time consuming process. The estimated ratio of time required for transcribing interviews is about 6:1. This means that it can take six hours to transcribe a one hour interview. It also produces a lot of written text. For conversation analysis or discourse analysis, very specialised transcription is required which includes precise notation of lengths of pauses and inflections, among other features, and this type of transcription is therefore much more time-consuming.

The research team should at an early stage consider the question "who should do the transcribing?" Ideally there might be resources to pay a professional transcriber who is aware of the need for confidentiality. This is usually more cost effective than a health care professional who will take longer and is more highly paid – on the other hand some researchers find that the process of transcribing helps them to become "immersed" in the data and is therefore a useful step in the process of interpreting how the account helps in the answering of the research question. If the transcriber is unfamiliar with the terminology or language contained in the interviews this can lead to mistakes or prolong the transcribing time. All transcripts should be carefully checked by the researcher (usually the interviewer) in conjunction with the recording.

When people are in conversation only a small proportion of the message is communicated in the actual words used. A larger proportion is transmitted in the way people speak. Tone and inflection are good indicators of a whole range of feelings and meanings. When transcribing, consideration should be given to whether and how these feelings and meanings can be communicated on paper by using punctuation marks (full stops and commas will be essential for meaning, for instance). As mentioned above, discourse and conversation analysts have a repertoire of specialised conventions for inflections and pauses, and would transcribe every sound an interviewee makes. Those using constant comparison would use less intensive transcribing, concentrating on the content of what is said, and some may decide to ignore "ums" and "errs" – these issues should be decided in advance within a team. It can be useful to adopt the convention that the interviewer's speech is upper case, and the interviewee's speech is lower case. Some researchers may consider techniques such as underlining and emboldening: all these need care to ensure that a transcript remains as faithful as possible to the speech it transcribes – if in doubt they are best avoided in favour of listening to the original recording to clarify any potentially ambiguous statements. These decisions also need to take into account the requirements of any software that will be used.

6.3 Using Qualitative Software

If a research team is using software such as N6, NVivo, (at the time of updating this pack, N6 and NVivo are likely to combine) or Ethnograph to help store and organise the data during analysis, then transcripts need to be in a format that can easily be imported into the relevant package.

Whatever type of analysis is undertaken, it is crucial to be able to provide an audit trail (i.e. a record of what has been done and why, at all stages). Software can help with this; for instance N6 allows the user to make memos, and automatically records the dates and times at which changes are made to the coding system.

6.4 Without Qualitative Software

If you do not have access to qualitative software it may be helpful to refer to a website hosted by Huddersfield University in which Nigel King describes using spreadsheets to help organise qualitative analysis, either when adopting constant comparative approaches or when collecting information under pre-determined themes or categories:
http://www.hud.ac.uk/hhs/research/template_analysis/index.htm.

6.5 Doing Constant Comparison

Constant comparison is an approach based on grounded theory. It allows researchers to identify the themes that are important (i.e. important in answering the research question) in a systematic way, providing an audit trail as they proceed.

In order to illustrate data handling and constant comparison to identify themes in an interview and focus group study, using software, we have included the following explanation adapted from a (successful) "real-life" grant application [1]. Readers can also refer to the resource pack *Qualitative Data Analysis.*

Data handling and analysis using constant comparison:
Interviews and focus groups should be recorded where consent is given, and the tapes or electronic records should be identified by code numbers only. If any cases arise where consent to audiotape is refused, permission can be sought to take notes, and the notes can be shown to the interviewee who can agree, or disallow, their use. If disallowed, the interviewee can retain the notes if s/he wants and the notes will not be used.

Interviewer(s) and focus group facilitators should maintain a reflexive diary which will contribute to an audit trail of the data collection and analysis process.

Data should be transcribed verbatim, and all identifying information removed from transcripts (for instance where the interviewee talks about a named health professional the name can be substituted in the transcript by a phrase such as "name of nurse"). The stages involved in constant comparison are:

(i)   *Open coding*: The first few (4 or 5) transcripts are read in detail by team members who familiarise themselves with their content and then "open-code" them. This means summarising the content of short sections of text (each "unit" of meaning) in a few words, on a line-by-line basis.

(ii) *Progressive focussing*: The large number of open codes thus generated by individuals are discussed as a team, and progressively focussed (grouped) into broader categories which reflect the issues that interviewees say are important to them, or ideas that help to structure and explain the way that interviewees describe their views and experiences. The collection of categories will form the initial coding frame. If you have a group of patients or other advisory group it would be important to discuss the coding frame with them to get their views on its completeness and how well it reflects reality. Their suggestions can either be incorporated immediately, or recorded for consideration in the light of further transcripts. (Ideally analysis and data collection should happen cyclically so that ideas that emerge during analysis can be explored in future interviews. In practice this may be difficult, but researchers should at least reflect on whether earlier interviews have implications for what areas are explored in later ones.)

(iii) *Applying the coding frame*: The coding frame should be programmed into qualitative software such as N6 or NVivo7, the transcripts can then be imported into the software, and the coding frame systematically applied on a code-by-code basis, across transcripts. For those who do not have access to qualitative software, the University of Huddersfield website referred to earlier may be useful. During this process, the researchers search for new themes, and look out for novel ways of perceiving situations, in successive interviews. Where the coding frame cannot accommodate these, its structure should be adapted to fit them. The change, and the reason for making it, should be recorded. In this way the coding frame will be continuously developed in response to new information until the point where new interviews or focus group transcripts do not provide any new themes relevant to the research focus. At this point theoretical saturation is said to be reached.

(iv) *Summarising and interpreting the findings*: Researchers will look at relationships among the ways themes co-occur within participants' accounts, or look for patterns in the types of concerns raised by those with particular roles, and gather together insights which may contribute most effectively to the research focus.

6.6 Doing Other Types of Qualitative Analysis

This pack does not look in detail at other types of analysis, but for those who are interested we suggest references (2-7 below) which will help readers understand what is involved during interpretative phenomenological analysis[2], conversation analysis[3], discourse analysis[4], narrative analysis[5], ethnography[6], and content analysis[7].

References:

1. Faull C.: Research protocol for study of Pre-emptive Prescribing in Terminal Care at Home, funded by Leicestershire, Northamptonshire and Rutland Primary Care Research Alliance, 2007.
2. Baillie C., Smith J., Hewison J. (2000). Ultrasound screening for chromosomal abnormality: Women's reactions to false positive results. *British Journal of Health Psychology*, 5, 377-94
3. Maynard D.W., Heritage J. (2005). Conversation analysis, doctor-patient interaction, and medical communication. *Medical Communication*, 39, 428-435
4. Crowe M. (2005). Discourse analysis: towards an understanding of its place in nursing. *Journal of Advanced Nursing*, 51(1), 55–63
5. Greenhalgh T, Russell J, Swinglehurst D. (2005). Narrative methods in quality improvement research. *Qual Saf Health Care*. 2005 Dec;14(6):443-9
6. Burden B. (1998). Privacy or help? The use of curtain positioning strategies within the maternity ward environment as a means of achieving and maintaining privacy, or as a form of signaling to peers and professionals in an attempt to seek information or support. *Journal of Advanced Nursing*, 27, 15-23.
7. Seale C, Kirk D, Tobin M, Burton P, Grundy R, Pritchard-Jones K, Dixon-Woods M. (2005). Effect of media portrayals of removal of children's tissue on UK tumour bank. BMJ Aug 13; 331(7513):401-3.

It is not possible to demonstrate the complete procedure of analysis within the confined space available in this pack. However, Exercise 3 provides an opportunity to look at an excerpt from a transcript and begin the process.

The following text is an excerpt from the transcript of an interview conducted by a community psychiatric nurse with a woman following discharge from hospital. The excerpt deals with the woman's recollection of being admitted and how she felt at that time. Imagine that the study's research focus is on exploring the experiences of people during inpatient psychiatric care.

Read the transcript carefully and complete the following tasks.

1   Summarise what's being said by the respondent, on a line-by-line basis. This means thinking of a word or phrase that captures the meaning of each bit of text and noting it down. You may have several phrases for some lines, and no phrases for other lines of text – that's fine. (When doing constant comparison, these summarising phrases are known as "open codes").

2   Look at your collection of open codes. Could you group them together in meaningful categories?

3   Think about the categories that have emerged. Do they help to illuminate the research question?

4   Would it be possible to have other experiences of inpatient care or has this interview excerpt covered everything? If not, how would you go about gathering as wide a range of experiences as possible? (This is a question about sampling, as it relates to analysis and interpreting the findings)

Interviewer:	What were your first impressions when you were first admitted to hospital?
Respondent:	It's hard to remember. I was so terrified. I didn't know what to expect. I was so ashamed that I was going to a loony bin. I thought everybody would be mad. But then I saw Ann. I knew her and at first I couldn't believe it, she's not mad, why is she here? Then she came up to me and smiled and said hello and she started asking me about Bill and the kids then she asked me if I was visiting someone and I told her "No, I've come in" and she told me why she was here. She didn't seem to think it was strange at all.
Interviewer:	Who's Ann?
Respondent:	She used to live next door to me at my last house before we moved.
Interviewer:	So was it better when you saw Ann?

Respondent: Yes. Well, yes and no. It was good to see someone I knew but I didn't know what to think about it all. I mean, she was in there and I had no idea. Looking back a little while afterwards I realised that just because you go into a psychiatric hospital it doesn't mean you're mad. I wasn't and I knew she wasn't. Well, I hadn't thought so.

Interviewer: So before you arrived at the hospital, is that what you thought? That it would be full of mad people.

Respondent: Yes. Well you do don't you? But it wasn't. I was scared at first. But Ann stayed with me after the nurse had seen me and she talked to me about where we lived and everything and the people we knew and it was just like having a chat anywhere. It didn't feel like we were in hospital.

Interviewer: How do you mean? Didn't the hospital look like you thought it would?

Respondent: Not really. But looking back I don't know what picture I had of the hospital, only what the people would be like. And most of them were like you and me really. Only one or two seemed particularly ill. And I felt sorry for them. Only one chap I didn't like.

Interviewer: Can I come back to that later? For now can we stick with your thoughts about your first impressions? I mean, for example, were the staff friendly? What about where you slept? The ward in general.

Respondent: Well everyone was very kind. I think they knew I was frightened and they did their best to help. But they're busy. I'm glad Ann was there.

Interviewer: What about the environment?

Respondent: It was OK...ish. Not like a hospital. More like a lounge at a boarding house. A bit seedy. Needs decorating.

Interviewer: How do you mean, "seedy"?

Respondent: It needed decorating. And some of the chairs, you could fall through them if you weren't careful. I'm glad there was no smoking in the lounge but I think that had only started recently 'cos there were a lot of cigarette burns in the carpet. I don't like smoking. It makes me feel sick. Awful habit. The bedrooms were nice. They'd been decorated. And I loved the duvets and the curtains. You don't expect matching duvet and curtains. Mind you, one thing I didn't like about the bedrooms was that I couldn't lock my wardrobe.........

7. Presenting Qualitative Research

When presenting the results of research, the objective is communication and so the presentation should be tailored to suit the audience. Whatever the audience or the form of the presentation, a good starting point is the research question. If you are clear what question you set out to address, it will be easier to make sense of the mountains of data you have generated and to present an interesting, meaningful and high quality paper or other presentation. Your analysis will probably have generated a number of themes or categories and you might have interpreted these in such a way as to contribute to the theory base in your discipline. The story of how you undertook this analytical process forms the basis of your presentation. A good way to structure the results section of a research report is to use, as subheadings, the main categories or themes which emerged from the data.

The thematic structure can be set out at the beginning, either as a list or in diagrammatic form. The overarching themes may be presented as sections with the contributory categories as sub sections. In this way, you can show how the categories of data are used to construct a case that the overarching themes are the main findings of the study. Further "evidence" to support the findings is usually provided by using direct quotations from respondents. Key quotations should be selected to illustrate the meaning of the data, care being taken not to rely heavily on a small number of particularly articulate sources (see Section 5). Consider the example below. It shows three overarching themes and the structure of sub-categories which emerged from an investigation into the need for an outreach teenage health clinic. The research question was "What do young people find difficult in their use of primary care services?"

1) Health issues for young people
    i) Sexual health
        (a) safe sex
        (b) pregnancy
        (c) sexual behaviour
        (d) sexual orientation
    ii) Drugs
        (a) smoking
        (b) alcohol
        (c) illicit drugs
    iii) Mental health
        (a) mental health problems
        (b) relationships
        (c) self esteem
        (d) stress

2) Barriers to accessing services
    i) Lack of knowledge
        (a) services available
        (b) understanding
        (c) perceptions
    ii) Attitudes
        (a) own beliefs
        (b) peer pressure
        (c) expectations of staff

3) Incentives to use services
    i) Availability
        (a) time
        (b) venue
    ii) Approachability
        (a) staff attributes
        (b) environment

A presentation of these findings would describe what was meant by "health issues" in general for the young people interviewed. This would be followed by identification and description of each of the broad categories of health issue - sexual health, drugs and mental health. Each category of health issue describes how a range of topics is included in this category (labelled (a), (b), ...). Quotations extracted from the transcripts of interviews with young people should be used to illustrate why or how this is a health issue.

Quotations should be presented with a linking commentary and should be selected to illustrate such features as: the strength of opinion or belief, similarities between respondents, differences between respondents, the breadth of ideas.

As the researcher works through the different categories, links should be made between categories to demonstrate how the themes emerged and how conclusions about the findings were drawn. Many of the quotations will "speak for themselves" as they are examples of the manifest level of analysis - what people actually said. However, as previously mentioned in Section 6, analysis of data also includes interpretation which involves extracting the meaning of what was said and using it to comment on and contribute to the theory base.

Strategies which contribute to the rigour of a piece of research and any report of it are transparency and reflexivity. A researcher should make clear and justify the method used as well as the analytical process as described above. Some forms of reporting call for sections exclusively about the researchers' roles in the research but when this is not the case, the style and content of the report should make apparent their roles and acknowledge the possible influence they will have had on the research process.

Some qualitative data can be dealt with in a quantitative way. If an idea appears in the data frequently, it may be feasible to count how often it appears. In the example of the teenage outreach service, it may be possible to say what percentage of respondents identified sexual health as a health issue, what percentage identified drugs and what percentage identified mental health. By counting the number of respondents who mention contraception as opposed to the number who mention safe sex it may appear that contraception is a greater concern than safe sex for young people. It may be feasible or even desirable to present some of the results quantitatively using tables and figures. It must be made clear however that these figures do not represent a statistical sample.

8. Summary

The purpose of this pack is to provide an introduction to qualitative research to enable readers with no previous knowledge to understand, at a basic level, how qualitative research is undertaken. By describing the nature of qualitative research and the different approaches to research, Sections 3 and 4 started to demonstrate the potential for qualitative approaches to be used to investigate research problems in health and social care settings. By raising some of the issues involved in collecting and analysing qualitative data in Sections 4, 5 and 6, novice researchers can start to appreciate the complexity of qualitative research. The pack is designed as a starting point for anyone contemplating qualitative research but further reading is necessary to understand these complexities more fully. A selection of the more widely available texts is listed at the end of this pack.

9. Feedback on Exercises

<div style="text-align: center">**Exercise 1**</div>

A) A comparison of the effectiveness of drug A versus drug B in the treatment of migraine.

Quantitative. In order for the effectiveness of the two drugs to be compared a way of scoring of effectiveness would need to be used. The effectiveness scores for the 2 drugs, administered in a randomised controlled trial, could be compared statistically.

B) An exploration of the role of the Practice Manager in the primary health care team: a study of four practices.

Qualitative. The study aims to explore the role of the practice manager and will describe a phenomenon. The fact that the study is conducted in only four practices also suggests an in depth study of the views of a small number of participants. The analysis might contribute to development of policy concerning the introduction of practice managers.

C) An examination of young people's and parents' accounts of communication about cancer in childhood.

Qualitative. The question requires in depth examination of people's views in a sensitive area. This information can only be gained by listening to the people involved.

D) A national survey of the public's knowledge of the nature and extent of abuse of the older people.

Quantitative. A national survey suggests a large scale study. The data could be collected using a questionnaire followed by statistical analysis.

<div style="text-align: center">**Exercise 2**</div>

Consider the following list of research areas and consider which … approaches … could be adopted, for each one. If you think that more than one approach would be appropriate, explain why.

A) You want to explore the challenges and benefits of prescribing morphine before it is needed, so that it is available in a terminally ill patient's home to avoid unnecessary delay in pain control.

Ethnography (focusing on the primary care team involved in patient care) would be one possibility, although it would entail some very careful ethical consideration to avoid intruding on families' lives and to avoid causing inconvenience to the professionals. It would also be difficult to cover a wide range of perspectives because any one researcher could be in only one place at once – ethnography is often a 'solitary researcher' activity because it is so expensive. A grounded theory approach, in which views and experiences of those involved are invited by interview, focus group, or other means, might be a more practicable way to allow researchers to build understanding of the area.

B) You want to understand the workings of a primary health care service for the homeless in one city.

Because the research focuses on one geographical location, and because the remit of the research question is broad and exploratory, ethnography would be appropriate. This could include one-to- one interviews with professionals and clients of the service as well as other means of data collection, and the analysis could include some theory building (this illustrates how the approaches listed in section 3 are not mutually exclusive)

C) You want to gain insight into how people describe the experience of developing long term, limiting health problems.

This research is likely to focus on people's stories of their lives, including accounts of whether, and how, their lives changed when they developed long term illness. A narrative approach would be appropriate: but accounts could also be examined using Grounded Theory techniques to build theoretical understanding of adaptation to illness, or from the perspective of a discourse analyst (e.g. to study whether people adopt a discourse implying triumph over adversity, or a discourse of victimhood …).

D) You want to understand what goes on in telephone conversations between GP receptionists and patients who wish to arrange a consultation with a nurse or GP.

Conversation analysis could reveal details of the interaction that could shed light on how adequately the patient's request is met – for instance details of silences, turn-taking, forms of speech such as asking questions and making suggestions, and so on. (This, as other examples, would have ethical implications not least because both parties would need to agree to the conversations being recorded).

There are obviously no definitive answers to this exercise; but we provide a few pointers below

1. Summarise what's being said by the respondent, on a line-by-line basis. This means thinking of a word or phrase that captures the meaning of each bit of text and noting it down. You may have several phrases for some lines, and no phrases for other lines of text – that's fine. (When doing constant comparison, these summarising phrases are known as "open codes").

Looking at the first two lines of the interviewee's account, the following open codes could be appropriate: fear, uncertainty, shame, everyone's mad …

2. Look at your collection of open codes. Could you group them together in meaningful categories?

Categories might include: emotional responses to admission; preconceptions about the nature of psychiatric hospital (this could include subcategories such as preconceptions about the physical environment and preconceptions relating to other patients' behaviour) …

3. Think about the categories that have emerged. Do they help to illuminate the research question?

You may feel that despite the very preliminary nature of this categorisation process, you are beginning to understand which aspects of people's experience of being a psychiatric inpatient are important.

4. Would it be possible to have other experiences of inpatient care or has this interview excerpt covered everything? If not, how would you go about gathering as wide a range of experiences as possible? (This is a question about sampling, as it relates to analysis and interpreting the findings)

Of course one excerpt from an interview with one person would be likely to give one part of one view about one set of experiences. It would be important to interview a wide range of people who had been, or were inpatients perhaps drawing up a sampling frame to remind yourself of characteristics that might be important – gender, reason for admission, way in which admission was arranged, size and organisation of the ward and/ or hospital and many other things could all make a difference to people's experience.

10. Further Reading

Introductory textbooks which readers will find helpful for getting started in qualitative research:

Hansen EC (2006) Successful Qualitative Health Research. Maidenhead, Open University Press.

Maykut P, Morehouse R (1994) Beginning Qualitative Research: a Philosophical and Practical Guide. London, Falmer.

Murphy E, Dingwall R (2003) Qualitative Methods and Health Policy Research. New York, Aldine de Gruyter.

Sources which will help readers assess the quality of qualitative research, and to write and assess research proposals:

The CASP website:
http://www.phru.nhs.uk/casp/critical_appraisal_tools.htm#qualitative

Mays N, Pope C (2000). Qualitative research in health care. Assessing quality in qualitative research. *BMJ.* Jan 1; 320(7226):50-2.

Dixon-Woods M, Sutton A, Shaw R, Miller T, Smith J, Young B, Bonas S, Booth A, Jones D. (2007) Appraising qualitative research for inclusion in systematic reviews: a quantitative and qualitative comparison of three methods. *J Health Serv Res Policy.* Jan; 12(1):42-7.

More detailed texts which make useful reference sources:

Bryman A, Burgess R (Eds) (1994) Analysing Qualitative Data. London, Routledge.

Flick U (2006) An Introduction to Qualitative Research (3rd edition). London, Sage. *This has a detailed section on sampling in qualitative research – see chapter 11.*

Pope C, Mays N (Eds) (2006) 3rd edition. Qualitative Research in Health Care. London, BMJ Publishing Group. (includes chapters on quality in qualitative research, ethical issues and combining qualitative and quantitative research)

Silverman D (2001) 2nd edition. Interpreting Qualitative Data: Methods For Analysing Talk, Text and Interaction. London, Sage.

Pope C., Ziebland S, Mays N (2000). Qualitative research in health care. Analysing qualitative data. *BMJ.* Jan 8; 320(7227):114-6.

The classic texts on grounded theory:

Glaser BG, Strauss AL (1967) The Discovery of Grounded Theory. Chicago, Aldine.

Strauss A, Corbin J (1990) Basics of Qualitative Research: Grounded Theory Procedures and Techniques. London, Sage.

Ethnography:

Hammersley M, Atkinson P (1995) 2nd edition Ethnography: Principles in Practice. London, Routledge.

Pitchforth E, van Teijlingen E, Graham W, Dixon-Woods M, Chowdhury M. (2006). Getting women to hospital is not enough: a qualitative study of access to emergency obstetric care in Bangladesh. *Qual Saf Health Care*. Jun;15(3):214-9

Pitchforth E, van Teijlingen E. (2005) International public health research involving interpreters: a case study from Bangladesh. *BMC Public Health*. Jun 28;5:71

Burden B (1998). Privacy or help? The use of curtain positioning strategies within the maternity ward environment as a means of achieving and maintaining privacy, or as a form of signaling to peers and professionals in an attempt to seek information or support. *Journal of Advanced Nursing*, 27, 15-23

Case study:

Yin RK (2003) 3rd edition Case Study Research: Design and Methods. Newbury Park, Sage 21(6) 1117-1122.

Focus groups:

Kreuger RA (2000) 3rd edition Focus Groups: A Practical Guide For Applied Research (2nd Edition). London, Sage.

Discourse analysis:

Benford R, Gough B (2006) Defining and defending 'unhealthy' practices: a discourse analysis of chocolate 'addicts'' accounts. *J Health Psychol*. May;11(3):427-40

Crowe M. (2005). Discourse analysis: towards an understanding of its place in nursing. *Journal of Advanced Nursing*, 51(1), 55–63

Conversation analysis:

Maynard D.W., Heritage J. (2005). Conversation analysis, doctor-patient interaction, and medical communication. *Medical Communication*, 39, 428-435

Narrative analysis:

Greenhalgh T, Russell J, Swinglehurst D. (2005) Narrative methods in quality improvement research. *Qual Saf Health Care*. Dec;14(6):443-9

Riessman CK (1993) Narrative Analysis (Qualitative Research Methods) Sage.

Content analysis:

Seale C, Kirk D, Tobin M, Burton P, Grundy R, Pritchard-Jones K, Dixon-Woods M. (2005). Effect of media portrayals of removal of children's tissue on UK tumour bankBMJ. 2005 Aug 13;331(7513):401-3.

Interpretative phenomenological analysis:

Baillie C, Smith J, Hewison J. (2000). Ultrasound screening for chromosomal abnormality: Women's reactions to false positive results. *British Journal of Health Psychology*, 5, 377-94