The role of qualitative research in broadening the ‘evidence base’ for clinical practice

Rosaline S. Barbour MA, PhD
Department of General Practice, University of Glasgow, Glasgow, UK

Abstract
This paper presents the case for seeking to broaden the ‘evidence base’ of medicine and health care by the inclusion of qualitative research findings. In order for qualitative research to make a significant contribution, advocates of this approach must demonstrate its ability to address questions of relevance to practice and proponents of EBM must rethink their ideas as to what may constitute a research question. A definition of qualitative research is provided, highlighting the somewhat different assumptions which underpin this model. The potential contribution of qualitative findings is assessed and the paper examines the ways in which such insights can be utilized. Finally it addresses the question as to how qualitative findings can be incorporated in the ‘evidence base’.

Introduction
Over the last few years there has been a growing recognition of the need to extend the boundaries in terms of the types of research (and research methods) which contribute to the evidence base of medicine (e.g. Ong 1993; Black 1994; McPherson 1994; Popay & Williams 1998). It has been argued that this broadening should extend both the types of evidence included and the scope – moving on from a focus on clinical interventions to encompass both interventions by, and encounters with, other health care professionals (the arena of healthcare) and even the everyday world in which patients experience health and illness (Popay & Williams 1998).

The term ‘evidence’, as used in quantitative research, conjures up notions of information or ‘available facts’ which have an independent existence, thus enabling a particular argument or hypothesis to be ‘proved’ or ‘refuted’, or its validity to be established. By contrast, qualitative researchers hardly ever appeal to notions of ‘evidence’, choosing, instead, to describe the product of analysis of their empirical data as ‘findings’ and to apply alternative criteria – reflected in the use of different terminology – to discuss validity and rigour (Lincoln & Guba 1985). The term ‘findings’ – with its explicit recognition of agency on the part of the researcher (rather than on the part of the piece of information, as in the term ‘evidence’) – acknowledges the importance of the context in which data is generated, interpreted and presented.

Even within the quantitative paradigm, however, the relationship between argument and evidence is far from straightforward. As Phelan & Reynolds (1996) point out, ‘If evidence is to be used effectively, it must be material to the specific issue being addressed’ (p.111). Thus, selection of observations or information plays a key role. In order for qualitative research ‘findings’ to make a significant contribution within evidence-based medicine and healthcare two parallel developments are necessary: advocates of the qualitative paradigm must demonstrate its ability to address questions of relevance to practice (i.e. that it is ‘not an end in itself’
(Miles et al. 1998; p.264)) and proponents of EBM must rethink their ideas as to what may constitute a research question.

What is qualitative research?

Qualitative research generally aims to answer research questions which are rather different from those addressed by quantitative research. ‘Qualitative research is essentially “exploratory”, setting out to describe, understand and explain a particular phenomenon. It may address “what?” “why?” and “how?” but not “how many?” or “how frequently?”.’ (Gantley et al. 1999; p.7). The qualitative paradigm is characterized by the use of a particular range of methods used either (1) to generate data – including semi-structured interviews and focus group discussions, or (2) to study naturally occurring events – such as observational fieldwork or video recordings, or (3) to analyse independently produced materials – i.e. document or textual analysis. An example of this latter type of study is David Armstrong’s (1983) study, which looked at the ways in which medical texts have defined the patient and the body.

Although the schedules which guide qualitative research encounters, such as semi-structured interviews or focus group discussions, may be quite detailed, they generally have an open-ended element: rather than relying on predetermined categories, these less structured methods allow the researcher to concentrate on issues which have salience for those being studied and, thus, allow different perspectives to be explored. Qualitative research is also characterized by its own rather distinctive vocabulary (or, indeed, vocabularies, since it draws on a number of overlapping but distinct disciplinary traditions (Barbour 1998) including anthropology, sociology and social psychology). Disciplinary and professional backgrounds are important in that they bring variation to the ways in which qualitative methods are put into practice by individual researchers (Barbour 1998) and this provides fertile ground for developing new approaches or hybrids.

With the notable exception of those few qualitative studies which draw on a sampling frame derived from complementary quantitative studies, representativeness is not generally a key concern or aspiration. Even where quantitative studies furnish a large sampling pool, complementary qualitative work tends, in any case, to focus on specific sub-samples or outliers (Barbour 1999). Stand-alone qualitative projects are often small scale, with the ability to carry out an ‘in-depth’ study compensating for lack of numbers. However this is not always the case – see, for example, Bloor’s (1976) study in ear, nose and throat clinics, which involved the observation of more than 1000 consultations. Qualitative samples aim to reflect the diversity within a given ‘population’ or group (Kuzel 1992) and thus may vary considerably in size, depending on the range of characteristics being studied. Studies described as ‘qualitative’ can range from the \( n = 1 \) of a case study to relatively large-scale interview studies (e.g. Barbour 1995a; who interviewed over 150 professionals providing care to people with HIV/AIDS employed in four cities in a variety of roles in different health and social care settings).

Epistemological underpinnings of qualitative research

The qualitative paradigm is underpinned by particular assumptions about the nature of knowledge and the methods which are used to collect data to add to the knowledge base.

The hallmark of qualitative methods is the stress on context and the ways in which features of a specific situation or setting impact upon the phenomenon under study. This approach does not attempt to get at the ‘truth’, but seeks, instead, to acknowledge the existence of and study the interplay of ‘multiple’ views and voices – including, importantly, lay voices. This type of research does not aspire to objectivity but recognizes the influence of the researcher on the data collected and brings this to bear on analysis – in other words it is ‘reflexive’. Qualitative research frequently focuses on the routine or mundane – practices and exchanges which we otherwise tend to take-for-granted. David Silverman quotes Wittgenstein who stated: ‘The aspects of things that are most important for us are hidden because of their simplicity and familiarity’ (Silverman 1993, p.145).
The scope of qualitative research

Qualitative research is suited to the study of process – how outcomes are achieved, the mechanisms involved, how situations or changes unfold in the short- or long-term. It can document difficulties and obstacles encountered, how these are perceived and dealt with and can provide insights into why particular interventions and attempts at implementation are successful or unsuccessful. It can study decision-making processes by clinicians, patients and managers. This generally involves the study of social interaction between key players and, with its ability to focus on language and explanations furnished in situ, qualitative research is well placed to provide an enhanced understanding of communication – most notably in relation to doctor–patient encounters or consultations, but also with regard to other types of encounter.

By concentrating on the minutiae of interactions, qualitative studies can also examine the process of negotiation, whether this is between different professionals, each with their own definition of the situation and their own set of preferred lines of action, or between patient and health care provider. Qualitative methods can illuminate the variety of meanings attached by different individuals to particular events or issues – whether these arise from their professional backgrounds and training or from personal experience – and can provide an understanding of how these different perspectives give rise to particular conflicts, misunderstandings or breakdowns in communication. Differences in interpretation are frequently implicated in such breakdowns – in particular with reference to how health promotion or training initiatives are received and qualitative research can play an important role in ensuring that appropriate materials are developed.

What sort of ‘findings’ can qualitative research furnish?

By the nature of its scope and scale, qualitative research cannot provide evidence on prevalence, prediction, cause and effect, or outcomes and its findings are not statistically generalizable. However, qualitative research is ideally suited to providing in-depth contextualized accounts. It can offer more than ‘thick description’ – it can furnish explanations. Qualitative research can, sometimes, offer explanations for unexpected or anomalous findings generated by quantitative studies (Black 1994; Barbour 1999); or it may shed light on the mechanisms which account for correlations or relationships identified by a quantitative study. An example of the latter is provided by Sparks et al. (1994) whose work followed on from an epidemiological study of the patterning of childhood accidents, and which explored the nature of social class differences in interpretation and implementation of ‘safety rules’.

Either in tandem with quantitative methods (as described above) or via stand-alone in-depth studies, qualitative research can provide ‘knowledge for use’ or what Maenaughton (1998) refers to, in the context of general practice, as ‘practical wisdom’. Harding & Gantley argue that qualitative research can offer ‘an understanding both of social processes and how they may be modified in the pursuit of desired ends’ (Harding & Gantley 1998, p.79). Qualitative work has illuminated the ways in which non-clinical factors impinge on decisions ranging from whether to refer children for tonsillectomies (Bloor 1976) to the management of hospital waiting lists (Pope 1991).

At the core of such studies is the ‘playfulness of mind’ described by C. Wright Mills (1959) which enables the researcher to ‘take a sideways look’ at the phenomenon under study in order to ‘free the mind from the constraints of conventional wisdom’ (Crombie & Davies 1996; p.51). This frequently means stepping back from the received wisdom of particular professional groups – something which practitioners becoming involved in research often find extremely hard to achieve (Malterud 1993, Barbour et al., in press).

Lay views of health and illness may be highly complex, internally consistent and logical, despite being at variance with received medical wisdom. Whilst much of the debate on out-of-hours services has centred on the extent to which patients understand – or can be brought to understand – what constitutes a medical emergency, the 46 patient interviews conducted by Hopton et al. (1996) showed the complex reasoning involved in patients’ decisions to make out-of-hours calls to doctors. In addition to responding to symptoms, patients’ decisions were reached through taking into consideration a wide
range of potentially contradictory factors, including ideas about responsibility for others, their experiences of ‘past frights’, current concerns about other illnesses, awareness of specific illnesses (such as meningitis), ideas about what is ‘normal’ in oneself and colleagues, the impact of symptoms on daily life and previous contact with health care providers. Their findings, argue Hopton and colleagues, highlight the limitations of a rational decision-making model in seeking to understand and manage out-of-hours care.

Because of its broad focus, rather than adherence to very precisely formulated research questions, qualitative research can also uncover unintended consequences of service developments: for example Griffiths & Hughes (1998) used a case study approach – which involved observation at meetings of a core contracting team (supplemented by interviews with purchasers and providers) – to address the question as to whether the new purchasing arrangements had, in effect, led to explicit rationing.

Qualitative research can also be used to generate hypotheses or research questions for future studies. Edwards et al. (1998) used focus groups with professionals to stimulate a very wide-ranging discussion about the practicalities of risk communication in primary care. The focus groups allowed practice staff to comment on the usefulness of patient information leaflets, the role of the media, patients’ wishes and the relevance of research findings in relation to a variety of conditions and clinical situations (e.g. in relation to the contraceptive pill, immunizations and with patients from different backgrounds in terms of social class, ethnicity, linguistic and intellectual ability, and levels of anxiety). Amongst other issues, this research highlighted the lack of up-to-date and unequivocal guidance, and the degree of professional uncertainty in rapidly evolving areas of clinical practice. The focus groups allowed respondents to draw comparisons and to help the researchers begin to identify similarities and patterns in responses to risk communication. This approach, capitalizing on the comparative potential afforded by a wide range of conditions and clinical situations which characterize general practice, illustrates the capacity of qualitative methods to generate hypotheses as well as to attempt to answer more specific research questions.

Although qualitative findings are not statistically generalizable, they can be ‘theoretically generalizable’. This refers not to some rarefied abstract theoretical knowledge base but to explanatory frameworks or typologies developed from the data, or mechanisms identified which have applicability beyond the immediate context of the reported study. Lincoln & Guba (1985) argued that instead of using the term ‘generalizability’, it is more useful to talk about ‘transferability’ of qualitative findings. This relates to their relevance for understanding similar issues and processes involved in other situations, other specialties, other illnesses or other types of consultation.

One of the clearest examples of such work is Conrad’s (1985) study which re-framed the medically defined problem of ‘noncompliance’ as ‘self-regulation’, which allows us to see modifying medication practice as a vehicle for asserting some control over epilepsy. This study bears all the important hallmarks of qualitative work, exploring the interaction between lay perspectives and situational constraints and illuminating the internal consistency of patients’ views. The findings from this study can be said to be ‘theoretically generalizable’ to the extent to which they help in understanding apparently illogical behaviour in a wide range of clinical and non-clinical contexts, including non-uptake of childhood immunizations, observance of ‘safer sex’ and day-by-day management of asthma and diabetes.

In deriving models or explanations which are theoretically generalizable, qualitative research can also draw, where appropriate, on pre-existing bodies of theory – most commonly those deriving from the social sciences. Fairhurst & Huby (1998) bring to bear, in understanding the data which they collected, cognitive learning theories of education. Some commentators, however, have alerted us to the dangers of ‘sociological imperialism’ (Harding & Gantley 1998), whereby such theorizing is deemed essential to good qualitative research. Whilst many pieces of qualitative research – particularly in health services research – may illuminate the processes and phenomena under study without recourse to sociological theory, the application of theoretical perspectives can often allow arguments to be extended and thereby provide ‘added value’.
Utilizing qualitative findings

Some qualitative studies make explicit recommendations with regard to practice, as do Chapple et al. (1997) who carried out ethnographic work in a clinic providing genetic counselling. This study employed video recordings of consultations, supplemented by interviews after each consultation with the consultant involved, together with interviews with families post-consultation and six months later. It documented the confusion and anxiety of many of the 30 families studied, arising from the newness of many of the diagnostic categories and the central role of complex calculations around statistical probability. The authors concluded that clinic nurses could play a bigger part in communication with patients, perhaps even extending their involvement to carrying out some home visits. Further work could encompass such diverse studies as an RCT of combined nurse and consultant input as compared to consultant counsellors or, at the other end of the scale, an evaluation of a small scale intervention. Alternatively, the study may have an impact on practice, which is neither quantified nor described by further research.

Since many qualitative studies are funded as separate stand-alone projects, rather than being linked to large trials or multi-site interventions, it is probably more common for them to make their reports and/or recommendations without having the opportunity to gauge their effect. However, qualitative research findings may not be alone in this. Fairhurst & Huby (1998) who attempted to document the use which GPs made of evidence about statin drugs in their management of hypercholesterolaemia, found that few GPs had, in fact, read the original papers from which evidence had been derived: rather, knowledge ‘trickled down’ to them. Due partly to time constraints, GPs relied on editorials and assessed the sources of evidence (i.e. trusted journals) rather than the evidence itself. Data were deemed relevant only when underpinned by a clear consensus – reinforcement was required from several sources before GPs were convinced they should change their practice. Thus, although the evidence base may rely heavily – and some would argue that it should rely exclusively – on findings from clinical trials, the process by which it is interpreted and assessed for use is one which can best be described by qualitative methods.

Invitations or challenges from individuals, who are sympathetic to qualitative methods but rooted in the quantitative paradigm, to furnish examples of qualitative ‘discoveries’, or examples of work which has influenced practice, fail to take account of the possibility of findings – both qualitative and quantitative – having a pervasive impact, but one which defies measurement. A good example of such work is Hilary Graham’s (1993) findings regarding the ways in which smoking serves useful functions for disadvantaged women within the context and constraints of their daily lives, despite their acknowledgement of the health risks involved. This piece of work is frequently cited by GPs and has, undoubtedly, tempered the advice given to thousands of patients with respect to smoking cessation.

When the findings of a study carried out by Hoddinott & Pill (1999) were presented to a group of GPs these met with a similar reaction, being viewed as reflecting and articulating what can probably best be described as ‘practical wisdom’ (Macnaughton 1998). This interview study, involving 21 women, took place in a deprived area, which was known to have a low rate of breast-feeding. While all of the women interviewed were aware that ‘breast is best’ the study highlighted the importance, both for initiating and maintaining breast-feeding, of exposure to breast-feeding mothers. Hoddinott & Pill summed up by asserting, ‘Breast-feeding is best considered a practical skill and a performing art . . . it needs to be learnt. Developing the confidence, commitment and knowledge necessary to perform this new behaviour may be more efficiently gained through apprenticeship to a breast-feeding mother rather than theoretically in consultation or from books’ (Hoddinott & Pill 1999 p.34).

Fairhurst & Huby (1998) consider the implications of their study for strategies to encourage GPs to base their practice on clinical evidence. The proliferation of guidelines and courses on clinical appraisal skills may be missing the point and, however well this is done, such initiatives are unlikely to facilitate the incorporation of research findings into everyday practice. Fairhurst & Huby recommend strategies which centre on developing informal consensus: in the absence of a tradition of using evidence, the
strongest tendency may be to do what everybody else does.

Action research offers an unparalleled opportunity for getting research into practice, allowing researchers to work with practitioners or practice teams in identifying and seeking to overcome obstacles to implementing change (Barbour 1995b). Such studies may involve setting up consensus panels or expert panels, which can begin to influence practitioners through informal personal contact in those very settings in which Fairhurst & Huby (1998) identify GPs as processing and evaluating the results of quantitative research. Intervention studies can follow on from initial qualitative research to evaluate the viability of putting recommendations into place in particular settings. Practitioners can also borrow qualitative research methods in developing their own initiatives along these lines, as illustrated by Fardy & Jeff’s (1994) account of using focus groups to develop consensus guidelines for the management of the menopause in primary care, or see Trickey et al. (1998) on a similar approach to developing a guideline for dementia.

Miles et al. (1998) have lamented the lack of collaboration between health service researchers and practising clinicians at the research planning stage, arguing that research requires ‘a much, much closer relationship between its researchers and clinical decision-makers and an explicit recognition by the former that the latter are part of the solution and not part of the problem’ (p.264). With the introduction and funding of primary care research networks, which has been accompanied by a dramatic increase in the numbers of practitioners themselves undertaking qualitative research, there are exciting new opportunities for getting research into practice through getting practitioners into research. This should enhance the development of reflective practitioners and, ultimately, have an influence on clinical decision-making and behaviour, with reference to the emergent qualitative ‘evidence base’ – not only for those primary care practitioners who become involved in research, but also for their colleagues. A particularly interesting development involves multidisciplinary research teams, which allow for the qualitative study of clinical decision-making, such as is reported by Granier et al. (1998) in relation to recognizing meningococcal disease. Such teams can facilitate what Miller & Crabtree (1998) term ‘conversations at the walls’.

**Incorporating qualitative research into the ‘evidence base’**

**Systematic review**

If qualitative methods are to be incorporated as an equal partner in the ‘evidence base’, then there are two important challenges which have to be faced. These relate to how we are to provide an overview of, or aggregate the results of, individual qualitative studies. Systematic review is one of the cornerstones of evidence-based medicine and several researchers have begun to address the issue of developing a qualitative variant. Interestingly, discussion, to date, has centred around evaluation of individual studies to the exclusion of two equally important issues: those of developing effective search strategies to identify qualitative papers and the aggregation of qualitative research findings. Several researchers have developed checklists for use in evaluating qualitative research studies (Dowell et al. 1995; Hoddinott & Pill 1997; Popay, Rogers & Williams 1998).

Concerns have also been voiced with respect to the dangers of thereby creating yet another restrictive ‘gold standard’ (Barbour 1998; Chapple & Rogers 1998). The ongoing debate surrounding these checklists notwithstanding, there are some important areas of agreement – particularly with regard to the provision of information, which is needed in order to review papers. This affords an interesting contrast with quantitative research, where blinding is the most important mechanism for ensuring lack of bias. The opposite is the case with qualitative research, where commentators such as Ritchie & Spencer (1994) urge us to render transparent the processes involved in analysis. We are urged to provide details not only about analysis, but about the researcher’s preconceptions and background (Hoddinott & Pill 1997). Another area of agreement relates to being explicit about the limitations of a study and, hence, the ‘transferability’ of its findings.

However much abstracting templates are amended and extended to take account of the peculiarities of qualitative research (Chapple & Rogers 1998) they
still rest on the assumption that the findings of such studies can be effectively summarized. In practice, however, it may be difficult to anticipate which findings are likely to be of greatest relevance to future researchers or reviewers – particularly since the qualitative tradition derives its insights from examining exceptions (Frankland & Bloor 1999). Hence, the most fruitful avenues for further analysis may involve exploration of apparently contradictory findings from several different studies.

Archiving and secondary analysis of data

For some time now the ESRC Qualidata archive at Essex University has located, assessed and arranged for the deposit of qualitative research data in suitable repositories (Corti et al. 1995). As a funding body, the ESRC now actively encourages archiving and requires applicants and grant-holders to provide an explanation as to why their data could not be archived. There are moves afoot by other funding bodies, such as the Department of Health, to introduce similar measures. However, ‘despite growing interest in the re-use of qualitative data, secondary analysis remains an under-developed and ill-defined approach’ (Heaton 1998).

This apparent lack of enthusiasm for secondary analysis of qualitative data, may, however, reflect the motivations which bring individuals to qualitative research (i.e. a desire to collect their own empirical data in the field) rather than an in-built limitation of qualitative methods. Mauthner et al. (1998) have highlighted some of the problems involved for qualitative researchers in attempting to re-analyse their own data. They emphasize the constraints of the original fieldwork situation, the researcher’s theoretical framework and the implications for what is regarded as ‘data’ or as ‘findings’, arguing that meanings are ‘made’ rather than being ‘found’ (p.742).

Secondary analysis of qualitative data, particularly when carried out by someone other than the original researcher, raises some important practical, methodological and ethical issues, such as the nature of the consent obtained from respondents (Thorne 1994). Whilst some qualitative researchers insist that another researcher carrying out a secondary analysis could not possibly appreciate the nuances in the data, because he or she was not present when the data was collected, Corti et al. (1995) argue that adequate documentation can counter such objections. It is, in any case, standard practice for members of research teams to engage in analysis of each others’ data and the so-called ‘principal investigator’ frequently does not visit the research setting.

This ‘connectedness’ with the data generated, however, may actually render secondary analysis more of a challenge for the original researcher and it is possible that the most productive secondary analysis can be carried out by a researcher with a somewhat different focus in terms of research interests. Although many anthropologists continue to revisit their qualitative datasets throughout the whole of their working lives, this is not the case for most contract-funded health services researchers. There is considerable potential to make further use of datasets which may well contain material which transcends the purposes of the original investigation and which has, consequently, not been fully mined.

Such a recognition, however, is not tantamount to arguing that we must emulate the meta-analysis of the quantitative paradigm: it is difficult to see how ‘findings’ could be easily aggregated in the way that ‘evidence’ might be. A qualitative variant of meta-analysis is likely to be a ‘very different beast’, which might necessitate carrying out additional research, such as contacting the original researchers in order to seek clarification about particular aspects of study design, or analysis, and, perhaps, to find out more about the context in which data was generated. It may well be that a prospective model, involving collaboration between qualitative researchers about to embark on related studies, will turn out to be more appropriate than the retrospective model favoured in meta-analysis of quantitative studies (Barbour 1998).

Conclusion

Qualitative research methods can provide useful data on a range of topics and research questions which are not amenable to study using conventional quantitative methods. However, the breadth of qualitative research approaches and the nature of the insights derived do not readily lend themselves to incorporation in the ‘evidence base’ through the use of templates developed for summarizing and evalu-
ating quantitative research. The impact of qualitative findings may be pervasive, although not amenable to measurement and action research has considerable potential to influence practice. Such difficulties notwithstanding, it is essential that we find ways of transcending the piecemeal fashion in which qualitative research findings are often used. We must address – as a matter of some urgency – the ways in which we can ensure that the whole is greater than the sum of its parts.

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References


