Exploring doctor and patient views about risk communication and shared decision-making in the consultation

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Abstract

Background There have been significant conceptual developments regarding shared decision-making (SDM) and assessments of people's hypothetical preferences for involvement in treatment or care decisions. There are few data on the perceptions of patients and professionals about SDM in actual practice.

Objective To explore, from paired doctor–patient interviews, participants' perceptions of SDM in the consultation and the level of consensus between the participants in the consultation process.

Design Qualitative analysis of semi-structured interview data.

Setting and participants Twenty general practitioners received training packages in 'risk communication' (RC) and 'SDM' to use as tools within the consultation. Forty patients with one of four conditions, for which a range of treatment options is available, were selected. Patient/doctor pairs were interviewed separately following consultations at four stages – 'baseline' [general practitioner's (GP) usual consultation style], SDM training, RC alone, and both RC and SDM training. Interviews were transcribed and analysed using NVivo software.

Results Risk communication interventions by doctors appeared to result in a greater perception of decisions being made in the consultation. High levels of satisfaction with consultations were evident before application of the interventions and did not change after the interventions. Doctors' and patients' perceptions of the consultations were highly congruent at all phases of the study.

Conclusion Shared decision-making and RC approaches were helpful in selected consultations and showed no detrimental effects to patients. However, the use of RC and SDM made only small differences to decision-making in consultations within the

population studied. Increasing patient participation may be seen as more ethically justifiable than the traditional paternalistic approach but this needs to be set against the additional training costs incurred.

Introduction

Health care is a knowledge-based activity and there has been a massive expansion in the amount of knowledge available in recent years. Changes in consumer expectations, the growth of information on the Internet, the emphasis on evidence-based medicine and clinical governance increase the pressure for clinicians to keep up with scientific advances. Doctors have traditionally relied on memory, reference books, experience or colleagues to help them handle the complexity of information and come to treatment decisions. Despite the growth in knowledge there are still few commonly used aids to reasoning for decision-making in medical practice.

Clinical decision-making is complex and choosing the best treatment option is not always clear-cut. Clinicians must somehow assimilate relevant knowledge and come to a decision (with or without the patient's involvement) about the best treatment option. Traditionally doctors have employed a paternalistic approach, making decisions on behalf of the patient, but this approach has been challenged in recent years.[1] Measures to develop a more equal partnership between professionals and patients include the training of professionals in special skills to ensure a shared decision-making (SDM) approach.[2] In addition, there is a need to promote decision-making aids that provide treatment options and information on outcomes relevant to the patient's individual situation.

Sharing decision-making within a medical consultation is a relatively recent development,[3] and although involving patients in their treatment may improve health outcome, it rarely occurs in routine practice.[4] The use of decision-making aids has been shown to produce benefits,[5] but there are still gaps in the knowledge base. The effects of using decision-aids on doctor–patient interactions, the ability of doctors to involve patients in decision-making and the effect on the patient of such involvement is unclear.[6] Research into the roles patients prefer to adopt within the decision-making process has been based largely on hypothetical scenarios,[7–9] although studies based in real life situations are beginning to appear.[10]

The study comprised the qualitative element of a larger Department of Health funded project evaluating RC and SDM as decision-making aids in medical consultations. The study described below aimed to capture additional elements of the consultation not addressed in the quantitative evaluation of the tools themselves.

A qualitative approach was used to analyse real patient consultations where general practitioners (GPs) had been given training packages in 'risk-communication' and 'SDM' to acquire the necessary tools and skills for these elements of consultation. The analysis aimed to reveal patients' and GPs' thoughts and feelings about sharing decisions in a consultation, to assess levels of consensus between doctors and patients regarding perceptions of the consultation and to see if changes in the consultation style had an effect on doctor and patient perceptions of the consultation.

Study design

Setting and participants

GPs ($n = 21$) who were interested in the study and receptive to the idea of skills training were recruited from practices in Gwent Health Authority. The GPs had been in practice for a period in between 1 and 10 years, and had no experience of the 'new' approaches. Twenty GPs completed the study. The skills training took the form of small group work-based experiential

learning, involving simulated patients and working through consultations to implement, and learn from, the experience of using either the SDM skills or the RC tools.

Patients ($n = 960$) were identified by researchers from the morbidity registers and prescribing records in the practices of the participating GPs. The patients were those who had a relevant therapeutic choice to consider for one of the following four conditions.

- Atrial fibrillation
- Prostatism
- Menorraghia
- Menopausal symptoms.

Purposeful stratified sampling was used to select 40 patients for interview.[11] There were four stages of the trial: baseline (before intervention), after risk communication (RC) training, after SDM training and training in both methods. For all stages of the trial to be represented, GPs were interviewed twice. Individual interviews were conducted with a GP and then a patient who had just consulted in a research clinic consultation. Each GP contributed one interview from the single intervention phase (RC or SDM) and another selected randomly (by random number generation) from either baseline or combined intervention phase. In this way approximately 10 doctor–patient pairs of interviews would be available from each phase of the study.

Patients were sent information about the study by post and were asked to return a form indicating their consent to participate. Those patients who indicated their consent were then offered a single appointment to review their condition and treatment needs. Patients were informed that this was part of a study of 'communication in health care'. This 'GP initiated' consultation is similar to usual practice in which patients taking long term therapy for conditions are asked to attend their GP periodically to review their continuing need for medication. This may include assessing requirements for altered doses of medication.

In the development phase the project team undertook a values clarification exercise. A satisfactory outcome for a consultation was considered to be one in which the patient was positive about the treatment decision and about their level of involvement in making the decision.

Data collection

Data were collected from semi-structured interviews as they offered the means to explore and understand individual perspectives without imposing restrictive structure on participants' responses.[12] Interviews allowed the researcher to probe further into responses of interest and to assist mutual understanding of questions and responses.[13] They also enabled the researcher to create a relaxed atmosphere in which respondents could explore more details of their experience.[14,15] The interview schedule was developed and piloted by authors RD, ST, CA, GE and EA. As GE and AE had been involved in delivering the training RD, ST and CA conducted the interviews.

Consultations took place in 'research clinics' which enabled the GP to work within a session of limited time. The participating GP had a 10–15-min audio-taped consultation with the patient. Following the consultation, individual interviews were carried out with the GP and the patient to explore what happened in the consultation. The interviews, lasting 20–30 min, were tape-recorded and transcribed verbatim for computer-assisted analysis.

Data analysis

The transcribed interview data were exported to QSR Non-numerical Unstructured Data*Index Searching and Theorising (NUD*IST) NVivo (QSR International Pty Ltd, Doncaster, Victoria, Australia). This software enables free editing and coding, and places them in a non-hierarchical structure. The aim of the analysis was to extract information from each set of paired interviews and carry out comparative analysis across GP and patient pairs.

Using a content analysis approach themes were identified,[16] and coding instructions created to define the categorization of themes.[17] Researchers undertaking this analysis were blinded to infor-

mation regarding demography, phase of trial and type of intervention during the initial phases of analysis, in order to prevent researcher bias. These data were analysed in two stages by four researchers to provide triangulation.[18]

Following the identification of themes, a detailed analysis was made of the data regarding the GP training and of congruence and dissonance between GP and patient perceptions of the consultation. Data were checked for internal validity and following discussion, a coding was agreed. This second stage of analysis followed Miles and Huberman's principle of using a quantitative analytic approach to illuminate qualitative data.[19] In over 80% of cases researchers agreed on the coding, and in cases of disagreement, each researcher presented their justification for the coding and agreement was reached.

Results

Eighty GP and patient interviews were conducted and transcribed, 38 GP/patient pairs of interviews were usable for analysis. Two others were lost because of equipment failure. The interviewees included 21 GPs and 38 patients. Because of the nature of the conditions selected for the study, approximately three-quarters of the sample ($n = 29$) were females. They were also predominantly older patients aged between 40 and 77 years (except one patient who was 30 years of age). The age range was equally distributed according to gender. In relation to each patient's condition, most female patients were experiencing the menopause ($n = 19$) and men suffered from prostatism or atrial fibrillation. Although this sample is not representative of the general population, it does reflect the type of patients in the trial. Table 1 shows the relationship of the interview schedule to the phase of GP training. Full results and sample characteristics are available at http://www.healthinpartnership.org/studies/edwards.html.

Emerging themes

Over 20 emerging themes were identified and a coding framework developed. Five themes, considered to be the most important for the project aims and to inform conclusions about training or wider policy issues, were selected and analysed in detail to see if they varied according to the type of training received by the GP. These themes did not necessarily appear more frequently than the others. The themes were:

- *Decision-making*: description of the treatment decision and who made it.
- *Discussion of* 'risk' in the consultation: to what extent were treatment risks discussed and numbers or figures such as graphs used?
- *Patient involvement* with the treatment decision: to what extent did the GP and patient agree/acknowledge that the patient was involved in the treatment decision?
- *Patient satisfaction* with the treatment decision: to what extent did both the GP and patient agree/acknowledge that the patient was satisfied with the treatment decision?
- *Treatment priorities*: to what extent did the GP and patient agree that they had the same treatment priorities for the patient's condition?

The data under each theme are presented in relation to the GP's 'phase' of training (see

Table 1 Relationship of phase of GP training to interview schedule

Phase	GP interviews	Patient interviews	Total
1: Baseline data – no training given to GPs	11	11	22
2: After GP had RC training	10	10	20
3: After GP had SDM training	9	9	18
4: After GP had both SDM and RC training	8	8	16
Total number of interviews	38	38	76

GP, general practitioner; RC, risk communication; SDM, shared decision-making.

Table 1) The data are presented as quotations from each patient and GP pair, to illustrate the perspectives of the GPs and patients.

Decision-making

Table 2 shows the types of decisions made within the consultation. New treatment decisions regarding the patient's current condition were rare. This was to be expected as many patients were on established treatment regimens. The most common decision was no change, in other words, either 'continue with current treatment' or 'continue without treatment' ($n = 23$). For example:

> Patient: So he gave me peace of mind in a way by saying yes, you can carry on the treatment…' (patient 19, phase 4)
>
> GP: To continue on with the current therapy and to continue monitoring her as we have done'. (GP 19, phase 4)

Other decisions were equally distributed at each phase of the study.

A decision within the consultation was more likely to occur when GPs had received RC training (phases 2 and 4). In all but one of these 18 consultations a decision was made. Where GPs did not receive RC training (phase 1 and 3) six in 20 consultations did not reach a decision. SDM training alone (phase 3) however did not appear to increase decision-making in the consultations overall.

The decision-maker in the consultation varied between the GP, patient, and jointly by the GP-patient dyad. For example:

Shared decision:

> Patient: It is shared because neither one of us knows which way to go – so yes, I would say shared (patient 1, phase 1)
>
> Interviewer: *Did you come to that agreement together, would you say?*
>
> GP: Yes, I think so (GP1, phase 1)

Patient-led decision:

> Patient: If I wanted to come off, it would be my decision (patient 12, phase 4)
>
> GP: I think she probably makes the decisions about most of her treatment (GP 12, phase 4)

GP-led decision:

> Patient: I still basically think it's the doctor who decides (patient 13, phase 1)
>
> GP: Being older he seemed to come across as part of a generation where the doctor decided and told him what to do, and he was coming along and saying, I'm happy about that. (GP 13, phase 1)

Of the 31 decisions made it was only possible to determine who made the decision in 16 cases. At baseline there was some evidence that patients were already involved in the decision-making process and following GP training the number of GP-led decisions declined. In the remaining interviews it was difficult to determine who made the decision. Reasons for this were varied. In some cases the concept of 'treatment decision' was not overtly discussed or defined with patients prior to the consultation and some patients found difficulty with the concept that 'no treatment' or 'no change to treatment' was a treat-

Table 2 Type of treatment decision made within the consultation

		Treatment decision			
Training (phases 1–4)	No. of paired interviews	Decision to continue current treatment	Other decisions	No decision	Total number of decisions
1: Baseline	11	6	2	3	8
2: RC	10	7	2	1	9
3: SDM	9	4	2	3	6
4: SDM and RC	8	6	2	0	8
Total	38	23	8	7	31

RC, risk communication; SDM, shared decision-making.

ment decision. In other cases there was dissonance between the patient and GP, or there was no reference regarding who made the decision.

Discussion of 'risk' in the consultation

Discussion of risk featured in many of the consultations, but only where RC training had taken place were aids such as graphs or charts employed. The aids allowed GPs to show patients who were receiving or considering treatment for their condition, the risks involved (see Table 3).

At baseline, fewer than half of the 11 consultations (five) appeared to include discussion of risk factors and none of them used the aids to do so, according to the patient and GP interview pairs. When SDM training alone had been given, the general discussion of risk was more frequent at six of nine consultations but without the use of graphs and numerical data.

When RC training alone had been given, the numbers using numerical figures/graphical aids rose to nine of 10 consultations. When both forms of training had been taken five of eight GPs used aids to convey the concept of risk. It would seem that RC training appeared to increase the use of numerical/graphical aids.

The following quotes show differences in the level of detail described by patients following different forms of GP training;

- *Discussion of treatment risk (no RC training):*

> Patient: Yes we did discuss any side effects. They're very minimal (patient 26, phase 3)

> GP: We discussed like the pros and cons…if you get side effects in the first few days…I told her that she might do and they do wear off usually after a week or two. (GP 26, phase 3)

- *Discussion of treatment risk (after RC training):*

> (1) Patient: She offered me some leaflets of information that I can pick up on…and everything. You know, to read up as much as possible, giving me all the, you know, the pros and the cons of hormone replacement therapy (HRT), the good side and the bad side and everything. (patient 23, phase 4)

> GP: I gave her a couple of figures. I think she was quite reassured that it won't actually increase risk and looking at the graph she could see the benefits and the down side. (GP 23, phase 4)

> (2) Patient: It was very good to see graphs, you know, of…of women on treatment and without treatment. (patient 45, phase 2)

> GP: She saw that heart disease is markedly improved, i.e., there's less heart disease being on HRT and she could see there was a reduced risk of hip fracture on HRT, there's an increased risk of breast cancer on HRT – a negative one on the uterine cancer because she's had a hysterectomy. (GP 45, phase 2)

However, there were still occasions when RC aids were not used. The reasons for this included two patients whose personal preference was not to see the figures, one GP who did not want to show all of the figures to the patient and one GP who did not use the figures at all as he/she found them difficult to use. One other pair of interviews revealed that the GP and patient were not communicating well with each other and so, in this case, risks may not have been mentioned.

Table 3 Use of risk-communication during the consultation

Training (phases 1–4)	No. of paired interviews	General risk communication during consultation	Use of risk communication figures during consultation
1: Baseline	11	5	0
2: RC	10	9	9
3: SDM	9	6	0
4: SDM and RC	8	6	5
Total	38	26	14

RC, risk communication; SDM, shared decision-making.

Patient involvement

The majority of patients (31 of 38) in all phases of the study felt involved in the treatment decision for their particular condition (see Table 4), with little difference between the various types of training/study phases.

> Interviewer: How do you feel about being involved in making decisions about your treatment?
>
> Patient: Oh yes, I think that…being involved…that is necessary for everything. (patient 4, phase 3)
>
> Interviewer: How do you think he felt about being involved in talking about his condition and treatment?
>
> GP: Yes, he was quite happy. He said that I now know all about it. (GP4, phase 3)

Some consultations were GP-led which was what the patient preferred. When this was observed, patients indicated that they were happy not to be involved.

Patient satisfaction

Most patients (34 of 38) felt satisfied with the treatment decision they made. Once again, this was found in all phases of the study. The four remaining patients either did not feel happy with the treatment decision or had no perceived treatment decision in the consultation with which to feel satisfied.

> (1) Patient: I'm quite happy with what I'm on (patient 8, phase 1)
>
> GP: She looked more happy in a way that she knows why she's taking all the medication and what exactly caused the stroke. (GP 8, phase 1)

Table 4 Patient involvement and satisfaction with treatment decision

Training (phases 1–4)	No. of paired interviews	Patients involved	Patients satisfied
1: Baseline	11	9	10
2: RC	10	9	9
3: SDM	9	7	8
4: SDM and RC	8	6	7
Total	38	31	34

RC, risk communication; SDM, shared decision-making.

> (2) Patient: I'm quite happy. The tablets I'm on, like I says, it's working. (patient 36, phase 2)
>
> GP: He is satisfied with his treatment (GP 36, phase 2)

It is worth noting that both perceived satisfaction and involvement were very high at baseline and remained similarly high in each phase. This suggests that, here at least, GP training has little effect on patient involvement or satisfaction.

Treatment priorities

In relation to the phase of training, at baseline, only three consultations of 11 included discussions of treatment priorities (see Table 5). Proportionally, this was a much lower figure than had occurred in the cases where GPs had received training (21 of 27). This finding would be consistent with increased perceived patient involvement after training, as applied across all the types of training, yet this has not been seen to be the case according to the analysis of involvement so far. However, it should be noted that in 14 of the consultations according to these GP and patient interview pairs there was no mention of treatment priorities. In the 24 consultations where treatment priorities were mentioned, 14 included agreement of the same treatment priorities between GPs and patients.

The following quotations illustrate perceptions about treatment priorities:

> Patient: I do I feel that they match, is that what you're saying?…on the whole I feel that yes, it does match (patient 21, phase 4)
>
> GP: My priorities are to try and provide the best possible services I can within the allotted time. I think as long as she is happy with the care that she gets then I'm happy with that (GP 21, phase 4)

In seven of the 24 consultations where priorities were discussed it seemed that priorities were not agreed upon identifying whether priorities matched was not always straightforward. For example:

Table 5 GP and patient interview pairs: agreement on patient's treatment priorities

	Treatment priorities according to GP and patient pairs				
Training (phases 1–4)	No. of paired interviews	Both agree priorities are same	Both agree priorities are different	Either patient or GP disagree that priorities are same	Total
1: Baseline	11	1	1	1	3
2: RC	10	5	0	3	8
3: SDM	9	5	1	1	7
4: SDM and RC	8	3	1	2	6
Total	38	14	3	7	24

GP, general practitioner; RC, risk communication; SDM, shared decision-making.

> GP: Well, my priorities are not her priorities at the moment. And I had to compromise my priorities towards hers. (GP 10, phase 1)
>
> Patient: I think from a doctor's point of view like I was given the right tablets but from mine I think it's wrong… What I'm taking I don't know, I just take them and don't fuss. (PT 2, phase 4)

Congruence and dissonance

In all phases of the data there was considerable congruence between the content of the whole consultation from the perspective of each patient and GP pair, in relation to the five themes. There were a total of 172 congruent comments and only 16 dissonant comments between the interview pairs, of a total of 228 possible statements relating to these themes in the 38 interview pairs. Forty statements could not be categorized.

Of the few dissonant comments, the majority centred on whether there was SDM in the consultation (10 of 16), or what the treatment priorities for the patient were (five of 16). Overall, there was little dissonance and no difference in the levels of congruence and dissonance at any particular phase of the training.

Discussion

Interactions within consultations are complex as is evident in this qualitative study. It would be inappropriate using this approach to make generalizations from the findings. The data analysis produced over 20 different themes of which five relating to the study objectives have been presented here.

The study selected patients with four conditions for which there were a variety of treatment options. The decision-making focus would have been clearer for the patients if the sample had been restricted to patients facing the decision-making process for the first time, rather than including those established on treatment.

The patients interviewed were representative of those in the study, although they could not be said to be representative of the population in general. The conditions chosen tended to select an older population group and there is evidence that older people are more likely to prefer a directed approach and be less likely to expect active participation in decisions about their care.[7–9] Further research in younger populations would be useful to see if age is a factor in any of the outcomes.

It is likely that the GPs recruited to the study were already good communicators, receptive to new ideas and already with high levels of satisfaction from their patients. This would make increases in satisfaction or the SDM process harder to demonstrate. One of the challenges ahead is to make the approach appealing to doctors who, at the outset, are on the lower end of the spectrum on these issues.

Use of the semi-structured interview schedule enabled interviewers to ask the same questions to patients and GPs, and compare the results. However, the schedule inevitably meant that

patient and GP thoughts were guided in the direction of the broader aims of the study i.e. an evaluation of SDM and RC as consultation tools. It also meant that only questions that were applicable to both GPs and patients were asked, whereas it would have been illuminating to ask the GPs in more depth about their views on the training, their experiences of putting it into practice, and the likelihood of them continuing to use the aids in practice. Some of these issues were captured in a parallel study of GPs participating in focus groups.[20]

The decision-making aids appeared to be used selectively with some suggestion that GPs found the aids difficult to learn and/or use. Holmes-Rovner *et al.*[21] have suggested that doctors may find it difficult to incorporate decision-making aids when they clash with their usual consulting patterns. GPs sometimes found that the introduction of training into their consultations was restricted because of the fact that the patient needed to discuss other health-related concerns. One GP commented that using the training model took the 'enjoyment' out of the consultation. It would be useful to explore whether the difficulty lay with a different style of approach to the consultation or with the decision-making tools used.

A lack of clarity about the concept of SDM is suggested in several different ways. There was a tentativeness and qualification in interviewee responses to questions about 'who made the decision'. Typical responses include qualifications of uncertainty such as 'I think' or 'probably…'. Some of the doctors trained in 'SDM only' may have struggled with the concept in practice, as this group had a higher incidence of non-decisions (see Table 2). This finding corresponds with the findings during feedback of practitioners at post-training.[20] Patients may not have fully understood the term 'SDM' or the concept that a decision to 'continue with treatment' was classed as an active decision.

It would seem that uncertainty and contradiction associated with SDM points towards a need for far more in-depth study before clarity can be brought to the conceptualization and operationalization of these as measurable constructs.

The most noticeable effect of the training programme was the use of numerical figures and graphs by GPs who undertook RC training. It may be that the need to put the communication in a numerical or graphical format both clarified the purpose of the consultation and the decisions that followed. However, even among GPs who did the RC training, the aids were not always used.

There was a high degree of congruence between GP and patient comments in each of the interview pairs although there were some dissonant statements. The NVivo programme allowed the researchers to look at the distribution of dissonant comments and the number of comments made. This feature guards against one, or a small number of interviews with many dissonant comments skewing the data and giving a false impression of the weight to be attached to certain topic areas. In this case dissonant statements were spread throughout the interview pairs and related mainly to differences in perception about who made the decision within the consultation and to differences in where the treatment priorities lay. There are situations where the GP, faced with a range of treatment options, has to consider cost to the service and benefit to the patient, and this could create conflict in sharing decision-making.

Patients in most interviews appeared to be involved and happy with their treatment decision, irrespective of whether the GP had received training. Some patients commented that they learnt more about their condition than they usually did in consultations. The person who made the decisions (GP, patient or shared) appeared to have no effect on the level of satisfaction experienced by the patient. It is clear that some patients can be satisfied without being involved in the treatment decision. As satisfaction levels were high across the board it could be argued that clear benefits in terms of health outcomes should be demonstrated before the expense of further GP training in these new approaches is justified. The 'training' comprised four intensive evening sessions, reinforced by

research clinic sessions with audiotaping and interviews to make them think and reflect on the issues. Such training is always labour intensive and therefore expensive, so careful consideration is required before rolling it out into general postgraduate training.

There are clearly tensions between cost-effective (usually cost-minimizing) approaches on the one hand, and individual choices, benefits, etc. on the other.[22] The RC and SDM could be incorporated into GP training, although they are likely to be used selectively. It could be argued that, although different approaches were used without detrimental effect on patients, there were additional training costs, so the idea should be introduced with caution. Alternatively, it could be said that this approach should be adopted as increasing the level of patient participation is more ethically justifiable than the traditional paternalistic approach.

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