Involving patients in decision making and communicating risk: a longitudinal evaluation of doctors’ attitudes and confidence during a randomized trial

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Abstract

Background Important barriers to the wider implementation of shared decision making (SDM) and risk communication in practice remain. The attitudes of professionals undergoing training in these approaches may inform how to overcome these barriers, but there are few such data yet available. Aim To identify the attitudes of professionals during participation in a large practice-based intervention study with substantial individual exposure to SDM and risk communication, and to assess their confidence with these approaches and reported frequency of implementing them. Setting and participants Twenty general practitioners (GPs) who had been in practice between 1 and 10 years, and participated in an explanatory trial lasting 6 months. The trial interventions comprised training in SDM skills and the use of risk communication materials. The doctors consulted with up to 48 patients each (mean = 40, half of them audio-taped) for the study. Methods Questionnaire assessments before and after each training stage. Results The GPs indicated positive attitudes towards involving patients and towards the training interventions. They indicated that the risk information packs were applicable but had used them only occasionally with patients outside the trial. No statistically significant changes were associated with the specific interventions in terms of doctors’ confidence in discussing risk information after the risk communication intervention, or attitudes to patient involvement after the SDM intervention. Most attitudes and confidence ratings showed positive changes during the course of the trial as a cohort effect. Such positive changes were associated with female doctors more than male doctors, but not with MRCGP (postgraduate vocational) qualification. Time constraints remained important throughout the study in not implementing the approach more frequently. Conclusions Professionals appear receptive to patient involvement, and willing to acquire the relevant skills. SDM and risk communication training did not appear to contribute differentially to this. Practical barriers such as time constraints should probably be addressed with greater priority than the precise content of training or continuing professional development initiatives if ‘involvement’ is to become a commoner experience for patients in primary care.
Introduction

Patient involvement in decision making [or ‘shared decision making’ (SDM)] about options for their treatment or care is widely advocated. There are philosophical and ethical justifications (Coulter 1997; Schneider 1998; Ashcroft et al. 2001). Patients report preferences for more ‘patient-centred’ care (Little et al. 2001). There is also evidence from some settings that practical implementation of approaches to facilitate patient involvement improves both health and ‘patient-based’ outcomes (satisfaction, confidence, etc.) (O’Connor et al. 1999). There is, however, evidence that despite its apparent benefits, professionals do not readily acquire the skills to involve patients more or apply the developments in practice (Holmes-Rovner et al. 2000). This appears partly because of structural barriers, such as lack of time, but the attitudes and experiences of professionals may also be a crucial determinant (Holmes-Rovner et al. 2001). There are few data in the literature about general practitioners’ (GPs’) attitudes towards and confidence in adopting these approaches and how often they apply these approaches in practice.

Understanding these attitudes and experiences may make a vital contribution to the attempts to achieve a culture and practice of greater patient involvement. We conducted a randomized controlled trial of SDM and risk communication training for GPs. The results of the trial are reported elsewhere (Edwards et al. 2004; Elwyn et al. 2004). In short, the training interventions for participating doctors achieved large changes in processes of consultations (the doctors acquired the skills and applied them with real patients) (Elwyn et al. 2004) but no change in patient-based outcomes (Edwards et al. 2004). In this paper we report on the evaluations provided by GPs during the training in the trial, and then explore the lessons for continuing professional development and the wider implementation of SDM and its important component of communicating about the risks and benefits of treatment options.

Method

Participation and setting

General practitioners in Gwent, South Wales were eligible for the trial if they had been a principal in practice for between 1 and 10 years (to achieve a sample that had been exposed to recent communication skills training methods). A total of 101 practitioners in 49 practices were approached (average age 41 years, 62% male and 38% female). We limited inclusion to one practitioner per practice (in view of the number of patients required for the study). Twenty doctors completed the study (average age 38 years, 60% male and 40% female). Fourteen of these 20 held the MRCGP qualification. None of the doctors was a trainer or part of under- or postgraduate teaching departments at the start of the study. One was an elected board member of the Local Health Group (Primary Care Organization). Each doctor consulted with up to 48 patients in the study (mean of 40 patients). These patients had one of four established chronic conditions – prostatism, atrial fibrillation, menorrhagia or menopausal symptoms – and were attending for review of their condition or its treatment.

The trial evaluated the training interventions separately and combined, and the impact of varying the sequence of training (first SDM, then risk communication or vice versa) (Elwyn et al. 2004). The training interventions consisted of four workshops of 3 hours each (two for SDM and two for risk communication; see Fig. 1) and were based around simulated patient consultations with actors so that the doctors could experience the SDM and risk communication approaches and reflect on how they might be appropriately applied with real patients in the study setting or in routine consultations (Edwards et al. 1999; Elwyn et al. 1999). The study took place between February and December 2000 and was approved by the Gwent Local Research Ethics Committee.

Evaluation

We assessed doctors’ views of the training and implementation of SDM and risk communication approaches, alongside the principal quantitative evaluations of patient-based outcomes. The former were assessed by means of questionnaires given to the doctors. The areas these assessments sought to cover were:

1. attitudes towards involvement of patients in decision making;
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2 perceived competence to involve patients in decision making;
3 reported frequency (before, between or after training sessions) of involving patients in decision making;
4 confidence in discussing risk information with patients:
   - in general
   - and specifically for non-rheumatic atrial fibrillation and hormone replacement therapy
5 reported frequency of using the risk communication materials with patients outside the trial setting (and free-text feedback on their value in these consultations).

These findings were complemented by qualitative data from interviews with doctors and patients after selected study consultations from the research clinics (Davis et al. 2003).

**Administration**

Each doctor completed the short questionnaires:
1 after baseline phase, immediately before the first training intervention (see Fig. 1);
2 immediately after the first intervention (training sessions), before entering the active first intervention phase;
3 after the first intervention phase, immediately before the second intervention;
4 immediately after the second intervention (training sessions), before entering the active second intervention phase, and
5 after completing the second intervention phase.

Questionnaire responses were on five-point Likert-like scales, indicating agreement or disagreement with statements about attitudes and competence in patient involvement, confidence in discussing risks, etc.

**Analysis**

Responses to the questionnaires, particularly longitudinal changes in attitudes, perceived competence or confidence for each doctor, were assessed. Differences between the groups randomized to receive risk communication or SDM training first were assessed by t-tests. Power in this analysis was low because of the sample size of respondents (11 randomized to
risk communication and nine to SDM first). The data were not intended to stand alone as an evaluation of the training but were intended to complement and be complemented by other qualitative evaluations during the trial (Davis et al. 2003).

Changes in the variable scores from before- to after-training sessions were also calculated. Within the whole group (not separating the randomized groups) these data were also analysed for evidence of potential ‘effect modifiers’. These were identified a priori as:
- male vs. female doctors, and
- those with and without the MRCGP qualification.

Results

Ninety-nine out of the possible 100 questionnaires were completed and suitable for analysis. There were no statistically significant differences between the characteristics of the doctors (gender, age, years in practice) in the SDM or risk communication training groups immediately before the first intervention phase.

Baseline assessments

Doctors indicated support for the importance of patient involvement in decision making (mean score 2.1, SD 1.0, on a scale of 1–5 where 1 indicates greater importance). They also felt that patients respond positively to such approaches (mean score 2.4, SD 0.8). They appeared slightly less likely to report that they frequently involved patients in decision making (mean score 2.6, SD 1.0) or that they felt competent in such approaches (mean score 2.7, SD 0.9). Doctors also reported modest levels of confidence in discussing risk information with patients (mean score 2.7, SD 1.0), with some evidence of greater confidence in discussing hormone replacement therapy (mean score 2.6, SD 1.0) than atrial fibrillation (mean score 3.1, SD 0.8) with patients.

Changes associated with training

There were no statistically significant differences in these attitudes or confidence ratings associated with the training interventions. That is, there was no evidence, for example, that attitudes to patient involvement became more positive among the doctors receiving SDM training first. Similarly, there was no evidence that confidence in discussing risk information increased more in the doctors receiving the risk communication training and tools first.

At the whole group level, doctors indicated favourable evaluations of the training interventions. In particular they expressed higher levels of confidence after each training stage although this did not persist (i.e. when next assessed before the following stage of the trial). These applied to both involving patients in decisions and discussing risk information with their patients. Doctors expressed intentions to do things differently in their practice (mean score 2.0, SD 0.6) after each intervention stage. For all these analyses, however, the nature of the sample is a small cohort and statistical analyses are probably inappropriate. Some trends in the response data may be observed, as will now be described.

One month after the end of the study, doctors expressed more favourable responses than at the start to patient involvement (see Table 1 – ‘after second intervention’). However, there was less evidence of increased confidence overall in discussing risk information with patients (mean score 2.5, SD 0.8) or that patients expect to discuss such information (mean score 2.8, SD 0.8). Doctors reported that they felt the formats of the information (the risk ‘tools’) were helpful (mean score 2.1, SD 0.8) and that the information was applicable to their patients (mean score 2.4, SD 1.0, scores reversed for comparability with other figures in this section). Difficulties in having the information available when needed to discuss with patients remained a problem to some (despite having the tools in a file in the consulting room; mean score 3.1, SD 1.4). All agreed that lack of time remained a problem in attempting to adopt such communication approaches in consultations (mean score 1.6, SD 1.0).

In the month itself after the second intervention phase of the study, doctors reported that they had used the risk communication tools with patients on average 5.7 times each (SD 2.7).

Effect modifiers

Differences in responses between the 12 male and eight female doctors participating in the study were
evident. There were no statistically significant differences at baseline. There was also little evidence of differences in attitudes or confidence at the end of the first intervention. Before and after the second intervention (questionnaires 3, 4 and 5), however, female doctors in the study indicated greater support for patient involvement.

- They rated patient involvement as more important [statistically significant in questionnaire 4 (1.4 vs. 2.2 mean scores; \(P = 0.04\)) and trend in questionnaire 3 (1.6 vs. 2.5; \(P = 0.05\))].
- Female doctors felt patients were more likely to respond positively to involvement (Q3: 2.1 vs. 2.9; \(P = 0.02\); Q4: 1.6 vs. 2.6, \(P < 0.01\); Q5: 1.9 vs. 2.4, \(P = 0.03\)).
- Female doctors felt more competent in SDM after the second training intervention (Q4: 1.9 vs. 2.5; \(P = 0.03\)).

There were some differences in relation to discussion of risk information:

- Female doctors indicated greater confidence in discussing risk information about hormone replacement therapy with patients, with the gap widening during the study (not statistically significant in Q1; Q2: 1.5 vs. 2.2, \(P = 0.04\); Q3: not significant; Q4: 1.5 vs. 2.3, \(P < 0.01\)).
- These differences between female and male doctors were not evident for confidence in discussing risks of atrial fibrillation.
- After the trial, female doctors reported using the risk tools with fewer patients than male doctors (mean score 3.9 vs. 6.8). Whilst this result was not statistically significant, the trend in this finding appears inconsistent with the above findings of more positive attitudes to patient involvement and greater perceptions that patients respond to it positively.

There were no statistically significant differences between the 14 doctors who had the MRCGP qualification compared to the six who did not for these variables of attitudes and confidence.

### Discussion

#### Principal findings

Doctors responded positively to the communication skill interventions during the study, though at a more general level than could be attributed to the content of each separate training intervention itself. Reported confidence and frequency of adopting these approaches in practice rose during the course of the trial as a cohort effect. There was no evidence of changes associated with the specific interventions in terms of doctors’ confidence in discussing risk information after the risk communication intervention, or attitudes to patient involvement after the SDM intervention. Changes appeared more evident among female doctors participating in the study, but were not associated with MRCGP (i.e., postgraduate vocational) qualification. The doctors indicated that the risk information packs were applicable and had used them occasionally with patients outside the trial.

#### Strengths and weaknesses of this study

The study was able to monitor closely any changes in doctors’ attitudes, confidence and views through this

### Table 1 Attitudinal and confidence responses of doctors to patient involvement or risk communication before and after the interventions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean (SD) before first intervention (Evaluation 1)</th>
<th>Mean (SD) after second intervention (Evaluation 5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importance of patient involvement in decision making</td>
<td>2.1 (1.0)</td>
<td>1.7 (0.7)</td>
</tr>
<tr>
<td>Patients respond positively to involvement in decision making</td>
<td>2.4 (0.8)</td>
<td>2.2 (0.6)</td>
</tr>
<tr>
<td>I frequently involve(d) patients in decision making</td>
<td>2.7 (1.1)</td>
<td>2.2 (0.7)</td>
</tr>
<tr>
<td>I feel confident in discussing risk information in general with patients</td>
<td>2.7 (1.0)</td>
<td>2.5 (0.8)</td>
</tr>
<tr>
<td>Time is a problem in involving patients in decision making</td>
<td>1.8 (1.1)</td>
<td>1.6 (1.0)</td>
</tr>
</tbody>
</table>

Lower scores indicate respondents more strongly agreed with the item.
regular assessment schedule, including pre- and post-training at each stage. A randomized comparison between the doctors randomized to receive SDM or risk communication training first was possible. However, the group sizes were small, making comparisons and inferences very limited because of lack of power. The data were not intended to be taken in isolation of other patient-based (Edwards et al. 2004), economic (Cohen et al. 2004) and qualitative evaluations (Davis et al. 2003) of the study. Most attitudes and confidence ratings showed positive changes during the course of the trial as a cohort effect. This may have been a response to the shared content and process of the training interventions, or a true Hawthorne effect (Wickstrom & Bendix 2000).

Findings in context

There are few data available from training in SDM or risk communication and evaluation with professional participants, despite the limited application of these approaches in routine practice (Guadagnoli & Ward 1998). The difficulties of wider implementation have tended to focus on structural barriers (Holmes-Rovner et al. 2000), and data here support this – such as time constraints, and difficulties in using tools made available for use in consultations. The accompanying paper indicates that specific changes in the content of the training (SDM or risk communication) may lead to significant changes in patterns of resource use (Cohen et al. 2004). However, these findings indicate that the content of the training appears less influential on the outcomes in this paper – doctors’ attitudes, confidence, etc. – and these outcomes improved through participation in the communication skills programme probably at a more generic level.

Implications for policy and practice

The favourable response from participating doctors is encouraging for those commissioning, planning or delivering continuing professional development programmes. These doctors appeared responsive and willing to acquire the skills in a complex and time-consuming study (Edwards et al. 2004), and these findings were supported by the qualitative evaluations (Davis et al. 2003). Furthermore, they have given some initial indication that the risk communication materials were acceptable to doctors (and their patients as estimated by the doctors). In particular, the risk communication materials were found to be reasonably acceptable (increasing doctors’ confidence) and applicable for use in the short consultations that characterize UK general practice, and perceived to be effective in conveying information (Davis et al. 2003). There is increasing attention to the provision and use of risk communication tools – or ‘decision aids’ (O’Connor et al. 2003) – to inform and engage patients more in decisions about their treatment of care options. The findings here lend support to efforts to make these more widely available and for a wider range of clinical conditions than is currently the case.

Further research

As above, the sample size here is small and the findings require confirmation from larger samples and in more detail. As training and development programmes themselves evolve, it will be worth examining whether more specific training will lead to more specific improvements in attitudes and confidence – especially with the SDM and risk communication components themselves.

Conclusion

Doctors indicated positive views about SDM and the risk information packs and their application in routine practice. Reported confidence and frequency of adopting these approaches in practice rose during the course of the trial as a cohort effect, rather than associated with the specific training components. Both the acquisition of skills [from Elwyn et al. (2004) and seen here as greater confidence] and the application of risk communication tools (‘decision aids’) can be taken as encouragements for policy and practice developments. The findings, however, should be confirmed with larger and more widely representative samples of professionals.

Acknowledgements

We gratefully acknowledge the commitment of the 20 participating doctors from general practices across
Gwent, South Wales, and their practice staff, and the 800 participating patients; also the secretarial and clerical assistance of Claire Darmanin, Sheila Morris and Sali Morgan in administering the study; and the guidance of the study Steering Group members. This study was funded by the Department of Health ‘Health in Partnership’ Programme 1999–2002.

References


