What do patients really want? Patients' preferences for treatment for angina

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Abstract

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Objective To measure preferences for angina treatments among patients admitted from accident and emergency with acute coronary syndrome.

Background Evidence suggests variability in treatment allocations amongst certain socio-demographic groups (e.g. related to age and sex), although it is unclear whether this reflects patient choice, as research on patients' treatment *preferences* is sparse. Given current policy emphasis on 'patient choice', providers need to anticipate patients' preferences to plan appropriate and acceptable health services.

Design Self-administered questionnaire survey.

Setting In-patients in a UK hospital.

Participants A convenience sample of 53 newly admitted patients with acute coronary syndrome. Exclusion criteria were: a previous cardiologist consultation (including previous revascularization); a clinical judgement of too ill to participate; post-admission death; non-cardiac reasons for chest pain.

Main outcome measures Patients' preferences for coronary artery bypass graft (CABG); angioplasty; and two medication alternatives.

Results Angioplasty was the preferred treatment (for 80% of respondents), and CABG was second (most preferred by 19%, but second most preferred for 60%). The two least preferred (and least *acceptable*) treatments were medications. The majority of patients (83%) would 'choose treatment based on the extent of benefits' and 'accept any treatment, no matter how extreme, to return to health'. There were some differences in preference related to age (> 70 years preferred medication to a greater degree than < 70 years) and sex (males preferred CABG surgery more than females).

Conclusions There was general preference for procedural interventions over medication, but most patients would accept any treatment, however extreme, to return to former health. There was some evidence of differences in preferences related to age and sex. Furthermore, most patients preferred to have *some* input into treatment choice (e.g. nearly half wanted to share decision responsibility with their doctor), with only 4% preferring to leave the decision *entirely* to their doctor. Given these findings, and past findings that suggest there may be variability in treatment allocation according to certain socio-demographic factors, this study suggests a need to develop and use preference measures, and makes a step towards this.

Introduction

The elicitation of patients' preferences for treatment is as important as the body of evidence about costs and effectiveness. However, information on patients' preferences for treatment, where there is clinical uncertainty, or alternatives exist, is sparse. This paper presents a unique survey exploring the treatment preferences of patients newly admitted with acute coronary syndrome. In an era of 'patient choice', healthcare providers need more understanding of patients' level of knowledge, values and fears regarding treatment.

Background

In the UK, coronary heart disease accounts for around 30% of deaths in males and 23% in females; 83% of these deaths are among people aged 65 years or older.¹ Treatment ranges from conservative medical management to more or less invasive revascularization procedures, with differing profiles of benefits and risks. Patients are likely to hold different attitudes to the varying treatments.

Treatment costs differ, with medical management being the cheapest, but from a relatively short-term perspective.² Costs are converging as angioplasty becomes more expensive with the introduction of drug eluting stents, and surgery costs decrease with less invasive operations, reduced morbidity, hospital stay, resource use and cost.^{3,4} Angioplasty and coronary artery bypass graft (CABG) surgery can alleviate the

impact of angina on quality of life, but neither have clear cut advantages across the range of patient outcomes or quality of life.⁵⁻⁸ While the risks, duration of benefits and costs of existing treatments may vary, there has been over-generalization of evidence from trials (particularly of angioplasty and stenting) to the population at risk, who are largely excluded from trials.⁹

Variations in coronary intervention

Access to cardiac interventions (e.g. revascularization) has been documented to vary with patients' characteristics, with older patients and women being less likely to receive invasive interventions.¹⁰⁻¹³ The choice of procedure depends on the clinician's calculation of patients' risks and benefits, variations in decision-making styles and processes, and facilities available. Cardiologists may also be reluctant to refer patients to surgical colleagues if they believe they are able to provide satisfactory treatment.

Lower rates of cardiac intervention among older people and women could be caused by a lack of applicable evidence from trials, ageism, differentials in symptom description and reporting, a reluctance by these patients to accept invasive treatments, and/or younger people, and men, being more likely to want, request and be referred for, interventions.^{13,14} A limited body evidence, however, shows that there is no evidence that women prefer less invasive approaches than men.¹⁵⁻¹⁷ Factors influencing treatment preferences need further investigation.

Patients' preferences

Information on patients' (informed) preferences for type of treatment, where there is clinical uncertainty, or alternatives exist, is sparse.¹⁸ This is needed to inform decision-making and to discourage clinicians from imposing their preferences on patients, without due consideration of the harms and benefits of alternative treatments, and patients' values. Where quality of life, life expectancy and equity issues are relevant, patients' preferences are as important as the body of evidence about costs and effectiveness.

Aim and method

The aim of this study was to explore patients' preferences for treatment for angina among new in-patients with acute coronary syndrome (who had not discussed potential treatments with a cardiologist, and prior to major investigations where indicated).

Method

The method was a questionnaire survey of in-patients with acute coronary syndrome, admitted from the Accident and Emergency Department at Bristol Royal Infirmary for investigation of chest pain. Participants were recruited between July 2005 and July 2006. Patients were approached post-admission, when their condition had been stabilized, by a member of the research team, invited to participate and complete two questionnaires. The intent was to recruit a consecutive sample of eligible patients. However, strategic difficulties identifying all eligible patients on admission to a busy hospital meant the sample was, in effect, a convenience sample. Nevertheless, there was no intentional selection other than applying the eligibility criteria; patients were approached when staff were available but not on the basis of their presenting characteristics. The project was approved by Local Research Ethics Committees of Southmead, Bristol.

Patients were given an information leaflet about the study, and an information booklet

describing the risks and benefits of four treatments for angina: CABG; angioplasty; a combination of drugs, taken several times a day to prevent the symptoms occurring but which would not improve or cure the condition; a combination of drugs, taken several times a day to prevent the symptoms occurring *and* partly to reduce the risks of a heart attack. The implications of no treatment were described. The booklet was based on British Heart Foundation literature and information from local cardiologists and surgeons. Written informed consent was not deemed to be necessary as a patient could decline to complete the questionnaire. Patients who agreed were asked to read the information sheet and the booklet before completing the questionnaires.

Measures

The questionnaires were the Coronary Revascularization Outcome Questionnaire (CROQ),¹⁹ including symptoms and impact on life, and a questionnaire about treatment preferences. The CROQ included items, with a 4-week time-frame, on the bother caused by symptoms (five items), frequency of medication (one) and symptoms (one), trouble caused by the condition (one), activities of daily living (eight), impact of the condition on social relationships/activities (four), psychological distress (10) and cognitive problems (three); 3-, 5- and 6-point response scales were used.

The items in the preferences questionnaire were derived from semi-structured interviews with patients in primary care, which identified patients' *reasons* for preferring different angina treatments.^{20,21} The questionnaire comprised attitude statements on treatment for angina with medication (16 items), coronary artery bypass surgery (19), angioplasty/stents (14) and five general items, all of which were rated on 5-point scales ('strongly agree' to 'strongly disagree'). Preference items were summed, with reverse coding (where required) to form preference sub-scales for medication, angioplasty and surgery, with higher scores equalling more negative attitudes (preferences). The summed

preference scores included 15 items for medication overall, 19 for surgery and 13 for angioplasty (two items – one on medication and one on angioplasty – were subsequently considered to be ambiguous and were dropped from the analysis).

Patients were asked to place the four treatments described in the information booklet in rank order of their preferences. Additional questions covered treatment acceptability, preferred mode of decision-making,²² self-assessed health, quality of life and socio-demographic characteristics.

Analysis

The dependent variables were patients' ranked treatment preferences, and the preference items representing patients' reasoning. As the study was largely exploratory, basic descriptive analyses (frequency distributions and means) were conducted, along with *t*-tests to examine the associations between preference variables and patients' socio-demographic and health status characteristics. Cronbach's alpha was used to test the reliability of preference scale items, which proved acceptable. The general consensus is that Cronbach's α should be >0.70 , if a scale is internally consistent, but not too high as this suggests item redundancy. Cronbach's alphas for the three sub-scales were α : 0.794 for the 15 medication items (inter-item correlations: -0.092 to 0.789); $\alpha = 0.849$ for the 19 surgery items (inter-item correlations: -0.266 to 0.438); $\alpha = 0.865$ for the 13 angioplasty items (inter-item correlations: 0.091 – 0.659).

Results

The study aimed to recruit a convenience sample of patients with acute coronary syndrome, who had not discussed potential treatments with a cardiologist, and prior to major investigations where indicated (e.g. angiography). Exclusion criteria were:

- 1 Previous consultation with a cardiologist (including previous revascularization) ($n = 33$)

- 2 Too ill to participate (12).
- 3 Post-admission death (1).
- 4 Non-cardiac reasons for chest pain (15).

No information was available for 12 patients, leaving 82 believed to be eligible. Of the 29 non-responders, eight refused to take part, one could not speak/read English, two had poor vision, and 18 were discharged before they could be approached. Fifty-three (65%) eligible patients returned completed questionnaires.

Table 1 shows the characteristics of this sample. The age range of respondents was 31–85 years (Mean 63.7; SD 11.1; median 64); 62% (33) were male; 71% (36) were home owners and 53% (27) left school before age 16 years. About a quarter (26%, 14) reported that their health status was 'excellent' or 'very good', and 41% (22) reported it as 'good' (rather than 'fair', 'poor' or 'very poor'); 43% (23) reported that their quality of life overall was 'so good, it could not be better' or 'very good', and 35% (19) reported it as 'good' (rather than 'bad', 'very bad', 'so bad, it could not be worse').

Table 2 shows patients' most preferred treatment was angioplasty (most preferred by 80%), followed by CABG (most preferred by 19%, but second most preferred by 60%). The two least preferred treatments involved medication. Angioplasty, followed by CABG, was also the most *acceptable* treatment to patients, with 46% (24) ranking angioplasty as 'very acceptable', 46% (24) as 'acceptable' or 'fairly acceptable' and 8% (4) as 'hardly acceptable'; 19% (10) ranked CABG as 'very acceptable', 73% (38) as 'acceptable' or 'fairly acceptable' and 8% (4) as 'hardly acceptable'. In contrast, just 6% (3) ranked 'medication for prevention and risk reduction' as 'very acceptable', while 94% (47) ranked it as 'acceptable' or 'fairly acceptable'; 4% (2) ranked 'medication for symptom relief only' as 'very acceptable' and 82% (41) ranked it as 'acceptable' or 'fairly acceptable', 10% (5) as 'hardly acceptable' and 4% (2) as 'not at all acceptable'.

While the data in Table 2 point to patients' relative treatment preferences, they do not speak to the strength of their preferences for the

Table 1 Characteristics of respondents

	% (n)
Age (years)	
31 to 60	33 (17)
60 to < 70	33 (17)
70 to < 85	33 (17)
Sex	
Male	62 (33)
Female	36 (19)
Housing tenure	
Home owner	71 (36)
Rents home	29 (15)
Age left school (years)	
< 16	53 (27)
16–18	37 (19)
18+	10 (5)
Bothered by heart symptoms summed scale (CROQ)	
4–12 bothered a lot	31 (13)
13–18	40 (17)
19–25 not at all bothered	29 (12)
Heart condition interferes with daily activities (ADL) summed scale (CROQ)	
8–12 limited a lot	21 (9)
13–18	40 (17)
19–24 not limited at all	38 (16)
Heart condition interferes with relationships and activities summed scale (CROQ)	
4–10 all of the time	26 (12)
11–14	34 (16)
15–20 none of the time	40 (19)
Worried, depressed, frightened by heart condition summed scale (CROQ)	
10–25 all of the time	22 (10)
26–35	39 (17)
36–50 none of the time	39 (17)
Forgetful, lack of decision skills, difficulty concentrating summed scale (CROQ)	
4–9 all of the time	17 (8)
10–14	46 (21)
15–18 none of the time	37 (17)
Health status	
Excellent	9 (5)
Very good	17 (9)
Good	41 (22)
Fair	20 (11)
Poor	7 (4)
Very poor	6 (3)

different treatments. For example, though patients might prefer one treatment to the others, they might actually be fairly positive about all of the treatments, or they might be

Table 1 (Continued)

	% (n)
Quality of life	
So good, could not be better	2 (1)
Very good	41 (22)
Good	35 (19)
Alright	11 (6)
Bad	9 (5)
Very bad	2 (1)
No. of respondents	42–53

CROQ, Coronary Revascularization Outcome Questionnaire.
Rounding of percentages, and missing values, mean that the percentages do not necessarily sum to 100% for every question.

fairly positive about the most preferred treatment, but actually very negative about the others, and so on. The responses to the preferences questions shed some light on this, as well as on the specific *reasons* for positive or negative preferences. Scores on these sub-scales also show a preference for the two procedural treatments over medication (mean score for angioplasty was 2.36, SD 0.49, and for CABG was 2.38, SD 0.45, while for medication the mean score was 2.89, SD 0.45). However, all of the means were below the mid-point (3.0), indicating that patients were by and large positive towards all the treatment options to a greater or lesser extent.

Our interest is in whether there are patterns within treatment preferences, given evidence of variability in treatment allocations amongst certain socio-demographic groups. Our main interests lie in differences related to sex and age. Table 3 shows differences in preferences scores (summed within each sub-scale), according to age (< 70 years vs. ≥ 70 years) and sex (male vs. female).

Table 3 reveals some interesting differences (*higher* summed scores indicate *lower* preferences). Independent sample *t*-tests reveal that those under 70 appear to be significantly less positive about medication than those above 70 years or older ($P = 0.005$), though there are no differences across age for the surgical treatment options. Analysis also reveals that males appear to prefer CABG surgery significantly more than do females ($P = 0.01$), with no differences between sexes for the other treatments.

Table 2 Ranked treatment preferences (row %)

	Most preferred, % (n)	2nd most preferred, % (n)	3rd most preferred, % (n)	Least preferred, % (n)	No of respondents, (n)
Angioplasty	80 (39)	12 (6)	4 (2)	4 (2)	49
CABG surgery	19 (9)	60 (29)	15 (7)	6 (3)	48
Medication for prevention and risk reduction	12 (6)	16 (8)	67 (34)	6 (3)	51
Medication for symptom relief only	4 (2)	10 (5)	4 (2)	81 (39)	48

CABG, coronary artery bypass graft.

Table 3 Preferences for treatment by age and sex (summed item scores)

	Age (years)		t-tests
	< 70 (SD) [n]	≥70 (SD) [n]	
Prefers medication	3.02 (0.39) [31]	2.62 (0.46) [15]	2.989 d.f. = 44 <i>P</i> = 0.005*
Prefers angioplasty	2.32 (0.02) [32]	2.44 (0.63) [14]	−0.754 d.f. = 44 <i>P</i> = 0.455
Prefers surgery	2.37 (0.41) [31]	2.42 (0.53) [14]	−0.374 d.f. = 43 <i>P</i> = 0.711
	Sex		
	Male (SD) [n]	Female (SD) [n]	
Prefers medication	2.83 (0.44) [27]	2.97 (0.20) [19]	−1.016 d.f. = 44 <i>P</i> = 0.315
Prefers angioplasty	2.28 (0.52) [29]	2.49 (0.43) [17]	−1.460 d.f. = 44 <i>P</i> = 0.151
Prefers surgery	2.26 (0.46) [29]	2.60 (0.32) [16]	−2.585 d.f. = 43 <i>P</i> = 0.013*

Preference items are mean scale scores: medication (15 items), CABG surgery (19 items), angioplasty (13 items) all on 5-point Likert scale (1–5) strongly agree to strongly disagree (with reverse coding where required).

**P* < 0.05.

The responses to the preference items may shed light on specific *reasons* for preference rankings (see Table 4). If we consider the responses to the questions on medication, although it appears that most patients were fairly positive about this treatment option, there was some concern about certain aspects. Just over half of patients agreed that medication ‘doesn’t really solve the problem’, while only about one-quarter agreed that they preferred medication over ‘surgery’ because of its ease of use (and the figure was even less – just 13% – when compared to angioplasty). Other issues with medication that were of particular concern to some participants were the ease of understanding medication, and the difficulty of ‘organizing regular prescriptions’ (in each case, the proportions agreeing that these issues were problems were similar to those disagreeing).

If we next consider responses to the questions on angioplasty, it is clear that this treatment was

considered highly favourably. For example, only very few *disagreed* that angioplasty was ‘a good thing’, would improve ‘well-being’ or would ‘prolong life’ (< 10% for each of these, and for most other statements about potential benefits of the treatment). There was only a moderate degree of reticence: for example, about one-third agreed that they would only consider the treatment if their condition worsened, and a similar proportion admitted that they were ‘frightened’ of the procedure. For CABG surgery, a similar pattern emerges: the large majority agreed with positive statements about the treatment’s benefits (e.g. prolonging life, improving their ability to do the things they like to do, and avoiding being a burden on others). As with angioplasty, a moderate number suggested, however, that they would only take the treatment if their condition worsened, and nearly one-half admitted to being frightened of surgery.

Table 4 Responses to preference statements (row %; base numbers: 50–53)

	'Strongly agree' or 'agree'	Neither agree or disagree	'Strongly agree' or 'disagree'
Preference items	% (n)	% (n)	% (n)
Medication			
Medication would be very good to control symptoms	74 (39)	22 (12)	4 (2)
It is easy to get used to most medication	64 (34)	21 (11)	15 (8)
I like to be in control of my own medication	56 (29)	35 (18)	10 (5)
Medication does not really solve the problem	53 (28)	40 (21)	7 (4)
Medication is not usually very risky	51 (27)	34 (18)	15 (8)
Medication would help me to lead an active life	45 (23)	45 (23)	10 (5)
Having to carry medication when outside home would be troublesome	38 (20)	13 (7)	49 (26)
Organizing regular prescriptions with any medication can be a nuisance	38 (20)	24 (13)	38 (20)
Most medication is very difficult to understand	36 (19)	30 (16)	34 (18)
The side-effects of medication are worse than those from angioplasty	35 (18)	40 (20)	25 (13)
The side-effects of medication are worse than those from surgery	33 (17)	58 (30)	9 (5)
With medication the side-effects are often worse than the condition	29 (15)	52 (27)	19 (10)
I am constantly afraid of forgetting my medication	29 (15)	21 (11)	50 (26)
I prefer medication because it is easy, even if it is less effective than surgery	24 (12)	24 (12)	52 (26)
I prefer medication as it is easy, even if it is less effective than angioplasty	13 (7)	32 (17)	55 (29)
Taking medication would be a real hassle	12 (6)	38 (20)	50 (26)
Angioplasty			
Overall, angioplasty is a good thing	84 (43)	14 (7)	2 (1)
Angioplasty would improve my well-being	76 (39)	20 (10)	4 (2)
Angioplasty would improve my ability to do the things I would like to do	75 (39)	21 (11)	4 (2)
Angioplasty gets treatment over with quickly	68 (34)	30 (15)	2 (1)
Angioplasty would prolong my life	63 (33)	31 (16)	6 (3)
People who have angioplasty seem to do well	61 (31)	37 (19)	2 (1)
The balance of risks and benefits of angioplasty seem better than the risks and benefits of medication	58 (30)	38 (20)	4 (2)
Angioplasty gives the best chance of cure	53 (27)	33 (17)	14 (7)
Once you have had angioplasty there is no going back	35 (18)	33 (17)	32 (16)
I would only consider angioplasty if my condition worsened	35 (18)	13 (7)	52 (27)
I am frightened of angioplasty	31 (16)	31 (16)	38 (20)
I would put off having angioplasty	12 (6)	25 (13)	63 (33)
Angioplasty is a last resort	12 (6)	42 (22)	46 (24)
I am too old to have angioplasty	4 (2)	13 (7)	83 (43)
CABG surgery			
Surgery gives the best chance of cure	79 (41)	19 (10)	2 (1)
I would have surgery if I could avoid being a burden on others in the long-term	79 (41)	11 (6)	10 (5)
Surgery would prolong my life	78 (39)	18 (9)	4 (2)

Table 4 (Continued)

	'Strongly agree' or 'agree'	Neither agree or disagree	'Strongly agree' or 'disagree'
People who have surgery seem to do well	77 (41)	23 (12)	–
Surgery would improve my ability to do the things I would like to do	77 (40)	17 (9)	6 (3)
The pain of surgery would not put me off having it	73 (38)	19 (10)	8 (4)
Scars from surgery would not bother me	73 (38)	10 (5)	17 (9)
Overall, surgery is a good thing	66 (35)	32 (17)	2 (1)
Surgery gets the treatment over with quickly	62 (33)	38 (20)	–
The balance of risks and benefits of surgery seem better than the risks and benefits of medication	60 (32)	34 (18)	6 (3)
Surgery would improve my well-being	60 (32)	36 (19)	4 (2)
I am frightened of surgery	48 (25)	26 (14)	26 (14)
Once you have had surgery there is no turning back	44 (23)	31 (16)	25 (13)
I would only consider surgery if condition worsened	38 (20)	23 (12)	39 (21)
I hate the idea of being cut open	30 (16)	32 (17)	38 (20)
Surgery is a last resort	25 (13)	35 (18)	40 (21)
I would put off having surgery	14 (7)	17 (9)	69 (35)
Having a general anaesthetic is just too risky	13 (7)	27 (14)	60 (31)
I am too old to have surgery	6 (3)	17 (9)	77 (40)
Other			
I would choose my treatment mainly on the extent of the benefits	83 (44)	13 (7)	4 (2)
I would accept any treatment, no matter how extreme, to return my health to what it was	83 (44)	13 (7)	4 (2)
I would choose my treatment mainly on the basis of the risk and severity of side-effects	65 (34)	25 (13)	10 (5)
I would do anything to avoid a hospital stay	34 (18)	23 (12)	43 (23)
I dislike the idea of placing my health entirely in the hands of others	27 (14)	27 (14)	46 (25)

CABG, coronary artery bypass graft.

In spite of these few slight negatives, there was a high degree of consensus amongst patients that 'I would chose my treatment mainly on the extent of the benefits', and 'I would accept any treatment, no matter how extreme, to return my health to what it was' (only 4% – or two patients – disagreed with these two statements). It seems that for most, the greater benefits lie with the procedural interventions, and the fear they have is insufficient to deter them from preferring these to medication (which has a number of other small negatives too, as noted above).

It is worth noting that we found no significant differences in patients' responses to individual preference items by patients' characteristics,

health status, quality or impact on life. For example, there were no age or sex differences on items such as 'surgery is a last resort', 'I'm too old to have surgery' (or angioplasty), 'I'm frightened of surgery', 'the pain of surgery would not put me off having it', 'scars from surgery would not bother me' and 'having a general anaesthetic is just too risky'. However, the sample was relatively small, so it is not surprising that there were no significant differences for the individual items that comprised the preferences sub-scales.

Finally, it is worth noting that few people preferred to make the treatment decision: 49% (26) preferred to share responsibility for decisions with the doctor, 30% (16) preferred the

doctor to make the decision after considering their opinion; 4% (2) preferred to leave the decision to the doctor, 4% (2) preferred to make the final decision themselves, and 13% (7) preferred to decide after considering the doctor's opinion. There were no associations between views on treatment decision-making and patients' characteristics.

Discussion

The study presented here was largely exploratory, looking at patient preferences for various angina treatments and the reasons behind these in light of evidence of variability (and potential inequity) in treatment allocation. Angioplasty was ranked higher than the more invasive CABG by most respondents as their preferred treatment (consistent with its higher acceptability), which might be explained by patients' greater fear of surgery, supported by more patients (almost half) being frightened of surgery than angioplasty (almost a third). However, the mean difference between the scores for these treatments on the preference sub-scales was low (2.36 vs. 2.38). Though patients were consistently less positive about medication treatments, the majority nevertheless agreed that 'I would accept any treatment, no matter how extreme, to return my health to what it was'.

There were few associations between individual preference items and patients' characteristics, but the small sample size and the large number of comparisons tested mean that this should be interpreted cautiously. However, there was some evidence of differences related to age and sex on two of the sub-scales, with older patients preferring medication more than younger ones, and males preferring CABG surgery more than females. These results are particularly interesting in that they appear to be consistent with actual variability in treatment allocation, given that older patients and women are less likely to receive invasive interventions.¹⁰⁻¹³ Past explanations for these variations in treatment have centred upon inequity – but could it be that patients' preferences are somehow influencing what treatments they are given, or are these

results simply (and fortuitously) coincidental? We cannot answer this question on the basis of current data: clearly, there is a need to access health professionals to determine the factors influencing their decision-making (though decision processes may not be consciously retrievable, so patient influences may not be apparent to the doctors themselves). Our suspicion is that real inequity does exist, and that preferences rarely specifically and directly influence treatment realities. Regardless, it is clear that a larger study is needed to confirm these differences, and to determine the underlying reasons for them. In particular, we hope to continue the development of our preferences instrument (which data here suggest has good reliability and validity, in terms of its results corresponding to answers to other preferences questions) in the hope that this might prove a useful tool for ascertaining patient treatment perspectives. Furthermore, a larger sample would enable us to study other important issues, such as potential framing and order effects related to the information in the booklet explaining the treatment options.

Finally, it is worth noting that, while few respondents preferred to make treatment decisions themselves, the large majority wanted doctors to take their views into account. If patients' preferences are to be incorporated into final treatment decisions, doctors need to elicit these preferences and incorporate them into joint treatment decisions – and it is to be hoped that the preferences scale used in this study, further developed, might be of use for this purpose. Although information about patient preferences may be unrealistic in an era of healthcare rationing, public consultation is a mark of good policy practice.^{23,24} For example, part of the NHS modernization plan included setting up the Expert Patients' Programme, which aims to involve people more in the way their health care is delivered and strengthen patient choice.²³ The need for patient involvement in treatment decisions was also apparent from a survey which reported that two-thirds of UK patients said that their doctor did not ask for their ideas and opinions on treatment and care, compared with half of patients elsewhere.²⁵ There are several

conditions where patients may be faced with making a decision between taking lifelong medication or undergoing surgery (e.g. chronic gastric reflux disease). However, the standardized measurement of patients' preferences has been neglected. Indeed, even in clinical trials which have included patient preference arms, the majority of studies do not indicate how preferences were measured.²⁶ With current policy emphasis on 'patient choice', providers need to anticipate patients' treatment preferences to plan appropriate and acceptable health services.

Conflict of interest

None.

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Ethical consent

The project was approved by Local Research Ethics Committee of Southmead, Bristol (reference: 04/Q2002/111).

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