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Health care beliefs and the willingness to prioritise: the impact of deliberation

R. Edlin¹, A. Tsuchiya^{1,2}, P. Dolan³

1. Health Economics and Decision Science, School of Health and Related Research, University of Sheffield

2. Department of Economics, University of Sheffield

3. Tanaka Business School, Imperial College London

1. Introduction

In consumption settings, the assumption that individuals behave as utility maximisers is defended by the routine nature of consumption choices. Individuals are expected to discover the value of particular choices to them through exposure to cases where a particular commodity is, or is not, consumed. Experience provides a feedback mechanism that allows individuals to decide upon the value of particular goods. So long as this provides sufficient information about the impact of the commodity and individuals choose in a rational fashion then they can be argued to be the best judges of their own welfare.

Agencies allocating scarce resources on behalf of society may attempt to use individual preferences when making decisions. However, it is less clear whether health-based preferences can be given the same interpretation as in standard consumption contexts. Commodity values are typically inferred from real-world data, and are arguably experience based; health state values used by agencies such as the National Institute for Health and Clinical Excellence are typically inferred from hypothetical questions and based on population judgements rather than individual experiences. Further, when comparing health across individuals then preferences cannot be based on individual experience since there is no practical forum to gain such experience.

Though such preferences are unlikely to indicate personal benefit as reliably as those underlying regular consumption choices, they may still be judged important inputs into decision making. Where such preferences are to be found, the questions of how to elicit them become important. Whilst it is not possible for experience to provide feedback on values, it is possible that some form of deliberation may be able to. If such deliberation has the effect of improving the information on which a decision is made, then it arguably provides better preferences.

Economics and psychology typically approach the issue of choice in groups differently. Economics assumes that individuals choose according to self interest and focuses on those cases where an individual's choice becomes pivotal in the group's decision according to different methods of combining

preferences. In combining preferences, we would typically expect that a consensus decisions would generally involve a compromise amongst the recommendations that individuals would make independently. For instance, Dolan, Cookson and Ferguson (1999) observed a cohort of the public who took part in a focus group. They found that many respondents reversed an earlier preference to give lower priority to those who were arguably partially responsible for their own illnesses – smokers, heavy drinkers, and illegal drug users. They suggest that “the public’s views about setting priorities in health care are systematically different when they have been given an opportunity to discuss the issues”. They conclude that the value of surveys not allowing respondents time or opportunity to reflect may be doubtful.

However, on the other hand, psychologist may be more sceptical about the benefits of group discussion. The phenomenon of group polarisation is well-established within psychology (Moscovici and Zavalloni, 1969). This argument suggests that group interaction tends to exaggerate attitudes within a group. For example, “risky shifts” occur where a group’s decisions are riskier than the average of individual’s own decisions in isolation (Stoner, 1961). Similar types of changes see mock juries made up of authoritarians imposing more severe penalties than they recommended as individuals, just as less authoritarian mock juries give still more lenient penalties (Bray and Noble, 1978). Such changes are not necessarily specific to lay judgements: analysis of US civil liberties cases suggests that three-member judicial panels are significantly more libertarian in approach than individual judges (Main and Walker, 1973)

A variety of mechanisms were proposed to explain this phenomenon (Pruitt, 1971a, 1971b), of which two persist and are considered below. In his meta-analysis Isenberg (1986) finds that a combination of both theories explains group polarization, but that experiments examining persuasive argument theory tend to find larger effects. As such, neither explanation can be excluded.

(Note that a third theory explaining risky shifts as due to “diffusion of responsibility” was used in a recent American Economic Review article highlighting similarities between risk-based shifts and the Allais Paradox (Eliaz, Ray and Razin, 2006). It’s applicability to non-risk settings is less clear.)

Social comparison theories

Isenberg (1986) defines social comparison theories (SCT) as those assuming that individuals “are constantly motivated both to perceive and to present themselves in a socially desirable light. In order to do this, an individual must be continually processing information about how other people present themselves, and adjusting his or her own self-presentation accordingly.” Under SCT individuals “preferences” represent not only the underlying values of an individual but also an element of gaming – the intentional misrepresentation of her preferences to improve their social acceptability.

Whether group polarisation and hence “deliberative preferences” provide better choices under SCT may depend on the details of the situation. Here, an individual may have an incentive to present themselves as generally

typical and differing by a little to signal the direction in which an individual would like society to move. If individuals typically misjudge the average group value then prior to group communication they would self-present some distance from society's true value. As individuals gain more experience and "deliberate" (or even if they are merely exposed to other's values) they update their expectations and move closer to true societal values. In such a case, deliberation is beneficial in the sense that it provides better information about society's values. (Note that if there was perfect knowledge about the distribution of ideal values then self-presentations would be stable as expectations would be correct.)

Suppose instead that individuals define themselves against their expectation of society's values. Here, they wish to be a certain distance from society – and always in a specified direction. For instance, they may choose to be more reactionary than they view society to be. If a group of like-minded individuals react with each other they will tend to become increasingly extreme in their positions, since each defines their position against the average of those they observe, which itself is becoming more extreme. Such "bandwagon" cases do not easily lend themselves to equilibria and are arguably difficult to reconcile with an economic viewpoint.

Persuasive argumentation theories

Persuasive argumentation theory (PAT) "holds that an individual's choice or position on an issue is a function of the number and persuasiveness of pro and con arguments that that person recalls from memory when formulating his or her own position" (Isenberg, 1986). It is normally suggested that persuasiveness is based on the novelty and validity of an argument, with novel and valid arguments trivially preferred to established or invalid ones.

Under PAT, perfect information corresponds to where individuals know all relevant arguments (and their validity) and choose accordingly. Sub-optimal choices occur where individuals do not have access to all arguments and also where some arguments are novel, since this will tend to bias conclusions towards newly-discovered arguments. Group discussion in PAT could either improve or worsen the quality of deliberations, depending on whether the bias from ignored arguments or the bias from novel arguments dominates.

The UK National Institute for Health and Clinical Excellence and the National Collaborating Centre for Research Methodology have funded a series of studies to investigate public preferences. This paper reports on research undertaken as part of a project assessing the relative societal value of health gains to different beneficiaries. As part of this, we investigate the methods to be used in the main phase of this research. This paper compares two different study designs, of which one (resource intensive, RI) involves opportunities for group discussion and reflection whilst the other (interview only, IO) does not. The impact of deliberation is assessed by comparisons of preferences both within and between study designs. This will shed some light on the debate on the relevance of deliberation in the context of health care resource allocation decisions.

2. Methods

The study designs

The experiment assesses whether two different study designs affect the health care beliefs and general willingness to prioritise amongst the public. The more intensive and costly RI design involves both a group discussion and a face-to-face interview, and a less intensive and less costly IO design involves just the face-to-face interview.

The RI design begins with a group exercise in which each respondent is asked to complete a self-completion questionnaire that asks a set of general attitudinal questions. The questionnaire is intended to help clarify the respondents' thoughts on the topic, and lead to more stable preferences at the later stage.

This is followed by a discussion session covering the relevant issues and arguments. The discussions will focus on the reasons for particular preferences, and whether or not respondents are happy with the policy implications of their preferences. This discussion session is of a similar form to those used in earlier phases of the project. The questions received by these respondents consider explicit gains to particular groups who are differentiated by a variety of factors including age, the cause, and the severity of their conditions. The respondents were asked to discuss whether they would be willing to accept a lower QALY gain in order to prioritise one group over the other.

The self-completion questionnaire is administered again at the end of the session and a time arranged for an interview in 1-2 weeks at the respondent's address. This interview begins with a third administration of the same self-completion questionnaire. An elicitation task follows that allows the construction of decision weights. As these weights are irrelevant to the experiment, the elicitation task is ignored here.

The IO design is similar to the RI design but excludes the pre-interview phase and comprises of the self-completion questionnaire and the same interview as given to the RI group. (As these individuals receive less preparation prior to their interview, they receive a slightly expanded preamble to this interview.)

The questionnaire

The self-assessment questionnaire elicits political beliefs and the participant's willingness to prioritise NHS resources towards specific groups. A copy of the questionnaire appears as an appendix to this paper.

The 20 political belief questions cover attitudinal questions on general social issues and social attitude questions on health. In both cases, participants were asked to state how much they agree or disagree with the statement listed on a 5 point ordinal scale. These statements are typically taken or modified from the British Household Panel Survey (Wave 14) and attitudinal questions used previously by the research team.

Several of the questions relate to general issues rather than to health. Here, distributional issues dominate and test agreement to statements such as "The poor are entitled to more help", "There is one law for the rich and one for the poor", and "Private enterprise is the best way to solve the UK's economic problems". A second series of questions consider the role of private health care, for example "Private health care should be abolished", and "Private health care providers can assist the NHS in meeting patient's needs". Other questions deal specifically with general NHS management (e.g. "Much of what the NHS does is unnecessary"), NHS budgets (e.g. "Income tax should be increased to improve the running of schools and hospitals") and entitlement to NHS treatment (e.g. "The NHS primarily exists to look after those who can't afford private health care", "Patients should receive public health care when needed and regardless of costs to the NHS.")

The topics in the ten prioritisation questions were based on our preparatory studies. In each case, the question asks "Where there are no other differences between people, it is more important for the NHS to treat ..." and then gives a group whose treatment may be perceived as desirable. These questions address priority to those: waiting longer, in worse health, having lower incomes, in paid employment, with children to care for, with elderly relatives to care for, who are children (vs. adults), or younger adults (vs. the elderly), whose illnesses are caused by the NHS, or those whose illnesses are of genetic origin.

Background characteristics were collected for each respondent and comprise data on: life satisfaction, gender, age, marital status, housing type, current employment, highest educational achievement, race, whether disabled, current health (5 point scale as per BHPS), and whether they have private health insurance.

Piloting

As these questions have typically been used before, piloting was not strictly required on the self-assessment questionnaire. However, as piloting was required for the subsequent elicitation task the self-assessment questionnaire was included in this. In this piloting all individuals were given this questionnaire at the appropriate point(s) in the relevant study design and no objections were raised.

The group exercise was piloted using a sample approached in an outdoor shopping centre in Sheffield on 24 and 25 January 2006. 418 people were approached which elicited 11 participants. One participant rang and explained they were ill so unable to make the group discussion, five attended and five were absent. In the group exercise, the participants appeared to understand the context and objective of the study very well. The discussion was lively and relevant, indicating a level of comprehension and engagement with the task. The respondents appeared to accept that views differed, so that the process of challenging or questioning each others views was carried out in a friendly and productive way.

Analysis plan

The 20 self-assessment questions were first analysed using factor analysis techniques in SPSS. The extraction technique was principal component analysis and Varimax rotation was used to construct the component matrix. The number of variables was defined using a Scree plot, with cut-off at first flattening of the curve. Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test of sphericity were both run to test for the appropriateness of factor analysis.

The resultant factors were computed for each individual and regressed against background variables and dummy variables indicating the design/phase of the questionnaire (RI pre-discussion, RI post-discussion, RI pre-interview, and IO pre-interview). The baseline comparison at first contact is between RI pre-discussion and IO pre-interview, whilst the relevant comparison for equality of data in the main elicitation task is RI pre-interview and IO pre-interview. Comparison of the three RI phases provides an indication of how deliberation affects health care beliefs.

Factor analysis was also applied to the ten prioritisation questions using the same methods as used for the self-assessment questions. These questions were also analysed using a regression of each prioritisation factor against the self-assessment factors, design/phase dummies, and background variables. The significance level is set at 5% throughout.

Recruitment

It is difficult to calculate the necessary sample size for comparing the phases since the factor analysis produces a composite variable in a form that is not observable until the analysis is underway. We initially attempted to recruit 144 individuals for both the IO and RI arms of the experiment.

Seven areas were sampled (Barnsley, Cumbria, Dronfield, Huddersfield, Rotherham and Sheffield) and a total of 3342 households were sent invitations to participate. Representativeness is not essential here as differences by background variables are adjusted for in the regressions. Eight interviewers were briefed to undertake about 18 interviews of each variant.

All households were sent an 'interview only' participant information sheet with a covering letter detailing the study and explaining the possibility of a resource intensive option (i.e. a group meeting followed by an interview). Respondents would be paid £5 for attending the interview only and £15 for the resource intensive variant. When meeting the potential interviewees, interviewers would offer the choice of participation in the more lucrative resource intensive variant.

3. Results

Data

One of our interviewers fell ill early on. All interviewers aimed to recruit for both variants on the doorstep. Interviews for the interview only variant were conducted straight away or at a mutually agreed time. Those who agreed in principle to participate in the resource intensive variant were then telephoned and offered days/times to participate and then sent a letter confirming the time, date and venue. In practice, this resulted in some individuals being contacted up to six times before confirming attendance and some of them still dropped out.

We initially took the option of trying to accommodate people from their availability and arrange groups around them. When this proved to be difficult, we then told people when the groups were and asked them to attend. There seemed to be little difference in level of response from the two options. Groups were offered with over two weeks notice and also shorter notice periods, but again there seemed to be little difference between the two options: those with a longer lead time seemed to have forgotten their agreement to participate and those with a shorter lead time were not able to attend at short notice.

Recruitment to the RI design proved to be logistically difficult, and of the target of 144 participants only 56 were recruited in the allotted time. To compensate, we attempted to oversample within the IO group, with 232 participants interviewed rather than the targeted 144. Table 1 presents respondent location by design. Note that at this stage we do not attempt to find a representative sample, either geographically or within specific socioeconomic groups. As we do not have people in all locations in all groups, we are unable to use these as background characteristics in our subsequent analysis. (The RI design requires a sufficient number of respondents in each area before a group discussion can take place. This was not achieved in Rotherham or Sheffield.)

Representativeness

Table 2 gives details on the background of each sample. The group for the IO design appears to be more representative against Wave 14 of the BHPS (BHPS codebook, 2006). However this may be partly due to the smaller number in the RI design. Both groups over-sample females, the retired, students and those who have never been married. Those in the RI design tend to be slightly healthier than the BHPS sample; those in the IO design marginally more ill. The IO group appears to be closer in the housing, health insurance and the number of disabled included. Note that our background variables consider age bands, whilst the BHPS use continuous ages and this makes direct comparison difficult. (Note that, like the BHPS, we undersample ethnic minorities.)

Health care beliefs

In 14 of the 20 questions the median response remains the same across all three RI phases (pre-discussion, post-discussion, and pre-interview). In two of the remaining six questions, the median response changed during the discussion period and in the last four, this change occurred within the deliberation period post-discussion and pre-interview. None of the changes between phases are significant on any one variable – given the small sample size this is possibly inevitable.

The results of the factor analysis on the health care belief questions are presented in Table 3. Bartlett's test of sphericity ($p = 0.000$) suggests that some factoring is possible, although the Kaiser-Meyer-Olkin measure (0.659) is only mediocre so that significant variation remains after factoring. 17 of the 20 questions are used by the four factors identified in the analysis, which we call "equity", "market support", "mixed" and "NHS entitlement".

"Equity" increases in agreement with statements suggesting that the rich benefit at the expense of the poor and that the government should give greater help to the poor at the expense of the rich. Those agreeing to these statements also tend to suggest that this should not necessarily extend to NHS treatment however, since they also agree that "People on higher incomes already pay more taxes, so are just as entitled to free treatment".

"Market support" suggests general agreement with the principles of private enterprise and private health care – that health insurance should exist, that those with sufficient funds should use health insurance, that health insurance helps patients and the NHS, and that some copayment in the use of health care is desirable (so that those using the NHS more should contribute more).

The "NHS entitlement" factor suggests strongly that whilst there is inefficiency in the NHS ("The NHS needs to manage the resources that it has far more efficiently"), there is also cause to increase the NHS budget to reduce the impact of scarce resources. The statement that "It is essential that NHS services are targeted to the needs of the local population" could be interpreted as an inefficiency or scarcity argument consistent with the above.

The "mixed" factor is the least effective explainer. It argues against abolishing private health care and argues that it can assist the NHS, but also argues against copayments and the argument that "Much of what the NHS does is unnecessary". The argument that "The NHS will never have enough resources to completely satisfy all the demands made of it" could be interpreted as either a justification of private provision or an argument in defence of the NHS. In either case, it is consistent with the idea that this factor provides support for a mix of public and private provision.

A summary of the phase comparisons in the factor regressions is given in Table 4. F tests reveal a significant baseline difference between the IO and RI pre-discussion responses ($p = 0.025$) even after correcting for background differences (significant differences observed on sex, age, education, and whether the individual has health insurance). The other three baseline

comparisons are non-significant. The pre-interview comparisons between the designs also display a significant difference in the equity factor ($p = 0.001$).

There are no significant differences between the RI phases, although this is possibly unsurprising given the small sample size available. The pre- and post-discussion coefficients do appear to differ insignificantly, approaching significance in the “mixed” case. For all four factors, any effect of group discussion was partly or wholly discounted in the time prior to the interview. In two of the four factors, this reversal was sufficient to change the sign of the difference against RI pre-discussion.

Prioritisation

Table 5 presents the median and mean values for the prioritisation questions. The median preference suggests that it is considered more important to treat those who have waited longer, are in worse health, and have NHS-caused illnesses. In contrast, most people felt it was largely unimportant to give priority to those with lower incomes or in paid employment.

Unlike the attitudinal questions, the prioritisation questions reveal a significant change within the three phases of the RI design. Specifically, the willingness to prioritise young adults over the elderly appears to change as a result of the discussion group (mean response: 2.27 vs. 3.16, $p = 0.004$), although this change does diminish somewhat within the deliberative period prior to the interview (mean response: 2.95, $p = 0.033$ vs. pre-discussion). This suggests that the resource intensive framing does have a significant effect on preferences, although the length of this impact is not certain. Again, though, the smaller sample sizes may make significance more difficult to find within RI phases than in comparisons of the RI and IO groups.

The results of the second factor analysis are given in Table 6, which outlines three summary prioritisation variables. Bartlett’s test of sphericity ($p = 0.000$) suggests that factoring is possible, whilst the Kaiser-Meyer-Olkin measure (0.758) suggests that less variation remains after factoring than in the earlier attitudinal questions.

As with the factor analysis earlier, we have attempted to interpret and label the factors created. If delay of treatment worsens health, then the two main factors in “prioritise clinically” lead to a concentration on the level of health when left untreated. The second factor “prioritise generally” suggests that there may be a tendency to support NHS prioritisation as a disparate list of people benefit here – those caring for children or elderly relatives, those with lower incomes, those in paid employment (which appears to conflict with the previous factor), and those with genetic illnesses. The final factor suggests that benefits to the young should be prioritised, as it includes both questions explicitly prioritising the young and the case in which the young are benefited by having healthier carers.

Neither the three baseline comparisons between the designs (i.e. IO versus RI pre-discussion) nor the three pre-interview comparisons between the designs

(i.e. IO versus RI pre-interview) are significant at a 5% level. This suggests that the choice of which design to use appears to make relatively little difference at factor level. However, significant differences do exist between the different observations within the RI design. Specifically both the “prioritise generally” and “prioritise young” factors are significantly higher in their post-discussion observations compared to their pre-discussion observations.

4. Discussion and conclusion

The intention of this experiment was to provide guidance on an appropriate design for the main elicitation study starting in late 2006. The intended criterion related to whether there were significant differences in the responses between the RI and IO designs in the pre-interview stage. If no difference was found, it was expected that the main study would proceed with the IO design, as this is less costly. If a difference was found, the RI option would be selected as we – as economists – interpreted deliberation as beneficial.

In both the attitudinal and prioritisation questions we conducted factor analyses to discover the views underlying these responses. We found differences between the phases in pre-interview responses on one of four self-assessment factors and none of the three prioritisation factors. However, on the single significant difference there was also a significant difference in the baseline results – i.e. when considering responses for the RI design prior to group discussion. As such, the findings are insufficiently strong to recommend one design the other.

In particular, consider the prioritisation questions since these are likely to have the strongest impact on the main elicitation exercise. On all three prioritisation factors the post-discussion delay appears to reduce the impact of discussion on preferences. This reduction is only partial: 45%, 66%, and 55% of the discussion effect remains at the time of the interview for the three factors. Whilst these differences are not significant at the small sample size of the RI framework, the lack of power implied by this makes it unwise to quickly infer that deliberation is unimportant and that an IO design is warranted.

Ultimately, the choice of design is a judgement of the normative status of deliberation. If deliberation is unambiguously good, then the RI design should be selected even in the face of logistical difficulties. Our psychologist colleagues on this project appeared surprised that we would treat group discussion as uncritically positive. With this in mind, we investigated how deliberation – particularly group deliberation – is treated in the psychological literature.

Isenberg (1986) suggests that SCT is more likely to dominate group polarisation in situations that involve values, where information is constrained to a relatively small range of inputs and issues, and where the perceived importance of questions ensures that the relevant arguments have already been considered by individuals. In contrast, PAT was expected to dominate where there are a large number of factual or logical components to be balanced.

In the experiment above we found evidence that group discussions affected the values that individuals appear to hold. Whilst the impact of these discussions had fallen to statistically insignificant levels by the time of an interview, the low sample size makes it difficult to dismiss the effect of this deliberation.

Our participants were not asked to engage with significant numerical questions within either the self-assessment questionnaire or the group discussion. The attitudinal and prioritisation questions in the self-assessment questionnaire were also selected to be answerable without prior questioning (for relevance to the IO group). The issues considered are also very value laden. Together, these factors may suggest SCT dominates here.

If the deliberative effects found in the experiment were due to improvements in knowledge about the values others hold then it is arguable that preferences from the RI design – which includes deliberation – are superior. In instead changes were due to bandwagon effects, then the non-deliberative IO design is probably preferred. In either case, SCT poses a real challenge to the use of standard economic arguments, since it is based on social comparisons that economists are generally ill-equipped to analyse.

Whilst economics assumes that we reflect and learn from our own choices to produce findings closer to those of *homo economicus* – the rational economic agent – this assumption is not necessarily true. As a phenomenon, group polarisation provides an interesting puzzle to both psychologists and economists, and the differing models of human choice raise questions as to whether deliberative preferences (whether PAT or SCT based) are automatically preferable to “cold” preferences. Without clearer guidance on this point, we choose to proceed using an interview-only format because it is less costly. As ever, more research is potentially warranted to consider these issues in greater depth.

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Table 1: Locations of respondents by design

	RI Design (%)	IO Design (%)
Barnsley	16 (29%)	64 (28%)
Cumbria	22 (39%)	35 (15%)
Dronfield	10 (18%)	20 (9%)
Huddersfield	8 (14%)	82 (35%)
Rotherham	0 (0%)	21 (9%)
Sheffield	0 (0%)	10 (4%)
Total	56 (100%)	232 (100%)

Table 2: Background of the sample

		RI design	IO design	BHPS
Sample size		56 (100%)	232 (100%)	
Gender	Female	55%	63%	52%
Age:	18-39	21%	27%	
	40-59	30%	36%	
	60+	48%	36%	*
Employment status:	Employed	36%	44%	58%
	Retired	45%	36%	21%
	Unemployed	0%	2%	3%
	Student	2%	4%	6%
Marital status:	Married/cohabiting	77%	63%	65% [†]
	Never been married	13%	13%	22% [†]
	Separated, widowed divorced	10%	24%	14% [†]
House ownership:	Owned/mortgage	91%	75%	73%
	Rented	5%	24%	25%
Ethnicity	White	98%	99%	97%
Disabled?	Yes	4%	12%	11%
Health status:	Excellent	36%	25%	23%
	Good	48%	38%	46%
	Fair	11%	23%	20%
	Poor	4%	10%	8%
	Very Poor	2%	5%	2%
Medical insurance:	Yes	22%	15%	14%

* Of over 16s.

Table 3: Large coefficients (> 0.40) in factor analysis of attitudinal questions

	EQUITY	MARKET SUPPORT	MIXED	NHS ENTITLEMENT
1. "Government should redistribute income from the better-off to those who are less well-off."	0.717			
10. "The poor are entitled to more help."	0.701			
12. "There is one law for the rich and one for the poor."	0.658			
15. "People on higher incomes already pay more taxes, so are just as entitled to free treatment."	0.478			
17. "Big business benefits owners at the expense of workers."	0.411			
9. "Anyone who can afford it should take out private medical insurance."		0.660		
8. "Private health care providers offer greater choice to patients than the NHS does."		0.630		
3. "Private enterprise is the best way to solve the UK's economic problems."		0.558		
18. "People who use the health service more often than average should pay more."		0.453	-0.505	
13. "Private health care providers can assist the NHS in meeting patient's needs."		0.425	0.474	
19. "Private health care should be abolished."		-0.439	-0.418	
6. "The NHS will never have enough resources to completely satisfy all the demands made of it."			0.540	
14. "Much of what the NHS does is unnecessary."			-0.559	
16. "Patients should receive public health care when needed and regardless of costs to the NHS."				0.660
7. "The NHS needs to manage the resources that it has far more efficiently."				0.614
20. "The government should spend more on the NHS so that it can avoid having to make difficult decisions about who gets treatment and who doesn't."				0.476
11. "It is essential that NHS services are targeted to the needs of the local population."				0.453
2. "Income tax should be increased to improve the running of schools and hospitals."				
4. "It is the government's responsibility to provide a job for everyone who wants one."				
5. "The NHS primarily exists to look after those who can't afford private health care."				

Table 4: Health care beliefs: comparisons between observation sets within factor regressions

	EQUITY	MARKET SUPPORT	MIXED	NHS ENTITLEMENT
IO pre-interview versus RI pre-discussion (baseline comparison)				
Coefficients	+0.344	-0.004	-0.160	-0.020
Significance	0.025	0.982	0.313	0.906
RI pre-discussion versus RI post-discussion				
Coefficients	-0.211	-0.071	-0.339	0.018
Significance	0.247	0.733	0.074	0.928
RI pre-discussion versus RI pre-interview				
Coefficients	-0.175	-0.019	0.006	-0.104
Significance	0.328	0.925	0.974	0.596
RI pre-interview versus IO pre-interview (pre-interview comparison)				
Coefficients	-0.519	-0.015	0.166	-0.084
Significance	0.001	0.928	0.280	0.605
Significant background variables:				
	Female, age, education, insurance	None	Female, age, housing, employment	Female (higher, p=0.000)

Background variables in regressions (Self-assessment factors, Happiness, Gender, Age, Marital Status, Housing, Employment, Education, Race, Disability, Current Health and Health Insurance)

All tests are F tests following removal of variable(s) from regression predicting prioritisation factor values

Table 5: Prioritisation questions: median and mean response by observation set

	Median				Mean			
	RI pre-discussion	RI post-discussion	RI pre-interview	IO pre-interview	RI pre-discussion	RI post-discussion	RI pre-interview	IO pre-interview
Where there are no other differences between people, it is more important for the NHS to treat								
(1)... those who have been waiting longer.	5	4.5	4	5	4.48	4.29	4.20	4.37
(2)... those who are in worse health.	5	4	4	5	4.34	4.14	4.29	4.53
(3)... those who have lower incomes.	1	2	2	2	1.79	2.34	2.07	2.46
(4)... those who are in paid employment.	2	2	2	2	1.48	2.29	2.13	2.26
(5)... those with children to look after.	3.5	3	4	3	3.13	3.45	3.45	3.13
(6)... those with elderly relatives to care for.	3	3	3	3	2.96	3.14	3.20	3.09
(7)... children and teenagers rather than adults.	3	3	3	3	2.68	2.93	2.86	2.60
(8)... younger adults (e.g. 25-40 year olds) rather than the elderly (e.g. 60-80 years olds).	2	3	3	2	2.27	3.16	2.95	2.21
(9)... those whose illnesses are caused by the NHS.	4	4	4	4	3.47	3.52	3.82	3.71
(10)... those whose illnesses are of genetic origin.	3	4	3	3	2.84	3.41	2.98	2.93

5-point Likert Scale: 1 = Not at all important, 3 = Neutral, 5 = Very important

Table 6: Prioritisation questions: factor analysis and comparisons between observation sets within factor regressions

Where there are no other differences between people, it is more important for the NHS to treat	Prioritise clinically	Prioritise generally	Prioritise young
(1)... those who have been waiting longer.	0.713		
(2)... those who are in worse health.	0.814		
(6)... those with elderly relatives to care for.		0.787	
(3)... those who have lower incomes.		0.768	
(4)... those who are in paid employment.		0.744	
(10)... those whose illnesses are of genetic origin.		0.518	
(5)... those with children to look after.		0.707	0.464
(8)... younger adults (e.g. 25-40 year olds) rather than the elderly (e.g. 60-80 years olds).			0.830
(7)... children and teenagers rather than adults.			0.766
(9) ... those whose illnesses are caused by the NHS.			
IO pre-interview versus RI pre-discussion (baseline comparison)			
Coefficients	+0.175	+ 0.233	-0.034
Significance	0.306	0.136	0.828
RI pre-discussion versus RI post-discussion			
Coefficients	-0.289	+ 0.386	+0.444
Significance	0.152	0.037	0.018
RI pre-discussion versus RI pre-interview			
Coefficients	-0.130	+0.256	+0.245
Significance	0.514	0.160	0.185
RI pre-interview versus IO pre-interview (pre-interview comparison)			
Coefficients	-0.305	+0.023	+0.279
Significance	0.072	0.882	0.075
Significant background variables:	EQUITY, MIXED, Gender	EQUITY, MARKET SUPPORT	MARKET SUPPORT, NHS ENTITLEMENT, Race

All tests F tests following removal of variable(s) from regression predicting prioritisation factor values

Health care beliefs

The following pages contain questions about health and health care in this country. Please choose one option for each question.

There are no right or wrong answers, and the answers you give will inform the NHS as to what should be done about these issues.

Your responses in this questionnaire will be kept in confidence, and anonymously reported. Please tell your interviewer when you finish.



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The following questions ask about your attitudes on social and health issues. Please indicate how much you agree or disagree with each statement.

		Strongly Disagree				Strongly Agree
		↓				↓
1.	"Government should redistribute income from the better-off to those who are less well-off."	**	**	**	**	**
2.	"Income tax should be increased to improve the running of schools and hospitals."	**	**	**	**	**
3.	"Private enterprise is the best way to solve the UK's economic problems."	**	**	**	**	**
4.	"It is the government's responsibility to provide a job for everyone who wants one."	**	**	**	**	**
5.	"The NHS primarily exists to look after those who can't afford private health care."	**	**	**	**	**
6.	"The NHS will never have enough resources to completely satisfy all the demands made of it."	**	**	**	**	**
7.	"The NHS needs to manage the resources that it has far more efficiently."	**	**	**	**	**
8.	"Private health care providers offer greater choice to patients than the NHS does."	**	**	**	**	**
9.	"Anyone who can afford it should take out private medical insurance."	**	**	**	**	**
10.	"The poor are entitled to more help."	**	**	**	**	**
11.	"It is essential that NHS services are targeted to the needs of the local population."	**	**	**	**	**
12.	"There is one law for the rich and one for the poor."	**	**	**	**	**
13.	"Private health care providers can assist the NHS in meeting patient's needs."	**	**	**	**	**
14.	"Much of what the NHS does is unnecessary."	**	**	**	**	**
15.	"People on higher incomes already pay more taxes, so are just as entitled to free treatment."	**	**	**	**	**
16.	"Patients should receive public health care when needed and regardless of costs to the NHS."	**	**	**	**	**
17.	"Big business benefits owners at the expense of workers."	**	**	**	**	**
18.	"People who use the health service more often than average should pay more."	**	**	**	**	**
19.	"Private health care should be abolished."	**	**	**	**	**
20.	"The government should spend more on the NHS so that it can avoid having to make difficult decisions about who gets treatment and who doesn't."	**	**	**	**	**

These questions relate to where the NHS should give priority when it has to choose between benefiting different groups of people. Each question considers a way in which the people getting treatment could differ. Please treat this as the only way in which these people differ.

The following questions ask about your attitudes on social and health issues. Please indicate how much you agree or disagree with each statement.

		Strongly Disagree				Strongly Agree
		↓				↓
1.	Where there are no other differences between people, it is more important for the NHS to treat those who have been waiting longer.	**	**	**	**	**
2.	Where there are no other differences between people, it is more important for the NHS to treat those who are in worse health.	**	**	**	**	**
3.	Where there are no other differences between people, it is more important for the NHS to treat those who have lower incomes.	**	**	**	**	**
4.	Where there are no other differences between people, it is more important for the NHS to treat those who are in paid employment.	**	**	**	**	**
5.	Where there are no other differences between people, it is more important for the NHS to treat those with children to look after.	**	**	**	**	**
6.	Where there are no other differences between people, it is more important for the NHS to treat those with elderly relatives to care for.	**	**	**	**	**
7.	Where there are no other differences between people, it is more important for the NHS to treat children and teenagers rather than adults.	**	**	**	**	**
8.	Where there are no other differences between people, it is more important for the NHS to treat younger adults (e.g. 25-40 year olds) rather than the elderly (e.g. 60-80 years olds).	**	**	**	**	**
9.	Where there are no other differences between people, it is more important for the NHS to treat those whose illnesses are caused by the NHS.	**	**	**	**	**
10.	Where there are no other differences between people, it is more important for the NHS to treat those whose illnesses are of genetic origin.	**	**	**	**	**