

# Do NHS clinicians and members of the public share the same views about reducing inequalities in health?

Aki Tsuchiya<sup>a,\*</sup>, Paul Dolan<sup>b</sup>

<sup>a</sup>*School of Health and Related Research, and Department of Economics, University of Sheffield, Sheffield, UK*

<sup>b</sup>*Tanaka Business School, Imperial College, London, UK*

Available online 20 April 2007

---

## Abstract

Decisions about how to allocate resources in health care are as much about social value judgements as they are about getting the medical facts right. In this context, it is important to compare the social preferences of members of the general public with those of National Health Service (NHS) staff involved in service delivery. A questionnaire eliciting peoples' preferences over maximising life expectancy and reducing inequalities in life expectancy between the highest and lowest social classes was completed by 271 members of the UK public and 220 NHS clinicians. The two samples have different preferences with the general public showing a greater willingness than clinicians to sacrifice total health for a more equal distribution of health. These differences may highlight tensions between what the public wants and what clinicians want, and should be subject to further investigation.

© 2007 Elsevier Ltd. All rights reserved.

*Keywords:* UK; Distributional preferences; Efficiency-equity trade-off; General public; NHS clinicians

---

## Introduction

There is an emerging literature on the degree to which members of the public support health maximisation as the general decision rule for the allocation of the UK National Health Service (NHS) resources (Dolan, Shaw, Tsuchiya, & Williams, 2005). In contrast, relatively little is known about the views of actual NHS decision-makers. This paper is based on a postal survey that directly compared how members of the public and NHS clinicians trade-off the maximisation of health against reducing inequalities in health across the

socioeconomic groups. Inequalities in life expectancy at birth across the five socioeconomic classes, defined in terms of occupational groups, have been a main public health policy concern in the UK, especially since the special report to the Department of Health and Health and Social Services by Sir Douglas Black (1980).

One thousand members of the public and 600 NHS clinicians were sent the questionnaire. The main outcomes indicate that the two samples have different preferences, with the general public showing a greater willingness than NHS clinicians to sacrifice total health (measured in terms of life expectancy) for a more equal distribution of health across the highest and lowest social classes.

---

\*Corresponding author.

E-mail address: [A.Tsuchiya@shef.ac.uk](mailto:A.Tsuchiya@shef.ac.uk) (A. Tsuchiya).

## Background

There is a growing recognition that decisions about resource allocation in health care are as much about social value judgements as they are about getting the medical facts right. This view is supported by the recent Guidance by the National Institute for Health and Clinical Excellence (NICE, 2005; also see Oliver, Healey, & Le Grand, 2002). NICE is an independent body set up to advise the NHS on health care resource allocation decisions in England and Wales, and as such, are committed to evidence based medicine. Facts, and good scientific evidence should come from experts, but where should social value judgements come from? It is not our intention to discuss the various ethical arguments here, but rather (through a postal questionnaire) to consider whether the general public and health professionals have different values about the general issue of how to balance the twin, and sometimes competing, objectives of maximising health and reducing inequalities in health.

The starting point is the idea that the public's views are at least considered relevant given that NHS resources continue to be devoted to eliciting the social values of the general public. For example, NICE has a "Citizen's Council", made up of 30-strong representative members of the public, which report back to NICE on social value judgements concerning issues such as ageism. It is also important to elicit the views of those actually making resource allocation decisions in the NHS. Health care professionals are routinely forced to make value judgements on behalf of the public. If these decision-makers and the public share the same value judgements, then there is a case for leaving decision-makers alone to make decisions based on their own value judgements.

However, if value judgements differ markedly, then there is a case for setting up additional mechanisms of transparency and accountability to ensure that public decisions are made in line with the public's views, or at least so that the public can clearly see the source of any differences (Dolan, Edlin, Tsuchiya, & Wailoo, 2007). While there are numerous studies that elicit the views of the public (Dolan et al., 2005), there are few that examine the views of NHS staff (Farrar, Ryan, Ross, & Ludbrook, 2000) or that directly compare public preferences to those of professionals (Neuberger, Adams, MacMaster, Maidment, & Speed, 1998).

## Methods

### *Questionnaire*

The main question (see Fig. 1; Shaw et al., 2001) began by presenting the difference in life expectancy at birth between the highest and lowest social classes (78 for social class 1 and 73 for social class 5, with each class making up around 7% of the population). The question then asked for the respondent's preference over two hypothetical programmes (the details of which were left deliberately vague so that respondents were not focused on considerations of feasibility). One programme increased the life expectancy of both social classes by 2 years, and the other left the life expectancy of social class 1 unchanged and increased the life expectancy of social class 5 by 4 years.

If the respondent chose programme A, no further questions were asked. If the respondent chose programme B, i.e. to "target", then they were asked further questions where programme A was unchanged (always giving 2 years to each social class), but the benefit to social class 5 in programme B fell incrementally until it was only 1.5 years (with the life expectancy to social class 1 in programme B always unchanged). So, to prefer programme B at this stage suggests that the respondent thinks the inequality is so severe that reducing it takes priority over improving the absolute level of life expectancy of those in social class 5. The objective here was to note if the respondent does always choose programme B or whether they "switch" at some point from B to A because the sacrifice in overall health is considered to be too great.

Background questions for both samples included age, sex and education and the questionnaire for the NHS sample included questions on whether the post the respondent held was a clinical or a managerial post, and whether they had private health insurance.

### *Respondents*

For the survey of members of the general public, 1000 postcodes were selected from England, Wales and Scotland, to reflect geographical and socio-economic spread, and then, from each postcode, one name was randomly picked out. The questionnaires were posted in summer 2000. The sample of NHS staff was generated from three sources. First, 400 hospital specialists were extracted using an on-line database (Specialistinfo.com), stratifying

As you might know, average life expectancy differs by social class. There are differences between people in social class 1 (for example, doctors and lawyers) and people in social class 5 (for example, road-sweepers and cleaners). These two groups are more or less equal in size (they each make up about 7% of the population). Whilst actual life expectancy varies between individuals, on average, people in social class 1 live to be 78 and in social class 5 they live to be 73. Imagine that you are asked to choose between two programmes which will increase average life expectancy. Both programmes cost the same. In the two graphs below, the light grey part shows average life expectancy, and the dark grey part shows the increase in life expectancy. There is a separate graph for each of the programmes. As you can see, Programme A is aimed at both social classes and Programme B is aimed only at social class 5. Please indicate whether you would choose A or B by ticking one box.

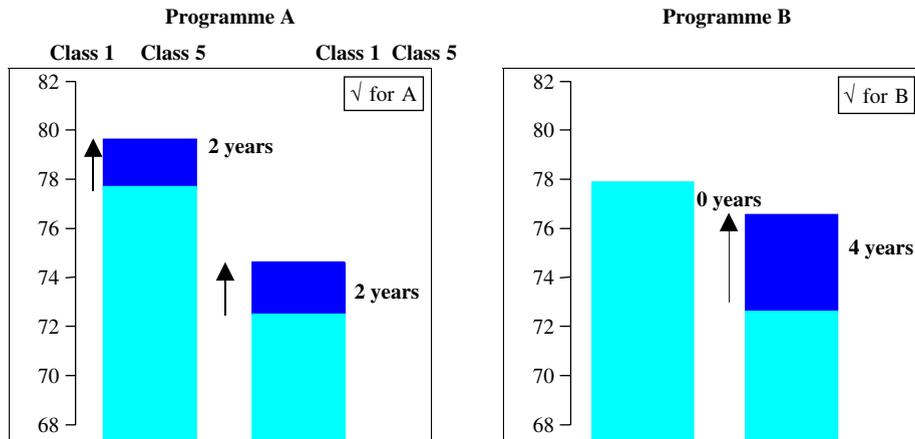


Fig. 1. An example question.

for region, speciality, gender and the year of first qualification, i.e. MBChB (to approximate age). Second, a random sample of 100 general practitioners was extracted by geographical location using Primary Care Trusts' websites. Third, details for GPs were used to contact a further 100 practice nurses. Thus, the NHS target sample was 600. The questionnaires were posted in spring 2004.

### Analysis

The results were tabulated by the proportion of respondents who chose not to target (i.e. those who prefer the first programme from the very first stage) and who chose not to switch (i.e. those who prefer the second programme throughout). Those who chose to target and then subsequently to switch are referred to as those who trade-off between efficiency and equality. Two-sided *z*-tests for proportions were carried out, with a 5% significance level, to test the null hypothesis that the proportion of NHS clinicians who target and who do not switch is the same as the proportion found in members of the public. Additionally, the effect of respondent background characteristics on targeting preferences is tested by using binary logistic regressions for each sample group.

### Results

Of the 1000 questionnaires posted to the general public, 271 (27%) were completed and returned following one reminder, which is comparable to similar studies (Anand & Wailoo, 2000). Of these, 66% were female, 64% were in the age range 35–64, 30% had a degree or equivalent qualification, and 84% had no private health care insurance. Of the 600 questionnaires posted to the NHS sample, 220 (37%) were completed and returned after one reminder. Of these, 56% were female, 68% were in the age range 40–54, 93% were clinically trained and in a clinical post, and 80% had no private health care insurance.

Table 1 summarises the distribution of responses. Forty-two percent of the general public sample chose not to target the worse off, and 9% chose not to switch and choose programme B throughout. On the other hand, 52% of NHS respondents choose not to target, and 8% choose not to switch. Thus, it can be said that clinicians and members of the public have statistically significantly different targeting preferences ( $p = 0.044$ ), with the public being more likely to target, although they are not significantly different with respect to “non-switching” behaviour ( $p = 0.525$ ).

Table 1  
Percentage of respondents in each response category

	General public ( <i>n</i> = 271) (%)	NHS personnel ( <i>n</i> = 220) (%)
<i>Non-target</i> , i.e. chose the programme that increases the life expectancy of both the highest and lowest social classes by the same amount	42.4	51.5
<i>Trade-off</i> , i.e. chose to initially target the lowest social class but switched to programme A when the sacrifice in overall health was seen as being too great	48.3	40.9
<i>Non-switching</i> , i.e. always choosing to target social class 5 even if this means less absolute benefit	9.2	7.6
Total	100	100

Targeting is explained in terms of age, gender, education, and insurance status, using a binary logistic regression. For the general public, age ( $p < 0.000$ ; compared to those aged 16–34, those aged 35–64 are less likely, and those aged 65 are more likely to target) and insurance status ( $p = 0.048$ ; those without insurance are more likely to target) are significantly associated with targeting at the 5% level. On the other hand, for NHS clinicians, respondent sex ( $p = 0.049$ ; men are less likely to target) is the only significant variable. The non-significance of respondent age may be due to the much smaller variance amongst the second group.

## Discussion

When asked to choose between targeting and not targeting resources to the social class with lower life expectancy at birth, just under half of the NHS respondents chose not to target. On the other hand, a clear majority (58%) of general public respondents chose to target. This bears a remarkable resemblance to the results of the recent NICE Citizens' Council meeting, where, faced with a similar question, 15/26 (58%) chose to target

resources to the worst off members of society even if this implied a loss in efficiency (NICE, 2006). Given the extensive process employed at the NICE Citizens' Council, involving the examination of expert evidence and discussion of different opinions over 2 days, the similarity in the results is intriguing.

The same questionnaire has been used in several other studies. For instance Dolan, Tsuchiya, Smith, Shaw, & Williams (2002) has surveyed members of the public in face to face interviews; and (Williams, Dolan, & Tsuchiya, 2005) reports the findings from ad hoc samples including public health professionals attending health economics courses. However, the data presented in this paper are the only combination that allows for a direct comparison between views of the general public and NHS clinicians, using the same (postal) survey method.

The greater propensity of NHS clinicians in this study to choose the option which benefits the highest and lowest social classes equally may reflect the fact that the sample of NHS clinicians are more concerned with ensuring that health care resources are used to the benefit of all groups, including the better off. This in turn could be explained by the clinicians taking into account the possible political fall-out of devoting resources only for the benefit of the worse off, e.g. the better off may become less willing to subsidise public health care which could erode the support for the NHS. The difference between the general public and the NHS clinicians would not appear to be explained by the fact that the sample of clinicians was better educated: the effect of having a degree or equivalent qualification is not significant in the general public sample.

Given that the response rate of the NHS sample was higher than that of the general public, there may have been an element of sample-specific patterns of self-selection. The respondents from the general public sample may have included a higher proportion of those interested in socio-economic inequality issues than the NHS sample, whereas the clinician sample may have included those who are not particularly interested in such issues, but those who responded simply because it was a questionnaire about health.

It is a costly enterprise to explore the views of the public on every contentious issue concerning social value judgements in health care resource allocation. If it can be demonstrated that the public and NHS clinicians have similar views, then it may be acceptable to delegate such judgements to people whose job is to make actual resource allocation

decisions in the real world. However, the results presented here suggest that the two groups have different views about whether or not to sacrifice overall health benefits to reduce inequalities in health across the social classes.

Furthermore, the preferences of the two samples appear to be explained by different factors: whereas the targeting behaviour of the general public sample was explained by age and insurance status, the responses of the NHS sample were explained by gender. Of course, there may be other socio-demographic characteristics that could explain the differences in the preferences of the public and the NHS sample but this does at least raise the possibility that the difference is in part attributable to the different degree of involvement in resource allocation decisions. There is much heterogeneity within the NHS clinician sample. It may be possible that different specialties or types of clinicians (e.g. GP, practice nurses, hospital consultants) have different effects. However, the sample size in this study does not allow further exploration, and this would be a topic for further research.

The study reported here is based on a postal survey where respondents had limited opportunity to deliberate on associated issues, and considered a particular kind of social value judgement, and so the findings are not definitive and have limited generalisability. Moreover, it is not clear whether the differences in preferences reported here would translate into different decisions in real policy situations. However, the potential differences between the social value judgements of the public and of health professionals is an important and under-researched area and we hope that this study will serve as a catalyst for further research and debate in this area.

### Acknowledgements

Peter Smith, Bekki Shaw and Alan Williams helped to design the questionnaires, Hilary Bekker, Carolyn Murray and Jennifer Roberts helped with administering the study of NHS staff. We are grateful to all those who responded to the questionnaire. The survey of members of the public was

funded by the Economic and Social Research Council, “Measuring preferences regarding equity and variations in health” (ref: L128251050); and the survey of NHS staff was funded by the NHS Service Delivery and Organisation programme, “The relative importance of cost effectiveness, equity and access” (ref: SDO/36/2003). The usual disclaimer applies.

### References

- Anand, P., & Wailoo, A. (2000). Utilities versus rights to publicly provided goods: Arguments and evidence from health care rationing. *Economica*, 268(67), 543–578.
- Black, D. (1980). *Inequalities of health: The black report*. London: DHSS.
- Dolan, P., Edlin, R., Tsuchiya, A., & Wailoo, A. (2007). It ain't what you do, it's the way that you do it: Characteristics of procedural justice and their importance in social decision-making. *Journal of Economic Behavior and Organization*, forthcoming.
- Dolan, P., Shaw, R., Tsuchiya, A., & Williams, A. (2005). QALY maximisation and people's preferences: A methodological review of the literature. *Health Economics*, 14, 197–208.
- Dolan, P., Tsuchiya, A., Smith, P., Shaw, R., & Williams, A. (2002). Determining the parameters in a social welfare function using stated preference data: An application to health: Sheffield Health Economics Group Discussion Paper.
- Farrar, S., Ryan, M., Ross, D., & Ludbrook, A. (2000). Using discrete choice modelling in priority setting: An application to clinical service developments. *Social Science & Medicine*, 50(1), 63–75.
- Neuberger, J., Adams, D., MacMaster, P., Maidment, A., & Speed, M. (1998). Assessing priorities for allocation of donor liver grafts: Survey of public and clinicians. *British Medical Journal*, 317(7152), 172–175.
- NICE. (2005). Social value judgements: Principles for the development of NICE guidance. <<http://www.nice.org.uk/page.aspx?o=283494>> (accessed 22 August 06).
- NICE. (2006). Report on NICE Citizens Council Meeting, 8–10 June 2006. Inequalities in Health. <<http://www.nice.org.uk/page.aspx?o=355633>>.
- Oliver, A., Healey, A., & Le\_Grand, J. (2002). Addressing health inequalities. *Lancet*, 360, 565–567.
- Shaw, R., Dolan, P., Tsuchiya, A., Williams, A., Smith, P., & Burrows, R. (2001). Development of a questionnaire to elicit public preferences regarding health inequalities. Center for Health Economics, University of York.
- Williams, A., Dolan, P., & Tsuchiya, A. (2005). Eliciting equity-efficiency trade offs in health. In P. C. Smith, L. Ginnelly, & M. Sculpher (Eds.), *Health policy and economics: Opportunities and Challenges*. Open University Press.