The Relevance of Indirect Benefits in Setting Health Care Priorities: Results of an Australian Survey of Social Preferences

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ABSTRACT

The inclusion of indirect costs and benefits in the economic evaluation of a programme or service can have potentially significant distributive effects between patients, and this raises questions of fairness. In pluralist democracies there is a prima facie case for consulting the community on such ethical questions. This paper reports the results of an Australian survey of social preferences for the inclusion of pecuniary and non-pecuniary indirect benefits in the evaluation of services for coverage a publicly funded national health scheme. Indirect costs and benefits are often very large compared with direct costs and benefits, and clearly influence the availability of resources in the economy. Despite this, our respondents rejected “social contribution” as a criterion for prioritising health services. The case for the inclusion of indirect benefits is strongest when they result in an increase in tax receipts that benefits the entire community and not just the patient (as occurs when increased income increases own consumption). Nevertheless, even these benefits were seen as “socially irrelevant” for priority setting. Specifically, respondents rejected giving high tax-payers priority access to life-saving organ transplants (90.2 per cent) or to very costly drugs (83.4 per cent). There was some support for giving priority to parents of young children (40.9 per cent) and to carers of elderly relatives (42.2 per cent), but equal numbers of respondents rejected the relevance of these non-pecuniary benefits. By contrast, there was strong support for allocating health care on the basis of need (88.6 per cent).

ACKNOWLEDGEMENTS

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1. Introduction

Controversy exists about whether or not indirect costs and benefits should be included in economic evaluations of health services and programmes and, if so, which costs, which benefits, and how they should be measured (Koopmanschap, Rutten et al. 1995; van Roijen, Koopmanschap et al. 1995; Johannesson and Karlsson 1997; Weinstein, Siegel et al. 1997; Liljas 1998). Indirect benefits to society from health care include the early return to work of patients, or their retention in the workforce when they would have otherwise died. They are “the production gains to society because more people are well, or alive, and able to return to work” (Torrance 1986, p. 2). Indirect costs include the production lost while patients undergo treatment, reduced productivity at work, the recruitment and training of replacement personnel, and so on. They are “the non-health care costs which accompany the treatment” (Olsen and Richardson 1999, p. 18).

The category of indirect costs and benefits can be construed more widely than these considerations would suggest, to include costs and benefits affecting social support networks more generally construed. For example, Olsen, Richardson et al. distinguish between “pecuniary utility” and “non-pecuniary utility”. Pecuniary utility refers to the benefits “generated by what a treated patient is able to produce…. [T]he more one contributes to society when one is healthy, the higher the total pecuniary utility the person generates”. By contrast non-pecuniary utility refers to the benefits generated “through caring and personal interaction”. In light of this we may distinguish between a person’s “pecuniary social contribution” and their “non-pecuniary social contribution”. Depending on the context, it may be appropriate to focus on the indirect costs and benefits arising exclusively from pecuniary social contributions, exclusively from non-pecuniary social contributions, or both.

The present paper is concerned with the scope of the indirect benefits that should be included in health economic evaluation. It endorses the view – gaining increasing acceptance among researchers and governments (Bowie, Richardson et al. 1995; Harrison and Mort 1998; Buck, Eastwood et al. 1999; Lenaghan 1999; Mossialos and King 1999; Litva, Coast et al. 2002; Wiseman, Mooney et al. 2003) – that decisions regarding the inclusion, or otherwise, of particular (classes of) indirect benefits should reflect social preferences with respect to equity, and that these may be country specific. This paper reports the results of an Australian survey that sought to assess these social preferences.

2. Background

Two main ways of calculating production gains and losses have been proposed. The human capital approach uses gross earnings as a proxy for the value of a person’s output (Weisbrod 1961a; Weisbrod 1961b). The value of the production gain to society of a person’s return to work at age 35, for example, is taken to be that individual’s total earnings from age 35 until retirement. However, this method tends to exaggerate production losses to society, since it takes no account of
the fact that absences from work due to illness and death can be filled by the unemployed or covered by other employees. Taking account of this, the friction cost method limits production losses to the period of time needed to replace a sick, injured or dead worker, which depends on the labour market (Koopmanschap, Rutten et al. 1995; Koopmanschap and Rutten 1997). To date no agreement exists about which of these methods should be used.

Whichever approach is adopted, it has generally been accepted that indirect costs and benefits should be included in the comparison of the overall costs and benefits of a programme. For example, Johannesson and O’Conor state: “To provide a theoretical foundation and a rationale for using cost-utility analysis, a first step seems to be to include all the costs in the analysis rather than only health care costs” (Johannesson and O’Conor 1997, p. 244). This argument is supported by van Rijpen, Koopmanschap et al., who argue that “production losses due to illness and production gains due to health care influences the wealth of society and should therefore be incorporated in economic evaluations of health care programmes” (van Rijpen, Koopmanschap et al. 1995, p. 16). These arguments have been persuasive. The early Canadian guidelines on economic evaluation of pharmaceuticals also endorsed the inclusion of indirect costs (Canadian Coordinating Office for Health Technology Assessment 1994).

In sum, the argument for including indirect costs and benefits in economic evaluations is that these costs and benefits are no less real for being indirect. They are often very large compared with direct costs and benefits, and clearly influence the availability of resources in the economy. If they are excluded, one programme or service may be ranked higher than another only because these real costs and benefits are being ignored.

However, this argument is not conclusive, despite the evidence of its persuasiveness. As Brock points out, “there may be good reasons why specific consequences should not be counted when we make particular assessments of outcomes” (Brock 2003). The inclusion of indirect costs and benefits is likely to advantage some groups and disadvantage others in ways that raise questions of fairness. For example, the inclusion of indirect benefits is likely to favour working people, especially those with high incomes, as the size of production gains is measured by their income. It will disadvantage the elderly, the long-term unemployed, the chronically ill and the permanently disabled. Moreover, high-income individuals are themselves the chief beneficiaries of their own high income, which raises the question of fairness in pointed form. The inclusion of indirect costs and benefits without constraints may also result in de facto sexual and racial discrimination, to the extent that income and wealth are correlated with sex and race (Caplan 1987; Ferrans 1987; Ogden 1987; Held, Pauly et al. 1988; Turenne, Held et al. 1996).

By contrast, if health care is allocated on the basis of “equal access for equal need”, as one example of fairness (Mooney 1991; Olsen and Rogers 1991), there would seem to be little justification for the inclusion of indirect costs and benefits at all, except to the extent that they bear on access or need. In contrast to Canada, the Australian guidelines on economic evaluation of pharmaceuticals oppose the inclusion of indirect costs (Commonwealth of Australia 1995). These effects might be mitigated, but not eliminated, by ascribing an implicit wage to those who are outside the paid workforce but are making a social contribution (such as unpaid home workers), but this does not overcome the objection that the advantage assigned to different groups will be proportional to the size of their paid or imputed incomes and this, therefore, leaves unresolved the question whether or not this class of benefits and costs should have any influence on the allocation of health resources when they are discriminatory in their impact.
In recognition of this, Olsen and Richardson suggest the possibility of viewing some benefits of health care as “socially irrelevant”, a class that would include, for instance, the net benefits of crime and other anti-social activities, even if the net benefits were positive. They argue that it is for society to decide which benefits are relevant in different contexts – that is, which benefits are “socially relevant” and which ones are not. There are several ways of restricting the class of “potentially relevant production gains” from health care (Olsen and Richardson 1999, p. 21). First, they might be restricted to those that have an impact on the rest of society. That is, the utility arising from a patient’s own consumption would be ignored, since this is based on income and is therefore already included (Weinstein, Siegel et al. 1997). Second, they might be restricted to those that lead to more health care rather than public goods and services that do not affect health. This is one form of the “separate spheres” argument (Walzer 1983; Kamm 1993; Brock 2003). Third, only a patient’s taxes might be included, as these benefit others. But even with these restrictions in place conventional economic analyses will favour high-income earners, as such individuals will contribute more in tax and therefore contribute more to health care. If it is considered unfair that high-income earners should receive priority access to publicly funded health care, the optimal solution may involve a trade-off between equity and efficiency, which in this case implies a trade-off between net indirect benefits and fairness in the distribution of health and net indirect benefits. The extent of the trade-off will depend, inter alia, on the importance and nature of equity in a particular society, which is an empirical matter. There is, however, little information about such social preferences for equity. The present paper aims to partly fill this gap: to determine, in a limited range of cases, which indirect benefits are “socially relevant”.

In view of the widespread support for the principle of maximising net benefits, either in the health sector or elsewhere, this latter question may appear to be anomalous. It is generally true that any economic activity will result in winners and losers. However, the distributive issues are of particular importance in the health sector. Elsewhere, it is possible to appeal to the potential compensation principle to overcome unwanted distributive effects. That is, when the net (material) benefits of an activity disadvantage someone or some group they may, potentially, be compensated, and the decision whether or not to do this is made by government. It can be argued that all an economic evaluation can achieve is the identification of net benefits that may be re-distributed (Debreu 1959; Arrow and Hahn 1972). In the health sector this argument is not applicable. Losers may die and compensation may be impossible. As McGuire et al. comment: “Health itself is not tradeable in the sense that it cannot, strictly, be bought or sold in a market … health is not exchangeable” (McGuire, Henderson et al. 1988p. 32). When health care only impacts upon the quality of life it is possible to tax the beneficiaries to compensate losers who, in a national health scheme, are tax-payers. However, one of the desired effects of the national health scheme is generally a re-distribution of benefits to the sick, and a re-distribution back to the tax-payers would clearly have the opposite effect. This implies the well-known conclusion that equity and efficiency are inseparable in the health sector and that efficiency in the form of maximising net benefits might violate important principles of equity.

The main argument for taking account of the potential non-pecuniary contributions of patients when prioritising programmes and services is similar to the argument above for including indirect pecuniary contributions: “pecuniary utility” and “non-pecuniary utility” are both utility. From a welfarist perspective, both contribute to social welfare and both should therefore be taken into account in economic evaluations. Here too, however, it may turn out that some non-pecuniary benefits are “socially irrelevant” and should be ignored. It cannot be assumed, for instance, that the utility arising from caring for children or elderly parents is of equal societal value as the utility arising from personal friendships. This is also an empirical, not a logical issue.
3. Previous Empirical Studies

The five studies we identified as relevant for these issues are summarised in Table 1. In the first of these, Charny, Lewis et al. surveyed 719 subjects in Cardiff on their attitudes towards priorities in allocating life saving treatment. Among other things, respondents were asked to make a choice between saving the life of an employed person or an unemployed person, an unskilled worker or a managing director, and a lorry driver or a teacher, and to register how easy or difficult they found the choice (Charny, Lewis et al. 1989). The results indicated a preference for the employed over the unemployed, and for the teacher over the lorry driver, but they also prioritised the unskilled worker above the director. This provides ambiguous evidence of social support for indirect benefits, since it is not clear what factors influenced subjects’ choices, particularly in relation to the latter two pairs, as occupation may be valued in terms of social contribution or for other reasons (Katz 1970, pp. 676-7; Tancredi 1982, p. 98). It is notable that a large number of respondents (50 per cent) made no choice, even though “the interviewers were instructed not to offer the possibility of not making the choice,” and to record a median score “if the respondent persisted in not making a choice” (Charny, Lewis et al. 1989, p. 1334). The large “no choice” response raises the suspicion that some subjects may have preferred to give equal priority to each member of the pair if this had been an option.

Table 1. Studies of Social Preferences for the Inclusion of Indirect Costs and Benefits in Economic Evaluations

<table>
<thead>
<tr>
<th>Study</th>
<th>Country</th>
<th>Number of Subjects</th>
<th>Type of Subjects</th>
<th>Elicitation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Charny, Lewis et al. 1989)</td>
<td>Wales</td>
<td>719</td>
<td>General Population</td>
<td>Discrete Choice</td>
</tr>
<tr>
<td>(Skitka and Tetlock 1992)</td>
<td>USA</td>
<td>198</td>
<td>Undergraduates</td>
<td>Discrete Choice</td>
</tr>
<tr>
<td>(Nord, Richardson et al. 1995b)</td>
<td>Australia</td>
<td>551</td>
<td>General Population</td>
<td>Discrete Choice</td>
</tr>
<tr>
<td>(Neuberger, Adams et al. 1998)</td>
<td>England</td>
<td>1,300</td>
<td>General Population/Family Doctors/Gastroenterologists</td>
<td>Discrete Choice</td>
</tr>
<tr>
<td>(Dolan, Cookson et al. 1999)</td>
<td>England</td>
<td>60</td>
<td>Patients</td>
<td>Small Group Discussion</td>
</tr>
</tbody>
</table>

In a US study, Skitka and Tetlock asked subjects to rate a number of allocation procedures on an “appropriateness scale”, ranging from “extremely inappropriate” to “extremely appropriate”. Subjects rated need (e.g. “allocating resources to those who are the sickest”) as the most appropriate way of setting priorities. The two criteria that rated lowest were merit (i.e. “priority should be based on the contributions people have made to society”) followed by market based allocation (“priority should be given to the highest bidder”). These last two were rated as the “most inappropriate ways to allocate resources” (Skitka and Tetlock 1992, p. 509). The low rating given to merit again casts some doubt on public support for the inclusion of indirect benefits, at least on the assumptions that past contribution is an indicator of future contribution.

Nord, Richardson et al. asked a random sample of Australians whether (i) working people and non-working people should have equal priority when they have the same illness, or whether (ii) people in the workforce should have some priority over non-working people, in order to limit possible economic losses to the country (Nord, Richardson et al. 1995b). The results showed that 87 per
cent of respondents rejected participation in the workforce as an important criterion for assigning priority. Moreover, 79 per cent found the decision "not difficult" and 13 per cent had only "slight difficulty" making the choice. Follow-up interviews in stage 2 of the study confirmed these findings, with a slight increase in the percentage rejecting workforce participation as a criterion for assigning priority.

In another survey Neuberger, Adams and colleagues questioned the general public, family doctors and gastroenterologists in the UK about which factors should be used to select patients for liver transplantation (Neuberger, Adams et al. 1998). Subjects were asked to select four of the following criteria: time on waiting list; age; value to society; alcohol consumption; work status; outcome; drugs. Of the gastroenterologists, 77 per cent included work status ("those who are likely to return to paid work or caring for family after transplant") among their chosen four criteria. For this group, work status was second only to outcome in order of importance. Of the family doctors, 57 per cent chose work status, and only 44 per cent of the general public chose this criterion. "Value to society" was selected by 31 per cent of family doctors and gastroenterologists, whereas only 21 per cent of the general public chose this criterion. This strongly suggests that the general public places less emphasis upon indirect benefits than the medical profession.

The importance of equity was confirmed in a study of the effect of discussion and deliberation on the public’s views of priority setting undertaken by Dolan, Cookson et al. They asked a random sample of 60 patients in the UK whether some groups of patients should have more or less priority for treatment than others (Dolan, Cookson et al. 1999). Of those surveyed, 97 per cent thought the unemployed should have the same priority for treatment as the employed, and 95 per cent would give the same priority to those who “contributed a lot” and to those who did not. Discussion and deliberation had no effect upon the first response, and a negligible effect upon the second response.

4. Survey and Study Hypotheses

In the postal survey reported below we sought to determine the level of support in the Australian community for the inclusion of indirect benefits, both pecuniary and non-pecuniary, in economic evaluations in the health area. Respondents were not asked to assess health programmes or services directly, but to indicate their agreement or disagreement with several principles that might be used to formulate policy, and to indicate how important or unimportant certain reasons were in evaluating those principles. The main hypothesis tested was that the Australian public believes that all benefits, not only health benefits, should be included in the comparison of the overall benefits of a programme or service. More specifically, two main hypotheses were tested. These were:

**Hypothesis 1:** That Australians endorse the following principle: *Those who make an indirect non-pecuniary contribution to society, through caring and personal interaction, should have priority access to health services, if this allows them to resume their caring role.*

**Hypothesis 2:** That Australians endorse the following principle: *Those who make an indirect pecuniary contribution to society, through paying higher taxes or a higher Medicare levy (which part funds Australia’s universal health scheme) should have priority access to Medicare services, if this allows them to return to the workforce.*
A secondary hypothesis was also tested:

**Hypothesis 2a:** That Australians who endorse hypothesis 2 do so for efficiency rather than equity reasons.

The self-administered postal questionnaire contained three parts. In Part 1 respondents were asked five questions about indirect benefits. Part 2 of the questionnaire was headed “Which Medications Should be Subsidised Under the Pharmaceutical Benefits Scheme?” and this is to be reported elsewhere. Part 3 asked for respondent’s personal information.

**Question 1**

The first of the five questions provided a test of societal support for using the non-pecuniary social contributions of patients as a criterion for prioritising health care. The question consisted of three statements. Respondents were asked to indicate on a 5-point Likert scale whether they “strongly agree,” “agree,” “neither agree nor disagree,” “disagree”, or “strongly disagree” with the statements. The statements were as follows:

**Statement 1:** “Parents of young children should be given priority over people who do not have young children, so that they can return to care for their children sooner.”

**Statement 2:** “People who care for others, for example elderly parents, should have priority over people who do not have these responsibilities, so that they can return to care for these people sooner.”

**Statement 3:** “People with a large social network (such as people who have a large family and many friends) should have priority over other people, because their family and friends will benefit from their good health also.”

Respondents were asked to assume that the two groups of patients (e.g. parents and non-parents) have the same illness and will gain as much from treatment. They were also asked to assume that resources are scarce and that some groups in society must be given priority. At the end of each statement space was provided to allow respondents to give other reasons if they wanted. This was so for all questions.

**Question 2**

The second question also included three statements, and respondents were again asked to indicate the strength of their agreement or disagreement on the 5-point scale.

**Statement 4:** “People who pay the highest taxes should have priority access to Medicare services, if this allows them to return to the workforce earlier.”

Medicare is Australia’s publicly funded health scheme. Those who agreed with statement 4 were then asked how important the following reasons were in reaching their decision:
**Reason (a):** "It is fair that high tax-payers have priority access to Medicare services, since their taxes help to pay for roads, education, and other health services."

**Reason (b):** "The cost to society is less when high tax-payers return to the workforce because their taxes help to pay for roads, education, and other health services. It is efficient to return people like this to the workforce."

This time the 5-point scale was "very important", "important", through "neither important nor unimportant," to "unimportant" and "very unimportant". The purpose of reasons (a) and (b) was to determine whether the preferences of those in favour of differential treatment were based on equity or, alternatively, efficiency considerations. The term "high tax-payers" was used rather than "high income-earners" to emphasize the (pecuniary) social contribution of this group.

**Statement 5:** "Access to Medicare services should have nothing to do with the amount of tax people pay."

Again, respondents who agreed with statement 5 were asked to indicate how important the following reasons were in their choice:

**Reason (a):** "Most people contribute to society in their different ways, and access to Medicare services should not depend on the type of contribution a person makes."

**Reason (b):** "High tax-payers can afford private health insurance if they want priority access to health services."

Support for reason (a) would suggest egalitarian motivations influencing respondents’ choices, with the significance of differences in the type of social contribution being minimised. Reason (b) provides a test of whether or not the existence of private health insurance in Australia affects the aversion to unequal treatment in the public system.

**Statement 6:** "Those who pay the highest taxes should have a higher priority for life-saving organ transplants (kidney, heart, etc.) if there are not enough organs for all patients who need them."

Statement 6 was included because it was thought that respondents would have little difficulty in accepting that transplantable organs are in short supply, whereas some members of the public find it hard to accept the implications of a limited health budget. That is, the question is a test of internal consistency. It is also focused explicitly on life-saving treatment.

Respondents who agreed with statement 6 were asked to indicate how important the following reasons were in reaching their decision.

**Reason (a)** "It is a greater benefit to society if the life of a high tax-payer is saved, because their taxes help to pay for roads, education, and other health services."

**Reason (b)** "It is fair that high tax-payers have a higher priority for life-saving treatment, since their taxes helps to pay for roads, education, and other health services."

**Reason (c)** "Life-saving treatment should go to those who will have the best life after treatment, and high tax-payers generally have a more comfortable life-style."
Question 3

Question 3 was about Australia’s Pharmaceutical Benefits Scheme (PBS). Respondents were told that the PBS places some drugs on a special list, which means that people who need them do not have to pay the full cost. They were asked to assume that drugs which cost more than $100,000 per year are not subsidised. It was explained that all Australians would be better off if those individuals who paid more than $100,000 in tax per year were given very costly drugs at a subsidised rate, provided that the drugs would allow them to return to work (and this would not happen without the drugs), because these high tax-payers would pay more in tax than it would cost to provide them with the expensive drugs. Respondents were then presented with the following three statements, and asked to indicate whether they agree or disagree with them:

**Statement 7:** “High tax-payers should be able to receive very costly drugs under Medicare that are not available to other Australian’s, provided they pay more in tax than it costs for the drugs.”

**Statement 8:** “High tax-payers should get no priority under Medicare, but they should be able to buy expensive drugs privately that are not included in Medicare because of their high cost.”

**Statement 9:** “Wealthy individuals should not be able to buy expensive drugs privately that are not included in Medicare. Health care should have nothing to do with a person’s income or wealth.”

Question 4

In addition to general taxes, which indirectly support Medicare, resident tax-payers in Australia also pay an hypothecated Medicare levy, which is paid directly to Medicare. Question 4 exploited the fact that the link between the levy and the financing of Medicare is more obvious than the link between general taxes and Medicare. The levy is currently 1.5 per cent of taxable income (except for pensioners and low-income earners). It was explained that high tax-payers contribute more to Medicare than low tax-payers. For example, someone with a taxable income of $100,000 per year would pay a levy of $1,500 whereas someone with a taxable income of $50,000 per year would pay $750. Respondents were then asked whether they agree or disagree with the following statements:

**Statement 10:** “Those who pay a high Medicare levy should have priority access to Medicare services.”

**Statement 11:** “It is unfair that the current Medicare levy is the same for all tax-payers (1.5%), because this means that high tax-payers must pay more even though they only receive the same benefits under Medicare.”

**Statement 12:** “The Medicare levy should not be the same for all tax-payers (1.5%). Those who can afford it should pay a higher percentage of their income, and those who cannot afford it should pay a smaller percentage.”

Giving priority to those who pay more taxes and to those who pay a higher Medicare levy both result in indirect (pecuniary) benefits for the community. However, the “direct/indirect” and “health/non-
health” distinctions are not co-extensive. Saving the life of a labourer, for example, might result in more houses, whereas saving the life of a surgeon might result in more lives saved. The additional houses built and the additional lives saved are both indirect (pecuniary) benefits, but only the latter is an indirect health benefit. It has been argued that this distinction may have moral significance (Brock 2003). It is possible that respondents would view giving priority to those who pay a higher Medicare levy as more important in the current context because the production gains from this fall more properly within the health sphere. This would be confirmed if there was agreement with statement 10 but disagreement with statement 4.

Question 5

In the final question respondents were asked to think about their answers to the previous questions, and to give their summary opinion on the issues raised by indicating whether they agree or disagree with the following statements:

Statement 13: “When resources are limited, people who contribute more to society should have a higher priority for medical care in a public health system like Medicare.”

Statement 14: “Only medical ‘need’ should count in deciding who receives medical care in a public health system like Medicare, not a patient’s contribution to society.”

Multivariate Analysis

Responses to each of the questions were subject to multivariate analysis. For this, the five response categories were assigned scores of 5.00 (strongly agree) through to 1.00 (strongly disagree). Independent variables were generally the simple response to various questions. In a number of cases they were composite variables constructed using factor analyses to identify latent variables/concepts. Regression results and definitions are reported in the Appendix.

5. Results

Prior to trialling the questionnaire it was subject to a critique by several health service researchers at the Centre for Health Economics at Monash University. A pilot of the questionnaire was then mailed to 100 households in Melbourne, Australia, in October 2004. This revealed no major problems. Another 1,500 questionnaires were subsequently mailed in November. For the main survey, eight suburbs were chosen spread across the five different “SEIFA” (Socio-Economic Indicators For Areas) groups, which describe the socio-economic spectrum in Australia. Addresses were chosen at random from an electronic version of the Melbourne telephone directory. The response rate was 27.5 per cent (N = 359), after one reminder letter and a replacement copy of the questionnaire were sent, and after excluding 195 questionnaires returned by the post office marked “Return to Sender”. The demographic characteristics of respondents are given in Table 2, along with the ABS (Australian Bureau of Statistics) 2001 Housing and Population Census data for each category. We report the results of the main survey only below.
A possible criticism of this, and similar survey-based studies, is that respondents may have been atypical of the broader population. We tested a number of demographic characteristics of our respondents to see how well they corresponded with the ABS census data. This revealed some differences implying a possible bias in our sample. These were primarily in relation to age and educational attainment. Results were therefore adjusted using a weighting for six age and education categories. From the sample and census percentages it is possible to calculate full weights that reflect only the differences between survey and census results. However, in two of the categories the number of responses was small (viz., non-degree holders aged between 18 and 34;
Table 2. Respondent Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Category</th>
<th>Years</th>
<th>%</th>
<th>2001 Censusa</th>
</tr>
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<tr>
<td>Gender</td>
<td>Male</td>
<td></td>
<td>46.7</td>
<td>48.6</td>
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<td></td>
<td>Female</td>
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<td>53.3</td>
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<td></td>
<td>Total 359</td>
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<tr>
<td>Age</td>
<td>Mean</td>
<td>56.6</td>
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<td></td>
<td>Standard deviation</td>
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<tr>
<td></td>
<td>Median</td>
<td>56.0</td>
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<td>Age Groups</td>
<td>Age 18 to 24</td>
<td>1.2</td>
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<td></td>
<td>Age 25 to 34</td>
<td>7.2</td>
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<td>Age 35 to 44</td>
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<td>20.2</td>
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<td>Age 45 to 54</td>
<td>19.7</td>
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<td>18.3</td>
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<td>Age 55 to 64</td>
<td>21.4</td>
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<td>Age 65 +</td>
<td>34.2</td>
<td></td>
<td>16.7</td>
</tr>
<tr>
<td>Country of origin</td>
<td>Australia</td>
<td>73.6</td>
<td></td>
<td>71.7</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>26.4</td>
<td></td>
<td>28.3</td>
</tr>
<tr>
<td>Education</td>
<td>Degreeb</td>
<td>23.1</td>
<td></td>
<td>18.8</td>
</tr>
<tr>
<td></td>
<td>Postgraduate qualificationc</td>
<td>15.9</td>
<td></td>
<td>3.8</td>
</tr>
<tr>
<td></td>
<td>Non-degree</td>
<td>61.1</td>
<td></td>
<td>77.4</td>
</tr>
<tr>
<td>Main activity</td>
<td>Working</td>
<td>52.3</td>
<td></td>
<td>59.9</td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>0.6</td>
<td></td>
<td>4.5</td>
</tr>
<tr>
<td></td>
<td>Studying</td>
<td>3.1</td>
<td></td>
<td>10.3</td>
</tr>
<tr>
<td></td>
<td>Not in labour force</td>
<td>41.5</td>
<td></td>
<td>35.6</td>
</tr>
<tr>
<td>Household income</td>
<td>&lt; 20,000</td>
<td></td>
<td>19.3</td>
<td>17.4</td>
</tr>
<tr>
<td>(AUS $ per year)</td>
<td>20,001 – 30,000</td>
<td></td>
<td>15.7</td>
<td>12.9</td>
</tr>
<tr>
<td></td>
<td>30,001 – 40,000</td>
<td></td>
<td>7.6</td>
<td>12.3</td>
</tr>
<tr>
<td></td>
<td>40,001 – 50,000</td>
<td></td>
<td>6.9</td>
<td>10.9</td>
</tr>
<tr>
<td></td>
<td>50,001 – 60,000</td>
<td></td>
<td>7.3</td>
<td>9.7</td>
</tr>
<tr>
<td></td>
<td>60,001 – 80,000</td>
<td></td>
<td>16.0</td>
<td>10.9</td>
</tr>
<tr>
<td></td>
<td>&gt; 80,000</td>
<td></td>
<td>27.2</td>
<td>25.9</td>
</tr>
</tbody>
</table>

b Bachelor Degree, Advanced Diploma & Diploma level, Advanced Diploma & Associate Degree level, Diploma level.
c Postgraduate Degree, Doctoral degree, Masters Degree, Graduate Diploma & Graduate Certificate, Graduate Diploma level and Graduate Certificate level.

Table 3. Categories Used for Weighting Responses

<table>
<thead>
<tr>
<th>Category</th>
<th>Sample Percentage</th>
<th>Census Percentage</th>
<th>Partial Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Degree Holder; Aged 18 to 34</td>
<td>4.0</td>
<td>25.1</td>
<td>.063</td>
</tr>
<tr>
<td>Non-Degree Holder; Aged 35 to 54</td>
<td>16.5</td>
<td>28.9</td>
<td>.395</td>
</tr>
<tr>
<td>Non-Degree Holder; Aged 55 and over</td>
<td>37.4</td>
<td>23.5</td>
<td>.321</td>
</tr>
<tr>
<td>Degree Holder; Aged 18 to 34</td>
<td>4.4</td>
<td>7.8</td>
<td>.020</td>
</tr>
<tr>
<td>Degree Holder; Aged 35 to 54</td>
<td>19.9</td>
<td>10.7</td>
<td>.146</td>
</tr>
<tr>
<td>Degree Holder; Aged 55 and over</td>
<td>17.8</td>
<td>4.0</td>
<td>.055</td>
</tr>
</tbody>
</table>
and degree holders in the same age category). This indicates the possibility of “extreme values” attributing too much importance to individual and possibly atypical answers by respondents from unrepresentative categories. Consequently, a decision was made to “weight the weights”, so that individual answers from these two smaller categories would not have a disproportionate effect on results. Table 3 reports the weights that were eventually used.

Some indication of the likelihood of bias may be obtained from the results of the multivariate analysis reported in the Appendix. The most important variables in this are the indices of socioeconomic status and for this our sample reflects the community relatively well. The political leaning of respondents impact but it is small and, even assuming an unrepresentative sample in this respect the bias would be very small. The other group of variables which exerted considerable influence in this analysis relate to the locus of control reported by individuals. As population data do not exist for these it is not possible to determine whether or not it is the source of bias. Finally, the single age variable in the regression analyses is significant in only one of the 10 regression results reported and only at the 5 percent significance level. For these reasons the results below are probably fairly representative of the views of the Australian public.

Responses to the questionnaire statements and reasons in support of them are given in tables 4 to 9, and 11. In reporting the results in these tables, the categories “strongly agree” and “agree”, and “strongly disagree” and “disagree” have been collapsed. The adjusted percentages of respondents “(strongly) agreeing”, “neither agreeing nor disagreeing”, and “(strongly) disagreeing” are given in parentheses in tables 4 to 9, and 11. Weighted percentages are not given when the number of responses is very small.

**Non-Pecuniary Benefits:** Responses to statements 1, 2 and 3 are reported in Table 4. This reveals that only 6.2 per cent of respondents were in favour of giving priority to patients with a large social network. The resulting (non-pecuniary) utility experienced by family and friends was considered either insufficiently important, or insufficiently relevant, to justify differential treatment in a public health scheme. This disconfirms hypothesis 1. By contrast, there was significantly more agreement with statements 1 and 2 (40.9 and 42.2 per cent respectively). But this was almost exactly matched by those disagreeing with the statements. That is, respondents were evenly divided with respect to prioritising the treatment of carers. The result provides only limited support for hypothesis 1, and indicates that respondents distinguish between types of (non-pecuniary) indirect benefit, and consider some more relevant than others for setting priorities in health care.

Multivariate results from the Appendix indicate that high education and income are very strongly associated with lesser support for priority to parents, carers or networkers however individuals with a strong locus of control – that is XXXXXXX, are more likely to support priority for these groups.

[THIS SEEMS PERVERSE: MALCOLM PLEASE CONFIRM HOW LOCUS VARIABLES WERE DEFINED – I’VE ASSUMED HIGHER NUMBERS MEAN GREATER SUPPORT BUT APPEARS MORE LIKELY TO BE THE OTHER WAY AROUND.]
### Table 4. Support for the Inclusion of Non-Pecuniary Indirect Benefits in Economic Evaluations (Question 1).

<table>
<thead>
<tr>
<th>Statement</th>
<th>Percent Support (Weighted)</th>
<th>No of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong> “Parents of young children should be given priority over people who do not have young children, so that they can return to care for their children sooner.”</td>
<td>40.9 (37.7) 19.9 (21.7) 39.2 (40.6)</td>
<td>357</td>
</tr>
<tr>
<td><strong>2</strong> “People who care for others, for example elderly parents, should have priority over people who do not have these responsibilities, so that they can return to care for these people sooner.”</td>
<td>42.2 (39.4) 20.4 (21.8) 37.4 (38.9)</td>
<td>353</td>
</tr>
<tr>
<td><strong>3</strong> “People with a large social network (such as people who have a large family and many friends) should have priority over other people, because their family and friends will benefit from their good health also.”</td>
<td>6.2 (6.4) 20.6 (19.6) 73.2 (74.0)</td>
<td>354</td>
</tr>
</tbody>
</table>

a  Responded with 1 or 2 on the five point scale.
b  Responded with 3 on the five point scale.
c  Responded with 4 or 5 on the five point scale.

**Tax-Based Priority, Return to Work:** Table 5 shows that respondents decisively rejected the suggestion that high tax-payers should have priority access to Medicare services. This indicates a clear rejection of hypothesis 2, even though “their taxes helps to pay for roads, education, and other health services.” Of the 5.9 percent who (strongly) agreed with the principle, the majority found both fairness and efficiency (very) important considerations. This implies a rejection of the secondary hypothesis, 2a, that Australians who believe that high tax-payers should have priority access to Medicare services base their view solely on efficiency considerations, although the number of responses was small (5.9 per cent).
Table 5. Support for Priority Access to Health Services for High Tax-Payers Who Can Return to the Workforce (Question 2, Statement 4).

<table>
<thead>
<tr>
<th>Statement</th>
<th>(Strongly) Agree</th>
<th>Neither Agree nor Disagree</th>
<th>(Strongly) Disagree</th>
<th>No of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 “People who pay the highest taxes should have priority access to Medicare services, if this allows them to return to the workforce earlier.”</td>
<td>5.9 (6.2)</td>
<td>9.9 (9.0)</td>
<td>84.2 (84.7)</td>
<td>355</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reason for agreement</th>
<th>(Very) Importanta</th>
<th>Neither Important nor Unimportantb</th>
<th>(Very) Unimportantc</th>
<th>No of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) “It is fair that high tax-payers have priority access to Medicare services, since their taxes helps to pay for roads, education, and other health services.”</td>
<td>80.9</td>
<td>14.3</td>
<td>4.8</td>
<td>21</td>
</tr>
<tr>
<td>(b) “The cost to society is less when high tax-payers return to the workforce because their taxes help to pay for roads, education, and other health services. It is efficient to return people like this to the workforce.”</td>
<td>90.0</td>
<td>5.0</td>
<td>5.0</td>
<td>20</td>
</tr>
</tbody>
</table>

a Responded with 1 or 2 on the five point scale.
b Responded with 3 on the five point scale.
c Responded with 4 or 5 on the five point scale.

**Tax-Based Priority, The Irrelevance of Tax Paid:** Table 6 reports responses to statement 5. An even greater percentage of respondents (90.4 per cent) (strongly) agreed with the statement that access to Medicare services should not be related to taxes paid. This again indicates a clear rejection of hypothesis 2. Almost two-thirds (65 per cent) indicated that an important reason for this is that high tax-payers can afford private health insurance (reason (b)). The answers to this question also indicated that those surveyed distinguish between public and private health services, and are prepared to accept some degree of inequity in the private system, but reject it in the public system.
Table 6. Support for the Irrelevance of Taxes Paid in Determining Priority Access to Services in a Public Health Scheme (Question 2, Statement 5).

<table>
<thead>
<tr>
<th>Statement</th>
<th>(Strongly) Agree</th>
<th>Neither Agree nor Disagree</th>
<th>(Strongly) Disagree</th>
<th>No of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 “Access to Medicare services should have nothing to do with the amount of tax people pay.”</td>
<td>90.4 (90.6)</td>
<td>2.8 (1.7)</td>
<td>6.8 (7.7)</td>
<td>354</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reason for agreement</th>
<th>(Very) Important</th>
<th>Neither Important nor Unimportant</th>
<th>(Very) Unimportant</th>
<th>No of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) “Most people contribute to society in their different ways, and access to Medicare services should not depend on the type of contribution a person makes.”</td>
<td>88.0 (90.3)</td>
<td>5.6 (4.0)</td>
<td>6.3 (5.8)</td>
<td>319</td>
</tr>
<tr>
<td>(b) “High tax-payers can afford private health insurance if they want priority access to health services.”</td>
<td>65.1 (63.0)</td>
<td>17.5 (17.8)</td>
<td>17.4 (19.2)</td>
<td>315</td>
</tr>
</tbody>
</table>

Table 7. Support for Tax-Based Priority Access to Life-Saving Organ Transplants (Question 2, Statement 6).

<table>
<thead>
<tr>
<th>Statement</th>
<th>(Strongly) Agree</th>
<th>Neither Agree nor Disagree</th>
<th>(Strongly) Disagree</th>
<th>No of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 “Those who pay the highest taxes should have a higher priority for life-saving organ transplants (kidney, heart, etc.), if there are not enough organs for all patients who need them.”</td>
<td>5.0 (6.2)</td>
<td>4.7 (3.5)</td>
<td>90.2 (90.3)</td>
<td>359</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reason for agreement</th>
<th>(Very) Important</th>
<th>Neither Important nor Unimportant</th>
<th>(Very) Unimportant</th>
<th>No of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) “It is a greater benefit to society if the life of a high tax-payer is saved, because their taxes help to pay for roads, education, and other health services.”</td>
<td>62.5</td>
<td>18.8</td>
<td>18.8</td>
<td>16</td>
</tr>
<tr>
<td>(b) “It is fair that high tax-payers have a higher priority for life-saving treatment, since their taxes helps to pay for roads, education, and other health services.”</td>
<td>62.5</td>
<td>12.5</td>
<td>25.1</td>
<td>16</td>
</tr>
<tr>
<td>(c) “Life-saving treatment should go to those who will have the best life after treatment, and high tax-payers generally have a more comfortable life-style.”</td>
<td>56.3</td>
<td>0.0</td>
<td>43.8</td>
<td>16</td>
</tr>
</tbody>
</table>
**Tax-Based Priority, Organs:** Table 7 shows responses to statement 6. Again, there was strong opposition to the suggestion that high tax-payers should have priority access to life-saving organ transplants (90.2 per cent). This question was included because some members of the public try to avoid the implications of limited health funding by saying that more money should be spent, whereas most people readily accept that transplantable organs are in short supply. This question also focused on life-saving treatment rather than Medicare services generally, making the implications of non-treatment very stark. The response to this question also indicates that hypothesis 2 was decisively rejected. Of the small minority who agreed with the principle, two-thirds found reason (a) (very) important – it is a greater benefit to society if the life of a high tax-payer is saved – two-thirds found reasons (b) (very) important – it is fair that high tax-payers have a higher priority – and half found reason (c) (very) important – life-saving treatment should go to those who will have the best life after treatment. This again tends to disconfirm the hypothesis 2a. Although the numbers are small, the 62.5 per cent support for reason (b), and the 43.8 per cent rejection of reason (c), suggest that efficiency considerations alone do not explain respondents’ choices.

**Tax-Based Priority, Drugs:** Table 8 shows responses to statements 7, 8 and 9. The proposition that high tax-payers should be able to receive very costly drugs under Medicare that are not available to other Australians was soundly rejected (statement 7), thus again disconfirming hypothesis 2. The response to statement 8 confirms that respondents distinguish between publicly-funded and privately-funded health care, and are more tolerant of inequity based on wealth and income in the private system. Of respondents, 65.6 per cent agreed with the proposition that high tax-payers should be able to buy expensive drugs privately that are not included in Medicare because of their cost. On the other hand, the proposition that access to health care generally should have nothing to do with a person’s income or wealth saw an equal split: 40.6 per cent agreeing, 42.7 per cent disagreeing.

**Table 8. Support for Tax-Based Priority Access to Expensive Pharmaceuticals (Question 3).**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Percent Support (Weighted)</th>
<th>No of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Strongly) Agree</td>
<td>Neither Agree nor Disagree</td>
</tr>
<tr>
<td>7 “High tax-payers should be able to receive very costly drugs under Medicare that are not available to other Australians, provided they pay more in tax than it costs for the drugs.”</td>
<td>11.7 (12.3)</td>
<td>4.9 (3.8)</td>
</tr>
<tr>
<td>8 “High tax-payers should get no priority under Medicare, but they should be able to buy expensive drugs privately that are not included in Medicare because of their high cost.”</td>
<td>65.6 (61.5)</td>
<td>13.2 (13.5)</td>
</tr>
<tr>
<td>9 “Wealthy individuals should not be able to buy expensive drugs privately that are not included in Medicare. Health care should have nothing to do with a person’s income or wealth.”</td>
<td>40.6 (44.8)</td>
<td>16.7 (16.1)</td>
</tr>
</tbody>
</table>
It is worth parenthesising that 41 per cent of our respondents implicitly supported the prohibition of private purchase of (all) health care. This strong egalitarianism is inconsistent with Pareto efficiency when this concept is defined in terms of outcomes (and excludes the disutility arising from the observation of other’s outcomes).


<table>
<thead>
<tr>
<th>Statement</th>
<th>Percent Support (Weighted)</th>
<th>No of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>10</strong> &quot;Those who pay a high Medicare levy should have priority access to Medicare services.&quot;</td>
<td>(Strongly) Agree 7.1 (9.4)   Neither Agree nor Disagree 7.7 (7.2) (Strongly) Disagree 85.2 (83.4)</td>
<td>352</td>
</tr>
<tr>
<td><strong>11</strong> &quot;It is unfair that the current Medicare levy is the same for all taxpayers (1.5%), because this means that high tax-payers must pay more even though they only receive the same benefits under Medicare.&quot;</td>
<td>21.5 (26.3)                13.5 (11.7)                65.1 (62.0)</td>
<td>349</td>
</tr>
<tr>
<td><strong>12</strong> &quot;The Medicare levy should not be the same for all tax-payers (1.5%). Those who can afford it should pay a higher percentage of their income, and those who cannot afford it should pay a smaller percentage.&quot;</td>
<td>35.0 (33.7)                9.8 (8.2)                  55.2 (58.1)</td>
<td>346</td>
</tr>
</tbody>
</table>

Table 10. Summary Questions on the Relevance of Indirect Benefits and Need for Priority Setting in a Public Health Scheme (Question 5).

<table>
<thead>
<tr>
<th>Statement</th>
<th>Percent Support Weighted</th>
<th>No of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>13</strong> &quot;When resources are limited, people who contribute more to society should have a higher priority for medical care in a public health system like Medicare.&quot;</td>
<td>(Strongly) Agree 7.9 (8.8) Neither Agree nor Disagree 5.1 (5.2) (Strongly) Disagree 87.0 (86.0)</td>
<td>352</td>
</tr>
<tr>
<td><strong>14</strong> &quot;Only medical ‘need’ should count in deciding who receives medical care in a public health system like Medicare, not a patient’s contribution to society.&quot;</td>
<td>88.6 (87.5)              3.4 (3.6)                  8.1 (8.9)</td>
<td>349</td>
</tr>
</tbody>
</table>

**Tax-Based Priority, the Medicare Levy:** Table 9 shows the responses to statements 10, 11 and 12. The vast majority of respondents (85.2 per cent) rejected the proposition that those who pay a high Medicare levy should have priority access to Medicare services (statement 10). This is consistent with earlier answers and again disconfirms hypothesis 2. Comparing responses to statements 4 and 10 the hypothesis that, in the context of Medicare, individuals value indirect health and indirect non-health benefits differently may be rejected at the 1 per cent level. The responses
to statements 11 and 12 indicated general satisfaction with the current Medicare levy. A majority of respondents (65.1 per cent) (strongly) disagreed with the proposition that the current Medicare levy (1.5 per cent) is unfair because it means that high tax-payers must pay more to receive the same benefits (statement 8). A slight majority (55.2 per cent) also disagreed with the proposition that those who can afford it should pay a higher percentage of their income (statement 12).

Responses to the summary statements, reported in Table 10, confirm the previous results. Of those surveyed, 87 per cent (strongly) disagreed that when resources are limited people who contribute more to society should have a higher priority for medical care in a public health system like Medicare (statement 13). Similarly, 88.6 per cent agreed that only medical "need" should count in deciding who receives medical care, not a patient's contribution to society (statement 14).

6. Discussion

Precisely how questions of distributive justice are to be resolved is a difficult issue, and in particular the role of public opinion is not clear and, to date, there has been no agreement – and very little debate – about the role of public opinion in the context of decision making for a national health scheme. Nevertheless, in a liberal democracy there is a strong prima facie case for taking account of public preferences and, in particular, in the context of an NHS which was explicitly created to satisfy the public's concern about public access to health services. The present study was undertaken to determine the Australian public's assessment of one quantitatively important issue, namely, the (partial) inclusion of indirect benefits in economic evaluation studies.

Serious consideration of the public's views is only one input into the decision-making process, but at a minimum it indicates respect for those who finance, and are the prime beneficiaries of, the health system. At the same time, it leaves room for government "laundering" of socially irredeemable preferences if they should arise. By comparison with the eliciting of individual preferences for alternative health states, the eliciting of social preferences for the principles that should guide decision makers, and in particular governments, when they assess alternative health programmes and services, has received little attention. The present paper is also a contribution to this important "meta-task".

The study focused upon taxation and not upon the total value of indirect benefits, which includes personal savings and consumption. This was because the case for including indirect benefits is more compelling when they advantage the entire community. In contrast including the consumption element of indirect benefits implies that as a patient's own consumption rose, tax-payers should be prepared to forgo $1.00 for every $1.00 which a consumer obtains for themselves and where there is no benefit to the taxpayer. It would be highly unsurprising if tax-payers rejected this redistribution of income. For this reason questions focussed upon the strongest argument for including indirect benefits, namely the social benefits from increased taxation. We believe it is a safe inference that if our respondents reject tax-based priority setting they would also reject own-consumption based prioritising. Indeed, there was confirmation of this in question 2 (Table 7), where 43.8 per cent of the small number of respondents who (strongly) agreed that high tax-payers should have priority access to life-saving organ transplants, (strongly) disagreed with the statement: "Life-saving treatment should go to those who will have the best life after treatment, and high taxpayers generally have a more comfortable life-style".

In rejecting the relevance of indirect benefits in prioritising health care it would seem reasonable to assume that respondents were aware of the consequences of their choices. For example, it was
explained that all Australians would be better off if those individuals who paid more than $100,000 in tax per year were given very costly drugs at a subsidised rate, provided that the drugs would allow them to return to work (and this would not happen without the drugs). Even so, 83.4 per cent of respondents rejected this as a legitimate reason for differential treatment. This is consistent with results in experimental economics which show that many people are prepared to accept a personal disadvantage in order to punish unfairness (Kahneman, Knetsch et al. 1986b; Ochs and Roth 1989; Bolton 1991). In particular, the low level of importance attached to indirect pecuniary benefits implies a rejection of what Olsen, Richardson et al. call “pecuniary utilitarianism”. The rejection of hypothesis 2 was decisive.

The rejection of hypothesis 1 was less decisive. In particular, discriminating in favour of patients who care for young children (statement 1) or elderly parents (statement 2) received substantial support (40.9 and 42.2 per cent respectively). On the other hand, a similar proportion of respondents rejected such discrimination (39.2 and 37.4 per cent respectively). Olsen, Richardson et al. characterise “social worth” as a function of both pecuniary and non-pecuniary utility. In this sense, those who rejected pecuniary and non-pecuniary utility were rejecting the relevance of “social worth” for setting priorities in health care. It is tempting to speculate that these respondents were distinguishing between the goodness of a person and their usefulness – between their moral and their social worth - and basing their assessments on the (equal) moral worth of persons despite their (differing) social worth (Young 1975, p. 447; Basson 1979, p. 317; Harris 1985; Harris 1988a; Nord 1999a).

By contrast with both pecuniary and non-pecuniary social contribution, there was strong support for allocating health care on the basis of need (statement 14). Need is typically explained in one of two ways in the health literature – either as capacity to benefit from treatment or as severity of pre-treatment condition (Culyer and Wagstaff 1993; Hurley 2000). Empirical evidence from at least nine studies indicates strong societal support for the latter (Nord 1991; Nord, Richardson et al. 1993; Nord 1993a; Nord 1993b; Abelson, Lomas et al. 1995; Ubel, Loewenstein et al. 1996; Prades 1997; Ubel, Spranca et al. 1998; Ubel 1999b), and moderate support for the former is found in at least eight articles (Olsen 1994; Johannesson and Gerdtham 1996; Nord, Street et al. 1996; Choudhry, Slaughter et al. 1997; Prades and Lopez-Nicolás 1998; Andersson and Lyttkens 1999; Olsen 2000; Rodríguez-Míguez and Prades 2002). As the responses to statements 13 and 14 indicate, our respondents distinguished between medical need (interpreted in either of these ways) and social worth, and unambiguously endorsed the former and rejected the latter as a criterion for prioritising health care. The rejection of the relevance of social worth as measured by pecuniary utility was more decisive than that measured by non-pecuniary utility.

By implication, those surveyed rejected the principle that people who pay more in tax or pay a higher Medicare levy deserve preferential treatment. One of the aims of an equitable system of allocation is to ensure that benefits and harms (tangible goods, opportunities, privileges) are not bestowed on individuals undeservedly. Neither paying more in tax nor paying a higher Medicare levy were thought to confer special consideration based on desert. Only certain characteristics of people create legitimate grounds for desert, and respondents may have thought that low tax-payers are not solely responsible for their inability to contribute more, income being heavily influenced by level of education, prevailing employment opportunities, intelligence, and other personal and social factors largely beyond an individual’s control. (On attributions of responsibility see (Meyer and Mulherin 1980; Reisenzein 1986; Weiner 1986; Skitka and Tetlock 1992)). On the other hand, there was substantial support for preferential treatment based on non-pecuniary social contribution when this involved parents of young children and carers of elderly relatives. It is possible that
respondents considered these groups more deserving, though it is not possible to conclude this with any confidence.

There are at least three reasons for exercising some caution in interpreting the results. First, it is likely that responses to some of the questions can be partly explained by status quo bias (Ciccone 2004; Masatlioglu and Ok 2005). Medicare in Australia at present does not distinguish between high and low tax-payers. A certain amount of de facto discrimination of this type may occur informally at the hospital or individual service-provider levels. But it is not Medicare policy to discriminate on the basis of tax contribution or Medicare levy contribution. This may have influenced respondent’s choices. However, even if confirmed, the implications of this caveat are debatable, as it is generally people’s preferences and not the reasons for them that are of importance for the allocation of resources.

Second, while the questions in our survey are not conceptually difficult, they raise difficult ethical issues. Prior to receiving our questionnaire respondents may not have thought about these issues deeply. As a result, it is possible the questionnaire elicited “under-considered” and therefore potentially “unstable” preferences (Shiell, Hawe et al. 1997, p. 516). Again, this does not necessarily invalidate the results as people’s “considered” preferences are likely to be highly correlated with their initial assessment. Rather, this objections highlights the need for on-going research, including the development of preference elicitation techniques that encourage reflection, and promote preference construction rather than preference elicitation (Gregory, Lichtenstein et al. 1993; Lopez and Lopez 1998; Payne, Bettman et al. 1999; Shiell and Gold 2002; Shiell and Gold 2003; Shiell, Hawe et al. 2003).

Third, it is important to be mindful of the scope of the study. Indirect benefits may be assessed through consideration of a variety of factors, including income, net worth, educational background, community service and occupation (Kilner 1990, p. 27). In the case of pecuniary social contributions we concentrated on tax and Medicare levy contribution. In the case of non-pecuniary social contribution we concentrated on parents with young children, carers of elderly relatives, and those with a large social network. This still leaves other forms of indirect benefits unconsidered. Similarly, indirect benefits may confer priority for life-saving treatment, life-enhancing treatment, preventative measures, clinical trial participation, palliative care and much else. We concentrated on access to life-saving organ transplants and expensive drugs in the present study. It is possible that different combinations of benefits and interventions will result in different assessments of relative worth by the community. This is also something for further study.

Finally, and perhaps the most important caveat in the interpretation of the results, the study considered the issue of priority setting within the health sector and between different beneficiaries. The framing therefore implied, as intended, a fixed budget and within-sector priority setting. The results do not necessarily apply when deciding upon the size of the health sector itself. Thus, it might be desirable to take account of the cumulative tax benefit when health budgets are determined. Our results, however, indicate that this should not be done in a way that directly or indirectly favours one group of patients over another.

7. Conclusion

The survey revealed strong egalitarian sentiments in the Australian community, at least regarding Australia’s publicly financed health system. The principle that indirect benefits should be included when prioritising health care was rejected in the case of individuals who pay the highest taxes and
those who pay the highest Medicare levy, and for two health services in particular – access to life-saving organ transplants and to very costly drugs. In particular, pecuniary social contribution was decisively rejected as a criterion for prioritising health care. There was more support for taking account of patients’ potential non-pecuniary contributions when setting health priorities. This was particularly so in the case of parents with young children and carers of elderly relatives. But here too, equal numbers of respondents rejected the relevance of non-pecuniary utility. In general, therefore, there was little support for including indirect benefits in the comparison of the overall benefits of a public health service. “Social worth” was rejected as a criterion for prioritising health care. In the words of Olsen and Richardson respondents considered the indirect benefits of giving priority to these groups in these contexts as “socially irrelevant”.

While it remains true that taking account of indirect benefits is a prerequisite for maximising potential utility it is also true that this may reduce social welfare in a social welfare function in which the distribution of benefits is of great importance and this appears to be true in the context of a national health scheme.
References


