Some other goals are scarcely utopian. It should not be an insuperable task to make sure the places where we deliver care are clean, not only in the wards and departments where it most matters, but in every passage way and waiting area. According to the Healthcare Commission the private sector manages these things better. Surely it is not an unreasonable expectation that the NHS will do so long before 2015.

Work in progress

Although in many ways the NHS in 2015 may fall short of what many aspire to, we must not undervalue how far it has come. The incremental changes that mark progress will continue. Advances in clinical science and their translation into services, practice, and care will be steps to improvement. Quality and clinical excellence will be an intrinsic part of a health service that is fit for the needs and expectations of patients. The long and deeply ingrained urge to question clinical practice and improve care will be supported by adequate investment. And at last we are beginning to see recognition and mature acceptance of a responsibility to match expectations and demands with ethical best use of the resources available. A new behaviour among public

Vision

Health care will be safe, clinically effective, and patient focused

Primary care will have enabled patients to reject behaviours that harm health

Patients will continue to rely on doctors to help them make decisions about health

Medical professionalism will ensure high levels of public trust

and providers alike, a mature conversation between clinicians and patients might seem unrealistic, but it is not beyond imagination.

Competing interests: None declared.

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Health policy

Improving NICE's social value judgments

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NICE has just published guidance on judgments relating to social values. A systematic approach to incorporating patients' characteristics in modelling could improve such judgments

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Discrimination between patients on the basis of individual characteristics is inevitable in clinical practice. Such characteristics are clearly relevant in determining the risks and benefits of specific treatments, and few would question the appropriateness of considering factors such as age, sex, and obesity in devising guidelines for preventing deep vein thrombosis or taking account of ethnic origin in screening for diseases that occur in particular populations. Such discrimination might, however, be considered unfair, particularly when the issue to be decided relates to cost effectiveness or if the grounds for discrimination could be seen as being a question of "deservedness."

Consistency, comprehensiveness, and specificity

The National Institute for Health and Clinical Excellence (NICE) is to be congratulated on tackling this difficult issue through the development of guidelines on social value judgments.¹ The draft document provided guidance on how such issues might be addressed in the decisions taken by NICE, particularly

in relation to the appraisal and guideline development processes, but there were some difficulties and potential shortcomings.² Several issues arise in regard to the extent to which this advice is consistent, comprehensive, and sufficiently specific for technology appraisals or guideline development.

Firstly, the apparent inconsistency between recommendations relating to different characteristics such as age, sex, and ethnic origin has been partly resolved in the final version.³ For example, in respect to age the draft guidance stated that "where age is an indicator of benefit or risk, age discrimination is appropriate"—but existing guidance, such as that relating to the use of drugs for influenza and the treatment of infertility, already sets criteria in relation to age.⁴ In respect to gender and sexual orientation, they suggested that discrimination is not appropriate "unless there are risk factors for benefits, risks or both" whereas in respect to ethnicity they stated categorically that there is no place for discrimination, and did not include a caveat in respect to differences in risks and benefits.

It is not logical to treat individual characteristics such as age, sex, or ethnic origin in different ways—an alternative would be a generic approach that deals with how such information should be used, rather than the specific nature of the information. Some forms of

Who should we treat?

discrimination might be considered unacceptable, whatever the characteristic on which the bias is based, and yet it would seem illogical to insist on providing an ineffective treatment to an entire population purely in the interests of equity.

Secondly, the guidelines are not comprehensive, concentrating on age, gender, ethnicity, social status, and self inflicted illness, but not covering the full range of characteristics that might be used to identify subpopulations. For example, over the next few years, genetic markers could be identified that may predict the risks and benefits related to diseases or their treatment. These in themselves may frequently be proxy markers of ethnic origin or sex and therefore could lead to discrimination. Factors such as obesity, stature, and occupation may all be related to health outcomes. Guidance should be designed in such a way that it can be generalised to include any such characteristics; it should relate to any characteristic that may define a subpopulation that could be shown to have identifiable differences in effectiveness, treatment costs or overall cost effectiveness.

The third issue is one of the specificity and usefulness of the guidance. In decisions based primarily on a cost-utility approach, all analyses are likely to include risk and benefit variables related to patients' characteristics such as age and sex. The guidance does not seem

to be sufficiently explicit to determine when these should be used for decision making.

Situations and examples

In many cases, economic modelling allows individual characteristics, and the way in which these influence cost effectiveness, to be considered. Modelling can be used to identify several specific situations (table). If characteristics relate to the incidence of a condition (case 1) or the severity or disutility associated with that condition (case 2), treatment could focus on the group that would be most harmed by the condition. Targeting treatment towards those with the highest burden of disease, due to either higher incidence or increased severity, would result in positive discrimination that would tend to promote equity; thus it seems fully compatible with social justice.

Another situation is where the variables influencing cost effectiveness are those relating to the response to the treatment (case 3). For example, elderly people might be less likely to respond to a certain form of treatment even though their disease is as severe as in younger people. Limiting treatment to those most likely to respond would be likely to improve cost effectiveness, but it would reduce equity. This situation shows the greatest conflict between the utilitarian approach and concepts of social justice: the desire to maximise total benefit from available resources must be weighed against the wish to provide equitable treatment on the basis of need. One approach is to first consider the cost effectiveness of treating the entire eligible population. If this showed that overall cost effectiveness was acceptable then a decision could be made without discrimination—but if the entire technology would be rejected as not cost effective, it would be reasonable to try to identify a subgroup of patients in whom the treatment would be cost effective.

The final situation is that in which the variables that influence cost effectiveness may be entirely unrelated to the disease or its treatment (case 4). This raises one of the shortcomings of the cost-utility approach: people who have the least potential to benefit in terms of

Situations in which the risks and benefits of treatment might vary in patient subgroups

	Variables related to patient's characteristics	Situation	Implications	Appropriateness of discrimination	Example
Case 1	Incidence of disease	Identification of high risk populations for screening or prophylaxis	Selection would result in favouring the population with the highest incidence of disease	Yes	Screening programmes aimed at people of a specific age group, sex, or smoking habits
Case 2	Severity of disease, complication rate, or disutility	Directing treatment to patients with the highest complication rate or those likely to get most severe symptoms	Patients with the greatest burden of disease would be treated preferentially, reducing health inequalities	Yes	The use of zanamivir or oseltamivir selectively in patients over 65, as recommended by NICE ⁸
Case 3	Outcome of treatment	The identification of groups for whom treatment is less cost effective due to poor success rate	Discrimination would be likely to disadvantage those with the worst prognosis	Requires trade-off between equity and cost effectiveness. May be appropriate to select a subgroup for treatment if the technology would otherwise have been denied to all	NICE recommendation to allow imatinib for blast cell phase as opposed to chronic phase in chronic myeloid leukaemia despite higher cost per QALY ⁹
Case 4	Patient's baseline quality of life or life expectancy from other causes	Reduced benefit in some patient subgroups due to factors unrelated to the disease in question	For many treatments this might result in discrimination against elderly or disabled people	No	

quality adjusted survival, such as elderly patients or those with chronic disability, are likely to prove less cost effective to treat. To allow discrimination on these grounds would seem analogous to determining treatment on the basis of deservedness. This is the basis of much of the recent controversy regarding the guidance from NICE regarding drugs for Alzheimer's disease⁵; as well, some would challenge the over-reliance on conventional QALY (quality adjusted life year) measures for assessing the cost effectiveness of interventions in an elderly and chronically disabled population.⁶

Is modelling the answer?

One of the advantages of the increasing use of economic modelling to address cost effectiveness issues is that it allows specific causes of variation to be addressed through sensitivity analysis and alternative scenarios. Although current NICE guidance relating to technology appraisal indicates that it might be appropriate to provide modelling of the clinical and cost effectiveness of treatments for subgroups of patients,⁷ no advice sets out which variables would be considered ethical to include in such analyses or attempts to identify which features of specific subgroups are responsible for any differences in cost effectiveness. Even in the most complex cases, where patients' characteristics are related to a number of variables in the analysis, those that could ethically be used for discrimination could be isolated. Ultimately, difficult decisions are required to balance conflicting priorities in healthcare provision. Though it is impossible to satisfy all of the people all of the time, we can at least try to ensure that decisions are explicit, transparent, and reached through a consistent process.

Contributors and sources: JAM is professor of vascular surgery in Sheffield and has a longstanding interest in technology appraisal, cost effectiveness analysis, and decision modelling. This paper arose from consideration of the issues raised in the recent consultation document published by NICE regarding social value judgments, particularly regarding how such judgments could be incorporated into more formal cost effectiveness analysis.

Competing interests: JAM is a member of the National Institute for Health and Clinical Excellence's appraisals committee. The opinions expressed in this article are those of the author and not of the institute.

Summary points

Despite recent consultation on the subject, there is currently no consistent and comprehensive framework for the incorporation of social values into NICE's decision making

Patient characteristics that may relate to the incidence, outcomes, or costs of diseases and their treatment include age, sex, and ethnic origin, and also less obvious proxy markers

Subgroup and sensitivity analysis within economic modelling may predict the effect of such characteristics on cost effectiveness and equity

Clear criteria for the appropriateness of subgroup analysis, based on specific variables, could provide a framework for incorporating social values into decision making in an explicit, transparent, and consistent way

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Do-it-yourself cardioversion

A 64 year old man had been treated for six years for atrial fibrillation with digoxin, verapamil, and warfarin. At the onset a cardiologist wrote: "We contemplated the possibility of DC cardioversion, but he was certainly resistant to any procedure under general anaesthetic."

On Good Friday he decided to put up some shelves at home. As he drilled the necessary holes in the wall, the tip of the drill bit came into contact with a mains electric cable (240 volts AC) within the wall. The shock lifted him off the stool on which he was standing and deposited him in a dazed state on the floor. His wife, a nursing sister, found his pulse to be present and regular. There were no embolic phenomena. Ten weeks later, he was still in electrocardiographically confirmed sinus rhythm. The drill bit was ruined.

We calculate—on the assumption that the non-wet human body has an electrical resistance of 100-500 ohms—he would have received about 240 joules for each full second that he was in electrical contact with the mains.

We do not know whether this has been reported previously, but we recommend that, even where there is a waiting list for elective DC cardioversion, this is not something that patients should try at home.

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