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Cost-effectiveness is arguably the most influential factor in the provision of healthcare in the 21st century. Health technology assessments (HTAs), performed by organisations such as the National Institute for Health and Clinical Excellence (NICE) and the Scottish Medicines Consortium (SMC), can make or break a drug – and, consequently, make or break the lives of many people who may benefit from those drugs.

Cost-effectiveness analysis (CEA) is one of the techniques used in economic evaluation to compare the costs and health benefits of an intervention (e.g. a structured education programme or a new treatment). The objective is to see whether or not it is worth spending money on this intervention, i.e. to maximise health benefits within a resource-limited health service.

NICE appraisals are based primarily on a type of CEA called cost-utility analysis, where the benefits are expressed in terms of the quality and quantity of life delivered by a given treatment, i.e. quality-adjusted life years (QALYs). NICE has adopted a cost effectiveness threshold range of £20,000-£30,000 per QALY gained, although this figure has no basis in either theory or evidence and could be argued to be too low when one considers the wider personal and social costs of incapacity.

Cost-effectiveness is only one of a number of criteria that need to be considered when rationing healthcare; others include issues of equity, needs and priorities. Although NICE does not accept or reject therapies based on cost-effectiveness alone, it is undoubtedly a major deciding factor. There are two main problems with this system:

1. it accounts only for costs to the NHS
2. it does not consider the patients’ perspective in decision-making

Pfizer’s inhaled insulin Exubera® was potentially one of the biggest breakthroughs for people with diabetes since insulin was first discovered by Banting and Best in 1922. Unfortunately, insulin without the need for injection was more expensive and (apparently) no more effective than injected short-acting insulin, so NICE decided that it “was not an effective use of National Health Service (NHS) resources”.

Another case in point is in macular degeneration (MD), where the cells of the macula become damaged and stop working, resulting in central vision blindness. Most commonly, one eye is affected at a time. In June 2007, NICE assessed two potential drugs for wet age-related MD. They dismissed the use of one and recommended that the other is prescribed only when both eyes have been affected, with the treatment being given only for the least degenerated eye. This suggests that people with MD must lose total sight in one eye before being offered treatment, despite evidence to suggest that it is actually more expensive for society (if not the NHS) to support someone once they have lost their sight than to provide this treatment.

Whatever you may think of NICE, it has brought the process of healthcare rationing out into the open. Someone (or some organisation) needs to decide what treatments can be afforded and for whom.

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At what cost, cost-effectiveness?

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For many years, that process has gone largely unchecked behind closed doors, with decisions made on a case-by-case basis or a “postcode lottery”. At least NICE has made an attempt to ensure that such decisions are transparent, independent and evidence-based.

So, in a resource-limited environment, someone is required to place a value on health. The problem comes in defining “health” and deciding whether other factors such as quality of life (QoL) and treatment satisfaction can and should be part of the CEA equation.

In the cases of Exubera® and MD (above), neither treatment necessarily improves health (or certainly not in the way it is measured in HTAs), but they can improve QoL and other patient-reported outcomes (PROs). PROs refer to a variety of outcomes that can be provided only by the patient. Examples of these include symptom severity and bothersomeness, perception of daily functioning, feelings of well-being, satisfaction with treatment, and health-related QoL. NICE’s principal choice of generic health status questionnaires are unsuitable for measuring the quality of someone’s life in a way that is sensitive to a variety of conditions or allows the individual to indicate what is important for them personally and how that is impacted by their illness. Conditions like MD, diabetes and breast cancer, do not necessarily result in major incapacity (as measured by the EQ-5D) but the impairments that are not measured can be substantial. To paraphrase Albert Einstein: do we really only value the things we can count? Or should we be counting the things that we value?

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In an attempt to speed up the drug approval process, the government has recently outlined plans which dictate that NHS trusts will no longer be able to refuse drugs on the basis of cost alone. With much recent controversy over the availability of certain life-saving cancer drugs, this could be interpreted as long overdue, but it may also seem highly inappropriate in a resource-limited NHS. However, it is also clear that the current system of evaluating QALYs in isolation is unsuitable. To maximise the health benefits of treatments available on the NHS, the impact of a condition on the individual must be considered, as it is apparent that this directly affects the impact and cost of the disease on the wider population. Interestingly, while health psychologists have been involved in National Service Frameworks in recent years, there remain none on the board at NICE. What does that say about the values of NICE? We wouldn’t like to comment!

References