strategies to change the minds of adolescents and parents who at first refuse HPV vaccination. When disagreements arise in other clinical situations, physicians are encouraged to understand the patient’s (or parent’s) perspective and to respond to their concerns and needs. Such a patient centred approach might also be useful with individuals who decline HPV vaccination.

Some parents question the need for vaccination because their daughters are not sexually active. Physicians should acknowledge that HPV vaccine is unnecessary until just before sexual activity starts. It is also not unreasonable for parents to delay vaccination for other reasons, including uncertainty about long term effectiveness and concerns that rare adverse effects may not yet have been identified. The challenge is for doctors to help parents consider a different perspective: their child’s sexual activities may differ from what they would approve.

In other clinical settings, physicians have used “I wish” or “I hope” statements to respond to unrealistic expectations: “I only wish that a parent could be sure in this day and age that their child won’t be sexually active . . . ” It is possible that parents who feel that the doctor or nurse has listened to them might then be willing to consider the evidence that girls who pledge premarital abstinence start having sex at about the same age as other girls.

Other parents may fear that the HPV vaccine will encourage or condone adolescent promiscuity. Their concerns are understandable given parental fears that children grow up too quickly in the 21st century. Indeed, public health officials should monitor trends in the incidence of sexually transmitted infections. Once parents have their underlying concerns acknowledged, it is possible that they might be more willing to accept that the weight of the evidence indicates that the vaccine is unlikely to increase sexual activity. Furthermore, HPV vaccine may indeed offer parents an opening to talk with their children about sexuality, including the possibility of sexual disinhibition after HPV vaccination. Focus groups of parents and adolescents and community advisory boards can suggest how healthcare workers can respond to concerns about HPV vaccine.

Despite their parents’ objections, some girls will want to receive the vaccine. Adolescents who know they are likely to become sexually active should have the opportunity to benefit from HPV vaccine. In the US, most states allow adolescents to obtain care for sexually transmitted infections, contraception, and pregnancy care without parental consent. The rationale is that reducing serious harms to adolescents and respecting their emerging independence outweigh parental interests in control over their children. It would be wise to enact laws that explicitly allow them to receive HPV vaccine as well.

As Raffle’s article illustrates, public health is an inherently utilitarian enterprise, guided by outcomes and cost effectiveness. The distribution of risk and resources also needs to be taken into account. Uptake of HPV vaccine might be lower in certain socioeconomic and ethnic groups, where the likelihood of earlier sexual activity or risk of cervical cancer may also be greater. Targeting vaccination campaigns at these groups may be more cost effective than a broader based campaign but may be opposed on the grounds of being stigmatising and discriminatory. Suggestions from adolescents who are at risk and their parents can help to design effective targeted campaigns and build community support.

In summary, making HPV vaccine mandatory might advance the immediate goal of increasing uptake. However, public policies also need to consider a broader perspective. Such vaccination is not a goal in itself, but a means to achieve the goal of cancer prevention. Furthermore, physicians need to persuade people who have concerns about the HPV vaccine to trust in and cooperate with other measures to promote adolescent health.

**NICE’s cost effectiveness threshold**

How high should it be?

The recent judicial review instigated by the drug companies Pfizer and Eisai concerning National Institute for Health and Clinical Excellence (NICE) guidance, which would deny access to three drugs for patients with mild Alzheimer’s disease, and a second ongoing inquiry into NICE by the House of Commons Health Select Committee, are the latest examples highlighting the importance of NICE and the challenges it faces. The judicial review, which ruled predominantly in favour of NICE, concerned the procedures NICE used to arrive at their judgment, not the outcome specifically. However, NICE has to make a judgment that is more fundamental than the matters at stake in the judicial review—at what point should an intervention be deemed cost effective enough to warrant public subsidy via the National Health Service (NHS)?

An advantage of the way in which the United Kingdom funds the NHS is that its patients do not have to judge whether or not the health benefits of their treatment are worth its costs. But someone, somehow, still has to grapple with the decision over the value that is placed on health.

This valuation lies at the heart of the work performed by NICE—which, since its inception in 1999, has adopted a cost effectiveness threshold range of £20 000 (£29 500; $40 000) to £30 000 per quality adjusted life year (QALY) gained. NICE does not accept or reject healthcare technologies on cost effectiveness grounds alone, although it is undoubtedly a major deciding factor. But the uncomfortable truth is that NICE’s threshold has no basis in either theory or evidence.

This is not a technical problem confined to the decisions made by NICE. That is just the tip of an iceberg of clinical, managerial, and policy decisions made daily
In health care—decisions that, unlike those derived from NICE’s transparent procedures, may not be based on an explicit threshold, or even consider cost effectiveness at all. Nevertheless, these decisions all imply that the value of the health benefits justifies the costs—of the operation, the prescription, the new hospital, a reduction in waiting times, and so on.

The cost effectiveness threshold is emerging as a key factor in the House of Commons Health Select Committee inquiry into NICE, which has received evidence that the threshold may be too generous. If this suggestion is correct, the implications are profound. It means that NICE has recommended too many new technologies. It also means that when primary care trusts implement NICE’s guidance, resources may be diverted from other healthcare services that are better value for money. By setting the hurdle too low (the cost per QALY threshold too high), NICE might be reducing the efficiency of the NHS. So, what should the threshold be?

Two approaches to setting a cost effectiveness threshold have been proposed. The first is to decide the worth or value of a QALY and set the NHS budget so that all health care is provided at a cost at or below that value. The second is to decide how much we wish to spend on the NHS, and let the value of a QALY emerge from the decisions made by NHS purchasers. If purchasers aim to maximise QALY’s, and their budgets are set so that they can do so, these approaches converge. In practice these conditions are not met and there is currently no political or other mechanism to facilitate them. The danger is that purchasers are likely to make inconsistent decisions based on their variable, and often implicit, valuations of health gain.

Evidence suggests a mismatch between NICE’s threshold range and that apparent elsewhere in the NHS. The average primary care trust spends £12 000 to gain an extra QALY in circulatory disease and £19 000 in cancer. In contrast, an analysis of NICE’s decisions suggests that its threshold is in practice even more generous than NICE admits, being closer to £45 000.

Why should NICE be required to set and defend what is an NHS wide cost effectiveness threshold? The factors that should determine this threshold—such as society’s willingness to pay for health improvements, the size of the NHS budget, the level of health sector inflation, and the discount rate used for future costs and benefits—are beyond NICE’s control. Moreover, as these factors are not constant the problem of thresholds can never be resolved. This means NICE has to keep the threshold constantly under review, although its main business and expertise is in appraising health technologies and producing guidelines.

In 1997, Gordon Brown (then chancellor) gave the Bank of England operational independence from the treasury so that it could set UK interest rates to contain inflation. It does this via its Monetary Policy Committee, which consists of bank officials and independent members. The NHS could be given similar independence from the Department of Health on the specific matter of setting a cost effectiveness threshold. The NHS should have a threshold committee with a similar structure to the Monetary Policy Committee; and NICE, primary care trusts, and other NHS purchasers should be required to adopt the common NHS threshold. NICE conjuring up a threshold and others not using one at all creates neither efficiency nor fairness in the NHS.

**Improving the outcome of stroke**

**UK needs to reorganise services to follow the example of other countries**

The outcome of stroke varies markedly between countries. A study of 12 centres in seven European countries found that mortality varied twofold even when adjusted for case mix and use of healthcare resources. Similar variation was also found in two large international multicentre trials of acute stroke. All three studies found the outcome was worst in the United Kingdom; in one study the differences in the proportion of patients dead or dependent between the UK and the other eight countries were between 150 and 300 events per 1000 patients.

What underlies this variation and why is outcome so poor in the UK compared with countries with similar economies in western Europe? Residual confounding by case mix is difficult to exclude completely, but differences in the process of care are likely to be important. In many European countries stroke care is an integral part of neurology. In contrast, in the UK it has, until recently, been a “Cinderella” subject, often falling between neurology and general and geriatric medicine. It is tempting to conclude that this lack of interest has led to underinvestment and a resulting poor outcome. However, the cost of care of stroke patients seems to be as high, if not higher, in the UK than in European countries with better outcomes. This suggests that organisational and structural problems in delivery of resources are important.

Limited data show that European countries with better outcomes focus resources more heavily on the acute aspects of care. The vast majority of the cost of in-hospital stroke care in the UK is for nursing and hospital overheads, with the cost of investigations and medical care being very low. The higher length of stay in England found in comparative studies suggests that improvements in acute care could not only improve outcome but also lower costs by reducing length of stay.

Organisation of acute stroke care has become even more important now that there are specific treatments for acute stroke. Thrombolysis with alteplase (tPA) improves outcome if given within three hours of ischaemic stroke onset. Providing thrombolysis is challenging even in countries with well developed services.

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