Essentials of Health Economics

Part II—Financing health care

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The choice of method of financing is one of the basic economic decisions a government has to make concerning the health care sector. It is intriguing, therefore, that different countries have developed quite different systems for raising the finance, paying doctors and other health care professionals, and exerting influence over the amount and direction of health care expenditure. The choice of system cannot be divorced from political ideology, of course, and not surprisingly the USA has a health care system with a large private market element whereas those of Eastern European countries are based largely on State provision. In the United Kingdom the method of financing has been examined by a royal commission¹ and more recently been debated in the medical press² after statements by members of the present government. Despite the ideological issues the initial interest of health economists in the UK was in whether a system based on market principles would lead to more efficient delivery of care than that existing in the National Health Service (NHS).³ There is no simple answer to that question, but the market versus State debate opens up a Pandora's box of issues concerning the nature of the "commodity" (health care), the role of doctors, patients, and institutions in the delivery of health care, and the performance of health care systems. In short, the financing debate gives some important clues in the search for ways of obtaining better value for money in health care, clues which we shall follow up in later articles in this series.

Nature of the "commodity" (health care)

Compared with other goods and services what is different about health care? This question has been posed by economists seeking to explain the role of government in health care delivery. One important difference is that all of us have an interest in other people's health and hence their consumption of health services. For example, others may care about your health because they want you to continue working and hence create wealth for the community. They may also like you to be vaccinated against communicable diseases since this reduces their chances of catching the disease. On a more general level others may care about your health just because seeing you in poor health may make them feel sad or uncomfortable. These *externality* relationships are an important argument for government intervention in health care markets. They do not necessarily imply government finance and provision of health care, however, as Seldon⁴ has been quick to point out: "If you had a choice in

spending your money, would you waste it unnecessarily when your children needed schooling and your wife needed a doctor. If not, what makes you think other people would? If they wouldn't, why don't we give money to people who need it and leave everyone free in spending it? If we do that, what happens to our tax-financed public services." This quote hints at another way in which health care may be different. That is, some individuals do not act in their own best interests and some "élite" exists who knows "better." (This is known as the *merit good* argument and is often applied to the consumption of education.) While the *merit good* argument might reasonably be applied in the case of care for children or psychiatric care, it is much more open to question in the health care field as a whole and is one cornerstone of the ideological debate.

CONSUMER SOVEREIGNTY

Perhaps people should be free to make their own mistakes. This would certainly be the view of economists such as Mishan,⁵ who in commenting on how reductions in the risk of death should be valued argued that the relevant values are those for the individual's own (possibly misguided) perception of risk changes. Other economists are, however, more sensitive to situations where consumers are not fully cognisant of the possibilities open to them. Nevertheless, they are wary of taking away from the consumer the right to choose (a concept known as *consumer sovereignty*), although this may be defined to include situations where the individual consciously delegates that choice to an acknowledged expert.

INSURANCE

Another important feature of health care is that one's future consumption of it is uncertain. The usual way market systems cope with uncertainty is by insurance against future risks. In most countries with a large private sector in health care the vast majority of people with the resources to pay have some form of medical insurance cover, usually as a benefit from their employer. Of course some individuals—such as those born mentally handicapped or with a severe heart defect or the old and infirm—would be bad risks for insurance companies, and even pro-market hawks recognise the need for some government provision in these areas. The crucial feature of insurance is, however, that once one has the cover the money price paid at the time of receiving health care may be close to zero, as in the NHS. Thus, one of the benefits of a market system—the consumer carefully scrutinising the product and then deciding whether it is worth the cost (sacrifice in terms of other benefits forgone)—disappears. In motor insurance terms, this is similar to the difference between the "insurance job," where a car is virtually replaced, and the kind of repair one would pay for oneself. If one has behaved in this way, then an economist would call it "experiencing *moral hazard*."⁶

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Conclusions

Whereas the car repair example suggested similarities between the consumption of health care and other goods under insurance, the same analogy also suggests a crucial difference between health care and other commodities. This is because the relationship between the consumer (patient) and the supplier (doctor or other health professional) is different in the health care field. Because of the status that the doctor has in society the advice he gives is likely to carry more weight than that given by a car mechanic. This status is inexorably linked to the professionalism of doctors and can be viewed either as a good or bad thing. Since this phenomenon does exist it has implications for strategies designed to influence society's demand for health care. It could be said that the doctor makes the demands on behalf of the patient, not the patient himself; that is, he acts as an agent for the patient. Thus, if you want to make the delivery of health care more efficient do you try to influence the patient, the doctor, or both? In a market system institutions such as hospitals and insurance companies are unlikely to be indifferent to the nature or amount of care provided, even if they are run on non-profit-making lines. Presumably they would not want the size

of the health care market to decrease. Strategies designed to increase the efficiency of provision, therefore, need to take account of these interests too.

Next week's article will continue to examine different systems of financing health care.

References

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- 3 Culyer AJ. *Need and the national health service*. London: Martin Robertson, 1976.
- 4 Seldon A. *Charge*. London: Temple Smith, 1977.
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Repeated exposure to halothane carries a risk of jaundice. Does this risk still exist if someone previously exposed to halothane subsequently (several years later) has a halothane anaesthetic?

Minor abnormalities in liver function tests may follow up to 20% of exposures to halothane and subsequent exposure may not necessarily lead to further hepatic damage. In contrast, massive liver cell necrosis occurs in 1 in 35 000 instances of exposure to halothane and in 1 in 3700 cases of multiple halothane anaesthetics.¹ The risk of developing jaundice decreases with increased intervals between halothane anaesthetics. The mechanism of the jaundice is not clear, but may be immunological or toxic or both. Provided that the initial exposure was not followed by unexplained postoperative fever, arthralgia, jaundice, or eosinophilia (suggesting that sensitisation might have occurred) the risks of re-exposure to halothane after several years are even lower. If there is doubt, and the anaesthetist wishes to use halothane, the patient can be tested for evidence of sensitisation to halothane-altered liver cell components² by looking for the presence of a specific antibody in serum.—JAMES NEUBERGER and ROGER WILLIAMS, liver unit, London.

¹ National Halothane Study. Summary of the national halothane study. *JAMA* 1966;197:121-34.

² Neuberger J, Vergani D, Mieli Vergani G, Davis M, Williams R. Hepatic damage after exposure to halothane in medical personnel. *Br J Anaesth* 1981;53:1173-7.

Was the failure of Queen Anne to produce an heir to the throne a rhesus problem?

The brief answer is almost certainly no. Queen Anne (1665-1714) had an extraordinarily complex obstetric history, the details of which are not entirely clear. She may have had as many as 17 pregnancies. After a stillbirth in 1684 Mary was born on 1 June 1685 and Anne Sophia on 12 May 1686. Both appear to have been healthy until they died from smallpox in February 1687. After three miscarriages in 1687 and 1688 the Duke of Gloucester was born on 24 July 1689. He lived to the age of 11 and, according to Scott Stevenson,¹ died of hydrocephalus. W Pittis (1715), in *Some Memoirs of the Life of John Radcliffe*, however (although he states incorrectly that the boy died in 1699), records that the fatal illness was characterised by a rash and was thought to be smallpox. The author of the entry on Queen Anne in the *Dictionary of National Biography* disputes this, but in a recent biography Gregg² states categorically that it was smallpox; all this has some bearing on the question. Queen Anne's subsequent pregnancies ended in two live births, both infants dying within hours of birth, and a further series of miscarriages (at least four) between 1696 and 1700. There is a gap between 1691 and 1696 for which we have no obstetric information, but in which other miscarriages may have occurred. Royal births, including stillbirths, are always likely to be recorded—miscarriages not necessarily.

Scott Stevenson¹ based his belief that Queen Anne had syphilis

partly on the obstetric history but also on the death of the Duke of Gloucester, which he attributed to syphilitic meningitis. If, however, one accepts the smallpox story (which seems the most likely and avoids invoking a disorder of great rarity) it removes one of the supports for the syphilis theory. The possibility of rhesus incompatibility as the cause was raised by Maurice Anderson.³ It does not seem that the obstetric history, at least on the basis of the knowledge we have, would fit with a diagnosis of rhesus incompatibility. Syphilis remains a possibility, simply because it was so common and is so often invoked in medical mysteries in the seventeenth century; but it is, after all, not rare today to find that a few patients have no trouble in conceiving but, for reasons often unknown (despite recent advances in the understanding of autoimmune disorders) suffer a series of miscarriages interspersed with a few live births. Queen Anne may have been just such a case.—I S L LOUDON, Wellcome research fellow in the University of Oxford.

¹ Stevenson RS. *Famous illnesses in history*. London: Eyre and Spottiswoode, 1962: 213.

² Gregg E. *Queen Anne*. London: Routledge and Kegan Paul, 1980.

³ Anderson M. Queen Anne's children. *Br Med J* 1963;i:684.

A retired district nurse has had a colostomy for 20 years. For two years she unsuccessfully attempted to manage her colostomy with colostomy bags. She was then advised by her previous doctor to use daily washouts and for many years she has been successfully washing out her colostomy every day, and covering it with a gauze pad during the day time. She has now been told at surgical outpatients that this is an extremely dangerous procedure to perform. Is that so?

Colostomy irrigation has been used for many years for controlling colostomy function. The original equipment of rubber tubing and primitive utensils fell into disrepute when perforated colons were reported. Recent developments in irrigating apparatus, particularly the development of the Stoma-cone using a soft malleable plastic with a cone-shaped nozzle for inserting into the stoma, have eradicated these problems. The Hollister Stoma-cone set is a purpose-made irrigating set containing a reservoir for two to three pints of tepid water, a tap, and an introducing nozzle, together with an effluent-collecting bag or duct. Two to three pints of tepid water are introduced into the stoma and within half-an-hour the colon has reacted, emptying the waste material. Most patients find that the colostomy does not act for a further 24-48 hours and all they need to wear during this period is a small adhesive pad. Provided that the patient has good eyesight and a moderate degree of manual dexterity, irrigation of the stoma should present no problems, and if the Stoma-cone is used there should be no untoward problems.—D A GRIFFITHS, consultant surgeon, Yeovil.

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