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Essentials of Health Economics

Part III (continued)—Developing health care policies

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If the National Health Service is to consider broad objectives in its health care planning then cost and outcome data should be assembled in a form best suited to such consideration. In health care priorities are often thought of in terms of the elderly, the mentally ill, and the acute sector. Why not then produce data which will allow consideration, no matter how crudely, of what is being spent on these different client groups and what is being obtained for the money?

Programme budgeting

This was the thinking underlying the programme budgets presented by the economists at the Department of Health and Social Security in 1976.¹ These analyses were used to indicate what was then currently being spent and achieved. Furthermore, the plotting of previous years' expenditure could indicate which programmes had been growing at what rate and, perhaps most

important of all, provide information on where the NHS should be heading in future. The logic of this simple approach of bringing together cost and output data to help assess priorities would seem difficult to deny, bearing in mind as always that costs here are forgone benefits. It is an explicit recognition of what most NHS personnel would accept implicitly—that an important goal of health care is to try to maximise the benefit from the limited resources available. Economists are thus not the desiccated calculating machines of Nye Bevan's portrayal. They are not attempting to remove the need for value judgments or even emotionalism in health care but are trying to provide a framework within which these can be articulated constructively.

One interesting extension of this approach is to look explicitly at the margins of future expenditure, because it is here that priorities genuinely apply. "Higher priority" for the elderly as opposed to the acute sector clearly does not mean that all aspects of care of the elderly have priority over all aspects of acute care. Fortunately, the issue is much simpler: is the marginal resource better spent on the elderly or the acute sector? is the community overall better off if a little less is spent on the acute sector and a little more on the elderly? Acceptance of this marginal approach led the Scots (so often in the van) in their latest priorities document² to consider different possible future growth rates so that their priorities were set out in terms of different recommendations given—that is, no growth, 1½% a year, and 3% a year. This is economic planning, an acceptance that priorities are a relative marginal concept and are equally determined by benefits and costs. Three examples of different forms of programme budgeting at different levels are

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given in figs 1-3. Fig 1 shows the approach of the DHSS in their original priorities document,¹ fig 2 the programme budgets for an area health board in Scotland,³ and fig 3 those for maternity care.⁴ These are simply information frameworks for planning; they ought not to be used by themselves for making decisions.

Budgets and incentives

Beyond programme budgeting, is there a wider role for budgeting in health care? At present this role is much more muted than it could be and this was recognised in the report of the Royal Commission on the NHS.⁵

Too frequently in the NHS control over resource deployment is separated from accountability for efficient resource use. Clinicians are responsible for many resource allocation issues but they do not have budgets for which they have to account. This is contrary to all good principles of budgeting practice. Because of this several experiments are presently being conducted in different places into specialty budgeting and clinicians'

FIG 1—Expenditure by programme as a percentage of total expenditure. (Current and capital expenditure in £m at November 1974 prices.)

FIG 2—Grampian area health board programme budgets—inpatient programmes, percentage changes in expenditure (1970-71 prices), bed utilisation, and discharges by programme, 1975-76 compared with 1970-71. (Discharges not presented for long-stay programmes.)³

FIG 3—Grampian maternity subprogramme budgets, as percentages of total spending on maternity care, 1976-77.

budgets. Underlying these experiments is the realisation that clinicians need to be more accountable and hence more efficient. Clinicians do not deliberately go out of their way to be inefficient but incentive mechanisms and constraints are not there to channel them into more efficient behaviour.

At present individual clinicians have every incentive to "work the system" in favour of their patients; many would perhaps argue, on the basis of clinical freedom, that this is right and proper. But on the basis of the inescapable concept of opportunity cost it quickly becomes apparent that one doctor's clinical freedom can only be obtained at the expense of another's; clinical freedom cannot escape the chains of resource constraints. This does not mean that doctors should not make choices about clinical matters. Of course they should; that is their job. But to do so efficiently and hence genuinely promote the wider goals of health care in the community, and not just of their patients, they need to be constrained as individual decision makers just as the health service as a whole is. Clinical budgets could serve this end.

Client group planning

But what of developing policies for particular disease or client groups? What kind of contribution can economists make to planning in the fields of maternity care, the elderly, and the mentally ill? One area in which economists have been concerned in planning issues is that of the balance of care of the elderly between the community, residential home, and hospital.⁶⁻⁸

What is common to these studies of the balance of care of the elderly is that in principle they are firmly rooted in the philosophy of cost-benefit analysis—that is, in deciding how to allocate resources between different locations of care they attempt to examine both the benefits and the costs of alternative patterns of care. Not surprisingly, however, they do not succeed in measuring all the costs associated with care of the elderly and they most certainly do not even begin to get to grips with measuring benefit.

Essentially this approach asks the question, What are the existing costs of care for individuals close to the boundaries between different care locations (for example, residential home/hospital) and what would the costs be if they crossed these boundaries? Ideally, the next step would be to estimate the benefits of such moves, weigh up the costs with the benefits, and decide which type of move was preferable—that is, yielded the highest ratio of marginal benefit to marginal cost. In practice

measuring such benefit has proved difficult, and there has thus been a tendency to settle for descriptions of the dependency and other relevant characteristics of individuals likely to be affected by increasing or decreasing the amount of services available. Thus, Fordyce *et al*⁹ suggested that if an additional annual resource of £255 000 (a figure they chose to ease numerical calculations) was allocated to care of the elderly, then the information generated by their costing study would provide the following options: (a) 60 geriatric beds (moving people from home into them)—cost £255 000; or (b) 86 geriatric beds (occupied by people who were currently in residential homes, the 86 vacancies being filled by people from their own homes)—cost £255 000; or (c) 375 residential home places (occupied by people from their own homes)—cost £255 000. They add: "Armed with that information and the information about people who would be involved in these moves, the decision-maker is in a position to form judgments as to where the ratio of marginal benefit to marginal cost is higher than in other areas, and therefore to form a judgment as to whether option (a) is to be preferred, option (b), option (c), or some mix of these. It is this process of decision-making which the approach of marginal analysis is attempting to assist."

Conclusions

The major differences between this type of approach and those commonly found in health care planning are that account is taken of cost (opportunity cost) and that decision-makers have to place explicit weights on the relative benefits of different courses of action. Too often the current approach is restricted to some attempt at arbitrarily defining need and equally arbitrarily setting standards of care to meet this need. Such an

approach "is bedevilled by the scarcity of resources, the difficulties in defining need, the problems of defining standards when little is known about effectiveness, the problems of meeting (and often only partially meeting) some needs as opposed to others in trying to ensure value for money in an opportunity cost context."³

In other words to ignore basic economic principles leads to inefficiency and inefficiency to less improvements in health than would otherwise be obtained. Improving economic efficiency can be a mechanism to promote less suffering and death. Most doctors agree with the objective but are less than wholehearted in embracing the mechanism.

Part IV of the series will be published next week.

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MATERIA NON MEDICA

A new lease of life

When I learnt that I had terminal renal failure and would have to spend the rest of my days on dialysis my first priority was to buy a piano. The salesman invited me to try it out before paying for it, but after years without practising I couldn't play a note. Obviously, something had to be done. I therefore gathered up all the music I could find and spent several hours a day doing nothing but sight-reading. After a few weeks I was surprised to find that I'd worked through all Mozart's sonatas, all Bach's French and English suites, a few of Mozart's concertos, the first book of Bach's "48," all Mendelssohn's "Songs Without Words," all John Field's nocturnes, four books of Scarlatti, a fair amount of Chopin and Beethoven, plus several volumes of assorted music ranging from Dussek to Debussy. The newly acquired ability to sight-read produced an indescribable feeling of joy.

For an amateur, there isn't really any need to perform anything; sight-reading in itself is a worthwhile accomplishment. For those who wish to acquire a repertoire the trick is to concentrate on pieces that are easily mastered: Beethoven's "Für Elise," Chopin's preludes in A, B minor, E minor, and C minor, Schumann's "Träumerei," Bach's prelude in C, MacDowell's "To a Wild Rose," to name only a handful, are all easy enough to be taught to small children but sound extremely impressive when played by a concert artist. Lists of pieces suitable for the amateur can be found in Eileen Robilliard's *The Persistent Pianist* (Oxford University Press) and a complete survey of piano music in Ernest Hutcheson's *The Literature of the Piano* (Hutchinson).

There is a virtually infinite variety of piano styles, ranging from that of old Uncle George who plays down at the pub on a Saturday night, Jelly Roll Morton with his "Spanish Tinge," Liberace with his candelabra, Jacques Loussier with his Bach in the jazz idiom, and, more recently, "Pulsion," Victor Borge with his comedy in music, Earl Wild who plays nineteenth-century virtuoso music by Thalberg and Henri Herz, Errol Garner who couldn't read music and played entirely by ear, George Shearing with his block chords, Artur Schnabel

playing Chopin's ballades . . . the list is endless. It is impossible for the amateur to emulate them all, but it's well worth spending 30 years or so in making the attempt.—DONALD M BOWERS, Darlington, Co Durham.

Horizons

Three Welsh towns and cities dominated my childhood. I dominated them in the freedom and escapism of cycling from Merthyr Tydfil to Brecon (over the paradise known to others as the Brecon Beacons) and from Merthyr Tydfil to Cardiff (through Abercarnaid, Aberfan, Troed y Rhiw, Pontypridd, Taffs Wells). Three English towns and cities dominated my adulthood. I motored from Wolverhampton to Stafford (through the pleasant countryside of Brewood, Wheaton Aston, Penkridge) or from Wolverhampton to Birmingham (via Dudley or West Bromwich).

Two sets of names: Brecon, Merthyr, Cardiff; Stafford, Wolverhampton, Birmingham. Brecon and Stafford—county towns; Merthyr and Wolverhampton—working class towns; Cardiff and Birmingham—both pseudo capitals of important areas of this country. If for England and Wales you substitute Mother and Father, you begin to understand my feelings. If for Wales and England you substitute introvert and extravert, you are beginning to get the message which is, "A man is his own 10 horizons."

In Merthyr, I lived as a boy on the immense iron ore mountain. When the Dowlais works shut in 1932, when I was 10 years old, no longer did my bedroom walls burst into flickering light. No longer could the *Merthyr Express* be read from the glow of the red hot iron ash poring over the White Tip at Penyard. The magnetism of the bosomy hills remained, however, for many years. It was lost in Cardiff. It was restored like *Paradise Regained* when I worked as a school medical officer in Tipton in the Black Country, once again an area associated with iron making. It is no coincidence that Merthyr had some of the world's finest boxers and that Tipton had the famous English heavyweight "Tipton Slasher." The ions in the atmosphere explain it. Think of the song: "Any old irons, any old ions, any, any, any old ions."—GARETH REES DAVIES, retired senior medical officer, Wolverhampton.