Health needs, health-care requirements, and the myth of infinite demand

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The increasing costs of modern health care, allied to widespread economic pessimism, have led health policy-makers world wide to emphasise retrenchment and cost control. The current NHS reforms in the UK, which represent a particularly forceful response to this global perception of a crisis in health care,[1] have been made largely in response to the political problems presented by failure to satisfy health-care demands as identified in long waiting lists. After forty years the waiting list tail—a device for offering nominal access to treatments which may never be delivered—has finally wagged the entire NHS dog. Instead of identifying all demand, but rationing access to it, the reformed NHS has at its core the innovation that health-care providers' capacity to offer treatments is to be made explicit. According to the white-paper, *Working for Patients,* health authorities are to be relieved of direct responsibility for treatment facilities so that they may "concentrate on ensuring that the health needs of the population for which they are responsible are met".

Assessment of health needs

Whatever the practicalities involved in the redirection of a health system as large and complex as the whole NHS, the ideal of health-care provision based on prior assessment of health needs has long been aspired to by health-care planners. But what is need? In common use, the term has two distinct meanings: circumstances in which a thing/ course of action is required; or lack of necessaries, poverty. The semantic tension between the first neutral meaning, a requirement, and the second moral meaning, a situation of great difficulty or misfortune, lies at the heart of the difficulties faced when deciding what needs should be assessed, how they should be assessed, and whether and when any action should follow that assessment.

The conventional form of needs analysis derives from the work of Engels, Dickens, Chadwick, Wakley, Charles Booth, Seebohm Rowntree, and other social reformers in the nineteenth century. The dominant view of need and needs assessment can be followed from the exposure of appalling social conditions by the poor-law reformers, through the more sophisticated studies of poverty and health that concerned the originators of the welfare state, to more recent concerns to quantify the relations between health status, material circumstances, and resource allocation.[2-4] This research tradition is fundamental to our understanding of the broad relations between social inequality and health, but these established measures of need are no more than independent variables with little relevance to the determination of levels of need for particular health-care interventions. Research activity has been concerned almost exclusively with the probability of neediness, in the tradition of the social reformers, not with the distribution of those who might be expected to benefit from particular interventions.

Needless confusion?

Where the concern is to determine an appropriate level of provision for a particular intervention, needs are those services that are necessary for the alleviation of that particular form of morbidity. The focus is therefore upon the services that are needed, rather than the neediness of the population. The term need is unfortunate in collapsing both meanings. Is the population in need, or the service needed? These distinctions are not just matters of pedantry or semantics. The conflation of ideas of broader neediness on the one hand, and the need for particular interventions on the other, may support a lack of interest in determining levels of need for particular health-care interventions. For example, more information is available on hernias in Jerusalem in the 1950s[5] than is known about the current population prevalence and incidence of hernias in the UK, even though an apparent problem in satisfying demand for hernia repair and other elective procedures has led to a fundamental reorganisation of the NHS. Has this confusion surrounding the use of the term need caused us not to take requirements for health care as seriously as we might?

Health-care requirements

The implications of this confusion between the two meanings are such that it would be preferable to use a quite different term for each. Heath needs could be reserved for discussion of the broader environment of individual health, thus encompassing questions of deprivation and inequality. The term health-care requirements could then be used to describe a population's needs for provision of particular health-care services. Thus, in any analysis of the resources necessary for effective provision of health care, health-care requirements reflect not the simple prevalence or incidence of the condition concerned, but the number of individuals with that condition who are likely to benefit from treatment, who want treatment, and in whom treatment is generally regarded to be a reasonable investment for a publicly funded health service. This last caveat might be criticised for being judgmental, but such judgments, whether explicitly acknowledged or not, are made every day in the operation of waiting-list systems. Far better surely to have criteria for treatment priorities out in the open where they can be assessed, criticised, and changed?

Limits of demand

The continuing confusion that surrounds the term need has a further and particularly serious connotation in adding support to the view that, like the poor, need will always be with us. The view of need based upon the concept of relative deprivation has as its health-care equivalent an assumption of highly elastic or even infinite demand for particular interventions. Although the assumption that demand is

infinite is rarely made explicit, this view underlies the common derision of the supposed naivety of the NHS's founders for expecting demand to fall as the backlog of morbidity was cleared. A frequently used metaphor, the iceberg of morbidity, supports the pessimistic view that the relation between health-care activity and unmet need is unchanging, and that the pool of untreated illness remains constant whatever level of intervention is contemplated. Enoch Powell, a former UK Minister of Health, is one of the few who has candidly asserted the futility of attempting to satisfy demand. He likened the problem to Horace's observation *Naturam expellas furca, tamen usque recurret*—if you drive Nature out with a pitchfork, she will soon find a way back.[6] This view of the overwhelming nature of the demand for health care has been supported by the attempts to define more rational grounds for the allocation of finite resources between competing specialties and regions, which appear to support the necessity of rationing in all areas of health-care provision.

However, even if demand may in general exceed supply, this does not necessarily imply that particular health-care requirements cannot be satisfied. Although large regional variations in levels of surgical provision point to the difficulties in determining the appropriate use of particular procedures,[7,8] the important question surely becomes, can any reasonable level of health-care provision satisfy the needs of the population? In many instances, alas, epidemiological investigations cannot give us an answer, because prevalence and incidence surveys have often failed to incorporate other factors that may influence health-care requirements. Population studies of the prevalence of radiographic hip osteoarthritis, for example, may not (unlike Wilcock[9]) take into account the uncertain relation between radiographic change, symptoms, and function. Few would deny that total hip replacement is a well-established procedure of proven cost-effectiveness which is an appropriate intervention for a considerable proportion of the population that suffer from osteoarthrosis of the hip. Indeed, the failure to satisfy demand for this operation in the UK has been seen as continuing evidence of the failure of the NHS,[10] as it represents one of the commonest waiting list procedures.[11] But these assessments of operative activity tend to proceed as if the population denominator were constant in its requirement for intervention, and may overlook the fact that such elective operations are done to people whose life expectancy is in general good. Calculations of the population at risk should take account of the proportion of those nominally at risk whose hips have already been replaced, and those in whom the operation would almost certainly not be done for other reasons. Previous operation rates indicate that some 3% of 65–74-year-old women have had hip replacements, with up to 6% in older age groups[12]—figures which exceed Wilcock's[9] estimates of population requirements. Thus there may be a realistic prospect of demand coming into balance with supply for this procedure, and other common interventions would repay similar scrutiny.

Conclusions

The conventional view of the infinity of demand is sustained by the persistence of waiting lists which, in the absence of adequate empirical population data, are taken as an indicator of overwhelming demand. But is it logical to focus almost exclusively upon what is not done by the health system to assess the feasibility of satisfying demand?

Health systems world wide are grappling with the problems of explicit or implicit rationing of health-care resources. Such efforts are commonly informed by the pessimistic belief that the satisfaction of demand is in truth an unrealistic goal: gestures are made in its direction, but the task of satisfying demand is widely held to be fundamentally futile. The assumptions that underlie this pessimism should be questioned, and abandoned in favour of empirical determination of health-care requirements, with the assumption that there may be no need to ration those interventions of undoubted efficacy.[13]

REFERENCES

1. Field MG, ed. Success and crisis in national health systems. New York: Routledge, 1989.
2. Department of Health and Social Security. Review of the Resources Allocation Working Party formula: final report by the NHS Management Board. London: HM Stationery Office, 1988.
3. Carstairs V, Morris R. Deprivation, mortality and resource allocation. *Commun Med* 1989; **11**: 363–72.
4. Jarman B. Identification of underprivileged areas. *Br Med J* 1983; **286**: 1705–08.
5. Abramson JH. The epidemiology of inguinal hernia. *J Epidemiol Commun Health* 1978; **32**: 59–67.
6. Powell JE. Medicine and politics. Tunbridge Wells: Pitman, 1976.
7. Bunker JP. Surgical manpower: a comparison of operations and surgeons in the United States and England and Wales. *N Engl J Med* 1970; **282**: 135–44.
8. Wennberg JE, Freeman JL, Culp WJ. Are hospital services rationed in New Haven or over-utilised in Boston? *Lancet* 1987; i: 1185–89.
9. Wilcock GK. The prevalence of osteoarthrosis of the hip requiring total hip replacement in the elderly. *Int J Epidemiol* 1979; **8**: 247–50.
10. Duthie RB. Orthopaedic services: waiting times for out-patient appointments and in-patient treatment. London: HM Stationery Office, 1981.
11. Davidge M, Harley M, Vickerstaff L, Yates J. The anatomy of large inpatient waiting lists. *Lancet* 1987; i: 794–96.
12. Frankel SJ, Williams M, Nanchahal K, Coast J. Epidemiologically based assessments of need: total hip and knee joint replacement. Bristol: Health Care Evaluation Unit, 1990.
13. Brook RH, Lohr KN. Will we need to ration effective health care? *Issues Sci Technol* 1986; **III**: 68–77.

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