Letters to the Editor

Tailoring health services to the needs of individual communities

SIR—Womersley and McCauley’s profile (1987, 41: 190–5) demonstrates a technique for determining areas of relative health need and goes on to argue the importance of standardised mortality ratios (SMRs) in resource allocation. This presupposes that all health expenditure is on services that prevent mortality, but the whole question of resource allocation is in fact far more complex.

To equate the word “resources” with funding is a mistake. Health care resources are personnel, buildings, and equipment; money is simply the means of purchasing them. High disease specific SMRs give clues as to which resources to spend money on and where to deploy them but does not give a reliable basis on which to allocate global sums.

Low SMRs for all causes of death lead to longevity, which in turn leads to greater numbers requiring care at an age when illness and disability are increased and the powers of rapid recovery are diminished. Mortality is in fact a cheap outcome of disease.

In my district, with low SMRs for ischaemic heart disease, cerebrovascular disease, and all causes, we have seen over the last 10 years an increase in the total population of a little under 5% but a 25% increase in the total population over the age of 75. Over the same period the percentage of bed days occupied by patients over 75 in the District General Hospital has risen from 22% to 37%. This indicates the pressures of extreme old age on acute hospital services in an allegedly healthy district. There are, in addition to this of course, the effects on long term care services, both domiciliary and institutional, and psychiatric services which are also likely to be age related.

I believe that in securing equality in health care, a case can be made out for funding to be based simply on population size, leaving the other health indices to determine how the funds are actually spent.

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The authors reply as follows:

Perhaps we can give a specific example to illustrate our arguments.

The SMR (0–64 years) for the Greater Glasgow Health Board (GGHB) population is about 116 (Scotland = 100): in Scotland the standardised mortality ratio (SMR) for the age group 0 to 64 years is used as a “proxy indicator of morbidity” in the SHARE formula¹ for the calculation of revenue resources. The proportion of the GGHB revenue allocation which is attributable to this SMR is 6% for acute (non obstetric, non psychiatric) hospital services, 11.5% for outpatient and day patient services, and 12% for community services² (the figure of 7% quoted in the paper for community services was in fact an underestimate). Our suggestion is that the 12% “extra” resources for community (including preventive) services, which are attributable to the relatively high SMR, should be distributed in favour of those communities within GGHB which have the greatest need.

We were not suggesting that these “extra” resources should necessarily be distributed to those communities with the highest SMR values, but rather to individual communities according to their different needs as assessed from measures such as our health profiles. It will however often be the case that those communities with the highest SMRs do have the greatest need according to these measures.

We are not certain that Dr Bush is correct in his assertion that populations with low SMRs have greater proportions of individuals who require care “at an age when illness and disability are increased”. The populations would seem to be approaching the biological ideal of maintaining good health to a ripe old age, followed by relatively sudden deterioration and death—the “rectangular society”.³ It could well be the high SMR populations that have the longest period of disability and make most use of expensive health service resources.

Again, the 10-year demographic trends described by Dr Bush are not exclusive to areas with low SMRs. The GGHB population has fallen by some 10% over the past 10 years whereas the proportion aged 75 years and over has increased by 16.5%. The percentage of acute bed days occupied by patients aged 75 years and over has increased over the past 10 years from 20% to 29%.

Finally, we would emphasise that our main aim is to try to achieve equality in health—or rather to decrease inequality in health, this being the prime objective of the WHO project ‘Health for All 2000’. It is not to secure equality in health care, which is the basis of Dr Bush’s argument in his final paragraph.

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Modern epidemiology?

Sir—I share Elwood’s high regard for Rothman’s Modern epidemiology (1987; 41: 263), and am at present treating myself to a refresher course on it (much reassured in the process by the author’s confidence in my statistical capability). However, as a guide to modern epidemiology the book has serious limitations. As it reflects powerful currents in our discipline, particularly in the United States, perhaps you will allow me briefly to indicate what, to my mind, are some of these limitations.

The student coming to it afresh could not gather that epidemiology is the basic science of public health. Thus in close on 150 years of epidemiological research (Dr Rothman doesn’t have much space for history) it continues plausible that the main determinants of the health of populations and sizable subgroups in them are their economic-social-cultural conditions. The data on this are mostly cross-sectional and inevitably derived from studies of populations and groups as the unit, rather than from aggregation of individuals with their various attributes. This, plus the maze of intercorrelated variables involved in the standard of living, and much other “noise”, leads often to unacceptable uncertainty (and is one factor in sometimes bruising controversy). Has Dr Rothman any modern ideas on how progress is to be made—truly “general” causes distinguished—the strength of specific factors here determined—and so on? The issues are unlikely to go away; more likely on present social trends they will be aggravated (in the United States as in this country).

One of the main features of the Third Age public health which we are now enjoying, or the “new public health” as many call it, is the salience of lifestyles in diet and exercise, smoking and drinking, social networks and support systems, etc. These, of course, are much implicated in the above economic, social, and cultural situations. They also raise sharply the need for epidemiology to assimilate concepts and methods from the social and behavioural sciences and to collaborate with these. In much worthy effort to this end over the past 40 years the results, with few exceptions, have been only modest. Can Dr Rothman offer any epidemiologic ideas on the nature of the difficulties? Are we asking the wrong questions of each other? What next?

Another grand feature of the Third Age is the contribution of medical care to the health of the population throughout life but greater, of course, in later life. Huge expenditures of time, money, and effort in health services research have again yielded but moderate dividends, on such crucial issues as the outcomes of services for the elderly, for example. The challenge to epidemiology is plain and becoming more urgent as “economics” progressively dominates. It is only too evident that there are serious problems for us in methodolgy, but status problems too. What can be learned from critical analysis of past successes in this field? Do the aetiological studies, superbly described by Dr Rothman, indicate possible lines of advance? Can we better define the scope for experiment?

The hungry sheep . . .

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Letters

PS Having devoted the greater part of my professional life to it, much indeed in pursuit of a single factor, I hope it is unnecessary to add that none of this is to gainsay the importance of disease-specific analytic and aetiological research.

Multiple sclerosis on islands

Sir—It seems that rates of multiple sclerosis (MS) are higher in island populations than in control mainland populations at the same latitude.1 2 This suggestion is consistent with the idea that MS is a sequel of some rather uncommon infection which has subsequent deleterious consequences only if it is first contacted later than usual in life. This hypothesis has been noted to fit the high concordance rate in dizygotic twins as contrasted with the sib risk;3 and the suggestion that first borns are at greater risk than others.4

Lastly, epidemics have been described in Iceland and the Faroes, and possibly the Orkney Islands and Shetlands,5 which were suspected of somehow being initiated by the temporary immigration of British troops. I suggest that, in the absence of large-scale immigration, the pathogen will not have a large enough pool of infection to sustain itself on islands. Hence when large-scale immigration occurs, it gets reintroduced and the age at which residents first get infected will be higher than in the mainland...