The need for health care—a pilot survey with general practice

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SUMMARY. A feasibility study was carried out in two places in Wiltshire of a method of ascertaining the morbidity of the population. Traditional medical history taking and examination of the individuals were completed in a random sample of the population, of whom 89 per cent were contacted. The method appears feasible for a survey of sufficient size to measure morbidity and the study gave useful preliminary indications of unmet health care need. The cost of such a larger survey would be small in relation to the sums involved in health care planning.

Introduction

National background

IN the absence of definition of the nature and extent of the ill health which the NHS is required to treat, health service planning has been little more than an exercise in building the indifferent upon the bad, relying on such fallacious bases for planning as the 'existing use' of services; 'norms' based on average provision regardless of whether it is the right amount or even of the right nature; and 'projections' which are scarcely more than proposals to equalize such provision across the country.

Provision, especially of buildings with a finite number of beds, places, or square feet of floor, is visible, quantifiable, and can easily be compared with national, regional, or local norms. Morbidity, however, is unseen and any attempt at its measurement meets with difficulties. Without the otherwise unfortunate catalyst of a period of financial stringency and the climate achieved by the 1974 reorganization, the planning principles shown in Table 1 would probably have remained. As it is, there are the proposals of the Resource Allocation Working Party (RAWP, 1976) and the documents issued by the DHSS (1976a and b; 1977), known as the 'red book' and the two 'priorities documents'. Together they have provided a stimulus for more logical thinking about resource distribution. Table 2 shows the main measures of need used in the RAWP formula.

The use by RAWP of mortality, in the form of a Standardized Mortality Ratio, as a surrogate has caused much argument and criticism (Barr and Logan, 1977; Ferrer *et al.*, 1977; Forster, 1977). Mortality has long been a suspect indicator of health needs in that individuals who die have not necessarily required a substantial amount of health care; indeed they may have required none. The needs of individuals who live for a long period with chronic illness may be much more relevant. Indeed, Knox (1978) has said that in some cases there may be an inverse relationship between the numbers of deaths and health care expenditure. Moreover RAWP takes no specific account of Family Practitioner Committee Services in assessing the levels of provision and of expenditure.

More general criticisms of the RAWP proposals were summarized in the *British Medical Journal* and the *Lancet*. But what are the alternatives? The General Household Survey (OPCS, 1973), or the application of its method, has been put forward as a preferable source but, apart from some inconsistencies in the techniques used so far and its unsuitability for other than national purposes, it also raises difficulty in interpretation in that it relies on self-estimated ill health, which may be quite different from actual need. Figure 1 shows how need and demand for health services overlap but do not coincide.

Epidemiological approach

What is clearly required is a method that measures the level of morbidity in the community and which, if possible, also identifies unmet need in order that explicit

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Table 1. Pre-reorganization 1974.

Distribution of resources to hospital regions	
1. Population 2. Existing level of provision of beds and national age/sex usage 3. Case flow	related 2:1:1
Distribution of resources to local government health services	
Local rates plus government grant related to existing level of provision and usage	

Table 2. DHSS allocations to regions.

Current usage related to total national expenditure on:
1. General hospital inpatients
2. General hospital outpatients
3. Psychiatric patients
4. Community health services
5. Ambulance and FPC services

Based on population and existing patient flow, and weighted for various factors including standardized mortality ratios.

Source: Resource Allocation Working Party (1976). *Sharing Resources for Health in England.* London: HMSO.

additional or reallocated resources can be deployed to alleviate it. The majority of studies of morbidity referring to general practice have been based on use of services. These include the two national morbidity studies (Logan and Cushion, 1958; RCGP *et al.*, 1974) and more local surveys such as those of Ashford and Pearson (1970) and Morrell (1971). Nevertheless, users of primary care are not necessarily the same in respect of morbidity as non-users (Anderson *et al.*, 1977). Most studies of morbidity in the population as a whole, such as those of disability either nationally (Harris, 1971), in Lambeth (Garrad, 1974), or Perthshire (Cole, 1978), have been based on questioning rather than on clinical examination, although in some cases such examinations were carried out (Milne *et al.*, 1972; Adler *et al.*, 1973). Williams and colleagues (1972), however, report a study in which they were able to examine comprehensively 87 per cent of the 342 patients aged over 75 in their general practice in Bolton; in addition an interview was carried out on each patient by a health visitor.

A further possible approach is to apply the traditional process of medical history taking and medical examination to a representative sample of the population. There are, however, theoretical objections to the use of such a method in that it might require impracticably large numbers of patients to produce worthwhile results or would take a number of years to accomplish (which would invalidate it because no random sample of the population could be subjected to a 'stand still'). In order to minimize the effects of movements of population, significant alterations in morbidity, and changes in facilities, such an exercise must be completed within a short period but, in fact, there seems no reason why this should not be achieved.

There may be considerable problems in translating results obtained in this way into resource and planning terms so as to define the necessary provision or corrections in existing levels of resources. Klein (1977) has pointed out some of the difficulties of adjusting national policy to local circumstances and it is also clear that the methods or indicators for assessing morbidity that are advocated at national level may be neither applicable nor sensitive enough at local level and this is an important consideration in health care planning and resource allocation.

However, it is clear from the RAWP report that problems exist with any system of resource allocation and it would be preferable to start with one which had at least a basis of directly discovered morbidity.

Aim

Our aim was to test the feasibility of assessing need by carrying out random medical examinations.

Method

A pilot survey was conducted in two areas in Wiltshire in the autumn of 1976.

The borough of Wilton and the parish of Amesbury were selected for the survey as being of suitable size and having the convenience of health centres. The general practitioners concerned, who serve virtually all the local population, agreed to assist by carrying out medical examinations. Arrangements were made for the health visitors to do the necessary field work with the members of the public selected to take part in the survey.

The size of a representative sample of addresses for inclusion in the study was designed to make the number of medical examinations practicable, and amounted to a 3.5 per cent sample in each place. These addresses were selected by a random method using the electoral rolls, and were then checked against the records held by the general practitioners. Where necessary replacements were made, by a random method, to ensure that the sample was of persons registered with those particular doctors. Service staff, who form a substantial part of the population of both the study areas, were excluded from the sample but their dependants were included. The surveyed population did not differ significantly from the census population of the same areas with respect to age/sex structure or social class composition. In both cases, using a chi-squared test, a probability over five per cent was obtained. The elderly population (65 years and over) were represented by 10.9 per cent of the sample (1971 census = 11.5 per cent).

Letters explaining the purpose of the survey were posted to each household in batches at intervals calculated so as to spread the examinations over an eight-week period in Wilton and a 10-week period in Amesbury. About four to eight days after posting the

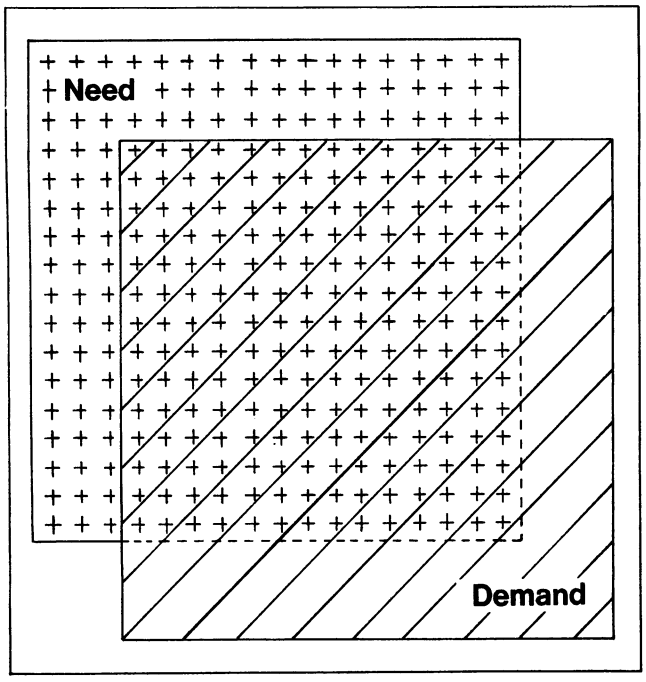

Figure 1. *Diagrammatic model of the relationship of need to demand.*

health visitor sought contact with the household and where successful completed a census-type form. If agreement was obtained a questionnaire for each member of the family was completed by the respondent(s) and returned to the health visitor. If the respondent agreed to a medical examination this was carried out by a general practitioner in the practice with which the person was registered. The results were recorded on a comprehensive form designed to indicate systematically the positive existence or non-existence of a range of morbid conditions. The criteria used were the clinical appearances of morbidity. The level of morbidity in those not examined is of course unknown. Also recorded were the conditions for which treatment was currently being received, or the kind of NHS resource recommended in the case of newly discovered conditions. The self-administered general health questionnaire (Goldberg, 1972) designed to assess mental health was also used.

Results

Table 3 shows the degree of co-operation of those selected and the outcome of the medical examination. There are notable differences between Amesbury and Wilton in the success rate in securing co-operation in that 50.2 per cent of the original sample of Amesbury were given a medical examination whereas a 61.9 per cent success was achieved at Wilton despite a percentage of 'no contact' (after at least two visits) of 18.4 per cent compared with 7.6 per cent for Amesbury. There were some differences between the two areas in their social class composition but this did not appear to influence the response rates.

If the numbers of 'no contact' are removed from the sample base the percentage success rates then become 54.4 per cent and 75.8 per cent for Amesbury and Wilton, respectively. A comparison of the age/sex profiles of 'no contact' and refusals with the profiles in the 1971 census shows no significant differences after allowing for service heads of families.

This pilot survey was intended to test the feasibility of the methods which had been devised and was not expected to show significant results in terms of morbidity of the population or of particular forms of health care. Nevertheless it uncovered an appreciable amount of hitherto unknown morbidity in those examined. In particular 13.7 per cent of those examined in Amesbury and 8.5 per cent of those in Wilton were considered to

Table 3. Degree of success in securing co-operation and outcome of medical examination.

	Amesbury			Wilton		
	Number of people	Percentage of original sample	Percentage of analysed medical forms	Number of people	Percentage of original sample	Percentage of analysed medical forms
1. Original sample	396	*100*	—	152	*100*	—
2. No contact	30	*7.6*	—	28	*18.4*	—
3. Refusals	167	*42.2*	—	30	*19.7*	—
4. Completed medical examination	199	*50.2*	—	94	*61.9*	—
5. Forms rejected after medical examination	16	*4.0*	—	0	*0*	—
6. Medical forms analysed	183	*46.2*	*100*	94	*61.9*	*100*
7. People with some morbid condition(s)	125	*31.6*	*68.3*	43	*28.3*	*45.7*
8. People with newly discovered morbid condition(s)	70	*17.7*	*38.3*	10	*6.6*	*10.6*
9. People with newly discovered morbidity referred for second opinion	25	*6.3*	*13.7*	8	*5.7*	*8.5*

have morbidity of sufficient note for their referral for a specialist opinion. There was no significant difference between these two percentages. Of the 33 people (37 conditions) referred for second opinions 15 people (18 conditions) were recommended for surgery. Conditions included varicose veins, menorrhagia, mammary cyst, melanoma, rectal prolapse, hernia, and enlarged prostate. Most of the remaining patients were recommended for observation. These referrals did not include any of those referred to dentists or opticians. The general practitioners did not consider that they had parted from their usual criteria for treatment or referral of patients or that the patient's attitude to acceptance or refusal had been affected by the fact that this particular morbidity had been discovered by a survey and not by the usual process of consultation. This applied, for example, to the 10 patients found to require surgery, all of whom have either received treatment or are on the waiting list.

The results of the exercise show a reasonable consistency in the outcome at both places and a consistent epidemiological picture is the most important factor for the significance of such a study. Unmet need for social support in the community was not surveyed but could be added to a larger survey without difficulty.

Discussion

Can it properly be concluded from this initial study that the method is possible for a larger study in Wiltshire or for use elsewhere? From the point of view of carrying out a medical examination, the study seemed to indicate that extension to a larger sample which could provide an epidemiological picture of the Wiltshire Health Area (population 706,100) could be feasible.

Nevertheless, it is important to point out that the pilot study failed to secure the complete participation of a high enough proportion of the sample. This failure with a random sample of whatever size would invalidate the result. If, however, the reasons for the failure can be defined and eliminated, the method would be feasible since in other respects the pilot survey produced consistent results. In this context most of the variation in the response rates between the two areas was probably attributable to differences in the size of the workload of the health visitors.

Each health visitor in Wilton had 33 households to visit whereas those in Amesbury were required to visit at least 70 households each, and of course all were required to continue with most of their normal duties. At Wilton the medical examinations were spread fairly evenly over an eight-week period, but at Amesbury they were covered in two separate periods totalling less than eight weeks. Therefore the visiting by the health visitors in Amesbury was obviously subject to more pressure than in Wilton and no doubt this could have reduced the rate of success, despite determined efforts on their part. They were thus able to spend much less time, if any at all, explaining the purpose of the survey and there is no doubt that the high load factor had an undesired effect at Amesbury. Clearly, any future study would require a marked reduction of the load on health visitors.

The health visitors taking part were those attached to the general practices involved and as there is virtually full attachment of this kind in Wiltshire the spread of the load between health visitors in a larger survey would depend upon the proportion of general practitioners in the Area participating.

Table 4 shows the average loading effect on general practitioners and health visitors given 100 per cent or 80 per cent or 70 per cent participation by general practitioners in the Area with a one per cent sample of the population including about 7,000 individuals and 2,450 households. An enquiry by personal interview of a sample of practitioners throughout the Area (87 doctors constituting 27 per cent of all general practitioners in the Area) obtained affirmative, and in many cases enthusiastic, replies from 79 (91 per cent of the sample). It therefore appears safe to assume that the ultimate response would fall between 80 per cent and 100 per cent. As with the 80 per cent level of participation by doctors the load upon health visitors would be improved by at least 20 per cent compared with Wilton in the pilot survey and would be 37.1 per cent less compared with Amesbury, it is concluded that the method is feasible.

Further detailed measures to secure a higher acceptance rate by the public would also be applied.

Surveys to find actual morbidity should provide information to define and quantify what services could be provided and with what priority, enabling more specific and personal health care planning to take place, and outlining this should help to eliminate delay in

Table 4. The average loading effects of different rates of co-operation by general practitioners and acceptance of medical examination by the general public with total sample of 7,000 people.

Percentage acceptance by general practitioners	Number of examinations per general practitioner for three acceptance rates of general public			Number of households per health visitor
	100 per cent	80 per cent	70 per cent	
100	21-23	17-19	15-16	16-21
80	26-29	21-23	17-18	20-26
70	30-33	24-26	21-23	23-30

providing the right kind of care in response to individuals' needs, defined by general practitioners and consultants.

Cost

Assuming an original sample of 7,500 people of whom 80 per cent accept and progress to medical examination, with *per capita* payments to general practitioners for the medical examinations, payment of health visitors for overtime work on the survey, payment for a research assistant employed for one year, and the use of computer analysis, the estimated cost is in the order of £90,000 at 1976 values.

Conclusion

It is concluded that a survey of need for health care in a health area by the method outlined above is feasible and that in view of the importance of essaying the use of a morbidity picture obtained by direct epidemiological survey of individuals as the basis for estimating the need for health care and drawing planning conclusions, the expenditure involved is justified. This sum makes no specific provision for, nor does the method tested clarify, the additional work which would be required to apply the morbidity picture to the provision for health care now existing so as to define and quantify the changes which need to be produced through health care planning and resource allocation.

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Frequency of sexual dysfunction in 'normal' couples

In analysing the responses of 100 predominantly white, well educated and happily married couples to a self-report questionnaire, this study examined the frequency of sexual problems experienced and the relations of those problems to sexual satisfaction. Although over 80 per cent of the couples reported that their marital and sexual relations were happy and satisfying, 40 per cent of the men reported erectile or ejaculatory dysfunction, and 63 per cent of the women reported arousal or orgasmic dysfunction. In addition, 50 per cent of the men and 77 per cent of the women reported a difficulty that was not dysfunctional in nature (for example, lack of interest or inability to relax). The number of 'difficulties' reported was more strongly and consistently related to overall sexual dissatisfaction than the number of 'dysfunctions'.

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