General-practice workload, needs, and resources in the National Health Service*

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This paper presents data from general practice in the mining valleys of South Wales, showing the relation of local to national workload, morbidity, and mortality. The implications of over-work and deficiencies of resources make this evidence of more than local significance.

In 1970–72 my practice, in the small mining village of Glyncorrwg, took part with 115 other volunteer doctors in the Second National Morbidity Survey of England and Wales (Office of Population Censuses and Surveys, 1974). Consultation rates in Glyncorrwg were more than double the average, higher than in any other participating practice, and hospital admission rates were 76 per cent higher. Even allowing for probable procedural errors (the base population was almost certainly understated, for reasons we have been unable to determine), this practice was so deviant that I suspect its experience was regarded as the result of an eccentric policy of care rather than a real difference in workload presented by patients.

I wish to refute this. The practice was at that time single-handed, without any kind of special financial or staff support, and our research work was excluded from all data on workload. Consultation rates had been calculated every year from 1964 to 1972, and throughout that time were stable, with a mean rate of 5·3 consultations per patient per year, and a standard deviation of 0·21. There was no excess of consultations per episode of illness; the whole of the excess lay in an increased rate of episodes of sickness, rather than revisits and follow-up. In other words, the increase lay in the part of workload mainly determined by patients rather than the doctor.

We had also taken part four years earlier in Williams' (1970) study of workload in 68 practices in South Wales. Our consultation rate during the four sample weeks of that study was higher than in the year as a whole, or the year of the National Morbidity Survey (5·9 consultations per patient per year), yet it was still seven per cent lower than the average for the 11 study practices in coalmining areas, and only nine per cent higher than the average for all study practices in South Wales. Mean consultations for all practices in the study were 80 per cent higher than in the morbidity survey.

Participants in the National Morbidity Survey were volunteers for a heavy burden of unpaid extra work for themselves and their staffs, for at least one year. I suggest that doctors with high workloads were not fully represented, and could not be, with a study of this design. Though Williams' study also depended on volunteers, and was therefore also inevitably biased against practices with a heavy workload, great efforts were made to recruit doctors working in the areas of known high morbidity, and to make minimal demands in recording, which was required only for one week in each quarter. In both studies the greatest difficulties in recruitment and the highest losses from drop-out were found in industrial areas with high workload.

Unfortunately, the only randomly-sampled (and therefore unbiased) data on consultation rates presently available are based on patient recall over the 12 months preceding survey (Cartwright, 1967). Rates by this technique are always under-estimated, but

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even so the study gave an annual adult rate of 4·5 per person—50 per cent higher than the Morbidity Survey.

The rather neglected estimates of the Seventh Report of the Review Body on Doctors' and Dentists' Remuneration, based on visits by Regional Medical Officers to over 3,000 general practitioners in the winter and spring of 1964–5, gave an annual equivalent of 5·6 consultations per patient per year, 86 per cent higher than the Morbidity Survey. All doctors are interested in pay, fewer in research, and these are probably the most representative figures we have. Cartwright discussed the subject fully and concluded that the true rate in 1964 was probably about five per patient per year. Though there has probably been a general decline in home visits, there is no good evidence that this has occurred for office consultations except in a few exceptional practices (Fry, 1973).

High workload in general practice leads to high referral rates. Of 211 patients referred to the district hospital outpatient department from the Glyncorrwg practice during the first Morbidity Survey year (table 1), more than half waited more than four weeks, one-fifth waited more than six months, and one-tenth waited for over one year. Our experience was similar to Fraser and others (1974). Waiting lists of this length are close to, and sometimes beyond, the point of breakdown of effective service in terms of real consultation between colleagues, optimal return to work, and the reasonable satisfaction of consumer needs.

TABLE 1

WAITING TIME IN WEEKS OF 211 CONSECUTIVE PATIENTS REFERRED TO HOSPITAL OUTPATIENT DEPARTMENTS, 1970–71, FOLLOWED FOR ONE YEAR AFTER REFERRAL

	Waiting time in weeks							
	0–2	*–4*	*–8*	*–12*	*–24*	*–36*	*–52*	*over 1 year*
Number	55	44	41	13	16	15	4	23
Cumulative per cent	*26*	*47*	*66*	*72*	*80*	*87*	*89*	*100*

Social determinants of morbidity

Very high workload in primary care correlates with social class. The Morbidity Survey provides no evidence on this, because plans to record occupational data in a subsample (as in the first survey of 1951) were abandoned by the Department of Health and Social Security after a parliamentary intervention by Mr Enoch Powell, who claimed that this would violate personal rights (Powell, 1970). This association with social class is obvious to general practitioners, and discussion has centred on the extent to which high workload reflects high somatic morbidity—" real illness ", as the fatuous saying goes.

The problem in the South Wales valleys, peopled almost entirely by manual workers and their families, is a special case of the more general question of social differences in mortality, morbidity, and health service workload. The mortality of social class 5 (unskilled manual workers aged 15–64) exceeded that of social class 1 (professional and higher managerial) by 23 per cent in 1930–32, 37 per cent in 1949–53, 88 per cent in 1959–63, and 78 per cent in 1970–72 (table 2).

The General Household Survey (1973) showed an even larger difference in morbidity, though here there are no earlier figures to establish a trend (table 3). The prevalence of limiting long-standing illness was two-and-a-half times as great in social class 5 as in social class 1 for men of all ages, and twice as great for men aged 15–44. For women the differences were threefold and almost twofold, respectively.

TABLE 2

STANDARDISED MORTALITY RATIOS BY SOCIAL CLASS, MEN 15–64. FROM REGISTRAR GENERAL'S DECENNIAL SUPPLEMENTS ON OCCUPATIONAL MORTALITY, AND FROM SOCIAL TRENDS, NO. 6, HMSO. ALL SOCIAL CLASSES = 100.

Years	*Social classes* 1	2	3	4	5
1930–32	90	94	97	102	111
1949–53	86	92	101	104	118
1959–63	76	81	100	103	143
1970–72	77				137

TABLE 3

LIMITING LONG-STANDING ILLNESS, PREVALENCE RATIOS BY SOCIAL CLASS. GENERAL HOUSEHOLD SURVEY, 1972. ALL SOCIAL CLASSES = 100

Social class	*Men*		*Women*	
	all ages	*15–44*	*all ages*	*15–44*
1	64	89	55	71
2	79	94	69	94
3a (non-manual)	89	91	81	75
3b (manual)	95	96	96	122
4	126	109	137	112
5	164	177	166	137

Only a small part of these differences is likely to be due to differences in the quality of medical care, though as doctors become more effective (through technical advance) quality may well become more effectively important. These differences certainly imply unequal burdens on health services.

Wales has an eight per cent lower average list size for general practitioners than England and Wales (because of high local recruitment; the effect in Scotland is even greater), a one per cent greater hospital capital expenditure per head, and two per cent more hospital beds per head. In general terms, medical resources per head of population in Wales are either rather better, or at least little worse, than the average for the whole of England and Wales. However, the demand on these resources is much greater, because there is a higher proportion of manual workers, more sickness and premature death, and access is more difficult because of mountainous country, a dispersed population, and relatively low car-ownership.

Doctors' perceptions of high workload

As elsewhere, general practitioners in South Wales see those patients who consult and fail to see those who do not; consulters make more impact than non-consulters. A doctor coping with excessive presented workload can easily slip into a peevish interpretation of his role, as caused by a delinquent minority of patients, to be solved (preferably through the authority of some third party) by firm discipline and indiscriminate financial penalties for minor or out-of-hours consultations. This view is taken up enthusiastically by the press and seems to have been a part of the folklore of social brutality ever since Queen Elizabeth proposed cutting off the ears of sturdy vagabonds.

From his study of nearly 1,000 sampled British general practitioners in 1966, Mechanic (1968) concluded that " doctors tend to view their problems from a personal

rather than an organisational perspective." If medical process and resources are assumed to be constant and unchangeable, solutions to an unbalanced equation may be seen only in terms of a change in input—more self-care, less trivia. In fact input is extremely difficult to alter, at least if we are to encourage early presentation of potentially serious illness, and cursing patients behind their backs does not make them go away.

Apart from pay, the three worst problems perceived by doctors in Mechanic's survey were: the number of patients they had to care for, the time they were able to give each of them, and the proportion of trivial or inappropriate demands. The relative poverty of resources in primary care seemed to be accepted as inevitable. This study was done before the 1966 " package deal ", which marked a turning point in the development of British primary care. This was a substantial, though not yet decisive, step away from the system whereby the general practitioner provided (well or badly) a public service out of his own pocket, with predictable consequences in under-capitalisation of primary care, benefit to the Treasury, and decline in clinical morale; and a substantial, though not yet decisive, step toward salaried service in which the doctor was responsible only for his own skills and labour, and clinical conscience was no longer an impossibly expensive liability. This, more than any other step, has accelerated the considerable, though not yet dominant, trend for British general practitioners to accept an active role in the conservation of health within their defined community rather than merely to respond to presented demand. This development was made possible by the pioneer work of the College of Practitioners in developing an independent ideology of primary care, but until 1966 it had little material base.

Unfortunately there are still many doctors who have accepted the benefits of 1966, without any such extension of their responsibilities. Cartwright (1967) found that doctors who estimated a high proportion of their consultations as trivial or inappropriate enjoyed their work less, had less satisfied patients, were less likely to attend postgraduate courses, performed fewer minor technical procedures, referred fewer patients to hospital outpatient departments, were less likely to employ a nurse, and were less likely to be members of the College of General Practitioners. None of these features were themselves caused by high workload, as these doctors were consulted less often by their patients than those with a more generous attitude to their work. Evidently, those who cannot accept that patients, not doctors, define the content of primary care, are unhappy people. They hate their situation, but have no realistic and humane strategy to change it.

Other determinants of workload

We must accept that input is a variable whose size and nature we can influence only slowly, and with great care to avoid damage to our work; but it by no means follows that it is determined only by the prevalence of somatic disease. Between 1953–4 and 1972–3, there was a 30 per cent rise in certified incapacity for work from illness in Great Britain (excluding Northern Ireland). In Wales, there was a 59 per cent increase during the same period, nearly double the national average, and greater than in any other region (Taylor, 1976). Clearly this is a mainly social phenomenon, since there has been no decline in health in any way approaching this size and speed.

It may be possible to account for most of this difference between Wales and other parts of Britain, particularly London, which has shown no rise at all over the whole period. Wales combines exceptionally high morbidity and mortality with high rates of long-term male unemployment. Much of this is concentrated in communities without alternative work after pit closures and particularly lacking protected light employment for those disabled by heavy industry; unemployment in the Glyncorrwg Urban District has never been less than ten per cent since 1968, and in the whole Aberavon area it is now seven per cent.

One result is a large, but so far as I know unmeasured, concealment of unemployment as long-term sickness absence. There is often a financial and sometimes a social advantage in classification as sick rather than unemployed, when there is some real disability, and no reasonable prospect of suitable local work. There may also be a political advantage to the Department of Employment in minimising this evidence of economic failure. Sickness certification is encouraged by some employment exchanges after prolonged difficulties in placing a middle-aged man. As most men made redundant in heavy industrial areas have some disability if they are over 50, and disability and unemployment are closely associated, this is neither illegal nor immoral; but it is statistically misleading and increases workload in primary care. The national trend toward rising sickness absence, which affects the whole of Europe and is in no way unique to Britain, is another matter; it affects young men more than the middle-aged, and clearly has complex social roots which have been ably discussed by Semmence (1971).

Consultation rates may also be inflated by symptoms of demoralisation rather than somatic illness. We looked at the incidence in Glyncorrwg of consultations for neurosis and personality disorder and found that these accounted for only two per cent of all male consultations, compared with seven per cent for England and Wales, and for five per cent of female consultations, compared with 18 per cent for England and Wales. Differences were found in the same direction by Williams (1970). The South Wales valleys have shown consistently low rates for death by suicide for many years. There is no evidence of high prevalence of neurosis in their general population, though there is an increased tendency to consult for it compared with the semi-rural area of the Vale of Glamorgan (Carstairs and Brown, 1958).

There is probably no place in Britain where the tendency of a few patients to use their doctors casually exceeds that of many more to neglect their health and delay consultation for threatening symptoms. A major study in Glasgow, also an area of high workload and concentrated social problems, has shown that 23 per cent of randomly sampled adults had at least one medical symptom for which they had not consulted, although it was severely painful or disabling, or they thought it was probably serious (Hannay and Maddox, 1975). Less than half this proportion, nine per cent, had consulted although they had no medical symptoms that were painful, disabling, or thought by them to be serious. The authors concluded that the " iceberg " of significant but unreported medical symptoms was probably two-and-a-half times as great as the volume of " trivia ". It is likely that this is broadly true for most of our older industrial areas.

It appears that high workload in South Wales and probably in other areas of heavy industry, reflects a raised morbidity both somatic and social, which cannot in practice be separated. There is no reason to believe that consultations for major somatic disease displace those regarded by doctors as trivial or inappropriate; indeed it is likely that high workload reflects high demand in all dimensions, and that it acts as a barrier both to effective access by the patient and perception by the doctor, so that high workload areas are also areas of high unmet need.

However, it is also clear that the relation of sickness to consultation rates is extremely complex and indirect, depending a great deal on deeply rooted local custom, often localised to quite small areas or even to single practices, if these have a long history. Despite large area and social differences in mortality, consultation rates appear to be only loosely correlated with local mortality rates standardised for the age- and sex-composition of the population at risk. Using Williams' (1970) raw data and the Registrar General's standardised area mortality indices, the correlation coefficient (r) of adjusted area mortality to consultation rate was only 0·34 for the 68 practices in the study.

Area mortality and perinatal mortality rates

Judging by expectation of life (reflected in age-adjusted mortality rates), the prevalence of serious illness in South Wales is much higher than in England, particularly in the

valleys. The weighted arithmetic mean of local adjusted death rates in the valleys was 26 per cent higher than the rate for all of England and Wales in 1963–67, and 22 per cent higher in 1968–72. This is probably mainly an effect of gross social deprivation between the wars.

This could account for the recent and quite sudden disappearance of our grossly excessive infant mortality; up to 1971 the South Wales valleys showed a consistent excess over England and Wales of 25 per cent or more, but since 1971 there has been a dramatic and sustained fall to a level significantly better than that for England and Wales (table 4). This did not coincide with any dramatic change in obstetric practice, and it seems likely to be a combined effect of efficient contraception and termination of pregnancy, ending high parity and unwanted pregnancies in the elderly multigravida, with a shift into the non-reproductive age group of the women who experienced childhood malnutrition as a mass phenomenon. Nearly all pregnancies are now occurring in those born after 1935.

However, the abruptness and extent of the improvement is astonishing, and requires detailed study, which so far as I know it has not yet received. It remains to be seen whether the return of mass unemployment, rising food prices, and cutbacks in social services, have any effect on this trend.

TABLE 4

MEAN INFANT MORTALITY RATES PER 1000 LIVE BIRTHS, WEIGHTED BY BIRTHS, GLAMORGAN & MONMOUTHSHIRE VALLEYS,* COMPARED WITH ENGLAND AND WALES RATES, 1921–73. (REGISTRAR GENERAL'S ANNUAL REVIEWS)

Years	*(1) Mean Welsh valley rates*	*(2) Mean England and Wales rates*	*ratio (1):(2)*
1921–25	87·7	76·0	1·15
1926–30	80·5	67·9	1·18
1931–35	73·5	62·2	1·18
1936–40	66·9	55·0	1·22
1941–45	60·6	49·5	1·22
1946–50	46·9	36·3	1·29
1951–55	37·3	26·9	1·39
1956–60	30·5	22·6	1·35
1961–65	25·8	20·6	1·25
1966–70	22·8	18·2	1·25
1971–73	16·7	17·3	0·96

* Local authorities included in this definition are listed by Hart (1970).

Clinical poverty

High workload concentrated in areas of least resource may have serious consequences for the quality of primary care, and the morale of those who deliver it. Buchan and Richardson (1973) found an average face-to-face time for consultation of five minutes. The hurried nature of most British primary care is linked to a style of work in which frequent presumption of psychosomatic illness is coupled with a relatively low level of examination and investigation (Marsh, Wallace and Whewell, 1976). This is a real danger even in teaching practices. In the more decayed parts of urban industrial centres it is disastrous (Wilkes, 1975), leading to " perfunctory work by perfunctory men " (Albutt, 1912) the roots of this behaviour lie deep in the nineteenth century. It is a state of clinical poverty.

For the most part this problem has been solved by turning our backs on it, but at least in a period of economic expansion and full employment there was the hope that improvement in quality of care in affluent areas would trickle down to the clinical slums,

leading to their eventual extinction. There can be no such perspective now; the conventional wisdom is social retreat, and ruthless questioning of traditional liberal objectives in the name of good business sense prepares us for a colder charity.

Strategies for change

It is in this climate that we have to work out a realistic strategy to overcome the problems of high workload. We have seen already that inputs cannot be reduced by economic or social barriers to consultation without serious damage to the quality of care, if by that we mean above all the anticipation and avoidance of crisis-intervention. Nor can we divert the major part of it away from ourselves to paramedical staff with less training and lower wages. There are no huge untapped reserves of nurses waiting to be rapidly turned into doctors, and there is no reason to think that it would cost much less to train them to a good standard of primary diagnostic assessment.

It is true that nurse-practitioners with specific training in the skills of primary care, and carrying a 50 per cent lower caseload, can do as well as general practitioners who have not had such training (Spitzer *et al.*, 1974); but nurses trained as doctors and working as doctors will, sooner rather than later, demand the wages and status of doctors, share their social ambitions, and recreate the same problems of maldistribution and malorientation that we have now, no more and no less. Of course, we can learn from the capacities of paramedical personnel that turning out effective doctors depends not on breeding them but training them; seriously, not by a hit-or-miss sporting amateurism and by drawing many more mature students into our medical schools (Hart, 1974). Nevertheless, the skills evolved for good primary care in industrially developed countries are of a high order, and rightly so in view of the critical importance of our work to all other medical activity; there is no way of getting them both quickly and cheaply.

The ingredients of a rational solution are more doctors, properly distributed (we have not done badly in that respect), with fewer patients, more time to care for them, time and facilities to preserve and develop the life of creative medical science within us, and a final rejection of our confusing alternative role as small shopkeepers and dabblers in the lucrative, but largely parasitic, fringes of the National Health Service. Of course we need more paramedical staff, but there is a limit to how much of our work can be delegated without loss of continuity.

On the whole, it is not first assessment that can be delegated, but specialised areas that can be defined only after such assessment. Paramedical workers can certainly expand and deepen primary care, but can do little to rescue us from the responsibilities of first encounter, except in a veterinary style of service. Essentially, this was the perspective envisaged by the Royal Commission on Medical Education (1968), when almost everyone still believed in progress; it may be less fashionable now, but it remains both true and feasible.

The spectre of medical unemployment (Fry, 1969), once the gross pathology of our industrial populations is overcome and morbidity falls to the present levels of affluent suburbia, fails to allow for the necessary and inevitable development of general practice into quite new, but undoubtedly labour-intensive, areas of preventive and anticipatory care, much of which will still have to be delivered at an intensely personal level. In the twenty-first century there will most certainly be an undiminished need for jobbing engineers in human biology.

The conventional wisdom also has it that we are become a poor country, wherein such aims are utopian. Where does our poverty lie? Each year more useful goods and services can be produced by fewer people in less time. The technical possibility of satisfying all basic human material needs is obvious for the first time in history. What is to be done with the increasing numbers of people no longer required for the production of necessities, or even of the most absurd luxuries? We now have one-and-a-

half million unused human beings, many of them recent school and university graduates; are we really going to tell them that in such a situation we do not need more doctors, more nurses, more laboratory technicians—and more musicians, actors, playwrights, builders and creators of every kind, who can at last live to work rather than work to live? The social obstacles to such rational change are immense and very serious, but its necessity is hugely obvious. Our poverty lies in failure to use our true wealth.

The facile formula: wants > needs > resources is an alternative to effective thought and action, falsely posing our problems as inevitable and attempts to solve them as futile. It is not true that wants are infinite (though interested promoters may make them so). It is not true that resources cannot be expanded; our capacity to expand them increases year by year, whether or not it is used. It is not true that our choices must be divisive, and that we must learn to choose between civilised care of the aged sick and the salvage of young lives by dialysis; if some fields of care should be reduced—our gross over-medication, for instance—this should be from a greater caution and respect for human life and for medical science, not from parsimony.

Buchan and Richardson (1973) concluded from their study that: " If more clinical responsibility is to be placed on the family doctor and his team, if that team is to accept the challenge of preventive medicine, if comprehensive health records are to become a reality, the objective of at least ten minutes per consultation should be a top priority." Britain is a civilised country. We can afford a ten-minute consultation for everyone, everywhere.

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