PRACTICE OBSERVED

Practice Research

Identification of underprivileged areas

BRIAN JARMAN

The Royal Commission on the National Health Service,[1] the Black report,[2] the Royal College of General Practitioners' survey of primary health care in London,[3] the Acheson report,[4] and several other publications have drawn attention to large geographical variations in problems dealt with by primary care services and also to variations in the characteristics of these services from area to area.[5–11] It has been suggested that in urban areas the problems to be dealt with are greater and the services to deal with them less adequate.

Both the report of the joint Department of Health and Social Security and General Medical Services Committee Working Party on Underdoctored Areas[12] and the Acheson report suggested that there is a need to identify those areas where the difficulties are greatest (the underprivileged areas) with a view to improving services.

This initiative is analogous to the identification of priority areas in other topics such as housing and education (for rate support grant and educational priority areas) and work in deprived areas[13] or those thought to be in need of higher than average levels of social services.[14] In all of this work it is important to distinguish between the problems of the population served, however they are assessed (social factors), and those of the services provided (service factors) and to obtain independent measures of both, as they may not necessarily be strongly correlated, as is often assumed. It is often said that we know where the worst areas are and that it is a waste of time and resources trying to define them more accurately; and in any case attempts at quantitative analysis are bound to fail. If, however, it is eventually decided for instance that action will be taken which will have different financial consequences for those working inside and outside underprivileged areas it will be necessary to justify the reason for choosing certain areas and to be able precisely to specify how each area was defined.

When considering factors that affect a general practitioner's workload or pressure on his services (referred to below simply as workload) and hence the appropriate deployment of general practitioner services several variables come to mind. For instance, consultation rates and times, or home visiting rates and times, prescribing rates,[15] social conditions, morbidity[16] and mortality rates, practice working conditions, and the amount of support available from others such as ancillary staff, community nurses, social services, and hospitals might all be thought to influence a general practitioner's workload. It would clearly be difficult to obtain a precise measure of workload based on all of these variables and to calculate its variation with any of them even if we had more knowledge of each of the factors mentioned.

In analysing the evidence submitted to the Acheson committee about primary care services in London, however, it soon became clear that there was a strong consensus of opinion among those submitting evidence that certain social characteristics of the population—for example, the proportion of elderly people living alone—were thought to be associated with greater pressure on primary care services. Medical conditions (except psychiatric illness) were mentioned less often. Deficiencies in services were also mentioned as being relevant but less so than the social conditions of the population. Bearing this in mind it was decided to analyse the evidence submitted and then send a questionnaire to a random selection of general practitioners in the United Kingdom to find out how universal these impressions were, to find the variation of opinion throughout the country, and to ask about any other factors that might not have been mentioned in the evidence submitted to the Acheson committee.

Method

In 1980 Professor Donald Acheson, chairman of the London Health Planning Consortium Primary Health Care Study Group, wrote to about 4000 general practitioners in the London area and a large number of organisations connected in some way or other with health services asking for their comments about primary care services in London. About 180 general practitioners and 190 organisations replied and some of them also gave verbal evidence. The written evidence was analysed and 1603 different mentions of various factors thought to be relevant were grouped into 21 categories; in this paper these are divided into 13 social factors and eight service factors (see table I).

In January 1981 a questionnaire was sent to a one in 10 sample of general practitioners by selecting every tenth doctor on a commercial mailing list of general practitioners. A prepaid addressed envelope was included with the questionnaire for the reply and one reminder was sent three weeks after the first letter. The results of replies received by four weeks after the reminder were analysed. The general practitioners were asked the following:

Below is a list of factors [that is, those given in table I] which evidence suggests contribute to the pressure of work on general practitioners. Based on experience in your own practice, could you please score each factor on a scale from 0 (no problem) to 9 (very problematical) according to the degree to which it increases workload or contributes to the pressure of work when it is present. Those factors which you do not mark will not be included in our final calculations.

Four spaces were left for other factors to be listed and respondents asked to specify these other factors mentioned, and these were also analysed.

A total of 2614 questionnaires were sent and 27 were found to be ineligible (for example, due to retirement of doctor), leaving 2587 eligible questionnaires sent. Within three months of the first mailing 1983 replies (77%, of the total eligible) had been received. Of these, 1842 (71%) were received within the time limit, of which 40 were found to be unsuitable for analysis—for example, because the doctor did not understand or agree with the questionnaire or made some error. This left a total of 1802 (70%, of those eligible) available for analysis.

Results

Table I gives the average score of each social and service factor and the total number of general practitioners entering a score for each factor. Other social and service factors mentioned were divided into 13 and 12 groups respectively, each of which received 10 or more mentions, plus a mixed group of the remainder (table II). The most frequently mentioned of the other social factors (trivial complaints, 68 mentions) and service factors (poor psychogeriatric services, 138 mentions) in addition to the ones on the list occurred much less frequently than the average number of general practitioners scoring the listed factors (1687).

There was considerable consistency in the average score for each factor. The average standard deviation in average score for each of the 115 family practitioner committee areas in the United Kingdom was 0·95, the lowest being 0·60 for proportion of elderly living alone, all others being less than 1·12 except for ethnic minorities, where the standard deviation of mean scores was 1·40. This is also illustrated in table III, which gives the mean scores for each social factor for general practitioners in urban England, rural England, and rural Wales, Scotland, and Northern Ireland.

It was decided that social factors alone would be used to measure workload according to the general practitioners' assessments. Service factors were not included for the following three reasons.

(*a*) Social factors are generally not amenable to alterations by those responsible for providing health services, whereas service factors can be altered—for example, in areas where social factors show a high workload.

(*b*) Service factors are recorded on the basis of health authority districts, family practitioner committee areas, or local authority areas and usually not for smaller areas, whereas social factors from the census are known down to the level of an enumeration district—the area covered by one enumerator at the time of the census, on average covering about 500 people.

(*c*) There was a tendency for some of the service factors to cancel one another out in some areas—for example, those with shorter hospital waiting lists tended to have more elderly, singlehanded general practitioners.

Among the social factors it was decided not to use (*a*) proportion over 65, as there was already weighting for the elderly in general practitioners' remuneration, and also the proportion of elderly living alone was included; (*b*) crime rate, as this is not a census variable or known down to enumeration district level—also it was found in the Royal College of General Practitioners' survey[3] to have a high correlation (+0·84) with overcrowding of households for the London boroughs, which was already included as a variable; and (*c*) difficulty in visiting, which is allowed for in general practitioners' remuneration

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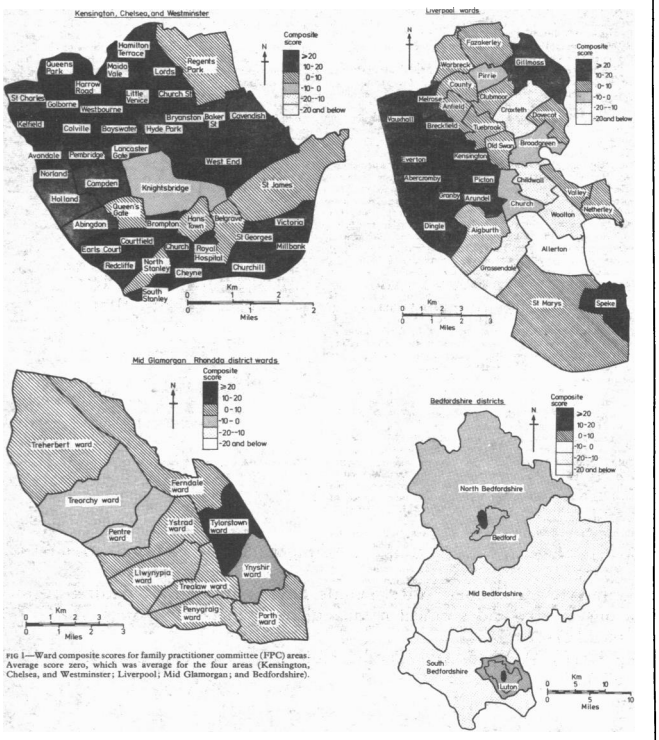

FIG 1—Ward composite scores for family practitioner committee (FPC) areas. Average score zero, which was average for the four areas (Kensington, Chelsea, and Westminster; Liverpool; Mid Glamorgan; and Bedfordshire).

TABLE I—*Analysis of 1802 replies to general practitioner workload survey*

	Average score	No of GPs scoring
Social factors		
(1) Older people (aged 65 and over)	6·19	1792
(2) Children (aged under 5)	4·64	1784
(3) Unemployment	3·34	1743
(4) Poor housing	3·60	1756
(5) Ethnic minorities (people born outside United Kingdom)	2·50	1670
(6) Single parent households	3·01	1754
(7) Elderly living alone	6·62	1802
(8) Overcrowding	2·90	1712
(9) Lower social classes	3·74	1742
(10) Highly mobile people (... changing house in a year)	2·68	1705
(11) Non-married couple families (less stable family groups)	2·71	1721
(12) Crime and vandalism	2·30	1692
(13) Difficulties visiting (long distances, traffic, etc	3·10	1725
Service factors		
(1) Long outpatient waiting times	5·55	1744
(2) Low ... area health authority expenditure on community services, more on hospital services	4·29	1635
(3) Low ... local authority expenditure on home helps, meals on wheels	4·19	1703
(4) Low ... area health authority nurses attached to general practices	2·83	1653
(5) High ... elderly GPs (aged ≥70) in area	1·47	1563
(6) High ... single handed GPs in area	0·93	1552
(7) High ... GPs' lists over 3000	1·66	1518
(8) High ... GPs' lists under 1000	0·57	1461

TABLE II—*Other factors mentioned in 1802 replies to general practitioner workload survey*

	No of GPs scoring
*Social factors**	
(1) *Trivial complaints*, inappropriate use of NHS, unrealistic expectations, lack of education about self treatment, etc	68
(2) *Psychiatric problems*, addicts, difficult patients, long term psychosocial problems, people in hostels, etc	66
(3) *Alcoholism*, possibly with drugs or smoking	50
(4) *Poor public transport*, possibly leading to unnecessary visits and/or need for branch surgeries	39
(5) *Visiting difficulties*, unnecessary visits, late calls for visits, poorly marked numbers on estates, etc	38
(6) *Certification* requests, housing forms, unnecessary paperwork, epidemiological questionnaires (of this group, 60% NHS cuts)	32
(7) *Temporary residents*, tourists, visitors, commuters, newcomers	31
(8) *Environmental problems*, "slagheaps," high rise flats, estates	29
(9) *Marital instability*, absent husbands (for example, in forces) unsupportive families, fights with neighbours, etc	29
(10) *Middle class expectations*, requests for private treatment, etc	20
(11) *Higher physical morbidity*, more of various physical complaints—for example, catarrhal illnesses, respiratory illnesses, obstetrics	17
(12) *Lack of health education*, lack of preventive medicine	12
(13) *Hazardous occupations*, industrial illnesses, mining areas, etc	11
*Service factors**	
(1) *Poor psychogeriatric services*, psychiatric services, or geriatric services	138
(2) *Poor part III accommodation*, poor local authority provision for the elderly, lack of sheltered housing, etc	51
(3) *Poor social services*, poor liaison with social services department, lack of social worker counselling, etc	47
(4) *Lack of beds*, long waiting times for admissions	45
(5) *Nursing problems*, rota schemes, catchment areas, no night rota, too few community nurses, unfilled nursing vacancies, no community psychiatric nurses, etc	28
(6) *Ambulance services*, poor transport to hospital, long distance to district general hospital	28
(7) *No casualty department*, lack of accident and emergency or cottage community hospital	20
(8) *Poor hospital liaison*, late letters, poor English of junior staff, hospital passing prescription or certificate writing to GP	17
(9) *Poor practice premises*, high surgery costs	16
(10) *Lack of provision of physiotherapy*	15
(11) *Lack of open access to pathology facilities*, difficulty of transporting specimens to laboratory	12
(12) *Lack of deputising service*	10

*The following were mentioned fewer than 10 times: few telephones, panic statements by media, high cost of housing, family planning needs, repeat prescriptions, severe weather conditions, single homeless, particular needs of over 75s, rudeness of patients, declining moral standards, travelling people (gypsies, tinkers), working mothers, street disruption in Northern Ireland, higher percentage of female patients.

†The following were mentioned fewer than 10 times: few locums, group practices, lack of chiropody, poor ancillary staff, poor administrators (hospital), no local pharmacy, early discharge and day cases, professional isolation, competition for patients, lack of postgraduate education, lack of abortion services, high proportion of private practice, no sick bay for students living in practice area, lack of domiciliary visits, lack of finance for capital equipment for surgery, unethical colleagues.

TABLE III—*Average scores of social factors for general practitioners in different parts of United Kingdom*

	Average scores		
	Urban England	Rural England	Rural Wales, Scotland, and Northern Ireland
(1) Over 65s	6·23	6·20	6·06
(2) Under 5s	4·63	4·35	4·84
(3) Unemployment	3·52	3·23	3·08
(4) Poor housing	3·52	3·36	3·54
(5) Ethnic groups	3·69	1·75	1·38
(6) Lone parent families	3·31	3·11	2·74
(7) Elderly alone	6·59	6·64	6·67
(8) Overcrowding	3·32	2·83	2·78
(9) Lower social classes	3·86	3·74	3·74
(10) Mobility	3·06	2·74	2·51
(11) Fewer married families	2·99	2·85	2·36
(12) Crime rate	2·98	1·97	2·36
(13) Visiting difficulties	3·18	3·60	3·34

in rural areas by means of rural practice payments. There is no allowance for the difficulties of travelling through traffic and parking in urban areas, and therefore omission of this variable means that workload is underestimated in urban areas.

Using the remaining 10 social variables and 1971 Census data, composite workload scores were calculated for each of the London boroughs by adding the standardised values of each variable for each borough, weighted by the weighting given by the scores for each variable in the United Kingdom general practitioner survey. The results showed that the boroughs with the highest composite scores for workload calculated by this quantitative method were those which were generally thought qualitatively to pose the greatest difficulties for primary care services. Hence it was decided to extend this methodology to data from the 1981 Census for the whole of England and Wales down to a ward or enumeration district basis.[17,18]

The King's Fund agreed to support this project, the statistics and computing work being done at the London School of Economics by Doreen Irving. A full report of this will be published separately.

Four family practitioner committee areas were studied from different parts of England and Wales (Kensington, Chelsea, and Westminster; Liverpool, Mid Glamorgan, and Bedfordshire) and maps drawn on a ward basis for each area using the means and standard deviations of the variables for the four family practitioner committee areas in the calculations of standardised values (after a statistical transformation to make the variables more normally distributed). Figure 1 shows the scores for wards in these areas, and figure 2 the scores for enumeration districts in the Kensington, Chelsea, and Westminster family practitioner committee area, this time using the means and standard deviations of the variables for that area alone. The social class variable was not included in the calculations as it was not yet available from the 1981 Census.

This method of identifying underprivileged areas was relatively insensitive to the actual value of the weighting used for each of the 10 variables. For instance, for the London boroughs, using 1971 Census data, if the weightings of successive variables were changed by alternately −50% and −50%, the boroughs' scores changed by an average of only 2·8%. Similarly, if the average weightings of social factors of urban England general practitioners were used, then the borough scores changed on average by only 1·5% from those found using weightings of all United Kingdom general practitioners (though the average change in weighting was 12·1%). If the weightings of general practitioners in rural England, Wales, Scotland, and Northern Ireland were used (a 5·7% change in average weighting from that of all of the United Kingdom) then the average score for the boroughs changed by only 0·8%. Preliminary analysis also showed that although the values of variables had changed between the 1971 and 1981 Censuses, the relative values of variables comparing boroughs with each other had not changed greatly, and hence there was not a great change in the areas which were identified as underprivileged.

Discussion

A method has been described whereby census data may be used to define areas that have higher than average concentrations of social factors that general practitioners nationally have weighted according to the degree to which they increase their workload or pressure on their services. If it is thought desirable to give extra support to general practitioners in areas where they are under the greatest pressure owing to the social characteristics of the community they serve, then this is a way of locating these areas. The method is very flexible, in that other census variables may be included if required, and it is applicable to areas as small as an enumeration district or any combination of enumeration districts such as a ward, family practitioner committee area, local authority area, health authority area, social services area, regional health authority area, medical practices committee classification district, community nurses' visiting patch, etc. It is also robust, in that fairly large variations in the weightings have relatively small effects on the ultimate scores for each area.

A survey is in progress using the same questionnaire with community nurses in one health district. The weightings obtained from this survey will be used to modify the scores for each enumeration district obtained using the United Kingdom general practitioners' weightings: preliminary results indicate that the change needed will be small. In principle it would be possible to include service factors by modifying the method but, for the reasons already stated, this has not been done. At present only areas in England and Wales have been studied, but the method could be applied to census data from Scotland and Northern Ireland. The cut off value of score which is taken for the definition of underprivileged areas is, to a certain extent, arbitrary and could be determined on the basis of population by arranging, for example, that 25% of the population fall in areas above the cut off value. Studying the London boroughs using 1971 Census data shows two natural cut off points, such that the boroughs are divided by their scores into three groups regardless of whether the weightings used for the social factors are those of urban, rural, or all of the United Kingdom general practitioners. The boroughs with the highest scores are the inner ones (Hammersmith, Kensington and

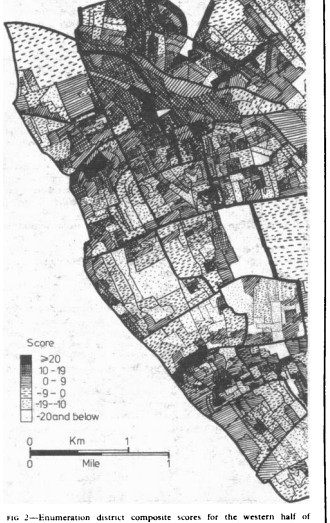

FIG 2—Enumeration district composite scores for the western half of Kensington, Chelsea, and Westminster family practitioner committee. Average score was zero (average for that committee area only).

Chelsea, Tower Hamlets, Newham, Islington, Hackney, Westminster, Camden, Lambeth, and Southwark); next comes an intermediate group (Haringey, Brent, Wandsworth, Lewisham, Waltham Forest, Ealing, and Greenwich) and, lastly, a group with the lowest scores, consisting of the rest of the outer London boroughs.

The General Medical Services Committee's Subcommittee on Underprivileged Areas has considered the methodology described and the results illustrated in fig 1 and concluded that "underprivileged areas can be identified by detailed analysis of relevant data, and the interim findings appear to support this view."[9] It is hoped that family practitioner committees in other areas will have an opportunity of seeing maps like fig 1 for their own areas and that general practitioners will be able to comment from their knowledge of local conditions whether the areas thought to have the most problems have been correctly selected. It would be possible to draw maps on a ward basis for each family practitioner committee area (there are 9284 wards in England and Wales). Scores for each ward could be given based on the weightings of all United Kingdom general practitioners and also based on the weightings of the general practitioners of each family practitioner committee for the local general practitioners' comment on the differences (which, as indicated above, are likely to be small). If a differential capitation fee were adopted for underprivileged areas it would be necessary for family practitioner committees with underprivileged wards in their area to keep a note of patients living in these areas. Computerisation of family practitioner committee records would enable this to be extended down to an enumeration district basis (there are 112 280 enumeration districts in England and Wales). Comparison of figs 1 and 2 shows the difference of detail of information between wards and enumeration districts in an urban area. Even on a ward basis the practice area for most general practitioners will cover all or parts of several wards. It would also be possible, if scores on a ward basis were adopted, to pick out any enumeration districts which differed greatly from the ward average.

There was no attempt to develop an arbitrary definition of general practitioner workload based on consultation rates, etc, but rather to use a survey of a representative sample of general practitioners in Britain to suggest what factors are important in determining their workload, to determine the relative importance of these factors, and to use a statistical method applied to census data to locate areas where these factors are concentrated. There is evidence[1] that in these areas not only is there less than average provision of primary care services but that hospital services—accident and emergency, outpatient, and inpatient—for the resident population are provided at above average rates. It may be that hospital services are coping with inadequacies in primary care services in areas where social conditions would be expected to generate a greater than average general practitioner workload. Hence any attempts to validate scores for underprivileged areas with direct measures of general practitioner work (consultation, visiting, prescribing, referral rates, etc) would have to take these considerations into account. Even if acceptable methods of measuring the work actually done by general practitioners at present could be agreed on and implemented (a very difficult task), they would not, for the reasons given above, be a true measure of the potential workload for general practitioners implicit in the social conditions of the population. This paper attempts to define the latter.

No attempt has been made to suggest what changes might be instituted if underprivileged areas were identified in the way described, nor to suggest that identification of these areas in a generally acceptable way would lead to better general practitioner services, nor even to suggest that more resources for health care would necessarily improve the health of the population. These are wider issues for others to comment on.

I am grateful for financial support from the King's Fund and for the interest shown in this work by the Underprivileged Areas Subcommittee of the General Medical Services Committee.

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Overlapping with General Practice

Undertaker

LEE CHAPPELL

Many of us know what it is like to experience the death of a relative or close friend. Even when death is expected the finality of it is often overwhelming. When the emotional distress causes the bereaved person to seek help there are many people to whom he can turn. Friends, of course, are vital at this time. His doctor may give him something to relieve his depression, and the clergy will offer guidance and religious support. But the first task he must face is the arrangement of the funeral, and this must be done while the bereaved person is still in his most distressed state. These practical aspects of death are simply unknown to the average person, and the impact of the relative's death is further compounded by this lack of knowledge and ignorance of procedure.

When the bereaved person enters my office he is often so distressed that "normal behaviour" abandons him—that is, his customary interest in a service that he is purchasing is reduced. His trust in me as a (sometimes) total stranger is implicit, and he assumes without question that my guidance is correct. This trust was recognised in a report made by the Price Commission in 1974. They suggested that the bereaved "do not act with the prudence that they would expect to observe in other business transactions."

In dealing with the financial aspects the bereaved person again does not act normally. I would estimate that nearly half of these people who come into my office to arrange a funeral have no knowledge of costs. They seem largely uninterested in financial details and in some cases are too embarrassed to discuss them. It does not occur to them to query prices or seek quotations for a similar service. Obviously, this lack of normal behaviour charges the funeral director with the highest degree of responsibility. Financial guidance is acutely important when emotional stress has pulled the curtain down on clear thinking.

In America this ignorance of funeral costs has been taken advantage of and resulted in stricter regulations and requirements. In Britain the Price Commission gave funeral directors a very good report, stating that "there is no evidence in this country of the kind of abuse that has been so widely publicised in North America." Even so, funeral costs have sometimes been criticised. The average price one should expect to pay is about £400. Of this, £100 is paid by the funeral director on behalf of the client in fees to doctors(s), the clergy, the cemetery or crematorium, and for obituary notices. If one considers that a video recorder is about the same price it sheds a clearer light on the subject. This view was again backed up by the Price Commission report, which stated that "while the cost of a funeral may be a real burden to poorer people, funeral costs in this country are low compared with elsewhere."

Goudhurst, Kent
LEE CHAPPELL, undertaker

Changing customs

Generally speaking it seems that funeral expenses do not present such a problem to families as they once did. Before the second world war burial was the most common form of funeral and expensive and "obvious" trimmings an indication of social standing. With burial there were many added expenses. One had first to purchase a grave and then a memorial to place on it. In the past these memorials were much more elaborate and had side curbs as well as a headstone. (For ease of maintenance only headstones are now allowed.) It was also normal for a body to be taken home for viewing, and the coffin in which it lay would have been made of solid oak or elm with solid brass fittings. Chipboard and veneer had, of course, not been introduced. The inside of the coffin would have been lined in pure silk. Motor vehicles were relatively more expensive because they were not produced in large numbers, and more following cars were required because people often did not have their own transport. Finally, having professional mourners was not uncommon, and they had to be paid for by the day.

Slowly, however, funeral customs have changed. Cremation now accounts for 60% of all funerals, and more people are choosing simple and less expensive services. And though funeral customs may have changed, our ability to face death and funerals has not. The funeral director is one of the few people who knows what must be done after a death. The trust placed in him through the public's lack of knowledge is nothing short of sacred. It is the one business where mistakes cannot be made.

What does a funeral director actually do? His first concern is to collect the deceased from wherever he has died. A 24 hour service must be provided for this. While the coffin is being fitted with handles and inside linings the body is placed in a refrigerator. A doctor then visits the funeral director's premises to sign a death certificate unless the deceased died in hospital, in which case the certificate would have been signed there. Embalming or hygienic treatment, if required, must be carried out. Some funeral directors embalm every body, which, I think, is unnecessary if refrigeration facilities are available.

Having registered the death, the client then comes in to make the arrangements he wishes. Several forms must be filled out, and the funeral director assists him in doing this. At this time the funeral director must also contact the minister of the parish where the deceased lived and arrange a time and date with the crematorium or cemetery. The client is then given a written estimate, confirming all the details that he needs to know.

While the preparation of the deceased and making the arrangements is straightforward there are other services which the funeral director provides that are more complex. Certain religious groups have traditions that must be observed. The Hindus, for example, require that their dead are cremated before the passing of another evening. For this to happen the funeral director must try to get permission from the appropriate municipal authorities. Moslems must be allowed to enter the funeral director's premises to wash the body of the deceased and place it in special white cloths. The funeral director must also know the regulations that apply when a body is transported from one country to or from another. This is invariably an expensive procedure. All bodies that leave England for another country must be fully embalmed and placed in a hermetically sealed coffin lined with zinc. I recently had to arrange for a body to be returned to Italy. The cost of this was more than £500, which seemed excessive when one considers that a one way ticket to Rome is about £100. I was sorely tempted to suggest to the relatives that they send the deceased on an excursion class ticket, propped up in a seat with a fixed smile and token hand luggage! But all joking aside the figures are true, and sending bodies to other countries is very costly.

Back to this question of ignorance. While we pride ourselves on being able to openly discuss sex, death still remains on that list of unmentionable subjects. It is not my intention to make light of the subject, but merely to encourage a more open and knowledgeable approach. Our attitude needs changing. We must first accept that death is inevitable. We must lose the uneasiness that so restricts us verbally when attending a funeral. Though the death of a loved one causes deep distress for relatives and close friends it also causes a certain awkwardness in more distant friends. Surely something more than a mumbled "I'm so sorry" would be helpful. And what of the poor widow who has just begun to get over her initial shock and sorrow? When she at last feels like talking instead of crying is there anyone there to listen to her, or are they still carefully avoiding her lest they "say the wrong thing?" Avoiding these people through our own fear of embarrassment only strengthens their isolation and unhappiness.

Now is the time to begin to ask questions, to know more about procedure, costs, and services. The funeral director is only too pleased to answer any queries. Perhaps with a bit more knowledge the shock and distress might be slightly cushioned and our ability to cope with death improved.

Occupational Medicine

Adventures in shipping

IAN REID ENTWISTLE

When I returned to the university for a postgraduate course shortly after my preregistration year I eked out a meagre living in the depths of darkest Birkenhead by working part time for a general practitioner. The patients waited on an old church pew in the front of a disused grocer's shop devoid of heat and illuminated by the faint light from a 60 watt bulb in the back consulting room percolated through a tan light. He also provided primary care for those sailors of Clan Line and Union Castle, whose ships were berthed in the Merseyside docks.

The compensation for picking my way between the dirty, wet railway wagons lining the quayside to ascend the gangways of those ships during that cold, dank winter was the aroma of superb Indian curry wafting from the saloon. One good lunch was assured that week, but first I had to face the rows of lacklustre sad eyed Asians craving attention for diverse diseases ranging from cervzia to carcinoma. Some of these wretched fellows, suffering from advanced and often serious illness, had managed to be signed on as crew members to obtain treatment through the National Health Service by sending a fit relative for the medical examination before engagement. Others simply wanted panaceas with which to treat their families back home. Usually the wily serang provided interpretation, a short but accurate character reference, and a nearly always correct diagnosis for me. Thus began my initiation into both general practice and occupational medicine.

Some years later, after becoming a junior partner in a practice, I was able to persuade the amazingly astute but irascible late Robert Heggie, medical superintendent of the Cunard Steam Ship Company, to allow me to act as relief surgeon on one of the company's passenger liners for a round transatlantic voyage during my holiday. Robert Heggie was a truly remarkable man of great intellect and a magnificent politician, possessed of a quick temper and an almost insatiable appetite for food, drink, and money, little of which he ever spent. He was to become my mentor and taught me much for which I shall always be grateful.

During that first voyage I quickly learnt that the duties of a ship's surgeon were not confined to languishing in a deck chair or drinking all day, but that in addition to providing general practitioner care to both passengers and crew, one also had to carry out radiology, pathology, and anaesthesia and surgery when necessary. Then on reaching the terminal port of the voyage arrangements for the continued care of the patients had to be made.

Regulations and the many formalities regarding port health had to be complied with. In this closed, moving environment full of dangerous machinery the ship's surgeon also acted as an occupational hygienist with responsibility for the potable water, air conditioning, hygiene of the vessel in general, and the food handling and storage in particular. The doctor headed the small medical team of nurses, dispenser, and, on a large ship, other doctors, physiotherapists, dentists, and hospital attendants. Together they ran the hospital and held two passenger and two crew consultancy sessions each day. He also wore a uniform with three gold rings infilled with red and was an executive officer of the vessel, responsible only to the captain or staff captain. These duties, although compelling, did not prevent me from pursuing and greatly enjoying the additional role of an entertainment officer relating to the passengers, officers, and men. In fact I literally took to it like the proverbial duck to water.

The experience was repeated each year in the early 1960s, during which time I acted as principal medical officer to RSM

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Mauretania, *Queen Mary*, and *Queen Elizabeth*. When I was serving in RMS *Carinthia* a moribund seaman who had fallen 25 ft (23 m) down a hold in a Norwegian freighter was transferred by me in an open boat in the mid Atlantic. It was a dramatic medical emergency and fortunately saved the man's life. The case was given great publicity and Cunard were to remember it when they invited me, at the age of 34, to be the fifth medical superintendent in the company's history.

Starting a practice

This offer coincided with my decision to set up in practice on my own in the National Health Service with a small self built list—a decision that I was able to make only because I was then a bachelor. I have never been attracted to the concept of practice in a large group in a health centre, though there are obvious advantages for both doctors and patients. To me it smacks of a medical supermarket, and I prefer to "do my own thing." The one to one relationship that exists when the doctor is selected by a person who considers himself sick is a very special one. It must, however, be understood that doctors are not unique, and they are no more able to work well and efficiently 24 hours a day, seven days a week than an airline pilot can fly safely for continuous periods of time.

I also recognised that patients were entitled to be seen in clean, pleasant, and relaxed surroundings, backed up by modern clinical equipment and an efficient but compassionate secretarial service. With this in mind, I gathered all my resources and established a suite of consulting rooms to achieve these aims. My small list size allowed me to establish an excellent rapport with my patients and to provide the type of service that I imagined they required.

I was conscious, however, that if I worked single handed without day to day contact with colleagues I would become clinically and professionally isolated. I therefore joined the College of General Practitioners, as it was then, as an associate. The college was foremost in organising postgraduate education and attempting to erase the widely held view by hospital trained and orientated graduates of my era that general practice was the last refuge of the destitute, to be entered only reluctantly if one fell off the hospital pyramid ascending to consultancy.

From these early days I have sat on the Merseyside and North Wales faculty board, serving as secretary and treasurer for some five years. Becoming treasurer arose from my assertion that a professional academic body could not successfully exist in an academic vacuum but must have financial standing and viability if it was to be well regarded both from within and without the profession. The friendships that membership of the faculty has given me with colleagues has been exceptionally rewarding. Their support during the illness leading to the death of my 38 year old wife from malignancy, leaving me with two small sons, was particularly so.

Shipping

My appointment as Cunard's medical superintendent in Liverpool catapulted me into the world of occupational medicine for roughly half my working week. It brought me at a relatively early age into contact with businessmen in the then thriving world of Liverpool shipping. I was welcomed to their circle, given every assistance in carrying out my medical work, and concerned in many management decisions about personnel. Introductions to their leather armchaired clubs and other social venues soon followed.

My duties were at first towards administering the health service for the seagoing and shore based employees and passengers, and particularly organising the medical personnel serving on board our large passenger fleet. The standards of medical fitness for seafarers both before and after signing on were carefully laid down but scantily applied. The "audio and visual" method of examination was frequently enforced. A crew member about to sign on would walk, often fully clothed, past the seated medical officer who would ask "Can you hear me?" "Can you see me?" The reply "Yes sir" almost invariably evoked the response "Fit." It was not surprising that the ships were full of geriatric, alcoholic wrecks and men suffering from cardiac failure, diabetes, and mental illness who were unable to perform their work properly, and some, amazingly, not at all. Turnover of itinerant staff was high, as was hospitalisation and repatriation from the far corners of the world.

On two days out of every week my day started at 5 am and I travelled through the Mersey tunnel to Liverpool to board a passenger liner with port health officials at 6 am. I then met the members of the medical department, understood the medical problems that they had encountered during the voyage, and coordinated any continuing care. Cunard were prepared at that time to carry patients who were already sick and sometimes infectious, with such conditions as pulmonary tuberculosis, in isolated conditions between North America and Britain. A courtesy visit to the captain of the vessel was followed by breakfast, although most of the 60 items on the menu were ignored.

The return trip through the Mersey tunnel allowed morning surgery in West Kirby to start about 9 am, and house calls were usually completed before lunch. Then across to Liverpool again from the Wirral to carry out medical examinations—not of the type that I have just described, however. Recruiting nurses, arranging surgeons' leaves, and ordering drugs and medical supplies took till 5 pm, and I was back for evening surgery and late calls from 5 30 pm onwards. The lack of a deputising service gave 24 hour responsibility.

The next day was virtually inverted, with dinner on board ship in the evening before watching the liner sail down the Mersey with a new set of passengers on a new voyage—always a much more moving experience than the take off of an aircraft. On more than one occasion that farewell drink with the ship's surgeon has nearly ended with a view of the Manhattan skyline that I hadn't planned.

The appointment with Cunard included their various subsidiaries, in particular T and J Brocklebank. The well established close working relationship with Canadian Pacific's medical department was maintained. I had pleaded with Cunard to include in my contract of employment a clause allowing me to continue to spend two separate months of the year at sea working on passenger vessels, and this they agreed to.

Not only did I enjoy working as an officer in the Mercantile Marines, cruising to places that most people would have saved for a lifetime to visit, I also enjoyed the great friendship and outlook of the officers and men who served as regular seafarers, many of whom were great individualists and extraverts and a few deviants, alcoholics, and rogues. My involvement with them completed the education that had started with entry to medical school. The stimulating contact with passengers ranging from presidents to peasants, entertainers to entrepreneurs, and poets to politicians has been very special and formed the basis of many long lasting friendships.

General practice, not general surgery, is the bread and butter of the ship's surgeon's work, and these voyages have permitted me to practise it world wide.

This is the first of a three part article.