

TALKING POINT

Who cares about cardiology?

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Cardiovascular disease accounts for more deaths in the United Kingdom than all other causes put together including cancer and respiratory disease.¹ More than a quarter of all deaths are certified as being due to ischaemic heart disease,¹ and 24 million working days are lost by men from this cause each year.² About one third of the population will suffer from myocardial infarction at some time during their lives, and the 28 day mortality will be of the order of two fifths.³ During the decade 1968-78 the rates of discharge and death after acute myocardial infarction in ischaemic heart disease in the United Kingdom rose in men (aged over 45) and in women, although this may represent a change in referral patterns.⁴ Recent evidence, however, suggests a fall in the incidence of ischaemic heart disease in the United Kingdom as has been seen in the United States, Canada, and Australia over the past two decades.⁵

The United Kingdom is particularly badly equipped to deal with this burden of disease. For historical reasons the development of specialist medicine outside the teaching and postgraduate centres has been slow and patchy. Conservatism on the part of the Royal College of Physicians and established physicians has impeded the appointment of physicians trained in cardiology while the ill informed pressure of politicians and others has insisted on the deployment of resources towards uneconomical small units at the expense of specialist medicine in district hospitals and regional centres.

There are 125 cardiologists in England and Wales,⁶ and in 1980 there were a further 98 physicians spending 40% or more of their time in cardiology.⁷ These figures represent the lowest number of cardiologists per head of population in the Western world apart from Eire and one twelfth of the number in the United States. There are also considerable regional differences, the Thames regions overall having the greatest numbers of cardiologists, although several health districts in these regions have no specialist trained in

cardiology. The pattern is repeated throughout the United Kingdom.⁷ In terms of numbers of specialists, cardiology could apply for Cinderella status along with mental handicap (159), geriatric medicine (434), and psychiatry (1127).⁶

Level of need

What is the level of need? The overriding problem in adult cardiology is coronary artery disease. Many of the massive numbers of patients with myocardial infarctions need intensive management, usually in a coronary care unit, and subsequent care in hospital. The means of identifying high risk patients after myocardial infarction who may benefit from further intervention have recently been identified.⁹ It is also now accepted that coronary artery bypass grafting not only relieves angina but also prolongs survival in certain patients with severe coronary artery disease.¹⁰ Percutaneous transluminal angioplasty¹¹ is also a promising new development that may shift the burden to some extent from the cardiac surgeon back to the cardiologist, although the intermediate and long term prognosis of this procedure has not yet been established.

The availability of such care could reasonably be expected to be available to patients in a country claiming to provide a comprehensive health service. But this is not the case. Estimates of the need for coronary artery bypass grafting vary but increase year by year. In 1977¹² the Scottish Home and Health Department predicted a future need of 352 cardiac operations/million population/year at a time when only 30 coronary artery bypass procedures/million population/year were being performed in the United Kingdom.¹³ This prediction was not far off. South Australia is often taken as having a representative health service with a stable population of 1.3 million and a single referral centre in Adelaide. The number of coronary artery bypass procedures in 1979/million population was 600; the figure for Australia as a whole in the previous year was 180.¹⁴ Joy and Huggett prospectively studied the growth in need for cardiac surgery in a health district¹⁵ after the establishment of a subsidiary cardiac centre along the lines recommended by the Royal College of Physicians and the Royal College of Surgeons.¹³ In 1981 the need for coronary artery bypass grafting based on their observations was for 180 operations/million population/year with a further 90 cardiopulmonary procedures/million population/year to provide for valvular heart disease and other less common miscellaneous adult conditions. Their unpublished figures for 1982-3 show an acceptance rate of patients for coronary artery bypass grafting (and percutaneous transluminal angioplasty) of 420/million population/year. This figure is approximately the figure that applied in the United States in 1980,¹⁶ although there has been an increase in the numbers of such operations performed in that country over the

past two and a half years. In the United Kingdom in 1981, 5058 coronary artery bypass grafting operations were performed on a population of 56 million, but this figure increases to 6104 when those operations are included in which coronary artery bypass grafting was performed together with other procedures such as valve replacement.¹⁷ At present about 15 000 patients a year who could benefit from the procedure (or from percutaneous transluminal angioplasty) are thus unlikely to do so.

Filling the gap

How can the gap be filled? An expansion of the number of consultant posts has been suggested^{7,18} and will need to be funded: but how? In a demand led, largely privately funded health care system such as exists in the United States, the demand (which may be different from the need) is governed by market forces. In a health service funded from taxation as in the United Kingdom there is a limit to the burden that can be borne from the public purse, be it for health, motorways, or defence. Until 1976 National Health Service financing was based on estimates that bore little relation to spending. In that year cash limits were introduced¹⁹ and the hospital services (but not the community services) had to live within their income. This discipline has sharpened the competition for scarce resources between specialties, and, given the proposed 5% increase in health care spending over the next 10 years, it is likely that the strain and distortions that have already arisen will become increasingly difficult to contain as medicine inevitably moves forward.

Is this such a bad thing? The provision of health care is costly, and as new techniques become available it becomes costlier still. Is it fair that new developments should be available to a favoured few or should untold sums be made available to silence the lobby groups pleading that every item is a special case? An outside referee reviewing clinical practice in the United Kingdom might be forgiven for failing to comprehend the differences in working practices whereby some patients remain in hospital for twice as long and at twice the cost as others with the same problem. This aspect of "clinical freedom," carelessly or deliberately exercised and often based on no more than habit, whim, or prejudice, saps available resources and prevents their useful deployment elsewhere.

Cardiology is no exception to this rule. Why is cardiac catheterisation carried out on a day case basis in some centres and on an overnight basis in others, while other consultants keep their patients in hospital for three or four days? Why do some cardiac surgeons follow up their patients ad infinitum when they could be in the operating theatre? Why do some centres follow up their patients for ever regardless of the domicile of the patient when, for instance, patients who have undergone coronary artery bypass grafting

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may reasonably be discharged if free of symptoms at 12 months? It is often claimed that these patients are followed up to determine the prognosis of conditions even when it has been established, and clinical audit, if needed, could be obtained by less extravagant means.

Advantage of audit

Cardiology and indeed the entire health service might benefit from an audit. This could be an efficiency audit, maybe using performance indicators²⁰ to help the specialty evolve economical safe working guidelines and recommended practices. From the district hospital's point of view it should be possible for each to identify a regional or postgraduate centre and establish a close working liaison with it. Experience at St Peter's Hospital has shown that this arrangement apparently reduces the need for cardiac catheterisation. Thus in 1982-3, 89% of patients referred for invasive investigation were accepted for surgery subsequently, contrasting sharply with the figure of about 30% for the four Thames regions.²¹ District referrals to cardiological regional centres of patients who have been investigated have to compete with general practitioner referrals of patients who have not been investigated, many without cardiovascular disease. When resources are scarce such practices cannot be regarded as necessary or desirable. I hope that general practitioners would prefer to work with their district units, acknowledging the advantages that a nearby service provides. These proposals require the appointment of new physicians trained in cardiology as a substantial minority of health districts do not have such an appointment. This could evolve with local agreement on the retirement of general physicians, and there are plenty of trained senior registrars available.⁷ There are also implications that include joint patient management, with the invasive investigation and surgical procedures being carried out at the regional centre and convalescence and follow up at district level. Earlier discharge from the regional centre would increase turnover of beds and spread the financial consequences of surgery between health districts. Finally, there are implications with regard to equipment and technicians' time.

It is unlikely that the combined centres for investigation and surgery will be fully efficient until they are performing 600 operations a year.¹³ Furthermore, the role of the small unit performing cardiac catheterisation without surgery is more doubtful now that percutaneous transluminal angioplasty is becoming established, for it seems unlikely that percutaneous transluminal angioplasty will be performed except in centres where cardiopulmonary bypass is available.¹¹ Modern developments, such as digital vascular imaging, may enable coronary angiography to become more generally available. The large capital cost, however, is unlikely to be justified if dedicated to this technique outside the major centres. Meanwhile, further economies may be achievable. Cardiac catheterisation is not a no risk procedure and in the interests of patient safety should be performed by professionals or professionals in training, be they cardiologists or radiologists. In the interests of safety and efficiency there may no longer be room for the occasional visitor keeping his hand in and the transient registrar.

Changing habits

These proposals require the streamlining and rationalisation of available resources and agreement, and this may be hard to find. Clinical freedom should include the freedom to provide the best that we can with what we have got for all our patients and potential patients. If this means modifying the working practices of decades and the habits of a lifetime to be able to do so then, however painful, it will be worth while. People care about cardiology but do they care enough?

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Computers in medicine



The BMA's board of science has produced a new video to help doctors to make the best use of computers. "The Days After Tomorrow" shows the actor Frank Windsor in several amusing roles depicting doctors facing the pitfalls associated with selecting and using computers. The film has been sponsored by the Department of Trade and Industry and Glaxo Pharmaceuticals Ltd. A back up leaflet reinforces the need for planning and management when considering using computers for the first time and gives practical advice and

useful contacts. The video covers the basics of small computers and is not for the expert in computer technology. BMA regional offices and divisions will be able to borrow the video, and copies of the booklet will be supplied. The picture shows Professor Peter Quilliam, chairman of the BMA's board of science and education; Mr Kenneth Baker, Minister for Industry and Information Technology; Mr D I Glynn-Williams from Glaxo Pharmaceuticals Limited; and the secretary of the BMA, Dr John Havard, at the launch of the video.