

## The role and education of doctors in the delivery of health care\*

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The demand for health care is rising but the financial and personnel resources available to the UK National Health Service (NHS) are failing to keep pace. Three paradoxes are now apparent. First, because of the advances in biomedical science and technology, we have never been able to do so much for our patients as we can now, but rarely, it seems, have doctors been so criticised. As Roy Porter pointed out in his recent history of medicine,<sup>1</sup> few people today feel confident about their personal health, about doctors, about health-care delivery, or about the medical profession in general. The second paradox is that we have never spent more on health care, at least in more developed countries, but we have never seemed so short of resources to meet unmet need. Third, in more developed countries, despite the increase in longevity, there is still a high prevalence of disease and disability.

These paradoxes are easily explained. For example, ventilation of babies born at less than 28 weeks of gestation is now common place. Tin and colleagues<sup>2</sup> showed that although the prognosis has improved, from 42% survival between 1983 and 1986, to a 54% survival between 1991 and 1994, the rate of severe disability among the survivors has remained at 27%, and 10% of the survivors will have lifelong dependency. The consequences for the children and for the families of those who are severely handicapped are disastrous. The families concerned find it difficult to understand why the outcome in their cases should have been so much worse than for the majority, and they seek to apportion blame. They ask whether better application of the technology might have prevented the handicap.

In the UK, expenditure on health care and on personal social services is now ten times higher for people over the age of 80 than it is for those aged 40. The reason is that, although people are now living longer, the survivors into old age are carrying with them various handicaps and disabilities. The dependency ratio defines the proportion of the population who are younger than 15 and older than 65 in relation to the working population of a country. This ratio is now 54% in the UK and is set to rise to 56% by 2020. Modern technology has enabled us to replace joints, to install cardiac pacemakers, to control hypertension, to provide oxygen therapy for chronic bronchitis and emphysema, but not to prevent dementia or the need to provide care for those who are incapable of caring for themselves.

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### National systems for health-care delivery in more developed countries

Even in more developed countries, there is a temptation to believe that by spending a greater proportion of the nation's wealth on health care, we would improve both health status and the longevity of the population. This is probably not the case. In fact, health-care spending is closely related to the wealth or gross domestic product (GDP) of a nation and there is, according to statistics from the Organisation for Economic Cooperation and Development, a strong correlation between the GDP per head and the total expenditure on health care per head. The richer countries spend a higher proportion of their GDP on health care than poorer countries do, but the health statistics are not noticeably better. For example, the USA spends almost twice as much per person on health care than the UK.

Most health-care systems seek to balance three ethical principles, but with difficulty. The ethical principles are the need to protect life and health, the need to ensure justice or equity in the delivery of health care, and the primacy of autonomy—that is, the right of all competent adults to make their own decisions about their health care. These principles can be in conflict. In the UK, case law firmly establishes the right of a pregnant woman to refuse caesarean-section delivery even if the refusal places the life of the fetus in jeopardy. Here the principle of autonomy over-rides the need to protect life and health. Likewise, not only can the inappropriate application of technology lead to avoidable suffering, but also the unaffordable cost can compromise the concept of equity.

Equity or social justice is at the centre of the NHS. The NHS seeks to provide all individuals with equal access to adequate health care according to their clinical need and irrespective of their wealth or social influence.

Unfortunately, difficulties arise when trying to define what constitutes an adequate health-care system within the possibilities afforded by modern medical technology and the demands for health care created by an ageing population with multiple disabilities. Although the rich (and they have to be very rich) are able to afford unlimited and immediate access to all health care, it is simply not affordable for the state either through direct taxation or with social insurance to provide this service for all; thus, the concept of equity is breached. In effect, all health-care systems now ration care in terms of what is provided, when it is provided, or to whom it is available.

In the UK, we argue that the most equitable approach is to ensure equal access to all citizens, to prioritise access according to clinical need, and to determine the scope of public provision by discussion and agreement. The NHS is funded largely through direct taxation, and, because governments do not wish, for various reasons, to raise taxes, the service is chronically underfunded. Moreover, the direct involvement of government increases the political

controversy that surrounds the service, giving everyone who uses or works in it, as a British Minister of Health stated 20 years ago, a vested interest in denigrating it, in the hope of raising more money from government.<sup>3</sup>

### Priorities and choices

Arguments about how best to fund health-care services should not allow us to escape the simple truth that health care is funded by the citizens for whom the service is provided. Except for the few people who pay directly for their health care, most citizens pay for health care through some form of insurance, whether organised privately or through the state. Given that all societies now have to make choices about what health care is to be delivered, to whom, and under what circumstances, there develops a tension between the interests of society that pays for the delivery of health care and the needs of individuals who are ill, who quite reasonably believe that everything they need in the form of treatment and care ought to be available when they need it.

It is intended that the recently formed National Institute for Clinical Excellence in the UK (see *Lancet* March 27, p 1079) will advise on appropriate health-care provision with regard to new and current technology. Although a national framework for priorities can be set, local flexibility is important, and district health authorities and, in future, primary-care groups will have important roles in commissioning services.

If the insurer (in our case the NHS), acting on behalf of society, is to determine priorities and choices, individuals who are in need should also be able to make choices within this framework. The question that arises is what role, if any, doctors should have in this process.

### The role of doctors in management

Faced by the rising cost of the delivery of health care, and the need to determine priorities and choices, not surprisingly those responsible for funding health care have sought to regulate the activities of doctors and to restrict their autonomy. Clinicians have a choice, either to be part of the management, or to be managed. I contend that they will benefit their patients most by taking their share of the responsibility for managing the system and be better able to maintain their professional integrity. Profligacy in the use of resources where funding is limited inevitably means the denial of appropriate treatment to someone else; thus, clinicians have an ethical responsibility to be involved. Also, clinical freedom requires resources; if we maximise the resources that are available, we will be better able to benefit patients.

Doctors therefore need to have regard for the five 'E's.

- Efficacy—Does the treatment work?
- Effectiveness—How well does it work in practice?
- Efficiency—Is the maximum output obtained for the minimum input?
- Equity—Are those most in need receiving priority?
- Economy—Is the expense justifiable compared with the opportunity costs?

We can no longer justify or afford the widespread variation in the application of different forms of treatment. For example, in Switzerland, the prevalence of tonsillectomy is 39% in the whole population of children, but 26% among children whose parents themselves have not had tonsillectomy, and only 12% among children whose parents are doctors.<sup>4</sup>

Attention to economy is difficult and controversial but necessary if we believe in equity. Recombinant tissue-plasminogen activators are more effective than streptokinase in coronary thrombosis, but they are much more expensive. Each system and country has to decide whether they can afford them.

I suggest that to maximise efficiency in the use of resources, clinicians should manage resources through clinical budgets. They must audit the outcome of their work and the processes that they organise to ensure clinical effectiveness, while being accountable for the cost of the services that are provided. Paying attention to efficiency without regard for effectiveness is dangerous, whereas effectiveness without regard to efficiency is unrealistic in a cash-limited system.

In 1985, at Guy's Hospital in London, we developed a new management system, modelled on the system introduced at the Johns Hopkins Hospital in Baltimore, USA, in 1972.<sup>5-7</sup> We established 13 clinical directorates with the head of service or clinical director responsible for the clinical economy of his or her service. Budgets were decentralised and covered 80% of the costs of running the hospital, encompassing the costs of the staff working in the directorate (including doctors, nurses, secretaries, and technicians), drugs, maintenance of equipment, investigations, and, in due course, the use of such services as intensive care or operating theatres. Over a 3-year period, we reduced total costs by 15% (more than £8 million) while preserving both the quality and the quantity of patients' care. The four underlying principles were the involvement of clinicians, decentralisation with accountability, development of teamwork between professionals, and the introduction of information systems.

In effect, clinicians in a hospital can fulfil one of four roles. They can be: part of the management group and as medical director regulate the activities of their colleagues; budget managers who have responsibility for the resources delegated to them but no say in the corporate governance or strategy of the organisation; or medical advisers to the management. However, the role that we emphasised in our system, is one of corporate governance.

We established a management board for our hospital; it was composed of the 13 clinical directors and the functional directors, such as personnel and finance. We broke up line accountability, arguing that professional accountability could be separated from management accountability so that doctors were still accountable to their colleagues for professional issues, just as nurses were for nursing issues, but each was accountable managerially within their decentralised directorate. By giving significant responsibility for the organisation to those who actually delivered the service, we aimed to reduce the disconnection that occurs in hospitals, as pointed out by Mintzberg,<sup>8</sup> between those at the top who organise the strategy and those at the service end who deliver care to patients.

Hospitals and universities are what Mintzberg terms professional bureaucracies or organisations that depend on the independent professional skills of those who deliver the service to patients or students. Such organisations become disconnected, both vertically and horizontally, when the different professional groups work in isolation from each other. Professional and management aims may differ, epitomised by the

observation that the business of a university is not university business. Corporate governance diminishes vertical disconnection, teamwork diminishes horizontal disconnection, and separation of professional and management responsibilities brings clarity to the different roles.

In our system, clinical teams working within clinical directorates and within their budgets were able to do their best to meet the needs of individual patients because the savings they were able to generate could then be used to improve their service.

### Teamwork and clinical decisions

The delivery of health care has become complex, and satisfactory delivery can only be achieved through teamwork between doctors, nurses, and other professionals. We need to learn how to work in teams to deliver efficient and effective care while ensuring that the delivery of care does not become impersonal, because all of us want a personal doctor to whom we can turn for advice when we are ill.<sup>9</sup>

Most patients, when they seek medical help, require the answers to six questions.

- "What is wrong?"
- "Why is it wrong?"
- "What can be done?"
- "What should be done?"
- "Who should do it?"
- "What can I expect?"

The new question, which hardly existed when I qualified 35 years ago is, "What should be done?" Previously, this question could in most cases be regarded as synonymous with "What can be done?", but not now. There are now a wide range of choices available and the correct answer to the question "What should be done?" does not necessarily involve the application of modern technology. For an 80-year-old man who develops carcinoma of the pancreas on the background of other disabilities (for example, a previous stroke, incipient cardiac failure, and diabetes), palliative care rather than aggressive surgical treatment of the cancer may well be the right decision. Archie Cochrane in 1972,<sup>10</sup> quoting T S Eliot's ironical poem, said "I hope that clinicians in the future will abandon the pursuit of the marginally impossible and settle for reasonable probability". Decisions on what should be done depend on the patient's circumstances, both medical and social. They should involve discussions between the whole health-care team, including the general practitioner, and the patient<sup>11</sup> and also the family. The decision needs to be informed by knowledge of the community and the services available there. The decision needs to be cost efficient as well as clinically efficient, given the finite nature of the health-care resource.

### The hospital and the community

The complexity of modern health care and the numbers of people involved, along with some well-publicised disasters, have led to widespread concern in the UK about quality assurance in the delivery of health care. There is a strong movement to develop clinical guidelines using the evidence base for clinical practice. Although this input is welcome, we should remember, as Marianne Rigge, the director of the College of Health has said, that perhaps half the patients do not have

evidence-based illnesses. Those of us who practise western medicine must be a little concerned that there are more visits to complementary practitioners than to primary-care physicians. Clearly, they are providing something we are not.

Guidelines, or clinical frameworks, require the cooperation of staff working across the boundary between primary and secondary care, and this poses major questions about how to deliver these services and how to audit their quality. Donald Light, an expert on comparative health-care systems, has noted<sup>12</sup> that big savings lie in development of integrated care for patients with serious or chronic diseases so that they can leave hospital more quickly or not have to go into hospital at all. He has pointed out that this strategy requires integrated contracts for integrated care that are facilitated by one organisation being responsible for the delivery of care both in the community and in hospital. Certainly in the UK there is an urgent need to ensure that a summary record for people with chronic disease and disabilities is available 24 h a day for health-care professionals dealing with emergencies. In the inner cities, most such individuals are not known to those who see them in primary care, and they are transferred to hospital where they are seen by similarly disadvantaged junior doctors. Too often, inappropriate care is introduced before the patient's full history is available.

The complexity of the technology has led to the emergence of more and more specialities, so that in effect some doctors can only tell you what is not wrong with you. Better integration and communication between all involved in a patient's care are required, and perhaps all of us need a generalist who is our case manager and who provides the essential advice and care to help us manage our illnesses.

### Education

The dilemmas and problems of modern health care must inform the education and training provided for doctors and other health-care professionals. The task is to develop passionate medical professionals who are dedicated to individual patients, and who have a population perspective, including a responsibility to improve public health within their practice.<sup>13</sup> They need to understand the system in which they work and they must be able to provide leadership. The principle of a modern medical education is lifelong learning, which is centred on the student, who should be facilitated to learn rather than just be taught.<sup>13,14</sup>

Although the new curriculum remains formidable,<sup>15</sup> it is no longer based on the acquisition of factual knowledge. Science and practice are integrated and the curriculum is based on topics and themes, not disciplines. Core knowledge, often problem based, has to be defined and tested while giving time for personal development through self learning, incorporated into special study modules. The foundation of biomedical sciences includes cell biology, molecular biology, genetics, and the structure and function of the human body. Behavioural and social science, ethics and law, management, and team skills are important. There is a greater emphasis on the role of man in society with the study of public-health medicine, epidemiology, and health economics.

Information, clinical, and communication skills are

important and the focus is on primary, or generalist, rather than specialist medicine. The emphasis on problem-solving skills is important. Examinations in the past have been based on knowledge, but we all recognise that professional status is based on problem identification, analysis, and solving skills. Exams should test understanding and ensure adequate competence and suitable attitudes at qualification.

Schon pointed out that, although the art of medicine is difficult to know and teach, it nonetheless appears to be learnable.<sup>14</sup> Professional practice has as much to do with finding the problem as with solving it. Reflective practice through problem analysis and coaching between the student and teacher endeavours to understand the full nature of patients' problems and their need to ask and understand.

We recognise the importance of team work in the delivery of health care and we are trying to increase the opportunities for interdisciplinary education and contact during the undergraduate years. Some parts of medical and nursing courses can be shared, such as communication skills, joint project work, and clinical skills.

Petr Skrabanek and James McCormick defined a new disease—sceptiaemia, an uncommon generalised disorder to which a medical education confers lifelong immunity.<sup>16</sup> We must increase its prevalence. Thus, we believe that understanding of and participation in research, including health-services research, is an important part of the course. Not only do doctors need to be able to evaluate research, but they also need to be able to contribute in the future to improving not only knowledge but also the systems for the delivery of health care.

### Conclusion

There was a Victorian aphorism that a good doctor was better than a bad doctor, and almost as good as no doctor at all. That such a statement is no longer true is because of the advances in biomedical science. Medicine used to be simple, ineffective, and relatively safe. Now it is complex, effective, and potentially dangerous. The mystical authority of the doctor used to be essential for practice, now we need to be open and work in partnership with our colleagues in health care and with our patients. We must recognise and encourage our patients' right to make fully informed decisions about available treatments<sup>11</sup> and provide care and support, not just technically advanced interventions.

The time has come to make a fundamental re-examination of the role of physicians in our society and in the health care we provide for our people. It is not in the interest of society, patients, health-care systems, or even the doctors themselves for the doctors to continue to operate as independent advisers concerned with diseases. I believe that we can serve our patients' best interests, and retain the necessary degree of independence to be the patients' advocate, by participating more fully in the problems that our society

faces and in the health-care systems that we have developed.

Our role in these systems needs to be developed; we need to be educated for this role, and it needs to be explained to patients. We need to operate in a framework in which politicians, health-care managers, and indeed doctors themselves are more open and realistic with the public about what is possible and what is not possible, and encourage people to recognise that doctors do not save lives though we can on occasions help to prolong them.

Our society needs to recognise that we are mortal and that care can be more important than treatment at the end of life. Rudyard Kipling said that mankind is divided into two classes of people, doctors and patients. Doctors need to remember that we are, or one day will become, patients. We need to remember our role as what Ivan Illich calls "the amicus mortis",<sup>17</sup> the friend who tells you the bitter truth and stays with you to the inexorable end. Perhaps if we can do these things, complicated and difficult though they are, and if we recognise the huge demands that this will place on the profession, maybe we will continue to justify Samuel Johnson's accolade that "The profession is the greatest benefit to mankind".

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