we hope that the government will review the system and make the necessary further minor adjustments.

We thank our clinical colleagues and staff for their continuing support with the screening programme and Mrs J Finnie and Miss L Constable for typing the manuscript.

1 Department of Health and Social Security, Health Services Management. *Cervical cancer screening*. London: Department of Health and Social Security, 1988. (Hc(88)1.)
2 Chamberlain J. Failure of the cervical cytology screening programme. *BMJ* 1984;**289**:853-4.
3 Cancer of the cervix: death by incompetence [editorial]. *Lancet* 1985;ii:363-4.
4 Department of Health, Welsh Office, NHS General Medical Services. *Statement on fees and allowances payable to general practitioners in England and Wales from 1 April 1990*. London: DOH, 1990:57-9.
5 Scottish Home and Health Department, NHS General Medical Services. *Statement of fees and allowances payable to general medical practitioners in Scotland*. London: HMSO, 1986:28.1-28.5.
6 Department of Health and Social Security. *Cervical cancer screening*. London: DHSS, 1985. (DA 85/8.)
7 OCCURS Group. Computerisation of screening for cervical cancer. *Health Bull* (Edinb) 1988;**46**:146-52.
8 Robertson AJ, Reid GS, Stoker CA, *et al*. How complete can cervical screening be? The outcome of a call screening programme for women aged 20-60 years in Perth and Kinross. *Cytopathology* 1990;**1**:3-12.
9 Shroff KJ, Corrigan AM, Bosher M, *et al*. Cervical screening in an inner city area: response to a call system in general practice. *BMJ* 1988;**297**:1317-8.
10 Gemmell J, Holmes DM, Duncan ID. How frequently need vaginal smears be taken after hysterectomy for cervical intraepithelial neoplasia? *Br J Obstet Gynaecol* 1990;**97**:58-61.
11 Chomet J, Chomet J. Cervical screening in general practice: a "new" scenario. *BMJ* 1990;**300**:1504-6.
12 Sefton C. GP target performance widens the income gap. *Pulse* 1990;Dec 8:41.
13 Waugh NR, Robertson AJ. Cervical screening in general practice. *BMJ* 1990;**301**:238.

(Accepted 6 June 1991)

The Future of General Practice

Set menus and clinical freedom

T C O'Dowd, A D Wilson

This is the seventh in a series of articles commissioned in response to the General Medical Services Committee's strategy paper "Building Your Own Future"

The freedom of doctors to do what they believe to be best for the patient is now backed into a corner, and the profession has by and large accepted this situation. After a decade when the status accorded to all professions has been challenged the medical profession is becoming accountable to society while being expected to serve the individual patient. The NHS has always acknowledged societal obligations, but there has been an implicit understanding that patients will get optimal treatment even if they have to wait for it. The extent to which this understanding is under pressure can be judged from the shroud waving of doctors in the media; such behaviour is more often motivated by decent compassion than by a desire for clinical freedom.

Limitations on clinical freedom serve to protect individuals from bad doctors and enable finite health service resources to be managed. The profession is now discussing whether general practitioners can still enjoy clinical freedom as accepted patterns of clinical management emerge.[1] We do not know how far individual general practitioners accept, or have knowledge of, standard practice as defined by their peers. A degree of freedom is necessary to allow for individual flair and innovation as doctors working in highly regulated environments and with strict protocols have been shown to perform suboptimally.[2,3] We examine how far the balance has tipped and whether clinical freedom is at risk from protocols.

Freedom in the profession

Constraints on freedom in the medical profession are not new, and indeed being a member of any profession results in loss of personal liberty.[4] The traditional limitations on medical practice enforced by the profession are of an ethical nature and designed to protect the patient from antisocial acts, usually of a sexual or financial nature. This aspect of etiquette now seems quaint, and the civil courts are still left to decide on the quality of clinical care delivered in a particular case. Clinical freedom has resulted in a spectrum of care ranging from excellent to wholly bad, but because of the collegial, even secretive, practice of medicine the government and the public have difficulty in finding out where a hospital or doctor lies in this spectrum. If clinical standards are still mysterious to those outside the profession other aspects of care raise obvious questions. A public mesmerised by medical advances has begun to wonder why Aunty Mabel cannot have her hip replaced for two years and why one general practitioner cannot see you for a week while another can see you on the day you request.

Doctors know that clinical freedom often masks dangerous and inefficient practices and some have rejoiced in its passing. "It died accidentally," said Hampton, "crushed between the rising costs of new forms of investigation and treatment and the financial limits inevitable in an economy that cannot expand indefinitely."[5] On making a case for drug formularies in hospital, Petrie and Scott argued that individual clinical freedom carries with it responsibility.[6] When the government limited the list of drugs available on NHS prescription some doctors saw this as interference with their clinical freedom. But Hoffenberg thought that it was a weak issue on which to defend clinical freedom.[7] Indeed it showed that at that time the profession poorly understoood the balance between clinical freedom and clinical responsibility. Since the limited list controversy there has been an emphasis on clinical responsibility and a willingness to strive for quality of care.

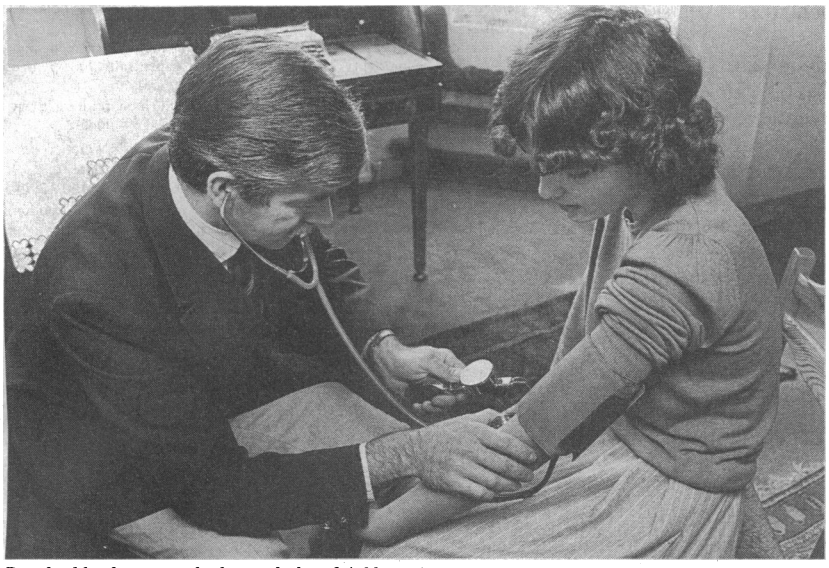
Standards and contracts

The theory of consensus management based on data from epidemiological or clinical trials or consensus conference has been widely accepted. This acceptance, however, has not been translated into practice.[8] The reluctance of both hospital doctors and general practitioners to change their habits in the light of scientific evidence is illustrated by the underuse of proved treatments in the secondary prevention of myocardial infarction.[9] That general practitioners and others in primary care are often too busy to keep up to date with the literature and to devise clinically sound protocols will rightly concern patients and those paying for health care. That practices may intellectually accept the need for protocols and indeed may have protocols but do not have the administrative or clinical staff to put them into effect will also concern those purchasing health care on patients' behalf. Purchasers will be tempted to lay down minimum criteria for care in the form of protocols for general practice. It will then be easy to monitor that the care is being given, even though it may have the mass produced characteristics of a hamburger chain.

Department of General Practice, University of Nottingham Medical School, Queen's Medical Centre, Nottingham NG7 2UH
T C O'Dowd, FRCGP, *senior lecturer*
A D Wilson, MRCGP, *lecturer*

Correspondence to: Dr O'Dowd.

BMJ 1991;**303**:450-2



SALLY AND RICHARD GREENHILL

Regular blood pressure checks may be beneficial but urine analysis and height measurement seem less worth while

The new contract is motivated by consumer demand and political expediency and, though unpopular with doctors, has shown that linking remuneration to the screening targets has had its desired effect. This carrot and stick approach could be extended to other conditions by health planners. Those practices agreeing to protocols, that are externally vetted, or indeed externally designed, will be permitted to provide care for the Cinderella diseases in return for performance related fees. This could lead to the baleful scenario of the practice tendering for the care of its own diabetic patients using an off the peg protocol it does not own, delegated to a practice nurse who is quality controlled by the medical adviser of the family health services authority, which is paying for standardised care. Equally depressing is an extension of the current reality of general practitioners completing forms for payment for medical procedures that they do not value and that have not been proved beneficial by research.[10]

Rationing of resources

There is an understandable tension between the epidemiological perspective, so popular with health planners and politicians, and the individualistic case based approach of the clinician. Practitioners, however, feel even more uneasy when an economic perspective is added. Roberts *et al* created a disturbance when they asked, "How much can the NHS spend to save a life or avoid a severe disability."[11] They argued that clinical effectiveness is not enough and that it must be accompanied by an estimation of the outcome to be avoided and the cost of the intervention itself. A system of measuring quality adjusted life years (QALYs) has been designed to measure outcome of health care choices in decisions related to both individual patient care and allocation of social resources.[12] However, the system's robustness has been criticised on the grounds that it is not clear about what patients want. Fears have been expressed that it may be adopted by default without sufficient appraisal.[13]

So far the processes of standard setting and audit in general practice have been advocated as an educational method of improving quality of care rather than of rationing.[14] It is likely that increased use of protocols in general practice would incur further costs in terms of treatment, investigation, and referral. Audits of management of hypertension have, for example, shown unacceptably low levels of investigation and follow up.[15,16]

Emphasis on education has led to a bottom up approach to standard setting in the United Kingdom, with practices being encouraged to develop their own protocols, perhaps in association with others in the locality, and being given postgraduate education credits. Empirical evidence suggests that active participation in standard setting is necessary to change behaviour if only because it gives a sense of ownership to those involved.[17] The Netherlands have adopted a more dirigiste approach with a national programme of standard setting.[18,19] This initiative has been endorsed by general practitioners, although most thought such standards should not become obligatory. This suggests that Dutch doctors may be wanting to use such standards as a basis for their own, obligatory standards. Brook pointed out that doctors do not have time to search the literature in pursuit of guidelines and, unlike lawyers, do not employ researchers.[20] He suggests that, rather than textbooks, concise publications with explicit recommendations are needed until expert software systems are developed.

Policing standards

Perhaps accepting standards as simply aide mémoires or guidelines to good practice will mean that they do not reach those who engage in poor medical practice. The essence of a standard is that it should be adopted, and it is here that the conflict between standards and clinical freedom exists. If a practice fails to adopt a standard what sanction operates? The profession has shown little appetite for clinical policing and the government seems keener on financial sanctions. Achievement of a standard of performance is essential in any system of accountability, whether to the patient, the health care system, or the profession. Some fear that if the standards fall into patients' hands they could be used in medical litigation.[19] Similarly, external audit such as is included in the new contract has not been endorsed by the profession. However, such monitoring of clinical care to ensure minimum standards are met will need a huge bureaucratic machine, which would be at odds with the ideas of market forces and professionalism. Do these attitudes reflect a desire not to be accountable, or are they becoming the future battlelines of clinical freedom?

It is important to distinguish between standards set at a practice or health service level and those that apply to particular patients. The strongest argument for clinical freedom is that clinicians should have a degree of latitude at initial presentation or in unusual cases. For example, a practice may accept the epidemiological evidence that antibiotics have no place in treating sore throats but acknowledge that antibiotics may be appropriate in response to psychological, social, and even consumerist factors. Similarly, the protocol for an annual diabetes check may be appropriately waived in a patient whose life expectancy is known to be limited because of advancing cancer. Such examples are not arguments against working to standards, but emphasise the need for targets of attainment to be less than 100%. A practice that achieves total coverage for well person checks should raise suspicion that coercive pressures are being applied or that non-compliers are being removed from the list. Few general practitioners would argue against the offer of a blood pressure check every five years but most could put forward a good case against routine urine analysis and height measurement, both of which are required in the new contract.[21] Standards set within the profession are equally likely to be open to dispute, such as the debate about who should have serum cholesterol concentrations measured.[22] The system of paying for health promotion clinics only after the protocol has been approved by the family health services authority gives these authorities unprecedented power to influence clinical practice. It

remains to be seen whether such powers will stimulate or repress innovation.

In summary, protocols and standards can be used both to allocate resources and to provide evidence that care is not falling to unacceptable levels. For a trusting and democratic 1990s the argument should not be about their necessity or who sets them but about how far they achieve their objective of maximising the effectiveness of medical care. Our patients should have the security of knowing that whichever doctor they consult he or she will provide them with a minimum level of cost effective care of proved value. Those who pay for the service should have the information to know that resources are being used properly. Without explicit standards and public monitoring of their achievement such assurances cannot be given. The profession needs to be able to negotiate standards with politicians and the public alike. We should resist imposed standards that are not based on scientific evidence and be willing to montitor, change, and update standards in response to changing health care needs.

Finally, can we ever hope to look forward to the day when NHS changes will be driven by innovators rather than by the laggards? Those who pay for health care also have a duty to encourage innovation and experimentation. They must not think of rationing when doctors implement standards and find things wrong that can be corrected by expensive management. Allowing patients to suffer or to die before their turn comes on the waiting list must be a greater insult to the freedom of the individual than to any concerns we as doctors have about clinical freedom.

1 General Medical Services Committee. *Building your own future*. London: BMA, 1991.
2 Shortell SM, Hughes EFX. The effects of regulation, competition, and ownership on mortality rates among hospital patients. *N Engl J Med* 1988;**318**:1100-7.
3 Nicoll A, Mann N, Mann S, Vyas H. The child health clinic: results of a new strategy of community care in a deprived area. *Lancet* 1986;i:606-8.
4 Fox TF. Professional freedom. *Lancet* 1951;ii:115-9.
5 Hampton JR. The end of clinical freedom. *BMJ* 1983;**287**:1237-8.
6 Petrie JC, Scott AK. Drug formularies in hospitals. *BMJ* 1987;**294**:919-20.
7 Hoffenberg R. *Rock Carling fellowship 1986. Clinical freedom*. London: Nuffield Provincial Hospitals Trust, 1987:14-5.
8 Baber NS, Julian DG, Lewis JA, Rose G. β Blockers after myocardial infarction: have trials changed practice? *BMJ* 1984;**289**:1431-2.
9 Lichtenstein MJ, Elwood PC, Thomas HF, *et al*. Doctors' opinions on the prevention of myocardial infarction. *J R Coll Gen Pract* 1985;**35**:516-9.
10 Morrell DC. Role of research in development of organisation and structure of general practice. *BMJ* 1991;**302**:1313-6.
11 Roberts CJ, Farrow SC, Charny MC. How much can the NHS afford to spend to save a life or avoid a severe disability? *Lancet* 1985;i:89-91.
12 Rosser RM, Kind P. A scale of valuations of states of illness: is there a social consensus? *Int J Epidemiol* 1978;**7**:347-58.
13 Loomes G, McKenzie L. The use of QALYs in health care decision making. *Soc Sci Med* 1989;**28**:299-308.
14 Royal College of General Practitioners. *Quality in practice. policy statement 2*. London: RCGP, 1985.
15 Mant D, McKinlay C, Fuller A, *et al*. Three year follow up of patients with raised blood pressure identified at health checks in general practice. *BMJ* 1989;**298**:1360-2.
16 Stern D. Management of hypertension in 12 Oxfordshire practices. *J R Coll Gen Pract* 1986;**36**:549-51.
17 Anderson CM, Chambers S, Clamp M, *et al*. Can audit improve care? Effects of studying use of digoxin in general practice. *BMJ* 1988;**297**:113-4.
18 Gol R, Mokkink H, Schellews F. The effects of peer review in general practice. *J R Coll Gen Pract* 1988;**38**:10-3.
19 Gol R. National standard setting for quality of care in general practice: attitudes of general practitioners and response to a set of standards. *Br J Gen Pract* 1990;**40**:361-4.
20 Brook RH. Practice guidelines and practising medicine. Are they compatible? *JAMA* 1989;**362**:3027-30.
21 Mant D, Fowler G. Urine analysis for glucose and protein: are the requirements of the new contract sensible? *BMJ* 1990;**300**:1053-5.
22 Leitch D. Who should have cholesterol concentrations measured? What experts in the United Kingdom suggest. *BMJ* 1989;**298**:1615-6.

A PAPER THAT CHANGED MY PRACTICE

Miniature Wright peak flow meter

The paper which has changed my practice most was not a clinical trial but a brief description of a device which has had a radical effect on the investigation and treatment of asthma.

In 1978 Wright published his description in the *BMJ* of the commercial version of his mini peak flow meter.[1] This came 19 years after his description of the standard Wright peak flow meter. The 1978 paper, under the title "Contemporary Themes," was a simple description of the meter and it is doubtful that it would have been accepted today in its published form. There are no original data apart from a few correlation coefficients and error assessments. The journal's current statistical advisers would not allow the use of correlation coefficients for the validation of such an instrument. There was no prediction of the meter's potential usefulness outside drug trials. Yet this instrument allowing the measurement of peak flow rate at home has become an essential part of nearly all drug trials in asthma and has revolutionised the routine clinical care of people with asthma.

The importance of frequent simple measurements of airflow obstruction was quickly recognised. Regular recordings had already been used to identify various patterns of asthma.[2] The mini meter expanded this area and the field of occupational asthma opened up as patients were able to record their peak flow rates throughout the day. Peak flow recording became the chest physician's equivalent of urine or blood testing for sugar in diabetes.[3] It became recognised that deterioration in peak flow rate and increased diurnal variation may precede severe attacks[4] and that intervention at an early stage could prevent hospital admission and even death.

Numerous machines have been developed to mimic the mini peak flow meter but none of them has matched the original cheap, robust device designed by Wright. It is difficult to imagine the management of asthma today without peak flow meters. For 12 years they were the one useful gift supplied by drug company representatives and at less than half the cost of some new metered dose inhalers they represent excellent value for money. Twelve years after their introduction the government finally agreed to make them available on prescription.

The Wright mini peak flow meter produces results which vary from the true flow rate measured by pneumotachographs or other devices, but when individual patients with asthma have their own meter the comparison with other devices is of little consequence. The simple paper by Wright introduced a device which has become incorporated worldwide into the management of asthma. It has increased our understanding of the disorder and as part of an overall management plan for individual patients would probably begin to make inroads into the continuing morbidity and mortality from asthma.—JOHN REES, *consultant physician, United Medical and Dental Schools, London*

1 Wright BM. A miniature Wright peak-flow meter. *BMJ* 1978;ii:1627-8.
2 Turner-Warwick M. On observing patterns of airflow obstruction in chronic asthma. *Br J Dis Chest* 1977;**71**:73-86.
3 Rees PJ. ABC of asthma. Definition and diagnosis. *BMJ* 1984;**288**:1370-2.
4 Bellamy D, Collins JV. "Acute" asthma in adults. *Thorax* 1979;**34**:36-9.