

Personal paper: Medicine in the 1990s needs a team approach

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Summary

Health care increasingly emphasises the team approach in which doctors, nurses, and other health workers adapt and develop new skills. Before changes of this kind are widely accepted, however, there must be clarity about the training, status, authority, working relationships, career structure, and remuneration of those who undertake responsibilities well beyond their traditional roles.

Introduction

The team approach to the delivery of health care has always been important and has become more so as the boundaries between professional groups have become blurred. Doctors and nurses are becoming managers; nurses are taking on jobs previously done by doctors; support workers are taking over jobs done by nurses; and, similarly, technicians, physiotherapists, and radiographers are all taking on tasks previously done by others. For the most part the NHS workforce is ready to adapt and update its skills as circumstances dictate. But unless there is dialogue and trust between the groups, one or more of them are likely to feel threatened as their roles are changed.

The changing role of nurses provides an example of the circumstances in which we need to alter our practice. If these changes are to be widely accepted there has to be a cooperative effort; and without the support of the medical profession these changes will not occur.

Extending the role of nurses

Some recent innovations in nursing practice have had a profound impact on both junior and senior doctors. Of these, three from Papworth were dependent on the close working relationships that developed between nursing and medical staff at the hospital during the 1970s and 1980s. This was largely a result of the transplant programme initiated during this time, to which the nurses made an important contribution.

The first example came about as a direct result of the transplant programme. A group of nurses who are now called clinician's assistants came into being in 1990. Apart from their role in clinical management, they give support and information to the patient and family throughout transplantation—providing continuity of care in the face of an ever changing junior medi-

cal team. They also coordinate the different hospital staff who contribute to the care of patients undergoing transplantation.

As this scheme developed a particular difficulty occurred—that of role identity—and this is now seen elsewhere. Despite their nursing background, clinician's assistants were initially seen neither as nurses nor as doctors. They were paid on a nursing scale, but they did not have the jurisdiction over nurses that a senior nurse at that grade would have. There was also no peer group within the hospital with which they could share concerns, and initially it was difficult to meet their training needs. However, with time clinician's assistants have acquired both experience and status and are now valued members of the transplant team, within which they fulfil many of the roles of a senior house officer.

The role of the clinician's assistant is still developing, and their clinical skills will soon include clerking patients undergoing transplantation, obtaining consent for a set number of procedures, and prescribing a limited number of drugs. These tasks will, however, be undertaken only after a further programme of training and supervision. They look forward to this greater degree of autonomy, but they are unsure how they will fare should they wish to reregister as nurses under the guidelines of the United Kingdom Central Council.¹

Clinical nurse specialists

The title of clinical nurse specialist has probably been subject to as much misuse as that of nurse practitioner, and there remains a lack of agreement on their precise role. The key characteristics are that he or she is an expert in some clinical area, practises tasks often to a high level of technical expertise, and carries responsibilities commensurate with that role but not necessarily with the authority to go with it.

Against considerable criticism from within the medical profession, the Royal College of Surgeons and the Department of Health approved a scheme in Oxford in 1989 to evaluate the role of a non-medically qualified person working as a cardiac surgeon's assistant. The person appointed happened to be a nurse, and the main though not sole objective was to train her in the surgical skills needed to remove the saphenous vein from the leg for coronary artery bypass grafting. For this she attended the physician's assistants programme at the Cleveland Clinic in

See editorial by Casey and Smith

This article is based on the inaugural lecture of the Lewisham Academic Centre last year

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BMJ 1997;314:661-3



Fig 1 The extended role of the nurse: a sister giving chemotherapy

America, where up to 20 000 such people are now incorporated into the delivery of various aspects of health care, only a small proportion being in cardiac surgery. The principle, however, is the same for all. Such people, for whom there are formal training programmes with appropriate certification and career structures, enhance the way in which doctors function by relieving them of certain technical duties.

When the Royal College of Surgeons assessed the Oxford project in 1992 it concluded that there were sufficient advantages in the scheme to allow other surgical units to employ and train staff for a similar purpose but that such training needed to be carefully organised and monitored.

Papworth now has four cardiac surgeon's assistants at varying stages of being trained in an expanding repertoire of tasks within operating theatres. Surgeon's assistants are able to teach new junior staff the basic surgical techniques of dissection and wound closure.

Critical care practitioners

In 1995 Papworth began developing another category of clinical nurse specialist, this time in intensive care units—the so called critical care practitioner.

For the benefit of the 80% of patients who now have an uncomplicated recovery after routine cardiac surgery it was necessary to train enough senior nurses to ensure that there would always be one critical care practitioner available in each of the critical care areas to provide cover. Any patients who develop complications, or fall outside the clinical pathways defined in the protocols, receive the attention of surgical or anaesthetic staff as appropriate, but otherwise all decisions about routine management are made by the critical care practitioners.

The project was planned between the senior surgical registrar and the senior nursing staff in the intensive care unit. The senior surgical registrar took a large part in training the critical care practitioners and in making them aware of the sensitivities that could exist as a result of their new status in relation to the junior surgical staff, who might otherwise feel threatened and excluded from their role in intensive care.

After initial misgivings, the junior staff now believe that their training has been enhanced by the clear protocols that they have to understand and follow, and they welcome not being called for minor decisions about routine management. So long as clinical variables remain within the protocols that have been set, patients receive swifter attention, yet the junior doctor remains the first person to be informed if anything goes wrong. The scheme is still being formally evaluated, but it is likely to extend to other large cardiac surgical units, and accreditation for the training programme may be sought with the English National Board for Nursing.

There have also been comparable developments elsewhere. Resources for staffing paediatric intensive care units have been a continuing problem, and any scheme that helps to recruit and retain trained staff while also improving quality of care merits serious consideration. Such a scheme is now in operation at Great Ormond Street Hospital for Children, where neonates and infants with severe respiratory difficulties are treated by connecting them to what is in essence a miniature heart-lung machine providing extracorporeal membrane oxygenation.

The programme now depends on the expertise of nurses who are specialists in this technique. They essentially take over the combined roles of anaesthetist, perfusionist, and intensivists while providing conventional nursing care. The consultant intensivist in charge of the intensive care unit points out that these nurses have largely replaced the need for junior doctors in the unit. Indeed, the intensivists would now prefer to work directly with these specialist nurses, rather than have inexperienced and transient junior doctors interposed between them in effect authorising what the highly specialised nurses are already doing.

If the current situation for such critical care practitioners is to be formalised, and if other units are to be encouraged to adopt the practice, several steps will be necessary.

Firstly, the nurses should be given a title appropriate to the specialist training that they have received.

Secondly, they should be given the necessary authority to act independently, commensurate with the responsibility that they already carry.

Thirdly, they should receive a salary which reflects the value of the work they do and which would help to retain their services. Trusts now have more freedom to set appropriate terms and conditions of service for staff, but support is also needed from the nursing authorities and the Department of Health.

Nurse practitioners and primary care

There have also been profound changes in the role of nurses in primary care. These changes started with the Cumberlege report in 1986, entitled *Neighbourhood Nursing—A Focus for Care*.² This report recommended introducing the nurse practitioner into primary health care and said: "We are suggesting that patients who visit their general practitioners with conditions which are self limiting, or want to discuss other aspects of their health care, should have a choice of whom to see. Research has shown that nurses can be as effective as doctors, and as acceptable to patients, in securing compliance with therapy for chronic disease, making initial

assessments of patients, diagnosing and treating certain minor acute illnesses and behavioural disorders, and rehabilitating elderly people after surgery.”

An extensive role was thus envisaged for this new category of nurse practitioner. The Department of Health and the Royal College of Nursing both responded favourably, as did general practitioners, who soon appreciated the potential value of having a new class of health professional working alongside them.

With the introduction of the scheme, however, came a profusion of new posts that were given the title of nurse practitioner but did not always meet the criteria outlined in the Cumberlege report and subsequently expanded by the Department of Health. There is a need to resolve this confusion not only to clarify relationships between general practitioners and nurses but also to dispel some of the uncertainty that exists in the minds of the public and consumer organisations about what the title and role of nurse practitioner really implies. The ethical and legal issues also need to be resolved if this innovation in the delivery of health care is to progress into areas such as management of specific diseases, in which even closer cooperation with general practitioners will be needed.

Nurse practitioners have not been confined to primary care. They also have a role within accident and emergency departments, where the recent shortage of junior doctors has lent further impetus to their training and employment. The Royal College of Nursing has decreed that the accident and emergency nurse practitioner should be “a key member of the health care team and directly available to members of the public. He or she must be an autonomous practitioner, able to assess, diagnose, treat and discharge patients without reference to a doctor, but within prearranged guidelines. And must also be able to make independent referral to other health care professionals.”³

The potential value of such a practitioner was recognised by recent reports from both the Clinical Standards Advisory Group and the Audit Commission.^{4,5} Nurse practitioners in accident and emergency departments can reduce waiting times, improve staff morale, and facilitate the more sensible use of resources. Designated nurse practitioner schemes are, however, still comparatively rare, although it is quite common to find unofficial schemes in specialist units such as ophthalmic accident and emergency departments.

Response of the professions

For the most part, the doctors and nurses participating in these developments have adjusted their professional relationships smoothly and without rancour. Such initiatives, however, whether they originate from local needs, such as the clinician's assistants in the transplant programme at Papworth, or whether they result from national planning, such as nurse practitioners in primary care, will also need to be supported by the professional organisations that represent nurses and doctors if they are to achieve their full potential. These organisations have the responsibility of entering discussions at an early stage of developments so that they can inform and educate their members of the benefits of closer cooperation and changing roles. It is

better for them to lead the debate rather than to follow or react to events.

In the nursing profession there has been considerable talk during the past few years about the extended or expanded role of nurses, and in 1992 the United Kingdom Central Council responded to this by publishing *The Scope of Professional Practice*.⁶ This emphasised each person's need to acquire the extra skills and knowledge to adjust to his or her extended scope of practice rather than the acquisition of certificates for a string of tasks. There was, however, concern that nurses were tending to relinquish their caring role and concentrate too much on the acquisition of technical skills. And there were other more cynical views that *The Scope of Professional Practice* was promulgated to enable nurses to help implement the reduction in junior doctors' hours as outlined in the new deal agreement. These fears were not allayed by the Greenhalgh report in 1994, which was commissioned to study the interface between medical and nursing staff in hospitals “with a view to enhancing the role of nurses and reducing the inappropriate workload of junior doctors.”⁷ This was not received favourably by nurses, probably because of its task oriented approach and lack of recognition of the danger of overloading nurses with new tasks when many were clearly already overworked. This issue should continue to be addressed. The recently published report from the Sheffield Centre for Health and Related Research advises trusts and purchasing authorities on how various aspects of patient care can be dealt with as effectively by specialist nurses as by junior doctors.⁸

Debate for doctors

This debate is of as much importance to doctors as it is to nurses. The recent report from the BMA's consultants committee entitled *Towards Tomorrow—The Future Role of the Consultant* recognises that some medical procedures currently undertaken by doctors may be dealt with as effectively by non-medically qualified staff, provided that they have received appropriate training.⁹ Consultants would also want such staff to take legal responsibility for the tasks they undertake. The report also emphasises that the debate on skill mix should not focus on consultants simply delegating unwanted tasks to junior doctors or non-medical professionals. The primary concern is to develop roles and skills that are appropriate to the level of training and qualifications needed by each team member.

- 1 United Kingdom Central Council. *The report of the post-registration education and practice project*. London: UKCC, 1990.
 - 2 Department of Health and Social Security. *Neighbourhood nursing—a focus for care*. London: HMSO, 1986. (Cumberlege report.)
 - 3 Royal College of Nursing. *Accident and emergency: challenging the boundaries*. London: RCN, 1994.
 - 4 Clinical Standards Advisory Group. *Urgent and emergency admissions to hospital*. London: HMSO, 1995.
 - 5 Audit Commission. *By accident or design: improving accident and emergency services in England and Wales*. London: HMSO, 1996.
 - 6 United Kingdom Central Council. *The scope of professional practice*. London: UKCC, 1992.
 - 7 Greenhalgh and Co. *The interface between junior doctors and nurses: a research study for the Department of Health*. London: Greenhalgh and Co, 1994. (Crown copyright.)
 - 8 Read S. *Catching the tide: new voyages in nursing*. Sheffield: Sheffield Centre for Health and Related Research, 1995.
 - 9 Central Consultants and Specialists Committee. *Towards tomorrow: the future role of the consultant*. London: BMA, 1996.
- (Accepted 30 January 1997)

Controversies

Is it time to stop searching for MRSA?

Screening is still important

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BMJ 1997;314:664-6

The number of patients acquiring methicillin and multiple antibiotic resistant *Staphylococcus aureus* (MRSA) infections while in hospital is increasing worldwide. This pattern varies between countries, within the same city, or even in different wards in the same hospital.¹⁻³

The revised British guidelines for MRSA control will shortly be circulated for comment.⁴ They will suggest different types of response and even screening strategies depending, for example, on local healthcare referral patterns, the type of MRSA, and the different categories of patients at risk.^{5,6}

In the United Kingdom, unlike in many other countries, when MRSA re-emerged in the early 1980s, epidemic strains (EMRSA—defined as MRSA isolated from two or more patients in at least two hospitals) were characterised and numbered at the Laboratory of Hospital Infection in Colindale.⁷ Initially they seemed to be confined to outbreaks in one region, but the isolates that have emerged in the 1990s (EMRSA-15 and EMSA-16) are causing outbreaks of infection and colonisation in hospitals in more than one region,⁹ resulting in a fourfold increase in submissions of isolates for typing to the Laboratory of Hospital Infection in the past six years.

Any MRSA that spreads in a hospital is a potential new EMRSA.^{8,9} Certain EMRSAs (strains 1, 3, 15, and 16) have spread more widely and over a longer period and perhaps could be termed “super” EMRSA. Patients infected with MRSA in hospitals are now involved in cycles of re-admission from the community to hospitals and causing renewed outbreaks.

We cannot provide reliable predictors of virulence in the laboratory, and it is true that MRSA has rarely caused the primary sepsis seen in patients and healthcare workers caused by the infamous phage “80/81” *S aureus* of the 1950s and 1960s. Resistant strains can be as virulent as strains that are susceptible to antibiotics, but the virulence of both types can vary.⁴

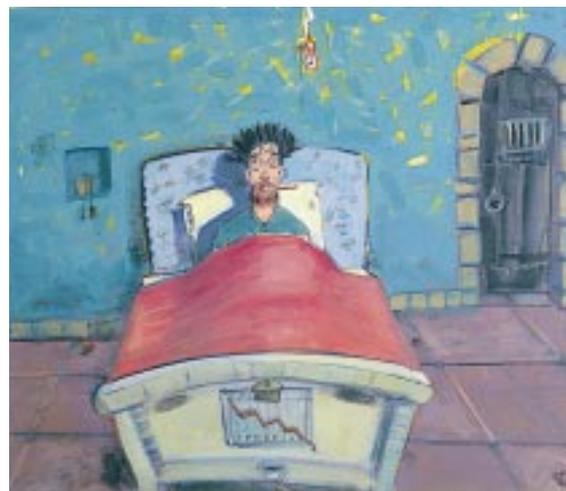
In Britain there is recent evidence that current strains are causing disease. In the second United Kingdom national prevalence survey conducted in 1993-4, MRSA comprised 5% of all infections, including 14 of the 228 surgical wound infections. The preliminary univariate analysis of this survey has shown that MRSA colonisation had the highest relative risk (5.09) for hospital acquired infection.¹⁰ The data from the Public Health Laboratory Service's bacteraemia reporting system also indicate worrying increases in MRSA infections.¹¹ The incidence of MRSA infection had remained static (about 1.8%) between 1989 and 1991 but increased to 8.1% by 1994 and in the first half of 1995 was 13.5%. Other data on antibiotic susceptibility patterns indicate that these MRSA strains are most likely to be the current epidemic strains (EMRSA-15 and EMSA-16). At least two studies (described by

Wenzel *et al*¹²) have shown that these MRSA infections are additional to, and do not replace, strains that are sensitive to antibiotics. Controlling MRSA infection, therefore, will reduce overall infection rates.

Screening for carriers rather than simply identifying infected patients has a major role in control of an outbreak and reduces the number of infections. Although detecting MRSA in routine clinical specimens provides important information, many studies show this to be inadequate.¹³ It will become more unsatisfactory as lengths of hospital stay shorten and the numbers of clinical specimens decrease.¹⁴ By switching to a strategy of identification and treatment of carriers in a large and prolonged MRSA outbreak in Spain, Coello and coworkers were able to reduce mortality from and infections with MRSA.¹⁵

Searching and eradicating carriage of MRSA have been shown to be cost effective even in a large prolonged MRSA outbreak in a London tertiary referral hospital, in comparison with a large MRSA outbreak in Madrid.¹⁵ The screening and control measures resulted in a probable sevenfold reduction in the number of infected patients. Using recent costing data for British hospital infections, these researchers showed that the costs of extended lengths of stay and resources needed to treat the infected patients exceeded the costs of screening and control.¹⁶

The re-emergence of MRSA as a serious problem has led to our relearning many of the lessons from 20 years ago. Infection control teams (which interact with the Laboratory of Hospital Infection) should encourage correct reflexive infection control practices and enable others to improve their quality of service.¹⁷ Infection control teams should also facilitate the review of antibiotic policies, as antibiotics have been identified



as risk factors for acquiring MRSA, although recent data suggest that this might have been overestimated due to prolonged lengths of stay acting as a collinear confounding factor.¹⁸

The new British guidelines will suggest ways in which MRSA rates can be used to encourage changes in infection control practices. Health workers should be given feedback on the number of new MRSA infections and colonisations detected by screening, as a measure of the success of control measures.¹²⁻¹⁹ The shortening lengths of hospital stay may mean that screening on discharge is required in certain situations.

In certain parts of the world rates of MRSA colonisation are so high, and resources so scarce, that elimination is impossible. Damage limitation policies such as control of antibiotic prescribing are the sensible way forward. However, the increasing number of antibiotic resistances seen in some strains of MRSA, and the predicted eventual emergence of vancomycin resistance in such strains, makes MRSA control, and indeed antibiotic resistance in general, a matter of global importance.²⁰

- 1 Voss A, Milatovic D, Wallrauch-Schwarz C, Rosdahl VI, Braveny I. Methicillin-resistant *Staphylococcus aureus* in Europe. *Eur J Clin Micro Infect Dis* 1994;13:50-5.
- 2 Cookson BD. Aspects of the epidemiology of MRSA in Europe. *J Chemother* 1995;7(suppl 3):93-8.
- 3 Panlilio AL, Culver DH, Gaynes RP, Banerjee S, Henderson TS, Tolson BS, et al. Methicillin-resistant *Staphylococcus aureus* in US hospitals 1975-1991. *Infect Control Hosp Epidemiol* 1992;13:582-6.
- 4 Cookson BD. MRSA: major problem or minor threat? *J Med Microbiol* 1993;38:309-10.
- 5 Ayliffe GAJ, Brumfit W, Casewell MWC, Cooke EM, Cookson BD, Duckworth GJ, et al. Revised guidelines for the control of epidemic methicillin-resistant *Staphylococcus aureus*. Report of a combined working party of the Hospital Infection Society and the British Society of Antimicrobial Chemotherapy. *J Hosp Infect* 1990;16:351-77.
- 6 Richet H, Le Gallou F, Andre-Richet B, Fleury M, Espaze E, et al. Strategies for screening methicillin-resistant *Staphylococcus aureus* (MRSA). In: Brun-Buisson C, Casewell MW, El Solh N, Reginer B, eds. *Ath Maurice Rapin Colloquium, Medecine-Sciences*. Paris: Flammarion, 1995:101-6.
- 7 Hartstein AL. Improved understanding and control of nosocomial methicillin-resistant *Staphylococcus aureus*: are we overdoing it? *Infect Control Hosp Epidemiol* 1995;16:257-9.
- 8 Epidemic methicillin-resistant *Staphylococcus aureus*. *Commun Dis Rep CDR Wkly* 1996;23:197.
- 9 Cox RA, Conquest C, Mallaghan C, Marples RR. A major outbreak of methicillin-resistant *Staphylococcus aureus* caused by a new phage-type (EMRSA-16). *J Hosp Infect* 1995;29:87-106.
- 10 Cookson BD, Morrison D, Marples RR. Nosocomial Gram positive infection. *J Med Microbiol* (in press)
- 11 Johnson AP, Speller DS. Epidemiology of antibiotic resistance: blood and CSF. *J Med Microbiol* (in press)
- 12 Wenzel RP, Nettleman MD, Jones RN, Pfaller MA. Methicillin-resistant *Staphylococcus aureus*: implications for the 1990s and effective control measures. *Am J Med* 1991;16(suppl):221-7S.
- 13 Goodman DA. Contemporary challenges for hospital epidemiologists. *Am J Med* 1991;16:8-16S.
- 14 Rahman A, Mackenzie D, Marples R, Cookson BD. Identification of MRSA incidents in hospitals. *J Hosp Inf* 1995;30:76-8.
- 15 Coello R, Jimenez J, Garcia M, Minguez D, Fernandez C, Cruzet F, et al. Prospective study of infection, colonization and carriage of methicillin-resistant *Staphylococcus aureus* in an outbreak affecting 990 patients. *Eur J Clin Micro Infect Dis* 1994;13:74-81.
- 16 Casewell M. New threats to the control of methicillin-resistant *Staphylococcus aureus*. *J Hosp Infect* 1996;30(suppl):465-71.
- 17 Cookson BD, Emmerson AM, Sedgwick JE, Taylor LJ, Tebbs E. *Standards in infection control in hospitals. Report of a combined working party of the Association of Medical Microbiology, Hospital Infection Society, Infection Control Nurses Association and the Public Health Laboratory Service*. London: HMSO, 1993.
- 18 Asensio A, Guerrero A, Quereda C, Lixan M, Martinez-Ferrer M. Colonization and infection with methicillin-resistant *Staphylococcus aureus*: associated factors and eradication. *Infect Control Hosp Epidemiol* 1996;17:20-8.
- 19 Sheridan RL, Weber J, Benjamin J, Pasternack MS, Tompkins RG. Control of methicillin-resistant *Staphylococcus aureus* in a pediatric burn unit. *Am J Infect Control* 1994;22:340-5.
- 20 About YZ, Acar JF, Ayliffe GAG, Atri N, Cookson BD, Fu W, et al. Report of the World Health Scientific Working Group on monitoring and management of bacterial resistance to antimicrobial agents. Geneva: WHO, 1995. (WHO/CDS/BVI/95.7)

Stop the ritual of tracing colonised people

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MRSA (methicillin resistant *Staphylococcus aureus*) is endemic in many British hospitals, and enormous attempts at control have not stemmed its relentless progress. Epidemic strains EMRSA-15 and EMRSA-16 each affect over 100 hospitals¹ and the struggle for containment causes disruption and consumes resources.²⁻³ This failure to control MRSA raises the question of whether current interventions serve any purpose.

MRSA may not need any control. There is no convincing evidence, despite a vast body of literature, that it causes greater morbidity than methicillin sensitive *S aureus* (MSSA), which is more prevalent. During 1983-6 one hospital in Essex found that the ratio of MRSA to MSSA among blood culture isolates was identical to that in all other specimens,⁴ indicating that methicillin resistance was unrelated to virulence. A London study in 1991 also found no increase in virulence.⁵ Other antibiotic resistant bacteria arouse far less interest. For example, methicillin resistant coagulase negative staphylococci are often resistant to many antimicrobial agents, are implicated in an increasing variety of diseases, and are spread within hospitals,⁶ but there is no suggestion that carriers should be found and treated.

Costs are many and predictable: to the estimated £300-£500 per week for screening in a typical hospital^{3,7} should be added costs of ward closure, expenditure on locums and pharmacy materials, demoralisation, stigmatisation of staff who are found to be carriers, difficulties with purchasing authorities, and threats of litigation.

Patients in isolation may receive less attention. Isolation is psychologically detrimental and may delay progress and discharge.

Benefits of screening for MRSA are much less clear. Does screening reliably detect carriers? Unfortunately any screening by bacteriological culture lacks sensitivity. Moreover, all staff and patients cannot be checked simultaneously, so transient carriage may be missed. Even in areas without apparent MRSA, speculative screening has detected positive patients,⁴ revealing the existence of background carriage. Screening thus reveals an incomplete picture of prevalence. Does it reduce MRSA disease? For a colonised person, attempts to control carriage are warranted only if they benefit that individual. Giving potentially toxic antibiotics to eradicate the organism in asymptomatic carriers raises ethical

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questions—and may not succeed.³ Even local treatment with topical antiseptics may have adverse effects and is unlikely to reduce carriage in sites such as the gut.⁸ Carriage by staff shows that harbouring MRSA is compatible with continuing health. Conversely, detection of patients with MRSA by screening does not necessarily prevent progression to disease.⁹

So does identifying carriers benefit others? It is impossible to see how proof might be obtained. In both endemic² and epidemic³ situations, however, screening has been felt to be unhelpful, and the rise of MRSA infection in Britain supports this; even in countries where success for screening programmes has been claimed,¹⁰⁻¹¹ later work has shown the eventual spread of MRSA.¹²

More often, success in controlling MRSA is attributed to radical measures, including isolation wards. Selkon *et al* reduced the incidence of MRSA by removing all identified patients and carriers to a dedicated isolation ward,¹³ as did Cox *et al* more recently.³ Selkon's success coincided with a similar decline in MRSA in countries not using isolation units and where an alternative explanation—changing antibiotic usage—was proposed.¹⁴ Another study found that changes in local numbers of people infected with MRSA reflected fluctuations in infections throughout the wider health region rather than local control measures.² Similarly, the coincidence of the decline of EMRSA-1 and the increase of EMRSA-3¹⁵ may mean that MRSA control measures eliminate one strain while allowing another to proliferate, but it is more likely that both strains underwent long term changes irrespective of intervention. Evidence exists that geographical trends are a major determinant of many antibiotic resistant bacteria, including MRSA,¹⁶ with a gradient of increasing resistance from Scandinavia to southern Europe.¹⁶ On present evidence, we conclude there is neither a theoretical nor an empirical justification for MRSA screening.

Substantial efforts made to control MRSA by pursuing colonisation make poor use of scarce resources. It is time to acknowledge that MRSA is endemic and to adopt a pragmatic approach. Standard infection control precautions, such as hand washing, are well described¹⁷ and should be implemented throughout hospitals to minimise the risk of transmitting infectious agents of any kind. Environmental

cleaning should become part of ward standards and be monitored routinely. Attention should be given to effective decontamination of equipment before it is used for another patient. Trust policies should recognise the importance of training in infection control within the framework of risk management. The use of infection control link nurses is a simple way of introducing high quality practice.

MRSA is endemic and costly, and the unhelpful ritual of tracing colonised people should be abandoned. An outbreak of MRSA disease should be treated in exactly the same way as an outbreak of any other clinical infection.

- 1 Epidemic methicillin resistant *Staphylococcus aureus*. *Commun Dis Rep CDR Wkly* 1996;6:197.
- 2 Barrett SP, Teare EL, Sage R. Methicillin-resistant *Staphylococcus aureus* in three adjacent health districts of south-east England 1986-91. *J Hosp Infect* 1993;24:313-25.
- 3 Cox RA, Conquest C, Mallaghan C, Marples RR. A major outbreak of methicillin-resistant *Staphylococcus aureus* caused by a new phage-type (EMRSA-16). *J Hosp Infect* 1995;29:87-106.
- 4 Barrett SP, Gill ON, Mellor JA, Bryant JC. A descriptive survey of uncontrolled methicillin-resistant *Staphylococcus aureus* in a twin site general hospital. *Postgrad Med J* 1988;64:606-9.
- 5 Phillips I. Epidemic potential and pathogenicity in outbreaks of infection with EMRSA and EMREC. *J Hosp Infect* 1991;18(suppl A):197-201.
- 6 Perdreau-Remington F, Stefanik D, Peters G, Ruckdeschel D, Haas F, Wenzel R, *et al*. Methicillin-resistant *Staphylococcus haemolyticus* on the hands of health care workers: a route of transmission or a source. *J Hosp Infect* 1995;31:195-203.
- 7 Mehtar S, Drabu YJ, Mayet F. Expenses incurred during a 5-week epidemic methicillin-resistant *Staphylococcus aureus* outbreak. *J Hosp Infect* 1989;13:199-200.
- 8 Rimmiand D, Roberson B. Gastro-intestinal carriage of methicillin resistant *Staphylococcus aureus*. *J Clin Microbiol* 1986;24:137-8.
- 9 Bendall RP, Gonzalez-Ruiz A, Batiste L, Kelsey MC. Outcome of methicillin-resistant *Staphylococcus aureus* carriage. *Lancet* 1994;334:819.
- 10 Vickery AM, Australian Group for Antimicrobial Resistance. Strains of methicillin-resistant *Staphylococcus aureus* isolated in Australian hospitals from 1986 to 1990. *J Hosp Infect* 1993;24:139-51.
- 11 Riley TV, Rouse IL. Methicillin-resistant *Staphylococcus aureus* in Western Australia 1983-1992. *J Hosp Infect* 1995;29:177-88.
- 12 Riley TV, Pearman JW, Rouse IL. Changing epidemiology of methicillin-resistant *Staphylococcus aureus* in Western Australia. *Med J Aust* 1995;163:412-4.
- 13 Selkon JB, Stokes ER, Ingham HR. The role of an isolation unit in the control of methicillin-resistant staphylococci. *J Hosp Infect* 1980;1:41-6.
- 14 Jepsen OB. The role of an isolation unit in the control of hospital infection with methicillin-resistant staphylococci. *J Hosp Infect* 1980;1:363-4.
- 15 Marples RR, Reith S. Methicillin-resistant *Staphylococcus aureus* in England and Wales. *Commun Dis Rep CDR Rev* 1992;2:R25-9.
- 16 Voss A, Milatovic D, Wallrauch-Schwartz C, Rosdahl VT, Braveny I. Methicillin-resistant *Staphylococcus aureus* in Europe. *Eur J Clin Microbiol Infect Dis* 1994;13:50-55.
- 17 Department of Health. *Guidance for clinical health care workers, protection against infection with HIV and hepatic viruses: recommendations of the expert advisory group on AIDS*. London: HMSO, 1990.

VETERINARY COUNTER PRACTICE

A dog's life

Professor Jimmy Payne's account of anaesthetising a monkey for dental extractions (*BMJ* 1996;313:1444) reminded me of an incident over 60 years ago when I was in medical practice on a Scottish Hebridean island. A veterinary surgeon visited for a few days every few months but veterinary emergencies will not wait and the local general practitioner had to do his best to help.

One day I had just finished my morning surgery when a crofter was ushered into my consulting room. Rather diffidently he asked me if I would come to visit his dog, who during the past week or two had become so savage and unmanageable that he could not bring it. He thought it "had something wrong with its mouth." At the house I found a snarling, fierce looking sheep dog crouching in a corner of a room. I threw a shawl over the dog and got its master to wrap this around the animal and hold it so that I could examine it. I found a long misshapen tooth which grew from the lower jaw and penetrated

the upper jaw, from which it protruded. I picked up a sock which was lying on the floor, soaked it in chloroform, and threw it into a cupboard into which I told the man to put the dog, still wrapped in the shawl. I shut the cupboard door fast.

After about 10 minutes the snarling and scratching noise had given way to rhythmic snoring. It was then only a matter of minutes to extract the tooth with one of several dental forceps which I usually carried around with me. Having satisfied myself that the dog was still breathing, I made myself scarce with all haste. Incidentally, in the early days of my practice I had picked out from a list of veterinary publications a little book which I found very helpful over the years. It was called *Veterinary Counter Practice*.

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*The rationing debate***Maximising the health of the whole community****The case for**

A J Culyer

Caveats

It seems a pity to compromise what seems uncompromising, but let us begin with some health warnings. Firstly, "principal" does not mean "only" and some of the other things the NHS does (and ought to do) turn out to be necessary anyway if it is to achieve this prime objective. Moreover, efficiency (which is what maximising is about) needs always to be tempered by consideration of equity in both process and outcome. Secondly, let's remind ourselves that most moral objectives (of which this is one) do not lose their force by virtue of being impossible to attain—one of the reasons for having moral rules about anything is that they provide bases for judging how well one is doing with respect to what one ought to be doing.

Thirdly, let's remember that there are good reasons for our having taken health care out of the "ordinary" market place. These include a solidarity-type case that ensures no one is excluded from benefit on grounds of lack of portable, transparent, and comprehensive entitlement; protection from professional dominance in the determination of both general healthcare priorities and specific patient-doctor relations (in any system of health care it is primarily the doctor who determines the demand for care, not the patient); equity in funding arrangements, processes, and outcome (mainly health); and the provision of care that is more likely to confer benefit than harm.

Fourthly, maximising such an objective involves not only a commitment to the ethicality of that which is being maximised but also embodies within it a host of other ethical issues; these often take the form of trade offs, whose exposure, discussion, and resolution by people with legitimate rights to be involved is important. Fifthly, maximising anything implies the need for particular sorts of knowledge: for information about health status, changes in it, its decomposition into relevant population subgroups, and believable attribution of such changes to causes (whether they lie in the delivery of health care or through other means).

Finally, the desirability of measurement in general ought to be distinguished from the suitability and acceptability of any specific measure. One desideratum of any measure of health or health gain is that it should enable interpersonal comparisons of health gain (or loss) to be made; and this is one of the striking departures from the more general utilitarian objectives customarily set by economists in evaluating the advantages and disadvantages of various institutions and policy options. A common objection to health measurement is not so much an objection to outcome measurement per se as to either a particular measure of it (for example, that it misses something important out) or to a particular way of using a measure (for example,

not weighting prospective health gain, or prospective health gainers, differentially according to morally relevant factors). One of the attractions of explicit measures of prospective outcome is that they clearly expose sins of commission and omission. Thus they enable the explicit discussion and implementation of equity based desiderata, rather than leaving them to the uninformed whim of individuals and committees with influence.

NHS ought to be about maximising health

There can be no doubt that a principal objective of the NHS is to maximise health. We have ministerial authority for that. The more interesting, non-factual, assertion is that it ought to do this. The ethical underpinnings for my view that it ought lie in the importance of good health for people to lead flourishing lives, which I take as an ultimate good. We can all think of individuals with terrible handicaps of ill health who seem to flourish but these are not persuasive counterexamples. Such people excite our admiration and are seen as exceptional.

In general, I take it that flourishing is an ultimate good and that good health is in general a necessary condition for achieving this ultimate good. In short, health is needed in the twin senses that it is both necessary (just as my possessing a Rolls Royce is a necessary sign of my personal success in life) and serves an ethically commendable end. This gives an otherwise merely technical relation between means and ends its ethically persuasive quality and raises the need for health to high ethical significance (in a way that is not true for my need for a "roller").

To take the argument further, health care (including medical care) may be a necessary (though not sufficient) condition for realising better health. If so, it too is needed (that is, is necessary if improved health is to be attained) and it too derives its ethically compelling character from the ethicality of the flourishing that is the ultimate good. So, not only may it be reasonably assumed that individuals want health care; they also need it in an ethically persuasive sense of the word.

If all that is accepted, maximising the health of populations becomes an ethical objective. So does being efficient so that the resources used in health care are used to maximise health outcomes. This is not the same as maximising the use of beneficial health care—or effectiveness. It differs from it principally in that delivering only that care which is most effective takes no account of the opportunity cost of such care (a highly effective but very costly treatment may rightly be given lower priority than a less effective but much cheaper one) when both cannot be delivered to all who might benefit. Distributive

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BMJ 1997;314:667-9



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justice also acquires a high priority: in my view (which is not that equity is sufficiently served by maximising some equity weighted outcome measure) this is best tackled in terms of seeking to identify and move towards a more equal distribution of health across the population while at the same time ensuring that each procedure offered to patients is that believed (on the best evidence available) to be the most cost effective. This will not usually imply an equal distribution of resources, nor will it imply a curmudgeonly equality in which everyone gets nothing (equally). It actually implies, given current knowledge of the way medical technology is deployed, both a rise in the average health of people and a more equal distribution of health. There are twin problems for social decision makers here. One (for healthcare commissioners and providers) is the selective use of their resources to achieve objectives efficiently. Others (for higher level decision makers) involve trading off other ultimately good things which we might legitimately seek in pursuit of flourishing lives but which compete with health care in the battle for resources. There is no room for absolutism here, for there is more than one means to the great ethical end of flourishing. Nor can every desirable thing be done for everyone. Conflict, and the need to choose, is inevitable.

Efficiency and equity aren't always in opposition

Conflicts can, however, be overcome. One that is commonly overcome is the alleged clash between efficiency and equity. If we define efficiency in a health service as being the maximisation of probable health outcomes, and there is also an acceptable quantification of these outcomes across the variety of activity we call "health services," then there exists, as a matter of logic, such a maximum for every possible distribution of resources to individuals. All these possible distributions are efficient. But all are most certainly not fair or equitable.

Choosing between these possible distributions, all of which are efficient, cannot involve any conflict between efficiency and equity—unless you make the additional ethical judgment that the marginal unit of outcome is always of equal value to whomsoever it accrues. I see no compelling moral argument for such a judgment.

Talking theoretically, though difficult, can sound glib. In practice one is in a sea of uncertainty, even in a world as conceptually simple as that just described. There is a deficit of usable relevant information on health itself, its distribution across population groups, on health gains (actual or projected), on the links between the activities of the NHS and their final impact on people's health, on the reasons for the huge variations that can be measured between practitioners or the variations in outcomes that individual practitioners achieve. As a practical example, the enormous clinically inexplicable variations in general practitioners' referrals within and across health authority areas are a source of both deep inequity and substantial inefficiency which only health authorities can address.

For many in the research and development commissioning communities, these lacunae provide the (ethical) momentum for changes that have recently been set in train in the research and development programme, for the intelligent use of evidence based medicine, for outcome measurement, and for the partial separation of the activity of healthcare commissioning from healthcare delivery. There is an act of faith involved here, which is that more evidence relating to the components of the links in the flourishing healthcare cascade is a good thing. This involves a belief that more (relevant) information is better than less and a commitment to the principle that the best should not be allowed to become the enemy of the good.

Information not a substitute for judgment

Undoubtedly, the mere provision of information is insufficient—at the very least it will need interpretation in particular contexts by patients and professionals who understand enough of its limitations not to fall into the trap of supposing that information can ever be a substitute for judgment (including clinical judgment). Moreover, there is abundant evidence that the mere provision of even very good information is not itself sufficient to get the professionals to act on it. Further, issues of value pervade the entire decision structure. At one level it is impossible to define "health" without value judgments (whose should they be?); at another, it is usually impossible to determine the appropriate course of medical actions for a particular patient without making patient specific value judgments (whose, again, should these be?). There are values to be selected at all points in between.

As I wrote at the beginning, improved health is not the only business of the NHS. In relations with patients a common task in both primary and secondary care is to provide information—and no more: information that a person does not have the disease he or she feared, about whom outside the NHS to contact for help with a problem, about healthy lifestyles, and so on. Plainly, such information serves an ethical end. Moreover, it may also serve the end of health maximisation—

health education, for example. The institutional side of the NHS also provides hotel services, which ought also to be provided efficiently but which may not raise questions of distributive equity of the same compelling sort as does active medical care itself and might be left to private purchasing power and insurance arrangements without damaging the objectives of the NHS.

■ *“Explicit measures of prospective outcome ... clearly expose sins of commission and omission”*

Similarly, equity in the distribution of health (or of health gain, or of healthcare resources) does not exhaust what ought to be proper equity concerns in the NHS. Procedures and processes too must be fair. It is not fair to keep similarly placed people waiting avoidably different times; nor for professionals to be rude or inconsiderate; nor to treat professionals within the system as though they were employees in a command economy or to set them professional targets without also supplying the means by which they might meet them; nor to exclude those for whom the NHS exists from decisions about the values that are to be incorporated in the layers of this many tiered cake.

Work on measures is needed

Setting an objective of the sort postulated here is not the usual way that economists have approached issues of efficiency and equity. They have more usually had a particular and rather sophisticated branch of utilitarianism to set the conceptual rules for resource allocation which goes under the name “Paretian welfare economics.” This is the view that decisions ought to maximise subjectively perceived welfare, that the only identifiable improvements are those where no one loses such welfare and at least one gains some, and that in situations where some gain and others lose one can only sit on one’s hands. Some of us have rejected

this framework for health and health care not because we want to reject the respect for individual values which is enshrined within its ethical frame but because it fails to deliver practical guidelines with practical consequences and, where it does, does so with severe limitations. A particular weakness of the traditional Paretian approach is that it affords no leverage on choices that have to be made which involve some people losing while others gain—which is, sadly, the usual situation. The usual evaluative framework is also silent for choices that are based on considerations of equity.

This is not true of the object set here (maximising health) provided that a suitable measure of the thing to be maximised is available. Twenty five years ago no such measure was available. That is no longer true. A battery of claimants exists, each of which has its advantages and disadvantages and some of which may be more appropriate to some types of choice than others. We need appropriate measures for all the outputs of the NHS that are of prime concern and indicators of the varied dimensions that equity takes. We also need a community of users of this information who can interpret and use it towards the NHS’s objective and who can feed problems back to the consumer and the professional, managerial, and research communities so that improvements and refinements can be made and lacunae filled. All this entails comprehensive partnerships and dialogue across a spectrum of communities and interest groups. It also requires education, training, and research.

The practical problem at all levels of the NHS is to be able to apply consistent and acceptable principles to answer questions like: Which services shall be available? To whom shall they be available? On what conditions shall they be available? These questions are all rationing questions, and the principles need to be practically useful and defensible by those who use them. If you don’t find mine acceptable (at least they meet the requirements of consistency and applicability and are derived from a set of explicit ethical considerations), then what are your alternatives—and how would you expect ministers, the NHS Executive, NHS managers, and NHS professionals to implement them?

The case against: what the principal objective of the NHS should really be

John Harris

Patients rationally want three things from health care. They want the treatment that will give them maximum life expectancy coupled with the best quality of that life, and above all they want the best possible opportunity of getting the combination of quantity and quality of life available to them given their personal health status. I believe that each citizen has an equal claim on the protection of the community as expressed by its public healthcare system, and this means that each is entitled to an equal chance of having his or her, necessarily individual, health needs respected by any publicly funded healthcare system.

Means and ends

It is common ground I suppose that we have to think about the ethics both of means and of ends. Even if it were to be accepted that the healthcare system ought principally to aim at maximising aggregate health gain, it does not follow that the most effective ways of achieving this are legitimate. If all seriously ill people were to be allowed to die this might dramatically improve the aggregate health of the community at large. I hope such a policy would not seem ethically defensible. Yet this is precisely what measures which

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use quality adjusted life years, or similar mechanisms, do: they systematically accord preference to those who have better health prospects, and, by selecting against those with worse prospects, tend to improve the aggregate health status of the whole community at the expense of the life chances of those with poorer prognosis.

We should notice that to make aggregate improvements a principal objective, even if not the only objective, is to imply the subordination of the health needs of individuals to something very abstract, and in some circumstances something very trivial indeed—namely, the improved health status of the whole community. For this could imply sacrificing the life of one person who was very ill and expensive to treat, if doing so would make even a tiny improvement to the aggregate health status, an improvement which no individual would even notice

Distributive justice

Distributive justice must be built into any articulation of principal objectives for the NHS, but it cannot be enough to define the relevant principle of distributive justice in terms of a more equal distribution of health across populations, because such an objective could be achieved as much by levelling down as by levelling up. One method of allocating a scarce resource which apparently satisfies the requirements of justice is, of course, not to allocate that resource to anyone. All are then treated equally.

The fallacy of such a supposition is easily illustrated. The principles of justice, and indeed the principles of equality, are moral principles, principles that are designed to be more than impartial, that are designed among other things to respect and to do justice to people. In some sense this must involve some benevolent attitude to people which is often abbreviated as “respect for persons.” Such an attitude to others is as different as it is possible to be to that of simply showing an equality of lack of respect or an equal indifference to their fate.

So, neither the failure to allocate resources that would save lives or protect individuals nor the simple attempt to move towards a more equal distribution of health could be part of a claim to satisfy the requirements of equality or justice conceived of as moral principles (and how else are we to think of them?). This is because equality or distributive justice has at its heart the claim that people’s lives and fundamental interests are of value, that they matter. Anyone who denied resources which would protect life and other fundamental interests is not valuing the lives of those to whom she denies these protections. Although she might be treating people equally in the sense of treating them all the same, she is not treating them as equals, as people who matter and hence matter equally.

Now this brings us close to the positive part of my account, because I believe it to be an integral part of any principle of distributive justice that people’s moral claims to resources are not diminished by who they are; how old they are; how rich or poor, powerful or weak, they are; or by the quality of their lives. A principle of justice worth its salt covers young and old, healthy and sick, weak and strong, regardless of race, creed, colour, sex, quality of life, and life expectancy.

Before further articulating the basis of this principle and what it means for the objectives of the NHS we must take a brief look at the concept of efficiency.

Efficiency

Efficiency in the delivery of health care is often defined in terms of maximising beneficial health care or of maximising health outcomes. These styles of definition of efficiency simply beg the question at issue. This question is: what is the good to be delivered by health care? They beg the question because they imply that the greater the health gain per treatment the greater the efficiency of that treatment. This implication is true in one context or application but false in another and it is the conflation of applications, either negligently or deliberately, which gives such plausibility as it has to the proposition that the NHS ought principally to maximise aggregate improvements in health status.

It is true that in order sensibly to maximise health outcomes you need an acceptable measure of success or failure. However, prioritising those outcomes you can best measure and calling it “maximisation of health outcomes” is letting the tail wag the dog. Any measure of what health care tries to maximise which counts life years after treatment faces a problem. The problem turns on the difference between selecting between different treatments for the same patient and selecting between different patients for the same treatment.

■ *“If all seriously ill people were to be allowed to die this might dramatically improve the aggregate health of the community at large”*

This distinction is of the first importance. If you are choosing between rival therapies for the same condition you would be wise to choose the therapy which maximises health outcomes. However, it is a fallacy to suppose that the measure of what is the best or most efficient treatment for a particular patient or condition can also be the measure of the most efficient or best way of distributing resources for care among patients when this amounts to prioritising patients for treatment rather than treatments for patients. The question of which is the most efficient treatment for this patient or condition is not the same as the question: which patients or groups of patients is it efficient or beneficial to treat? This is because there is an equivocation over the meaning of “beneficial” in the two contexts and a problem about incompatible ways of quantifying the size of benefit.

Incompatible approaches

If the millionaire and the pauper both lose all they have in the stock market crash, on one way of thinking about the loss, each has suffered the same degree of loss, each has lost everything. On another, each has suffered a different quantity of loss measured by the total sum lost. There is no straightforward way of reconciling these different approaches. If we are searching for an equitable approach to loss it is not obvious that we should devote resources allocated to loss minimisation to ensuring that the millionaire is

protected rather than the pauper. The same is true of health gain. Even if it is agreed that resources devoted to health care are resources devoted to minimising the loss of health or maximising the health gain, it could not be demonstrated that the person who stands to lose more life years if they die prematurely stands to suffer a greater loss than the person who has less life expectancy. Nor can it be shown that the measure of health gain must equate to the number of life years, quality adjusted or not, which flow from treatment.

If you and I are competitors for treatment and I will have a better health outcome from treatment than you, but both of us will make a health gain that is significant and important to us, automatically preferring to satisfy my needs rather than yours seems unfair. Why should my life be judged more worth saving because I am more healthy rather than more intelligent, say, or more useful? Arguments can (and have) been made on both sides, but to define need, for example, in terms of capacity to benefit and then argue that the greater the number of life years deliverable by health care, the greater the need for treatment (or the greater the patient's interest in receiving treatment) is just to beg the crucial question of how to characterise need or benefit.

■ *“Real and present dangers should be met before future and speculative ones”*

Equally, to define efficiency in terms of “the maximisation of health outcomes” and then argue that efficiency demands that the NHS aims at maximising aggregate health gain across the whole community is just to beg the question as to how we should think of the gain or benefit to be delivered by the NHS. Efficiency is like motherhood and apple pie; no one can admit to being against it. Arguably health outcomes are maximised and a healthcare system operates efficiently when more people who can derive

significant benefit from it are given their chance of access to health care.

I suggested at the start that patients want the treatment that will give them maximum life expectancy coupled with the best quality of that life and the best possible opportunity of getting the combination of quantity and quality of life available to them. Maximising aggregate improvements in health status of the whole community will not necessarily be a rational strategy for achieving these three objectives. Whether it is or not will depend on one's existing or probable health status. This in turn will depend on many things, including one's genetic constitution. If one principal aim of the NHS ought to be to give the people it serves what they want for themselves then this is unlikely to be the maximisation of aggregate improvements in health status. People tend to want the best for themselves and those they care most about, and a policy aimed at maximising aggregate improvements in health status will tend to favour those with the best prospects of large improvements, those with a “healthy” genome for example. People would only be likely to choose such a policy if they could be sure that they themselves would likely benefit.

NHS is there to protect life and liberty

Imagine an industrialised state that has big conurbations where millions of citizens are concentrated, many smaller towns, and thousands of tiny villages. It has vast sparsely populated tracts of agricultural land and vaster mountainous areas and wilderness where few people live. How should it distribute its access to health care? Probably it will place the major hospitals and medical schools in the centres of population, but smaller hospitals and medical centres will serve the smaller towns and isolated villages. For the remotest areas there will probably be an air rescue service or even a flying doctor or flying hospital service.

For geographical reasons if for no other, those in the most remote regions will be generally more expensive to treat. To fly the remote farmer and backwoodsman to the major centres of excellence for specialised treatment will be naturally more costly and hence less cost effective than to bus suburban commuters downtown. We will assume, what is probably true, that the funds devoted to servicing the health needs of citizens who are geographically remote from major centres would have treated more people had they been allocated to urban populations. Why do societies divert resources available for health care away from the more numerous city dwellers in a way which must adversely affect their ability to maximise aggregate improvements in health status or indeed to maximise numbers treated?

I believe the ends subserved by public healthcare systems are broadly the same as those which justify the high priority given to national defence. All governments and would be governments boast the strongest commitment to national defence. The question that is seldom asked is what is national defence for, what justifies its prominent place in national priorities? The simplistic answer is, of course, that without national defence there might be no nation and hence no national priorities. But pressed further it is reasonable



to ask for the underlying values and interests it subserves.

Equal protection

Arguably protecting citizens against threats to their lives, liberties, and fundamental interests is the first priority for any state. When in 1651 Thomas Hobbes wrote "The obligation of subjects to the sovereign, is understood to last as long, and no longer, than the power lasteth, by which he is able to protect them he was providing an answer to this question. On this view, any citizen's obligation to the state and to obey its laws is conditional on the state for its part protecting that citizen against threats to her life and liberty. If we reflect on what citizens today want and need in the way of protection I believe we will find that in most contemporary societies the most important threats to life and liberty come not in the form of soldiers with snow on their boots but from illness, accident, and poverty. This is why it is arguable that the obligation to provide health care, and in particular life saving health care, to each and every citizen, regardless of its effect on the aggregate health status of the community, takes precedence over the obligation to provide defence forces against external (and often mythical) enemies.

There is a good principle which states that real and present dangers should be met before future and speculative ones. If this is right the healthcare system should have first claim on the national defence budget. I should make clear that no part of my argument assumes a given budget for health care; rather I argue that the budget could and should be larger, that the health budget has first call on the defence budget, but

that whatever the budget is, there are ways of distributing the budget which are to be avoided because they are unjust.

■ *"The NHS should offer beneficial health care on the basis of individual need"*

Another feature of the state's obligation to defend its citizens which is often overlooked is its egalitarian nature. Just as each citizen owes his or her obligation to obey the law regardless of such features as race, religion, sex or age, quality of life, or prognosis, so the state must discharge its obligation of protection with the same impartiality. If we expect people to obey the law even though their life expectancy is short and the quality of their life poor, we must not deny them the equal protection that is an essential part of the social contract. I have suggested that the protection of the healthcare system is one of the principal elements of the state's side of this contract and that discrimination against those with poor quality of life or shorter life expectancy in the allocation of such resources is a betrayal, not only of those citizens, but of the social contract. Where all cannot be treated and priorities must be set the basis of prioritisation should not be the effect on the aggregate health of the whole community, for this will tend to discriminate against those arguably most in need of health care.

The principal objective of the NHS should be to protect the life and health of each citizen impartially and to offer beneficial health care on the basis of individual need, so that each has an equal chance of flourishing to the extent that their personal health status permits.

Primary care: opportunities and threats

Broader teamwork in primary care

Tony Kendrick, Sean Hilton

This is the fourth of a series of six articles discussing the imminent reforms in primary care

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The new white papers on primary care present opportunities for general practices to extend and develop their services to patients. These could enhance professional roles within practices and lead to new partnerships with secondary care, community health services, and social services. Two examples of new services are outlined: a practice led proposal to develop an integrated service for people with learning disability across a whole district, and a community health trust's contribution to extended primary care in an inner city area. For patients, the potential advantages of the reforms include more comprehensive and more integrated care in the community. The possible pitfalls of changing contractual arrangements include threats to the gatekeeping function of the referral system and, more fundamentally, to the central role general practice currently has in primary care in the United Kingdom.

Potential for joint working

The proposals outlined in the white papers on primary care present many opportunities for general practices wishing to develop or extend services for patients (box 1).¹⁻³ The reforms could enhance professional responsibilities and promote greater teamwork within practices. Practices will be able to try developing new partnerships with secondary care services and social services, helped by health authorities taking a facilitating and coordinating role. General practitioners and other members of the primary care team could be encouraged to develop and retain special skills and so increase their job satisfaction.

When primary care is defined broadly as health care delivered outside the acute hospital sector, general practices are not the only potential beneficiaries of the reforms. The white papers imply that general practice will be strengthened; yet, ironically, general practice

Box 1—Proposed changes that present increased opportunities for joint working

- Practice based contracts for extended primary care services
- More work, including prescribing, done by non-medical team members
- More options for employing salaried and part time doctors
- More options for funding improvements in premises
- Potential for increased collaboration with pharmacists, optometrists, dentists, and other primary care professionals
- More funding for services which cross the interface between primary and secondary care
- Potential fundholding for certain kinds of inpatient care without having to take on total purchasing
- Potential pooling of prescribing budgets for primary and secondary care
- Potential pooling of budgets for health authorities and local authority social services

will comprise a smaller proportion of primary care than now. This would not necessarily be bad for patients or for general practice. Changing contractual arrangements and breaking down traditional boundaries between disciplines and organisations could, as the government suggests, result in services that are more responsive to local needs. The challenge will be to retain the traditional strengths of general practice—namely, continuity of care and clinical generalism provided by a core team.⁴ This poses a dilemma which is exemplified by the BMA's approach to core and non-core general practice.⁵ The following examples illustrate some of the possibilities.

A practice wishing to develop a service for people with learning disability

The Abbey Practice in Chertsey, where one of us (TK) is a partner, illustrates how a practice might take the initiative to pilot an imaginative and flexible service tailored to fit local needs. The practice has been considering for some time how it might improve the health care offered locally to people with learning disability. For more than 20 years, partners from the Abbey Practice have worked as clinical assistants providing medical cover and annual medical checks for people with learning disability in Botley's Park Hospital, which is due to close later this year. As a result, former residents of the hospital are usually registered with the practice, which now has 94 patients with severe learning disability (IQ less than 50) living in 10 group homes in the Chertsey area.

Most people with learning disability have increased needs for physical as well as for psychiatric care; most commonly these are neurological, ophthalmological, dermatological, and orthopaedic problems.⁶⁻⁸ These problems could be managed in primary care by generalist physicians,⁶ but patients often have undetected needs for care, especially reduced hearing and vision.⁷ Protocols based on meta-analysis and expert consensus suggest how to provide primary care for these patients, including screening for the known complications of the clinical syndromes associated with learning disability.⁸⁻¹⁰ Among elderly people with learning disability, 80% take long term treatments such as psychotropic, antiepileptic, laxative, and diuretic drugs; these drugs

should be monitored and reviewed regularly.¹¹ However, while most general practitioners accept initial responsibility for the medical problems presented to them by such patients or by care staff, many do not accept that they should be carrying out proactive care, health promotion, or regular screening for visual and hearing problems; they feel that such patients should be under specialist supervision.¹² Most general practitioners have received little training in dealing with learning disability and are not interested in more training.¹³ Some argue that delivering adequate primary care to people with learning disability needs increased resources given the need for more visiting, longer consultations, extra screening and health promotion, and special experience in the particular physical and behavioural problems that such patients present.^{5 14}

The practice would like to develop a new, truly integrated, and properly funded service for people with learning disability, with increased teamwork as outlined in box 2. The white papers would allow the changes in local contractual arrangements that are needed to develop the service. Such a pilot could be funded with new money from both the £2m health authority development fund and from the £32m hospital and community health services growth fund. The objectives of the service are listed in box 3.

Evaluation of such a project would be essential and could be funded through a joint bid by the practice and trust to the NHS Research and Development programme. Evaluation would include process measures such as number of contacts between professionals and extent of diagnosis, investigation, and treatment of problems gathered through auditing patients' medical records. Outcome measures would include reductions in unmet needs for care and satisfaction with the service, gathered through surveys of patients and carers. A quasi-experimental design could be used, comparing the outcome for patients of the pilot service with a comparable district elsewhere. The health authority could ensure that evaluation of the pilot was carried out according to recommended guidelines.¹⁵

A community trust contributing to extended primary care in the inner city

Working with general practice to strengthen primary care may be difficult for NHS trusts delivering acute

Box 2—Proposed pilot for integrated primary and community care service for people with learning disability

- One practice holds the district contract for extended primary care for people with learning disability in group homes
- The extended team includes general practitioners (a named doctor for each home), psychiatrists, community nurses with limited rights to prescribe, physiotherapists, occupational therapists, care staff, a dentist, an audiologist, an optometrist, and a chiropodist
- Written protocols are agreed for general medical care, including health promotion and annual medical checks, and covering minor physical illness, epilepsy, urinary incontinence, and challenging behaviour
- Regular team meetings take place
- Primary care and secondary care budgets are pooled and include all costs of prescribing and hospital care

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services, particularly if this threatens to lead to a big shift in resources. Community health trusts should find this easier. In areas where general practice is well organised, with a large proportion of established fundholders or multifunds, the role of community trusts in primary care may be relatively small. In other areas these trusts and general practices will have to form strategic alliances to fulfil the objectives of the white papers. For example, inner city areas have smaller practices with fewer facilities, yet these practices have to meet greater demands associated with socioeconomic deprivation in the local population.

In inner London, primary care development plans set up after the Tomlinson report¹⁶ focused on three areas: getting the basics right, extending primary care services, and expanding the interface between primary and secondary care.¹⁷ Wandsworth Community Health NHS Trust in South London, where one of us (SH) is medical director, exemplifies a community based organisation committed to working with general practitioners, many of whom are singlehanded, have restricted facilities, and find that newer and more specialised serv-

Box 4—New primary care facilities introduced by Wandsworth Community Trust

- Foot health services including biomechanics and podiatric surgery
- Primary care physiotherapy and occupational therapy
- Haemoglobinopathy counselling
- Psychiatry services for younger disabled people
- Bilingual speech and language therapy
- Mobile dental unit and dental health education
- Continence service
- Primary care for homeless people
- Dietetics and health promotion for people from ethnic minorities

ices are difficult to obtain for their patients. In Wandsworth in the past three years all practices have had access to new and extended primary care services (box 4): chiropody has expanded into a foot health service including biomechanics and podiatric surgery; services for patients from ethnic minorities now provide health promotion, dietetics, and dental health promotion; and a community based continence service has been introduced.

Potential for expanding specialist skills

To advance the shift from secondary to primary care, however, more ambitious liaison work is required at the interface. Specialist nursing, therapeutic, and medical skills are needed. Three more initiatives in Wandsworth illustrate the potential for this.

A multidisciplinary therapy centre has been established for residents with severe or chronic physical disabilities. It serves a potential client group of approximately 1500 people with physical disabilities and their carers. The main causes of disability among the patients attending are strokes, Parkinson's disease, multiple sclerosis, head injuries, and rheumatoid arthritis. There is a dedicated transport service to help clients and carers to attend the centre. Staff also go out to see them in their own homes and local clinics and practices. A user group of clients and carers also has advisory members from local voluntary groups such as Community Care Alliance. The centre also offers neurological and psychiatric care, and a salaried doctor provides general medical care and liaison with the clients' general practitioners. Initially, referrals came mainly from secondary care (on discharge from hospital) but self referral is possible, and more referrals are now coming directly from general practitioners.

The white paper will allow the Trust to enhance its partnership with general practitioners by employing salaried doctors to cross practice boundaries. Experience within the London Initiative Zone Educational Incentives scheme, employing young vocationally trained doctors on short term salaried contracts, has shown this to be a feasible and popular means of providing additional clinical support to enhance rather than damage general practice. In 1996 one such scheme employed recently trained academic assistants to provide locum cover for Wandsworth general practitioners attending weekly daytime education and audit meetings.¹⁸

Box 3—Objectives of the learning disability service pilot

- To increase accessibility and acceptability of care, through:
 - Increased continuity and more proactive care
 - Regular visits to the homes by doctors, nurses, and other community therapists
- To increase communication between all the professionals involved, and:
 - Increase and improve support to home care staff
 - Simplify the tasks of prescribing drugs, dressings, incontinence supplies, and appliances
- To reduce the number of unmet needs for care, especially:
 - Vision and hearing problems
 - Complications of specific syndromes—for example, congenital heart disease, atlanto-axial instability, and thyroid problems among people with Down's syndrome

Box 5—Case history illustrating a hospital at home scheme

An Afro-Caribbean woman in her 80s had a moderately severe stroke. She was not known to community services other than her general practitioner, having previously refused support from social services. She had diabetes, high blood pressure, and gradually declining mobility. On referral to the community trust's rapid response team she was assessed at home over a period of four hours. Space in the home was reorganised to set up equipment, which included a pressure relieving mattress and aids to mobility and washing. Nurses and healthcare support workers visited up to six times daily for two weeks, and the night nursing service attended for 10 days. This care was combined with social support from friends and neighbours. The neurophysiotherapist from the trust's therapy centre visited and advised a programme of exercises which were carried out by the visiting staff.

The patient progressed steadily, and her mobility was improved further by the chiropodist. After three weeks the patient was independently mobile. Her care was transferred gradually to the usual services, with her general practitioner and the district nursing services monitoring her diabetes and hypertension. The patient had avoided going to hospital and the likelihood that hospital staff might have considered her home situation too risky to return to.

Intermediate care schemes incorporating early planned discharge and avoiding hospital admission¹⁹ also show how community trusts can work with large numbers of general practices to complement the core primary care team. The case study in box 5 illustrates one kind of intermediate care: hospital at home.

Implications for general practice

Initiatives that enhance the roles of general practitioners and other members of the primary care team may increase job satisfaction and help to tackle current recruitment problems. Changes in funding arrangements could benefit practices financially and pay for work shifted from secondary care.⁵ There is a risk, however, that the white papers will threaten the central role of the general practitioner in primary care (and even the existence of general practice) if elements of general medical services are parcelled up and divided between other providers. The history of the deregulation of public services in recent years shows that traditional roles can change dramatically, especially when new, cheaper, or more efficient operators tender for services. At the very least there will be more salaried and part time practitioners and fewer independent contractors in the future.

The government has stated that pilot projects should not create inequity of resources for patients of different practices. But inequity is inevitable, at least temporarily, because not all patients with relevant conditions in a district will be covered by pilot schemes. If voluntary pilots are successful then pressure will increase to implement service developments more widely, as was the case with fundholding.

Pilot projects that cross the interface between primary and secondary care should strengthen primary care in the broad sense, with community health services offering an important bridge between acute services and

general practice. However, such joint initiatives will blur the distinction between generalist and specialist roles and could threaten the important gatekeeping role of general practice.²⁰ Referrals to specialists may increase, whether from community professionals other than general practitioners or through self referral. Some of these referrals may be inappropriate and inefficient, and the resulting extra expense might even cancel out any gains made by integrating services. Referral rates will need to be monitored closely.

Perhaps the most intriguing opportunity is the potential for pooling budgets for health and social services. This would ringfence social services funds for residential facilities for patients with long term physical and mental health problems, which would remove some of the financial considerations that affect admission and discharge to hospitals and residential homes. Those currently responsible for these budgets will have concerns about this. Certainly, agreeing the relative contributions from health care and social care budgets would be problematic.

Above all, it is essential that the development of new partnerships and services is not allowed to undermine the obvious strengths of general practice. Patients value the approachability and accessibility of general practitioners and the continuity of care afforded by registration with a named doctor.²¹ Registration clearly assigns professional responsibility for primary medical care and defines the target population for preventive interventions such as immunisation and screening. Whatever benefits the new service developments bring, the registered list is a vital feature of British general practice which must be preserved.

- 1 Department of Health. *Choice and opportunity. Primary care: the future*. London: Stationery Office, 1996.
- 2 Department of Health. *The NHS. A service with ambitions*. London: Stationery Office, 1996.
- 3 Department of Health. *Primary care: delivering the future*. London: Stationery Office, 1996.
- 4 Royal College of General Practitioners. *The nature of general medical practice*. London: RCGP, 1996. (Report from general practice No 27)
- 5 General Medical Services Committee. *Core services: taking the initiative*. London: BMA, 1996.
- 6 Minihan PM, Dean DH. Meeting the needs for health services of persons with mental retardation living in the community. *Am J Public Health* 1990;80:1043-8.
- 7 Howells G. Are the medical needs of mentally handicapped adults being met? *J R Coll Gen Pract* 1986;36:449-453.
- 8 Royal College of General Practitioners Working Party. *Primary care for people with a mental handicap*. London: RCGP, 1990. (Occasional paper No 47.)
- 9 Welsh Health Planning Forum. *Protocol for investment in health gain—mental handicap (learning disabilities)*. Cardiff: Welsh Office NHS Directorate, 1992.
- 10 Pueschel SM, Anneren G, Durlach R, Flores J, Sustrova M, Verma IC. Guidelines for optimal medical care of persons with Down syndrome. International League of Societies for Persons with Mental Handicap (ILSMH). *Acta Paediatrica* 1995;84:823-7.
- 11 Walters RM. Prescribing requirements of the elderly mentally handicapped: future demands on primary health care teams. *J R Coll Gen Pract* 1988;38:317-9.
- 12 Kerr M, Dunstan F, Thapar A. Attitudes of general practitioners to caring for people with learning disability. *Br J Gen Pract* 1996;46:92-4.
- 13 Ineicher B, Russel O. *Mental handicap and community care. The viewpoint of the general practitioner*. Bristol, University Department of Mental Health, 1980. (Mental handicap studies research report 4.)
- 14 Howells G. Situations vacant: doctors required to provide care for people with learning disability. *Br J Gen Pract* 1996;46:59-60.
- 15 Institute for Health Policy Studies. *Evaluating primary care development projects: a practical guide*. Southampton: University of Southampton, 1996.
- 16 Department of Health. *Report of the inquiry into London's health service, medical education and research*. London: HMSO, 1992.
- 17 Department of Health. *Making London better*. London: HMSO, 1993.
- 18 Smith FR, Teague PA. The Bolingbroke Project. *The wider world of education. The London initiative zone educational incentives programme*. London: NHS Executive, 1996.
- 19 Iiffe S, Gould MM. Hospital at home. *Br J Healthcare Management* 1995;1:13-6.
- 20 Starfield B. Is primary care essential? *Lancet* 1994;344:1129-33.
- 21 Baker R, Streatfield J. What type of general practices do patients prefer? Exploration of practice characteristics influencing patient satisfaction. *Br J Gen Pract* 1995;45:654-9.