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## Do silicone breast implants cause connective tissue disease?

*There is still no clear evidence that they do*

See p 417

Few more controversial issues exist in modern rheumatology than the putative association between silicone breast implants and systemic connective tissue disease. The term silicone refers to a family of chemically related organic silicon compounds derived from silica (SiO<sub>2</sub>). Small quantities of silicone are found in joint prostheses, artificial heart valves, and baby bottle nipples, but the major medical use of the fluid compound, polydimethyl siloxane, is in implants. Silicone breast implants were developed in 1962 and are used mainly for cosmetic augmentation (80%) and reconstruction after surgery for breast cancer.<sup>1</sup> By 1992, 1-2.5 million women had received such implants in north America,<sup>2</sup> and 100 000-150 000 British women are currently estimated to have them. Silicone implants have been associated with hardening (thought to be due in part to leakage), occasional rupture, and enlargement of lymph nodes draining the implant site.<sup>3</sup> It is the possible link with systemic connective tissue diseases, however, that has fuelled an acrimonious medical, regulatory, and legal debate.

Although the first report of a connective tissue disease after direct injection of silicone into the breast dates from 1964,<sup>4</sup> the first three patients with silicone implants who developed these disorders were documented in 1982.<sup>2</sup> Since then over 290 patients have been described in the English language literature.<sup>2</sup> Although the most common specific diagnosis is scleroderma, a range of disorders has been reported, and many cases had a non-specific syndrome that did not fulfil conventional clinical and laboratory criteria for particular connective tissue disorders.

Public awareness of the issue rose steeply in 1991, when an American jury found that a patient had contracted mixed connective tissue disease as a result of her breast implants and that the company had misrepresented the safety of the product. In response to these events, and after two independent advisory panel reviews, the Food and Drug Administration requested a moratorium on the use of implants other than within trials.<sup>5</sup> By 1994 manufacturers of the implants had earmarked a large fund to deal with the burgeoning number of legal claims while still maintaining that the evidence did not link them to systemic disease. The litigants were given a deadline by which to choose between joining a large class action which guaranteed a minimum settlement, abandoning their litigation, or litigating separately. The first of these options became

the then largest proposed product liability settlement in American legal history.

Compensation for women outside the United States was set well below that for American women and has since been complicated by the chapter 11 bankruptcy of one of the manufacturers. Many women have continued to pursue individual claims. In Britain a Department of Health advisory group reported in 1994 that there was no evidence of an increased risk of connective tissue disease in patients with silicone breast implants and no scientific case for changing practice or policy with respect to breast implantation.<sup>6</sup>

Given this highly charged medicolegal background, what is the evidence that silicone breast implants cause connective tissue disease? Initial analyses used published case series to estimate the cumulative incidence of connective tissue disorders among women who received implants and suggested that the incidence estimates were similar to those expected in the general population.<sup>2</sup> These were supplemented by several case-control and cohort studies. Reviews of these studies have highlighted methodological shortcomings: in particular, the definition of connective tissue disease (and its validation) varies widely, and many studies are small, lacking statistical power.<sup>7</sup>

Of the larger studies, only one points to a weak association: this retrospective cohort study of 395 543 American female health professionals who completed a self administered questionnaire reported a relative risk of any connective tissue disease in association with previous implant surgery of 1.24 (95% confidence interval 1.08 to 1.41).<sup>8</sup> The study's major limitation was uncertain diagnostic validity, with potential bias due to differential over-reporting. The authors themselves concluded that silicone implants were unlikely to be associated with a substantial excess risk of major connective tissue disease. A second retrospective cohort study of 749 women who had received implants and 1498 community controls, followed for an average of 7.8 years, found no association between breast implants and connective tissue disease diagnosed at review of the medical record.<sup>9</sup> The Nurses Health Study, which used information collected through biennial mailed questionnaires, also failed to find an association.<sup>10</sup> Finally, a meta-analysis of the epidemiological studies performed to date has also been negative.<sup>11</sup>

The paper by Nyren et al in this issue adds to this body of evidence (p 417).<sup>12</sup> They report a retrospective

cohort study of women included in the Swedish national inpatient register. They compared first hospitalisation rates for connective tissue diseases between 7442 women with implants and 3353 women who had undergone breast reduction surgery over 92 880 person years of observation. No significant increase in risk of connective tissue disease was apparent when rates in the implant group were compared with expected rates in the general population (standardised hospitalisation ratio 1.1; 0.8 to 1.6) or with those in the breast reduction group (1.3; 0.7 to 2.2). Careful attention was paid to validating diagnoses, and the use of admission rather than self reports of disease improves specificity. The results add weight to the conclusion that silicone breast implants are not associated with a meaningful excess risk of connective tissue disease.

It is difficult to see how epidemiological studies will shed more light on this vexed issue. Some of those concerned in prolonged legal disputes are clearly unshakeable in their belief that the association exists, and the public reputation of silicone breast implants may have been irrevocably tarnished. An independent review group of the Department of Health, established by the chief medical officer in response to ministerial concern, is due to report this spring. Until then perhaps the medical community's most appropriate response would be to endorse the American College of Rheumatology's plea that greater reliance should be

placed on the quality of evidence during the early appraisal of health issues such as this.

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## Neonatal screening for cystic fibrosis

*No evidence yet of any benefit*

Neonatal screening for cystic fibrosis by using a simple test that can be performed on the "blood spots" routinely collected in screening for phenylketonuria and hypothyroidism raises exciting possibilities. The test is relatively easy to perform and the specimen is already collected, but even a simple test performed on millions of individuals will be costly, and the early knowledge of a serious disorder will cause more harm than good if there is no effective remedy. The results of a large randomised trial of neonatal screening for cystic fibrosis have recently been published in the *New England Journal of Medicine*.<sup>1</sup> The trial involved two thirds of a million newborn infants and their subsequent follow up. The conclusion that screening and subsequent treatment improves the growth and development of children with cystic fibrosis was met with enthusiasm.<sup>2</sup> Unfortunately the conclusion may not be justified, and the results suggest that any long term benefit is small.

The neonates were randomised into two equal groups of about 325 000 and immunoreactive trypsinogen measured on the blood spots of all infants; towards the end of the study DNA testing was also performed. In the "screened" group the results were examined immediately and acted on if they were positive. In this group there were 74 cases of cystic fibrosis (15 with meconium ileus recognised at birth, 54

detected by screening, and five missed on screening but diagnosed later clinically). In the control group the trypsinogen results were stored and examined when the child was 4 years old. In this group there were 67 cases of cystic fibrosis (18 with meconium ileus recognised at birth, 40 who presented clinically before the age of 4, and nine who were diagnosed only when the trypsinogen results were examined at the age of 4). The expectation of benefit from screening can only be small because the median age at diagnosis was 23 weeks in the controls, only 16 weeks later than in the screened group. Screening materially advanced diagnosis in only a minority.

The weights and heights of the two groups are reported in the paper. A difficulty that is not discussed in the report is that the data in children under 4 years are subject to selection bias. On average, affected infants in the screened group are likely to be healthier than identified affected infants in the control group, because the affected infants in the screened group are likely to include infants with less severe disease that would not have presented clinically had they not been screened. Only after 4 years are the two groups, in expectation, comparable, and only after this point does the randomised design ensure the avoidance of bias. The conclusion by the authors that screening is associated with taller and heavier children rests on the results

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in the whole period of 10 years, but this is statistically strongly influenced by the results in the first three years, which are open to selection bias. The authors do not present a separate analysis restricted to follow up after the first four years. The pattern of results shown in the graphs comparing height and weight at different times since birth suggests little difference between the two groups. The study design is an ingenious one, but the analysis of the results is problematic.

One must conclude, therefore, that this trial provides no evidence of any benefit of screening. The pattern of results after four years weighs against a material benefit, but the number of cases is small, so failure to find a significant difference does not exclude a small benefit. Longer follow up (beyond the 10 years of age in this study) may be informative. When the children are older the key outcome measure should be lung disease because it is this above all that causes the severe disability and premature death in cystic fibrosis. This is not covered here, but with longer follow up the

rate of hospital admissions for respiratory illness in the two groups could be reported.

Although we cannot say at this stage whether neonatal screening is worth while, the present evidence is not encouraging and does not warrant any change in policy from that suggested by the National Institutes of Health consensus development statement,<sup>3</sup> which concluded: "Offering cystic fibrosis genetic testing to newborn infants is not recommended."

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## Missed problems and missed opportunities for addicted doctors

*We need a special service for doctors addicted to drugs or alcohol*

Every few days another addicted doctor comes to light in Britain. A report from an alliance of health professional bodies, led by the British Medical Association and published last month,<sup>1</sup> highlights the risk posed by such doctors to the general public and calls for better preventive education and awareness. It fails, however, to prioritise the need for improved treatment for addicted doctors.<sup>2</sup> This need arises from the special problems facing addicted doctors compared with other addicts and their special treatment needs, which ordinary addiction services do not serve well.

Doctors are at special risk of developing addiction problems,<sup>3-5</sup> owing to the strain of medical practice, erosion of the taboo against injecting and opiates, and, particularly, access to supplies.<sup>6</sup> Once addicted, they pose a particular risk to the general public, forcing consideration of whether they need urgent removal from their work. Ordinarily, many patients with drug or alcohol problems receive outpatient treatment while continuing to work, but the same level of disability may be incompatible with medical practice. In addition, since most doctors who become addicted to drugs misappropriate them from work, removing the doctor from his or her work environment may be necessary to protect both the doctor and the public.

Membership of the medical profession normally enhances access to treatment, through knowledge of providers and the old boy network, but addicted doctors face major problems in accessing effective treatment. Addiction fosters isolation and denial: when present in a medical culture that prizes self reliance and has deficient mechanisms for intervention and treatment, the paradoxical consequence is impaired access to health care. Doctors find it particularly

difficult to access help for stigma bound problems, fearing breaches of confidentiality and jeopardy to their reputation, professional accreditation, and employment. The NHS reforms have further aggravated the problem with their requirement for identifying patients referred outside normal contracts.

The identification of addiction problems is often characterised by crisis—perhaps following removal from the operating theatre or surgery after being deemed intoxicated, complaints from patients, or discovery stealing drugs from the workplace. The problem may be chronic, but the circumstances around public exposure give the condition an acute on chronic character. Internal investigations are often inefficient, protracted, and inhumane for a doctor who essentially has a health problem. It is easy to see why addicted doctors feel they cannot seek treatment. Nevertheless, such crises provide excellent opportunities for healthcare intervention.

Providing treatment to the addict-doctor also poses challenges. Doctors have difficulty accepting the role of patient. Clinical staff may deal with addicted doctors differently—for example, treating them more as colleagues and holding higher expectations for recovery, compliance, and participation in treatment. Nevertheless, despite these complications, when addicted doctors are comprehensively treated the outcome is good.<sup>3,5,7</sup>

Thus addicted doctors are deflected from obtaining help by numerous obstacles and eventually come to light through distorted routes of referral—via distraught colleagues, friends, or family seeking secret consultations or informal opinions. Existing provision, as listed in the BMA report,<sup>1</sup> falls far short of an accessible and appropriate and adequate service. A

dedicated service for addicted doctors is now long overdue.

Three distinct components of care are essential. Firstly, entry routes into treatment should be simple and well publicised and must include crisis intervention. Responding to a crisis such as police proceedings or exposure at work with a distant appointment is manifestly inadequate. Not only is it compassionate to offer urgent admission; it is also valuable to capitalise on the motivation generated by the crisis.

Secondly, though immediate admission for assessment and detoxification is desirable, existing addiction units often have major difficulties in providing this care. Doctors who have committed crimes and other acts shameful to their professional standing may have difficulty sharing these episodes with a non-medical peer group. Other patients may express outrage at a fellow patient who is a doctor. The addict-doctor may therefore need treatment in a dedicated unit—probably alongside other addicted healthcare professionals.

Thirdly, special arrangements for supervision and post-treatment monitoring are essential, especially if the recovering addict-doctor returns to work. Progress may need to be “policed” by a supervising consultant in liaison with the recovering doctor’s employer or senior colleagues. Support systems such as peer groups<sup>8</sup> and counselling are pivotal factors in maintaining recovery.<sup>9</sup> Monitoring should include random collection of supervised urine or hair samples for analysis<sup>10</sup> and should generally continue for some two years.

The phenomenon of the addicted doctor may shock and offend. Nevertheless, it must be addressed by both the profession and employers as an important cause of impaired performance through ill health. In America, state level “impaired physician” schemes<sup>7 11 12</sup> ensure that addicted doctors are confronted, receive adequate treatment, and return to work under supervision. Other countries may feel less comfortable with such interventions, but, as the BMA report illustrates,<sup>1</sup> greater professional awareness at all levels and visible dedicated services will enable many doctors to avoid the tragic consequences of drug and alcohol dependence that can so affect their patients, their family, and their careers. The current lack of a dedicated

service leaves many addicted doctors unchallenged, untreated, and abandoned: the BMA report’s failure to deal with comment on this point is an important shortcoming in an otherwise excellent document. With good outcomes from treatment of this group (on whose training so much has already been expended), there are compelling grounds for such a development. The addicted doctor, the profession, and the general public would all benefit.

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## Turbulent future for school nursing and health visiting

*Change the bathwater—but hang on to the baby*

The government is attempting to reduce inequalities in health by public health measures rather than by a fundamental redistribution of wealth.<sup>1</sup> Primary prevention and health promotion will be encouraged and health action zones will “provide more integrated care ... better housing, healthy schools, and healthy workplaces.”<sup>2</sup> In the light of this, the recent proposal by Cambridge and Huntingdon Health Authority to move resources from health visiting and school nursing into acute care may seem perverse. Of course, health authorities must consider cost effectiveness, but it seems shortsighted to sacrifice pri-

mary prevention and health promotion to pay for technology and acute services.

What do health visitors and school nurses do, and how effective is it? The health visitor’s first task is to identify health care needs. Together with general practitioners, they provide the child health surveillance programme of immunisations, screening, and advice. They aim to identify those important conditions that parents might overlook and, for the rest, to help parents access professional expertise, voluntary agencies, and local facilities.<sup>3</sup> Britain’s child health surveillance programme is already the leanest in the

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Western world, and several screening procedures have been discontinued following evidence based reviews.<sup>4</sup>

Health visitors increasingly prioritise their caseload. They prevent and treat postnatal depression, which may adversely affect child development; they promote immunisation, breastfeeding, good nutrition, and dental care; and they contribute to the prevention of sudden infant death and home accidents. Research in America has shown an impressive cost benefit ratio for health visiting, but data in Britain are sparse.<sup>5</sup> Monitoring and intervention are essential for registered cases of child abuse, but are probably a less effective use of resources than primary prevention by family support. Health visiting offers the greatest potential among parents suffering severe deprivation and stress, who often lack the emotional and material resources to deal with issues such as stopping smoking or coping with depression. The challenge is to identify these mothers, secure their trust, and offer them a service that is not provided for everyone without them feeling stigmatised.

The first step in achieving this should be a better distribution of health visitors. Middle class areas do not need the same proportion of health visitors as areas of high deprivation.<sup>6</sup> Targeting communities or neighbourhoods is more effective and less stigmatising than targeting individuals. Next, the visiting pattern should be reviewed. A trusting relationship between client and health visitor is more likely if contact is made before the baby is 10 days old, and antenatal contact is probably even more effective.<sup>7</sup> Enabling a family to decide what help they require needs at least two visits, as specified in the basic child health surveillance programme, but contact beyond this should form part of a programme of care with defined objectives.

Two other developments might increase the effectiveness of health visiting. Firstly, an idea proposed 20 years ago—the combination of preventive health care and home based primary nursing care for children—should be tested.<sup>8</sup> Secondly, health visitors could promote the health of their local community by increasing their public health role, identifying population needs as well as those of individuals. To strengthen networks for socially isolated families, health visitors should call on the full range of local community services: they do not have to solve all their clients' problems themselves. Campaigning and working with local agencies on environmental hazards, poor housing, and child care should pay dividends, though maintaining the link between individual and public health work is important. A new approach to community data collection that emphasises outcomes, rather than counting contacts, is urgently needed.

School nurses too are doing some soul searching. School entry medical examinations by doctors have been replaced by health interviews with school nurses, but there is little evidence on the value of this exercise, except perhaps where preschool medical care is poor.<sup>9</sup> The school health service must collaborate more closely with primary care and focus on today's health problems—promoting physical and mental health, supporting children with physical or intellectual impairments, and reducing school failure due to missed learning disorders, bullying, or depression. Education about high risk behaviour and helping children to build self esteem and a successful school career should be joint responsibilities of education and health services.<sup>10</sup>

No healthcare activity can escape cost containment measures unless it produces robust evidence of effectiveness.<sup>11</sup> Much progress has been made recently in calculating the costs and benefits of screening programmes. Health promotion measures are harder to assess but, as evidence of what works accumulates, opportunities for successful intervention will increase. School nurses and health visitors must expect to compete with other professions for the important public health tasks of the next decade, but they have served the community well and deserve support for retraining and professional development.<sup>12</sup>

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## Caring for patients with chronic leg ulcer

*Early specialist assessment offers the best hope of sustained healing*

**L**eg ulcers are common, disabling, resistant to treatment, and expensive to manage. There is debate, not just about how to treat them but where. Recently, the trend has been towards treating patients almost exclusively in the community, leaving it to trained community nurses armed with evidence

based protocols and pocket Doppler devices. The diversion of resources away from specialist care in hospitals, as well as being politically motivated, has been driven by clinical trials showing that community treatment can work: ulcer healing rates can improve as much as 70% over 3-6 months when care is provided

by trained nurses in dedicated clinics using improved bandaging systems.<sup>1-4</sup> These benefits are, however, short term. The longer term prospects for patients treated in this way are more uncertain. Health professionals and managers should not continue to divert resources from hospitals into the community before, firstly, taking account of the epidemiology of the condition and, secondly, considering the likely negative impact on important new advances in management.

The aetiology of chronic leg ulcers is multifactorial. Data on the natural course of the disease show that healing rates achieved by conservative methods in clinical trials or in newly established clinics are neither achievable in the whole ulcer population nor sustainable long term.<sup>5</sup> Successes reported from clinical trials have been achieved in highly selected populations, by screening out patients with non-venous ulcers or those of "mixed" aetiology—those ulcers least likely to heal.<sup>2-4 6</sup> Even in the best trials, a quarter to a half of all ulcers remained unhealed. Furthermore, most of the high quality bandages and dressings materials used in these trials, such as the Charing Cross four layer system,<sup>2</sup> cannot be prescribed by general practitioners in Britain. The results of clinical trials cannot, therefore, be confidently applied to most patients with leg ulcers.

Not only are leg ulcers difficult to heal with current non-surgical regimens but, more seriously, most recur. Callam et al, in a study of 600 patients, found that a third had never healed their first ulcer and two thirds had a series of ulcers. Consequently, half of the study population had had their ulcer disease for more than 10 years, some for virtually their entire adult lives.<sup>5</sup> These findings have been confirmed in several subsequent studies.<sup>7 8</sup> Faced with these data, the massive cost of leg ulcer care becomes understandable.<sup>9</sup>

Can recurrence be prevented? Conservative measures have only limited success. In a recent randomised trial comparing class 2 (18-24 mm Hg compression at the ankle) and class 3 (25-35 mm Hg compression at the ankle) graduated elastic compression hosiery, 300 patients were followed for 3-5 years after their venous leg ulcers had healed.<sup>10</sup> The rates of ulcer recurrence were 19% and 32% respectively despite intensive preventive measures including professional fitting and regular renewal of hosiery, regular clinic visits, close supervision and counselling by leg ulcer nurses, and a hotline to the leg ulcer clinic—levels of support not available to the average patient. In non-compliant patients the recurrence rate was 69%.

How then should leg ulcers be managed? A new approach is urgently needed. The advent of duplex scanning has given us a non-invasive tool for imaging and measuring blood flow that, for the first time, makes it possible to tailor management precisely to the patient's pathology. This increases the likelihood of long lasting success. The results of surgical and non-surgical management are at last beginning to be correlated with particular patterns of venous dysfunction. The opportunities for improving outcomes for patients with venous disease, particularly leg ulcers, have never been better. At present, hospital referral tends to be the last resort, when care in the community has failed and the ulcer is embedded in chronic scar tissue. The best time for specialist input is at the outset,

giving patients the opportunity for a thorough diagnostic and prognostic evaluation in hospital including duplex scanning of the arterial and venous systems.<sup>11</sup> Such evaluation identifies patients who would benefit from early treatment of vascular disease, combined, if appropriate, with skin grafting. For example, a group in Leicester have recently described a venous ulcer assessment clinic where they performed duplex scanning on a consecutive series of 88 patients. They found that 14% had significant arterial disease, and 57% had incompetence limited to the superficial venous system, a category of patients in whom high success rates for simple venous surgery have been reported.<sup>12 13</sup> Care can continue in the community after discharge as it does for patients judged unlikely to benefit from radiological or surgical intervention.

Chronic leg ulcer is perfectly suited to shared care. The hub and spoke model, in which a hospital specialist unit supports outreach services linked to it by specialist nurses, offers an ideal blend of specialist intervention and community based care. It assumes, of course, availability of a high quality duplex scanning service and vascular consultants trained in the care of leg ulcer, a notable deficiency in many vascular training programmes. There is hope however. Most district general hospitals have duplex scanners and there is increasing recognition of the need for vascular surgeons to assume more responsibility for managing venous disease in general and leg ulcer in particular. This approach has the potential for major cost savings, and clinical trials are needed to establish cost effectiveness. The most important outcome is not ulcer healing but sustained ulcer healing. A combined effort with early specialist assessment has the potential to achieve this.

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# Providing primary care in the accident and emergency department

## *The end of the inappropriate attender*

Out of hours calls to general practitioners have doubled in the last three years,<sup>1</sup> while emergency admissions to hospitals have increased by 16% from 1988-9 to 1993-4, with some hospitals seeing a doubling since 1993.<sup>2,3</sup> Yet accident and emergency departments—a major gateway to the hospital—treat a mixed group of patients, and only a small proportion of the 15 million people who visit Britain's 227 accident and emergency departments each year<sup>4</sup> are critically ill or injured. What drives the increasing demands on accident and emergency services and out of hours calls to general practitioners is not yet understood, but attempts are being made to manage the workload in a way more appropriate to the problems it presents.

Until recently the accident and emergency community blamed many of its problems on "inappropriate attenders." That attitude is changing, with the recognition that many attenders need primary care. Lack of an agreed British national triage system makes valid comparisons difficult, but the British Association of Accident and Emergency Medicine considers that 10-40% of accident and emergency patients need primary care, while the Black Country review suggested a figure of 12-38%, and international figures suggest 7-70%.<sup>5-8</sup>

Dale and his coworkers at King's College School of Medicine and Dentistry have been researching the demand for "emergency" primary care since 1988. In a prospective study of 5658 patients attending one accident and emergency department in 1995 they used a triage system to divide patients into "primary care attenders" and "accident and emergency attenders."<sup>9</sup> They concluded that triage by nurses within the accident and emergency department could be developed to identify patients with problems that were more likely to be of a primary care type; these patients were less likely to receive an investigation, minor surgical procedure, or referral. Of the 5658 patients studied 40.9% were classified at triage as presenting with primary care problems. Nevertheless, there were limitations in the sensitivity of triage practice and in the clinical approach of junior medical staff—who had a propensity to intervene.

Using their definition of primary care, Dale and his team carried out a prospective controlled intervention study of 4681 patients classified as primary care attenders.<sup>10</sup> This showed that employing general practitioners in accident and emergency departments to manage patients with primary care needs reduced rates of investigation, prescription, and referral when compared with hospital doctors. A related study showed that primary care patients could be managed in this way at reduced cost and with no detrimental effect on outcome.<sup>11</sup>

In a study in Dublin, within a different health care system, Murphy et al performed a randomised controlled trial of 4684 patients.<sup>12</sup> This group represented

66% of all accident and emergency attenders and included "semi urgent" cases and those in whom a delay was considered acceptable. Their "delay acceptable" group was broadly similar to Dale et al's primary care attenders. This study also supported the success of triage systems and concluded that general practitioners working in accident and emergency departments managed "non-emergency" attenders safely and used fewer resources than did the usual accident and emergency staff.

These studies allow us to reach the following conclusions. Firstly, about 40% of new attenders in accident and emergency departments can be safely triaged by trained nurses to receive primary care. Secondly, general practitioners working in accident and emergency departments can safely and effectively treat these patients at less cost than hospital doctors. Both studies conclude that further research into patient outcome and satisfaction should be carried out.

So where do we go from here? The NHS is under pressure in both acute and community care, and accident and emergency departments represent the interface between the two. Although general practice is responding to the increasing demand for primary care out of hours through cooperatives and the development of out of hours primary care centres, accident and emergency departments also need to respond. Patients will continue to use accident and emergency departments for primary care problems as they have always done. So these departments need to be organised to provide care for the needs of their local community. Contracts for accident and emergency and general practitioner services need to be reworked for 2000 and beyond, to accommodate the need to integrate all out of hours emergency healthcare services. In addition, a national triage scale incorporating a recognised primary care attender category should be agreed as a matter of urgency. The studies of Dale and Murphy identify the primary care population and offer cost effective solutions. Whether there are enough general practitioners available or whether nurse practitioners are part of the solution to treating primary care attenders are unanswered questions. As an article in the *BMJ* concluded,<sup>13</sup> the fact that the current staffing crisis in accident and emergency departments is occurring at the same time as general practitioners are looking at better ways of organising their out of hours commitments offers both groups a unique opportunity to restructure their services and improve them.

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## Rationing health care

### *A logical solution to an inconsistent triad*

The basic principle of the NHS is simply that comprehensive, high quality medical care should be available to all citizens on the basis of professionally judged medical need without financial barriers to access. In seeking to enact this principle, the NHS is not alone. The same aspiration is to be found in nearly all economically developed societies outside the United States. Yet, in the face of increasing healthcare costs this basic principle threatens to become what logicians call an inconsistent triad; a collection of propositions, any two of which are compatible with each another but which, when viewed together in a threesome, form a contradiction. Perhaps we can have only a comprehensive service of high quality, but not one available to all. Or a comprehensive service freely available to all, but not of high quality. Or a high quality service freely available to all, but not comprehensive. Each of these three possibilities defines a characteristic position in the modern debate about healthcare costs and organisation.

High quality comprehensive care that is not freely available to all is, of course, the solution to the dilemma adopted by the United States. This is a poor solution. It is not simply the uncivilised way in which the healthcare needs of citizens are ignored, with up to 20% of Americans uninsured or underinsured and with non-existent primary care services for the poor. It is also that, even for those who are insured, the consequence of the search for ever more prestigious health care is a mutually defeating game of spiralling costs and defensive medicine.

American analysts reply with their own arguments, asserting that the NHS buys its comprehensiveness and free availability at the cost of quality. This is the essence of what may be termed the "Brookings" characterisation of the NHS, after the famous Washington think tank. Its reports have argued that the NHS serves patients badly, with too few diagnostic tests, too much waiting, not enough screening, and an unwillingness to use expensive treatments.<sup>1 2</sup> All too often this argument conjures up wartime stereotypes of a phlegmatic island race bearing their misfortunes with fortitude. More seriously, it commits the fallacy of assuming that good medicine is always interventionist medicine. It is not, however, an argument that is easily dismissed, as any visit to a busy outpatient department or a reading of the King's Fund report on London's mental health services will testify.<sup>3</sup>

Move then to the third option: why not sacrifice comprehensiveness in order to achieve at least a core of high quality care freely available to all? Perhaps when drugs were few and treatments simple it was possible to be comprehensive, but now we know that, for many patients, there will be possible treatments that are disallowed on the grounds of cost, either implicitly or explicitly. Honesty about lack of comprehensiveness and the definition of a core range of services might go some way towards a solution. The trouble with this proposal is that, though many have tried, none has succeeded in defining a core range of services that can be made to work without severe qualifications. As Rudolf Klein has pointed out, the various committees around the world that have looked at the problem have simply come up with the same candidates for exclusion (vasectomies, sterilisation, tattoo removal, in vitro fertilisation, gender reassignment), all of which are marginal to the problems of allocating resources in health care.<sup>4</sup>

This conflict, implicit in the basic principle of modern health care, is not one that is best approached by treating it as logical puzzle to be resolved by dropping the least credible proposition. Such value conflicts are the essence of public policy: between economic growth and environmental protection; between individual freedom and social stability; between humanitarian intervention and recognising the right of national self determination; between comprehensiveness, quality, and availability in health care. As Sir Isaiah Berlin said, 30 years ago, we live in a world of conflicting values where clearcut solutions cannot in principle be found. To suppose that we can escape this conflict of values by retreating to an ideologically and organisationally simpler world casts a veil of deceit over the choices that must be made.<sup>5</sup>

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