Education and debate

GP budget holding in New Zealand: lessons for Britain and elsewhere?

Laurence Malcolm

See editorial by Ham and p 1892

Aotearoa Health, Lyttelton R D 1, New Zealand
Laurence Malcolm, *professor emeritus*
laurelyn@chch.planet.org.nz

BMJ 1997;314:1890–2

The recent election in New Zealand resulted in the new coalition government rejecting key aspects of the National government's controversial, Treasury led health reforms implemented in 1993.[1 2] Based on the largely successful economic and state sector reforms of the 1980s, the health reforms had two key goals: improved efficiencies and better access, especially to elective surgery.[3] Superficial assessment of the hospital sector had led to expectations that savings of 20-30% could be achieved through competitive and commercial incentives.[3] Yet actual expenditure has increased by this amount, and waiting lists have grown by 50% since 1993.[1 4] The new government favours collaboration over competition, and its health policy is to abolish the market oriented CHEs (Crown health enterprises) and replace them with regional hospital and community service units, which will be required to improve the health of their communities.[2] The four regional purchasers that have a contract with providers are to be replaced with a central funding authority. The funder-provider split remains, but "purchasing" has been rejected as being too commercial. The government now seems to recognise that health is primarily a social service, not a business. The bottom line is not profit; it is better health outcomes.

Summary points

New Zealand's new coalition government has rejected key elements of its predecessor's health reform policies

Collaborative and professional incentives are to replace failed competitive and market incentives

The success of collaboration has been shown through rapidly growing independent practice associations—60% of general practitioners were members in late 1996

These associations manage budgets for an increasing range of services, and savings of up to 23% are being put into higher priority services

The next step is managed and integrated care relationships with secondary care providers

Budget holding and integrated care in New Zealand has many similarities to but also contrasts with Britain

Key lessons from the New Zealand's experience include the ascendancy of professional incentives over market mechanisms in health care, the potential for collaboration in achieving professional goals and the ability of doctors to be accountable, within a budget, for decisions about priorities in health

Growth of collaboration in primary care

The new government has recognised that collaboration may be much more effective than competition as an incentive in health care.[5 6] Nowhere has this collaboration been more clearly demonstrated than in primary care through the formation of independent practice associations.[7] The concept of independent practice associations, and their moves towards managed and integrated care, was borrowed from the United States. In practice, however, these associations have been much closer to British fundholding.[7 8]

Initial opposition to independent practice associations from the medical profession to this new contracting relationship has been replaced with strong support, especially from general practitioners. Unexpectedly rapid growth in membership has resulted—at the end of 1996—in 60% of general practitioners being not only members of independent practice associations but budget holders of laboratory, pharmaceutical, and other services.[7] This proportion is expected to increase to over 70% by mid-1997.

The independent practice associations also strongly support managed and integrated care.[7] They are on the verge of taking on budgets for referrals to secondary care, including inpatients, but again through collaborative ventures rather than competitive relationships with secondary services. Independent practice associations are essentially population based and becoming increasingly committed to public health goals.[7] They are similar in many respects to the new commissioning bodies proposed by Britain's new Labour government.

Independent practice associations are not the only form of managed and integrated care emerging in New Zealand.[3] Community groups including Maori are

also becoming budget holders and integrated care organisations. For Maori especially this is motivated by deeply felt concerns about redressing their poor health. In contrast with Britain, the New Zealand government funds less than 50% of the cost of general practitioner services.[9] Underuse of primary care services by Maori and low income populations is associated with high hospital admission rates.[9]

Convergences and contrasts with Britain

There are many similarities and convergences, but also contrasts, between budget holding in New Zealand and fundholding in Britain. Independent practice associations range in size from large group practices to ProCare Health, in Auckland, which has a membership of 340 practitioners. With an average membership of 57 there are major economies of scale, and the associations report administrative costs ranging between only 1-2%.[7 8 10] Larger groups are able to take on a much wider range of services, including all secondary care services, with minimal risk for member practices.

Budget holding is a flexible and progressive process.[7 8 10] Independent practice associations can choose to take on budgets for general medical services through capitation; laboratory, pharmaceutical, and maternity services; and other services.[7 11] They are thus able gradually to build up experience and competence in budgetary management and administrative and information systems. Extension to secondary care involvement is based on this graduated experience.

Savings made from budget holding are real and are held by the association. Savings already achieved in laboratory and pharmaceutical budget holding range from 8-23%, much higher than reported figures for Britain.[11] Savings are used to provide new services as determined by the association in conjunction with purchasing health authorities. These include free or reduced cost of access to the only partially subsidised general practice services—for example, free mammography, improved immunisation programmes, and terminal care. Independent practice associations have widely rejected personal financial incentives as unprofessional and unethical.[7 10]

Budget holding in New Zealand is a "generalisable" model in that all general practitioners in an area can join an association, rather than going to the trouble of developing individual practice contracts.[7] Practices hold a contract with their association, which negotiates contracts with purchasing authorities. This ease of entry may have been an important factor in the rapid growth of membership—in some areas 100% of general practitioners. But this raises questions about the commitment of individual general practitioners to the goals of their associations and how they can participate more, especially in large groups.

As in Britain, however, larger groups offer a more powerful peer review process for improving both quality of care as well as accountability for costs. Most associations have established mechanisms for monthly feedback on use of pharmaceutical and laboratory services to contrast the individual members' performance with that of the group.[9] This is an effective mechanism not only in achieving savings but in reducing variation between individual practitioners.[9] To complement this peer review process many associations have established small groups to prepare guidelines and to discuss prescribing and other aspects of professional practice.

GARRICK TREMAIN

Up the garden path—New Zealand's prime minister expresses qualms to the minister of health about the direction of the health reforms

Lessons from New Zealand's experience

In summary, some important lessons have been learnt from New Zealand's experience of health reform. The first is that professional incentives, based on collaboration, can be much more effective than market and commercial incentives in modifying professional behaviour and improving both efficiency as well as quality.[5] General practitioners comment on the sense of pride, professionalism, and achievement that they are experiencing. They have a better sense of the "bigger picture" of health.

The second lesson is that general practitioners can collaborate in relatively large groups to achieve public goals. Larger groups offer economies of scale, the opportunity for competent leadership to influence the quality of care of a wider group, better information and risk sharing, and the achievement of professional goals through shared and owned practice guidelines. Through this collaborative and entrepreneurial process doctors in the private sector are managing increasing amounts of public money. Although this is primarily to achieve public goals, concerns have been raised from public sector interests about the power that this puts into the hands of the private sector—hence the understandable rejection by almost all independent practice associations of personal financial incentives.

Perhaps the most important lesson is that doctors can become accountable for the prioritising of health resources. As with clinical service management in the hospital based sector,[2 12] independent practice associations are recognising that they have the power to shift resources from lower to higher priority services. This includes the power to achieve an aspiration widely held for many decades, a desirable shift in priority from secondary to primary care.

The *Economist*, commenting on the outcome of the recent election in New Zealand, said that New Zealand "may have lost its appetite for further reform but its economy is still a model for others."[13] The managed and integrated care that is emerging in New Zealand, based on professional rather than commercial values and incentives, may also be a "model for others."

LM is also professor emeritus at Otago University, New Zealand.
Conflict of interest: None.

1 Williams C. New Zealand voters focus on health. *BMJ* 1996;313:901.
2 Ministry of Health. *Health Policy Agreement.* 1996. URL: http//www.moh.govt.nz/policy.htm
3 Malcolm L, Barnett P. New Zealand's health providers in an emerging market. *Health Policy* 1994;29:85-90.
4 Ministry of Health. *Purchasing for your health 1994/95.* Wellington: Ministry of Health, 1996.
5 Ministry of Health. *Healthy New Zealanders: briefing papers for the Minister of Health 1996.* Wellington: Ministry of Health, 1996.
6 Berwick D, Smith R. Cooperating, not competing, to improve health care. *BMJ* 1995;310:1349-50.
7 Malcolm L, Powell M. The development of independent practice associations in New Zealand. *N Z Med J* 1996;109:184-7.
8 Malcolm L. Implementing managed care in New Zealand. In: Jolt H, Leibovici M, eds. *Managed care: principles and practice.* Philadelphia: Hanley and Belfus, 1995:199-210.
9 Malcolm L. Inequities in access to and utilisation of primary medical care services for Maori and low income New Zealanders. *N Z Med J* 1996;109:356-8.
10 Pringle M. Primary care: choice and opportunity. *BMJ* 1996;313:1026-7.
11 Kerr D, Malcolm L, Schousboe J, Pimm F. Successful implementation of laboratory budget holding by Pegasus Medical Group. *N Z Med J* 1996;109:354-7.
12 Malcolm L, Barnett P. Decentralisation, integration and accountability: perceptions of New Zealand's top health service managers. *Health Services Management Research* 1995;8:121-34.
13 Kiwis turn sour. *Economist* 1996; 19 Oct:17.

(Accepted 3 February 1997)

New Zealand's health reforms: a clash of cultures

Andrew Hornblow

See editorial by Ham and p 1890

Christchurch School of Medicine, University of Otago, PO Box 4345, Christchurch, New Zealand
Andrew Hornblow, *dean*
ahornblow@chmeds.ac.nz

BMJ 1997;314:1892–4

To reshape a health system without due regard for cultural imperatives is to risk failure, as has proved to be the case with New Zealand's health reforms of 1993. New Zealanders take pride in their claim to be the first to introduce a universal healthcare system, in 1938, as part of a post-depression welfare state. The recent, market oriented health reforms proved a major challenge to long accepted values and assumptions underlying the universal and freely accessible public health system established 50 years ago. In response to public opposition and polarisation of clinical and commercial cultures, the new coalition government is planning to remove the commercial and competitive basis of the reforms.

Summary points

The New Zealand health system has recently undergone its most radical restructuring in 50 years

The market oriented reforms of 1993 largely failed to deliver anticipated benefits and were widely opposed

Most key elements of the reforms have been or will be reversed by the new coalition government

Clinical and commercial cultures became polarised and must now re-establish cooperative decision making

The 1993 health reforms

The health reforms were announced in the minister of health's green and white paper of July 1991.[1] Before the health reforms hospital care was coordinated by 14 area health boards financed according to a population based funding formula. Some hospital services were (and still are) available privately, but as health insurance contributed only 6% to total health expenditure private hospital care was restricted effectively to such areas as elective surgery. In primary care, general practice consultations carried various government subsidies, though the value of these subsidies had been reduced steadily and markedly over a decade or more.

At the core of the health reforms was the establishment of a purchaser-provider split, which introduced the mechanisms of the market into a publicly funded health system. The government claimed that this would increase effectiveness and efficiency, improve access to care, create greater flexibility in the use of services, reduce waiting time for prioritised services, and better integrate primary and secondary care. It was considered that restructuring public hospitals as businesses would provide the necessary tension and incentives to enhance performance.

The reforms were implemented in July 1993. The Ministry of Health remained the government's primary adviser on health issues and overseer of the health system. The area health boards were disestablished. Four regional health authorities were set up to act as the government's purchasing agents. Twenty three Crown health enterprises (CHE) were established to run the restructured hospitals. The Crown health enterprises were placed under legislation applicable to commercial companies and expected to operate at a profit. Regional health authorities and Crown health enterprises then embarked on what became a complex and protracted process of negotiating contracts for services. The contracting process was to be competitive, to allow private hospitals, community agencies, or other potential providers to compete with the Crown health enterprises for provision of services. To ensure a market orientation in the restructured health sector the earlier process of electing members to the area health boards was replaced by ministerially appointed regional health authority and Crown health

enterprise boards, with most board members appointed from outside the health sector to ensure commitment to the commercial ethos behind the reforms.

Independent of personal clinical services, the government established the Public Health Commission to monitor the state of the country's public health, to provide policy advice on public health issues, and to purchase public health services. A further separate agency, the Core Services Committee, was also established to identify those core services which should be publicly funded.

Four years on

The government acknowledged that implementing the health reforms would take three years. Four years on, what progress has been made?

A formal review of the achievements and outcomes of the health reforms has not been undertaken. Many Crown health enterprises and other providers funded by regional health authorities have reported substantial increases in the volume of services provided under contract; however, these increases may be a continuation of the steady expansion of service provision that was occurring before the reforms. There are some indications that the reforms may have benefited "simple" health services rather than more complex ones. The contracting process is better suited to funding services such as rest homes than to funding more complex areas of health care, such as mental health and surgical services. There have also been successful initiatives in primary and community care,[2] through incentives available to independent practice associations, particularly general practitioners. Information systems in primary care have improved, and preventive programmes have been strengthened in some areas. There have been successes too in Maori health, through programmes set up by and for Maori, to provide more accessible and culturally acceptable services. Against these benefits have been stacked an increasingly formidable array of concerns about the health reforms and their impact.

In many areas the reforms have failed to deliver the anticipated benefits. The now substantial charges for general practice consultations are a significant barrier to access, particularly for disadvantaged people, including those from ethnic minorities. In some regions there has been a notable increase in hospital referrals and admissions for childhood conditions that might have been managed effectively in primary care if detected earlier. Hospital waiting lists for many procedures have become longer, by as much as 50%, rather than shorter. The government responded by allocating additional funds, outside negotiated contracts, to reduce waiting lists in the Crown health enterprises, and also proposed a booking procedure but with criteria that may well have excluded many currently on waiting lists. The claimed 20-30% savings from market led competition did not materialise; indeed costs escalated by a comparable percentage. The commercial imperative that Crown health enterprises operate at a profit was ignored as one after another received substantial additional funding to cover operating losses. Borrowing by the Crown health enterprises, in New Zealand and internationally, has exceeded $NZ300m (£130m; $208m) to meet the gap between government income through contracts and service commitments. Controversial user charges for certain hospital services were introduced then withdrawn, the cost of administering these charges being reputedly close to the revenue generated. Contract negotiations generated enormous transaction costs, were often concluded several months into the period to which they applied, and discouraged coordination between providers holding different contracts but providing services to the same patients. In the past two years the cost of running the regional health authorities has increased by 40% and the Ministry of Health's costs have grown 11% since 1994-5.[3] Medical schools and other training institutions have had difficulties—on top of increasing financial constraints—of lack of long term and coordinated planning with the Crown health enterprises. Maintaining excellence in an environment where teaching, research, and clinical practice are funded separately, often annually, and on the basis of a flawed "unbundling" strategy, has proved a major challenge.

Key structural elements of the reformed health sector were progressively modified. The Public Health Commission, a centrepiece of the reforms, was disestablished after a productive two years. Contributing factors were the Ministry of Health's antagonism to the commission's independent status and opposition from vested interests including the tobacco industry. The commission's role was taken over by the ministry. The Core Services Committee was also changed. Increasing difficulty in defining core health services to be funded by government led to the restructuring of the committee, now named the National Health Committee. A major focus of its activity became the development of service guidelines. Alternative healthcare plans were a further structural casualty. The green and white paper of 1991 had allowed for the possibility that individuals might withdraw funding from the public health system to establish alternative healthcare plans, but this was quietly dropped.

H FISHER AND SON/NZ

"Muster preparation Coronet Peak near Queenstown" by Peter Beadle. An exhibition of paintings by New Zealand artists is currently showing at Ebury Gallery, London

Response to reforms

From the outset suspicion about the health reforms and their unclear political agenda was widespread. Abolition of the largely elected area health boards was described by one political commentator as "an extraordinary constitutional innovation more characteristic of dictatorships."[4] The design of the new health system articulated in the 1991 green and white paper was worked out in secret without public consultation or debate among health professionals, who were considered to have "vested interests." Implementation, during the 1991-3 transition phase, was driven by government advisers committed to "new right" economics and previously involved in "corporatisation" and privatisation of public services, which heightened public and professional concern.

During 1993-6 opposition intensified as problems with the reforms became increasingly apparent. The individual and organisational stress of the changes was enormous. From mid-1993, when the 23 Crown health enterprises were established, to mid-1996, 13 chief executive officers resigned, as did the chairpeople of six health boards; turnover was also high among board members and senior management. Opposition from health professionals and the public reached an unprecedented level. Networking and coalitions among a wide range of health related and public organisations, and their effective use of the media, undermined the official promotion and defence of the reforms. Initially there had been a willingness among most health professionals to "give the reforms a go," but this goodwill was lost as management, and government, defended the indefensible elements of the reforms rather than negotiate compromises.

In October 1996 New Zealand faced its three-yearly general election, with health emerging clearly in repeated surveys as "the number one issue." The election was the first under the country's new "mixed member proportional" system. Neither of the two major political parties, National and Labour, emerged from the election with a clear majority. Eight weeks of intense negotiation followed, culminating in the formation of a centre right coalition between the National party (the previous government) and New Zealand First, the third party, which had campaigned against the health reforms. The coalition document *Policy Area: Health*, released on 9 December 1996, envisaged a health sector in which "principles of public service replace commercial profit objectives," with "cooperation and collaboration rather than competition between services." The four regional health authorities are to be replaced by a separate and central funding body, though the basic principle of separating purchaser from providers remains. The Crown health enterprises will be replaced by a smaller number of regional services. Major additional funding will be available for reducing waiting lists; for Maori health, child health, and mental health; and to remove current access and financial barriers. The coalition deal represents a major but not complete dismantling of health reforms that have been costly for all—the public, health professionals, and the reforms' political proponents.

Clash of cultures

The appropriateness of market oriented solutions to the worldwide problem of meeting seemingly infinite health needs with finite resources is widely debated.[5-10] The ultimate goal of a public health system is the provision of care as equitably, effectively, and efficiently as possible, not the profitable sale of commodities. The recent experience in New Zealand illustrates the limitations and risks of a market driven healthcare system.

Cultural factors proved at least as important as economic ones as the story of the health reforms unfolded. Culture may be regarded as an acquired system of values, beliefs, knowledge, and behaviour shared within a group, or more simply, "the way we do things around here."[11 12] Colonisation of one culture by another results in major changes in power structures, decisionmaking, resource allocation, social structures and networks, concepts and language, and dominant values and beliefs—all of which were apparent in the health reforms. Whatever the rhetoric of the reforms, the imposition of a market driven health system challenged widely held and cherished assumptions and existing values and practices. Major differences between clinical and commercial cultures became apparent. A high level of tension is inevitable in organisations where there are strong and competing pressures to maintain the separate identity of different subcultures and at the same time achieve organisational integration.[11-15] Clinical and commercial cultures need not be polarised but became so in New Zealand's reforms.

The lessons of New Zealand's health reforms have been painful ones. A major challenge now facing the country's health sector is to re-establish cooperative decision making between the clinical and commercial subcultures, to make best use of limited resources for the benefit of all.

Conflict of interest: None.

1 Minister of Health. Your health and the public health: a statement of government health policy. Wellington: Ministry of Health, 1991.
2 Kerr D, Malcolm L, Schousboe J, Pimm F. Successful implementation of laboratory budget holding by Pegasus Medical Group. *N Z Med J* 1996;109:334-7.
3 Health woes [editorial]. *The Press* 1996;9 Aug:9.
4 Easton B. How did the health reforms blitzkrieg fail? *Political Science* 1994;46:215-33.
5 Richards T. European health policy: must redefine its raison d'être. *BMJ* 1996;312:1622-3.
6 The Ljubljana charter on reforming health care. *BMJ* 1996;312:1664-5.
7 Borren P, Maynard A. *Searching for the holy grail in the Antipodes: the market reform of the New Zealand health care system.* York: Centre for Health Economics/Health Economics Consortium, University of York, 1993. (Discussion paper 103.)
8 Kassirer J. Managed care and the morality of the market place. *N Engl J Med* 1995;333:50-2.
9 Black D. A view on NHS reforms. *J R Coll Phys* 1995;29:442-5.
10 Dayan C. Provider power: an important lesson from the US health care market. *J R Coll Phys* 1993;27:238-41.
11 Elsass P, Veiga J. Acculturation in acquired organisations: a force-field perspective. *Human Relations* 1994;47:431-53.
12 Hood J, Koberg C. Patterns of differential assimilation and acculturation for women in business organisations. *Human Relations* 1994;47:159-81.
13 Nahavandi A, Malekzadeh A. Acculturation in mergers and acquisitions. *Academy of Management Review* 1988;13(1):79-90.
14 Strebel P. Why do employees resist change? *Harvard Business Review* 1996;May-Jun:86-92.
15 Leung K, Wu P. Dispute processing: a cross-cultural analysis. In: Brislin R, ed. *Applied cross-cultural psychology.* Newbury Park, CA: Sage, 1990:209-31.

(Accepted 3 February 1997)

Managed care

Implications of managed care for health systems, clinicians, and patients

Gillian Fairfield, David J Hunter, David Mechanic, Flemming Rosleff

Summary

The rhetoric and realities of managed care are easily confused. The rapid growth of managed care in the United States has had many implications for patients, doctors, employers, state and federal programmes, the health insurance industry, major medical institutions, medical research, and vulnerable patient populations. It has restricted patients' choice of doctors and limited access to specialists, reduced the professional autonomy and earnings of doctors, shifted power from the non-profit to the for-profit sectors and from hospitals and doctors to private corporations. It has also raised issues about the future structuring and financing of medical education and research and about practice ethics. However, managed care has also accorded greater prominence to the assessment of patient satisfaction, profiling and monitoring of doctors' work, the use of clinical guidelines and quality assurance procedures and indicated the potential to improve the integration and outcome of care.

This is the second in a series of three articles aiming to raise understanding of the issues surrounding managed care

Nuffield Institute for Health, University of Leeds, Leeds LS2 9PL

Gillian Fairfield, *senior registrar in public health medicine*

David J Hunter, *director*

Rutgers: The State University of New Jersey at New Brunswick, New Brunswick, NJ 08903, USA

David Mechanic, *René Dubos university professor of behavioural sciences*

Bure Managed Care, Box 5419, SE-402 29 Gothenburg, Sweden

Flemming Rosleff, *chief executive*

Correspondence to: Professor Hunter.

BMJ 1997;314:1895–8

Implications of managed care for health systems

Managed care in the United States has grown because it allows employers and public health programmes to purchase services for its clients at lower cost than traditional insurance. The growth of a competitive market and increased purchasing expertise has allowed private and public purchasers to contain the growth in premium costs and in some instances to reduce them.[2] However, a major difficulty in controlling costs is establishing capitation rates that adjust appropriately for projected morbidity and utilisation of care by patient populations. Managed care plans that enrol healthier patients make large profits while those attracting a disproportionate number of high risk patients can incur large losses. This undermines the goal of having plans compete on price and quality rather than success in selecting low risk patients. Attempts to control selection by risk include open enrolment periods, marketing rules, supervising enrollee choice, and federal legislation restricting the exclusion of people with pre-existing conditions.

Managed care companies are able to reduce costs by negotiating aggressively with hospitals and provider groups on rates and use of expensive resources such as inpatient care. Several sources report decreased utilisation of health services and decreased lengths of inpatient stays by managed care organisations.[3-5] This may reduce the demand for hospital beds and decrease hospital revenues, with the result that hospitals downsize and even close. Similarly, organised managed care networks need fewer specialists; by using primary care gatekeepers (who may have financial incentives to manage patients themselves) they shift power from specialists to general practitioners. As hospital and outpatient clinics are required to function more efficiently and at less cost, it remains unclear who will reimburse the higher costs of medical and other professional training, research, and patient care associated with new experimental treatments that do not fall within the managed care definition of "necessary care."

Implications of managed care for health systems

Positive:
- Better outcomes
- Lower cost
- Better quality (evidence based medicine)
- Improved allocation of resources
- Seamless care

Negative:
- Increased costs and time
- Need to overcome resistance to change
- Block to innovation
- Research and education at risk
- Vulnerable populations at risk

Though the evidence suggests that outcomes with managed care in general are no worse than with traditional fee for service, and may in some aspects be better,[5] some studies suggest that health maintenance organisations may have worse outcomes in treating elderly and poor patients with chronic illness; this may result in calls for regulation.[6] The lead in independent scrutiny of the quality of care provided by managed care organisations in the United States has been taken by the National Committee for Quality Assurance, a not for profit organisation partly financed by health maintenance organisations.[7]

Regulation and continuing scrutiny of managed care are emerging in three ways. Firstly, the United States congress and many state legislatures are passing laws to limit some managed care practices, such as mandatory early discharge (less than 24 hours)—for example, for mothers after giving birth— or to prohibit "gag rules" that restrict what doctors can tell their patients. Secondly, state departments of health and state insurance departments are issuing regulations on disclosure of financial incentives, mechanisms to settle complaints, required independent review of contested denials of service, and on matters such as whether non-medical reviewers of care can deny provision of medical service. Thirdly, the federal Health Care Financing Administration has also issued detailed managed care regulations affecting enrollees in government funded Medicare and Medicaid programmes.

Implications for clinicians

Within a system of managed care, doctors may experience decreased autonomy or lack of clinical freedom (box). Alternatively, they may derive satisfaction from working with guidelines within evidence based medicine and enjoy increased professionalism from knowing that their practices are operating to high standards.

Iglehart points out that by participating in managed care, doctors are showing a willingness to adapt to situations in which their actions may be curtailed and their accountability increased.[8] However, this willingness may be a result of the fact that work within managed care may be preferable to no work at all.

One of the powerful mechanisms underpinning managed care is the use of guidelines; either to pre-authorise care, manage ongoing treatment and length of stay, or for managing complex, high cost cases. Though often written and approved by doctors, these guidelines are usually administered by managers or nurses, curtailing some of doctors' freedoms—but doctors retain ultimate responsibility for patient care. The implications for doctors depend on the quality of the guidelines and how and by whom they are applied.

Incentives that encourage doctors to practice cost effectively include risk sharing, performance related payment, and bonuses and withholds.[9] Although use of hospital resources can be reduced by payment incentives—sharing resource utilisation information with clinicians, and formal utilisation strategies[10]— financial incentives are key to explaining low utilisation rates.[11] Financial incentives may undermine the doctor-patient relationship as they may result in management plans which are hidden from the patient. Conflict may arise if the doctor does not disclose incentives not to treat or fully explain treatment options. The ethical basis of many practices of managed care companies has been questioned: for example, putting more than small amounts of the providers' personal remuneration at risk should utilisation targets be exceeded; enforcing gag rules that limit what doctors can tell patients; and taking arbitrary decisions affecting patients and doctors without adequate appeals mechanisms.[12]

Managed care has implications for doctors by virtue of the means by which they are selected to become providers. Doctors not performing to standard, however defined, may be deselected. Their success can be judged on clinical criteria, commitment to the organisation, patient satisfaction, office organisation, case management of high cost patients, communication between primary and secondary care, length of stay, and delivery of preventive services.

Implications of managed care for doctors

Positive:
- Increased professionalism
- Collaboration
- Better information

Negative:
- Reduced clinical freedom
- Reduced status
- Increased supervision
- Conflicts of interest
- Altered doctor-patient relationship

"I used to be a doctor"

I used to be a doctor
now I am a Health Care Provider
I used to practise medicine
now I function under a managed care system
I used to have patients
now I have a consumer list
I used to diagnose
now I am approved for one consultation
I used to treat
now I wait for authorisation to provide care
. . . .
I used to have a successful people practice
now I have a paper failure
I used to spend time listening to my patients
now I spend time justifying myself to the authorities
I used to have feelings
now I have an attitude
Now I don't know what I am

(Found on the internet)

How, why and by whom should a doctor be considered inadequate? The concern is that managed care companies use profiling to deselect the high cost doctors rather than those providing poor quality care. Standards, case mix variables, and appeals procedures therefore need to be transparent, which has not always been the case in the United States. Increased accountability, utilisation management, and physician profiling all require better information systems, without which the long term evaluation of outcomes would prove impossible.

Many procedures are being removed from doctors and placed in the hands of other professionals, such as psychologists and optometrists, who have become preferred providers. Doctors are required to work in a more multidisciplinary manner and relinquish some control. Although this demands a culture change there are many opportunities for collaboration.

The feelings of United States clinicians towards managed care have included anger, denial, depression, negotiation, and finally acceptance. Doctors are often pulled between competing loyalties and tend to resist cost control measures because they suspect the motives of the managers. A poem taken from the internet (box) may represent an extreme view, but what is important is that these sentiments are expressed at all. If clinicians in the United States perceive managed care negatively, initiatives in Britain may engender similar fears. How managed care is presented to, and seeks to engage, clinicians in Britain will be central to its success.

Implications for patients

Patients too surrender some of their freedom under a managed care system. They may be restricted in their choice of doctor or hospital, and guidelines may dictate primary care rather than secondary care. Decreased choice may be offset by better outcome and quality of care: better integrated systems, improved quality monitoring, and greater attention to their satisfaction. Studies of the Medicaid population indicate that managed care may allow better access and some aspects of satisfaction than do traditional fee for service plans,[13] although consumer satisfaction is generally considered

to be poorer in managed care organisations. In Britain, how managed care will provide for disabled patients, who require continuing care and experienced professionals, and those with chronic disease, who require services across care areas, is of concern. The extent of the shift of burdens and costs outside the medical sector is unclear.

Potential improvements in the doctor-patient relationship include increased choice of managed care plan and physician, availability of information on physician competence and outcome, and a broader range of medical teams which include non-doctors[14]—but there may be less time for the doctor-patient interaction, fewer home visits, deselection of physicians causing disruption to continuity of care, and physician incentives causing conflict. As with the effects on clinicians, the implications for patients depend on the validity of the managed care processes, the training and skills of those involved in the process of managing care, the quality of the communications, and the constraints and incentives imposed on physicians.

There are calls for organised consumer protection in the United States,[15] and the Council on Ethical and Judicial Affairs in the United States has recommended guidelines for managed care[16]: doctors must continue to put patients first, with patient advocacy paramount. Information must be available to patients regardless of guidelines. There must be a mechanism in place to ensure arbitration and appeals by both patients and physicians. Alternative treatments must be discussed, and no gag clauses should be allowed. There should be standard limits on the amounts of fee incentives or withholds for clinicians and full disclosure to patients of those incentives.

Patients have the potential to drive managed care by being better informed and empowered. Under a seamless care system with integrated primary and secondary care, patients should receive more preventive services and take more responsibility for their own health. Measures need to be taken to ensure that it is not just the articulate middle classes that are empowered—the interests of vulnerable groups must be protected.

The NHS as a managed care organisation

Not all of the American experience is applicable to the NHS. Health care in the United States is a commodity to be bought and sold; in Britain, health care is regarded as a fundamental human right. Despite the challenges facing it, the NHS retains a population based, communitarian ethic. At a macro level, the NHS is already a managed care system with many of the requisite features in place (box).[17]

Implications of managed care for patients

Positive:
- Better outcomes
- Better informed
- Clearer expectations
- Patient driven guidelines
- Increased satisfaction

Negative:
- Restriction of treatment or doctor
- Increased responsibility not wanted
- Altered doctor patient relationship
- Less satisfaction

Features of the NHS as a managed care organisation

Structural features:
- Limited consumer choice of general practitioner
- Primary care gatekeeper
- Selective contracting by purchasers
- Financial incentives for general practitioners (capitation and bonuses for reaching targets, etc)

Functional features:
- Quality management (audit, accreditation)
- Utilisation management (guidelines, shared care protocols)

Recent white papers[18-20] developing the vision for a primary care led NHS offer the possibility of increasing both the structural and functional aspects of managed care by extending professional roles (thus increasing the range of potential preferred providers), diversifying employment and contract options, encouraging flexibility and sharing of premises, developing audit and evidence based medicine, introducing flexibility in resource use, and by encouraging information technology developments, including those in the area of clinical decision making.

Developing primary care purchasing could see the founding of structures similar to health maintenance organisations or preferred provider organisations with which health authorities could contract. Trusts and other health related bodies could employ salaried general practitioners, creating the equivalent of staff model health maintenance organisations.

The greatest potential lies at a micro level—namely, utilisation management, physician profiling, and financial incentives. With collaborative, seamless care as the goal of the NHS, key stakeholders will need to consider how risk will be distributed. Financial incentives and risks will need to be aligned to motivate all key players, yet this may prove difficult if fragmentation and diversity result in a conflict of policy objectives.

Increasing use of guidelines and utilisation management could provide a lever for the practice of evidence based medicine, which may reduce inappropriate treatment, improve quality, and decrease costs. Physician profiling could inform clinicians as to their own performance. All of these techniques will need to address two major barriers: information needs and the commitment and cooperation of doctors. Clinicians are still able to practise medicine as they see fit, and audit remains largely informal and without sanctions. This is a far cry from the United States, where managers are closely involved in clinical matters. Doctors in Britain will need to be reassured that the aim of managed care truly is to improve medicine and not direct it. If managed care comes to mean accountancy rather than accountability, doctors will resist.

Finally, a health warning: the further down the road to pluralism the NHS goes, the more difficult it will be for any government to reverse changes as there will be too many vested interests at stake to permit reform—a difficulty the United States is well aware of.

1 Fairfield G, Hunter DJ, Mechanic D, Rosleff F. Managed care:origins, principles and evolution. *BMJ* 1997;314:1823-6.
2 Zelman WA. *The changing healthcare market place.* San Francisco: Jossey Bass. 1996.
3 Welch WP. Health care utilisation in HMOs: results from two national samples. *J Health Econ* 1985;4:293-308.
4 Bradbury RC, Golec JH, Stearns FE. Comparing hospital length of stay in independent practice association HMOs and traditional insurance programs. *Inquiry* 1991;28:87-93.
5 Miller RH, Luft HS. Managed care plan performance since 1980. *JAMA* 1994;271:1512-9.
6 Ware JE, Bayliss MS, Rogers WH, Kosinski M, Tarlov AR. Differences in 4-year health outcomes for elderly and poor chronically ill patients treated in HMO and fee-for-service systems. *JAMA* 1996;276:1039-47.
7 Iglehart JK. The National Committee for Quality Assurance. *N Engl J Med* 1996;335:995-9.
8 Iglehart JK. Physicians and the growth of managed care. Health policy report. *N Engl J Med* 1994;331:1167-71.
9 Gold M, Hurley R, Lake T, Ensor T, Berenson R. A national survey of the arrangements managed care plans make with physicians. *N Engl J Med* 1995;333:1678-83.
10 Corad D, Wickizer T, Maynard C. Managing care incentives and information: an exploratory look inside the black box of hospital efficiency. *Health Services Research* 1996;3:235-59.
11 Hellinger F. The impact of financial incentives on physician behaviour in managed care plans: a review of the evidence. *Med Care Res Rev* 1996;53:294-314.
12 Mechanic D, Schlesinger M. The impact of managed care on patients' trust in medical care and their physicians. *JAMA* 1996;276:1693-7.
13 Sisk JE, Gorman SA, Reisinger AL, Gleid SA, DuMouchel WH, Hynes MM. Evaluation of Medicaid managed care; satisfaction access and use. *JAMA* 1996;276:50-5.
14 Emanuel EJ, Dubler N. Preserving the physician patient relationship in the era of managed care. *JAMA* 1995;273:323-9.
15 Rodwin MA. Consumer protection and managed care: the need for organised consumers. *Health Affairs* 1996;15:110-23.
16 American Medical Association Council on Ethical and Judicial Affairs. Ethical issues in managed care. *JAMA* 1995;273:330-5.
17 Hatcher P. Demystifying managed care. *Health Services Management Newsletter* 1995;3:1-3.
18 Secretaries of State for Health, Scotland, and Wales. *Primary care: delivering the future.* London: Stationery Office, 1996. (Cm 3512.)
19 Secretaries of State for Health, Scotland, and Wales. *Choice and opportunity. Primary care: the future.* London: Stationery Office, 1996. (Cm 3390.)
20 Secretary of State for Health. *The National Health Service: a service with ambitions.* London: Stationery Office, 1996.

Health in China

Maternal and child health in China

Therese Hesketh, Wei Xing Zhu

This is the fourth in a series of five articles on changing aspects of health care in China

Centre for International Child Health, London WC1 N1EH
Therese Hesketh, *research fellow*

Health Unlimited, London SE1 9NT
Wei Xing Zhu, *programme manager, East Asia*

Correspondence to: Dr Hesketh.

BMJ 1997;314:1898–900

Summary

China has made great progress in improving the health of women and children over the past two generations. The success has been attributed to improved living standards, public health measures, and good access to health services. Although overall infant and maternal mortality rates are relatively low there are large differences in patterns of mortality between urban and rural areas. The Chinese have developed a hierarchical network of maternal and child health services, with each level taking a supervisory and teaching role for the level below it. Maternal and child health in China came to international attention in 1995 with the promulgation of the maternal and child health law. In China this was seen as a means of prioritising resources and improving the quality of services, but in the West it was widely described as a law on eugenics.

The progress

Perhaps no other country in the world has achieved so much, so quickly, for the health of women and children. Just two generations ago Chinese women had bound feet and were the chattels of their menfolk. Now many women hold positions of considerable influence, with a level of equal opportunity and a sharing of domestic responsibilities that would be envied in many countries.

Since Liberation in 1949, appreciable reductions in mortality and morbidity have been achieved with limited resources—through a host of measures including control of infectious diseases, improved sanitation, better availability of food, expansion of maternal and child health services, safer delivery practices, an increase in women's literacy, and access to family planning. Maternal mortality fell from over 1500/100 000 in 1950 to 50/100 000 in 1995 and the infant mortality rate fell from 250/1000 to 37/1000 (fig 1),[2] though when this rate is translated into actual numbers of deaths, China is still second only to India in total numbers of infant deaths per year.

This official infant mortality rate is widely acknowledged to be at least 20% lower than the actual figure. Underreporting of infant deaths occurs not only because of poor data collection in many areas but also because of the imperative for local officials to perform well and meet targets. This is encouraged by the bonuses and prestige accorded to "model" hospitals and counties that appear to perform well. In some counties year on year reductions in infant mortality since the early 1980s have been found to be fabricated. In fact, they have plateaued in most parts of China since then.

The urban-rural divide

The overall mortality rates conceal wide variations between urban and poor rural areas. Maternal mortality differs at least fivefold, ranging from 18/100 000 in Shanghai to 108/100 000 in Ningxia.[3] In rural areas the

Paediatric ward at a county hospital in Jiangsu province

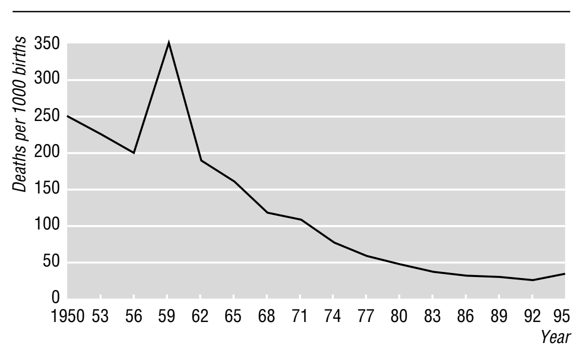
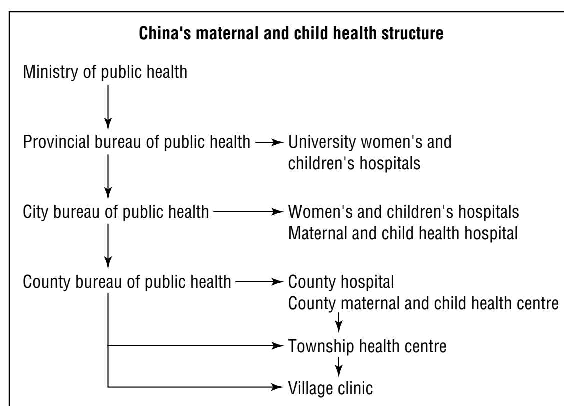


Fig 1 Trends in infant mortality. Figures for 1992 and 1995 are official estimates



most important cause of death is postpartum haemorrhage; in urban areas it is eclampsia.[4] Infant mortality rates show at least 10-fold differences: in Beijing the official rate is 10/1000, with a pattern similar to developed countries. Neonatal causes, mostly prematurity, asphyxia, and infection, account for around two thirds of the deaths. In the poorest areas, where around 15% of the population lives, the rates are over 100/1000 and the pattern is like that in the poorer developing countries, with postneonatal causes such as pneumonia and diarrhoea predominating.[1]

There are differences also in nutritional status between the cities and the countryside: in poor rural areas undernutrition remains a problem, with 10-20% of children aged 1-4 years in rural areas below 80% of the median weight for age,[1] while in the cities childhood obesity is now starting to become a problem. However, nutritional deficiencies such as iron deficiency anaemia are not confined to the rural areas. Studies carried out in the late '80s estimated that 40% of all Chinese 7 year olds had haemoglobin concentrations below 11 g/l. In some rural areas over 80% of children were anaemic. Around 20% of 7 year olds overall have rickets, and rates in the rural north are as high as 50%.[5]

The maternal and child health hierarchy

The maternal and child health department at the ministry of public health provides overall direction for maternal and child health services. Ministerial directives are translated by the provincial departments into implementation plans at city, county, township, and village levels (box). At city and county level there is a maternal and child health department at the bureau of public health which oversees the activities of the hospitals and health centres providing maternal and child health services.

The quality of services at each level varies enormously, depending on location and resources available. Country doctors (previously barefoot doctors) with three to six months' months training usually have clinics in their own homes. Their equipment is basic, usually consisting of the Three Instruments: stethoscope, sphygmomanometer, and thermometer. Village maternal and child health workers provide some basic antenatal, postpartum, and neonatal care as well as planning and, in remote areas, delivery services.

Township health centres are usually staffed by doctors with two to three years' training and by midwives. The centres have an average of 15 inpatient beds across all specialties,[6] and in the larger health centres some operative procedures such as caesarean section can be carried out.

Most obstetricians, gynaecologists, and paediatricians work at county and city level. At county level there is a county hospital, like a district general hospital, with around 300 beds, and a maternal and child health centre. The centre is the cornerstone of the maternal and child health network and was introduced by the Russians in the 1950s. Here the medical staff provide antenatal and postnatal care and surveillance of infants and schoolchildren. Medical staff are also responsible for the training and supervision of lower level workers. One third of the clinical staff is required to spend one third of their time at the lower levels. There has been a programme of expansion and improvement of the maternal and child health centres over the past decade, with grants and loans easy to obtain. Now many centres are introducing more lucrative delivery services; in the new market system this puts them in direct competition with county hospitals. The county hospitals in many places are being forced to upgrade their facilities or face closure of their obstetric units.

In most cities several hospitals, usually including a specialised women's and children's hospital, provide maternal and child health services. High technology

Where there is no rooming in, trolleys are used to bring babies to their mothers for breast feeding

care is widely available, at a price, and many hospitals now have a neonatal and paediatric intensive care unit.

There are clear advantages to such a hierarchical network: it creates a referral network for high risk patients, and the supervision system facilitates training and contact between health facilities, which is much needed in remote areas. It also means that directives can be acted on with sometimes astonishing speed. A good example of this is the way that the "baby friendly initiative" was embraced. From almost universal separation of babies and mothers after birth (at county and city hospitals), rooming in was introduced across the country in 1993. Three thousand hospitals were given the title Baby Friendly Hospital in the first year. Breast feeding rates (at 1 week), which had fallen to about 20% in cites like Hangzhou, now stand at around 70%.

But the vertical structure also leads to plurality of services and inefficiency. Family planning and immunisation programmes are run as entirely separate vertical programmes with their own provider units. In smaller counties there simply are not enough patients to justify a separate maternal and child health hospital. The duplication of staff and facilities, together with the underutilisation, makes the system inefficient. Nor is this good for patients: a woman may go to one hospital for her premarital examination, the maternal and child health centre for antenatal and postnatal care, and another hospital for delivery; her baby will be immunised at the anti-epidemic station, and she will go to the family planning clinic for contraception.

The maternal and child health law

The Chinese approach to maternal and child health came to international attention in 1995 with the enactment of the law on infant and maternal health (box). In Chinese maternal and child health circles the law is seen as a major step forward in attempts to improve health care for women and children. In the Western press it has been presented as a eugenics law and has been the subject of considerable debate.[7 8] The word eugenics is in fact readily used in Chinese official circles. However, eugenics translates into Chinese as *you sheng you yue*, meaning "better birth, better care," and does not have the negative overtones that the word has in the West.

There can be no doubt that most of the 38 articles of the law are positive. For example, during pregnancy women must receive instruction on healthy pregnancy, "rearing of the next generation" and "endemic diseases such as iodine deficiency syndrome." The law states that "pregnant and post-partum women should receive advice on hygiene, nutrition, and psychology." In addition, fetal sex determination is strictly illegal (except on medical grounds), with stiff penalties for any professionals and institutions involved. Some of the areas that seem controversial to Westerners merely state what has been accepted practice in China for many years—for example, the examination before marriage, with postponement of marriage if serious disease is found, to allow for investigation and treatment.

Two articles contain overtly eugenic elements: article 10 states that "if a couple both have a genetic defect which would make childbearing inappropriate from a medical point of view, then the marriage can only take place if the couple agree to take long term contraceptive measures or be sterilised." Article 18 states that "medical advice for a termination of pregnancy must be given if the fetus has a genetic disease of a serious matter or a serious defect or if the mother's life is threatened."

Law on Infant and Maternal Health (enacted 1 June 1995)

Introduced because of concerns about:
- High burden of disability (around 54 million people)
- Dubious local practices—for example, in Shaanxi Province anyone with an IQ lower than 40 was not allowed to get married.

38 articles cover:
- Premarital health
- Antenatal and perinatal health
- Guidelines on technical implementation, management, and legal liability

Local governments must:
- Prioritise resources for antenatal care and neonatal care
- Ensure that all health workers are appropriately qualified
- Give special emphasis to improving affordable services in poverty stricken areas

Western commentators have raised serious concerns about the lack of clear definition of the conditions for which termination would be advised.[9] But the Chinese deny that this is a law on eugenics (by Western definitions). They make several points: firstly, the anomalies covered under the law are rare. Antenatal diagnosis is still crude, so the issue of terminations for minor abnormalities doesn't arise. Secondly, there is no way of forcing a couple to take contraceptive measures if they refuse. Thirdly, termination can only be advised and force is totally unacceptable. Finally, in China it is very unusual for a couple to choose to have a child if they know it will be abnormal.

This final point is crucial. The maternal and child health law does not force people into eugenic abortions—it makes abortions more readily available to those who want them.[9] The decision has a clear economic rationale. A disabled child will probably not be able to support aging parents and will be a considerable financial drain because of the high costs of education and health care.

The main challenges for China's maternal and child health services are twofold: to protect the gains already made for the majority, while maintaining the momentum for improvement, and to prioritise resources to the poorest areas. The maternal and child health law will go some way at least to help the poorest areas.

1 Unicef. *Children and women of China: a Unicef situation analysis.* Beijing: Unicef, 1989.
2 *Chinese Health Statistics Digest.* Beijing: Ministry of Public Health, 1995.
3 Young ME. Maternal health in China: challenges of the next decade. *Health Policy* 1990;14:87-125.
4 Zhang LM, Ding H. Analysis of the causes of maternal death in China. *Bull WHO* 1988;66:387-90.
5 Zheng Y. Three Bests programme to help children. *China Daily* 1996 November 23.
6 Liu XZ, Wang JL. An introduction to China's healthcare system. *J Public Health Policy* 1991;12:104-16.
7 Western eyes on China's eugenics law [editorial]. *Lancet* 1995;34:131.
8 Hawkes N. Scientists attack China over selective breeding. *The Times* 1995 June 5.
9 Anton M. MCH law: a eugenics law. *China Review* 1996;4:29.