

Managing Chronic Disease

WHAT CAN WE LEARN FROM THE US EXPERIENCE?

JENNIFER DIXON, RICHARD LEWIS, REBECCA ROSEN, BELINDA FINLAYSON, DIANE GRAY

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Abbreviations and acronyms

Anthem BCBS	Anthem Blue Cross Blue Shield
CDM	chronic disease management
CEO	chief executive officer
COPD	chronic obstructive pulmonary disease
CQP	Clinical Quality Program
GHC	Group Health Co-operative
GMS	General Medical Services
GP	general practitioner
HEDIS	Health Employer Data Information Set (United States)
IPA	Independent Practice Association
IT	information technology
KP	Kaiser Permanente
KPNC	Kaiser Permanente North California
MCO	managed care organisation
NATPACT	National Primary and Care Trust Development Programme (England)
NCQA	National Center for Quality Accreditation (United States)
NHS	National Health Service (England)
NSF	national service framework (England)
PCP	primary care physician
PCR	population care registry, used at Kaiser Permanente North California
PCT	primary care trust (England)
PEC	Professional Executive Committee (England)
PILOT	Patient Integrated Logging, Outreach and Tracking system, used at Kaiser Permanente North California
PMG	Permanente Medical Group
TPMG	The Permanente Medical Group

Glossary

Anthem Blue Cross Blue Shield

A 'network model' managed care organisation in nine states across the United States, including Connecticut.

Case management

Case management is targeted at the highest-risk patients – those who have the most complex conditions or are the most severely ill. Specialist nurses or other highly skilled case managers co-ordinate care, work proactively to slow disease progression, improve patient education/self-management and liaise between primary and secondary physicians.

Chronic care model

A generic model developed in the United States by Professor Ed Wagner, Director of the MacColl Institute for Healthcare Innovation, to support the management of patients with any chronic disease.

Chronic disease management

A programme of care for people with on-going illnesses such as asthma, diabetes, heart failure, or chronic obstructive airways disease. The Disease Management Association of America defines disease management as: 'a system of coordinated healthcare interventions and communications for populations with conditions in which patient self-care efforts are significant'.

Clinical Quality Programs

A set of programmes run by Anthem Blue Cross Blue Shield to encourage the provision of high-quality clinical care, including in chronic disease management.

Disease management

Disease management is targeted at lower-risk patients. It includes the proactive management of care (involving, for example, guidelines with prompts to physicians and/or patients and an electronic disease registry), decision support systems for patients and clinicians, and feedback of clinical data to physicians on their own panel of patients.

Electronic disease registries

Computerised databases that identify patients affected by chronic diseases and record details of their care management.

General Medical Services

In England, the national contract between the NHS and GPs.

Group Health Co-operative

A 'mixed model' managed care organisation in Seattle.

Group model managed care organisation

Managed care organisations in which a risk-pooling or insurance function is linked to an integrated system of hospitals, ambulatory facilities and clinicians covering the continuum of services. Physicians are either salaried employees or shareholders of an affiliated medical group that contracts exclusively with the managed care organisation.

HbA_{1c}

Haemoglobin type A_{1c}. A blood molecule raised in patients with poorly controlled diabetes mellitus.

Health Partners

A 'mixed model' managed care organisation in Minnesota.

Independent Practice Association

In the United States, a loose alliance of physicians that contract jointly with purchasers of care.

Kaiser Permanente

The national organisation of a specific 'group model' managed care organisation. Kaiser Permanente – North California is a 'group model' managed organisation that forms part of the national organisation.

Managed care organisation

In the United States, an organisation that provides comprehensive healthcare in return for an annual fee per patient (typically with some co-payments by patients) and has strong incentives to manage patients' care pro-actively and to promote their health.

'Mixed model' managed care organisation

This type of managed care organisation exhibits characteristics of both the group and network models. Enrolees may be served by the affiliated medical group in facilities owned by the MCO, or by independently contracted groups that serve more than one health MCO.

National service frameworks

Policy documents providing blueprints and standards for the organisation of services to achieve best management for a range of conditions (such as coronary heart disease and diabetes) and patient groups (such as older people) in England.

Network model managed care organisation

This is the most common form of managed care organisation in the United States. MCOs contract with a variety of providers on a non-exclusive basis. The providers can be single hospitals, clinics or physicians, although it is far more common for network MCOs to contract with conglomerates of providers, typically in independent practice associations (IPAs) or medical groups. A single physician may belong to several IPAs or medical groups. Payments to physicians are made using a blend of capitation (usually for curative care) and discounted fee-for-service (usually to encourage preventative care).

Permanente Medical Group (Group Health)

Physician group affiliated with Group Health Co-operative.

Primary care trust

A statutory body responsible for delivering healthcare to its local population. Primary care trusts commission primary and secondary care local services and may also directly provide a range of community health services themselves.

Professional Executive Committee

Part of the management structure of each primary care trust in England, comprising GPs and other health care professionals.

Risk stratification

Risk stratification involves the proactive identification of patients at high risk of hospitalisation, at whom case management can be targeted to prevent admissions. Assessment of risk is based on previous use of health care, and is normally done with the help of computer software.

Strategic health authorities

NHS bodies responsible for providing a strategic framework to co-ordinate the development of health services across their areas, to manage hospital and PCT performance, and to improve the quantity and quality of services.

The Permanente Medical Group

Physician group affiliated with Kaiser Permanente North California.

Touchpoint Health Plan

A 'mixed model' managed care organisation in north-east Wisconsin.

Summary

A growing challenge

Chronic medical conditions – such as asthma, diabetes, heart failure and hypertension – are lifelong and often progressive. As the population in England ages, growing numbers of patients will need help in managing complex, multiple conditions over sustained periods. Quite apart from the burden of ill health, treating these conditions is likely to cost the NHS in England far more than elective surgical procedures.

Yet government policies and targets for acute sector managers and health commissioners, such as reducing waiting lists and increasing productivity, are strongly focused on the elective care sector. Several recent government initiatives – for example, the national service frameworks for diabetes and coronary heart disease – aim to improve the care of people with chronic disease. But these are taking place against a background of wider changes in the NHS, in particular the introduction of market-style incentives for hospitals, which may inhibit the development of good chronic care management. There is a growing danger that less, rather than more, collaboration between health service providers may result. There is a need for a new, co-ordinated national approach that helps people with chronic disease – and their carers – manage their conditions more effectively and thus reduces the burden of chronic disease on the health service.

Better primary care and better integration between primary and secondary care can play a significant part in reducing the use of expensive and disruptive hospital stays for people with chronic conditions. But in England, there are large variations in hospitalisation rates associated with chronic diseases between different primary care trusts (PCTs) that serve similar populations. These suggest the need for a wider, more systematic approach – and accompanying incentives – to help primary care providers manage chronic disease in consistent and targeted ways.

What happens in other countries?

There is much to learn from other countries. Managed care organisations (MCOs) are organisations that offer comprehensive health care to defined populations in return for a fixed capitation payment (an annual premium per patient). MCOs in the United States have in-built incentives to manage the care of patients more proactively. Some have achieved striking results – for example, good-quality care, high levels of patient satisfaction and much lower hospitalisation rates than in the NHS. There are obvious parallels between the structure and function of MCOs in the United States and PCTs in England – in particular, the need to manage financial risk while meeting all the health needs of their associated patients.

A number of MCOs have been particularly active in improving the care of people with chronic conditions – for example, Kaiser Permanente in California and United Healthcare in Minnesota. At present, initiatives inspired by their activities are being piloted in 18 PCTs in England under the leadership of the NHS Modernisation Agency. In addition, a generic model of care – the

Chronic Care Model – is gaining support in the United States and underpins the approach to the prevention and management of chronic disease in many MCOs.

But we have, as yet, a limited understanding of the features responsible for the success of these MCOs, and we know still less about which of these features might appropriately be adapted to the very different context of the NHS in England. We also need to assess the trade-offs that might be involved in applying lessons from market-driven, local health care organisations in the United States to a national health service based on principles of social equity and public good in England.

As the King's Fund contribution to the increasingly pressing debate about chronic care management, we undertook further research that we felt could usefully inform future decision-making. *Managing Chronic Disease* offers a critical analysis based on a study of five MCOs, all among the top performers in the United States in the care of people with chronic conditions, and asks what lessons or transferable models might emerge for health care in England.

About the study

We selected five MCOs as the basis of our study, largely because of their high scores on performance indicators (such as the control of blood pressure and the prescribing of appropriate medications) related to chronic disease management. One was a 'group model' MCO (where services were provided exclusively by a medical group affiliated to the MCO), one was a 'networked model' (where the MCO contracted freely with most local providers) and three were 'mixed models' (where the MCO worked with an affiliated medical group and contracted with other providers). The organisations we studied were:

- Kaiser Permanente (North California) – group model
- Group Health Cooperative (Washington State) – mixed model
- Health Partners (Minnesota) – mixed model
- Touchpoint Health Plan (Wisconsin) – mixed model
- Anthem Blue Cross Blue Shield (Connecticut) – network model.

A team from the King's Fund visited each MCO in the period February–August 2003 to identify what might lie behind their strong performance. Information was collected from each site by means of:

- semi-structured interviews with senior staff
- a review of 'grey' literature
- visits to clinical facilities
- presentations from staff
- contact with practising clinicians.

In putting together our analysis, we scrutinised the factors that appeared to be associated with their success in relation to three broad areas:

- **the wider environment in which they operated** – for example, the use of market incentives
- **their organisational domain** – including the relationship between healthcare purchasers and providers
- **clinical process** – such as the disease management programmes in place.

The wider environment

Our main findings were:

The impact of competition and the market

- Competition between MCOs for enrolees appeared to encourage innovation in service design and quality.
- Competition for enrolees (particularly competition for contracts with the large employers that are major purchasers of health care) seemed to have a greater influence than competition between providers for contracts with MCOs.
- The need to survive in the marketplace helped to align the objectives of managers and physicians, particularly where MCOs contracted with affiliated medical groups. The ability of enrolees to switch to another MCO prompted close collaboration.
- Excessive competition between MCOs could lead them to focus on attracting young and healthy enrolees at the expense of improving chronic disease management.
- Market competition could have both a positive and a negative impact on chronic disease management, and the value MCOs placed on this type of care was critical to their success in improving quality.

Recommendations for the NHS

- An assessment by the Department of Health of how different current national policies might help or hinder the development of better care for people with chronic conditions is needed – in particular, how proposed new market incentives for hospitals and the introduction of foundation trusts will impact on chronic care.
- We suggest that there could be stronger financial incentives on PCTs, GPs and acute NHS trusts to manage patients with chronic conditions more effectively in the community and reduce the need for admission. There is scope here for creativity, pilots and evaluation. The incentives could arise from the encouragement of competition and a market – for example, between PCTs for patients, or through contestability of PCT management, although both have significant risks. Another route could be taken that does not rely on encouraging market pressures, but which assesses in a much more sophisticated way the mix of incentives already acting on GPs, practices, PCTs and acute trusts, and aligns them more strongly to the goal of better health and reduced avoidable hospitalisation.

The organisational domain

Our main findings were:

Relationships and incentives

- MCOs had local discretion to set organisational goals and priorities through negotiation between corporate and clinician managers. Such negotiation helped to determine how successfully goals and priorities were implemented.

- Long-term relationships between MCOs (as commissioners) and providers (hospitals and networks of physicians working in the community) were considered critical in providing incentives for investment in chronic disease management.
- Larger and more organised networks of physicians were more willing and able to engage in effective chronic disease management than loose networks of solo practitioners.
- Where MCOs worked exclusively with affiliated medical groups, both the purchaser and the provider of care had very similar incentives to improve disease management.
- Doctor–manager relations were strong, although there were fewer leadership opportunities for other clinical professionals.
- There were effective financial incentives for quality, targeted mainly at physicians, to encourage better care of people with chronic conditions.

Recommendations for the NHS

- PCTs should be helped to develop a business case for investing in chronic disease management – this might be a role for strategic health authorities.
- Better-developed financial incentives for providers (primary and secondary) are needed to provide integrated care and to keep people with chronic conditions well enough not to be hospitalised. Current financial incentives that apply to hospitals do not promote good chronic disease management and should be reviewed.
- The IT infrastructure in primary care should be further developed to enable the identification of high-risk patients and the ‘real time’ feedback of information to clinicians, thus encouraging continuing peer review.
- Much greater investment is needed in developing clinician–manager relations within PCTs and between PCTs and their providers.

Clinical process

Our main findings were:

- All of the MCOs used at least some of the six elements of the Chronic Care Model – a generic model designed in the United States to help MCOs organise better care for people with any chronic disease.
- Four of the five MCOs identified high-risk patients (‘risk stratification’) and targeted them for intensive case management – mainly nurse-led outreach care to work with patients to effectively manage their disease (the fifth MCO was developing this model).
- Lower-risk patients were offered disease management programmes that involved:
 - proactive management of care using guidelines with prompts to clinicians and patients
 - decision-support systems for patients and clinicians
 - patient education and self-care

- electronic disease registries that identify affected patients and record details of their care management
 - the feedback to physicians of accurate, ‘real time’ clinical data on their own patients, with supportive peer review.
- There was limited choice for patients in whether or not to participate in case or disease management programmes (selection was determined by the MCO).
 - There was a marked lack of focus on social care.

Recommendations for the NHS

- A generic model of chronic disease management should be developed.
- Risk stratification (and the identification of patients at high risk of ill health and hospitalisation) should be developed in every PCT.
- Case and disease management programmes in which support for self-management is a central feature should be developed in every PCT.

Taking things forward

The King’s Fund is working with others in 2004 and 2005 to help take forward some items of the agenda outlined above.

- We are convening a national coalition of stakeholders interested in improving the care of people with chronic conditions. The coalition aims to raise the profile of chronic disease management, increase synergy between the work of participants to improve chronic care, and develop a chronic care model for England.
- We are discussing the agenda with the Department of Health, the Modernisation Agency and the Commission for Healthcare Audit and Inspection.
- We are embarking on development work with selected PCTs in London to help them improve the care they give to people with chronic conditions.

Introduction

Chronic diseases such as asthma, diabetes and heart disease are highly prevalent in England, affecting the lives of millions of people and causing thousands of premature deaths. Quite apart from their impact on physical health, these diseases disrupt the social and working lives of the people affected by them and have important implications for families, friends, carers, employers and health services.

Research from the United States shows that chronic diseases such as diabetes, asthma and chronic obstructive pulmonary disease (COPD) are among the costliest conditions to treat (Druss *et al* 2002) and emerging findings from England reveal a similar picture (Jobanputra *et al* 2003). Yet for many chronic diseases there is evidence that better primary care can reduce hospital admissions and that better hospital care can reduce the length of stay for patients (Pringle *et al* 1993; Swift *et al* 1993; Osman *et al* 1994). In the NHS in England, the care provided for patients with chronic disease varies widely: research shows large geographical variations in admission rates for patients with specific chronic diseases (Department of Health website 2002c). And one chronic condition, COPD, is the biggest cause of hospitalisation over the winter period in the NHS (Damiani and Dixon 2001). There is clearly scope to enhance prevention, reduce disease progression and improve treatment of chronic diseases.

In England, there are currently a number of national policies, backed by significant investment, that set out to improve the management of people with chronic diseases: for example, the national service frameworks (NSFs), the work of the NHS Modernisation Agency and the incentives in the new General Medical Services (GMS) contract. A system of targets and associated indicators allows the charting of progress in some key areas. Outside these national initiatives, there is considerable spontaneous local activity to improve care in the NHS.

Yet there is much to learn from other countries. In the United States, managed care organisations (MCOs) have strong in-built incentives to manage care for patients more effectively. They have been active in developing chronic disease management and have achieved some striking results. One study of a US managed care organisation, Kaiser Permanente in California, found that hospital use was one-third of that in the NHS (Feachem *et al* 2002). Other research confirmed that admission rates and length of stay in hospital were lower for older patients in Kaiser Permanente than in the NHS (Ham 2003).

This research paper explores what PCTs can learn from how high-performing MCOs (see p 3 *for definition*) in the United States care for people with chronic disease. Although comparisons with other countries are notoriously difficult, several factors make the present study timely and important for the NHS in England. First, MCOs have useful similarities with English primary care trusts (PCTs), in that both receive capitated payments to provide comprehensive care to patients. Second, the Department of Health and the NHS Modernisation Agency are showing great interest in learning from MCOs in the United States how to manage care better: EverCare, a project developed by United Healthcare in Minneapolis to improve the care of frail older people, is being piloted in nine PCTs in England. Older people at highest risk

of hospitalisation are being identified and targeted for intensive proactive care to reduce the risk of illness requiring hospital admission. Another nine PCTs are developing initiatives inspired by a visit to Kaiser Permanente North California in early 2003: for example, the more effective integration of primary, secondary and social care. Third, MCOs routinely provide information on their achievements in chronic disease management, thus enabling the best performers to be studied.

However, we have as yet a very limited understanding of the factors that are responsible for the success of MCOs in the United States, and even less of what might be adapted by the NHS in England, where health providers and commissioners operate in a very different environment. Critical analysis in this area is necessary if US initiatives are to be successfully imported. This research paper is therefore based on a study of five MCOs that are among the top performers in the United States in caring for patients with chronic diseases.

The paper is in five main sections. The first is a brief comparison of the US and English health care environments – understanding the differences between the two is crucial to assessing the potential of chronic disease management. The second and third sections describe the study of five selected US MCOs: the methods of study are described in section two and a summary of the main findings is given in section three. The fourth section discusses the key lessons that the NHS might learn from the study. The final section gives the main conclusions and suggests the next steps. More information about the five MCOs studied is available on the King's Fund website (www.kingsfund.org.uk).

1

The health care environment

This section looks at the differences between the health care environments of the United States and England. Understanding these differences is critical for assessing the development of chronic disease management in US managed care organisations (MCOs) and how far such initiatives could be transferred to the NHS.

The US health care environment

The United States has no national system of health care comparable to the NHS in England. The US health system is pluralistic, market-based and decentralised, and no single organisation is 'in charge'. Developments are as likely to be driven by the interaction of local influences (such as the response of the funders of care to increasing costs, or by physician-led and consumer-led initiatives) as by government policy. Government, both federal and state, provides the bulk of funding, mainly through two programmes: Medicare, which covers most health care for the over-65s, and Medicaid, which covers health care for those on the lowest incomes. Employers are the second largest contributors, and in third place are contributions directly from individuals, such as out-of-pocket payments. There are two other striking features of US health care: expenditure is higher than anywhere else in the world, and there is gross inequity in access. Currently about 18 per cent of the population (mainly people on low incomes) have no form of health insurance and millions more are under-insured.

More than 90 per cent of Americans with employer-funded health insurance now receive their health care through an MCO (Dudley and Luft 2001). Rather like a PCT in the NHS, the MCO receives a capitated payment for each person enrolled and, in return, is responsible for the care of that person. MCOs typically offer a specified package of care for a fixed annual sum per person. They may be run on a for-profit or not-for-profit basis. There is significant competition between MCOs (for contracts from individuals or collective contracts with employers, the state and federal government) and between providers (for contracts from insuring organisations).

A typical MCO is characterised by its efforts to:

- monitor and co-ordinate care throughout the entire range of services (primary to tertiary care)
- emphasise prevention and health education
- encourage the provision of care in the most appropriate setting and by the most appropriate provider: for example, outpatient clinic versus hospital, primary care physician versus specialist
- promote the cost-effective use of services through various means.

Adapted from Sekhri N (2000). 'Managed care: the US experience'. *Bulletin of the World Health Organisation*, vol 78 (6)

Occasionally, provider-based organisations in the United States are also described as MCOs, but in this research paper we use the term to refer solely to insurance-based organisations.

Two main pressures have shaped US health care since the 1980s: the need to curb the increase in costs and the need to improve the quality of care. Both pressures have had an impact on efforts by MCOs to improve chronic disease management, and are discussed briefly below.

Curbing health care costs

The number of MCOs grew rapidly in the 1980s and 1990s, largely in response to escalating health care costs. By 1996, 88 per cent of physicians were contracted with at least one MCO (Dudley and Luft 2001). MCOs were initially very successful in slowing down the increase in expenditure because they had built-in incentives to control costs within a fixed capitated budget, and because competition between MCOs kept premiums low. MCOs reduced costs by using managed care ‘tools’ such as pre-admission authorisation, pre-authorisation for expensive treatments and primary care ‘gatekeepers’ controlling access to specialists. This activity decreased take-up (particularly hospitalisation) compared to traditional indemnity insurance and was partly responsible for the curb in health expenditure in the United States between 1990 and 1997 (Dudley and Luft 2001).

However, aggressive competition between MCOs forced down premiums and cut profitability (Blumenthal 2003) to such an extent that the proportion of MCOs in profit fell from 90 per cent in 1993 to only 35 per cent in 1996 (Firshein 1997). This drove many to restrict benefits further and to use their ‘tools’ more actively, inaugurating an era of ‘tight’ managed care (Robinson 2001a). This approach increased administrative costs, reduced the clinical autonomy and income of physicians and restricted the public’s choice of provider and treatments (Blendon *et al* 1998). Not surprisingly, the frustration of physicians and patients led to a backlash against tight managed care in the late 1990s (Blendon *et al* 1998; Enthoven and Singer 1998; Casalino and Robinson 2003).

MCOs were forced to relax restrictions on consumers and controls on providers to such an extent that they are now in a period of what is described as ‘loose’ managed care (Robinson 2001a; Draper *et al* 2002). A range of more flexible managed care ‘products’ is now available: for example, consumers are able to select MCOs that offer a wider choice of physicians and health care providers with little or no ‘gatekeeping’.

One consequence is that health care costs are rising again (Iglehart 2002; Levit *et al* 2002). Another is that MCOs are now less able to compete through lower premiums, and so other factors, such as quality and access, are becoming more important as ways of discriminating between the MCOs on offer to health care funders (largely employers and state and federal government).

Improving health care quality

Employers are using their significant purchasing power to extract quality improvements from MCOs. Powerful inter-employer alliances have developed to negotiate collectively for better services and better information: examples include the Leapfrog initiative (www.leapfroggroup.org), the Pacific Business Group on Health (www.pdgh.org) and the National Forum for Health Care Quality Measurement and Reporting (Galvin 2001; Coye 2001). Most efforts to improve quality have focused on chronic conditions, because these are

widespread, costly (Druss *et al* 2002) and responsible for more than 70 per cent of deaths (Coye 2001), and because there is a sound evidence base for many chronic care interventions (Rich *et al* 1995; Naylor *et al* 1999; Weinberger *et al* 1996) and scope to reduce hospitalisation.

In the late 1980s and early 1990s employer groups began to develop quality indicators that would enable the performance of MCOs to be compared. The National Center for Quality Accreditation (NCQA) developed the Health Employer Data Information Set (HEDIS) of indicators. Refined annually, this captures performance data on diverse aspects of MCO performance (Epstein 1998). Almost 300 MCOs submit data to HEDIS, and it remains the most comprehensive source of information about the quality of care offered by MCOs. Many of the indicators relate to the care of chronic conditions, such as asthma, heart disease, diabetes and mental illness.

But despite good work by some MCOs and provider groups, care for people with chronic disease is still inadequate in many areas of the United States. The influential report *Crossing the Quality Chasm* (Committee on the Quality of Health Care in America 2001) highlighted major problems, in particular a lack of co-ordinated care for people with chronic diseases. The report's call for the development of care processes for chronic conditions has been taken up, for example by the Institute for Health Improvement.

There is no equivalent of the NHS national service frameworks (NSFs) in the United States, and no single recipe for high-quality chronic disease management has yet been identified. But there is an emerging consensus in the United States about the basic ingredients of good chronic care, and these have been synthesised into a generic model of chronic care that is gaining increasing acceptance across the United States (the Chronic Care Model). In the study reported in section three, all MCOs were implementing at least some elements of this model, which is discussed further in section four.

The health care environment in England

The health care environment in England is very different to that in the United States. The NHS is effectively a state-run bureaucracy directed from Whitehall and subject to very few market incentives. Yet over the past decade there have been various attempts to shift the balance of power from NHS headquarters to local NHS organisations, most recently by the creation of primary care trusts, which now hold 75 per cent of NHS resources and purchase primary and secondary care on behalf of their registered populations (about 250,000 in each case). As such, PCTs have some similarity with US MCOs, although the pressures PCTs face arise less from a competitive market, as in the United States, than from having to operate within a politically-led hierarchy.

Controlling costs has been less of a problem for the NHS than improving the quality of care. Traditionally, the chief concern has been to improve access for people waiting for elective surgery, since waiting lists are a sensitive electoral issue. Improving care for people with chronic diseases has not been prominent in NHS policy, yet significant (if less ostentatious) developments have taken place in England since 1997. These initiatives are of three kinds:

- imposition of 'top-down' policy mandates
- facilitation of 'bottom-up' service development
- investment in chronic disease infrastructure.

Each is considered in turn in the following pages.

‘Top-down’ policy mandates

The centrepiece of government policy to improve chronic care is the system of national service frameworks (NSFs). These represent a sustained effort to raise the priority given by NHS organisations to chronic disease management. NSFs bring together in a single statement a model of best care, a credible assessment of the international evidence on effectiveness, centrally mandated targets for implementation, and additional resources.

NSFs are supported by national clinical directors (or ‘czars’), whose role is to champion the frameworks and to provide clinical leadership for their implementation across the NHS. In addition, the NHS priorities and planning framework (the key statement of central requirements of NHS organisations) has set out a number of clear targets covering both clinical processes (such as the establishment of disease registers in primary care) as well as outcomes (such as reductions in mortality rates due to coronary heart disease) (Department of Health 2002a). Other developmental support is provided through the various arms of the NHS Modernisation Agency, including collaborative methods of improvement as developed by the Institute for Health Improvement in the United States.

NSFs already exist for coronary heart disease (Department of Health 2000a), diabetes (Department of Health 2002b; 2003a) and mental illness (Department of Health 1999) as well as for older people (Department of Health 2001a). Other NSFs are in development.

Unusually, the NSF for older people takes a broader approach than clinical practice alone, focusing on standards for the care of older people across both health and social services. Importantly, the emphasis is on person-centred care, where services are organised to meet individual needs regardless of service boundaries. This calls for integrated approaches to the commissioning and provision of services, and reflects another key policy theme for the management of chronic disease: partnership working. The flexibilities under the 1999 Health Act, together with lead commissioning arrangements between PCTs, pooled NHS and local authority budgets and integrated provision, were introduced to remove some of the barriers to more integrated provision of services for vulnerable people, for example, those with multiple chronic conditions.

‘Bottom-up’ service development

A number of new initiatives have emerged to facilitate local improvements in chronic disease management. Perhaps most significant is the introduction of new contractual arrangements for general practice. The 1990 national General Medical Services (GMS) contract provided only weak incentives for general practices to improve the management of asthma and diabetes. In 1998, experiments in local contracts for general practice – ‘personal medical services’ (PMS) pilots – were launched with the intention of improving the quality of primary care. Evaluation showed that there were observable, if minor, improvements in the management of angina, asthma and diabetes (PMS National Evaluation Team 2002).

The introduction of a new GMS contract in 2004 is likely to have a more profound impact on the quality of chronic disease care. The new contract introduces a wide range of explicit targets to drive up service quality across a range of different domains (known as the ‘quality and outcome framework’) and PCTs will have a key role in helping practices to achieve these targets. By 2005–2006, 15 per cent of the total resources paid through the new contract in England will be tied to these quality measures. Of the 1,050 incentive points available, 550 relate to clinical care, overwhelmingly in the area of chronic disease management.

A further policy strand has been to increase the flexibility of professional roles through a cluster of workforce-related initiatives. The NHS Plan (Department of Health 2000b) set out targets for new 'GPs with special interests', as well as announcing the intention to develop the roles of nurses and pharmacists, amongst others. To date, guidelines for practitioners with special interests (that is, not just doctors) cover coronary heart disease, care of older people, mental health and respiratory disease. The role of other, non-medical professional staff in chronic disease management also looks set to expand, not least in relation to community pharmacy services. Pharmacy roles such as 'medicines management', supplementary and independent prescribing and therapeutic monitoring can make a key contribution to better chronic disease care in the community (Department of Health 2003b). Local Pharmaceutical Services (LPS) schemes (similar to PMS pilots for GPs) offer new opportunities for pharmacy providers to contract for extended NHS services, and a new national pharmacy contract is under negotiation.

Attempts have also been made to strengthen the role of patients in managing their own chronic disease. Self-management is a central component of many of the NSFs and is being promoted through the Expert Patient Programme. This provides training and development support for patients with chronic diseases to equip them with the tools, knowledge and confidence to play an active role in care management. Currently, more than half of PCTs are either in, or are about to join, the programme and the Department of Health has estimated that up to 20,000 patients have received training (Department of Health 2003c).

Increasing the power and autonomy of patients is emerging as a defining theme of the Labour Government's health policy. While this is most obvious in relation to the selection of elective care provider by patients, introduced under the Patient Choice initiative (Department of Health 2001b), it is now clear that some form of increased choice will be extended to chronic disease and primary care.

Investment in chronic disease infrastructure

Two infrastructure issues are of vital importance to chronic disease management: the provision of information technology that supports a multi-agency, longitudinal approach to care delivery; and the development of facilities to house enhanced and community-based services.

Information technology has long been a failing of the NHS, which has a history of piecemeal development of incompatible systems. The new NHS strategy is set to invest heavily in the development of integrated and effective information technology. Of particular importance will be the creation of an 'integrated care record', allowing clinical information to be shared across institutions and professions, and the introduction of new forms of decision support for practising clinicians. The new GMS contract is already stimulating the development of clinical systems that support systemised chronic disease management (for example, through disease registers and 'templates'). Even more challenging are the moves towards shared records across health and social care sectors, particularly to support single assessments and integrated working.

Investment in new primary care facilities includes new primary care centres that combine locality-based 'extended services' (such as GPs with specialist interests) and new public-private partnerships (local investment and finance trusts) that will invest heavily in purpose-built premises for core primary care services.

Tensions between policies

This array of current initiatives to improve the care of people with chronic conditions suggests that the NHS in England is moving in the right direction. However, the wider policy environment within which these initiatives will have to operate may not be entirely favourable. This is because of the continual emphasis in NHS policy on reducing waiting times for elective care. The Government has concluded that the solution to waiting lists lies in sharper market-style incentives to encourage greater efficiency: a new 'cost per case' system of paying hospitals to encourage competition for patients, the introduction of a 'mixed economy' of public and private providers, and new rights of 'patient choice'.

As the new health care market develops, tensions may arise between policies on chronic disease management and policies on elective hospital care. Much depends on the relationship and the balance of power between the newly formed PCTs and the acute NHS trusts. These tensions may be played out through the new mechanism for paying hospitals. Greater transparency in the commissioning process (achieved through cost-per-case contracts underpinned by a standard price tariff) may strengthen the hands of PCT commissioners, allowing them to shift resources out of the hospital sector and into community-based alternatives that support chronically ill people. Alternatively, the same cost-per-case incentives may simply focus the attention of hospitals on their own survival: they may place more emphasis on protecting their elective 'business' than on shifting services to primary care or on working collaboratively across the primary-secondary interface. This trend could be accentuated in foundation hospitals, where a greater detachment from the local performance management regime of the NHS can be expected.

Summary

The US health care system is pluralistic, market-based and decentralised:

- Concerns about health care expenditure have led to the growth of managed care organisations (MCOs) which, for a capitated fee, 'manage' all aspects of care – from primary to tertiary – for their members.
- MCOs encourage the provision of care in the most appropriate setting and by the most appropriate provider.
- Aggressive competition between MCOs caused a backlash that has resulted in 'looser' managed care: fewer controls on providers, more choice for consumers and a greater preoccupation with the quality of care, especially for people with chronic conditions.

The NHS in England is a state-run bureaucracy subject to few market incentives:

- The NHS has been less concerned with controlling costs than with improving quality – although the chief concern has been to improve access to elective care.
- Primary care trusts have some similarities with MCOs in the United States, in that they are responsible for the comprehensive care of a registered population for a fixed budget.
- There have been recent initiatives to improve chronic disease management, most notably the national service frameworks and the new General Medical Services contract. Also

helpful have been the new emphases on flexibility of professional roles, self-management by patients and the development of appropriate infrastructure (including IT systems and primary care facilities).

- Yet many new NHS policies – such as the changed system of paying hospitals, the expansion of patient choice, and the introduction of foundation trusts and a mixed economy of providers – have been designed to reduce waiting times for elective care, and may in fact hinder improvements in integrated services for people with chronic conditions.

In the next section, we examine five highly performing managed care organisations in the United States to identify factors associated with good chronic disease management.

2

Research approach

In this section, we outline the rationale for the study, its structure and methods, and our analysis of the findings. The different models of managed care organisation are explained and the indicators for chronic disease management defined. Each of the five MCOs selected for the study is described in detail.

Rationale for the study

Managed care organisations (MCOs) were selected rather than provider groups as the focus of our study for several reasons. First, the capitated premiums paid to MCOs create similar incentives to those in primary care trusts (PCTs) to manage care within a fixed budget. Second, MCOs are encouraged to improve chronic care by the external reporting of performance and the potential cost savings associated with reduced hospitalisation. Third, in view of the significant interest in MCOs being shown by the Department of Health in England, we wanted to explore the factors associated with success in selected MCOs and analyse how far these factors were present, or could be developed, in the NHS.

However, this research does not attempt to make direct comparisons between chronic disease management in the United States and in England and to determine which is 'better'. The limitations of the information available about the population enrolled with each MCO mean that any like-for-like comparison is simply not feasible. Our intention was to examine the best that the United States had to offer and our assumption was that at least some of our learning might be transferable, given an understanding of the context within which health services in both countries operate.

Research structure

Using a conceptual framework developed by Ferlie and Shortell (2001), we hypothesised that the factors associated with the successful care of people with chronic conditions would operate in three domains:

- **the wider environment** The outside forces that shape the actions of health care organisations, managers and clinicians, such as market pressures, regulation and the development of broader trends such as 'consumerism'.
- **the organisational domain** The structure, management and operation of healthcare institutions: for example, the culture of management, the involvement of clinicians in management, financial incentives.
- **the clinical process** The delivery of services to patients at the level of the clinical team: for example, the numbers and types of staff available, the medication, the diagnostic tests available, the clinical pathway of care.

Site selection

A brief summary of how we selected the MCOs is given here. A more detailed account is included on our website at www.kingsfund.org.uk.

MCOs were selected according to four key criteria:

- high performance in chronic care components of the Health Employer Data Information Set (HEDIS) data set
- serving a population of at least 100,000 (to exclude organisations that were significantly smaller than the average PCT)
- covering a diverse population defined as accepting Medicaid enrollees to make them more comparable to English PCTs
- providing a cross-section of different types of MCO, ranging from the ‘group model’ to networked providers.

The fourth criterion was based on our hypothesis that ‘integration’ between MCO and providers – either through ownership or exclusive and long-term contracting – was important in helping to improve the quality of care and that the extent of this integration would vary according to the relationship between MCO and provider (*see the box below*).

Our desire to use one more selection criterion – admission rates for key chronic diseases – was thwarted by the fact that such data are not publicly reported.

We obtained the full HEDIS dataset for 2001 and selected 35 markers of chronic care (*see Table 1, overleaf*).

MODELS OF MCOS

Group model

Here, the risk pooling or insurance function is linked to an integrated system of hospitals, ambulatory facilities and clinicians covering the continuum of services. Physicians are either salaried employees or shareholders of an affiliated medical group that contracts exclusively with the MCO. Reciprocal exclusivity is the key feature, and the MCO often owns provider facilities. In this system the MCO is funded through capitation, but providers are paid in a variety of ways, usually with incentive payments. This is the least common form of MCO, owing to the historically fragmented nature of provision and insurance in the United States.

Network model

This is the most common form of MCO in the United States. MCOs contract with a variety of providers on a non-exclusive basis. The providers can be single hospitals, clinics or physicians, though it is far more common for MCOs to contract with conglomerates of providers, typically in independent practice associations (IPAs) or medical groups. A single physician may belong to several IPAs or medical groups. Payments to physicians are made using a blend of capitation (usually for curative care) and discounted fee-for-service (usually to encourage preventative care).

Mixed model

This type of MCO exhibits characteristics of both the group and network models. Enrolees may be served by the affiliated medical group in facilities owned by the MCO, or by independently contracted groups that serve more than one MCO.

TABLE 1: HEDIS INDICATORS SELECTED TO REPRESENT THE MANAGEMENT OF CHRONIC DISEASE

Category	Indicator
Access and service	Access to preventive ambulatory health services (age 20–44) Access to preventive ambulatory health services (age 45–64) Access to preventive ambulatory health services (age 65 plus) Childrens' access to primary care practitioners (age 12–24 months) Childrens' access to primary care practitioners (age 25 months–6 years) Childrens' access to primary care practitioners (age 7–11 years) Getting care quickly (composite) Getting needed care quickly (composite)
Behavioural health care	Follow up after hospitalisation for mental illness – 30 days Follow up after hospitalisation for mental illness – 7 days
Child and adolescent care	Adolescent immunisation status – Combo 1 Adolescent immunisation status – Combo 2 Child immunisation status – Combo 1 Child immunisation status – Combo 2
Living with illness	Anti-depressant medication management – continuation phase treatment Beta-blocker treatment after heart attack Cholesterol management after acute cardiovascular events – LDL-C level Cholesterol management after acute cardiovascular events – LDL-C screening Comprehensive diabetes care – eye exam (retinal) performed Comprehensive diabetes care – HbA1c poorly controlled Comprehensive diabetes care – HbA1c tested Comprehensive diabetes care – LDL-C screening performed Comprehensive diabetes care – LDL-C controlled Comprehensive diabetes care – kidney disease (nephropathy) monitored Controlling high blood pressure Use of appropriate medications for people with asthma (age 5–9) Use of appropriate medications for people with asthma (age 10–17) Use of appropriate medications for people with asthma (age 18–56) Use of appropriate medications for people with asthma (combined rate)
Staying healthy	Breast cancer screening rate Cervical cancer screening rate Prenatal and postpartum care: timeliness of prenatal care Prenatal and postpartum care: postpartum care Chlamydia screening in women (combined rate)

Source: National Center for Quality Accreditation, Health Employer Data Information Set (2001)

We scored each MCO according to its reported performance against each chronic care marker and obtained an overall score by summing each individual score. The MCOs were then ranked using the scores. All MCOs who did not report having any Medicaid enrollees were then excluded, as were MCOs with an enrolled population less than 100,000. A panel of five US health services research experts helped us to reduce the resulting list of 25 high-performing MCOs (shown in Table 2 below) down to eight on the basis of their track record for high-quality care, and five of these were selected to represent the three main types of MCO. Also shown in Table 2 is, for each MCO, the total population covered, the proportion of the total population that are Medicaid beneficiaries, the number of years in business, and whether the business is classified as 'for profit' or 'not-for-profit'. The figures in Table 2 are those reported to the NCQA for 2001.

TABLE 2: SELECTED MANAGED CARE ORGANISATIONS RANKED BY TOTAL SCORE

Managed care organisation	Total score	Total population covered*	Years in business	Tax status	Medicaid enrollees as a % of total population
Excellus Rochester	191	591,836	17	Not for profit	6.3
Touchpoint Health Plan	190	327,802	14	For profit	4.5
Anthem BCBS – New Hampshire	183	289,739	6	For profit	2.6
Security Health Plan of Wisconsin	179	119,123	15	Not for profit	20.2
Blue Shield of North East New York	166	105,654	7	Not for profit	1.9
Care Choices	166	138,417	17	Not for profit	5.9
Anthem BCBS – Connecticut	164	782,258	7	For profit	14.2
CDPHP	164	288,336	17	Not for profit	11.9
Kaiser – Colorado	164	407,806	33	Not for profit	2.3
Kaiser Permanente – Northwest	164	447,850	56	Not for profit	4.6
BCBS of Western New York	162	360,605	17	Not for profit	4.8
Preferred Care, Inc	160	154,195	24	Not for profit	9.6
Fallon Community Health Plan	159	187,520	25	Not for profit	5.6
John Deere Health	158	503,456	17	For profit	20.6
Independent Health – Buffalo	158	349,104	21	Not for profit	7.4
Priority Health – MI	153	310,239	16	Not for profit	8.3
Kaiser – Hawaii	152	225,455	44	Not for profit	7.5
Blue Plus	151	473,750	27	Not for profit	9.0
Dean Health Plan, Inc	150	200,463	18	For profit	4.7
Group Health Cooperative	150	426,384	54	Not for profit	8.0
Kaiser – CA (South California)	149	2,998,827	57	Not for profit	1.7
Health Partners, Inc	147	642,614	46	Not for profit	6.9
HealthPlus of Michigan	146	172,570	22	Not for profit	34.3
CIGNA – Arizona	142	561,024	24	For profit	9.2
Kaiser – CA (North California)	139	2,998,832	52	Not for profit	1.7

*For HMO, PPO and POS products only

Source: National Center for Quality Accreditation, Health Employer Data Information Set (2001)

The five MCOs selected for further study were:

- Kaiser Permanente (North California) – group model
- Group Health Cooperative (Seattle) – mixed model
- Health Partners (Minnesota) – mixed model
- Touchpoint Health Plan (Wisconsin) – mixed model
- Anthem Blue Cross Blue Shield (Connecticut) – network model

Brief details about each MCO can be found in the boxes on pp 14–17.

PROFILES OF MANAGED CARE ORGANISATIONS

Kaiser Permanente North California (group model MCO)

Kaiser Permanente North California (KPNC) is a not-for-profit integrated MCO. It purchases and provides health care for almost three million enrollees, including those eligible for Medicare (people over 65 years) or Medicaid (families with a household income below a limit defined by each state). KPNC began 52 years ago and is part of KP California, one of nine regional KP health insurance MCOs in the United States. In KPNC, there is an exclusive contractual relationship between the Kaiser Foundation Health MCO, the Permanente Medical Group (TPMG) and Kaiser Foundation hospitals. KPNC provides the majority of care in-house except for the highly specialist care – such as heart transplantation – that in the NHS would be organised on a regional or supra-regional basis.

KPNC operates in a rapidly evolving market environment. Its main competitors include Blue Shield California, Blue Cross California, Health Net and PacifiCare. KPNC enrollees currently stay for an average of 13 years. However, the enrollee base is ageing at the same time as younger, healthier people are opting for cheaper health plans that do not necessarily offer comprehensive benefits. If this trend continued, it would force KP to re-examine its priorities, cost structure and market orientation to avoid ever-increasing premiums.

The culture of KPNC, which includes a strong commitment to high-quality, evidence-based care, underpins its work at all levels. There has been record investment in IT to support disease management. Physicians have a dual responsibility – to individual patients and the enrollee population – and must act as ‘stewards’ of KP resources. KP selects like-minded physicians and weeds out those who fail to meet quality standards or adapt to KP’s culture. KP in North and South California employs 20 per cent of the state’s primary care physicians and 15 per cent of its specialists (Grumbach *et al* 2002). Physicians are paid a salary with a 5 to 10 per cent bonus tied to performance and patient satisfaction, and they each contribute US\$20,000 worth of investment into TPMG on joining.

In 1997 the Kaiser Care Management Institute was founded to develop evidence-based protocols and disease management programmes for six conditions: acute myocardial infarction, asthma, diabetes, depression, congestive heart failure and back pain. Patients are stratified into three levels of care: level 1 refers to well-managed and stable patients; level 2 refers to patients who are unstable or have had an acute exacerbation and require care management; level 3 refers to patients who are not stable and for reasons such as co-morbidities require intensive case management rather than level 2 support.

PROFILES OF MANAGED CARE ORGANISATIONS (MCOS) *continued***Group Health Cooperative, Seattle (mixed model MCO)**

Group Health Cooperative (GHC) is a not-for-profit health care system providing both insurance and services. Founded in 1947 as a co-operative, it remains consumer governed, albeit with less consumer involvement in decision-making than in the past. GHC accounts for 80 per cent of the health maintenance organisation (HMO) market in Washington (though only 20 per cent of the population has HMO cover) and covers one-in-ten Washington residents.

GHC has exclusive contracts with 1,000 doctors in the linked Group Health Permanente medical group (that is, they treat only GHC enrollees). It also contracts with a further 6,000 independent physicians in solo or smaller group practices. GHC offers an HMO product and a variety of other plans offering wider access to providers outside GHC for variable levels of co-payment. There are 25 Group Health medical centres and two owned hospitals. GHC also contracts with 16 community hospitals.

GHC operates in a highly competitive market, and the collapse of a number of large local employers left many younger people without cover or opting for low-cost catastrophic cover insurance plans. This has resulted in an ageing enrollee base and has forced GHC to review its organisational strategy and its enrollee recruitment plans. The decision actively to pursue younger enrollees with families has resulted in revised quality priorities focused on improving access and in the development of a web-based interactive facility called My Group Health. Investment in chronic care has been reduced during this period, with a resultant reduction in the staff and facilities (including clinical information systems) available to undertake disease management and case management. The success of this strategy is allowing a further review of priorities and chronic care is re-emerging as one of the organisation's clinical priorities.

The MCO is linked to the McColl Institute for Healthcare Innovation and the Center for Health Studies, which are responsible for developing in-house, evidence-based guidance on best practice. The Institute also undertakes primary research: its director, Professor Ed Wagner, has had a long-term interest in chronic care and the Chronic Care Model is partly based on research by Wagner and colleagues within Group Health and in various partner organisations.

Health Partners, Minnesota (mixed model MCO)

Health Partners was formed following the merger of Group Health and MedCenters Health Plan (a network model HMO founded in 1972). It is a family of organisations including an MCO insurance plan, a medical group consisting of more than 570 physicians practising in primary care and a wide range of other specialisms, a network of primary, speciality and dental care clinics in Minneapolis and St Paul, Regions Hospital (a teaching hospital), the Health Partners Research Foundation and the Institute for Clinical Systems Improvement.

Health Partners provides a third of care through its own clinics and clinical staff, and two-thirds through contracts with independent providers. It is a not-for-profit organisation and is

PROFILES OF MANAGED CARE ORGANISATIONS (MCOS) *continued*

‘consumer-governed’ (that is, it is ultimately accountable to a board drawn from members representing enrolees).

The Health Partners mission is to ‘improve the health of our members, our patients and the community’ and its vision is ‘to be the best and most trusted provider of health care, health promotion, health care financing and health care administration in the country’. The corporate strategy is underpinned by its Partners for Better Health programme, which emphasises the value of population-based health targets covering (for example) heart health, diabetes, physical activity and healthy eating.

Health Partners is the third largest MCO in Minnesota. Its main competitors are Blue Cross and Medica. Despite their competition, the main MCOs have co-operated by agreeing on overarching clinical standards (drawn up by the Institute for Clinical Systems Improvement) and by pooling information on diabetes performance (as part of a Minnesota Community Measurement Project). The market is significantly influenced by large employers such as General Mills, Cheerios and Wells Fargo Bank.

Physicians are paid on a fee-for-service basis underpinned by ‘relative value units’, which measure workload intensity (they were previously paid on a capitation basis). Primary care groups are also eligible for incentive payments through the Outcomes Recognition Program, which sets challenging chronic disease and patient satisfaction targets. Hospital and primary care contracts are also subject to ‘payment for quality’ incentives, which hold back a proportion of the market rate for care against the achievement of agreed quality targets.

Health Partners operates case management, in which claims data and other health information is used with computer software to identify the small proportion of enrolees (0.5–1 per cent) who are responsible for 20–25 per cent of medical costs. For diabetes, for example, 2–5 per cent of the most vulnerable diabetic patients are identified and placed under the overall care of a care co-ordinator. To reduce their future need for health interventions, these patients are offered intensive case management delivered over the telephone by nurses.

Touchpoint Health Plan, Wisconsin (mixed model MCO)

Touchpoint Health Plan is located in north-east Wisconsin. Annual turnover of patients is low at 10–15 per cent and competition with other MCOs is limited as there are only two others in the immediate area. Touchpoint Health Plan is owned by two for-profit companies that are in turn owned by the two medical groups with which the MCO contracts.

The first of these groups, ThedaCare, is well established and set up Touchpoint Health Plan in 1987. ThedaCare has a long-standing ethos of quality improvement, reflected in the priorities of the Touchpoint Health Plan and in the group’s mission to improve health across the whole community. This is demonstrated by the extension of disease management activities beyond its own enrolees to all patients seen by its doctors. ThedaCare is an integrated health care system with more than 100 doctors, two hospitals, 22 clinics and one nursing home.

PROFILES OF MANAGED CARE ORGANISATIONS (MCOS) *continued*

The second group is BellinHealth, a smaller integrated health care system with 75 primary care doctors in 18 clinics and contracts for specialist care through 125 specialists in four hospitals. Physicians in the two medical groups do not contract exclusively with the Touchpoint Health MCO: for example, only 25 per cent of ThedaCare's patients are covered by Touchpoint.

Chronic disease management activities currently focus on asthma, diabetes and heart disease, and a system of financial incentives is used to encourage primary care physicians to provide appropriate care. The Touchpoint Health Plan does not at present use risk stratification tools to identify vulnerable patients, though it plans to do so in future. Case managers are employed to work closely with poorly controlled patients, liaising with specialists and primary care physicians as necessary and in accordance with protocols. Specialists are paid fees for service and do not receive financial incentives linked to chronic care.

Anthem Blue Cross Blue Shield, Connecticut (network model MCO)

Anthem BCBS Inc was initially formed in Indianapolis from Blue Cross of Indiana and Blue Shield of Indiana, both founded in the 1940s. In 1997, as part of a national expansion programme, Anthem merged with Blue Cross and Blue Shield of Connecticut to form Anthem BCBS CT, based in North Haven. In 2001, Anthem BCBS Inc demutualised to become a for-profit public company aiming 'to improve the health of the people we serve'.

Anthem BCBS offers a variety of 'tight' and 'loose' managed care products as well as products specifically for people aged over 65 that supplement the basic coverage provided by federally funded Medicare. In Connecticut, Anthem BCBS holds 40 per cent of the state-managed Medicaid population. Enrollee turnover between plans in the area is about 10 per cent per annum. Anthem BCBS contracts with physicians and hospital groups on a non-exclusive basis. Providers may hold contracts with any or all of the other 16 MCOs that operate within Connecticut (including other national MCOs such as Aetna and Cigna). Anthem BCBS contracts with all 31 hospitals in the state and with 15,500 doctors arranged in a variety of structures: large teaching hospitals; physician-hospital organisations; independent physicians' associations and other groups of physicians; and individual physicians.

Providers are paid on a fee-for-service basis. Anthem BCBS is piloting programmes that boost the basic pay of providers with incentive payments when quality and efficiency standards are met.

Traditionally, Anthem BCBS case-manages catastrophic care for its members. Anthem also case-manages the top one per cent of patients with the most complex medical needs, identified by using software that collates claims and other MCO data. In parallel, Anthem BCBS provides in-house chronic disease management programmes and also uses third-party disease management companies. Programmes operate for diabetes, asthma and cardiovascular disease, largely by encouraging patient self-management, and by supporting primary care physicians with regular profiles of their patients with chronic disease and with financial bonuses if high proportions of patients meet HEDIS-based clinical targets.

Fieldwork methods and analysis

The objective of the fieldwork was to identify as far as possible the factors associated with excellence in chronic disease management.

Between February and August 2003, a study team from the King's Fund visited each of the five study MCOs. Typically, we approached the chief executive at each site and briefed them about the study. The chief executive's office, or similar, then arranged a programme of interviews with senior executives (clinical and non-clinical). We interviewed an average of eight people at each site using a semi-structured questionnaire. In addition, there were presentations by senior staff, visits to clinical facilities and contact with clinical staff. The questionnaire was developed in advance, and covered three broad areas: the wider environment, structural and organisational issues, and clinical issues (the questionnaire can be found on the King's Fund website at www.kingsfund.org.uk). We sought to understand the perspectives and actions of key individuals within the five organisations studied. The perspectives of interviewees were not independently verified, for example by the collection of other types of data.

Summary

- Our hypothesis was that the factors bringing success in chronic disease management were to be found in three distinct domains: the wider environment; the organisational domain; the clinical process.
- We selected five MCOs for our study, on the grounds that they: performed well against the HEDIS quality indicators; served a diverse populations of more than 100,000 people; represented a cross-section of the three main types of MCO (group model, network model, mixed model).
- Our fieldwork sought to understand the perspectives and actions of key individuals in the five MCOs, and involved the use of a semi-structured questionnaire.

3

Lessons learned from the United States

This section synthesises the findings from all five managed care organisations (MCOs) into key messages; there are also references to some relevant literature. The messages were derived from research data through group discussion. They are grouped under the three domains referred to in the previous section: ‘wider environment’; ‘organisational domain’; and ‘clinical process’.

More detailed findings for each MCO relating specifically to these high-level messages can be found on the King’s Fund website at www.kingsfund.org.uk. Below is a brief discussion of the main findings.

The wider environment: the effect of market forces

In our research we tested two hypotheses: first, that market incentives could help to align the objectives of clinicians and managers in MCOs, as well as those of MCOs and providers, and that the threat of failure in the market would prompt MCOs and providers to work together towards constant improvement, for example in the quality of care; second, that excessively strong market incentives might discourage investment in chronic disease management.

Three broad sets of competitive pressures operate in the United States: competition by MCOs for enrollees (or their employers, or the state on behalf of its staff and of Medicaid and Medicare recipients); competition among providers for contracts from MCOs; and competition between providers for patients.

Competition between MCOs for enrollees appeared to be the most significant market force (although our research focus on MCOs also made it more likely that we would observe market forces at this level). A particularly important aspect of this type of competition was the winning by MCOs of the business of local employers. Competition between MCOs could be intense and continuous – some employers chose to test the market on an annual or two-yearly basis. The achievement of MCOs against Health Employer Data Information Set (HEDIS) indicators offered potential customers a ready source of comparative data to aid their choice. This focused the minds and actions of MCOs on their performance.

Furthermore, the management of chronic disease provided a key focus for employers’ decisions about the relative cost and quality of the various products offered in the marketplace. In some cases, however, employers were far more interested in MCOs producing short-term cost reductions in care, which had the effect of skewing the priorities of the MCOs. In fact, employers strongly favoured case and disease management for this reason, suggesting there was at least a perceived business case for higher quality in the domain. Some MCOs had to compete with private companies providing ‘third party’ disease management services.

In the current era of ‘loose’ managed care, the ability of MCOs to restrict patient choice to certain panels of doctors is limited. As one MCO chief executive put it, the idea of gatekeeping is ‘dead in the water’. Consequently, mixed model and network MCOs tended to contract with

most medical groups offering services in the area they covered. Given these circumstances, there did not seem to be significant competition between providers for contracts with the MCO as these were unlikely to be refused. However, as competition between providers for MCO contracts has diminished, it is likely that competition between providers for patients may be increasing. As MCOs (rather than group model MCOs) can accommodate most providers, patients may experience more choice of clinician and be less likely to be directed to one provider organisation or another due to the terms of their health cover. Certainly, the view of Health Partners, a mixed model MCO, was that the existence of both affiliated and contracted clinical group practices served to introduce a beneficial competitive edge. Comparative information on practice performance was provided openly to medical groups and, through the Health Partners website, to patients.

We concluded that competition between MCOs could create a helpful receptivity to change within MCOs and provide them with a stronger motivation to seek regular improvements in care. This receptivity was also evident at provider level, particularly where affiliated medical groups shared a commercial interest with their MCO. Market pressures could make MCOs more 'nimble' in responding to consumers (and their employers). However, excessive competition for enrollees among MCOs could backfire, leading to high enrollee turnover, an undue emphasis on developing products aimed at recruiting young and healthy enrollees, and a reluctance to invest in the infrastructure needed for comprehensive disease management, with its longer-term gains. At Group Health, for example, recent financial pressures in a competitive market had led to investment being diverted away from comprehensive chronic disease management and towards attracting younger (and therefore healthier) enrollees by providing faster access to services.

All the MCOs we studied expressed concern about the impact of price competition upon the quality of care for patients. In particular, the marketing by competitors of low-cost products that offered restricted benefits to young and healthy people (such as 'catastrophic cover') meant that MCOs that valued comprehensive care would face increasing difficulties in sustaining this care for an increasingly needy enrollee base. In short, many of the MCOs we studied were experiencing an uncomfortable tension between their business needs and their 'mission success'.

Yet despite the competition within the MCO marketplace, we also found evidence that MCOs would collaborate with their competitors over disease management. For example, Health Partners shared clinical guidelines with other local MCOs to ensure a degree of coherence for physician groups that contracted with more than one MCO.

Market forces and patient choice

Given the renewed emphasis on choice in current NHS policy, it was interesting to look at the extent of choice available to people with chronic diseases in the United States. People were able to choose their MCO, though this was often from a limited set of options selected by their employer. This right to choose exerted an important influence on MCOs. Once the person was enrolled in an MCO, the extent of choice they enjoyed between providers varied. Health Partners and Anthem BCBS, for example, held contracts with most local providers, ranging from hospitals and large medical groups to independent solo physicians. In Kaiser, however, enrollees could only go to Kaiser-owned providers. Furthermore, the (voluntary) use of primary care doctors as a gateway to specialist care is still a feature in Kaiser, though less so in the other MCOs.

However, once patients were enrolled with an MCO and diagnosed with a chronic disease, they did not seem to have much choice about whether or not to participate in disease or case management programmes. Choice may well be an inappropriate concept here. For the MCO, the

key concern is whether patients will comply with treatment plans and the requirements of disease and case management programmes. For patients, the key concern is whether the monitoring arrangements and interventions proposed by the provider seem relevant to their own priorities and their own views about their condition. We were not given information on non-participation rates for these programmes, so could not estimate the extent to which patients exercised ‘choice’ simply by refusing to engage.

Summary

- Market pressures can create a helpful receptivity to change among both MCOs and providers.
- In the MCOs studied, competition for contracts with employers (that is, competition for enrollees) appeared more likely to bring about change than competition between providers.
- A high level of competition between MCOs created disincentives to improve chronic disease management and incentives to expand access to care for young and healthy enrollees.
- Patients had some choice over the MCO with which they enrolled. However, once within an MCO and diagnosed with a chronic disease, they had little choice about whether or not to be involved in disease or case management programmes.

The organisational domain: ‘ownership’ and exclusive contracting

MCOs rarely formally ‘own’ the providers that deliver services to their patients. The MCOs we studied could be distinguished more effectively by the degree of interdependence between themselves and their providers. This interdependence was determined by the exclusivity of the contracts that bound them together. At one extreme, Kaiser Permanente consisted of three components – The Permanente Medical Group (TPMG), Kaiser Foundation Health Plan and Kaiser Foundation Hospitals – that were linked together by exclusive and permanent contracts: that is, a commitment to work only with each other for the benefit of Kaiser enrollees.

In contrast, Anthem Blue Cross Blue Shield, a fully networked MCO, had no special relationship or exclusive contracts with providers of services (although it had built up an understanding with providers with whom it had contracted for some years). Mixed model MCOs operated through a combination of exclusive contracts with affiliated medical groups and other contracts with independent providers. Although Touchpoint Health Plan was set up and is mostly owned by the ThedaCare Physician Group, it also contracts with other providers – and ThedaCare doctors provide services for other MCOs.

One of our hypotheses was that ownership of providers by an MCO, or exclusive contracting without ownership, mattered: we felt that MCOs might be able to exert more influence over the providers they owned or exclusively contracted with and would thus be better able to improve chronic care. In the event, we received mixed messages from the MCOs about whether ownership mattered. Senior staff in Kaiser Permanente, Health Partners and Group Health, all MCOs with large affiliated medical groups, tended to think that it did. Staff in the fully networked Anthem BCBS tended to think it did not. There was consensus, however, on the importance of MCOs being able to influence their providers.

Influencing the behaviour of clinicians

Our study found that where MCOs contracted exclusively with affiliated medical groups (that is, independent groups wholly aligned with the MCO) and owned some or all of its own health care

facilities, they were more likely to be able to influence the behaviour of clinicians. There were several reasons for this:

- A similarity in values and mission between MCOs and providers: for example, a shared commitment to comprehensive care with a public health orientation. (Clinicians who choose to join affiliated medical groups such as TPMG, Health Partners or Group Health, may do so precisely because they share the community-orientated ethos of the MCO.)
- The alignment of commercial incentives between the MCO and the provider: with exclusive contracting, MCO and provider share a common destiny in the competitive market place.
- Good (and long-term) relationships, in particular between senior clinicians and managers in the MCOs and providers. It is easier to develop relationships when there is a direct link between MCO and provider, uncomplicated by relationships with third parties.
- Incentives for the MCO to invest in the infrastructure at provider level – particularly in the information technology required to support chronic disease management – and to link this technology across the primary-secondary interface.
- The ‘strategic competence’ of affiliated medical groups that are large enough to create their own leadership cadres and to develop shared goals and productive relations with the MCO.

An example of the dynamics at work in MCOs with affiliated groups is provided by Kaiser Permanente, North California. In Kaiser Permanente, the corporate mission focuses on the provision of systematic, high-quality care that incorporates disease prevention and health promotion as well as treatment. Physicians wanting to join the MCO must sign up to the mission and realise it in practice. If physicians do not do this satisfactorily, as assessed by rigorous peer review, they must leave – and a number do each year.

The MCO has invested heavily in disease management support and information technology to help its clinicians meet the corporate objectives, for example through access to an integrated health record throughout the region. Its former chief executive, David Lawrence, stated that ownership provided the incentive and the capitalisation needed to invest in quality of care – for example, IT infrastructure – and in the development of clinical leadership and management (Goldsmith 2002). He also made a sobering remark that might be relevant to primary care trusts (PCTs) in the NHS: ‘When you have no medical group organisation, no memory, no skills, and you have an inherent distrust of the people who have given you the information you need to run your business, how in the world are you going to manage risk?’

Furthermore, Kaiser Permanente physicians share in the success (or potential failure) of the MCO through the contract agreed between it and TPMG. The Kaiser Foundation Health Plan (the MCO) is integrally linked with TPMG at every level of the organisation, for example by the twinning of managers from the Kaiser Foundation Health Plan with clinicians in TPMG. A recent survey of all physicians in California showed that those working in Kaiser Permanente were more likely than others to believe that efforts to improve quality were not solely for the purpose of securing contracts, that financial incentives were based on quality and patient satisfaction, and that audit of practice patterns was accurate and intended to improve quality. They were less likely to believe that they were under pressure to limit referrals or diagnostic tests (Grumbach *et al* 2003).

However, we do not suggest that exclusive contracting between MCOs and affiliated provider groups is inevitably linked with high performance, nor that it is the only means of ensuring the highest quality care. Indeed, comparisons of affiliated medical groups with independent

contracted groups in MCOs such as Health Partners and Group Health suggested that no one relationship type could claim an absolute monopoly on high quality.

There has been little research into the impact of the ownership of providers (hospitals or primary care clinics and physicians) by MCOs. A recent study similar to ours, which aimed to identify the factors associated with success in ten top-performing MCOs, also concluded that exclusive contracting of providers was important. The authors suggested that this arrangement led to longer, stronger and more trusting relationships. These helped MCOs and providers to work together more effectively to improve quality, and encouraged the development of integrated information systems and the use of intranet tools to aid clinical practice (Felt-Lisk and Kleinman 2000).

Other studies agree that the most extensive efforts to improve quality of care have occurred in group model MCOs and large multi-speciality group practices, where return on investments in quality accrues directly to the MCO or medical groups (Coye 2001; Oswald 2001; Casalino *et al* 2003). These organisations have the infrastructure, leadership, investment, aligned incentives and longer-term strategy needed to support change. A study of 69 physician organisations (Budetti *et al* 2002) found that the organisations which were most successfully improving quality were those in which physicians were actively involved in developing disease management programmes, the programmes were patient-centred with well-aligned financial incentives, and clinical leadership was strong. However, according to one author, fewer than 15 per cent of US physicians are serving these types of organisations (Coye 2001).

So where does this leave MCOs that contract, in whole or in part, with independent providers? Although they cannot rely on the strong, mutually supportive relationships associated with exclusive contracts, they can use financial incentives, other contracting devices and developmental approaches to influence their providers. However, it may be that the excellence achieved by these MCOs is to some degree fortuitous – attributable more to the inherent skills and commitment of their providers than to their own initiatives to improve care.

Integration between providers

Integration between primary and specialist providers emerged as a key issue. After visiting Kaiser Permanente, where primary care physicians and specialists operate out of the same facilities and often belong to the same medical teams, our initial conclusion was that structural integration between providers was the key to effective and apparently seamless chronic disease management.

However, the evidence for integration was different in each MCO. Within Kaiser Permanente, we saw close working relationships between primary and specialist clinicians and between doctors, nurses and other clinical staff (such as health educators, physical therapists and disease management co-ordinators). Some areas of peer assessment included both primary and specialist physicians and, globally, underspends of the medical budget accrued to teams including primary and specialist clinicians. At Touchpoint, the MCO had invested jointly with ThedaCare and jointly owned the chronic disease ‘data warehouse’ that underpinned its chronic care provision. Although primary care physicians and specialists practised in different organisations, case managers acted as the links between them. Anthem BCBS created a similar situation in some of its networked providers through close working relationships and the voluntary sharing of each other’s data. Careful use of financial incentives helped to bring clinical behaviour into line with chronic disease goals.

We saw no evidence of the integration of health and social care providers in connection with chronic diseases, although Kaiser Permanente hospitals worked closely with a ‘specialist nursing facility’ for a selected group of post-surgical and post-stroke patients, with some links to community care facilities. There was very little evidence of joint or co-ordinated care between health and social care providers, or of collaborative planning between MCOs and other agencies to ensure that a diverse range of community-based support services is available to people with chronic diseases. Furthermore, although we saw many efforts to promote patient understanding and self-management, we did not feel that there was a diversity of services available from which a package of care to suit individual patient needs could be assembled. The impression was more of a medically dominated care process into which patients were slotted on the basis of their clinical condition and estimated clinical risk.

Summary

With respect to improving quality of care for people with chronic disease:

- Exclusive contracts and relationships between providers and MCOs may provide additional incentives and opportunities for both parties to invest in chronic disease management and high quality services.
- Long-term relationships were more likely to build up trust between MCOs and providers and encourage investment in the necessary infrastructure to support chronic disease management, in particular: IT, clinical leadership, the development by MCO and providers of disease management programmes, and well aligned incentives.
- Exclusive or long-term relationships between MCOs and providers are not absolutely correlated with high performance and not all excellence in provider performance can be necessarily traced back to the influence of MCOs.
- Clinical integration – in the form of co-ordination, close working relationships between clinicians – is achieved in a variety of ways. These range from structural and IT integration with aligned financial incentives seen in Kaiser to collaborative relationships, voluntary sharing of information between MCO and provider group and targeted incentive payments seen at Anthem.

The organisational domain: clinician–manager relations

Several of our findings about MCOs were striking by comparison with NHS practice. First, clinicians routinely occupied managerial roles and felt comfortable in doing so. In MCOs that contracted with affiliated medical groups, the discipline of the US health care market and the possibility of commercial failure were felt to promote physician involvement through a shared sense of organisational and personal risk. In Kaiser Permanente and Touchpoint in particular, clinician leaders barely recognised the distinction between clinicians and managers; they clearly felt that they were both.

Second, in several MCOs physician leaders were ‘twinned’ with a general manager, encouraging continuing dialogue about the roles and constraints of each party and about how to implement policy. For example, at Touchpoint the chief executive described himself as ‘joined at the hip’ to the MCO medical director. There were strong links between senior executives at the MCO and physician leaders at ThedaCare. Similar links between MCO executives and the senior physicians in provider groups existed in Kaiser Permanente and Health Partners.

Third, senior physicians in affiliated medical groups and their general managerial counterparts shared the same goals and priorities. It was acknowledged that negotiating priorities between the MCO and physicians could create tensions, but the underlying need to ensure the financial integrity of the MCO created an obligation to identify priorities that would sustain or increase the enrollee base. Within this key constraint, clinical priorities were set by the physician chiefs in the MCOs and medical groups, who were responsible for their implementation down the medical hierarchy.

Fourth, the medical domination of providers made doctors – rather than other clinicians or multi-professional teams – the key decision-makers on clinical priorities. There was no evidence of nurses being placed in general leadership roles, for example, and no apparent questioning of the appropriateness of exclusively medical leadership. Physician leaders in MCOs and their medical groups were doctors who were highly respected for their clinical skills and who were elected, selected or endorsed by their peers for a clinical management role. Intensive management training – designed to support both personal needs and organisational priorities – was available to ensure that physician chiefs had the skills they required.

Fifth, in the mixed model MCOs and within the fully networked Anthem BCBS, efforts to build relationships with clinical providers were focused on the larger medical groups treating a high proportion of the MCO's patients rather than on disparate solo or small-group practitioners. For example, Anthem BCBS had launched Clinical Quality Programs to improve the quality of care for people with chronic disease in larger, more organised medical groups (many of them with integrated primary and secondary care services) that had a track record of similar changes or were explicitly receptive to change. Each MCO acknowledged that building relationships with independent physicians or small medical groups was difficult, partly because each physician could be subject to similar attentions from a number of MCOs, resulting in confusion and conflicting requirements, and partly because of the lack of supporting infrastructure.

Group Health, Health Partners and Touchpoint claimed that it was much easier to encourage their affiliated physicians to change than those with which they contracted on a non-exclusive basis – though each acknowledged that the latter providers nevertheless often delivered high-quality care. Anthem BCBS and Touchpoint MCOs were making efforts to develop chronic disease management with independent practitioners working alone or in small groups.

Summary

- Physicians were closely involved in management and leadership roles, but other clinical staff were not.
- Physician leaders were often 'twinning' with non-clinical managers at every level of the MCO and were held jointly accountable for their actions.
- There was a striking similarity in strategic goals between senior physicians and managers in group and mixed model MCOs, partly resulting from the need for provider organisations and MCOs to survive in the marketplace.
- When attempting to improve quality, MCOs made more progress with large, organised medical groups than with loose networks of solo or small-group practitioners.
- Physicians dominated the process of identifying of clinical goals and priorities, and there was little reported involvement of other clinical staff.

The organisational domain: financial incentives for physicians

All the MCOs studied used financial incentives to influence the behaviour of physicians. The intended effect of the incentives was broadly to improve the quality of care and to minimise costs, but each MCO applied them in different ways.

One obvious difference between the five MCOs concerned the entitlement to financial bonuses for chronic disease management. In Kaiser Permanente, Health Partners and Group Health, both primary care and specialist physicians were eligible, whereas in Anthem BCBS and Touchpoint bonuses were offered only to primary care physicians. Separate incentive schemes were generally developed for primary care and specialist doctors. However, a key concern of chronic care is the collaboration between these two groups. To this end, several MCOs had structured incentive schemes to achieve better joint working. Most obviously, the multi-speciality nature of Kaiser Permanente's TPMG – in which all the practising doctors owned shares – provided a high-level incentive for primary care and specialist physicians to work together on chronic disease management (in that the financial security of all doctors depended on successful care).

At Health Partners, the Payment for Quality incentive system was able to reward specialists both for their collaboration with primary care doctors and for carrying out activities more usually seen as the remit of primary care itself. For example, orthopaedic incentive targets included the provision of case summaries to primary care doctors and the giving of advice on stopping smoking to patients attending the clinic. None of the MCOs offered standard bonus packages to other groups of health care professionals, despite the fact that much of the care and case management was undertaken by nursing staff.

In some MCOs each individual physician received the bonus directly, in others the physician group received it collectively. In Anthem BCBS, the method used depended solely on how the physician was normally reimbursed (that is, directly or through a group); in Group Health, different incentives were applied to solo practitioners and contracted groups; and in Touchpoint and Health Partners, the bonus was routinely given to the physician group in recognition of the fact that health care is 'a team game'. Although a small proportion of total salary arriving in the form of a bonus payment may have limited influence on an individual physician, these amounts produced greater effects when pooled at the group level. One example of this was seen in Touchpoint, where one of the two main physician groups contracting with the MCO realised that the group was losing several hundred thousand dollars each year because it did not have adequate chronic disease management processes. There was a physician-led move to introduce such measures, with the result that the group as a whole were rewarded with a significant proportion of the funds within a few years.

There were also differences in the proportion of salary that the bonuses represented. Group Health allowed the remuneration of primary care physicians to vary between 80 and 120 per cent of basic salary. More modestly, Anthem BCBS described its primary care physician bonuses as 'not a significant percentage of overall reimbursement'. Similarly, bonuses for Touchpoint physicians averaged around 5 per cent of salary. In Kaiser Permanente, each physician received on average 7 per cent of salary in the form of bonus, with a maximum of 10 per cent. Recent attempts by Kaiser to set performance-related bonuses at a higher level – up to 30 per cent of annual salary – were abandoned as they were felt to divert the priorities of clinicians away from quality and towards maintaining salaries.

Despite the experiences of Kaiser Permanente, some MCOs are introducing 'pay for performance' as a more substantial element of physician reimbursement. In Health Partners, the Payment for Quality initiative blends payment for quality and payment for process into market-based reimbursement rates for primary care physicians, specialists and hospitals. Anthem BCBS has also started to experiment with bonuses based solely on clinical results and quality. This programme has been piloted and is being rolled out in one state-wide specialist obstetrics and gynaecology physician group. Although the initial reaction of providers has been to increase investment in clinical structure and quality, it remains to be seen whether there will be a shift in physician priorities similar to that which occurred in the Kaiser Permanente experiment. It was noticeable that during our discussions at some MCOs, both physicians and managers were keen to downplay the role of monetary incentives, preferring instead to emphasise the importance of professional pride in, and peer review of, the provision of high-quality clinical care.

MCOs applied financial incentives to physicians in two main ways: either through the attainment of clinical targets, or through peer and patient assessment of provider performance (and frequently a combination of the two). Touchpoint, for example, set each physician up to 15 targets based on, but more stringent than, HEDIS measurements. One target for primary care physicians in 2003 was that 70 per cent of their diabetic enrollees would have HbA_{1c} levels of equal to or under 7.5mmol/l (the HEDIS target is under 9.5mmol/l). Anthem BCBS sets targets in a similar way for its primary care doctors in its Quality Incentive Program, as well as for those providers involved in its pilot Clinical Quality Programs.

On the other hand, although Kaiser Permanente also challenges its physicians to meet HEDIS-based clinical targets, this is only one element of a tripartite assessment of performance that also includes measures of patient satisfaction and peer appraisal, with individual bonuses based on each physician's total score. Similarly, Health Partners sets both quality and patient satisfaction targets in its Outcomes Recognition Program for primary care groups.

All MCOs used more than one method of payment to encourage better quality in chronic care. In a recent review of payment incentives to physicians, Robinson argues that simple payment systems were unlikely to suit complex physician behaviour, and that 'blended' methods outperformed those based on pure fee-for-service and pure capitation (Robinson 2001b).

Summary

- Financial rewards for good chronic disease management were usually (but not always) directed at both primary care and specialist physicians, but nurses and other health care professionals did not benefit directly from bonuses.
- Bonus payments were made for quality based on indicators of quality (usually HEDIS indicators) and also often on patient satisfaction.
- Financial rewards for quality aimed at physicians were mostly modest, amounting to between 5 and 10 per cent of salary. However, 'pay for performance' is developing in some areas as a more substantial form of reimbursement.
- Important non-financial incentives to improve quality included encouraging professional pride in the provision of high quality health care.

The clinical process: chronic disease management

Our basic observation about the chronic disease management programmes in each MCO was that there was no ‘rocket science’ involved. Each element of care is also in use in the NHS in England, and most of the data employed to stratify risks are available in a fully computerised GP surgery.

The Chronic Care Model

Three MCOs were using the Chronic Care Model to help improve their management of people with chronic conditions, although none had implemented the model in its entirety. The other two MCOs were not explicitly using the Model, although they had implemented some components.

The development of the Chronic Care Model was led by Professor Ed Wagner, Director of the MacColl Institute for Healthcare Innovation. The model emerged from attempts to improve chronic disease management at Group Health Cooperative (a managed care organisation in Seattle), a literature review and evidence from a panel of national experts (Wagner 1998). The model is based on the premise that in developing good chronic care, it is important to act in six main areas, outlined in the box below.

THE SIX COMPONENTS OF THE CHRONIC CARE MODEL

Community: mobilise community resources to meet needs of patients

- Encourage patients to participate in effective community programs
- Form partnerships with community organisations to support and develop interventions that fill gaps in needed services
- Advocate for policies to improve patient care.

Health care organisation: create a culture, organisation and mechanisms that promote safe, high quality care

- Visibly support improvement at all levels of the organisation, beginning with the senior leader
- Promote effective improvement strategies aimed at comprehensive system change
- Encourage open and systematic handling of errors and quality problems to improve care
- Provide incentives based on quality of care
- Develop agreements that facilitate care co-ordination within and across organisations.

Self-management support: empower and prepare patients to manage their health and health care

- Emphasise the patient’s central role in managing their health
- Use effective self-management support strategies that include assessment, goal-setting, action planning, problem-solving and follow-up
- Organise internal and community resources to provide ongoing self-management support to patients.

Delivery system design: assure the delivery of effective, efficient clinical care and self-management support

- Define roles and distribute tasks among team members
- Use planned interactions to support evidence-based care

THE SIX COMPONENTS OF THE CHRONIC CARE MODEL *continued*

- Provide clinical case management services for complex patients
- Ensure regular follow-up by the care team
- Give care that patients understand and that fits with their cultural background.

Decision support: promote clinical care that is consistent with scientific evidence and patient preferences

- Embed evidence-based guidelines into daily clinical practice
- Integrate specialist expertise and primary care
- Use proven provider education methods
- Share evidence-based guidelines and information with patients to encourage their participation.

Clinical information system: organise patient and population data to facilitate efficient and effective care

- Provide timely reminders for providers and patients
- Identify relevant sub-populations for proactive care
- Facilitate individual patient care planning
- Share information with patients and providers to co-ordinate care
- Monitor performance of practice team and care system.

Source: www.improvingchroniccare.org/change/index.htm

How MCOs were implementing some elements of the Chronic Care Model has already been described above (see, for example, high level messages on clinician–manager relations, financial incentives and ownership and exclusivity). Rather than list all initiatives by MCOs that followed the Chronic Care Model, we now look at a few of the major themes.

Case and disease management

DEFINITIONS OF CASE AND DISEASE MANAGEMENT

- **Risk stratification** involves the proactive identification of patients at high risk of hospitalisation, at whom case management can be targeted to prevent admissions. Assessment of risk is based on previous use of health care, and is normally done with the help of computer software.
- **Case management** is targeted at the highest-risk patients – those who have the most complex conditions or are the most severely ill. Specialist nurses or other highly skilled case managers co-ordinate care, work proactively to slow disease progression, improve patient education/self-management and liaise between primary and secondary physicians.
- **Disease management** is targeted at lower-risk patients. It includes the proactive management of care (involving, for example, guidelines with prompts to physicians and/or patients and an electronic disease registry), decision support systems for patients and clinicians, and feedback of clinical data to physicians on their own panel of patients.

Each MCO stratified the risks of the population it covered by the anticipated amount of health care resource utilisation. Intensive case management was then targeted at the most resource intensive, usually those with one or more chronic diseases. Case managers were typically experienced nurses working closely with specialists, primary care physicians and certified health educators. They were located in either a local hospital, the MCO itself, an ambulatory care facility or a remote facility, and they conducted much of their work over the telephone. Their role combined intensive monitoring of markers of disease severity, medication advice and review, patient education and liaison between clinicians when treatment changes were needed. This intensive service was targeted at the 1–5 per cent of the enrolled population who were responsible for a significant proportion of total health care costs. In some MCOs the target group consisted of patients with specified chronic diseases, such as diabetes, asthma and congestive heart failure; in others it included all patients with conditions that were costly to treat.

In addition, each MCO ran a highly developed disease management programme for people with specific common conditions – again typically diabetes, coronary heart disease and asthma. These programmes were comprehensive and evidence-based. They were underpinned by computerised disease registries that were often embedded in an electronic patient record, to allow regular monitoring of care for each patient, and much effort was made to keep the data complete and accurate. For example, clearly identified individuals (ranging from a clerk to a case manager) were responsible for ensuring that any gaps in the data were made good. Disease management programmes also involved the distribution of patient education materials, limited input (mainly at the time of diagnosis) from certified health educators, invitations to group education sessions, and regular clinical review by primary care physicians and/or nurse specialists.

Where MCOs contracted with independent providers, MCO-led disease management programmes became even more important. If medical groups did not have the capacity to develop their own disease management registries, the MCO could provide them (or at least make the relevant information available). Two MCOs had contracted out at least some of their case management work to a third party disease management company.

Self-management

Each MCO ran self-care initiatives. We saw evidence of efforts to educate patients about their disease and to involve them in decision-making about their care. Educational interventions ranged from the distribution of educational material to patients whose disease was stable and who had already met a health educator, through to regular contact with more severely ill patients and those at risk of future illness. Patient education materials included printed information, videos, interactive websites and peer group sessions. Several of the case managers and lead clinicians stressed the importance of focusing clinical contact on the problems perceived as most important by the patient. More intensive patient involvement took many forms (*see the box opposite*).

APPROACHES TO PATIENT EDUCATION AND SELF-MANAGEMENT

Patient education materials

- Written information
- Patient newsletter sent in paper or electronic form
- One-to-one session with a certified health educator at time of diagnosis
- ‘Talking head’ videos depicting lay people’s experiences of a particular disease or treatment
- Disease-specific websites nested within the main MCO website.

Methods for encouraging self-management

- Regular contact between case managers and high-risk patients to teach self-management skills and reinforce educational messages
- Consultations built around problems defined by the patient (rather than around abnormal test results or the doctor’s view of what the most pressing problem was)
- Group sessions led by case managers that combined educational input and issues identified by participants
- Self-reporting of monitoring data (glucometer readings, blood pressure, weight and so on) via telephone or internet
- Use of motivational interviewing techniques to identify the most important problems perceived by patients and to build subsequent advice and guidance around this.

But although we observed patient decision-making in the clinical process, we saw far less collective patient or public involvement in the setting of organisational priorities, as might be expected in the NHS. This contrasts with the efforts by MCOs to ensure the involvement of clinicians at the strategic level. Two MCOs – Health Partners and Group Health – were co-operative organisations with arrangements for member governance and participation. However, the influence of members on clinical priorities was indirect, and there was no reported attempt by any MCO to involve patients with chronic diseases or their carers or relatives in service design or development.

Decision support and clinical information systems

All the MCOs studied made extensive use of decision support and clinical information systems. Each MCO provided decision support through a combination of guidelines (developed either in-house or modified from respected national guidelines), investigation and treatment ‘algorithms’, computerised prompts drawn from disease registries and electronic medical records, and hard-copy prompts pinned opportunistically to the clinical notes of chronic disease patients.

Each MCO had invested heavily in the IT required to support a clinical information system for chronic disease management. These systems provided prompts to clinicians about individual patients, performance review and data feedback to doctors, electronic based guidelines and protocols, and support to clinicians and patients in making decisions about treatment at key points.

Delivery system design and health care organisation

The activities described above also reflected the underlying value systems of the MCOs we visited. Each MCO saw good chronic disease care as central to providing an effective service and each was willing, given a favourable market environment, to invest in the necessary resources (staff, information systems, education programmes and so on). The staff involved included clerks employed to contact patients who had not attended for routine tests, certified health educators, data analysts, nurse specialists, case managers and chronic disease programme co-ordinators to support. Interviewees consistently attributed this investment to the underlying value system of their MCO and the associated commitment to providing high quality care by the physicians in the main providers under contract (or owned). Each organisation was forward looking, had designed effective financial incentives to encourage case and disease management and was anticipating further 'pay for performance' rewards. Convincing the physician body of the value of case and disease management was helped by the commitment of physician leaders.

Summary

- Three MCOs were explicitly guided by the Chronic Care Model in developing disease management programmes, and all MCOs were implementing some components of the model – none used all.
- At least two MCOs had based their disease management work on a worked up business case, anticipating financial gains in the medium term.
- All MCOs were carrying out formal case management and disease management programmes.
- There was strong emphasis on stratifying the risks of enrollees (risk of health care utilisation and ill health) and targeting intensive proactive support to high risk patients (case management). Case management was targeted on up to 5 per cent of enrollees.
- Disease management programmes had been developed typically for a handful of common conditions. There had been strong roles both for MCO-linked institutes in developing evidence based protocols, and for providers in developing the programmes.
- In all MCOs, there was systematic, thorough and proactive application of disease management programmes, generally backed by the necessary investment.
- There was strong emphasis on the following aspects of disease management: self-management by patients; the use of clinical protocols and guidelines; regular peer review based on highly accurate information; electronic reminders to prompt proactive care and support decision-making by clinicians and patients; nurse-led proactive outreach care (much done on the telephone); well-aligned financial incentives targeted on physicians or teams.
- Few arrangements existed for enrollees to participate directly in the setting of MCO strategic direction and, where they did, their reported influence on clinical priorities was limited.
- There was a marked lack of focus on 'social' care and little evidence of MCOs taking a holistic approach to the needs of people with chronic diseases. For example, assessing a patient's health, social care and housing needs and co-ordinating a package of care.

4

Better management of chronic disease in England

In this section we discuss some limitations of the study presented in sections 2 and 3, then offer some general reflections on the NHS based on our work, and finally examine in more detail the three domains referred to earlier: 'wider environment'; 'organisational domain'; and 'clinical process'.

Our study in context

In the United States, the rate of progress towards good-quality care for people with chronic diseases is clearly variable. The study reported here selected a small and atypical group of health care organisations – top-performing managed care organisations (MCOs) – that covered a largely working population and achieved excellent results compared to their peers.

Our selection criteria, based on the use of HEDIS indicators, may or may not have been accurate in identifying those MCOs offering the best chronic disease management, since the measures reported reflect only a small part of chronic care. Yet HEDIS is the best dataset available for this purpose. We also used data from 2001 to identify MCOs, yet visited the sites in 2003; the HEDIS indicators may have been less favourable in the latter year. However, we used the most recent set of indicators available at the time of study and also relied on the advice of several senior US advisers about which were currently the best-performing MCOs.

A further limitation was that we were unable to obtain data on hospitalisation rates for chronic diseases from the MCOs we visited. Feachem *et al* (2002) attempted to compare hospital use in Kaiser Permanente with that in the NHS, and despite various methodological problems, their broad finding was that it was significantly lower. This has been confirmed by Ham *et al* (2003). It would be useful to research this important issue across several MCOs, although this would properly be the subject of another, more empirical study.

In trying to identify the factors associated with apparently successful care of people with chronic disease by MCOs, we did not use a comparison group. Hence we cannot with certainty claim that our findings, particularly the high-level messages, indicate the factors that mark out successful MCOs, only that they appear to be associated with success. However, our findings are similar to those of other surveys (Felt-Lisk and Kleinman 2000; Budetti *et al* 2002; Casalino *et al* 2003), which gives at least some support for the work reported here. For example, one detailed study of eight high-performing MCOs identified the ingredients of success in chronic disease management as: strong working relationships with physicians contracted by the MCO; leadership, culture and values focused on quality; a high-quality physician practice base; and an emphasis on the use of data and analysis in clinical improvement activities (Felt-Lisk and Kleinman 2000).

In a similar study, the facilitators of good chronic care were identified as: supportive organisational culture; existing electronic medical record systems; supportive managerial and medical leadership; support from MCOs and other external agencies; and support through the

organisation's strategic plan. Barriers to successful implementation were a lack of financial and staff resources, inadequate clinical information systems, doctors being too busy, providers not being paid more for high-quality care, and medical resistance to change (Rundall *et al* 2002).

Another important question raised by our work was: To what extent did MCOs improve the quality of care over and above the efforts of the main providers serving the MCO's enrollees? In other words, were the MCOs performing so well simply because the providers on their patch were good? In this study, many of the MCOs contracted with apparently highly performing medical groups and other provider organisations, and so it was difficult to assess how much value they added. Our conclusion was, however, that the MCOs did add value because they maintained a constant focus on the improvement of chronic care through their strategic priorities, incentive systems and use of IT to monitor care. This concurs with other research, which found that MCOs did not have to be 'born well' to achieve significant progress (Felt-Lisk and Kleinman 2000).

Our study was designed to draw lessons about chronic disease management from high-performing US providers that could be applied in the NHS. In this section as in the previous one, our observations are organised into three groups, relating to the wider environment, the organisational domain and the clinical process respectively.

The wider environment

In carrying out our fieldwork, we were constantly struck by how different (and, in many ways, alien) the wider US health care environment is compared with our own. US health care is well funded overall but denies universal access; it is competitive, decentralised and shaped by a multitude of powerful stakeholders. Market pressures had an all-pervasive effect, with health care organisations forming and folding constantly. The NHS, on the other hand, has grown out of a very different social contract, with its own history, values and assumptions. Equity, parsimony and continuity are valued in the NHS, and pursued through central control and hierarchy. There are effectively no market forces on the one hand to prompt constant innovation or on the other hand to provide perverse incentives or to bring about organisational failure.

But market pressures appeared to have brought benefits to the five MCOs studied, in that they created an important receptivity to change and helped to align the objectives of managers and clinicians. The market incentives in the US system push MCOs into almost constant review of consumer and payer attitudes to their 'products', their cost base and the packages of benefits they offered. In one sense this was consumer power *par excellence* – albeit indirect – underpinned by a very real fear of market failure. In the NHS, attention to the consumer is far less evident, although new policies to promote patient choice may help.

We were convinced that market pressures contributed to the quality of service that we observed. However, over-intense competition between MCOs produced unwelcome results: a higher enrollee turnover (real or anticipated) that discouraged MCOs from taking a long-term view of health improvement and from making the necessary investment in chronic disease care. The business case for chronic care makes most sense when long-term benefits can be set against short-term costs. The MCOs we studied faced difficult choices as their mission to provide population-based, comprehensive health care clashed with the realities of a shifting and unstable market place. Clearly, creating the right type of market pressures is crucial.

So what messages are there here for the English health care environment? In one respect, primary care trusts have significant advantages over MCOs in trying to improve chronic care – they have the benefit of national strategies, implementation programmes, targets and investment in the shape of national service frameworks, financial incentives to improve care of people with chronic conditions arising from the new GP contract and generally low ‘enrollee’ turnover. But in another they have a potential disadvantage – minimal incentives to prompt constant innovation, a consumer focus or to help bind together the goals of managers and clinicians, and pressure from Whitehall to achieve other targets. We concluded that, in time, stronger incentives would be needed in PCTs and in general practices to prompt more significant innovation.

Broadly, either of two routes could be taken. First, market-style incentives could be enhanced, and second, financial incentives on PCTs, practices, GPs, and acute NHS trusts could be strengthened.

Market incentives

More market incentives among PCTs could be encouraged – for example, allowing competition for patients or competition for contracts from the NHS to commission care. Such a policy would clearly need to be accompanied by appropriate regulation – for example to guard against adverse selection. At present, encouraging competition among PCTs for patients is risky. Primary care trusts are still at a very early stage of development. Even with encouragement, there may not be significant movement of patients between PCTs to generate a competitive pressure, and furthermore, the benefits of the current geographical population focus of PCTs, and continuity of care, may be lost. But a start could be made through careful piloting of competition through a comparison of performance indicators, and periodic market testing of PCT management in cases of poor performance.

The introduction of stronger market incentives to the NHS would change the environment significantly. Competition between providers of care, based in part on quality markers for chronic disease, may help to sharpen the focus on the needs of the consumer. This fits with the current direction of government policy: for example, the introduction of new contestability in primary care through personal medical service (PMS) pilots, local pharmaceutical services schemes and the new General Medical Services (GMS) contract. However, if they are to have bite, market incentives must allow organisations to exit in the event of failure. Historically, this has proved politically unacceptable.

Yet, at this stage, we cannot be certain that an NHS ‘market’ will not develop characteristics that inhibit the further development of chronic care. Policies such as ‘patient choice’ and ‘cost per case’ payment of hospitals and foundation hospitals may combine to strengthen even further the current focus on hospital (particularly elective) services at the expense of integrated, multi-sectoral chronic care. How the ‘right’ market incentives might apply to health care organisations is discussed further below.

We have already remarked upon the tensions between the positive effects of market forces on innovation and the way such forces can discourage MCOs from investing in chronic disease programmes delivering long-term outcomes. The most obvious way to imitate the market incentives seen in US-style managed care would be to introduce competition between PCTs for NHS contracts (ie, to give patients a choice of PCT). In theory, competition for patients between PCTs could provide managerial and clinical incentives to improve care. But we feel that at this stage such competition should be avoided, for a number of reasons.

First, PCTs are still at an early stage of development, and further changes of this sort could distract them from the immediate imperatives of developing robust commissioning and becoming well functioning and cohesive organisations. Second, PCTs currently serve registered populations that are well defined geographically, not shifting groups of enrolees. This offers a valuable opportunity to take a geographical or public health perspective on improving care that would be less easy if PCTs competed for patients. However, the potential benefits of the public health perspective should be weighed against the potential benefits of greater competition over time. Third, if PCTs could not be certain of having a long-term relationship with their members, they would have less incentive to invest in their future good health. Fourth, if patients shifted between PCTs, this could disrupt the delivery of systematic and longitudinal care.

The introduction of at least some competitive pressures might provide a greater incentive for PCTs to improve care and to seek out, and meet, the needs of their populations. The introduction of competition without the potential drawbacks of full-blown patient choice of PCT might be achieved in the first instance by the periodic market testing of PCT management and board: for example, through 'franchise' arrangements. Managerial performance could be judged by how the PCTs met a range of indicators including patient satisfaction, service quality and particularly the delivery of integrated and collaborative chronic care. However, this kind of competition would have to be carefully evaluated to ensure that its benefit were not outweighed by the negative effects of a discontinuity in clinician–managerial priorities and relationships.

We also believe that if management is to be held accountable for a PCT's performance, it should be allowed to exercise greater discretion over how it achieves its results and greater influence in the selection of the indicators on which it is to be judged. In several MCOs, management and clinicians drew up a limited set of annual priorities for performance, and this staff ownership of targets was thought to contribute to their achievement. Currently, PCTs have little say in the indicators on which they are to be assessed, but there may be room for dialogue in future with the new Commission for Healthcare Audit and Inspection. Furthermore, PCTs serve two masters: the public and the Department of Health. All too often, the voice of local people takes second place. We therefore propose that if PCT management is to be subjected to competition, this should be done within a strengthened local governance arrangement. We have noted elsewhere that, although there may be merit in mutually owned foundation NHS organisations, PCTs perhaps offer a more logical starting point for their introduction than do acute hospitals.

A vital component of market competition is consumer information. The reporting of performance to the public and particularly to employers through the Health Employer Data Information Set (HEDIS) undoubtedly had an effect on the MCOs we visited. It was not mere coincidence that the performance indicators against which these MCOs made their incentive payments included many from the HEDIS. In a competitive health care market, the publication of performance data served to align the goals and priorities of physicians and managers, as it was felt to contribute to overall survival. Although each MCO we visited reported tensions when negotiating priorities, we were struck by the similarities between the attitudes of clinicians and managers towards improving chronic disease management.

In the NHS, public reporting is in its infancy and our research suggests that benefits would accrue from its development. Again, the work of the Commission for Health Improvement (and, in future, the Commission for Healthcare Audit and Inspection) is important in this respect, and the first evaluation of NSF implementation is currently underway. Yet to be useful,

this information would ideally be used either to help the Department of Health assess the performance of PCT management (and to franchise out management if performance is poor, as outlined above) or eventually to help patients choose between competing PCTs. At the moment it is difficult to see how indicators of chronic care by PCT can be used in any meaningful sense to prompt improvement. In primary care, however, we welcome the recent ministerial decision to publish the achievements of general practices against the ‘quality and outcomes’ framework set out in the new GMS contract. This will help PCTs target help and investment and (where capacity allows) enable patients to use performance measures in their choice of primary care provider.

Strengthening financial incentives without encouraging competition between PCTs

The second approach would be to strengthen ‘non-market’ financial incentives in the NHS, on all relevant parts of the health economy (PCTs, general practices, NHS trusts and social care). There is much scope here for creativity, pilots, and local innovation. For example, financial incentives could be introduced to prompt specialists and primary care staff to work jointly to reduce the risk of inappropriate hospitalisation, or a joint budget could be created across primary and secondary care for people with chronic conditions building on experiments with multi-specialty teams under personal medical services ‘plus’ pilots (Lewis et al 2001). At the very least, a holistic analysis should be made of the mix of financial incentives currently operating – or about to be introduced – in the NHS, alongside the current incentives aligned to encourage better primary care of patient with chronic conditions, and a reduction in preventable hospitalisation of such patients.

The organisational domain

In the MCOs we visited, the factors most likely to encourage good chronic disease management were: value systems that supported investment in high-quality chronic care for *longer-term* return; good relationships between physicians and their leaders and the wider MCO executive; investment in IT systems to support chronic disease management; investment in people for the same purpose; and the use of micro-incentive systems to shape clinical behaviour. These factors in effect represented the survival strategy of the MCOs in a competitive market place. Their overall effect was to create a highly organised and closely monitored system of care. So what lessons can we draw from the United States to guide the development of chronic care in the NHS?

Financial incentives

Incentives to shape the behaviour of clinicians emerged as an important factor in the delivery of high-quality chronic care. In NHS primary care, these incentives are already under development, and those set out in the new GMS contract are as sophisticated and ambitious as any that we encountered in the United States. However, there is scope to develop financial incentives that more clearly link primary and secondary care together in the shared endeavour of chronic care, for example, joint incentives to reduce hospitalisation where appropriate. Currently, incentives that would reward specialists for working collaboratively with primary care are absent in the NHS.

Similarly, the impact of the new incentives that apply to NHS organisations is unclear where chronic disease management is concerned. As already noted, cost-per-case payment using a

standard tariff of prices may result in hospitals focusing on their own specific interests rather than taking a ‘whole systems’ view. This tariff system currently rewards activity regardless of the quality of care or the extent to which hospital care takes account of, or integrates with, primary care. We feel that the tariff system should be amended to link payments to the quality of care achieved in the areas of chronic disease and cross-sectoral working. Integrated delivery systems (that is, where primary and secondary care clinicians contract jointly to provide care) have already begun to develop under PMS ‘plus’ pilots (Lewis *et al* 2001). Such organisations mirror, albeit on a small scale, the multi-speciality medical groups we observed in the United States. The model appears to offer incentives for integrated chronic care that span primary and secondary care and make it possible to reward clinicians for disease prevention as well as treatment.

Information management and technology

A common IT infrastructure that links primary and secondary care – together with the necessary support and training – is a key priority. Similarly, regular monitoring of performance with data feedback to clinicians was a universal feature of the MCOs we visited and underpinned the micro-incentive systems we saw. There is scope to develop the same approach in England. The new GMS contract will go some way to providing the necessary data, but a common IT structure that enables the central analysis of data would more efficiently support chronic disease management.

Investment in staff

Although integrated IT systems across primary and specialist care are important, the investment in people that enabled the MCOs to obtain the information needed for chronic disease management is equally so. In the MCOs we studied, a key role of case managers (supported by clerks) was to fill information gaps to ensure that individual high risk patients were receiving appropriate care. At the population level, disease management programmes were implemented by all members of a multi-disciplinary primary care team with clear roles (doctors, nurses, health educators, physiotherapists and psychologists, all supported by clerical assistants). Similar investment in staff will be required in England if services are to address the physical, psychological and social needs of the people affected.

Clinician–manager relations

Developing shared values and goals for managers and clinicians – and providing the clinical leadership needed to bring about change in chronic care – remains a particular challenge for the NHS. At present, the NHS lacks the market forces that (as we argued above) can align the objectives of clinicians and managers, and the volume of central policy limits opportunities for the joint identification of local priorities that we saw in the MCOs we visited. Investment in clinical leadership at all levels of the health system appears to be vital for improving the quality of care. In particular, the leaders of Professional Executive Committees (PECs) in PCTs should be developed (and increasingly are). PECs provide an important opportunity to involve clinicians in the design and monitoring of PCT performance, and can also serve as a counterweight to the power of secondary care providers.

A striking finding was the unquestioned near-monopoly by doctors, rather than any other type of clinical staff, of management roles in the MCOs, and indeed in providers. We were unable to explore why this was so in any detail. One reason could be that in a market environment like that in the United States, doctors are much more involved in management because they have a greater financial stake in the MCOs and providers than other clinicians. Whether it is desirable

or possible to encourage greater medical dominance in NHS management is a moot point – but in our view one that merits further study, alongside an explanation of the management contribution of other staff.

The clinical process

The Chronic Care Model

Three of the five MCOS studied were using the Chronic Care Model to help develop chronic disease management. Unlike the NSFs, the model is generic: its six elements are designed to support the management of patients with any chronic disease. Furthermore, no element of the model is completely new to an NHS audience. A recent survey of organised chronic care in more than 1,000 US providers found that over half were using at least one of four key techniques described in the model: case management, feedback to physicians, guidelines with reminders and disease registries. However, fewer than 1 per cent of providers were using all four techniques across four common chronic conditions (Casalino *et al* 2003).

A more detailed study of chronic care in nine top US medical groups reported only partial implementation of the model (Rundall *et al* 2002), and a survey of the most innovative 72 chronic disease management programmes in the United States showed that, while most programmes included some elements of the Chronic Care Model, there was a lack of organisational strategy in implementing the model (Wagner *et al* 1999).

Studies of the effectiveness of the Chronic Care Model are limited, but there is evidence to support some of the individual components of the model. Various randomised trials (Nyman *et al* 2000; Friedman *et al* 1998) and systematic reviews (Weingarten *et al* 2002; Bodenheimer *et al* 2002a) of complex chronic disease interventions report improvements in both processes and selected outcomes of care. Meta-analyses of self-management support (Guevara *et al* 2003; Norris *et al* 2002; Mazzuca 1982) suggest that such programmes can improve process and selected outcomes of care, with some evidence for improved coping scores and locus of control scales in patients (Guevara *et al* 2003).

Reviews of the impact of clinical guidelines and other decision support systems (Berro *et al* 1998) reveal that educational outreach, reminders, multifaceted interventions and interactive education are generally effective at changing clinical behaviour. Reminders and data feedback are most effective in connection with prescribing, preventative care and general treatment but less so in connection with diagnosis (Johnston *et al* 1994).

Numerous studies also exist of innovations in the organisation and delivery of care for chronic diseases. These include integrated and shared care pathways (Campbell *et al* 1998; National Electronic Library for Health 2003), primary care chronic disease clinics (Moher *et al* 2001; Fay *et al* 2002) and facilities such as diabetic day care centres, outreach services provided by clinical specialists (Blue *et al* 2001; Loveman *et al* 2001), interventions targeted at particular risk groups (Salisbury *et al* 2002; Anderton and Broady 1999; Davidson 2003) and proactive structured review with care plans (Scottish Intercollegiate Guidelines Network and British Thoracic Society 2003). Many of this diverse group of studies report improvements in care, but the studies vary in the quality of their methodology and often assess only processes rather than outcomes.

Despite the promising findings from these studies of multi-faceted interventions, we are no nearer to finding the answer to a fundamental question: Which of the various activities under

investigation has the most effect, or is the impact enhanced only when all activities are combined? It is therefore hard to transfer the findings to other settings, where it may not be possible to replicate the combination of services described in research papers. Recent reviews (Glasgow 2001; Wagner *et al* 2001) have suggested that there should now be a thorough evaluation of the interventions making up the Chronic Care Model, and of the extent to which providers or MCOs are applying different interventions.

Now that several national service frameworks (NSFs) have been developed, would a generic model such as the one described above be useful to the NHS? In our view the NSFs, excellent though they are, fall short in three respects. First, they are mainly disease-based – and therefore fail to take into account the importance of developing a generic model for chronic disease management applicable to patients with multiple conditions or with conditions not yet the subject of an NSF. Such a model could help practitioners to co-ordinate their efforts.

Second, the NSFs largely ignore the wider policy context in the NHS. As noted in section 1, different policies (such as new ways of paying hospitals, the development of patient choice or the use of non-NHS providers) may either help or hinder attempts by PCTs or providers to improve chronic disease management. The Chronic Care Model could help policy-makers to recognise that wider policies – such as introducing diagnostic and treatment centres, or new methods of paying hospitals – can have a major effect on efforts to improve the care of people with chronic disease.

Third, the Chronic Care Model or something like it could help an NHS audience to understand what chronic disease management actually is, and could thus help providers to organise their efforts more effectively.

The need for a business case

Several MCOs had introduced chronic disease management on the basis of a business case, although one reported that the cost of the investment had exceeded the savings made. Across the United States however, there is a marked lack of knowledge as to the business case for quality of care more generally (Coye 2001). This is shared in the NHS, but nevertheless PCTs, health economies or the NHS nationally could do much more to develop a business case for chronic disease management in order to prompt the investment needed, particularly in PCTs. The new project by the Department of Health to identify the costs of particular diseases and conditions could be a useful starting point (Department of Health 2003d).

Risk stratification and case management

Four out of the five MCOs used risk stratification and targeted high-risk patients for case management. Most used computer software to stratify the risks – which would require the investment in IT described above. Far less emphasis is placed on this procedure in England, although some NHS sites have successfully identified and targeted high risk patients: for example, frail elderly patients with chronic disease (Audit Commission 2002).

The market pressures that encourage risk stratification and case management in the United States (that is, to reduce hospital costs for high-risk patients) do not really exist in England. A convincing business case for risk stratification and targeted case management may help to persuade hospital boards and PCTs to invest in case managers. Another incentive might be if PCTs saw that investment in hospitals could be released into primary care through good chronic disease management. Pilots in this area would be helpful and timely.

The NHS has already begun to import learning about risk stratification and case management from the United States, most notably with the project to pilot United Healthcare's EverCare model that we referred to in the introduction. One obstacle to further implementation is the paucity of available data with which to assess risks (or rather the inability within the NHS to link different data sources to a single patient identifier). The NHS information strategy should in time develop a solution to this problem, although there is a strong argument for not waiting for IT to improve. There could be much more piloting of simple risk stratification and case management, and evaluation of their impact in terms of costs and benefits. Clearly, initiatives to develop case management in England would need to be in accordance with the move towards closer working between health, social and other services.

Disease management

In the United States MCOs we found a serious commitment to case and disease management programmes among managers and clinicians. Vitally important to this was the interaction between human resources, IT infrastructure and micro-incentive systems, all underpinned by high-level commitment to, and investment in, good chronic care. What prompted this commitment was the professional and organisational culture, the need to improve care in order to compete in the marketplace, the business case, and some minor financial incentives.

As already noted, there is at present no business case for quality in the NHS and no relevant market incentives. The new GMS contract will provide financial incentives for primary care physicians linked to quality, and so is a step in the right direction. But as we mentioned above, different incentives are needed to align the goals of primary and specialist care, and in addition the goals of PCTs and primary care physicians. The development of managed clinical networks with an earmarked budget offers one possible approach to this, PMS 'plus' pilots another. The IT infrastructure in primary care and PCTs is also improving, which could support efforts to improve chronic disease management. But we believe that unless there are changes in the wider environment as suggested above, the commitment to better chronic disease management will not be strong enough in the NHS, especially at PCT level and in primary care.

Patient self-management

Self-management is not at present central to NHS practice. By contrast, each MCO provided an impressive array of support to enable patients to learn about their disease and – to some extent – participate in clinical planning, and greater self-management by patients in primary care is not unusual in high quality providers across the United States (Bodenheimer *et al* 2002b). The active involvement of patients in developing personalised care was heavily promoted in the MCOs we studied: for example, case managers carried out 'motivational interviewing' to identify each individual's personal priorities for managing their disease, and tailored further advice accordingly.

The NHS, and in particular PCTs, could learn from this and work with patients and carers to develop the skills needed for self-management. In particular, we saw extensive use of 'certified health educators' who typically provided the following services: urgent appointments for people with a new diagnosis, ongoing patient education on demand, and group education sessions for case management populations (at times of exacerbation in symptoms). They also worked closely with case managers for high-risk populations.

It will be important to make use of the full range of educational technologies in a way that the NHS currently does not. Patient information was provided in written form, on websites, on personalised (password protected) websites, via telephone consultations and in video and

audiotape form. In addition, some patients were able to access their own web-based medical record and examine clinical data relating to their disease.

The Expert Patient Programme is beginning to encourage such approaches, but it is in its infancy and not well funded. The expansion of choice for people with chronic diseases may provide more opportunities for direct patient involvement in establishing clinical management priorities. However, this approach is far from routine in the NHS.

Decision support

In many of the MCOs we found sophisticated systems to support decision-making by clinicians and patients, ranging from evidence-based 'decision trees' to interactive videos in hospitals and PCTs. Although different methods have been piloted successfully in the UK (Coulter 2002), they are not routine. Much more could be done to spread the findings of the more successful pilots. New developments in IT connected with the new GMS contract may provide opportunities to provide decision support to clinicians on chronic disease management.

Summary

On the basis of our study of five US providers, we suggest that the introduction of the following features could improve chronic disease management in the NHS:

The wider environment

- Stronger financial incentives on PCTs, GPs and acute NHS trusts to manage patients with chronic conditions more effectively in the community and reduce the need for admission. The incentives could arise from encouraging competition and a market, or not
- Stronger local governance arrangement for PCTs
- More effective public reporting of the performance of providers.

The organisational domain

- Incentives for clinicians that link primary and secondary care
- Incentives for NHS organisations that promote cross-sectoral working
- An IT infrastructure that links primary and secondary care, and provides the necessary training and support
- Investment in the full range of staff needed to implement CDM effectively
- The development of shared values and goals for clinicians and managers
- A business case for chronic disease management.

The clinical process

- A generic model of chronic disease management akin to the Chronic Care Model. But more research is needed to resolve a fundamental question: Are certain components of the model more important than others, or is the model only effective when *all* components are present?
- Risk stratification and case management. This could, for example, enable investment in hospitals to be released into primary care
- An explicit commitment to chronic disease management, underpinned by adequate human resources, effective IT and a system of incentives
- Support for patients in learning about their disease and participating in clinical planning
- Systems to support decisions by clinicians and patients.

5

Key findings and recommendations

On the basis of the work reported here, we have concluded that certain specific factors are likely to be responsible for the success of chronic care in the five managed care organisations (MCOs) we studied. Some factors relate to the wider environment in which the MCOs operate – in particular, the existence of market forces – while others relate to organisational factors or clinical processes. Within these three areas we have highlighted the factors that in our judgement are associated with success.

Understanding of the wider health care environment is critical, as it provides the soil in which efforts to improve chronic care can grow. For this reason, US initiatives transplanted without adequate reflection to England may well have different effects in the NHS. We suggest that, because of the relative weakness of market pressures (and all that arises from such pressures, such as greater involvement by clinicians in management and achieving better performance), the effect will be much weaker. Similarly, NHS policy-makers should bear in mind the potential for unintended negative consequences of wider policies (such as the introduction of foundation trusts and the cost-per-case method of paying hospitals) on efforts to improve chronic care.

More specifically, our work suggests a number of ways in which chronic care might be improved in the NHS.

Findings and recommendations

Wider environment

Our main findings were:

The impact of competition and the market

- Competition between MCOs for enrolees appeared to encourage innovation in service design and quality.
- Competition for enrolees (particularly competition for contracts with the large employers that are major purchasers of health care) seemed to have a greater influence than competition between providers for contracts with MCOs.
- The need to survive in the marketplace helped to align the objectives of managers and physicians, particularly where MCOs contracted with affiliated medical groups. The ability of enrolees to switch to another MCO prompted close collaboration.

- Excessive competition between MCOs could lead them to focus on attracting young and healthy enrollees at the expense of improving chronic disease management.
- Market competition could have both a positive and a negative impact on chronic disease management, and the value MCOs placed on this type of care was critical to their success in improving quality.

Recommendations for the NHS

- An assessment by the Department of Health of how different current national policies might help or hinder the development of better care for people with chronic conditions is needed, in particular how proposed new market incentives for hospitals and the introduction of foundation trusts will impact on chronic care.
- We suggest that there could be stronger financial incentives on PCTs, GPs and acute NHS trusts to manage patients with chronic conditions more effectively in the community and reduce the need for admission. There is scope here for creativity, pilots and evaluation. The incentives could arise from the encouragement of competition and a market – for example, between PCTs for patients, or through contestability of PCT management, although both have significant risks. Another route could be taken that does not rely on encouraging market pressures, but which assesses in a much more sophisticated way the mix of incentives already acting on GPs, practices, PCTs and acute trusts, and aligns them more strongly to the goal of better health and reduced avoidable hospitalisation.

Organisational domain

Our main findings were:

Relationships and incentives

- MCOs had local discretion to set organisational goals and priorities through negotiation between corporate and clinician managers. Such negotiation helped to determine how successfully goals and priorities were implemented.
- Long-term relationships between MCOs (as commissioners) and providers (hospitals and networks of physicians working in the community) were considered critical in providing incentives for investment in chronic disease management.
- Larger and more organised networks of physicians were more willing and able to engage in effective chronic disease management than loose networks of solo practitioners.
- Where MCOs worked exclusively with affiliated medical groups, both the purchaser and the provider of care had very similar incentives to improve disease management.
- Doctor–manager relations were strong, although there were fewer leadership opportunities for other clinical professionals.
- There were effective financial incentives for quality, targeted mainly at physicians, to encourage better care of people with chronic conditions.

Recommendations for the NHS

- PCTs should be helped to develop a business case for investing in chronic disease management – this might be a role for strategic health authorities.
- Better-developed financial incentives for providers (primary and secondary) are needed to provide integrated care and to keep people with chronic conditions well enough not to be hospitalised. Current financial incentives that apply to hospitals do not promote good chronic disease management and should be reviewed.
- The IT infrastructure in primary care should be further developed to enable the identification of high-risk patients and the ‘real time’ feedback of information to clinicians, thus encouraging continuing peer review.
- Much greater investment is needed in developing clinician–manager relations within PCTs and between PCTs and their providers.

Clinical process

Our main findings were:

- All of the MCOs used at least some of the six elements of the Chronic Care Model, a generic model designed in the United States to help MCOs organise better care for people with any chronic disease.
- Four of the five MCOs identified high-risk patients (‘risk stratification’) and targeted them for intensive case management, mainly nurse-led outreach care to work with patients to effectively manage their disease (the fifth MCO was developing this model).
- Lower-risk patients were offered disease management programmes that involved:
 - proactive management of care using guidelines with prompts to clinicians and patients
 - decision-support systems for patients and clinicians
 - patient education and self-care
 - electronic disease registries that identify affected patients and record details of their care management
 - the feedback to physicians of accurate, ‘real time’ clinical data on their own patients, with supportive peer review.
- There was limited choice for patients in whether or not to participate in case or disease management programmes (selection was determined by the MCO).
- There was a marked lack of focus on social care.

Recommendations for the NHS

- A generic model of chronic disease management should be developed.
- Risk stratification (and the identification of patients at high risk of ill health and hospitalisation) should be developed in every PCT.
- Case and disease management programmes in which support for self-management is a central feature should be developed in every PCT.

Taking things forward

The King's Fund is working with others in 2004 and 2005 to help take forward some items of the agenda outlined above.

- We are convening a national coalition of stakeholders interested in improving the care of people with chronic conditions. The coalition aims to raise the profile of chronic disease management, increase synergy between the work of participants to improve chronic care, and develop a chronic care model for England.
- We are discussing the agenda with the Department of Health, the Modernisation Agency and the Commission for Healthcare Audit and Inspection.
- We are embarking on development work with selected PCTs in London to help them improve the care they give to people with chronic conditions.

References

- Anderton J, Broady J (1999). 'Improving schools asthma policies and procedures'. *Nursing Standard*, vol 14 (6), pp 34–8.
- Audit Commission (2002). *Integrated Services for Older People. Building a whole system approach in England*. London: Audit Commission, p 24.
- Berro L, Grilli R, Grimshaw J (1998). 'Closing the gap between research and practice: an overview of systematic reviews of interventions to promote the implementation of research findings'. *BMJ*, vol 317, pp 465–8.
- Blendon R, Brodie M, Benson J, Altman D, Levitt L, Hoff T, Hugick L (1998). 'Understanding the managed care backlash'. *Health Affairs*, vol 17 (40), pp 80–94.
- Blue L, Lang E, McMurray J, Davie A, McDonagh T, Murdoch D, Petrie M, Connolly E, Namie J, Round C, Ford I, Mamison C (2001). 'Randomised controlled trial of specialist nurse intervention in heart failure'. *BMJ*, vol 323, pp 715–18.
- Blumenthal D (2003). 'Controlling health care expenditures'. *NEJM*, vol 344 (10), pp 766–9.
- Bodenheimer T, Wagner E, Grumbach K (2002a). 'Improving primary care for patients with chronic illness: the chronic care model, Part 2'. *JAMA*, Oct 16, vol 288 (15), pp 1909–14.
- Bodenheimer T, Lorig K, Grumbach K (2002b). 'Patient self-management of chronic disease in primary care'. *JAMA*, vol 288, pp 2469–75.
- Budetti PB, Shortell SM, Waters TM, Alexander JA, Burns LR, Gillies RR, Zuckerman H. (2002). Physician and health service integration. *Health Affairs*, 21, pp 203–10.
- Campbell H, Hotchkiss R, Bradshaw N, Porteous M (1998). 'Integrated care pathways'. *BMJ*, vol 316, pp 133–7.
- Casalino L, Gillies RR, Shortell SM, Scmittiel J, Bodenheimer T, Robinson J, Rundall T, Oswald N, Schaffler H, Wang M (2003). 'External incentives, IT and organised processes to improve health care quality for patients with chronic diseases'. *JAMA*, vol 289, pp 434–41.
- Casalino L, Robinson JC (2003). 'Alternative models of hospital–physician affiliation as the US moves away from tight managed care'. *Millbank Quarterly*, vol 81, pp 331–51.
- Committee on the Quality of Health Care in America (2001). *Crossing the Quality Chasm: A new health system for the 21st century*. Washington: National Academies Press.
- Coulter A (2002). *The Autonomous Patient: Ending paternalism in medical care*. London: Nuffield Trust.
- Coye MJ (2001). 'No Toyotas in health care: why medical care has not evolved to meet patients' needs'. *Health Affairs*, vol 20, pp 44–60.
- Damiani M, Dixon J (2001). *Managing the Pressure: Emergency admissions in London 1997–2001*. London: King's Fund.
- Davidson M (2003). 'Effect of nurse-directed diabetes care in a minority population'. *Diabetes Care*, (8) pp 2281–7.
- Department of Health (2003a). *National Service Framework for Diabetes: Delivery strategy*. London: Department of Health.
- Department of Health (2003b). *A Vision for Pharmacy in the New NHS*. London: Department of Health.
- Department of Health (2003c). <http://www.doh.gov.uk/cmo/progress/expertpatient/epp6.htm> (accessed 19 September 2003).

- Department of Health (2003d). <http://www.doh.gov.uk/natprogbudget/index-htm> (last accessed 12 December 2003).
- Department of Health (2002a). *Improvement, Expansion, Reform: The next three years – priorities and planning framework 2003–2006*. London: Department of Health.
- Department of Health (2002b). *National Service Framework for Diabetes*. London: Department of Health.
- Department of Health (2002c). <http://www.doh.gov.uk/performance/ratings/2002/index.html> (accessed 24 November).
- Department of Health (2001a). *National Service Framework for Older People*. London: Department of Health.
- Department of Health (2001b). *Extending Choice for Patients: A discussion document*. London: Department of Health.
- Department of Health (2000a). *National Service Framework for Coronary Heart Disease*. London: Department of Health.
- Department of Health (2000b). *The NHS Plan: A plan for investment, a plan for reform*. CM4818–1. London: The Stationery Office.
- Department of Health (1999). *National Service Framework for Mental Health*. London: Department of Health.
- Draper DA, Hurley RE, Lesser CS, Strunk BC. (2002). 'The changing face of managed care'. *Health Affairs*, vol 21, pp 11–23.
- Druss BG, Marcus SC, Olfson M, Pincus HA (2002). 'The most expensive medical conditions in America'. *Health Affairs*, vol 21, pp 105–11.
- Dudley R, Luft H (2001). 'Managed care in transition'. *NEJM*, vol 344, pp 1087–92.
- Enthoven A, Singer S (1998). 'The managed care backlash and the Task Force in California'. *Health Affairs*, vol 17 (4), pp 95–109.
- Epstein, A (1998). 'Rolling down the runway: the challenges ahead for quality report card'. *JAMA*, vol 297 (21), pp 1691–6.
- Fay J, Jones A, Ram F (2002). 'Primary care based clinics for asthma'. *Cochrane Database Syst Rev*, (1), CD003533. Review.
- Feachem R, Sekhri N, White K (2002). 'Getting more for their dollar: a comparison of the NHS with California's Kaiser Permanente'. *BMJ*, vol 324, pp 135–43.
- Felt-Lisk S, Kleinman LC. (2000). *Effective Clinical Practices in Managed Care: Findings from 10 case studies*. New York: The Commonwealth Fund.
- Ferlie E, Shortell S (2001). 'Improving the quality of health care in the United Kingdom and the United States: a framework for change'. *Millbank Quarterly*, vol 79 (2), pp 281–314.
- Firshein J (1997). 'HMO stocks hit bad times, say analysts'. *Lancet*, vol 349, p 1008.
- Friedman N, Gleeson J, Kent M, Foris M, Rodriguez D, Cypress M (1998). 'Management of diabetes mellitus in the Lovelace Health Systems EPISODES OF CARE program'. *Effective Clinical Practice*, Aug–Sept, vol 1 (1), pp 5–11. Erratum in *Effective Clinical Practice*, Mar–Apr 1999, vol 2 (2), p 100.
- Galvin RS (2001). 'The business case for quality'. *Health Affairs*, vol 20, pp 57–8.
- Glasgow RE, Orleans CT, Wagner EN (2001). 'Does the Chronic Care Model serve also as a template for improving prevention?'. *Millbank Quarterly*, vol 79, pp 579–613.
- Goldsmith J (2002). 'Integrating care: a talk with Kaiser Permanente's David Lawrence'. *Health Affairs*, vol 21, pp 39–48.

- Grumbach K, Dower C, Mutha S, Yoon J, Huen W, Keane D, Rittenhouse D, Bindman A. California Physicians 2002: Practice and Perceptions. <http://www.futurehealth.ucsf.edu/CWI/phass2.html> (accessed 24 November 2003).
- Guevara J, Wolf F, Grum C, Clark N (2003). 'Effects of educational interventions for self management of asthma in children and adolescents: systematic review and meta-analysis'. *BMJ*, vol 326, pp 1308–9 (14 June).
- Ham, C, York N, Sutcliffe S, Shaw R. 'Hospital bed utilisation in the NHS, Kaiser Permanente, and the US Medicare Programme: analysis of routine data'. *BMJ*, vol 327, pp 1257–60 (Nov 2003).
- Iglehart J (2002). 'Changing health trends'. *NEJM*, vol 347 (12), pp 956–62.
- Jobanputra R, Damiani M, Dixon J. 'The costliest conditions to treat in the NHS: inpatient care'. Submitted to *BMJ* December 2003.
- Johnston M, Langton K, Haynes R, Mathieu A (1994). 'Effects of computer-based clinical decision support systems on clinician performance and patient outcome: a critical appraisal of research'. *Ann Intern Med*, vol 120, pp 135–42.
- Levit K, Smith C, Cowan C, Lazenby H, Martin A (2002). 'Inflation spurs health spending in 2001'. *Health Affairs*, vol 20 (1), pp 172–80.
- Lewis R, Gillam S and Jenkins C eds (2001). *Personal Medical Services pilots – Modernising primary care?* London: Kings Fund Publications.
- Loveman E, Royle P, Waugh N (2001). 'Specialist nurses in diabetes mellitus'. *Cochrane Database Syst Rev*, (2), CD003286.
- Mazzuca S (1982). 'Does patient education in chronic disease have therapeutic value?'. *J Chronic Disease*, vol 35 (7), pp 521–9.
- Moher M, Yudkin P, Wright L, Turner R, Fuller A, Schofield T, Mount D (2001). 'Cluster randomised controlled trial to compare three methods of promoting secondary prevention of coronary heart disease in primary care'. *BMJ*, vol 322, pp 1338–42.
- National Electronic Library for Health website (2003). [www.nelh.nhs.uk/carepathways/primary care chronic disease clinics](http://www.nelh.nhs.uk/carepathways/primary%20care%20chronic%20disease%20clinics) (last accessed 24 November 2003).
- Naylor M, Broton D, Campbell R, Jacobsen B, Mezey M, Pauly M, Sandford Schwartz J (1999). 'Comprehensive discharge planning and home followup of hospitalized elders'. *JAMA*, vol 281, pp 613–20.
- Norris S, Lau J, Smith S, Schmid C, Engelgau M (2002). 'Self management education for adults with type 2 diabetes: meta-analysis of the effect on glycemic control'. *Diabetes Care*, vol 25 (7), pp 1159–71.
- Nyman M, Murphy M, Schryver P, Naessens J, Smith S (2000). 'Improving performance in diabetes care: a multicomponent intervention'. *Effective Clinical Practice*, Sep–Oct, vol 3 (5), pp 205–12.
- Osman LM, Abdalla MI, Beattie J, Ross SJ, Russell IT, Friend JA, Legge JS, Douglas JG (on behalf of the Grampian Asthma Study of Integrated care) (1994). 'Reducing hospital admissions through computer supported education for asthma patients'. *BMJ*, vol 308, pp 568–71.
- Oswald N. (2001). 'Toyotas or hush puppies? Physicians organisations and chronic care management'. *Health Affairs*, vol 20, pp 61–3.
- PMS National Evaluation Team (2002). *National Evaluation of First Wave NHS Personal Medical Services Pilots: Summaries of findings from four research projects*. Manchester: NPCRDC.
- Pringle M, Stewart Evans C, Coupland C, Williams I, Allison S, Sierland J (1993). 'Influences on control in diabetes: patient, doctor, practice or delivery of care?'. *BMJ*, vol 306, pp 630–4.
- Ram FSF, Jones A, Fay JK (2003). 'Primary-care based clinics for asthma (Cochrane review)' in *The Cochrane Library*, Issue 4. Chichester: John Wiley and Sons CD003533.

- Rich M, Becham V, Wittenberg C, Leven C, Freedland K, Carney R (1995). 'A multi-disciplinary intervention to prevent the readmission of elderly patients with congestive heart failure'. *NEJM*, vol 333, pp 1190–5.
- Robinson JC (2001a). 'The end of managed care'. *JAMA*, vol 285, pp 2622–8.
- Robinson JC (2001b). 'Theory and practice in the design of physician payment incentives'. *Millbank Quarterly*, vol 79, pp 149–77.
- Rundall TG, Shortell SM, Wang MC, Casalino L, Bodenheimer T, Gillies RR, Schmittdiel JA, Oswald N, Robinson JC (2002). 'As good as it gets? Chronic care management in nine leading US physician organisations'. *BMJ*, vol 325, pp 958–61.
- Salisbury C, Francis C, Rogers C, Parry K, Thomas H, Chadwick S, Turton P (2002). 'A randomised controlled trial of clinics in secondary schools for adolescents with asthma'. *BJGP*, vol 52, pp 988–96.
- Scottish Intercollegiate Guidelines Network and British Thoracic Society (2003). 'Chapter 9: Organisation and Delivery of Care' in *British Guideline on the Management of Asthma*. *Thorax*, vol 58 (suppl 1).
- Swift PGF, Hearnshaw JR, Botha JL, Wright G, Raymond NT, Jamieson KF (1993). 'A decade of diabetes: Keeping children out of hospital'. *BMJ*, vol 307, pp 96–8.
- Wagner EH, Austin BT, Davis C, Hindmarsh M, Schaefer J, Boninio A (2001). 'Improving chronic illness care: translating evidence into action'. *Health Affairs*, vol 20, pp 64–78.
- Wagner EH, Davis C, Schaefer J, Von Korf M, Austin B (1999). 'A survey of leading chronic disease management programmes: are they consistent with the literature?'. *Millbank Quarterly*, vol 7, pp 56–66.
- Wagner E (1998). 'Chronic disease management: what will it take to improve care for chronic illness?' *Effective Clinical Practice*, vol 1, pp 2–4.
- Weinberger M, Oddone E, Henderson W (1996). 'Does increased access to primary care reduce hospital readmissions?' *NEJM*, vol 334, pp 1441–7.
- Weingarten S, Henning J, Badamgarev E, Knight K, Hasselblad V, Gano A Jr, Ofman J (2002). 'Interventions used in disease management programmes for patients with chronic illness – which ones work? Meta-analysis of published reports'. *BMJ*, vol 325(7370), p 925.

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