



## **chapter** | nine

# **Paying for chronic disease care**

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### **Introduction**

There is no one “best” way to pay for services for people with chronic health problems, but there is little doubt that payment methods have important implications for the nature and quality of services provided. This chapter focuses on the different methods and combinations of methods available for paying for the care of people with chronic conditions, and the incentives generated by these methods. The chapter will cover incentives for payers/purchasers, providers (organizations, teams and individuals) and patients. Financial incentives can serve as primary motivators or reinforcers of behaviour change among providers, patients and other stakeholders. Yet few incentives in current healthcare systems promote effective chronic care, let alone chronic disease management. Instead, the predominant payment schemes represent major barriers. However motivated some healthcare stakeholders may be to implement changes to improve chronic care, few will operate counter to their economic interests (Leatherman et al. 2003). A core element for improving chronic care will, therefore, be to develop and adopt payment approaches that include appropriate financial incentives.

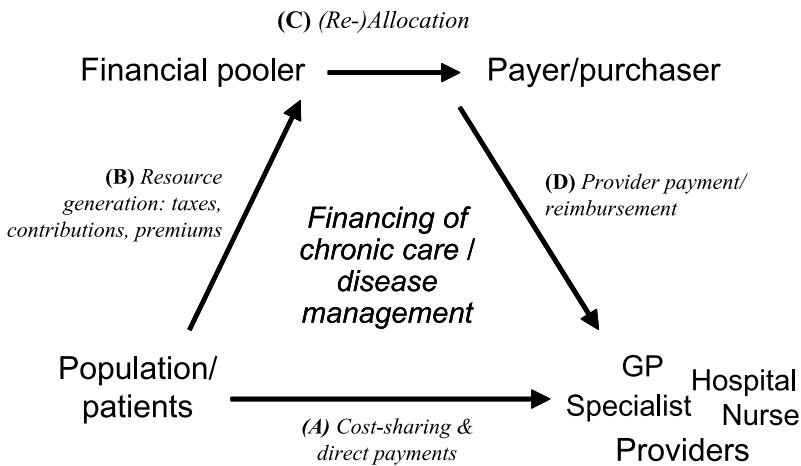
To examine both past and current financing mechanisms, as well as providing policy-relevant options in order to align incentives towards improving care for the chronically ill, the chapter employs an extended triangular model involving the population/payers, the providers and the financial intermediaries (Figure 9.1). The financial intermediaries have, in line with the separation found within most countries, been further subdivided into the “financial pooler”, which collects and pools collective resources for health services, and the “payer/purchaser”, which pays for or purchases care for defined parts of the population. The main focus is on how providers are paid to deliver care to people with chronic conditions. However, beyond looking at how such payers/purchasers





pay providers (relationship D), the chapter also examines the patient–provider relationship (A) and gives some consideration to financial allocations to payers/purchasers (C), especially in systems where patients have a choice of funder/insurer.

The chapter examines the main reasons why payers, purchasers, providers and patients may wish to use reimbursement modalities to increase the emphasis given by frontline staff to the management of chronic disease. It covers the main generic (i.e. not specifically developed for chronic care) approaches used to pay providers, including provider organizations, provider groups and individual providers, and summarizes key examples drawn from different countries, including some of the country case studies in the volume accompanying this book. The chapter then gives particular emphasis to describing so called “pay-for-performance” and “quality-based payments” (as defined in Box 9.1) on the grounds that they represent an area of innovation in provider payment that is widely debated in a number of countries, especially the United States and United Kingdom, but potentially relevant to many other high-income settings. Finally, the chapter attempts to summarize the evidence



**Figure 9.1** Financial flows related to paying for chronic care.

### Box 9.1 Definitions of key terms

*Chronic disease management.* This is defined as a population-based approach to the treatment of chronic illness using evidence-based clinical guidelines, multidisciplinary management and information systems to produce good outcomes at reasonable cost (Couch 1998; see also Chapter 4). Typically, chronic disease management programmes pay physicians and providers for putting in place appropriate structures and processes of care (e.g. better information systems), including paying for changes in the way that physicians and providers provide care.





*Pay-for-performance.* By contrast, pay-for-performance programmes have tended to focus on paying for the delivery of specific patient-based outcomes of care, not necessarily exclusively in the field of chronic care. Thus it refers to “financial incentives that reward providers for the achievement of a range of payer objectives, including delivery efficiencies, submission of data and measures to payer, and improving quality and patient safety” (McNamara 2006). It can be applied to hospitals, provider organizations, primary care physicians and their practices, specialists, nursing homes, domiciliary care teams and rehabilitation providers, and it can, in theory, be applied to any condition except the most acute. Pay-for-performance can thus be seen as an emerging component of more established approaches to chronic disease management, which typically include a wider range of techniques designed to improve the quality and cost-effectiveness of care.

*Quality-based payment.* A further development that is frequently discussed. (McNamara 2006) defines quality-based payment (or quality-based purchasing) as a narrower concept than pay-for-performance, since it does not generally include an economic component (i.e. incentives for cost savings or efficiency gains); instead it “focuses only on financing schemes that embody explicit financial incentives to reward and penalize providers based on the level of quality of care they deliver”. Quality, McNamara continued, “can be pegged to structural benchmarks (e.g. information technology investments), processes of care (e.g. compliance with clinical guidelines), and outcomes, including technical outcomes (lower mortality following surgery) and patients’ satisfaction with their care experiences’, but not costs.

available about the impact of these approaches in terms of effectiveness and cost-effectiveness.

## **Traditional forms of paying for healthcare and their effects on care for chronic conditions**

Before describing and analysing innovative ways of paying for the care of people with chronic illnesses, it is important to briefly review past, and often still current, ways of paying for care and their effects on chronic care.

### ***Provider payment/reimbursement***

Traditionally, there have been three ways for paying physicians and other healthcare professionals from pooled resources (i.e. by insurers or governments; resource flow D in Figure 9.1): fee-for-service, capitation and salary. All three have been used to pay providers at different levels in healthcare systems for the



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management of people with chronic conditions, among other things. However, none of these methods fully aligns financial incentives with the goal of optimal care for patients with chronic conditions. In effect, each creates different perverse incentives for patient care.

**Fee-for-service** involves paying extra money for each unit of service provided and generally motivates providers to increase the amount of service they provide, assuming that the payment offered exceeds the cost to the provider. The incentive under fee-for-service reimbursement is to provide as many reimbursable services as possible, creating the potential for overuse of such services while failing to provide uncovered services that may be equally or more cost-effective, such as active patient monitoring by phone or computer. The effect on quality is hard to predict. Providers may overprovide services of dubious value on the one hand yet, on the other hand, they face no incentives to skimp or withhold valuable services. Fee-for-service also minimizes incentives for avoiding patients who are difficult to treat, such as patients with multiple chronic conditions.

**Capitation** gives physicians (or other healthcare providers) a fixed amount to provide services to patients for a particular time, irrespective of the volume of services consumed by individual patients. Thus it generates the opposite incentives of fee-for-service, namely, to provide as little care as possible to each patient as providers paid by capitation bear the financial risk, creating the potential for underuse of services. Under capitation, physicians have the incentive to sign up more patients and do less for each, as well as to avoid high users of care such as patients with multiple chronic conditions. In theory, some of these incentives are moderated in situations where patients can choose to enrol with other providers. With choice, providers face some incentives to provide high-quality care to retain patients and income, but they must do so within a budget. If the capitation payment is not risk adjusted (i.e. if providers do not receive higher capitation payments for patients with higher needs), providers will not be interested in caring for the chronically ill as such patients will cost more to provide services to than the capitation sum based on average patients.

**Salary** gives a provider a guaranteed income for a period of time irrespective of how much work is carried out. As a result, there is no particular incentive on providers to over- or underprovide. However, there is also no specific incentive to provide high-quality care (unless the provider works for an organization in competition with other organizations to retain patient affiliations or maintain workload), and lazy staff may provide little care. While salary may be the most neutral form of clinician reimbursement, much relies on occupational norms, peer pressure and emulation to maintain performance.

The **payment of institutions** (especially acute care hospitals) is one level up in the system, and payment methods include fee-for-service, per diem payments, case fees and budgets. Per diem payments (i.e. a fee per day of inpatient stay) used to be a common way of paying hospitals particularly in social health insurance systems. If per diem prices are uniform across all patients, providers will have incentives to prefer less costly patients or to keep costly patients longer than necessary to recoup their costs through higher total reimbursement. As patients with chronic diseases are increasingly managed primarily in the





ambulatory care sector, they are hospitalized only for acute complications, which often makes them high-cost patients who are disadvantaged through this payment mechanism. Case fees, especially those known as “diagnosis related groups” have different incentives. The original system developed in the United States was based on diagnosis only and assumed that all patients in each diagnosis related group generated similar costs for the hospital, thus effectively sharing financial risk with providers, and perhaps perversely encouraging early discharge. The European adaptations, such as in France, Germany or the Netherlands, include, first, so-called “outliers”, which justify a higher level of reimbursement for difficult cases, and, second, procedures provided by the hospital for classification (Busse et al. 2006), effectively turning them into a hybrid with fee-for-service. Chronically ill people admitted to hospital should benefit from such developments, but they are at risk of inappropriate overprovision, as under fee-for-service. Institutional budgets have similar incentives to salaries paid to professionals.

In practice, variants of the basic payment methods are often combined into more complex payment systems in order to offset the inherent limitations of each. For example, it is common in the United States to find that salaried staff also receive additional incentive payments or bonuses (e.g. for treating a target number of patients and/or treating them in a timely manner) to mitigate the risk that they will provide poor-quality or too few services. Typically, capitation is coupled with incentives to reward high-quality services whereas salary is linked with output or productivity payments and fee-for-service with inducements to be economical, such as a share of any profit that the provider organization is able to make or by withholding a proportion of the professional’s earnings subject to satisfactory performance. Hence, there is a great deal of interest in developing “blended” or “mixed” approaches to payment for chronic disease care as well as for other services. Many pay-for-performance initiatives, as well as paying directly for the delivery of specific measures of quality and/or outcome, use a blend of payment methods. The United Kingdom NHS general practitioner contract first implemented in 2004 can be seen as a pay-for-performance blended payment contract in that it comprises capitation, fee-for-service, infrastructure (capital and information technology) payments plus a substantial element of quality-driven remuneration (see below).

### ***Resource generation and (re)allocation***

Often overlooked are the incentives for payers/purchasers related to the management of people with chronic disease. However, these are critical for the whole system to function properly, especially in countries with competing payers/purchasers. Two general situations can be distinguished: the payers receive their financial resources directly from the population (i.e. resource flows B and C in Figure 9.1 are not separated) and the payers receive their financial resources from pooled resources (i.e. through resource flow C in Figure 9.1).

In the first situation, resources allocated to the payers will be either risk related – thereby disadvantaging the chronically ill, who will face high premiums – or not risk related, that is, either income or community rated. While this leads to





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similar contributions for people with and without chronic illnesses, evidence from several countries shows that expenditure for around 80% of the population insured is *below* average while 20% have above-average expenditure and are bad risks (of whom 5% are very bad risks and are responsible for 50% of expenditure). Financially, insurers will always be better off to try to avoid the (very) bad risks. The insurers are also discouraged from providing high-quality chronic disease management as they risk disproportionately attracting sicker, especially chronically ill, people who want to benefit from paying average contributions.

In the second situation, the attractiveness of patients with chronic conditions will depend on whether the prevalence of morbidity or chronic illness is included in the formula for calculating the allocation to payers, be they sickness funds in social health insurance systems or local health authorities in tax-funded systems. Most formulae have traditionally only included sociodemographic parameters (e.g. age, sex, employment status) and sometimes regional variables (Busse et al. 2006). While in tax-funded systems with no choice of payer, this may disadvantage regions with a higher percentage of chronically ill people, it does not lead to deliberate selection of patients with low risks, or “cream-skimming”. Even if active cream-skimming of healthier persons is often not possible (and not allowed) on the part of competing sickness funds in social health insurance systems, the lack of a morbidity variable in the risk-allocation formulae has meant that sickness funds traditionally had no interest in investing in chronic disease management – as successful programmes would have increased their popularity with the chronically ill, thereby leading to financial difficulties. Recently, countries such as the Netherlands, Belgium and Germany have begun to address this issue by including morbidity as a factor in the formulae they use to calculate allocations to sickness funds (Van de Ven et al. 2007).

### ***Cost sharing and direct payments***

A final method of payment for chronic care is patient out-of-pocket payment or copayment (resource flow A in Figure 9.1). In most healthcare systems, patient copayments or user charges are the product of historical accident and are rarely designed with chronic care in mind. In general, copayments tend to obstruct good chronic disease care, especially for poorer people, who are normally at greater risk as copayments tend to be attached to the pharmaceuticals essential for good care. In a 2007 meta-analysis of the evidence on cost sharing between 1985 and 2006, Goldman et al. (2007) concluded that increased cost sharing is associated with lower rates of drug treatment, worse adherence by existing users and more frequent discontinuation of therapy. The RAND Health Insurance Experiment, a landmark study performed in the 1980s, demonstrated that cost sharing reduced *appropriate* and necessary office visits and preventive care as well as inappropriate visits, with adverse effects on visual acuity (Lurie et al. 1989), blood pressure control (Keeler et al. 1985) and survival among high-risk patients (Brook et al. 1983).

However, it is possible to see how varying patient copayments in systems where they are widespread could be used to encourage patients either to take part in chronic disease management programmes or to seek out providers





who are willing to comply with specific disease management protocols and/or standards (Table 9.2, below, has examples of the use of schemes of this type to promote chronic disease management). The effectiveness of such schemes depends on whether patients interpret the lower out-of-pocket cost or reduced contribution rate as a signal of lower quality and value, or are mainly influenced by the price signals and are thereby attracted to such programmes.

### **Chronic disease management programmes: rationale, role of incentives and prerequisites**

There are three main reasons why chronic disease management programmes have come to prominence with payers and/or purchasers in a number of very different health systems:

First, the clinical profile and needs of patients have altered dramatically over the last 40–50 years. Patients with multiple chronic conditions are now the norm. Unfortunately, the payment modalities in many healthcare systems were developed in an era of largely acute care and are not fitted to contemporary patterns of morbidity.

Second, studies commonly find that some patients do not receive appropriate, high-quality care and are exposed to the risk of medical errors. As a result, payers want to improve quality as a way of containing the rising overall costs of healthcare. A sense of financial “crisis”, perceived as threatening sustainability in some healthcare systems, has encouraged the development of better chronic disease care.

Third, it is well known that healthcare professionals, and particularly doctors, respond to financial incentives. Experience has also shown that simply giving comparative performance information to providers and other more traditional educational approaches to improvement have comparatively modest, gradual effects on doctors’ performance, but where rapid change is required, it is possible that the rate of improvement could be accelerated by adding financial incentives to the reputation-based incentives produced by making performance information available publicly (either to payers or patients or both).

Professionals tend to stress the importance of intrinsic motivation and worry that professional motivation and flexibility may be damaged by linking financial rewards to the performance of particular activities, whereas managers and payers tend to emphasize the importance of extrinsic motivation in improving quality of services. It is likely that both intrinsic and extrinsic incentives for quality improvement are necessary and need to be carefully balanced. This chapter focuses on the extrinsic aspect of quality improvement for chronic disease care whereas other chapters focus on other ways of motivating improvements in chronic disease management.

The range of reasons for the current vogue for altering payment modalities to encourage better chronic care means that different systems and payers will have different goals in introducing new methods.

The prerequisites described below are based on conceptualization and experience to date rather than rigorous evaluation since such evaluation of different approaches is often lacking (see below). There is still contention as to what





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are the essential clinical features of good chronic care management or other models (Singh and Ham 2006; see also Chapter 4). However, it is possible to identify many of the wider organizational features of systems that are needed to allow a range of different chronic care approaches a better chance of success.

The evidence presented in Chapter 3 indicates that any net returns to the payer from most chronic disease management programmes tend to occur after the first five years once the up-front investment in programmes has been made. Indeed, the benefits of avoiding severe complications are often only realized after eight to ten years (Eastman et al. 1997). This suggests that *continuity of involvement with patients on the part of funders/insurers* and hence providers (e.g. through patient enrolment), is likely to be one of the most important prerequisites for effective payment systems.

Given that benefits and cost savings tend not to appear for several years, it is noteworthy that in most private medical insurance systems, such as those in the United States, patients only stay with an insurer for an average of about three years. While this has not been the case until recently in social health insurance systems, where choice of sickness fund and competition between insurers is only now being encouraged, such as in Germany or the Netherlands, drop-out rates from disease management programmes (in Germany) or signs of a growing tendency to change funds (in the Netherlands) demonstrate that this may also become relevant in those countries. As a result, most chronic disease management programmes to do not appear to be a good investment for individual insurers.

Yet, as demonstrated in Chapter 3, chronic disease management (e.g. for diabetes) can be a very good investment from a societal point of view because of avoided complications, improved health-related quality of life, long-term cost savings from decreased use of services and less time receiving disability payments, and other benefits such as workplace productivity gains. There is a huge discrepancy between the individual insurer's weak rationale and the strong societal rationale for chronic disease management. Employers stand to gain potentially but are unlikely to invest heavily unless they are confident that they will have a stable workforce.

High-quality chronic disease management programmes also risk disproportionately attracting sicker people, further discouraging insurers and providers to provide such programmes. This suggests that in systems which offer choice of insurer or sickness fund and/or choice of provider, thereby encouraging a fairly rapid turnover of enrolees and patients, there may need to be a separate system of funding for chronic disease management, probably from public sources, to enable a socially efficient level of management to be provided. From this perspective, the prospect held out in the Netherlands of competing private insurers offering chronic disease management packages to their insurees in order to be able subsequently to offer them lower premiums appears naive, or at best unlikely to be sustainable if patients move between insurers in any numbers (Klein-Lankhorst and Spreeuwenberg 2008). An alternative approach in social insurance systems with multiple sickness funds or insurers is to develop a sophisticated risk-equalization formula and process that would operate to reallocate resources between insurers or sickness funds as patients change their







affiliations, as well as encouraging insurers to take responsibility for people with chronic conditions (resource flow C in Figure 9.1). This is, however, extremely challenging technically.

Even in collective tax-funded or single-payer social health insurance systems, which, in many ways, are much better placed to facilitate long-term chronic disease care, any significant degree of devolvement may encourage the local “insurers” (i.e. planning or purchasing authorities) to take a short-term view and focus on providing more acute care to deal with current demand rather than investing in chronic disease management with its likely longer term benefits. There may well be wider political reasons for so doing (e.g. reducing waiting times for elective surgery rather than investing in chronic disease management programmes) as governments are held to account for their achievements over a relatively short time cycle.

There are other prerequisites: experience with putting in place chronic disease management programmes indicates that there are a number of other important requirements for effective payment approaches.

- The ability *ex ante* to identify and stratify patients in terms of severity (i.e. risk adjustment for calibrating performance measures, see below) and requirements for care (i.e. risk adjustment of capitation rates), and to be able to monitor patients’ health status over time insofar as performance and outcomes relate to payment.
- The availability of widely accepted, evidence-based or informed guidelines or protocols defining “appropriate” and/or “cost-effective” care for different people, and the ability to implement these guidelines and protocols.
- The development of carefully chosen, risk-adjusted performance measures, where improvements against these measures will produce measurable improvements in the health of enrolled patients. These are generally likely to be process or quality measures, since outcome measures do not contain specific information about what providers should be changing to improve outcomes and often take too much time to achieve (see above). The measures should be as close as possible to the end of the causal chain from processes to outcomes (Chassin 2006).
- Systems are needed that can measure and assess the structure, process quality and outcomes (where relevant) of care *ex post*.
- Motivation of physicians and staff to empower and support their patients to manage their chronic disease: a collaborative approach to chronic disease management involving active patient self-management as well as encouragement of patient compliance through various forms of care management. This is more usually found in primary healthcare teams and therefore in systems with well-developed primary healthcare.
- An integrated, flexible workforce is required that is willing and able to cross professional boundaries, conventional team structures and job skills in response to financial incentives and payment modalities (Rechel et al. 2006).

The number and range of these prerequisites explains why payment schemes produce both disappointing and variable results.





## Specific incentives used to stimulate improved care especially for the chronically ill

Table 9.1 summarizes the main ways in which payers can specifically encourage the provision of appropriate chronic disease care. Financial incentives can apply to the structure, processes and outcomes of care, and should be considered in relation to other, non-financial regulations or incentives.

At present, the bulk of financial incentives in high-income countries other than the United States relate to the structure or process of care. Only the United Kingdom NHS general practitioner contract specifically includes a range of incentive payments focused on the delivery of particular outcomes (see below). In general, there has been a gradual shift of focus from approaches that simply take into account the presence of patients with chronic disease (or who are likely to suffer from chronic illnesses) when funding either purchasers or providers towards payment incentives designed to encourage specific kinds of structural and process response at provider level (e.g. as in the Australian Enhanced Primary Care (EPC) package (Glasgow et al. 2008)).

Case studies in selected high-income countries compiled for the volume accompanying this book provide a range of examples of the main types of payment and regulatory incentive currently in use to encourage chronic care (Durand-Zaleski and Obrecht 2008; Glasgow et al. 2008; Jiwani and Dubois 2008; Karlberg 2008; Klein-Lankhorst and Spreeuwenberg 2008; Schiotz et al. 2008;

**Table 9.1** Purpose of financial incentives and regulation for chronic disease care

<i>Focus</i>	<i>Purpose of financial incentives</i>	<i>Purpose of other relevant types of regulation</i>
Structure	To implement DMPs, and recruit and enrol patients in DMPs To put in place “integrated” forms of care (mostly packages that cross institutional/sectoral boundaries)	To implement systems of in-house quality management To detail structural requirements To implement systems of data collection
Process	To keep patients in DMPs for a target period of time To ensure that the care protocols specified in DMPs are followed (e.g. in encounters with a specific provider, over $x$ months) To reach predefined targets on process measures (e.g. proportions of patients treated with a particular drug)	To mandate evidence-based standards (i.e. clinical practice guidelines) To implement/mandate targets on process measures of quality To reach agreement on minimum volume of services
Outcome	To reach predefined targets (e.g. proportion of patients with outcome $x$ ) or to reward the top $y\%$ of providers on an indicator	To implement/mandate targets on health outcomes and/or patient satisfaction

DMP, disease management programme.





Siering 2008; Singh and Fahey 2008). The most notable examples of financial incentives in this group of countries are summarized in Table 9.2, organized according to the model for tracing financial flows outlined in Figure 9.1. The policy focus in most high-income countries is on provider incentives, given the importance of healthcare professionals, especially physicians, in determining how patients use health services (between payers/purchasers and providers; flow D in Figure 9.1).

The following sections describe examples of payment initiatives in the countries reviewed for this book and described in the accompanying volume, complemented by a description of the United States experience with Medicare pay-for-performance.

### ***Provider payment incentives***

#### **Australian Enhanced Primary Care Practice Incentive Programme and Service Improvement Payments**

After a series of experiments in the 1990s in multidisciplinary care planning and coordinated care, the Commonwealth government in Australia introduced the EPC package in 1999, designed to increase the involvement of general practitioners, practice nurses and allied health professionals in structured and coordinated care based on the Chronic Care Model (see Chapter 4) (Glasgow et al. 2008). Pay-for-performance elements (the Practice Incentive Programme and Service Improvement Payments) were subsequently introduced within the EPC, the bulk of which is paid by fee-for-service, the usual method of payment for general practitioner and related services in Australia. The Practice Incentive Programme and the Service Improvement Payments pay general practices according to whether they have met prescribed quality and service criteria for chronic care (Glasgow et al. 2008). Performance-based payments typically account for less than 10% of the income of a practice.

The diabetes Service Improvement Payment pays practices for each patient who has completed an annual cycle of care comprising assessment of glycosylated haemoglobin (HbA1c), blood pressure, lipids, weight, behavioural risk factors and screening for complications, and for the proportion of diabetics in the practice who have completed an annual cycle of care. By 2006, over 90% of eligible practices were taking part in the diabetes Practice Incentive Programme; of these, 70% had received Service Improvement Payments and half of these had achieved their outcome targets. The introduction of these programmes was accompanied, in the early 2000s, by improvements in the quality of care for patients with diabetes, though whether these gains would have occurred in any event is not known.

#### **The United Kingdom NHS general practitioner contract**

One of the innovations in the 2004 United Kingdom NHS general practitioner contract is that general practices are rewarded for delivering care exhibiting particular features deemed to be associated with clinical and organizational quality (Roland 2004; Smith and York 2004). The contract addresses quality in two ways.





**Table 9.2** Examples of financial incentives for chronic disease care in selected high-income countries

<i>Financial flows (as in Figure 1)</i>	<i>Target: patients with chronic conditions</i>	<i>Target: structures</i>	<i>Target: processes</i>	<i>Target: outcomes</i>
<p>Patient to provider (A)</p> <p>No copayments for services related to their disease (e.g. ALD in FR for 30 mainly chronic diseases until 2004)</p> <p>Lower annual limits on copayments (GER)</p> <p>Certain drugs require lower cost sharing if indication is deemed serious (FR)</p>	<p>ALD exemption only for established and agreed care protocol for each patient (FR since 2004)</p> <p>Cost sharing may be reduced or waived if patients enrol in DMPs (GER)</p> <p>Coverage of additional services (e.g. patient education) for patients in DMP/ALD</p> <p>Patients with chronic conditions/complex needs managed via care plan receive fee rebate for five allied health services per year (e.g. podiatry) (AUS)</p>	<p>ALD exemption only if care protocol is presented to every treating physician on each visit (FR)</p> <p>Lower cost-sharing limit only if patient adheres to therapy (GER, since 2007)</p>		
<p>Patient to financial pooler (B)</p> <p>Premium reduction of maximum of 10% for insured under group contracts (e.g. chronically ill) (NL)</p>	<p>Insurers are interested in offering premium reductions to DMP participants (NL), but this had not yet been implemented</p>			
<p>Financial pooler to payer/purchaser (C)</p> <p>Funding (re-) allocation formula between insurers accounts for individual morbidity criteria (i.e. individually risk-rated capitations) (NL, GER from 2009)</p>	<p>Funding (re-) allocation formula (RSCS) takes into account patient enrolment in DMPs: sickness funds receive <i>more</i> for patients registered with a DMP and <i>less</i> for those not enrolled, thereby encouraging funds to offer DMPs (GER)</p>			

(Continued Overleaf)





**Table 9.2** Continued.

*Financial flows (as in Figure 1)* *Financial incentives to encourage chronic disease care (patients and services) in different high-income countries*

<i>Target: patients with chronic conditions</i>	<i>Target: structures</i>	<i>Target: processes</i>	<i>Target: outcomes</i>
<p>Payer/purchaser to provider (D)</p> <p>Piloting of “year of care” payment for complete package of chronic disease management required by individuals with chronic conditions (e.g. based on validated “care pathways” for diabetes) (DK, UK)</p>	<p>Per-patient bonus for physicians for acting as gatekeepers for patients with chronic conditions and for setting care protocols (FR)</p> <p>Bonus for DMP recruitment and documentation (GER)</p> <p>1% of total health budget available for integrated care (GER)</p> <p>Points for achieving structural targets (UK GP contract)</p> <p>Payments to GPs for generic care planning, case conferences, establishing disease registers for patients with chronic disease (AUS, EPC)</p> <p>Additional services (e.g. patient self-management education) only reimbursable if physicians and patients participate in DMP (GER)</p>	<p>Points for reaching process targets (UK GP contract)</p> <p>PIP and SIP payments for meeting prescribed quality and service criteria for chronic conditions over an annual care cycle (e.g. for diabetes) (AUS)</p> <p>Additional services (e.g. patient self-management education) only reimbursable if physicians and patients participate in DMP (GER)</p>	<p>Points for achieving outcome targets (UK GP contract)</p>

ALD, affections de longue durée; AUS, Australia; DMP, disease management programme; DK, Denmark; EPC, enhanced primary care programme; GP, general practitioner; FR, France; GER, Germany; NL, Netherlands; PIP, practice incentive programme; RSCS, risk structure compensation scheme; SIP, service improvement payments; UK, United Kingdom.





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First, it sets out a range of quality-related requirements that have to be fulfilled by providers in order to be contracted to the NHS (e.g. having a practice information leaflet for patients, a system to handle patient complaints, safety policies and a system to enable quality assurance). Second, it includes a system of financial incentives for clinical and organizational quality. Traditionally, NHS funding of general practitioners has been largely on the basis of the number of patients registered with a practice, although there were exceptions such as target-driven payments for cervical cancer screening and child immunizations. Now, quality rewards make a substantial part of the funding (typically 25% of a general practice's income) in addition to capitation and infrastructure payments.

Performance is measured using a Quality and Outcomes Framework (QOF) especially developed for this purpose. The framework focuses on four main components, one of which (clinical standards) is linked directly to the care of people with ten chronic conditions: coronary heart disease, stroke or transient ischaemic attacks, hypertension, diabetes, chronic obstructive pulmonary disease, epilepsy, cancer, mental health problems, hypothyroidism and asthma (Box 9.2).

In 2006–07, other indicators were added covering heart failure, palliative care, dementia, depression, chronic kidney disease, atrial fibrillation, obesity, learning disabilities and smoking, with a greater emphasis on prevention. The other three

### **Box 9.2** The Quality and Outcomes Framework (QOF) in the United Kingdom NHS general practitioner contract

The Quality and Outcomes Framework (QOF) for achieving clinical quality standards was developed on the basis of the best currently available evidence. To link payments to the achievement of quality standards, a system of points was developed to an original maximum of 1050 (currently 1000). The maximum number of points achievable for each indicator is related to the associated workload. The 80 clinical indicators in 19 areas account for 66% of the total number of points achievable by a practice. Most points are available for ischaemic heart disease (121), hypertension (105) and diabetes (99).

For clinical indicators, indicator points are awarded in a simple linear relationship to achievement between a minimum and maximum achievable. By contrast, points are based on a yes/no determination for organizational or patient experience indicators. For example, for controlling blood pressure in diabetic patients (i.e. achieving a blood pressure of 145/85 mmHg or less) a maximum of 17 points can be achieved. No points are achieved until 25% of patients have controlled blood pressure; the maximum practically achievable has been set at 55%. If a practice achieves this target blood pressure in 55% of its diabetic patients, it will be given the full score for this indicator. If the target is achieved in, say, only 30% of the diabetic patients, the practice will get a score for this indicator of only 5(30%–25%) out of a maximum of 30(55%–25%), i.e. 2.8 points.





components of quality are organizational quality standards (in five areas), the experience of patients (consultation length and results of patient surveys) and the provision of additional services (in four areas: cervical screening, child health surveillance, maternity services and contraceptive services). Each component has been brought into operation through a comprehensive list of over 150 indicators that describe performance (selected examples are given in Table 9.3).

The approach is not prescriptive; it leaves it to each practice to decide in which domains of quality and targets to concentrate its efforts. However, the contract includes a small bonus mechanism to reward the breadth of the quality improvement focus, in addition to the incentives described above, which reward the depth of the improvements.

In the first year of the new contract, the median practice achieved 83% of the maximum total number of points (Doran et al. 2006), exceeding the government's predictions. Performance in the second year was even stronger, with the median practice attaining 87% of the maximum number of points. Performance in the third year (2006–07) was stronger still, with 95% of practices scoring the maximum number of points (Information Centre 2007).

In 2006, the QOF was modified, partly in response to a perception that the targets were too easy to achieve. All minimum, and some of the maximum, thresholds attracting points were increased. Thirty indicators were dropped or altered and 18 new clinical areas were introduced (e.g. depression) to give greater weight to areas such as mental health, which was regarded as under-represented in the QOF. The biggest query about the QOF remains whether it genuinely encourages better quality care or simply rewards successful undertaking of specific activities and completeness of recording (see below). Since payments are made in relation to the number of points achieved by a practice, the QOF is not a zero sum game and has resulted in an increase in spending on general practices in the NHS. As a result, the rewards of the better performers have not been at the expense of the poorer performers.

**Table 9.3** Examples of indicators, targets and point values for chronic disease management in the United Kingdom NHS general practitioner contract

<i>Type</i>	<i>Indicator</i>	<i>Points</i>	<i>Target range</i>
Structural	The practice establishes a register for patients with stroke or transient ischaemic attack (STROKE1)	4	Yes/no
Process	The percentage of patients with history of myocardial infarction who are currently treated with an angiotensin-converting enzyme inhibitor (CHD11)	7	25–70%
Outcome	The percentage of patients with diabetes in whom the last blood pressure was 145/85 mgHg or less (DM12)	17	25–55%
Outcome	The percentage of patients age 16 years and over on drug treatment for epilepsy who have been convulsion free for last 12 months recorded in last 15 months (EPILEPSY4)	6	25–70%

*Source:* British Medical Association 2003.





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### **The “year of care” approach**

The “year of care” approach is a costed “package” approach to paying for chronic disease care derived from managed care in the United States, but adapted for the circumstances of the United Kingdom NHS and designed to encourage continuity and integration of a full range of care for individuals over a concerted period of time (a year). The NHS defines this approach as, “[t]he ongoing care a person with a chronic condition should expect to receive in a year, including support for self-management, which can then be costed and commissioned. It involves individuals through the care planning process, enabling them to exercise choice in the design of a package to meet their needs” (Centre for Clinical Management Development 2007).

The amount of funding available for the “year of care” is calculated using a risk-adjusted capitation formula based on the likely consumption of a range of necessary health services over a 12-month period for people with specific diagnoses. “Year of care” funding has been developed for people with diabetes and a range of mental health problems and is being piloted and evaluated.

### **The United States Medicare pay-for-performance demonstration**

This Medicare pay-for-performance initiative in the United States comprised a series of demonstration pilots, initially with ten large multispecialty group practices, that started in 2005, though there are plans to extend the demonstration to solo and small group practices with fewer support staff and a narrower range of specialties. Practices are paid by fee-for-service in the normal way, but, in addition, there is a financial incentive for improved chronic care. The practices share 80:20 with the Centers for Medicare and Medicaid Services any savings on the usual cost they are able to make by improving their outcomes and/or reducing their costs of care for patients with costly conditions such as diabetes, congestive heart failure and chronic obstructive pulmonary disease. Half-way through the three-year trials, the practices were reported to be making encouraging progress in identifying Medicare patients with chronic, high-cost conditions and closing the gaps in their care, thereby avoiding costly hospital stays (Klein 2006). The participating groups take the decision to invest their own resources in the systems needed to track and follow up patients on the basis that they can make significant savings and they are being compared with a control group of matched patients in the same geographic area managed by other practices. If the group practice qualifies for the savings bonus, a proportion of it is tied to the group’s performance on a range of quality targets to prevent the accumulation of savings simply by reducing the quality of care.

### ***Incentives for payers/purchasers***

#### **Risk structure compensation scheme**

There are relatively few examples of chronic disease management incentives directed at payers/purchasers. However, in 2002 in Germany, where there is free patient choice among not-for-profit sickness funds, the formula used to







reallocate revenue between funds to ensure that each is fairly funded for the likely costs of meeting the healthcare needs of its enrolees was amended to give extra funding for enrolees registered with a chronic disease management programme (initially confined to diabetes, breast cancer, asthma and coronary heart disease and subject to minimum standards) (Busse 2004; Siering 2008). Instead of patients with chronic conditions generating deficits for sickness funds, they are now relatively attractive. Despite contention between the sickness funds and physicians' associations as to what constituted the minimum standards for chronic disease management programmes and the patient care documentation needed, this reform has led to a rapid rise in the provision of disease management programmes by sickness funds and of the number of patients enrolled in them, though critics argue that the scheme does not provide incentives for sickness funds to improve the care of people with chronic conditions as much as to enrol them in schemes and be compensated more highly as a result.

### ***Incentives for patients***

Financial incentive schemes targeted directly at patients to promote chronic disease management are also relatively uncommon. For example, hitherto, schemes involving differential copayments have been regarded as politically unacceptable in the United Kingdom NHS. However, there are schemes in both France and Germany where the general use of copayments is more common. In Germany, cost sharing may be reduced or waived entirely for patients enrolled with specific chronic disease management programmes. Patients choosing to become involved in chronic disease management programmes also have access to additional services that other patients are not eligible for, and patients compliant with chronic disease management protocols are eligible for further reductions in their copayments (Siering 2008). In France, patients are exempt from chronic disease management copayments if they present their previously agreed care protocol at every physician visit (Durand-Zaleski and Obrecht 2008). Evaluations of these schemes have yet to be published.

Another theoretical approach to altering what patients pay to promote their involvement in, and access to, chronic care would be to lower patients' insurance contributions (in private and social insurance systems) in return for their participation in validated chronic disease management programmes. This could be combined with lower copayments for specific services (A and B in Figure 9.1).

### **Evidence about the impact of different payment methods**

This section reviews the evidence on the different (financial) incentive systems to encourage better chronic disease management that have been described in the previous section.

There are surprisingly few high-quality studies of different payment methods designed to improve the quality and/or efficiency of care for chronic disease (i.e. pay-for-performance and quality-based purchasing, in particular) despite the



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strong interest in using financial incentives to improve healthcare quality. The best evidence comes from the United States and so has to be interpreted carefully for use elsewhere. Furthermore, much of the evidence comes from single case studies of schemes rather than rigorous comparative studies. As a result, there is considerable scope for debate as to the relative effectiveness of schemes; how they work; which are the most influential components of programmes; in which circumstances different approaches might work best; the best size, frequency and duration of incentives; whether rewards should be focused on the highest performers, on those who have improved or should relate to an absolute standard; how many performance domains to concentrate on at any one time; how financial incentives interact with other tools for quality improvement (e.g. reputational incentives generated by, for instance, publication of performance information where patients can choose providers); the costs of programmes in relation to their benefits; and the nature of the barriers and enablers of effective approaches.

While earlier reviews consistently concluded that there was a lack of evidence on the effects of different ways of paying providers for chronic care, including pay-for-performance (Eichler et al. 2001; Gosden et al. 2001; Institute of Medicine 2001; Dudley et al. 2004), one of the most recent reviews by Petersen and colleagues (2006) suggested that pay-for-performance has some positive effects, especially when its impact is monitored carefully. However, Frølich and colleagues (2007) remained doubtful, stating: "P4P [pay-for-performance] and PR [public reporting of performance] incentives intended to improve quality are now used worldwide. Despite this, there is relatively little research showing whether such incentives improve quality. We found little empirical evidence upon which to base the design of incentive programs, no comprehensive conceptual models of how incentives should work, and a disconnection between reported research and theory."

Despite some accumulation of information recently, there is little evidence about which performance targets/standards providers should be encouraged to achieve; what sort and scale of financial inducements, and combinations of incentives, are needed for what degree of change; how payments should be structured; and at what level incentives should be targeted (i.e. entire health plans, integrated organizations offering disease management services (e.g. disease-specific "carve outs"), group practices/physician partnerships, individual clinical teams or physicians, patients or some combination of these). It is generally held that incentive schemes should not rely exclusively on patient-level outcome indicators but should include a majority of structure and process measures of quality. This is because chronic disease outcomes are normally dependent on a range of factors, including patient involvement and compliance that are partly outside the control of chronic disease management programmes. Therefore, payments should be for performance largely on the basis of structures and processes rather than patient outcomes since the outcomes achieved are not necessarily always a direct reflection of the quality of services (Beich et al. 2006).

There is clearly growing interest in a range of different ways of changing payment methods to improve the effectiveness and cost-effectiveness of care, including for people with chronic conditions. This has led to more demonstration schemes and increased the scope for empirical work, especially in the





United States, to remedy the relative dearth of evaluative studies. As a result, a number of preliminary evaluations of several different incentive approaches are becoming available.

### ***Quality-based purchasing***

The Agency for Healthcare Quality recently reviewed the evidence from the United States on the effectiveness and potential of both reputational and payment-based quality-based purchasing schemes designed to improve the quality of care (Dudley et al. 2004). The review identified eight very varied trials of performance-based payment, each of which used different financial incentives and different measures of performance. The trials were mainly related to prevention and there was only one specifically directed at chronic care. In four studies, the recipient of the incentive was an individual provider, while in the other four the recipient was the provider group or could be either an individual provider or a group. Among the studies targeting individual providers, there were five positive and two negative results; among the studies in which the target was or could be the provider group, there were one positive and two negative results (in general, the term positive was used to mean an effect in the desired direction (i.e. the incentive worked) and negative to mean there was no significant effect of the incentive on the outcome measure). In seven studies, the target of the incentive was a physician. Of the nine dependent variables assessed, five showed a significant relationship to the incentive in the expected direction and four showed no significant change after the incentive was introduced. A single study involved pharmacists and achieved positive results.

There was no consistent relationship between the magnitude of the incentive and response, although the studies were so heterogeneous that this is not surprising. Among the fee-for-service studies, four were positive and one was negative. Among the bonus studies, two were positive and three were negative. There were seven studies of preventive care with nine dependent variables assessed. Among these nine outcomes, five were positive and four were negative. The single study on chronic care was positive. Generally, incentives to achieve performance were found to be more effective when the indicator to be followed required less patient cooperation (e.g. receiving vaccinations or answering questions about smoking) than when significant patient cooperation was needed (e.g. to quit smoking).

The authors concluded that, to date, there are few unequivocal data on which to base a quality-based purchasing strategy, but some evidence that both payment and reputational incentives can work. They suggest that, with appropriate caution, outcome measures can be included among the performance indicators used for quality-based purchasing, and not just structure and process indicators.

### ***Pay-for-performance initiatives in the United States***

Even though studies published so far cannot provide definitive evidence, they provide generally positive findings on pay-for-performance at the level of



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individual hospitals, insurers' programmes or large, integrated healthcare delivery networks. Unfortunately, and not uncommonly, it is still not possible to conclude which aspect of the intervention created the advantage over the comparators and there is no information about the cost-effectiveness of the intervention (Galvin 2006).

Petersen and colleagues (2006) offer perhaps the most up-to-date systematic review of the evidence on explicit financial incentives and improvements in quality measures. They identified 17 studies, 13 assessing process measures of quality, mostly for preventive services. Only two studies compared the type of incentive (bonus versus enhanced fee-for-service). Only five studies were specific to patients with chronic disease. Of these, one used the payment system to encourage skilled nursing home providers to take on elderly patients with chronic disease and improve their health status so that as many as possible could be discharged to their homes (positive effect of bonus payment); a second used the payment system to encourage providers to offer services to young people with substance abuse, psychological problems and criminal histories (to prevent cream-skimming in a system offering additional funding for more effective and efficient services); a third encouraged community mental health centres to provide case management of clients in the community (partial effect of enhanced fee-for-service); a fourth encouraged provider groups to screen diabetic patients for HbA1c (partial effect of bonus per member per month if target rates could be met or exceeded); and the final study encouraged individual physicians to meet quality targets for their diabetic patients based on process and outcome measures (e.g. serum low density lipoprotein and low density lipoprotein cholesterol, retinal examination) (partial effect of bonus paid in relation to achieving or exceeding individual targets and score on composite index of quality).

Five of the six studies of physician-level financial incentives and seven of nine studies of provider group-level financial incentives found partial or positive effects on measures of quality. One of the two studies of incentives at the level of the payment system found a positive effect on access to care, but the other showed signs of patient cream-skimming, indicating that access to care might have deteriorated. The authors found no studies looking at the duration of incentives or the persistence of any effects if incentives were removed. There was only one cost-effectiveness study, which happened to relate to people with chronic conditions. It showed that a combination of incentives could improve patients' access to nursing homes and the outcomes of nursing home care as well as saving US\$3000 (€1978) per nursing home stay. However, because of the structure of the payment system, the savings might not accrue to Medicaid, which had paid for the incentives.

Studies to date also raise some important issues, especially about the detailed implementation of pay-for-performance initiatives (Hackbarth 2006).

- Financial incentives for quality are likely to be worth pursuing but require very careful design since there is some evidence of perverse responses to incentives (i.e. excessive focus on incentive-linked versus other tasks or areas of quality, gaming or better reporting without any improvement in quality).
- The objectives of any scheme need to be clearly defined, in particular whether





the goal is to improve the performance at the bottom of the distribution, raise the mean, increase the proportion of providers achieving a standard or reward the best.

- Collecting the data needed for pay-for-performance programmes can be costly and the data may not always accurately capture performance (e.g. risk-adjusted, detailed clinical data are needed to make valid comparisons between providers).
- Providers expend considerable resources trying to earn incentive payments (Chassin 2006); consequently, programmes are costly in terms of providers' time.
- The performance measures used in incentive programmes have to be chosen with great care to ensure that they are associated with health improvements, since providers target their quality-improvement efforts on areas that might earn them additional payments (Chassin 2006); incentives combining process and outcome measures of quality (e.g. provision of smoking cessation advice and quit rates) may mitigate the disadvantages of either approach taken alone (i.e. process measures tend to be more susceptible to gaming and outcome measures may not be sensitive to quality of care since they may be partly outside the control of providers).
- The size of the incentive is probably important though the amount of empirical work on this is negligible, so it is difficult to determine what proportion of provider income should be put at risk in such schemes. In these circumstances, it seems sensible not to offer excessively highly powered incentives.
- Continuous incentives may be more influential than, for instance, an end-of-year bonus.
- Financial incentives alone do not improve care in that incentives must influence frontline staff to alter what they do with, and for, patients, which means that staff must know what to change in terms of the structure of their practices and their processes of care.
- Effects of financial incentives tend to be small at the provider group (or hospital) level but somewhat larger at the level of individual professionals, most likely because individuals cannot obtain the full benefits of their own efforts under schemes operating at higher levels. However, the evidence from studies of the Chronic Care Model (Bodenheimer et al. 2002a, 2002b) tend to show that multidisciplinary teams produce better outcomes, suggesting that incentives at team level might be a feasible compromise between levels. The experience of the US Veterans Health Administration suggests that provider group incentives even without large monetary incentives for physicians can be effective in the presence of rigorous performance monitoring and benchmarking between provider groups (Kerr and Fleming 2007).

Finally, Petersen et al. (2006) offered an interesting theoretical justification for pay-for-performance relating to the information asymmetry that is generally said to lie at the heart of healthcare. They argued that because patient demand may be relatively unresponsive to the technical quality of clinical care, since most patients cannot observe or know the skill expended by clinical staff, financial incentives that reward high quality should contribute to protecting patients' interests, irrespective of their level of awareness of provider quality.





## Evaluation of the Quality and Outcomes Framework in the United Kingdom

The QOF was introduced in April 2004 when the quality of care for many common chronic diseases in United Kingdom general practices was already steadily improving (Campbell et al. 2005). In the four years since initiation, the QOF has demonstrated two things: generously funded pay-for-performance programmes can be popular with primary care physicians and their staff and pay-for-performance programmes focus clinical behaviour on the aspects of care that are linked to incentives. Critics have argued that the QOF is poor value-for-money since it merely rewarded practices (handsomely) for what they were already doing in relation to chronic disease management, paid them for more activity not necessarily related to health improvement and simply rewarded the better organized practices excessively for improving their record keeping rather than their care. However, independent evaluation of the quality of care for three common chronic conditions in the QOF (angina, diabetes and asthma) using chart review in a representative sample of practices, rather than QOF returns, indicated strongly that quality (irrespective of value for money) continued to improve after 2004 when the QOF incentives were introduced and at a faster rate for asthma and diabetes than in the earlier period. For example, the percentage of patients with coronary heart disease with a serum cholesterol below 5.0 mmol/l had increased from 18% in 1998 to 61% in 2003, but at the end of the first year of the QOF it had reached 71%. The percentage of patients with diabetes whose HbA1c was less than 7.4 mmol/l increased from 38% in 1998 to 40% in 2003, but 58% after 12 months of the QOF.

There was also a statistically significant difference in improvement between areas of performance linked to incentives by the QOF and those not, suggesting some causal effect of the QOF on quality (Campbell et al. 2007). The authors concluded that pay-for-performance is a useful means to augment other approaches to quality improvement in chronic disease care.

However, general practices in more socioeconomically deprived areas tended to have lower levels of achievement and received less financial reward for the same level of achievement (Guthrie et al. 2006), though the differences between practices in more- and less-advantaged areas were small (Doran et al. 2006) and there were signs of "catch up" among practices in more-deprived areas over time (Ashworth et al. 2007). In addition, patients in deprived areas were less likely to be registered with a general practice and thereby less likely to be able to benefit from the care improvements reported.

The performance improvements identified are likely to be the result of the better organization of care at general practice level, in particular the provision of more systematic care, which tends to favour larger practices (Wang et al. 2006). This is manifest in a number of ways, such as more effective recall of patients with established risk factors for chronic disease, leading to better follow-up, and greater use of protocol-driven care, including templates for recording consultations, leading to better recording of care and more focused and effective clinical encounters. The QOF is also stimulating an expansion of the role of nurses in primary care. Finally, the quality gains observed would not have been possible without a well-established information technology infrastructure throughout





the United Kingdom general practice, allowing practices to understand where they started from before the new contract.

## Conclusions

Countries and health systems vary in the degree to which overall system characteristics support or frustrate efforts to enable and support services for people with chronic diseases. In very general terms, systems face the greatest difficulties in adapting their payment arrangements to become more conducive to effective chronic disease care if they have a tradition of patient choice of any provider, and/or of little or no enrolment with particular providers and/or of paying for services episodically using fee-for-service as the predominant method of reimbursement. This is because such systems tend to discourage continuity of care or a provider focus on a population of patients. Many of the most widely discussed approaches to the management of chronic disease are extremely difficult to implement in such fragmented, fee-for-service systems.

Systems with strong primary healthcare are more likely to give greater attention to the management of people with chronic conditions and to obtain better results in this area. For example, the United Kingdom has reasonably good performance on chronic disease outcomes for conditions such as asthma and diabetes compared with similar countries (Nolte et al. 2006). It is also no coincidence that the United Kingdom NHS has recently been able to develop some of the most innovative methods of paying for improvements in the quality and outcome of chronic disease care internationally because it has a well-developed primary care system, patient enrolment with primary care physician practices, gatekeeping by general practitioners and experience of paying for ambulatory care through a mixed mode contract that includes elements of capitation, fee-for-service and target payments.

Another commonly experienced barrier to encouraging the appropriate management of people with chronic conditions is the tendency in some systems to pay separately for the care of specific diseases (again, a throwback to a period when it might reasonably be assumed that most patients had a single condition at a time requiring professional attention). Indeed, in most countries, chronic disease management programmes have tended to evolve condition by condition (Anderson and Knickman 2001). Yet, in reality, chronic illness lies along a continuum (i.e. from the asymptomatic at risk to those with a range of established chronic illnesses) and chronic conditions (and their related risk factors) are increasingly seen as being strongly interrelated.

Yet another, similar, commonly encountered barrier related to system fragmentation, is a tendency in many systems to pay different healthcare professionals separately, thereby perpetuating traditions of independent, solo practice. Much effective care of people with chronic conditions appears to depend on multidisciplinary team work, yet this is frequently frustrated by these payment systems. For example, the Australian EPC initiative has been hampered by the fact that payment for involvement in care planning and case conferences for patients with chronic disease is only available to general practitioners and not



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for other healthcare professionals whose input is important for effective case management.

In response to such obstacles, policy makers and payers have been increasingly looking for ways of bringing together (bundling) different budgets and sources of funding for different activities and different types of professional to produce more patient-centred methods of payment, rather than paying different professionals separately for individual activities (e.g. the Coordinated Care Trials in Australia and the development of capitated primary health organizations in New Zealand since 2001). They have also begun to develop “blended” or “mixed” approaches to payment for chronic disease care, which attempt to capture the benefits and offset the drawbacks of each separate payment modality. Many pay-for-performance initiatives use a blend of payment methods, including paying directly for the delivery of specific measures of quality and/or outcomes. For example, Goroll et al. (2007) have proposed an alternative to the preponderant encounter-based, fee-for-service payment methods found in the United States in the form of a mix of comprehensive risk-adjusted capitation payments, including an amount for infrastructure and care coordination, and risk-adjusted performance bonuses to mitigate the disadvantages of capitation.

This chapter has focused particularly on recent high-profile pay-for-performance initiatives such as the 2004 general practice contract in the United Kingdom NHS and the current demonstration programmes of the Centers for Medicare and Medicaid Services in the United States. It has shown that financial incentives to encourage providers to undertake desirable activities may be effective in improving performance in chronic care. However, the volume of evaluative research in this field is still comparatively small given the many complexities inherent in designing payment systems, especially ones that include elements of pay-for-performance. For example, there is little or no research where the size of financial incentives has been varied to establish the nature of any “dose–response” relationship or understanding of the costs to providers of complying with the quality goals in programmes. In addition, there is no established conceptual model in the literature as to how financial incentives such as pay-for-performance should work and what factors would facilitate or reduce their impact (Frølich et al. 2007).

In these circumstances, policy development should be cautious. For example, it cannot be assumed that the financial elements in pay-for-performance schemes are always the major motive for professionals to change their practice (Marshall and Harrison 2005). Professionals are motivated by more than remuneration. In particular, physicians and other healthcare professionals respond to reputational incentives, particularly where performance information is published, though remuneration remains a powerful lever for change. There is also extensive psychological evidence that excessive use of externally imposed incentives, particularly financial ones, can “crowd out” the internal motivation to do a good job in areas that are not the subject of extrinsic rewards. This suggests further cautions: that pay-for-performance should not constitute too large a part of the remuneration of the typical provider and that, as far as possible, the indicators of performance used should be supported by the target population of professionals and aligned with their conceptions of what a high-quality service comprises.







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