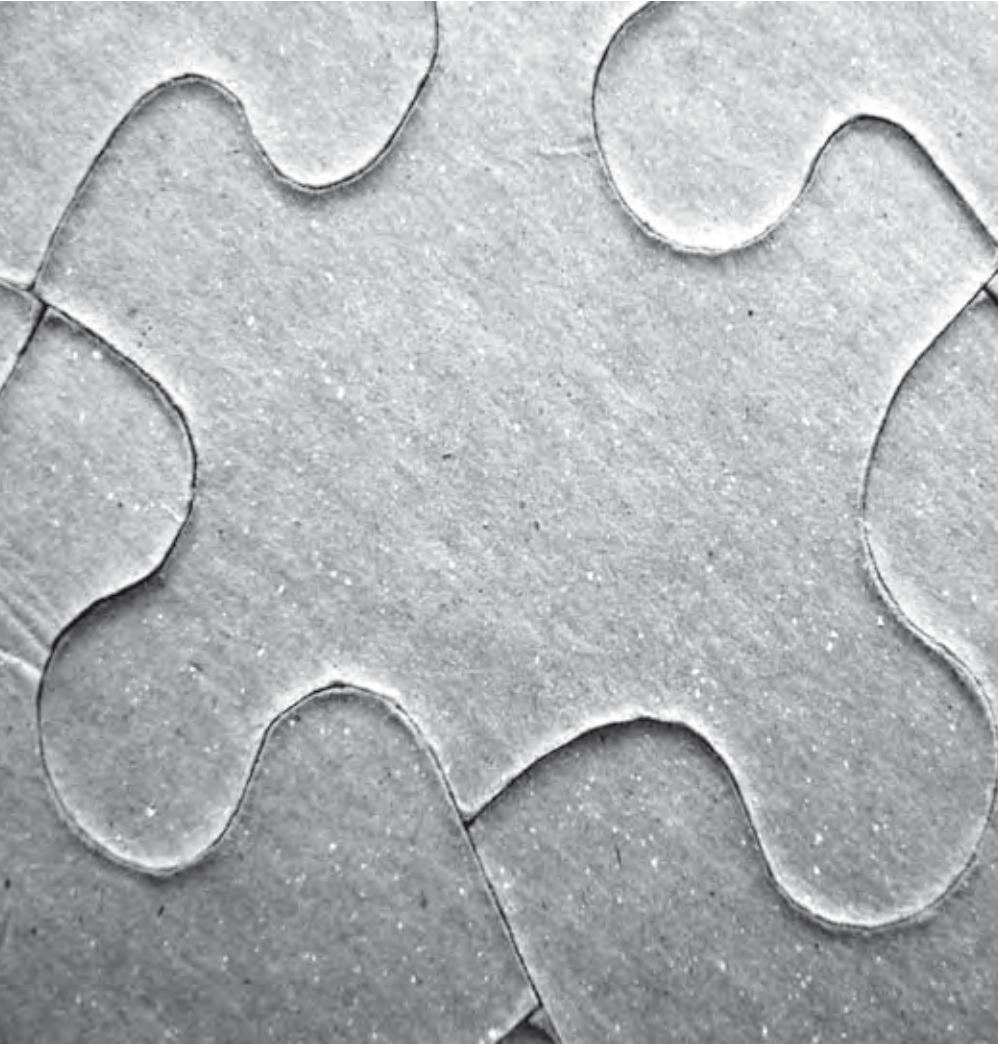


July 2010



Resource Allocation, Financing and Sustainability in Health Care

Evidence for the Expert Group on
Resource Allocation and Financing
in the Health Sector

(Volume I)

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The Economic and Social Research Institute

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Preface

The Minister for Health and Children, Ms Mary Harney TD established the Expert Group on Resource Allocation and Financing in the Health Sector in April 2009. From the outset, the Group was committed to being informed by the best evidence available, both nationally and internationally. When the task of assembling this evidence began, it became clear that a great deal of effort and expertise would be needed to source and validate the information required.

We are fortunate at the Economic and Social Research Institute to have a team of health researchers who can cover the diverse range of issues in health economics and health policy. An added advantage for this team was the ready access to national and international data sets on health services utilisation, expenditure, etc. The research undertaken assisted the Expert Group throughout its deliberations and it was agreed that the independent research findings should be published as a research report to accompany the Report of the Expert Group.

Having available, in a single publication, the information assembled from a wide range of sources, together with analyses of recent health system developments both nationally and internationally, constitutes an important contribution to the relevant literature. As with any research paper the Evidence Report is independent, and has been subject to peer review. Since the Report is a research document, its tone and content are different to that in the Expert Group's report. The recommendations for the Expert Group are published separately.

On behalf of the Expert Group, I would like to thank my colleagues at the Institute for their research which proved invaluable to our work.



Prof Frances Ruane

Director, Economic and Social Research Institute

Chairperson, Expert Group on Resource Allocation and Financing in the Health Sector

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Finally, we would like to thank the Chairperson and the members of the Expert Group on Resource Allocation and Financing in the Health Sector for their contribution to the research.

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PART 1 | Introduction

CHAPTER 1

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Chapter 1

Introduction

1.1 INTRODUCTION

Resource allocation in health care is a method for distributing resources between competing claims in ways that are consistent with health policy priorities (Birch *et al.*, 1993). With changing patterns of disease (particularly the increasing prevalence of chronic diseases) and models of care, most health-care systems are increasingly focusing on integrating care across all health-care providers and care settings and devising the resource allocation mechanisms that can support this. Internationally, the concept of population health need is being used to drive the allocation of health-care resources, in contrast to traditional methods driven largely by historic allocations to existing providers and facilities. Ensuring that the incentives facing providers and patients are aligned is crucially important in this regard and it is in this context that the structure of financing, i.e. the way in which resources are collected from individuals, has an important role to play in supporting effective resource allocation and the delivery of integrated health care. In addition, health-care resources are scarce and increasingly so in recent years; therefore, more efficient use of these scarce resources is required, and this can be influenced by effective resource allocation and financing systems.

Ireland is not alone in seeking to address issues surrounding resource allocation, financing and sustainability in health care and there is much to learn from international experience in these areas. In preparing the evidence to support the work of the Expert Group on Resource Allocation and Financing in the Health Sector, the purpose of this report is therefore:

- to provide a detailed discussion of the theoretical and empirical literature on resource allocation, financing and sustainability in health care;
- to evaluate the current systems of resource allocation and financing in Irish health care, and key issues in relation to sustainability; and
- to outline an overall framework for health-care entitlements and user fees that would support the delivery of integrated health care in Ireland.

Section 1.2 outlines the key international themes in relation to health-care resource allocation, financing and sustainability. Health systems operate in the context of stated principles, goals and objectives which govern policy decisions and these are discussed in Section 1.3, with specific focus on the complexity of some of these

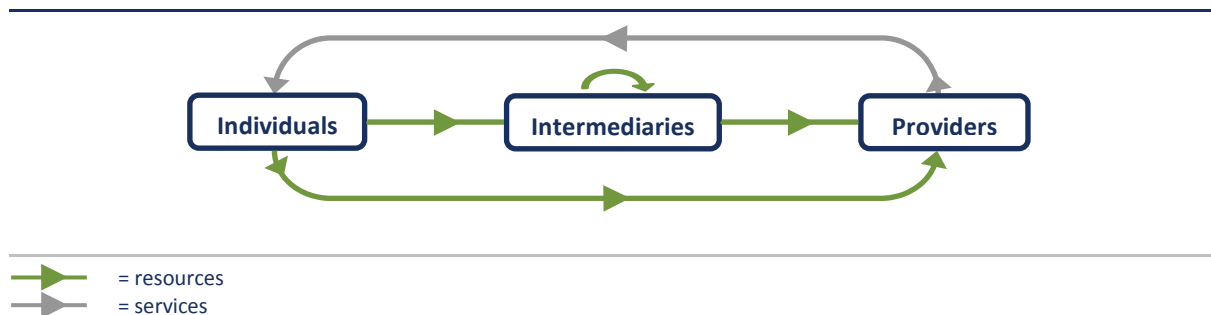
priorities (equity, in particular). As much of the analysis in this report focuses on current systems of resource allocation and financing in Irish health care, and issues associated with sustainability, this chapter also provides a brief overview of the Irish health-care system, highlighting its key features in terms of governance and organisation, financing and resource allocation, eligibility and entitlement and service delivery (Section 1.4). Section 1.5 provides a brief overview of the methodology and approach used in the subsequent analyses, while Section 1.6 summarises and provides an overview of the structure of the report.

1.2 HIGH LEVEL THEMES

The focus of this report is on the three issues of resource allocation, financing and sustainability in health care. While each of these issues is addressed in separate parts of this report, it is important to highlight the interlinkages between the three concepts. Figure 1.1 gives a stylised overview of the broad structure of a health-care system, showing the flow of health-care resources (*green arrows*) from payment source (individuals) to financial intermediaries (e.g. the Government) through to providers. Health-care services (*grey arrows*) flow from providers to individuals. Important decisions are required on the overall level of resources that flow through the system and how resources and services are to flow from one part of the system to the next, such that health care is financed and delivered in accordance with stated policy priorities. Decisions on how one of the components operates can affect the rest of the resource flow.

Thus, Figure 1.1 highlights the fact that decisions around the resources that are available for resource allocation in health care (sustainability issues), the way in which these resources are generated (financing issues) and how they are subsequently allocated (resource allocation issues) comprise different parts of a complete resource flow in a health-care system.

FIGURE 1.1
Flow of Health-Care Resources and Services



As noted above, Ireland is not alone in seeking to address issues surrounding resource allocation, financing and sustainability in health care. As discussed in particular in Chapters 2, 3, 4 and 9 of this report, there is a diverse range of experience with alternative structures and policies with regard to resource allocation, financing and sustainability. This diversity creates both challenges and opportunities for Ireland in learning from international experience. In addition, a country's wider social and economic history, dominant political and economic philosophies and culture must also be taken into account in evaluating the international evidence. While the review of the international experience highlights that there are no simple solutions to many of the issues facing health-care systems worldwide, a number of common 'high level' themes may be identified. As outlined in Section 1.3, there is also a high degree of commonality in the health-care priorities that guide international policy makers.

In terms of resource allocation, while most countries in the past allocated scarce health-care resources on the basis of historic allocations to existing providers and facilities, most countries now take, or are moving towards, a multi-annual, prospective, population health-based approach to resource allocation. Resources are distributed on the basis of relative need for care across the population. Moving towards a population health-based approach to the allocation of health-care resources raises a number of practical issues such as the extent of 'top slicing', the optimal size of the unit to which resources are allocated, the degree to which resources are allocated on a 'programmatic' basis and the nature, type and availability of data used to inform the population health-based allocation. A final important practical consideration concerns the nature of the transitional arrangements. Such arrangements are necessary since a movement to a population health-based allocation may involve large fluctuations in allocations to different areas in the short-run. Chapter 2 discusses these issues in greater detail.

However, even when allocations are made on the basis of population health, with appropriate adjustment mechanisms in place, the nature of the relationship between purchasers and providers (i.e. the extent of 'purchaser-provider split') and the methods of provider reimbursement can have important implications for the degree to which providers are financially incentivised to behave in a manner that is consistent with health policy priorities. The way in which providers are reimbursed for providing services is a key element of an effective resource allocation system; international evidence shows that providers respond to financial incentives. There are numerous methods for reimbursing providers (both individual and institutional) and all have their own strengths and weaknesses. No one method achieves all policy objectives; in practice, policy makers must be aware of the trade-offs involved in choosing an appropriate reimbursement mechanism. Chapters 3, 4, 6 and 7 discuss the reimbursement of providers in greater detail.

A common theme internationally is the need for greater integration in health-care structures and functions. With changing patterns of disease and care (in particular, due to chronic disease which necessitates linkages between different levels of care and providers), health-care delivery must be coherent and co-ordinated. A number of conditions are important in facilitating integrated health care, such as effective IT and governance systems. However, a fundamental component of an integrated health-care system is effective resource allocation and in particular, incentivising providers to work together to provide care in the most appropriate setting. Chapters 5 and 8 discuss integration of health care in greater detail.

Resource allocation and financing issues are crucially linked in terms of patient incentives. Patient incentives are determined primarily by how resources for health care are collected, for example, via taxation, social health insurance, private health insurance and/or out-of-pocket payments. Again, international experience with alternative methods of financing is diverse and there is no single approach that is preferred. Chapters 9 and 10 examine the choices made by international systems, including Ireland, on these decisions. Chapter 15 outlines a proposed framework for health-care entitlements and user fees that is more supportive of effective resource allocation and integrated health-care delivery in Ireland.

Finally, all health-care resources are scarce and could ultimately be used for alternative purposes. Currently, many countries are experiencing substantial decreases in national income and consequently concerns over the sustainability of health-care systems are increasing. While creating challenges for governments in responding to demand, the current fiscal situation also highlights the need to ensure value for money in how these scarce resources are utilised. However, all resources ultimately originate from individuals and thus the overall total cost of health care, and not just the fiscal cost, must also be considered. In this context, simply shifting the cost of health care to individuals (via increased out-of-pocket payments for example), while attractive from a fiscal perspective, does not ensure long-term sustainability of health care. With limited scope for increasing taxation or other sources of revenue, creating conditions for more efficient use of existing resources is a key component of strategies to ensure sustainability. Ireland is one of many countries dealing with such issues and there is a large body of international evidence concerning alternative mechanisms to ensure sustainability. Chapters 11-14 discuss these issues in greater detail.

1.3 HEALTH-CARE PRINCIPLES AND GOALS IN IRELAND

1.3.1 Overview

As discussed above, in looking at any health-care system the starting point is to explore what the health-care system is seeking to achieve. At an international level, core values for health care are identified by the World Health Organization (WHO) and others. These are outlined first, to put the discussion of Irish policy statements in context. The section then outlines the health policy principles and goals for Irish health care and this is followed by a discussion of the complexity in defining the specific principle of equity.

1.3.2 International Health Policy Goals

The WHO has identified a set of core values for health care (WHO, 2000; 2005). The primary/defining goal of a health-care system is to achieve better health, both in terms of improvements in health outcomes and the distribution of good health status within a society. The second key goal is to achieve fairness in contributions to financing of the health-care system; health care can be costly for the individual and the need for it is unpredictable, highlighting the importance of mechanisms to share risk and provide financial protection. The third goal is to ensure responsiveness of the system to people's expectations, reflecting the importance of respecting people's dignity, autonomy and the confidentiality of information (WHO, 2000). Some further important priorities have also been identified at the international level. These include equitable use and provision of services relative to people's needs; transparency and accountability; quality and efficiency in service delivery; efficient administration of the health financing system (Kutzin, 2008); and participation (i.e. direct involvement of individuals in health decision-making processes) (WHO, 2005).

At European level, the European Council adopted a statement on common values and principles in European Union (EU) health-care systems in 2006 (Council of the European Union, 2006). This statement listed the overarching values for EU health-care systems as being: universal coverage, high-quality health care, equity and solidarity in financing. The EU Commission aims to build on this statement as part of the 2008-2013 EU Health Strategy (e.g. incorporating the core value of citizen's empowerment) (Commission of the European Communities, 2007). As part of the Tallinn Charter on Health Systems, member states of the WHO in the European Region endorsed goals for improved health, equity in health, payment for health care according to people's ability to pay, responsiveness in the health care system and efficiency (WHO European Ministerial Conference on Health Systems, 2008).

1.3.3 National Health Policy Goals

In Ireland, the priorities for the health-care system are outlined in the national health strategy: 'Quality and Fairness – A Health System for You' (DoHC, 2001a).¹ The strategy adopts a whole-system approach to addressing health needs in Ireland, focusing on both health and social well-being, encompassing public and private providers of health services and any other individuals/institutions with a role to play in the health of the population. A range of actions are outlined in the context of the central aim to '*deliver a healthier population and a world-class health system*' (DoHC, 2001a; 15).

Specifically, the overarching vision for the system is: '*A health system that supports and empowers you, your family and community to achieve your full health potential; A health system that is there when you need it, that is fair, and that you can trust; A health system that encourages you to have your say, listens to you, and ensures that your views are taken into account*' (DoHC, 2001a; 8, italics in original).

Four principles support this overall vision: equity and fairness (discussed in more detail below), quality of service (best practice evidence-based care), clear accountability (financial, professional and organisational), and people-centredness (responsive to needs of individuals, co-ordinated delivery of care and individual participation in decision-making).

A set of four national goals have been identified to pursue this vision and these guiding principles. The first goal is to achieve better health for everyone by placing health at the centre of public policy, promoting health and well-being, reducing health inequalities and targeting specific quality of life issues (e.g. improved quality of life for older people, improved chronic disease management, improved rehabilitation for people with disabilities, etc.). The second focuses on the goal of fair access in the system, involving clearly defining and broadening the scope of eligibility in the system and ensuring equitable access for all patients. The third goal is to ensure that health-care delivery is responsive and appropriate, by placing the patient at the centre of care planning, delivering appropriate care in the appropriate setting and ensuring that the system has the capacity to delivery timely and appropriate services. The fourth goal is to achieve high performance in the system by using national standards and protocols for quality care and evidence-based decision-making.

¹ The Irish health sector is also guided by a number of other national strategies, including the national primary care strategy: 'Primary Care: A New Direction' (DoHC, 2001b). Activities within the sector are also governed by issue specific strategies such as the Integrated Workforce Planning Strategy for the Health Service (2009-2012), the 2006 Strategy for Cancer Control, the National Strategy for Action on Suicide Prevention (2005-2014), the 2004 National Health Information Strategy, the National Cardiovascular Health Policy (2010-2019), the National Health Promotion Strategy (2000-2005), the National Children's Strategy (2000) and the National Drugs Strategy (2001-2008), see www.dohc.ie [last accessed 29 June 2010]. Plans for capital development are incorporated in the government-wide National Development Plan (Government of Ireland, 2007).

The same vision and goals guide the Health Service Reform Programme set out in 2006, where the specific objectives identified are:

- deliver an improved health system that provides consistent national, regional and local patient-centred care;
- provide a better planned, managed and performance-measured system in which needs, services, funding and outputs are systematically interlinked;
- develop a health system that maximises the use of resources by delivering the right care in the right setting;
- provide a better working environment for staff (Health Service Reform Programme, 2006).

The health policy objectives outlined in the Terms of Reference for the Expert Group on Resource Allocation and Financing in the Health Sector are consistent with and effectively include the four goals outlined in the national strategy, while adding a fifth goal, namely, to ensure financial sustainability.

Table 1.1 summarises international (WHO/EU) and national (Department of Health and Children, DoHC) health sector goals. Central themes can be identified at both international and national levels in terms of structuring a health-care system in such a way that it improves health status, is equitable, is responsive and people-centred, delivers high-quality care and is efficient, transparent and accountable. However, it is noteworthy that in the statements of Irish health policy there is no explicit goal to ensure fairness in financial contributions to health care although this is one of the core values outlined at international level (in both the WHO and EU statements). The current national strategy statements on equity in the Irish context only focus on equity in health-care delivery and do not refer to equity in health-care financing.

TABLE 1.1
International, Regional and National Guiding Principles for Health Care

International		
1.	WHO core values and other objectives	Core values: 1. Better health Improve health status and ensure equitable distribution of health 2. Fairness in financial contributions Financial protection (ensure people do not become poor as a result of using health care) and equity in finance (equitable distribution of the burden of health financing) 3. Responsiveness to people's expectations Other objectives: Equitable use and provision of services relative to people's needs Transparency and accountability Quality and efficiency in service delivery Efficient administration of health financing Participation
Regional		
1.	EU values and principles	Universal coverage Solidarity in financing Equity in access High-quality health care
Irish		
1.	Guiding principles	Equity and fairness People-centred Quality of service Clear accountability
2.	Goals for health care	Better health for all Fair access Responsive and appropriate health-care delivery High performance
3.	Core objectives for Expert Group Resource Allocation and Financing in the Health Sector: Terms of Reference	Improve health/well-being Equity of access High-quality health care Financial sustainability

Sources: WHO, 2000; DoHC, 2001a; WHO, 2005; Council of the European Union, 2006; Kutzin, 2008; DoHC, 2009

1.3.4 Complexity in the Principle of Equity

The importance of stating clearly the principles that underpin health-care policy decisions has been underlined in the literature. As outlined by Williams (1988; 2001) publicly accountable decision makers, who are expected to provide justification for their actions, need to be clear on the ethical implications of each choice of action. It is important to be clear on the impact of their actions in terms of contributing towards the realisation of, or reducing the likely achievement of, national goals. While the Irish national policy principles and goals are in line with international statements, there are complexities around the definition of equity that require further discussion. This is not unique to Ireland and pursuing greater equity in any health-care system requires a more detailed understanding of what is meant by the term. In particular, different perspectives on equity are known to conflict with each other and this has implications for how a health system, including the Irish system, is to be structured.

There is no universally agreed definition of equity and there are a number of different philosophical perspectives on what is meant by the term.² In the context of health care, equity has been defined in terms of:

- ensuring equal access to health care for all in the population, or
- distributing health care according to need; or
- ensuring an equal distribution of health; or
- distributing health care on the basis of willingness/ability to pay.

Each of these definitions reflects a valid philosophical perspective on equity. However, the different goals, and their underlying philosophical theories, can conflict with each other and this possibility needs to be recognised.

If health care is structured so as to achieve equal access to health care, this will not necessarily mean that health care is distributed according to need or that health status is equalised across the population. Similarly, allowing health care to be distributed according to willingness to pay carries the risk of it being concentrated in the hands of those who are most able to afford it. This would likely lead to a situation where health care is not distributed in line with need and where health status is distributed unevenly across the population.

The definition of equity in the Irish national health strategy (and in other countries' health-care policies) is not clear. The Irish strategy includes goals to equalise access to health care, to distribute care according to need and to equalise health status as illustrated with the following statements.

- Equal access to health care: '*[...] no barriers, financial or otherwise, to receiving the services they need*' (DoHC, 2001a; 18).
- Distribution according to need: '*Equity means that: [...] people are treated fairly according to need*' (DoHC, 2001a; 17).
- Equal health status: '*[...] making sure that good health is enjoyed more equally across society*' (DoHC, 2001a; 39).

Despite the inconsistency in the definition, each of these statements implies the need for some form of government intervention to determine how health care is distributed across the population in Ireland. Without government intervention, the purchase and delivery of health care would take place in a free market whereby health care would be allocated to those willing and able to pay the market price for it. In such a private market setting, there would be a direct link between what

² See Smith (2009) for a more detailed discussion on equity in health care in the Irish context.

people pay and the amount of health care they receive. By extension, individuals that cannot afford to pay for health care have to go without it.

It is clear from the principles and goals of the Irish national health strategy that health care should not be left to the market and that it is accepted that there should be some separation between what people pay towards health care and the health care that they are entitled to receive. This allows for health care to be financed according to a stated principle (e.g. on the basis of ability to pay) and delivered in line with an accepted principle (e.g. on the basis of ensuring equal access, or according to need, or to equalise health outcomes). This separation, between health-care financing and delivery, is observed in many developed health systems and has been a fundamental assumption underpinning research on equity in health care. Specifically, international empirical research on equity has focused on measuring adherence to two central principles: that health care should be financed according to ability to pay and delivered according to need.

In the Irish context, the separation between health-care financing and health-care delivery that is implied in the national health policy is important and could be more clearly articulated. In particular, as noted above, there is no reference to any principle on health-care financing in Irish national health policy and the absence of such a principle leaves Ireland out of line with international health values. Health financing principles are discussed in more detail in Chapter 9 of this report. However, it is important to note here that ensuring separation between payment for health care and receipt of health care does not automatically require that all health care is publicly funded, as might seem to some to be the case. Rather, the separation means that health care is pre-paid (and this can be done using public or private sources of funding), and this is discussed further in Chapters 9 and 10.

Further policy discussion is required in the Irish context on the principles to govern health-care delivery.³ However, this requirement is not unique to Ireland and health policies in other countries have conflicting principles and ambiguous definitions (Smith, 2009). The English National Health Service (NHS) provides an example. Its central aim is to ensure equal access for equal need. In addition to this, there are other potentially conflicting objectives to improve health outcomes, reduce inequalities in health outcomes and others. However, commentators describe these latter objectives as secondary to the overriding aim of securing equal access for equal need (Oliver, 2005). The complexity of the equity concept makes it difficult, but not impossible, to outline a coherent statement on equity in health-care policy and to subsequently align health-care structures with the policy objectives. As a starting point, with a greater understanding of the different definitions of equity,

³ Out of the eight comparator countries, equity of access or universal access are cited as central health policy priorities in Australia, Canada, England, the Netherlands and New Zealand.

policy makers can be better informed of the implications of policy statements and subsequent health-care decisions.

1.4 THE IRISH HEALTH-CARE SYSTEM

1.4.1 Overview

The purpose of this section is to outline briefly the key characteristics of the Irish health-care system. In many respects, Irish health-care structures and functions are similar to those existing in many developed countries, but there are some important differences, most notably in terms of entitlement structures and the resulting complex mix between public and private financing and provision.

1.4.2 Governance and Organisational Structure

The Irish health-care system underwent substantial organisational reform in 2005, partly in response to the recommendations of a number of key reports on the Irish health-care system in the early 2000s, most notably the Brennan and Prospectus reports (Brennan, 2003; Prospectus, 2003).⁴ The central aim of the Health Service Reform Programme was to improve the availability and quality of health-care services by improving the planning, management, delivery and evaluation of services and their respective accountability arrangements (Health Service Reform Programme, 2006). The key bodies in the reformed system included a re-structured DoHC, a newly established Health Service Executive (HSE) and a new regulatory agency, the Health Information and Quality Authority (HIQA).

The DoHC performs a stewardship function for the sector and provides support to the Minister for Health and Children, who is politically accountable for the health service. The DoHC is responsible for strategic policy and planning, evaluation of resource allocations and development of an effective legislative and regulatory framework for the system. The HIQA was fully established in 2007 and is responsible for promoting quality and safety in Irish health and social care services.

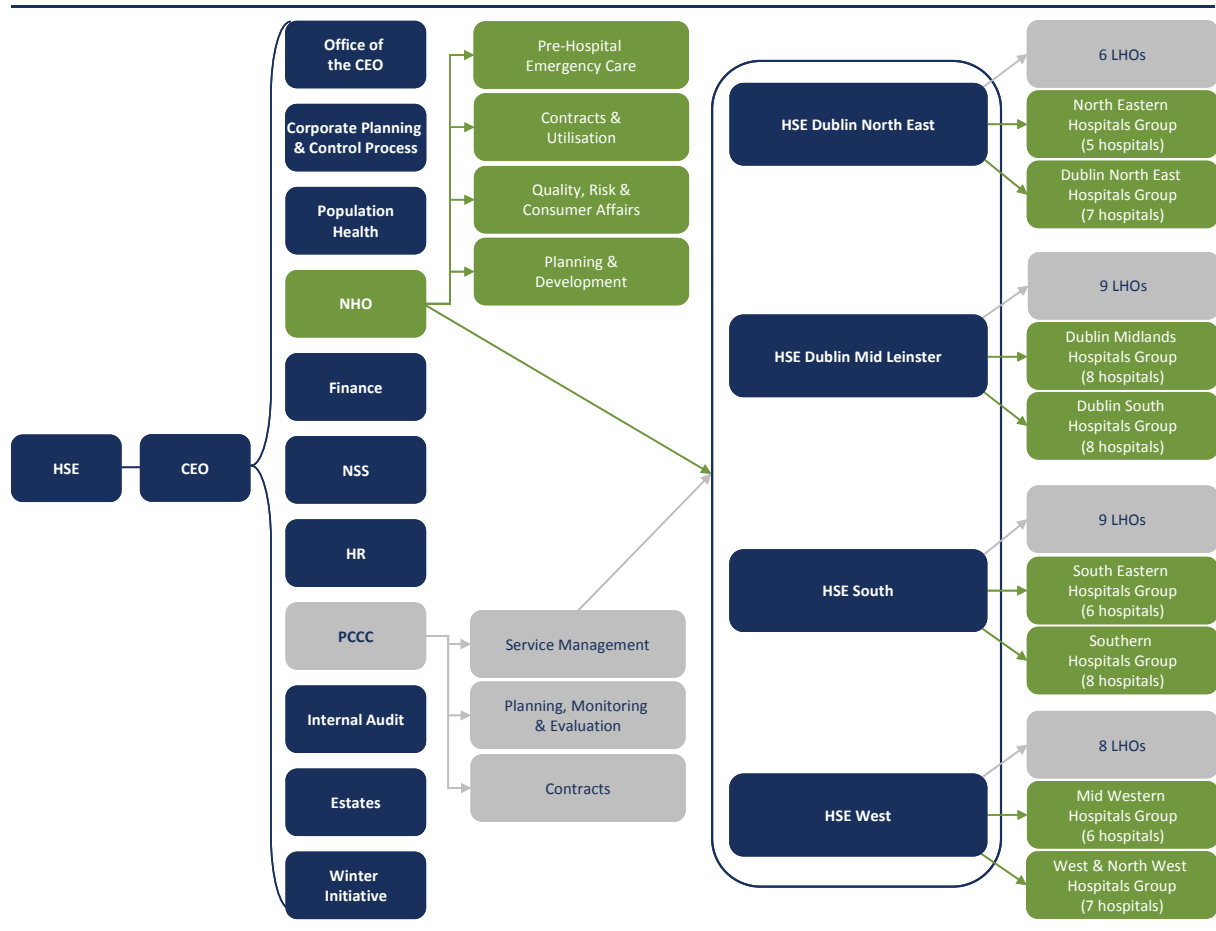
The HSE manages the operation of the health service, replacing 10 regionally-based Health Boards.⁵ Following recent restructuring in October 2009, the Integrated Services Directorate (ISD) now incorporates the previously separate offices of the National Director for Primary, Community and Continuing Care (PCCC) and the National Director for Hospitals (NHO). As most of the analysis in this report is based

⁴ Throughout this report, for ease of reference, major reports on the health service commissioned by the DoHC are referred to using the title of the chairperson of the group/agency undertaking the analysis. For example, the *Commission on Financial Management and Control Systems in the Health Service* is referred to as the Brennan report (Brennan, 2003).

⁵ The Health Boards were responsible for daily administration of public health services and operated in Dublin, Kildare and Wicklow (Eastern Regional Health Authority) and in the Midlands, Mid-West, North-East, North-West, South-East, South, and West.

on the pre-October 2009 structures, Figure 1.2 outlines the organisational structure of the HSE as existed prior to October 2009.

FIGURE 1.2
Structure of HSE, NHO and PCCC before October 2009



Notes: CEO = Chief Executive Officer NSS = National Shared Services HR = Human Resources LHO = Local Health Office
Within Service Management in PCCC, each of the four Assistant National Directors was charged with overseeing the delivery of PCCC services within their region and was also responsible for a particular service area (comprising primary care; children, youth and family, palliative care and chronic illness; older persons and social inclusion; mental health and disabilities).

Source: Adapted from HSE, 2005

HSE administration was divided into 4 regions: Dublin and Mid Leinster; Dublin and North East; West; and South. The PCCC Directorate was responsible for a diverse range of services, including primary care, mental health, disability, children, youth and families, community hospital, continuing care services and social inclusion services. The delivery of PCCC services was co-ordinated, and in some cases directly provided by, a network of 32 Local Health Offices (LHOs) throughout the country. The NHO within the HSE assumed responsibility for resource allocation, service delivery and performance management of acute public hospital services. Acute hospital services were managed on the basis of 8 hospital networks, 2 in each of the 4 regional administrative areas.

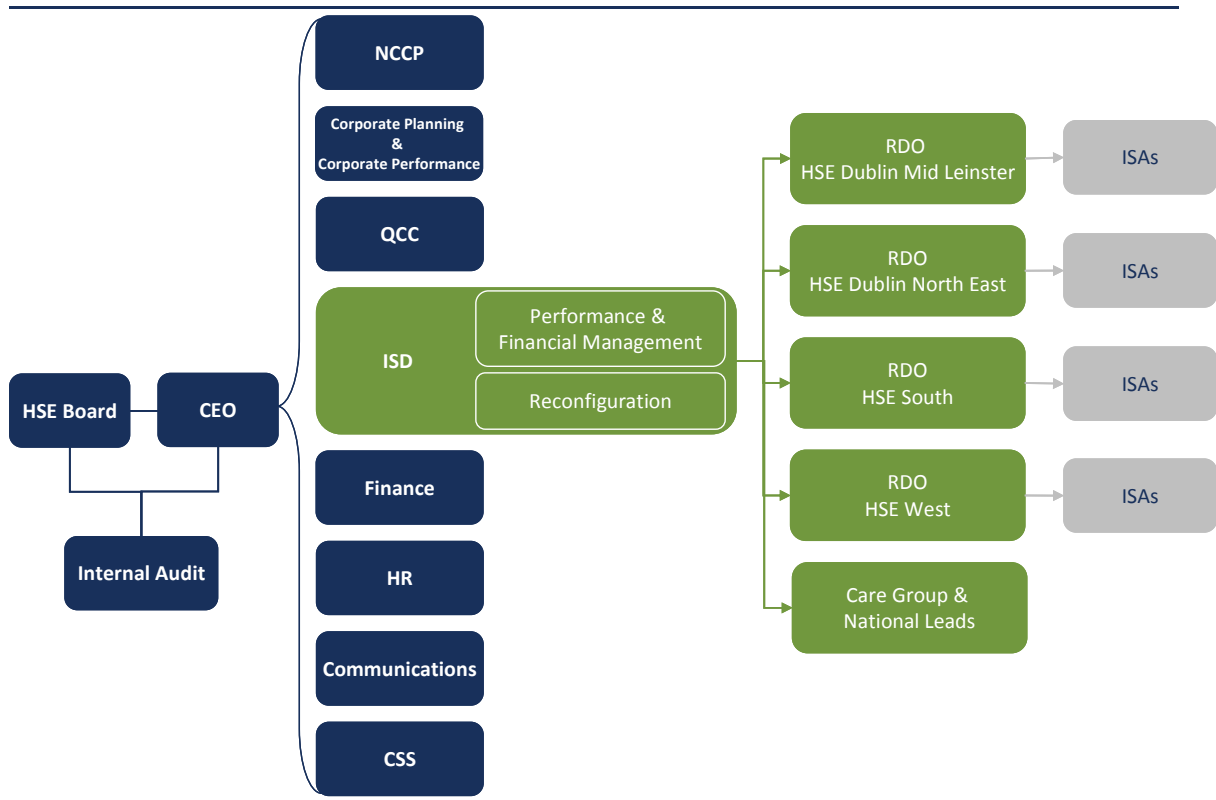
In the newly restructured ISD (see Figure 1.3), one national director has responsibility for performance and financial management (e.g. managing the 'demand-led' schemes)⁶ and a second national director is responsible for reconfiguration of acute hospital services, pre-hospital care and primary care teams (PCTs). Four regional directors are responsible for managing health and social services in their regions.⁷ Integrated Service Area (ISA) managers will act as the liaison between these regional directors and service managers. Unlike the network managers and LHOs, ISA managers will be individually responsible for overseeing both hospital services and primary, community and continuing care. It is envisaged that there will be 18 ISAs nationally, with 4 or 5 in each region (Houston, 2010). Chapter 8 discusses the new structures in greater detail and focuses in particular on the implications for effective resource allocation.

The Population Health Directorate is responsible for promoting and protecting the health of the population and target groups by influencing health strategy and policy, and through implementation of immunisation and other programmes. Other national directorates manage a range of functions including human resources, finance, procurement and information and communication technology (ICT).

⁶ Demand-led schemes refer to the General Medical Services (GMS, i.e. medical card) Scheme and the various pharmaceutical subsidy schemes (e.g. Drugs Payment Scheme, Long Term Illness Scheme, High Tech Drug Scheme, etc.) described in more detail in Section 1.4.4.

⁷ Ambulance services and population health are not within the remit of the RDOs (HSE, personal communication, 01 April 2010).

FIGURE 1.3
Structure of HSE and ISD after October 2009



Note: CEO = Chief Executive Officer NCCP = National Cancer Control Programme QCC = Quality and Clinical Care ISD = Integrated Services Directorate HR = Human Resources CSS = Commercial and Support Services RDO = Regional Director for Operations ISA = Integrated Services Area

Source: Adapted from HSE, 2010

1.4.3 Health-Care Financing and Resource Allocation

1.4.3.1 Resource Contribution Mechanisms

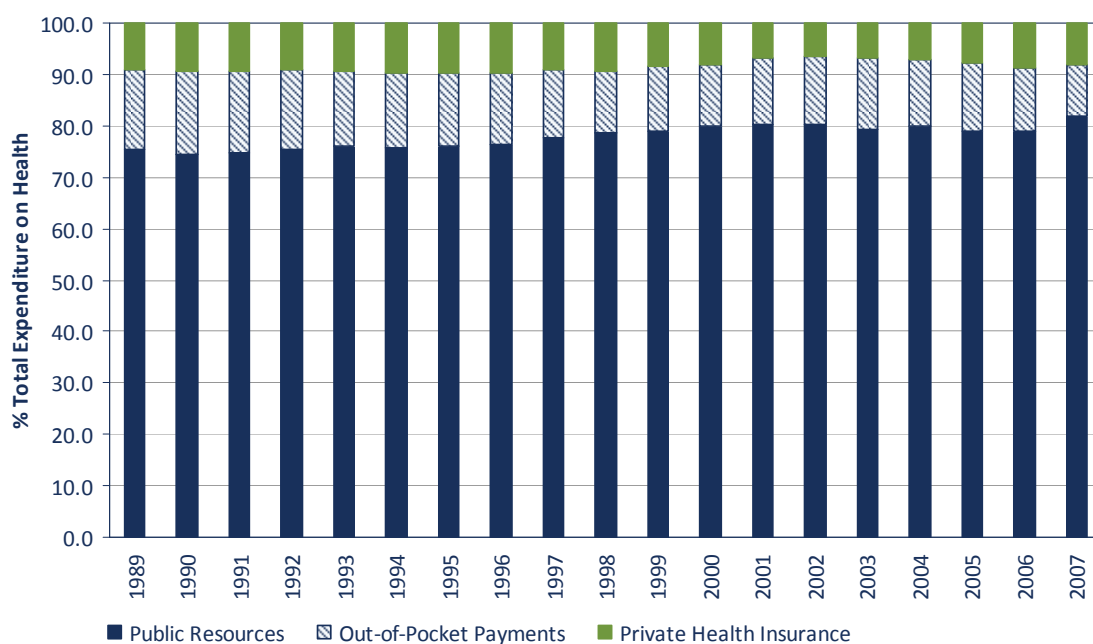
The Irish health system is financed by a mix of public and private expenditure (see Figure 1.4). Public resources (i.e. tax and non-tax revenue) have consistently accounted for the largest proportion (approximately 80 per cent) of total health-care financing in Ireland. A limited amount of public resources are earmarked for health care (i.e. via the health levy and subsidisation of care under the Treatment Benefit Scheme).⁸ Private health expenditure includes direct out-of-pocket payments by households (10-15 per cent of the total) and claims expenditure (8-9 per cent) by private health insurance companies on behalf of their members.⁹

⁸ Subsidisation of dental, aural and ophthalmic care for individuals who have made requisite pay-related social insurance (PRSI) contributions.

⁹ Organisation for Economic Co-operation and Development (OECD) data indicate that the breakdown of financing for Ireland in 2007 was as follows: public (81 per cent), out-of-pocket (10 per cent), private health insurance (8 per cent), corporations (1 per cent) (OECD, 2009). For consistency, Figure 1.4 presents the breakdown of financing over the period 1989-2007, using data compiled by the OECD. Public health expenditure in Ireland funds a range of social services that in an international context are not categorised as health expenditure. Thus, adjustments are made to Irish health expenditure data to align with the OECD definition of health expenditure. Tussing *et al.* (2006) highlight a lack of clarity/coherence around these adjustments and raise the possibility that further adjustments are needed when aligning with the OECD definition of health expenditure (i.e. exclusion of other expenditure on the grounds that it finances social rather than health programmes). While these adjustments would alter the proportion of public funding in total health

In 2009, the HSE spent approximately €15bn on the provision of health and social care services for the Irish population, and directly employed over 100,000 individuals. When contributions from private health insurance and out-of-pocket payments by individuals are included, total (non-capital) expenditure on health in Ireland in 2009 amounted to €19.7bn (DoHC, personal communication; 01 July 2010).

FIGURE 1.4
Percentage Breakdown of Health-Care Financing in Ireland (Current and Capital Expenditure), 1989-2007



Source: OECD, 2009

1.4.3.2 Public Expenditure Trends

Over the course of the 1980s, public health expenditure declined in real terms, before entering a period of sustained growth from the late 1990s.¹⁰ For example, public health expenditure increased by over 50 per cent in real terms between 2000 and 2004. Even with strong growth in national income over the early to mid-2000s, public health expenditure as a proportion of gross national income (GNI) increased annually and has increased sharply since 2006/2007 with the economic downturn. See Chapter 11 for further details.

expenditure, the overall pattern in Figure 1.4 would not change whereby public resources have consistently accounted for the largest proportion of total health-care financing in Ireland, followed by out-of-pocket payments and finally by private health insurance resources.

¹⁰ Throughout this report, growth rates are based on real percentage change, i.e. figures are deflated using the Consumer Price Index (CPI), available at www.cso.ie/px [last accessed 29 June 2010].

Public health expenditure comprises the second largest component of public expenditure (after social protection). As the largest component of total health expenditure, it is worth analysing recent trends in public (non-capital) health expenditure in greater detail. Over the period 2006-2009, total HSE (non-capital) expenditure grew by approximately 18 per cent in real terms. The largest components of HSE expenditure in 2009 were the (then) PCCC and NHO directorates (accounting for 56.4 per cent and 35.6 per cent respectively of total HSE expenditure in 2009).¹¹ While the share of total HSE expenditure devoted to PCCC has remained relatively stable over the period 2006-2009, the share accounted for by the NHO has declined from 37.2 per cent in 2006 to 35.6 per cent in 2009 (see Table 1.2).¹²

Expenditure in the corporate and shared services directorate increased by approximately 46 per cent over the period 2006-2009 and accounted for just over 6 per cent of total HSE expenditure in 2009. However, expenditure under the corporate and shared services directorate also includes expenditure on pensions, which increased sharply over the period 2008 to 2009 as a result of increased public health service retirements (from €342.0m in 2008 to €524.5m in 2009) (HSE, personal communication; 15 April 2010). Excluding pension costs, expenditure on corporate and shared services increased by 11.7 per cent in real terms over the period 2006-2009. In addition to pension increases, HSE corporate also reflects the centralisation of certain costs (e.g. from 2007, approximately €60m of university fees for nurses was centralised within corporate human resources). More generally, the ongoing centralisation of expenditure and re-classification of functions between directorates of the HSE (such as the centralisation of university fees or the movement of Environmental Health from PCCC into Population Health) means that it is difficult to assess accurately the trend over time in the various components of HSE expenditure (HSE, personal communication; 15 April 2010).

¹¹ As discussed above and in more detail in Chapter 8, since October 2009 the PCCC and NHO directorates of the HSE have been combined to form the ISD.

¹² Appendix Table A6.3 provides some context for the period prior to the establishment of the HSE. Pre-HSE programme areas are not comparable with post-HSE directorates, although it is clear that the hospitals sector had been accounting for a decreasing share of gross public health expenditure over the period 2000-2004, with expenditure on 'community health services' (which includes many of the services currently under the aegis of the PCRS), community welfare and disability services increasing strongly over the period 2000-2004.

TABLE 1.2
HSE Expenditure and Income by Directorate, 2005-2009 (Gross €m)

	2005 ^a	2006	2007	2008	2009	% change 06-09 ^b
National Hospitals Office	n/a -	4,585.2 (37.2)	5,087.8 (36.8)	5,332.5 (35.8)	5,380.3 (35.6)	12.6
Primary, Community and Continuing Care	n/a -	7,045.2 (57.2)	7,880.4 (57.0)	8,492.1 (56.9)	8,531.2 (56.4)	16.2
Corporate and Shared Services	n/a -	612.6 (5.0)	667.4 (4.8)	759.1 (5.1)	934.4 (6.2)	46.3
Population Health ^c	n/a -	69.2 (0.6)	81.7 (0.6)	95.3 (0.6)	197.2 (1.3)	173.2
Health Repayment Scheme ^d	n/a -	n/a -	119.8 (0.9)	236.5 (1.6)	79.4 (0.5)	-
Total (Gross Expenditure)	n/a -	12,312.2 (100)	13,837.1 (100)	14,915.5 (100)	15,122.5 (100)	17.8
Total Income ^e	n/a	914.7	979.9	1,072.6	1,500.9	57.4
Total (Net Expenditure)	n/a	11,397.5	12,857.2	13,842.9	13,621.6	15.6

Notes: Percentage of Total Gross Expenditure in parentheses.

^a Data for 2005 are not presented as the definition of PCCC in 2005 is not comparable with that for PCCC in later years.

^b % change refers to the growth in real expenditure over the period 2006-2009.

^c In 2007, Environmental Health expenditure of €45m moved from PCCC to Population Health. In addition, over the period, expenditure on vaccines moved into Population Health.

^d The Health Repayment Scheme (which provides for the refund of those who were charged for services in nursing homes even though there was no legal basis for the charges) came into effect in 2007.

^e Much of the increase in HSE income over the period 2006-2009 is accounted for by the recent introduction of the pension related deduction (PRD) in the public service. In terms of statutory sources of income, recent policy developments (e.g. in relation to the collection of payments for long stay patients, PRD, increases in inpatient charges etc.) account for much of the change observed over the period.

Source: HSE, personal communication [15 April 2010]

1.4.3.3 Out-of-Pocket Payments

Out-of-pocket expenditure on health includes spending on general practitioner (GP) and other professionals' fees (e.g. dentists, opticians etc.), net outlays on medicines, other medical equipment and services, and net hospital charges. The proportion of out-of-pocket resources in total health-care resources has remained stable over time, although it has been noted that data on private health expenditure in Ireland are imprecise and need to be interpreted with caution (Tussing *et al.*, 2006).

1.4.3.4 Private Health Insurance

Private health insurance in Ireland mainly plays a supplementary role, although there are also elements of a complementary role.¹³ While the establishment of the Voluntary Health Insurance Board (now Vhi Healthcare) in 1957 was initially intended to serve the wealthiest proportion of the population (approximately 15 per cent), demand has grown strongly with the result that approximately 50 per cent of the population now hold private health insurance (Insight Statistical Consulting,

¹³ Supplementary private health insurance offers faster access to health care, often through the use of private providers. Complementary private health insurance provides cover for user charges and for services that are excluded from the public system altogether (Thomson *et al.*, 2009).

2008). Despite this growth in demand, private health insurance has consistently contributed less than 10 per cent of the total health-care resource envelope. Government policy supports the existence of this market and the national health strategy describes it as a '*strong complement to the publicly funded system*' and a vital part of the '*overall resourcing of health care in this country*' (DoHC, 2001a; 111). The Government actively supports the market by subsidising the cost of private health insurance. Tax relief on private health insurance premiums amounted to approximately €260.5m in 2006 (Revenue Commissioners, 2008). The market is governed by principles of community rating, requiring that the same premium is charged for a particular product to all individuals, regardless of individual characteristics (e.g. age, sex, health status). Further details on the structure of the private health insurance market are outlined in Chapter 10.

The majority of health insurance cover is for hospital care (in both public and private hospitals) although a growing number of private health insurance policies now offer at least partial cover for GP, emergency department (ED) and other outpatient fees. For hospital care, the insurance company reimburses the hospital and the consultant on behalf of the insured patient, although the patient may be subject to certain co-payments (see Chapter 10).

1.4.4 Entitlement¹⁴

1.4.4.1 Overview

There are currently two main categories of eligibility for public health services, described in greater detail in Table 1.3:

- entitlement to free public hospital, primary care and other community care and personal social services (Category I);
- entitlement to public hospital care with charges for per-night and outpatient services (Category II);

¹⁴ A distinction is made between eligibility and entitlement. For example, where an individual applies for and meets the qualifications/requirements for a medical card, he or she is 'eligible' to receive the benefits offered by the medical card. The benefits offered by the card (e.g. free public health care) refer to the specific 'entitlements' that must be provided to the card holders.

TABLE 1.3
Entitlements to Health Services in the Irish Health-Care System¹⁵

	GP	Prescription Medicines	Public Hospital Care		Other
			Acute hospital inpatient	Acute hospital outpatient ^a	
Category I (Full medical card)	Free	Free (GMS Scheme) ^b	Free public care	Free public care	Various entitlement to community, personal and social care services, dental, ophthalmic, aural care ^f ; other benefits.
Category I (GP Visit card only)	Free	Free above €120 out-of-pocket payment per month (DP Scheme) ^c	€75 per night (annual max €750) ^e	Free with referral	
		Free for specific long-term illnesses/conditions (LTI/HTD Schemes) ^d		€100 without referral ^e	
Category II	Private GP user fee	Free above €120 out-of-pocket payment per month (DP Scheme)	€75 per night (annual max €750) ^e	Free with referral	
	Free GP maternity and infant care services (for specified number of visits)	Free for specific long-term illnesses/conditions (LTI/HTD Schemes)		€100 without referral ^e	

- Notes:
- ^a Includes emergency department (ED).
 - ^b General Medical Services.
 - ^c Drugs Payment Scheme.
 - ^d Long Term Illness Scheme / High Tech Drugs Scheme.
 - ^e Exemptions apply (e.g. children up to 6 weeks of age).
 - ^f For example, free treatment for children in state schools.

Source: Adapted from DoHC, 2010

1.4.4.2 Category I Eligibility

Individuals in Category I are issued with a medical card under the General Medical Services (GMS) Scheme. There are two types of medical card in Category I; the full medical card and the GP Visit card. The full medical card grants the recipient (and dependants) free access to public inpatient and outpatient hospital services, GP and pharmaceutical services, dental, ophthalmic and aural services, medical appliances, maternity and infant care services and a maternity cash grant on the birth of a child. A full medical card is granted to those earning an income below a specified threshold level and the medical card covers the individual and his/her dependants.¹⁶ Individuals from a European Union/European Economic Area (EU/EEA) country or Switzerland are eligible for a full medical card under specific conditions.¹⁷ The HSE

¹⁵ Tax relief at the standard tax rate (20 per cent) is available for all medical expenses that are not otherwise reimbursed by public funding or by private health insurance.

¹⁶ The net weekly income limit from 01 January 2009 ranges from €164 (single person aged up to 65 years living with family) to €298 (married couple/single parent aged 66 years and older with dependent children). Additional allowances are made for children, and for rent/mortgage payments, childcare costs and commuter expenses. A medical card is granted where the applicant's sole source of income is from Social Welfare or Health Service Executive allowances/ payments (HSE, 2009).

¹⁷ Individuals who are: living in Ireland and receiving a social security payment from another EU/EEA country or Switzerland, not getting an Irish social welfare payment (apart from Child Benefit or Early Childcare Supplement) and not liable to contribute to the Irish social welfare system (i.e. PRSI); living in Ireland and working in another EU/EEA country or Switzerland and are liable to pay Social Insurance Contributions in that country; living in Ireland and are the dependent spouse or child of someone employed in another EU/EEA country and Switzerland, not in receipt of an Irish Social Welfare Payment apart from Child Benefit or Early Childcare Supplement and not liable to contribute to the Irish social welfare system (www.hse.ie; last accessed 04 January 2010).

has the discretion to issue full medical cards on the basis of undue financial hardship due to ill-health. Retention of a full medical card for a specified time period, without means testing, is permitted for specific circumstances (e.g. participation in government employment/education schemes; retention of medical card for 3 years after return to work from period of unemployment of 12 months or more). Over the period 2001-2008, all individuals aged 70 years and over were automatically entitled to a full medical card (not including dependants), regardless of income (Government of Ireland, 2001). The automatic entitlement was removed from 01 January 2009 (Government of Ireland, 2008). Individuals aged 70 and over are now subject to a means test and income is assessed against a gross income threshold specified for this age group.¹⁸

The 'GP Visit' medical card (introduced in 2005) grants the recipient (and dependants) access to free GP services, not including prescriptions or any other primary/secondary care. Eligibility for the GP Visit medical card is determined by a means test where the income threshold is 50 per cent higher than that for a full medical card.¹⁹

1.4.4.3 Category II Eligibility

Individuals in Category II are required to pay in full for GP services (i.e. private GP fees paid at the point of use), with the exception of maternity and infant GP services which are provided free of charge (for a specific number of visits). Category II individuals, plus GP Visit card holders, are liable for statutory inpatient and outpatient charges for public care in public hospitals. The standard daily charge for public inpatient care is €75, up to an annual maximum of €750. The outpatient charge is €100, including attendance at an emergency department (ED), except where a referral letter is provided (other exemptions apply).

Individuals in this category, plus GP Visit card holders, can avail of a range of public assistance schemes, administered by the Primary Care Reimbursement Service (PCRS) and detailed in Table 1.4. The Drugs Payment (DP) Scheme reimburses prescription costs above a specified monthly threshold (€120 per month from January 2010). The Long Term Illness (LTI) Scheme covers the costs of prescription medicines for certain specified long-term illnesses (e.g. diabetes). The High-Tech Drugs (HTD) Scheme covers the cost of very expensive high-technology medicines that are usually only prescribed/initiated in hospital (e.g. anti-rejection drugs for transplant patients or medicines used in conjunction with chemotherapy or growth hormones). Additional schemes provide specific entitlements for some patients with

¹⁸ The gross weekly income limit from 01 January 2009 for individuals aged 70 years and older is €700 for a single person and €1,400 for a married couple (dependants are covered by the card). The allowances that are considered in the income assessment for the other medical cards (e.g. allowances for children, expenses) are not permitted here.

¹⁹ The net weekly income limit from 01 January 2009 ranges from €246 (single person aged up to 65 years living with family) to €447 (married couple/single parent aged 66 years and older with dependent children) (HSE, 2009).

some diseases (e.g. individuals who contracted Hepatitis C from the administration within Ireland of blood or blood products) and free immunisation and monitoring services for young children. Tax relief at the standard tax rate (20 per cent) is available for all medical expenses that are not otherwise reimbursed by public funding or by private health insurance.

TABLE 1.4
Primary Care Reimbursement Service Schemes

Scheme/Payment	Description	Entitlements			
		GP	Pharmacy	Dental	Optical
General Medical Services (GMS)	Persons who are unable without undue hardship to arrange general practitioner (GP) medical and surgical services for themselves and their dependants receive free General Medical Services. Drugs, medicines and appliances supplied under the Scheme are provided through retail pharmacies. In most cases the Doctor gives a completed prescription form to a person, who takes it to any pharmacy that has an agreement with the HSE to dispense GMS prescription forms. In rural areas the GP may dispense for those persons who opt to have their medicines dispensed by him/her.	✓	✓		
Drugs Payment (DP)	Under the Drugs Payment Scheme persons who are ordinarily resident in the state and who do not qualify for GMS can benefit if their spend on approved drugs, medicines and appliances for themselves or their family exceeds a monthly threshold (€120 per month since January 2010).		✓		
Long Term Illness Scheme (LTI)	On approval by HSE, persons who suffer from one or more of a schedule of long-term illnesses are entitled to obtain, without charge and irrespective of income, necessary drugs, medicines and appliances under the LTI. ^a		✓		
High Tech Drugs (HTD)	High Tech Drugs are generally prescribed or initiated in hospitals, and include items such as anti-rejection drugs for transplant patients or medicines used in conjunction with chemotherapy or growth hormones. The medicines are purchased by the HSE and supplied through community pharmacies for which pharmacists are paid a patient care fee.		✓		
European Economic Area (EEA)	Residents from one of the other States of the European Economic Area, with established eligibility, who require emergency GP services while on a temporary visit to the state are entitled to receive from a GP a GMS prescription form for necessary medication and to have such medication dispensed in a pharmacy that has entered into an agreement with the HSE within the state. Students, posted workers and their dependants are entitled to full services on presentation of a valid form E128.		✓		
Methadone Treatment Scheme (MT)	Methadone is prescribed and dispensed by doctors and pharmacists for approved clients under the Methadone Treatment Scheme. Capitation fees payable to participating doctors and community pharmacists and claims by pharmacies for the ingredient cost of the Methadone dispensed and the associated dispensing fees are processed and paid by the PCRS.	✓	✓		
Health (Amendment) Act 1996 Scheme (HAA)	Under the Health (Amendment) Act 1996, certain health services are made available without charge to persons who have contracted Hepatitis C directly or indirectly from the use of Human Immunoglobulin - Anti D or the receipt within the state of another blood product or blood transfusion.	✓	✓	✓	✓
Primary Childhood Immunisation Scheme	A National Primary Childhood Immunisation Scheme provides for immunisation of the total child population, with the aim of eliminating, as far as possible, such conditions as Diphtheria, Polio, Measles, Mumps, Rubella and Meningococcal C Meningitis.	✓			
Immunisations for certain GMS Eligible Persons	Agreement was reached between the Department of Health and Children and the Irish Medical Organisation on fee rates to be applied to certain immunisations for GMS eligible persons. The immunisations encompassed by the agreement are: - Pneumococcal, Influenza, Hepatitis B and the combined Pneumococcal/Influenza. The HSE facilitated claiming for any of these immunisations by extending the range of codes for 'Special Items of Service'.	✓			
General Practitioner Visit Card (GPVC)	Those above the income threshold for a medical card may apply to the HSE for a GP Visit card. GP Visit cards allow individuals and families who qualify to visit their GP for free. Introduced in October 2005.	✓			
Dental Treatment Services Scheme (DTS)	Under the Dental Treatment Services Scheme, GMS eligible adults have access to a range of treatments and clinical procedures, comprised of Routine Treatments and Full Upper and Lower Dentures. Routine Treatments are now available for all eligible persons. Dentists may also prescribe a range of medicines to eligible persons.			✓	
HSE Community Ophthalmic Services Scheme (HSE-COS)	Under the HSE Community Ophthalmic Services Scheme, adult medical card holders and their dependants are entitled, free of charge, to eye examinations and necessary spectacles/appliances. Claims by Optometrists/Ophthalmologists are paid by the PCRS. Claims for spectacles provided under the Children's Scheme are also paid by the PCRS.				✓

Notes: ^a Acute Leukaemia, Mental Handicap, Cerebral Palsy, Mental illness (in a person under 16), Cystic Fibrosis, Multiple Sclerosis, Diabetes Insipidus, Muscular Dystrophies, Diabetes Mellitus, Parkinsonism, Epilepsy, Phenylketonuria, Haemophilia, Spina Bifida, Hydrocephalus, Conditions arising from the use of Thalidomide.

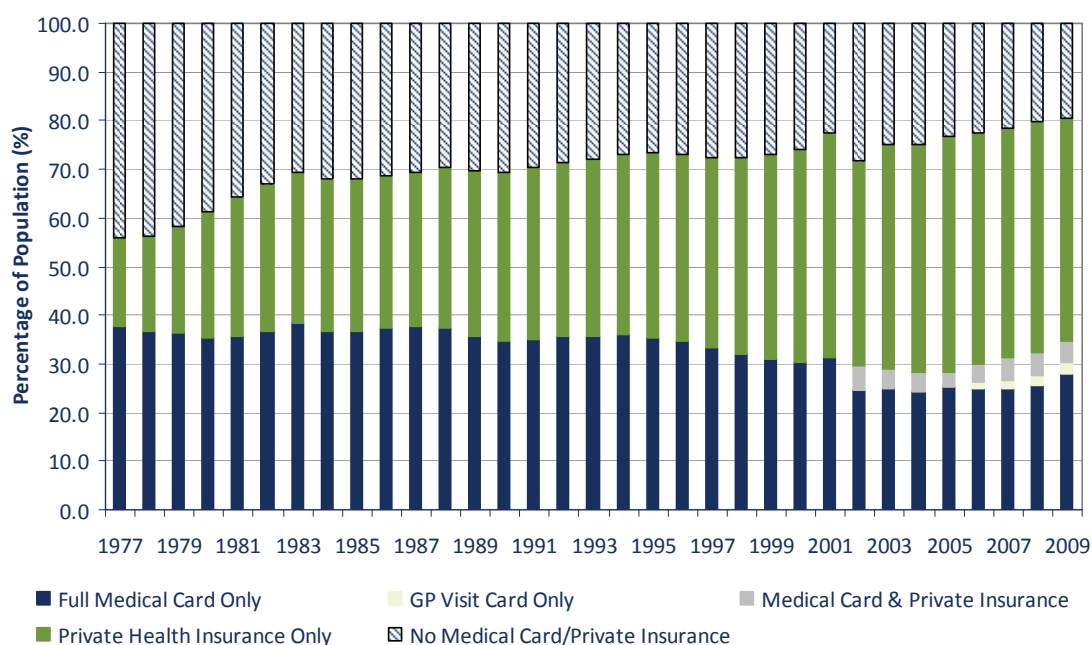
Source: Adapted from PCRS, 2009

1.4.4.4 Population Coverage

Many people in Category II, and a small proportion of those in Category I, purchase supplementary private health insurance. Thus, the population can be categorised into four broad entitlement groups: medical card only with no supplementary insurance ('medical card'); privately insured only with no medical card ('privately insured'); individuals with both medical card and private health insurance ('dual cover'); individuals with neither medical card nor private health insurance ('non-covered').

Figure 1.5 presents the breakdown of the population by these entitlement groups from 1977-2009.²⁰ In 2009, an estimated 46 per cent of the population held private health insurance only; 5 per cent held both a medical card and private health insurance; 30 per cent held a medical card or GP Visit card only; and 19 per cent of the population were non-covered. Therefore, approximately 65 per cent of the population did not hold a full medical card or a GP Visit card ('non-medical card holders') in 2009.

FIGURE 1.5
Percentage Breakdown of the Population by Health-Care Entitlement, 1977-2009



Note: Data on the size of the 'dual cover' group (i.e. those with both a medical card and private health insurance) are only available from 2002 onwards.

Sources: NESF, 2002; Amárach Consulting, 2003; Insight Statistical Consulting, 2005; PCRS, 2005, calculated from PCRS, 2008; CSO, 2010

²⁰ In the dual cover group, where individuals hold private health insurance as well as a medical card, the majority of these are estimated to be full medical card holders given that the size of the group has not increased by much since the introduction of the GP Visit card in 2005.

Based on descriptive data, these entitlement groups may be broadly ranked in terms of socio-economic status from the medical card (lowest) to the privately insured (highest), but overlaps in the various measures of deprivation and socio-economic status suggest that these do not describe mutually exclusive socio-economic categories (Smith *et al.*, 2009).²¹ Given the links between low socio-economic status, older age and poor health status, the above patterns suggest poorer health status amongst the two medical card groups and there is clear evidence that the medical card and dual cover groups report poorer levels of self-assessed health than the privately insured and non-covered groups. These patterns are reflected in other measures of ill health including the prevalence of chronic illness and functional limitations due to ill health (CSO, 2007).

1.4.5 Service Delivery

1.4.5.1 Primary Health-Care Delivery Structures

Primary care is delivered by private GPs. In effect, GPs act as gatekeepers for hospital treatment, providing letters of referral to acute care for their patients (Nolan, 2007). GPs are located in the community in single/multi-person practices although the trend for single-handed practices is declining (O'Dowd *et al.*, 2006). There are approximately 2,800 GPs practicing in Ireland and this translates to approximately 0.63 GPs per 1,000 population (Competition Authority, 2009). The majority of GPs hold a GMS contract with the Government to provide primary care services to individuals who are eligible for state-subsidised care (O'Dowd *et al.*, 2006).

Primary, continuing and community care is also provided by a range of other health professionals including community-based pharmacists (private practitioners), public health nurses, health-care assistants, home helps, midwives, occupational therapists and physiotherapists etc. The PCTs aim to integrate formally the work of these and other professionals with that of the GPs (see Chapter 8 for further discussion).

There are a number of public and private facilities that provide non-acute long-term health care. Public long-stay units include geriatric hospitals and homes, district and community hospitals, and HSE welfare homes. In total, there are approximately 27,400 beds in private, public and voluntary long-term care units (2006 estimate - Wren, 2009).

²¹ There are statistically significant differences in mean gross incomes across the groups, and the privately insured and non-covered groups are both more likely to be engaged in employment than the medical card and dual cover groups. Non-covered individuals have the lowest mean age, followed by the privately insured group and the medical card group. The mean age for those with dual cover is 61. Measures of health status indicate a higher proportion of ill-health amongst the medical card and dual cover groups relative to their respective population shares (Smith *et al.*, 2009).

1.4.5.2 Acute Hospital Care Delivery Structures

Acute health-care services are delivered in public and private hospitals. There are three broad types of hospital in Ireland: HSE public, voluntary public and private hospitals. HSE public hospitals are owned and funded by the HSE. Voluntary public hospitals may be owned by autonomous institutions (e.g. religious orders) but in fact for many years have received most of their funding from the Government. There are over 50 acute public hospitals (HSE and voluntary) including specialist (e.g. orthopaedic) and maternity hospitals. Although the total number of beds in acute public hospitals has not grown substantially in recent years, the composition of these beds has changed significantly. In particular, there has been substantial growth in day case beds and, consequently, the share of inpatient beds has declined from 93.5 per cent in 2002 to 88.7 per cent in 2007 (see Chapter 7). The acute public hospital sector is currently undergoing substantial reconfiguration, involving the concentration of acute services in regional hospitals, with local hospitals focusing on elective services. See Chapter 7 for further discussion.

There are approximately 20 purely private hospitals (McDaid *et al.*, 2009), including private psychiatric hospitals, and these are independent and receive no direct state grant funding.²² The private hospitals operate in parallel to the public hospitals but there are some services that are not available in the private sector (e.g. complex treatments such as liver transplants). See Chapter 7 for further discussion.

1.4.5.3 Public/Private Interaction in the Provision of Health-Care Services

In both primary and acute hospital care, publicly financed and privately financed care are very often administered by the same staff, using the same facilities. In primary care, all GPs are private, although most have both public (GMS) and private patients. In acute care, there are separate public and private hospitals, but within public hospitals consultants are permitted to treat patients on a private basis. The overlap between public and private care in the public hospital system is supported in government policy. This arrangement is defended in terms of permitting public hospitals to retain the services of top specialists and, therefore, to have them available to care for public patients. The national health strategy states that the current public/private mix of beds in the public hospital system is intended to ensure that the two sectors can share resources, clinical knowledge, skills and technology (DoHC, 2001a). However, the revised consultant contract includes a new 'public only' category whereby a consultant is not permitted to treat patients on a private basis. See Chapters 7 and 13 for further details on the consultant contract.

²² These private hospitals may receive other types of state funding, for example, from charges for public patients whose treatment is paid for by state funds under the National Treatment Purchase Fund.

Following the 2001 Health Strategy, the National Treatment Purchase Fund (NTPF) was established in 2002 to purchase spare capacity from the private sector (and also from public hospitals) to treat public patients waiting for treatment in public hospitals. During the first year of its operation, the NTPF received a budget of €30m. By 2007, this had increased to €91.7m (McDaid *et al.*, 2009). While the NTPF has succeeded in reducing specific waiting lists, it oversees the treatment of a very small percentage of total acute activity (see Chapter 7).

1.5 METHODOLOGY

This section provides an overview of the methodology and approach to the analysis carried out in this report, focusing in particular on data sources and the choice of countries selected for detailed comparative analysis. At all stages, the approach was guided by the terms of reference for the Expert Group on Resource Allocation and Financing in the Health Sector, which are as follows:

- to analyse the current strengths and weaknesses of the current resource allocation arrangements for health and personal social services;
- to recommend appropriate changes in these arrangements, which would support and incentivise the achievement of the core objectives of the health reform programme;
- in the light of its work, to take a view on the most appropriate financing mechanism for the Irish health service;
- to base its examination and recommendations on the existing quantum of public funding for health.

Guided by these terms of reference and the deliberations of the Expert Group, the approach taken in this report is to:

- critically evaluate the theoretical and international empirical literature on resource allocation, financing and sustainability in health care;
- critically evaluate current Irish systems of resource allocation and financing and issues associated with sustainability;
- suggest a framework for health-care entitlements and user fees that would support the delivery of integrated health care in Ireland.

For the review of the international evidence, national policy and corporate documents, academic publications and information from the OECD and European Observatory on Health-Care Systems were key sources, supplemented in some cases by discussions with individuals with expertise on individual systems. Where relevant, experience with past as well as current developments was analysed. During the review of the international evidence, a number of issues were highlighted for further

in-depth analysis (e.g. experience with various integrated care initiatives) and these form the substance of a number of country-specific case studies, which are appended at the end of Part 2.

The choice of comparator countries was guided by the necessity to consider a diverse range of countries and assess the characteristics of their resource allocation and financing systems, as well as their key issues in relation to sustainability. The countries chosen for in-depth analysis were:

- Australia
- Canada
- England
- Germany
- Netherlands
- New Zealand
- Sweden
- United States (Medicare)²³

For the analysis of international experience with resource allocation in Part 2, it was important to review experience in countries with differing approaches to population health-based allocations, the relationships between purchasers and providers, the reimbursement of individual and institutional providers, and differing approaches to integrated care. For example, in relation to the reimbursement of GPs, England, Australia and the US Medicare system were chosen to represent experience with 'pay for performance' methods of payment, while Sweden was chosen to represent experience with salary-based payments and New Zealand for predominately capitation-based payments. On the allocation of resources for acute hospital services, casemix funding was the most common approach, but the specific design of these funding systems varied across the countries investigated. Similarly, for the review of the international experience with alternative financing systems in Part 4, countries with predominately tax-based (e.g. England, Canada) and social health insurance-based (e.g. Germany) systems were chosen, as well as those with significant elements of private financing (e.g. Netherlands). In terms of the review of international approaches to ensuring sustainability in Part 6, England was highlighted an important comparator for the analysis of staff costs, given the similarities with Ireland in terms of provider training, education and culture.

²³ As the US health-care system is so diverse, it was not possible to review experience across a system with multiple payers. For the analysis of resource allocation, it was therefore decided to focus on the Medicare programme, which provides free or heavily subsidised health care to older Americans.

For the analysis of current Irish systems of resource allocation and financing (in Parts 3 and 5 respectively), and issues associated with sustainability (in Part 6), national policy documents, academic publications and HSE corporate publications were key sources of information. Discussions with personnel in the DoHC, HSE and other agencies also proved useful. A challenge in documenting the current Irish situation was the considerable change that the system was undergoing; over the course of this research: there was a major structural change within the HSE with the creation of the ISD and ISAs, as well as other important policy developments, most notably in relation to pharmaceutical pricing and prescription drug co-payments. While every effort has been made to outline the current situation as accurately as possible, it is inevitable in such a fast-changing landscape that some descriptions may date quickly.

A further challenge in carrying out the research concerns the varying quality of information and, in particular, the quality of the data on resource flows in the form of detailed expenditure data. This created challenges for the analyses in Parts 3 and 7 and especially the analyses of resource flows in the non-acute sector. The diversity of providers and care settings, as well as differing application of eligibility rules in different areas of the country, made the analysis of resource flows in the PCCC sector particularly difficult. The creation of the HSE in 2005 has meant that consistent time series are only available from 2005/06 onwards, making any analysis of long-run trends difficult. Every effort has been made to base the analysis on published documentation; however, in some cases, personal communications proved useful in clarifying issues and these are highlighted in the text where appropriate.

1.6 SUMMARY

The purpose of this chapter was to outline the key international themes in relation to resource allocation, financing and sustainability in health care. This chapter also provided a brief overview of the Irish health-care system, highlighting its key features in terms of governance and organisation, financing, entitlement and service delivery. International and Irish health-care principles were also discussed, with specific focus on the complexity in defining equity, one of the key principles in international health care. A brief overview of the methodology and approach used in the analysis for this report was also given.

The remainder of this report is comprised of 15 chapters divided into 7 parts. A full set of references is provided at the end of each chapter and where necessary parts are followed by a part-specific appendix.

The Parts are laid out as follows:

- Part 2 consists of a review of the international evidence on systems of resource allocation (Chapters 2-5), as well an appendix containing a set of country-specific case studies.
- Part 3 examines the current system of resource allocation and service delivery in Ireland and the extent of the integration of the health-care system at present (Chapters 6-8).
- Part 4 reviews how health-care systems are financed and assesses international evidence on the advantages and disadvantages of different resource contribution methods (Chapter 9).
- Part 5 examines the current system of health-care financing in Ireland (Chapter 10).
- Part 6 examines the sustainability of health-care systems focusing on two significant drivers of expenditure - pharmacy and staff costs - as well as the potential for savings associated with increasing efficiency in health-care delivery (Chapters 11-14).
- Part 7 summarises key issues and policy implications from the analysis in the foregoing Chapters, and presents a framework of user fees and entitlements for supporting the delivery of integrated health care in Ireland (Chapter 15).

A full list of abbreviations and a glossary is available at the end of the report. In addition, detailed profiles of the health-care systems in the selected countries are presented in the 'Country Profiles' appendix at the end of the report.

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PART 2

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Chapter 2

System Issues in Resource Allocation

2.1 INTRODUCTION

In this chapter, we provide an overview of the theoretical literature and empirical evidence on system issues in resource allocation in health care. Resource allocation in health care is a method for distributing resources between competing claims in ways that are consistent with health policy objectives (Birch *et al.*, 1993). While health-care resources have been distributed traditionally on the basis of historical allocations to existing providers and facilities, most industrialised countries now subscribe to the principle of a population health approach to resource allocation (whereby resources are distributed on the basis of relative needs for care). Resource allocation in health care thus encompasses consideration of a number of key issues, including:

- the implementation of a population health resource allocation method;
- the nature of the relationship between purchasers and providers;
- the methods used to reimburse providers for the services they provide.

Ensuring that the design of the system at each of these stages supports the delivery of health care that is consistent with health policy objectives is crucial. In particular, a key concern is to ensure that the resource allocation system supports the integration of health-care delivery, such that providers and users are incentivised to deliver/use appropriate care in the most appropriate settings.

In this chapter, we firstly provide an overview of the concept of resource allocation as applied to health care (Section 2.2). Section 2.3 summarises briefly the issues associated with the implementation of a population health model for the allocation of health-care resources (much of this discussion has been dealt with in previous studies and Staines *et al.* (2010a; b) focus in particular on the Irish primary, community and continuing care sectors). Section 2.4 deals with the issues of purchaser–provider split, while Section 2.5 summarises this chapter.

Part 2 of the report continues with Chapters 3 and 4, which provide an overview of the methods for reimbursing providers in the primary care and acute hospital sectors respectively, while Chapter 5 discusses the particular features of integrated health care and the mechanisms that are needed to support integrated health-care delivery.

2.2 WHAT DO WE MEAN BY RESOURCE ALLOCATION?

Resource allocation in health care is a method for distributing resources between competing claims in ways that are consistent with health policy objectives (Birch *et al.*, 1993). In the past, health-care resources in most industrialised countries have been distributed on the basis of historical allocations to existing providers and facilities. In contrast, most industrialised countries now subscribe to the principle of a population health approach to resource allocation (whereby resources are distributed on the basis of relative needs for care). Resources are thus targeted with reference to the underlying need for care of the population, rather than the needs of a particular set of presenting patients. However, this method is dependent on good measures of population health need and this has been the subject of an extensive literature (Birch *et al.*, 1993; Staines *et al.*, 2010a; b).

Distribution of resources on the basis of a needs-adjusted capitation formula is a core pillar of an equitable health system. In Ireland, current methods of resource allocation are based largely on past patterns of service provision and utilisation (see Chapters 6 and 7). Yet these patterns may not be consistent with the distribution of relative needs for care in the population. This also perpetuates any existing inequalities in the allocation of resources with respect to relative needs for care. A relative needs-based approach provides equal resources for communities with equal needs (horizontal equity), but unequal resources for communities with unequal needs (vertical equity) (Birch *et al.*, 1993). The alternative, in which the distribution of resources depends on the location choices of providers and historical legacy, usually conflicts with the achievement of equity and requires a plethora of incentives and penalties to address the imbalances that emerge. Such imbalances can be considerable; for example, in New South Wales (Australia) prior to adoption of a needs-based model for funding of area health services, it was found that some areas received as much as 30 per cent in excess of their needs-adjusted formula allocation and others up to 40 per cent below. Ten years after introducing a needs-adjusted resource allocation formula for hospital, community, mental health and other state-based services, these regional disparities were removed (Segal, 2008).¹

The efficiency of needs-based approaches relative to use-based approaches to resource allocation is further enhanced by the reduced opportunities for providers to 'game' the system. Under existing use-based systems, there is an incentive to increase utilisation in order to increase future allocations. Providers who respond to such incentives may not necessarily be acting unethically – the services provided may be effective, but the resources could be used more efficiently in different ways (e.g. by serving different communities or needs). Under the needs-based approach,

¹ While the majority of resource allocation formulae in use internationally concentrate on allocating resources primarily according to the size of the problem (i.e. health need), Mooney *et al.* (2004) outline an alternative approach that incorporates 'capacity to benefit' (i.e. the extent to which one population's health problems may be more amenable to health intervention than others) and management, economic and social infrastructure (i.e. the ability of an area to deliver health benefits to its population).

the system can be 'gamed' only by increasing the community's need for care. However, providers could argue that efficient use of resources, in terms of meeting the needs of the community, is penalised under the needs-based system as the resulting reduction in need for care that is brought about by effective treatment feeds back to reduced allocations in future periods. In this case, good performance monitoring is needed to ensure that such savings are not simply transferred to less efficient providers.

In moving towards a population health-based allocation of health resources, there are a number of key issues that arise, including the extent of 'top-slicing', the optimal size of the unit to which resources are allocated, the degree to which population health allocations are made on a 'programmatic' basis in addition to a 'geographic' basis and the nature and type of data used to inform the population health allocation.² In addition, a key concern in moving from a largely retrospective historic basis for resource allocation to one that is prospective and based on population health is the need to avoid large fluctuations in allocations to particular areas in the short run. Section 2.3 discusses these issues in greater detail.

However, even when allocations are made on the basis of population health needs, with appropriate adjustment mechanisms in place, the nature of the purchaser–provider split and methods of provider reimbursement can have important implications for the degree to which providers are incentivised to behave in a manner that is consistent with health policy objectives. Section 2.4 of this chapter discusses the issue of purchaser–provider split, while Chapters 3 and 4 provide an overview of the theoretical and empirical discussion on provider reimbursement in the primary and acute hospital sectors respectively.

2.3 IMPLEMENTATION OF A POPULATION HEALTH RESOURCE ALLOCATION MODEL

2.3.1 Top Slicing

Most developed countries exclude some resources from the population health-based resource allocation process. Such resources generally cover national specialties, i.e. those services considered too high cost or rare (e.g. transplant services) to ensure stable budgets over time. 'Top slicing' may also apply to resources for capital, teaching and research and national public health campaigns.³ There are trade-offs involved in top-slicing: on the one hand, top-slicing ensures that the units to which resources are allocated do not run the risk of rare events destabilising their entire budgets, while on the other, removing resources from the population health-adjusted budget reduces the degree to which resources are

² The broader question of the amount of (public) resources that should be devoted to health care is essentially a political decision.

³ In general, top slicing applies to funding for new capital or infrastructure only; the budget for the maintenance of capital facilities is generally included in the resources subject to the population health adjustment (see Chapter 4 for discussion of how hospitals are reimbursed internationally for their capital costs).

targeted at population health need. In addition, there must be appropriate mechanisms in place (e.g. clear clinical protocols) to ensure that providers do not face incentives to transfer responsibility for cases to services that are subject to the 'top-sliced' budget.

2.3.2 Optimal Size of Budget-Holder/Commissioning Unit

In practice, most health-care systems have multiple units to which resources are allocated, usually defined in terms of geography. In some cases, responsibility for the allocation of resources is, in turn, devolved to smaller units such as groups of primary care practices (Section 2.4.2 deals with issues associated with devolved purchasing arrangements in more detail). The review of the literature confirms that there is no one right size or configuration for the units to which resources are allocated (i.e. the budget-holding/commissioning units). The advantages of being big in terms of managing risk and exploiting economies of scale may clash with the advantages of being small in terms of being adaptable to local needs (Walshe *et al.*, 2004).⁴ In addition, the units must be of sufficient size to ensure that a population health-based allocation is meaningful and that administrative costs are minimised.⁵

Bachmann *et al.* (1996) discuss how risk varies with scale. They examine the influence of the size of the risk pool on random variation in expenditure, using English data on average costs and rates of referral for a selected group of 15 rare costly hospital admissions in 1995/1996. They find that the degree of random variation in expenditure decreases as the population increases. A risk pool of 70,000 has a comparatively high degree of risk, which decreases appreciably with a risk pool of 300,000 (and pools above this are subject to diminishing marginal returns).⁶

In England, the 152 Primary Care Trusts (which hold 80 per cent of the National Health Service (NHS) budget and commission various health-care services on behalf of their populations) had an average (median) population size of 338,500 (275,100) in 2008.⁷ In New Zealand, the 20 District Health Boards (which are responsible for ensuring the provision of publicly-funded health and disability support services for the population of specific geographic areas) had an average (median) population of 201,900 (153,000) in 2007.⁸ The recent report of the Australian Health and Hospitals

⁴ Simulation studies using NHS data provide strong support for economies of scale in managing risks by pooling populations: the probability of substantial overspend or under spend per capita falls as the population covered increases. However, pooling is not the only method for managing risk. Commissioning units could be allowed to carry forward budget surpluses when demand is unexpectedly small and draw down the banked surplus when demand generates a deficit in a period. They could also be permitted to insure, whereby they pay a premium from their budget in each period and in return have the insurer cover budget deficits in years when demand is high (Bojke *et al.*, 2001). However, insurance creates the 'moral hazard' problem, whereby incentives for cost control are removed (Bachmann *et al.*, 1996).

⁵ Smaller units also run the risk of duplication in (management) functions, which may increase administrative costs.

⁶ Sensitivity analyses showed that the simulated variations in costs were robust to the assumed rates of referral or prices of any particular referral category (Bachmann *et al.*, 1996).

⁷ Calculated from www.statistics.gov.uk/statbase/Product.asp?vlnk=15106 [last accessed 30 June 2010].

⁸ Calculated from www.moh.govt.nz/moh.nsf/indexmh/dhb-faq [last accessed 30 June 2010].

Reform Commission recommends the establishment of Primary Health-Care Organisations (with responsibility for service co-ordination and population health planning at the local level) and suggests an appropriate population size of between 250,000 to 500,000 (Commonwealth of Australia, 2009).

2.3.3 Population Health-Adjusted Budgets: Geography and/or Programme?

The degree to which decisions about the distribution of resources across different programmatic areas (e.g. primary care, hospital services) are made before or after the population health adjustment differs across countries. In some cases, the population health adjustment applies to a global budget and is then distributed to different geographic units (which then allocate resources by programme). In other cases, the population health adjustment applies to defined programmatic budgets and is then distributed to the various geographic units.

In New South Wales (Australia), for example, an annual budget is determined and distributed between nine health-care programmes (namely, population health, oral health, primary and community, outpatients, emergency services, acute inpatient, mental health, rehabilitation and extended care, teaching and research). For each programme, certain expenditure unrelated to population size is deducted and the remaining expenditure is then distributed between areas, using an appropriate capitation methodology. The resulting allocations are summed to obtain the allocation for each area. An adjustment is also made for cross-boundary flows (Staines *et al.*, 2010b). In England, the weighted capitation formula has three different components reflecting different types of health-care services, namely, hospitals and community health services, prescribing and primary medical services (Department of Health, 2008).

2.3.4 Nature and Type of Data used to inform the Population Health Adjustment

Internationally, one of the major differences in the implementation of population health models of resource allocation lies in the nature of the data used to identify population health needs and the calculation of the risk-adjusted capitation allocation. As a first step, capitation formulae based on age and sex are effective in accounting for a large portion of the variation in population health need (Birch *et al.*, 1993), although over time and with improved data availability, most countries move towards incorporating additional adjustments for need. Direct or 'bottom-up' measures of need (based on epidemiological data) are ideal but often unavailable, so indirect measures of need (e.g. based on utilisation data and/or deprivation indices⁹) are also employed. The source of data may also have implications for the accuracy of the population health needs adjustment. For example, there are some concerns over

⁹ While past utilisation of health care is an important predictor of future utilisation of health care, utilisation is also affected by provider and patient behaviour. It is, therefore, suggested that risk factors used in population health formulae should include only characteristics of the individual or population that are independent of providers of care (Birch *et al.*, 1993).

the use of data from household surveys, which are often 'once-off', available only with a considerable time lag and frequently based on different population units to those appropriate for the population health needs adjustment (see Birch *et al.* (1993) for further discussion).

In essence, the appropriateness of a particular population health needs adjustment is determined by both conceptual (i.e. a valid indicator of between-individual/community need for health care) and practical considerations (i.e. available and easily collected data) (Birch *et al.*, 1993). Staines *et al.* (2010b) provide an overview of the data used to inform population health allocations in England, Scotland, Wales, Portugal, Sweden, New Zealand and New South Wales. For example, in England, the adjusted capitation formula for allocations to Primary Care Trusts for primary care services adjusts for age and sex, additional health needs, the cost of employing staff (the 'market forces factor' which captures differences in pay rates between areas) and health inequalities (Department of Health, 2008).^{10,11}

2.3.5 Transitional Issues

Where resources are largely allocated on the basis of historic levels of service provision, the population health-based allocations to particular population units may differ considerably from current levels of funding to those units. It is, therefore, important to consider the use of appropriate transitional approaches to the implementation of a full population health-based allocation of health-care resources. One approach would be to apply the population health adjustment to increases in total resource allocation to health care and thereby protect population groups from reductions in the absolute level of funding available (Birch *et al.*, 1993). However, this approach does not address the appropriateness (i.e. efficiency and equity) of existing allocations. An alternative approach would be to apply the population health adjustment to total funds to produce 'target' needs-based allocations (Birch *et al.*, 1993). Over a period of years, actual allocations would move closer to targets, based on decisions on the proportion of adjustments to 'distance from target' (as is the case in England).¹²

¹⁰ Additional needs (i.e. needs over and above those pertaining to age) are estimated from a regression model of cost-weighted activity against additional needs indicators and supply variables. The coefficients on the additional needs indicators are used to adjust crude population counts for additional health need (Department of Health, 2008).

¹¹ The health inequality adjustment uses disability-free life expectancy (DFLE), which is the number of years from birth a person is expected to live which are free from limiting long-term illness. It is applied by comparing every Primary Care Trust's DFLE to a benchmark figure of 70 years (Department of Health, 2008).

¹² Primary Care Trusts do not automatically receive their target shares of resources. The difference between the actual and target allocations is used to calculate a 'distance from target' for each Primary Care Trust. All Primary Care Trusts receive a minimum level of funding uplift and the residual funds are distributed on the basis of the 'distance from target'. Decisions about the average and minimum funding uplifts and therefore, the rate of progress towards targets, are at the discretion of the national Health Minister (Department of Health, 2008).

2.4 PURCHASER–PROVIDER SPLIT

2.4.1 Overview

A common element in several recent health-care reforms internationally has been the separation of the responsibility for purchasing health-care services from the responsibility for providing them (Figueras *et al.*, 2005). The provision of services becomes the sole concern of providers such as hospitals, nursing homes or GP practices who hold no (purchasing) budget and have no control over how it is spent. Purchasing authorities (usually organised on regional lines) are tasked with securing improvements in health for certain defined populations and do so by assessing the health-care needs of their population, determining the most cost-effective means of meeting these needs and contracting with providers to ensure that such services are provided (Street, 1994). Systems in which purchasers and providers are strictly separated are usually highly centralised systems, in which resources are controlled and managed by either the national Department of Health or some group of sub-national organisations (usually organised on regional lines). In such a model, the Department of Health need not play a major part in the running of the health system, other than through setting strategic objectives, establishing regulatory functions and allocating resources to purchasing/budget-holding units (ideally on the basis of population health needs).

In theory, the separation of purchaser and provider aims to introduce market incentives in publicly-managed health-care systems through the use of competitive tendering for contracts (Street, 1994).¹³ In practice however, purchaser–provider split may simply mean that purchasers are not involved in the provision of health-care services, with contracts awarded on the basis of the (historical) availability of providers.¹⁴ One of the main advantages of segregating the purchasing and providing functions is the ability to engage in 'strategic purchasing' (WHO, 2002), whereby purchasers can employ financial incentives and monitoring tools to encourage providers to offer services efficiently. The 'World Health Report 2000' advocates '*strategic purchasing*' as a major tool for improving the performance of health systems. It argues that where a purchaser model exists, countries should move away from 'passive purchasing', whereby a predetermined budget is decided or fees are simply reimbursed retrospectively, to strategic forms of purchasing in which proactive decisions are made about which health-care services should be purchased,

¹³ It is important to distinguish between a purchaser–provider split and managed competition. A purchaser–provider split is designed to use contracts to introduce competitive elements into what is essentially a publicly-managed health system. Managed competition, on the other hand, is intended to reform the market for health insurance, by subjecting insurers to a regulatory framework designed to minimise risk selection and to transform insurers into purchasers of services (Street, 1994).

¹⁴ Elements of the Irish health-care system are organised along such lines; while there is strict separation between the purchaser and provider in many aspects of Irish health care (e.g. between the HSE and voluntary hospitals or between the HSE and GPs), other relationships are not characterised by such a split (e.g. the HSE owns, funds and operates HSE hospitals). See Chapters 6 and 7 for further details.

for whom, how and from whom (WHO, 2000).¹⁵ Competitive tendering for contracts is a key element of a more active approach to purchasing. In theory, a purchaser–provider split facilitates strategic planning and the setting of priorities since decisions are more responsive to the needs of patients and less dependent on the interests of providers (Street, 1994). Similarly, the careful design of contracts, which are central to purchasing, can incentivise providers to take account of wider issues, like prevention, which are likely to increase in importance with rising levels of chronic disease (Figueras *et al.*, 2005). From the perspective of the payer (government, insurers), contracting with providers allows for arrangements for risk-sharing between purchaser and provider (Saltman *et al.*, 1997).

One of the main disadvantages of active purchasing approaches (i.e. more competitive tendering for supply contracts) is the administrative cost; competitive tendering necessarily increases opportunities for disputes (Street, 1994). The potential for providers to skimp on quality is a very real possibility with competitive tendering; by its nature, quality is not easily measured (Street, 1994). The success of competitive tendering is also dependent on the structure of the market. As health-care markets are subject to various forms of market failure, this reduces the potential for competitive tendering to produce desired outcomes (e.g. for the provision of highly-specialised services, a monopoly provider may be the only option). In general, a clear separation of purchasing/commissioning and provision appear to operate well when there is potential for competition, where the product or service is relatively straightforward and where there are few economies of scale (Smith *et al.*, 2004). Finally, once contractual obligations have been filled, providers have no incentive to do further work (although the extent to which this emerges as a problem is dependent on the accuracy of the needs assessment underpinning specification of contractual obligations).

In social health insurance- based systems, contracts between insurers and providers are a central feature of the resource allocation system. In tax-based systems, contracting is increasingly becoming a device for negotiating on price and quality (Saltman *et al.*, 1997). See Chapter 9 for further discussion. A real division between purchasers and providers may be easier to achieve where there are private providers (e.g. Canada, Australia, New Zealand (primary care¹⁶), the Netherlands, England, Northern Ireland). However, in New Zealand, District Health Boards both own and operate public hospitals. As a consequence, the Boards have an incentive to increase activity at their own hospitals.

¹⁵ 'Commissioning' is regarded as a more sophisticated and strategic activity than purchasing, encompassing an assessment of the health needs of the population, buying of services to meet those needs and a range of strategic efforts to promote health (Smith *et al.*, 2004).

¹⁶ See Case Study 2.2 for further discussion of the recent reforms in the primary care sector in New Zealand.

2.4.2 Devolved Purchasing Arrangements

A related issue concerns the degree to which providers may themselves be responsible for the allocation of resources, i.e. the extent to which commissioning roles are further devolved or decentralised within the system. More decentralised models might consider the primary care team (or GP) as the budget-holder, giving the primary care team responsibility for the delivery and commissioning of certain services for their patients. For example, in England, Primary Care Trusts commission services from GPs and hospitals. In turn, GP practices can engage in 'practice-based commissioning', thus producing a more layered approach to primary care purchasing and potentially increasing patient and public involvement (Bellanger *et al.*, 2004; McCallum *et al.*, 2006) – see Case Study 2.1 for a more detailed discussion of the UK experience with such arrangements. In Sweden, in contrast, primary care providers are no longer involved in purchasing. Political concerns about the lack of separation between purchaser and provider mean that county councils now contract directly with GPs, other specialists and hospitals in parallel. In addition, many Swedish GPs were concerned about exposure to financial risk associated with purchasing roles (McCallum *et al.*, 2006).

The benefits of primary care purchasing include organisational improvements (reducing isolation among single-handed practices), more flexible service provision (expanded range of services available in primary care), more responsive services (faster test results), quality of care (reducing hospitalisations for ambulatory care-sensitive conditions, such as diabetes), improved cost-effectiveness of care (e.g. more cost-effective prescribing) and increased influence for primary care (McCallum *et al.*, 2006). Disadvantages include the costs of administration, direct or indirect risks and perverse incentives (e.g. focus on the purchasing of cheaper, but not necessarily better quality services) and lack of strategic focus. In addition, it can be hard for providers to accept financial liability (McCallum *et al.*, 2006). At a system level, optimising the balance between encouraging innovation with devolved budgeting, while minimising the bureaucracy associated with maintaining equitable access and service provision, requires careful management (McCallum *et al.*, 2006).

Debate on the ideal size of a devolved commissioning unit centres on the trade-off between the need to have critical mass to have commissioning 'clout' and achieve economies of scale in relation to management support and a desire for sufficient local focus to enable sensitivity to localities, practices, primary care staff and local populations (Smith *et al.*, 2004). Adequate management support is considered vital if primary care commissioning organisations are to gain the confidence of acute care colleagues in purchasing negotiations (Smith *et al.*, 2004).

An often overlooked aspect of purchasing reforms is that they imply that purchasers choose on behalf of their citizens, thus curtailing free choice of provider by users (Figueras *et al.*, 2005). Assuming that individuals value (and are able to exercise) choice, patient choice can be enhanced in such a framework by enabling consumers to choose among care arrangements and effectively to become the purchasers. This is a method that has been applied to a very limited extent internationally, although it is gaining popularity with the purchasing of certain services, such as social care services.¹⁷ Free choice of provider by patients will, in theory, increase the level of competition of services between alternative suppliers. It is most effective with services that are easily planned, such as ongoing chronic or social care. However, the success of such schemes depends largely on the quality of the information available to patients and the ease with which they can process it, as well as on the effective supply of alternative providers. In England, the 'Patient Choice' initiative offers patients referred for elective surgery a choice of providers, with waiting time guarantees. Experience with 'Patient Choice' suggests that transaction costs are high and there are concerns over whether it actually reduces health inequities in that it may simply facilitate more advantaged groups to make even better use of information (Smith *et al.*, 2004).

2.5 SUMMARY

Resource allocation in health care is a method for distributing resources between competing claims in ways that are consistent with health policy objectives (Birch *et al.*, 1993). While in the past in most industrialised countries health-care resources have been distributed on the basis of historical allocations, most countries now subscribe to the principle of a population health approach to resource allocation (whereby resources are distributed on the basis of relative needs for care).

Implementing such an approach requires careful consideration of a number of issues, such as the appropriate degree of 'top slicing', the appropriate size of the budget-holder/commissioning unit, whether to distribute by geography or programme and the nature and type of data used to inform the population health adjustment. In terms of the most appropriate population size of commissioning units, the review of the theoretical and empirical literature makes it clear that there is no single most appropriate unit size, but rather that there are trade-offs involved in choosing an appropriate size that minimises exposure to risk, yet ensures flexibility in responding to local needs. Nonetheless, international research suggests little gain in risk reduction as population size increases above 300,000 (Bachmann *et al.*, 1996).

¹⁷ The Irish Nursing Homes Support Scheme ('A Fair Deal'), which provides financial support to individuals for the purchase of long-term residential care services, is a recent example in Ireland (see Chapter 6).

In addition, moving from an historic to a population health resource allocation method requires consideration of appropriate adjustment mechanisms, since the population health-based allocations to particular population units may well differ considerably from current levels of funding to those units. While it may be attractive to limit the population health adjustment to additional resources (rather than the total allocation), this does not address the appropriateness (i.e. the efficiency and equity) of existing allocations. Alternatively, the population health adjustment could be applied to the total allocation to produce a 'target' allocation and over a period of years, actual allocations could move closer to targets, based on decisions on the proportion of adjustments to 'distance from target' (as is currently the case in England).

Apart from the above operational issues in relation to population health resource allocation, it is important to specify the nature of the relationship between the purchaser (i.e. the budget-holding/commissioning unit) and provider. In this context, a key issue concerns the degree to which the purchasing and providing roles are separated. One of the main advantages of segregating the purchasing and providing functions is the ability to employ financial incentives and monitoring tools to encourage providers to offer services more efficiently. In some cases, purchasing/commissioning roles have been further devolved within the health system (e.g. in England, practice-based commissioning allows groups of GP practices to come together and purchase a variety of services on behalf of their enrolled populations).

However, even when decisions on the practicalities of a population health resource allocation approach have been considered, as well as the degree of purchaser-provider split, it is important to examine the most appropriate payment mechanisms for providers and the incentives generated by alternative methods (see Chapters 3 and 4). In addition, with increasing prevalence of chronic disease and the associated recognition of the importance of an integrated health-care system, ensuring that resource allocation mechanisms support such a system is crucial. Chapter 5 discusses the theoretical and empirical literature on resource allocation mechanisms for integrated care in greater detail.

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Chapter 3

Resource Allocation in the Primary Care Sector

3.1 INTRODUCTION

Chapter 2 provided an overview of the theoretical literature and empirical evidence on system issues in resource allocation in health care, focusing on the implementation of a population health-based resource allocation model and the nature of the relationship between purchasers and providers. We now move on to consider the importance of provider reimbursement in supporting a population health-based resource allocation system, by firstly outlining provider payment methods in the primary care sector (this chapter) and the acute hospital sector (Chapter 4).

In this chapter, we concentrate on payment mechanisms for primary care and in particular, for individual providers such as general practitioners (GPs).¹ As the first point of contact for most individuals' interactions with the health service (particularly where gate-keeping by GPs is a feature), the methods by which GPs are remunerated have important implications for the entire health sector (Holden *et al.*, 2002). Prices are messages to providers, so it is vitally important to ensure that the message sent to them is one that seeks to promote and achieve improved health for patients, not increase the number of services and procedures (Guterman, 2006). Before assessing the various payment mechanisms available, it is important to reflect on the objectives that providers aim to pursue and the factors that motivate their behaviour (Section 3.2). Section 3.3 discusses the various methods of reimbursing primary care providers in greater detail (in particular GPs), focusing in particular on the incentives generated by each payment method. Section 3.4 summarises and concludes the chapter.

3.2 THEORIES OF PROVIDER BEHAVIOUR IN PRIMARY CARE

Designing payment systems for providers involves recognising the particular objectives and constraints that motivate their behaviour (Saltman *et al.*, 1996). There are a number of alternative theories of provider behaviour in health care. The 'medical ethics' model assumes that providers maximise the health of the patient, regardless of cost (Tussing, 1985). In other words, providers are strongly influenced by ethical codes, to which members often swear oaths, to treat patients regardless of economic considerations. In the 'self-interest' model, the provider maximises his

¹ Much of the following discussion also applies to individual providers in the acute hospital sector, most notably, hospital consultants (discussed in further detail in Chapter 4).

or her own welfare or utility in making decisions about patient care. In the 'agency' model, which is most frequently employed in describing the provider-patient relationship, the provider acts on behalf of the patient by making decisions that are consistent with how the patient would act if he or she had the same information as the provider, i.e. the provider maximises the welfare or utility of the patient. However, the necessity for patients to reveal all relevant information to their provider diminishes the potential for perfect agency. Indeed, the provider may not have enough information about the preferences of the patient in order to be a perfect agent (Dionne *et al.*, 1985; Scott *et al.*, 1999). While the agency arrangement is intended first and foremost to protect the patient's interests, it can lead to doctors, acting as agents for their patients, increasing demand for their own services in order to maximise incomes (a practice known as supplier-induced demand).

A key focus of the theoretical and empirical literature has been, in the context of the self-interest model of provider behaviour, the extent to which providers are willing and able to influence demand for their services and by extension, stimulate demand for their services beyond a point deemed economically efficient. Despite much empirical literature examining the issue of supplier-induced demand, there is little information on the relative importance of the different theories of provider behaviour, or how different influences (income, patient health, etc.) might be traded-off against one another in practice (Hausman *et al.*, 1999). Nonetheless, there is ample evidence that providers do respond to financial incentives. For example, Croxson *et al.* (2001) show how GPs in the UK responded to the introduction of the GP Fundholding Scheme, while Dusheiko *et al.* (2003) show how they responded to its abolition.²

3.3 METHODS OF PROVIDER REIMBURSEMENT

3.3.1 Overview

While there may be uncertainty surrounding the most important influences on provider behaviour, it is clear that providers do respond to financial incentives. Consequently, the design of provider payment systems is of crucial importance in ensuring that resources are allocated in a manner that is consistent with health policy objectives. An optimum payment system must seek to fulfil a number of policy objectives: the efficient use of resources, accessibility (and equity of treatment), quality (including co-ordinated care between different services), professional freedom for the provider, minimal administrative burden and patient choice (Saltman *et al.*, 1996). In the past, providers were paid generally on the basis of quantity of services supplied, with little regard for the quality of those services (Cutler, 2006). Essentially, there are three primary means of reimbursing providers: fee-for-service, capitation and salary (with the mixed method involving some

² Case Study 2.1 provides further details on the GP Fundholding Scheme (whereby GPs held budgets for the purchase of elective surgery, outpatient services and prescription medicines for their patients).

combination of the three).³ Increasingly, mixed methods also involve explicit targets in the form of 'pay-for-performance' incentives.

3.3.2 Fee-for-Service

Under fee-for-service, providers receive a payment for each item of service provided. The fee is usually predetermined, with additional fees added for home or out-of-hours consultations, or the provision of 'non-core' services (e.g. suturing by GPs). Fee-for-service payments are tied directly to the amount of services provided, which promotes productivity in that providers are encouraged to increase activity (Kristiansen *et al.*, 1993). They also ensure that access to care is guaranteed, since providers have a direct incentive to see more patients (Jegers *et al.*, 2002).

However, fee-for-service may also create incentives towards demand inducement on the part of providers (usually in the form of return visits or ancillary services such as extra tests).⁴ The administrative costs of fee-for-service schemes depend on who bears the cost, with the cost to the State being higher if it is reimbursing providers, in comparison with direct out-of-pocket payments by patients. As fee-for-service payments are retrospectively administered, the uncertainty associated can generate considerable costs for the payer.⁵ Additional problems associated with fee-for-service systems are 'fee creep' (where providers encourage the provision of more lucrative procedures) and 'input substitution' (where providers are discouraged from delegating tasks to other (more appropriate) providers such as nurses) (Saltman *et al.*, 1997). Whereas fee-for-service regimes can be lucrative for providers because of financial incentives to deliver more (and more costly) services, they typically do not offer incentives to improve quality or efficiency or to deliver care that has a low profit margin, such as preventive services or patient education (Steinbrook, 2009). Fee-for-service may also discourage collaborative and interdisciplinary care (Holden *et al.*, 2002) since doctors face no incentive to seek out more efficient ways of providing care to their patients (e.g. allowing practice nurses to provide certain routine services such as immunisations).

³ Usually discussed in the context of acute hospital services, the Commonwealth Fund in the US also discusses the possibility of 'episode-based funding' or 'bundling', whereby providers are paid for the provision of a specified set of services over a given time period. It is argued that such a method encourages co-ordination and integration of care across providers. However, such payments may also encourage 'unbundling', whereby practice styles are changed so that services previously part of the bundle are 'unbundled' so as to generate additional payment (Crosson *et al.*, 2009). In addition, the major challenge with such payment regimes is the difficulty in assigning accountability for care across different care settings over time (Davis, 2007).

⁴ An extensive empirical literature has documented clear associations between fee-for-service payment regimes and increased quantity of services (see Devlin *et al.*, 2008 and Nolan, 2007 for a review).

⁵ Such uncertainty can be reduced by introducing overall caps on expenditure at the macro level (Jegers *et al.*, 2002). It can also be reduced by adjusting fee scales and increasing regulation (e.g. sanctions for over-utilisation of certain procedures). For example, in Germany, doctors are paid according to a schedule of fees, tied to points per procedure; if the regional budget is exceeded, there is a retrospective reduction in the price per point (Saltman *et al.*, 1997).

3.3.3 Capitation

Under capitation, the provider is paid a fixed fee for each patient registered on his or her list. The payment is usually weighted by various characteristics that influence the need for health care, such as age and sex and is generally paid prospectively. Capitation payments give providers an incentive to attract and compete for patients and to introduce preventive measures (Saltman *et al.*, 1997). Unlike fee-for-service, patients are now a cost to the provider, rather than a source of revenue, so providers are incentivised to minimise that cost by promoting long-term, preventive health care. In addition, providers are incentivised to investigate alternative methods of provision, such as the use of less-expensive staff to provide less complex medical services (Holden *et al.*, 2002). As patient registration is required, capitation payments can facilitate the provision of services targeted to the full population (Greß *et al.*, 2006). They may contribute to cost containment by reducing the delivery of unnecessary services and encouraging integration and co-ordination of services (Special Commission on the Health Care Payment System, 2009). In addition, as financial risk is transferred to providers, capitation is an attractive method from the perspective of governments concerned with escalating health-care costs.

However, capitation payments may also encourage providers to engage in 'cream-skimming' by selecting only those patients who are expected to generate a low workload (Scott, 2001). Ideally payments to providers are appropriately risk-adjusted for differences in the morbidity of patients in order to reduce incentives for such risk selection (Greß *et al.*, 2006). However, the risk factors used in calculating capitation payments usually only explain a small proportion of variance in need for health care and, as such, are often an imperfect proxy for patient heterogeneity (Luras, 2004). Even with appropriate risk adjustment, capitation payments provide incentives for providers to reduce workload by minimising time spent with patients, reducing return consultations and referring patients on to other providers as early as possible. In addition, capitation systems can be costly to administer (although not necessarily as costly as fee-for-service), not least because payments are often tailored to the risk status of the patient and a system of patient registration is essential. Patient registration may be challenging where patients receive care from many unrelated providers (and also where patient choice of provider is upheld as a guiding principle of health policy) (Special Commission on the Health Care Payment System, 2009). Capitation may also discourage providers from locating in disadvantaged areas if the needs-based formula is not accurate.

3.3.4 Salary

In general, salary payments involve a fixed amount of money for a time period, thus providing basic income security for providers. In addition, costs are contained as expenditure is known *ex ante* (Jegers *et al.*, 2002). Salary payments are administratively easy and encourage the provider to contain costs (Gosden *et al.*, 2006). The incentives for preventive care are ambiguous with salary payments; while providers may have an incentive to provide preventive care services in order to reduce their future costs, the fact that the payment is not explicitly tied to service may actually discourage this type of behaviour.

On the negative side, salary payments provide incentives for providers to reduce workload in the same manner predicted by capitation payments. In addition, unlike capitation payments when appropriately risk-adjusted, salary methods generate strong incentives for providers to 'cream-skim' in order to decrease their workload. Providers have limited opportunities to increase their income (unless allowed to practise privately), which can reduce motivation and effort among providers (Greß *et al.*, 2006). However, a UK survey showed that salaried GP contracts in the UK are associated with lower stress levels among GPs, higher satisfaction with income and hours of work and the same levels of overall satisfaction as non-salaried GPs (Gosden *et al.*, 2006).⁶ Allowing salaried physicians to supplement their incomes with private practice is seen as running the risk of encouraging the development of a parallel private system, which can undermine the functioning of the public system (Greß *et al.*, 2006). Therefore, in thinking about salary as a method of payment, it has been noted that policy makers should provide adequate funding for salaried primary care physicians in order to reap the potential advantages of salaries – high income security for primary care physicians, high accessibility for patients and low transaction costs for society (Greß *et al.*, 2006).

3.3.5 Mixed Methods

From the above discussion it is clear that neither fee-for-service, nor capitation, nor salary, is the 'ideal' method for reimbursing primary care providers. There are trade-offs involved in choosing any one method.⁷ For example, while fee-for-service payments promote productivity and access, they also provide a disincentive to engage in preventive care and score poorly in terms of cost containment. On the other hand, capitation payments discourage productivity, but (with appropriate risk adjustment) promote access and preventive care and can be effective in controlling

⁶ However, salaried GPs are a minority in the UK and it is likely that the effects of salary payments might be quite different if applied to the majority of GPs (Greß *et al.*, 2006).

⁷ 'There are many mechanisms for paying [primary care providers]; some are good and some are bad. The three worst are fee-for-service, capitation and salary. Fee-for-service rewards the provision of inappropriate services, fraudulent upcoding of visits and procedures, and the churning of 'ping-pong' referrals among specialists. Capitation rewards the denial of appropriate services, the dumping of the chronically ill, and a narrow scope of practice that refers out every time-consuming patient. Salary undermines productivity, condones on-the-job leisure, and fosters a bureaucratic mentality in which every procedure is someone else's problem' (Robinson, 2001; 49).

costs. Table 3.1 summarises the main features of the three payment mechanisms, highlighting the trade-offs that are involved in choosing an appropriate mechanism for reimbursing providers of primary health-care services.

TABLE 3.1
Provider Payment Mechanisms and Incentives

Method	Productivity	Integration	Access (i.e. no risk selection)	Prevention	Cost Containment
Capitation	-	+	+	+	+
Salary	-	0	-	0	+
Fee-for-Service	+	-	+	-	-

Note: + positive incentives; - negative incentives; 0 neutral.

Sources: Adapted from Greß *et al.* (2006); WHO (2000)

Indeed, in light of these trade-offs, many countries are now experimenting with mixed or blended methods which include a capitation or salary component as well as a fee-for-service or block payments for the provision of certain services (out-of-hours, house calls, etc.) or the achievement of specific objectives, usually related to the achievement of goals relating to quality, chronic disease management and integrated care. In particular, 'pay for performance' elements are being introduced to provider payment schemes in an effort to reward performance that is consistent with health policy objectives (the UK Quality and Outcomes Framework component of the GP contract, discussed in Case Study 2.3, is a well-known international example).

3.3.6 Pay for Performance

Three types of pay for performance measures may be used: structure, process and outcomes (Special Commission on the Health Care Payment System, 2009). In general, pay for performance programmes that measure performance using outcome measures that could in part reflect patient behaviour pose greater financial risk to providers than programmes that measure performance on structure or process dimensions. However, the major problem with pay for performance components of provider reimbursement is the difficulty in measuring performance or outcomes, with the inevitable result that such mechanisms tend to be biased in favour of easily measured outcomes (Cutler, 2006). Indeed, while most pay for performance schemes tend to reward high-quality care or patient-centred care, it has proved much more difficult to reward care co-ordination or increased efficiency over time in treatment (Davis, 2007). In addition, if the reasons for outcome improvements cannot be distinguished or there are difficulties in identifying the reason for the improvement, then providers will have an incentive to game the system and potentially select individuals they believe/know will improve (regardless of treatment). In any case, in most countries the funds available through pay for performance payment systems still account for a relatively small proportion of total provider reimbursement.

3.3.7 International Evidence

In terms of the reimbursement of primary care providers, we concentrate here on the reimbursement of GPs (community pharmacists are dealt with separately in Chapter 12).⁸ The method of reimbursement is, of course, dependent on the structure and functions of the health-care system. For example, where GPs are regarded as employees of the national health service, salary is the dominant method of payment (Sweden); in contrast, where GPs are regarded as independent self-employed professionals, fee-for-service is the dominant method (Australia). Table 3.2 illustrates the predominant methods by which GPs are paid across the eight comparator countries examined in this report.

TABLE 3.2
GP Payment Methods (International Overview)

Country	Dominant Method	Pay for Performance Elements ^a
Australia	Fee-for-Service	PIP/SIP
Canada	Fee-for-Service	
England	Capitation	Quality and Outcomes Framework
Germany	Fee-for-Service	
Netherlands	Capitation	
New Zealand	Subsidised services: Capitation Private services: Fee-for-Service	
Sweden	Salary	
US – Medicare ^b	Fee-for-Service (although some states moving to capitation)	Physician Group Practice (PGP) Demonstration

Notes: ^a See Case Studies 2.3, 2.4 and 2.5 for further discussion of the pay for performance elements in the UK, US (Medicare) and Australian GP contracts respectively.

^b Due to the multiplicity of insurers in the US, we concentrate on the public Medicare system only. Medicare provides free or subsidised health care for individuals aged 65 years and over, for those under 65 years with certain disabilities and for those at any age with end stage renal disease (www.medicare.gov/navigation/medicare-basics/medicare-basics-overview.aspx) [last accessed 28 June 2010].

Sources: See Appendix 'Country Profiles' for further details

While mixed methods with a core capitation component are the most common, fee-for-service is still the dominant method of payment in a number of countries, namely, Australia, Canada and Germany and for services provided under the Medicare programme in the US. However, in practice, most payment systems are relatively simple in order to reduce administrative costs and to ensure transparency (Greß *et al.*, 2006). Perhaps the most developed mixed method of payment is the UK GP contract, which includes a provision for payments tied to the achievement of objectives on the Quality and Outcomes Framework (see Case Study 2.3). Other countries have experimented with pay for performance elements in their contracts with GPs, most notably the Medicare programme in the US and Australia (see Case Studies 2.4 and 2.5). Sweden offers an interesting case study; there, GPs are predominately employees of the county councils (which act as purchasers of health-

⁸ While information is harder to come by, in most countries dentists and opticians/optometrists/ophthalmologists are nearly exclusively paid on the basis of fee-for-service, in part because of much more limited entitlement to free or subsidised public dental/optical services and thus patient out-of-pocket payments dominate. Even when free public services are available, payment is usually on the basis of fee-for-service. For example, for the treatment of medical card patients (who are entitled to free public dental services), dentists in Ireland are reimbursed on a fee-for-service basis (see Chapter 6).

care services on behalf of their resident population) and are thus paid a salary. However, in an attempt to overcome the incentive for 'under provision' associated with salary payments, recent reforms have seen Swedish GPs increasingly adopt private contracts with the county councils, for which they receive a capitation payment with additional fee-for-service elements (Schoen *et al.*, 2009).

3.4 SUMMARY

The international review highlights the variation in provider payment mechanisms that exist. While much of the literature recommends a mixed system of provider reimbursement (see for example, Ellis *et al.*, 1991), the optimal mix between capitation, fee-for-service and salary is still open to question. It is important to recognise that no single payment method can achieve all desired policy objectives; there are trade-offs involved in favouring one method over another. In general however, mixed payment methods (with a large prospective component) seem to be more successful in achieving micro- and macro-level objectives (Saltman *et al.*, 1997). In addition, the extent to which providers are influenced by the way in which they are paid is dependent on the strength of the different factors motivating their behaviour.⁹ While no one theory describes providers' behaviour, which is likely influenced by all three factors (self-interest, agency and medical ethics), we know from extensive empirical evidence that financial incentives matter. In addition, while much empirical work focuses on the quantity of care provided, it is just as likely that the method of reimbursement also affects patterns and types of care (Gosden *et al.*, 2006).

The challenge is, therefore, to build incentives for improved efficiency and quality, while maintaining the prospective nature of payment in order to ensure financial sustainability (Figueras *et al.*, 2005). Indeed, the US state of Massachusetts announced recently its intention of moving away from fee-for-service payment in favour of prospective payment, believing that this change could significantly slow the growth of health-care spending (Special Commission on the Health Care Payment System, 2009). While pay for performance components are attractive and many countries have experimented with various different pay for performance regimes, their success is dependent on the accuracy with which outcomes can be measured, and, in particular, processes and outcomes that facilitate integrated care. In addition, unless carefully designed, they can create incentives for 'gaming' on the part of providers. It is also increasingly accepted that payment mechanisms need to be supported by non-price mechanisms, such as the setting and monitoring of clinical protocols (Robinson, 2001). Furthermore, the administrative burden associated with mixed methods of payment should not be underestimated, as well

⁹ A recent study reviewing the literature on job satisfaction among GPs identified diversity of work, relations and contact with colleagues, as well as being involved in teaching medical students as the primary factors that increased job satisfaction. Factors decreasing job satisfaction were low income, too many working hours, administrative burdens, heavy workload, lack of time and lack of recognition (Van Ham *et al.*, 2006).

as the implications for transparency engendered by increasingly complex payment schemes (Robinson, 2001).

Finally, the incentives built in to different reimbursement methods may be offset partly or fully by incentives on the demand side for individuals to use primary care services (Fujisawa *et al.*, 2008), as well as the incentives facing alternative providers. In this sense, the institutional context in which payment regimes operate is also important (Greß *et al.*, 2006). For example, fee-for-service payments to providers are often accompanied by some form of co-payments for patients, which may limit their demand for services despite the fact that the provider is incentivised to increase the quantity of services provided. Incentives may also be affected by patient type, particularly when payment methods differ between different classes of patient (Jegers *et al.*, 2002).¹⁰ Finally, aligning incentives across different providers is also crucial.¹¹ For example, *'if you combine capitation payments for GPs with fee-for-service payments for specialists, you run the risk of excess referrals and high expenditures for specialist care'* (Greß *et al.*, 2006; 196).¹² Chapter 8 discusses the importance of aligned incentives across providers in greater detail, while Chapter 15 outlines the importance of incentives that are aligned across all actors (patients and providers) in the system.

¹⁰ Indeed, the Irish case is a particularly stark illustration of this. Irish GPs face very different incentives due to the distinction between private patients, who pay an out-of-pocket fee-for-service payment to their GP and medical card patients, for whom the GP receives a predominantly capitation payment from the State (see Chapter 6 for more detailed discussion).

¹¹ Case Study 2.6 discusses the Swedish experience with the transfer of responsibility for long-term care from county councils to municipalities; essentially, municipalities are liable for any charges incurred after the individual's course of treatment in an acute hospital is finished.

¹² However, the authors counter this by giving the example of the Netherlands, where despite such incentives, the comparatively low referral rates of Dutch GPs do not support this hypothesis (Greß *et al.*, 2006).

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Chapter 4

Resource Allocation in the Acute Hospital Sector

4.1 INTRODUCTION

The focus of Chapter 3 was on the allocation of resources to individual providers of primary health care. This chapter considers the resource allocation mechanisms used within the acute hospital sector, where there is a mix of institutional (i.e. acute hospitals) and individual (i.e. hospital-based physicians) providers. As with individual providers, reimbursement mechanisms for acute hospitals can present an opportunity to influence provider behaviour through financial incentives to improve accessibility, efficiency, quality and cost containment (described as 'strategic purchasing' by the WHO, 2000; see also Murray *et al.*, 2000).

Section 4.2 introduces the principal concepts in resource allocation and then considers the theoretical implications of particular reimbursement arrangements for institutional providers, such as acute hospitals. Section 4.3 then details the resource allocation mechanisms, and their operation, in the same eight selected industrialised countries as in Chapter 3 (again excluding Ireland, which is the subject of Chapter 7). A form of prospective, activity-based payments, casemix funding, is now the most prevalent method of hospital reimbursement in these countries. Empirical evidence on the relationship between this reimbursement mechanism and hospital efficiency and quality of care is reviewed in Section 4.4. The focus shifts to payment mechanisms for hospital-based physicians in Section 4.5. Finally, key issues arising from this discussion are summarised in Section 4.6.

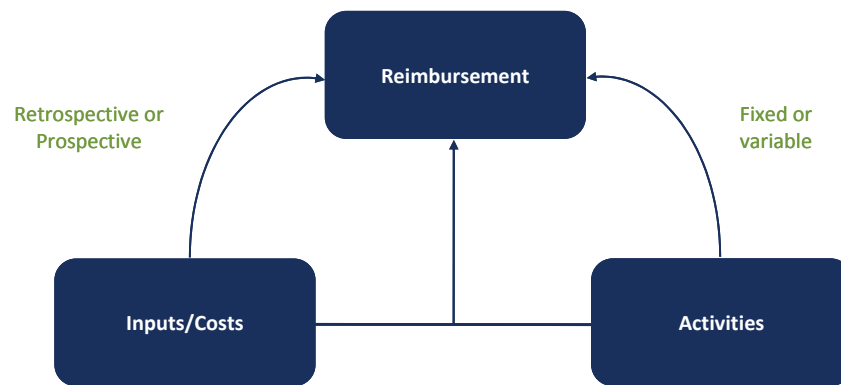
4.2 THEORY OF RESOURCE ALLOCATION IN THE ACUTE HOSPITAL SECTOR

4.2.1 Concepts of Resource Allocation for Hospital Reimbursement

Payments to institutional health-care providers may be linked to their activities and/or costs (as illustrated in Figure 4.1). In a fixed system, providers receive an aggregate budget for some specified time period that does not alter with subsequent activity levels. Under such an arrangement, providers do not receive additional remuneration for undertaking additional activity and instead face a strong financial incentive to minimise costs, which may be achieved at the expense of the quality of patient care, and potentially patient access (Jegers *et al.*, 2002). By contrast, under a variable system, reimbursement varies with activity so that providers may possess a financial incentive to increase output *ceteris paribus*. In the absence of external controls or monitoring, this could result in artificial creation of service demand by the hospital (supply-induced demand), which may not necessarily

be beneficial to patient health if such induced demand takes the form of longer hospitalisations or inappropriate/unnecessary procedures.¹

FIGURE 4.1
Role of Inputs/Costs and Activities in Reimbursement



Source: Adapted from Jegers *et al.*, 2002

The link between payment and costs, meanwhile, has been described as a trade-off between efficiency and (patient) selection (Newhouse, 1996). Under a cost-based reimbursement system, providers are fully compensated for all costs incurred on a retrospective basis and, therefore, lack any financial incentive to reduce costs; hence, the financial risk of hospital operation (such as cost overruns) is entirely borne by the funder. Providers, moreover, are indifferent to the type (low- or high-cost) of patient treated and possess an incentive to increase treatment intensity, possibly unnecessarily so (Ellis, 1998). Thus, retrospective payment systems would be expected to perform poorly with regard to efficiency, but do not encourage hospitals to discriminate actively between patient types. Conversely, by removing the link between reimbursement and costs, a prospective system (where payment is determined *ex ante* irrespective of subsequent costs) encourages low-cost, efficient health-care provision with high patient throughput. Yet to achieve this, it financially incentivises providers to select ('cream') low-complexity patients while 'skimping' on services to higher cost (higher complexity) patients or avoiding ('dumping') these patients entirely – potentially evident in patients being discharged 'quicker and sicker' (Ellis, 1998).²

4.2.2 Models for Hospital Reimbursement

The conceptual framework outlined in Section 4.2.1 can be used to assess the theoretical implications of the different mechanisms that are used in practice to reimburse hospitals. Internationally, hospital payment systems range from block

¹ Of course, whether this induced demand actually results in the provision of additional services is another question and may depend on who is responsible for paying for the service, as well as their ability and willingness to pay.

² 'Creaming' is a term used in the literature to describe the overprovision of services to low-severity patients. 'Skimping', however, entails the underprovision of services to highly complex patients, while 'dumping' refers to the explicit avoidance of this group (see Ellis, 1998).

budgets to activity-based payments. This section will consider four main examples of such systems.

Budgets (such as line item or global budgets) may be set *ex ante* for an agreed level of service without the formal possibility of *ex post* adjustment, and are thus equivalent to the fixed system described in Section 4.2.1. Faced with this budget constraint (which is binding if there is a credible commitment that the limit will be enforced), hospitals have no incentive to increase activity and bear the entire financial risk of cost overruns (Langenbrunner *et al.*, 2005). Therefore, budgets, if enforced, are generally considered to be effective in containing costs and improving efficiency (Aas, 1995; WHO, 2000; Langenbrunner *et al.*, 2002). However, the financial incentive to minimise costs may potentially have detrimental effects on the quality of care and access to services for more complex patients (Aas, 1995; Kutzin, 2001). Compared to line item budgets, global budget allocations allow hospital decision makers greater flexibility to distribute resources as they deem appropriate (Langenbrunner *et al.*, 2002). Determining budgets on an historical basis may be inflationary if higher expenditure in year t is reflected in the budget for year $t+1$. Conversely, hospitals may not be motivated to economise in the next funding period if they are not permitted to retain the savings made in the current funding period, or if their budget deficit is covered *ex post* (Aas, 1995).

Capitated payments are similar to budgets in several ways. Payment varies according to the size of the population under the provider's care (e.g. a fixed payment, over a defined period, for each resident within the hospital's catchment area), but is generally independent of whether and what services are provided. This reimbursement system generates strong financial incentives for cost control, which may encourage preventive health care (to reduce the patient's need to access the provider's services over the long run), but it can also incentivise the selection of low-cost, low-severity patients and skimping on the treatment of more complex patients or diverting them to other parts of the health-care sector (WHO, 2000; Kutzin, 2001; Jegers *et al.*, 2002; Langenbrunner *et al.*, 2002). As with hard (i.e. enforced) budget constraints, under the capitation method financial risk is borne entirely by the provider.

Both types of payment mechanisms, which are dependent on time and/or population, have been criticised for ignoring outputs (i.e. services and activities, Langenbrunner *et al.*, 2005) and for forcing the patient to follow the budget unless the patient can choose their preferred provider (Aas, 1995). Activity-based payments (equivalent to the variable system in Section 4.2.1) offer an alternative, linking payment to the level and type of care provided, and are intended to allow the flexibility for the money to follow the patient. The explicit link between services and payments under this reimbursement arrangement gives providers a very strong financial incentive to increase activity, but it may put upward pressure on macro-

level expenditure on hospitals to an unsustainable level unless strict external limits on total hospital activity and/or spending exist. While there are clear advantages to activity-based payments (such as access to care), adverse effects on health outcomes are possible if supply-induced demand results in inappropriate care (Jegers *et al.*, 2002).

The unit of reimbursement utilised in an activity-based system will also influence provider behaviour, especially with regard to the nature of service delivery (Jegers *et al.*, 2002). Typical units used for hospital payment comprise payment per procedure (or service), per day or per case. The former could encourage providers to unnecessarily increase intensity of treatment by undertaking more surgical interventions. However, it may also enhance efficiency: with a fixed sum paid per procedure, providers may have a financial incentive to minimise surgical costs in order to generate a surplus for use elsewhere in the organisation (Langenbrunner *et al.*, 2002).

Per day or *per diem* payments reimburse hospitals for each day of the patient's stay and, therefore, may unnecessarily prolong the duration of hospitalisation, which could adversely affect health outcomes for patients admitted to hospital (by increasing the probability of complications, such as hospital-acquired infection, Clarke, 1996); their extended bed use simultaneously reduces access to hospital services for others (Langenbrunner *et al.*, 2002). The financial incentive for unnecessarily long patient stays under a *per diem* payment regime is compounded by the fact that the majority of treatment costs are typically incurred within the first days of admission. Therefore, under a fixed *per diem* rate, there is an incentive to cross-subsidise with the subsequent lower cost days (Aas, 1995; Clarke, 1996; Langenbrunner *et al.*, 2002). *Ceteris paribus*, a longer length of stay may result in a lower average daily cost per case, but a higher average total cost per case. This issue may be overcome by varying the daily payment rate for each day in hospital, thereby attempting to increase the correlation between the actual treatment costs incurred and the payment rate, provided that this does not generate substantial additional administrative expenses (Aas, 1995).³

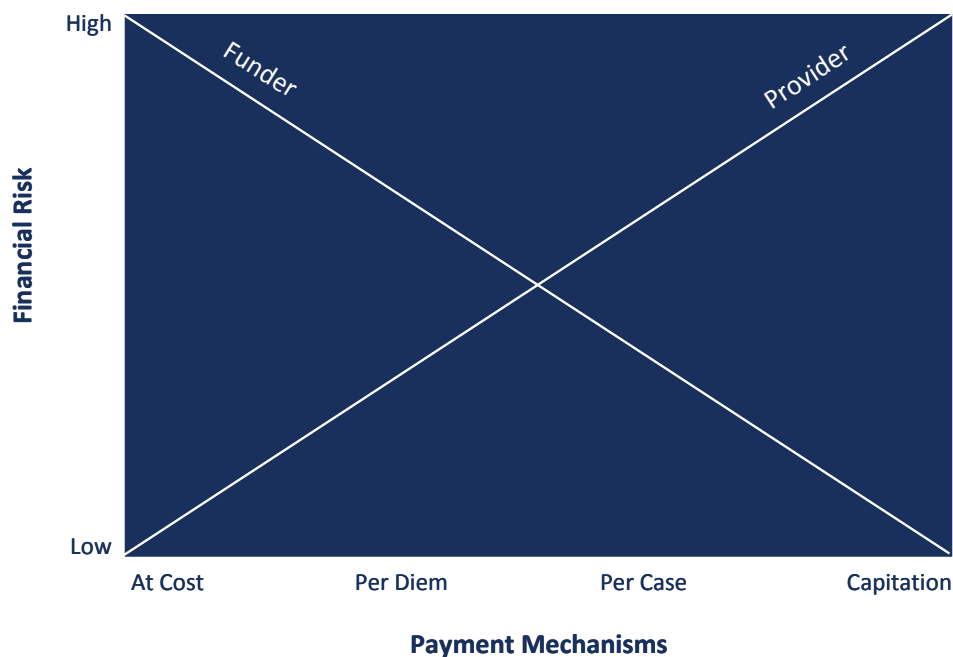
The incentives inherent in per case reimbursement affect not only the volume, but also the type of patients treated (Aas, 1995; Newhouse, 1996; Ellis, 1998; Langenbrunner *et al.*, 2002). The link between payment and patient numbers means that hospitals face a financial bias towards high patient throughput, but as noted above without an external limit this might increase overall expenditure on hospital services to unsustainable levels. Moreover, hospitals will be encouraged to cream low-cost patients. To avoid possible dumping or treatment-skipping of complex

³ As Aas (1995) discusses, there may be practical considerations in administering such a system (e.g. the variation in daily rates and whether the same daily rates can be applied to all patients).

cases, adjustment to the per case rate (e.g. using diagnosis-related groups, DRGs) may be required to compensate hospitals for the higher costs associated with treating such patients (Aas, 1995). However, this could add another layer of administrative complexity and expense to the reimbursement system.

Each of the payment mechanisms discussed above has implications for the extent to which the financial risk of running a hospital is borne by the funder and/or provider (see Figure 4.2). Under cost-based reimbursement, in the extreme case, the provider is compensated fully for all service costs and, therefore, the financial risk falls entirely on the funder. At the other extreme, the provider bears the full financial risk under capitation-based payments since capitated payments may not reflect the true cost of service provision (which is only apparent *ex post*). Under *per diem* and per case payment schemes, the funder and provider share the burden of financial risk to differing degrees.

FIGURE 4.2
Financial Risk Trade-Off Between Funders and Providers



Source: Adapted from Sutherland, 2009

4.2.3 Discussion

In summary, the international literature on the economics of health-care provision suggests that no system generates perfect incentives and, in effect, there are perverse incentives associated with each of the payment mechanisms outlined in this section. As seen in Table 4.1 (which summarises the foregoing discussion), there is no panacea since no single payment mechanism can individually achieve three common objectives of health-care systems – access, quality and efficiency.

Therefore, the academic consensus is that in practice a mixture of reimbursement systems (e.g. global budget in conjunction with some activity-based payments) will probably be required to minimise any adverse effects of individual systems and to attain all desired goals. However, implementation and monitoring costs associated with hospital-funding systems also need to be considered, to ensure that the administrative burdens do not exceed their benefits (which may be a particular issue for operating multiple types of reimbursement schemes simultaneously). Theoretical studies also highlight the importance of funders making a credible commitment to enforce their payment regime (avoiding, in particular, granting additional monies *ex post* to cover budget deficits since this may well give providers perverse incentives in the next funding period).

TABLE 4.1
Overview of Theoretical Impacts of Hospital Reimbursement Mechanisms

	Line Item Budget	Global Budget	Capitation	Activity-Based Payment		
				Procedure/ service	Day	Case
Efficiency						
Hospital costs	–	–	–	–	–	–
Macro-level expenditure	–	–	–	+	+	+
Patient selection						
Creaming	+	+	+	+	+	+
Skimping	+	+	+	+	+	+
Dumping	+	+	+	+	+	+
Service delivery						
Provide preventive care	+/-	+/-	+/-	–	–	–
Volume (numbers)	–	–	–	+/-	+/-	+
Intensity (number of interventions)	–	–	–	+	+/-	+/-
Quality	–	–	–	+/-	+/-	+/-
Length of stay	+/-	+/-	+/-	+/-	+	–
Other						
Risk burden	Provider ^a	Provider ^a	Provider	Provider/ Purchaser	Provider/ Purchaser	Provider/ Purchaser

Notes: + = increase. – = decrease. +/- = uncertain effect.

Focuses on prospective payment systems.

Impacts may depend on a hospital's budgetary position and on whether activity-based payments are adjusted for quality of care.

^a If there are binding budget constraints.

Sources: Aas, 1995; Newhouse, 1996; Ellis, 1998; WHO, 2000; Kutzin, 2001; Jegers *et al.*, 2002; Langenbrunner *et al.*, 2002; Langenbrunner *et al.*, 2005

4.3 INTERNATIONAL APPROACHES TO HOSPITAL REIMBURSEMENT

Following on from the discussion in Section 4.2 on the theoretical implications of different payment mechanisms for hospitals, this section examines the mechanisms actually employed to reimburse hospitals in eight industrialised countries (excluding Ireland, which is discussed in Chapter 7). What follows reviews the empirical evidence on how these reimbursement mechanisms have affected hospital services. First, though, a brief overview of the structure of acute hospital care in these countries is given in Section 4.3.1.

4.3.1 Structure of Acute Hospital Services

One feature common to all eight countries under discussion is the involvement of both the public and private sectors in the provision of acute hospital services. However, there is wide variation across these countries in the public/private mix (see Table 4.2).⁴ Acute hospital services are predominantly provided by public entities in Australia, England, New Zealand, Northern Ireland and Sweden, with the relatively smaller private sector concentrating mainly on the provision of elective services.⁵ In contrast, private hospital ownership is greater in other countries, especially Canada and the Netherlands.⁶ In Germany, there has been an increasing trend towards private for-profit ownership through the takeover of public hospitals, leading to concerns of underprovision of services previously provided by public hospitals (Busse *et al.*, 2004; Ettelt *et al.*, 2006; Busse, 2008; Herr, 2008).

TABLE 4.2
Ownership of Acute Hospitals

Country	Ownership of Acute Hospitals
Australia	Mostly public (including government hospitals and those established by religious/charitable organisations).
Canada	Mainly private non-profit.
England	Mostly public. ^a
Germany	Public and private (both for-profit and not-for-profit) providers.
Netherlands	All providers are private and not-for-profit.
New Zealand	Mostly public, smaller private hospital sector.
Sweden	Mostly public. Private sector care mostly focuses on day surgery and outpatient services.
US (Medicare)	Public and private.

Note: ^a Similarly for Northern Ireland.

Sources: French *et al.*, 2001; Lewis *et al.*, 2001; Busse *et al.*, 2004; Exter *et al.*, 2004; Glenngård *et al.*, 2005; Marchildon, 2005; Ettelt *et al.*, 2006; Healy *et al.*, 2006; Jordan *et al.*, 2006; Klein Lankhorst *et al.*, 2008; Ettelt *et al.*, 2010; Schäfer *et al.*, 2010

Overall there is a vast literature on the relative performance of public and private hospitals in these countries and the empirical evidence is ambiguous as to the merits of one over the other. Many studies have suggested that private hospitals were less efficient than their public counterparts (Valdmanis, 1990; Ozcan *et al.*, 1992; Helmig *et al.*, 2001; Hollingsworth, 2003; Herr, 2008; Hollingsworth, 2008), while earlier studies found the reverse (Wilson *et al.*, 1982) or were reluctant to draw definitive conclusions (Burgess *et al.*, 1996).⁷

⁴ Given the heterogeneity in health-care systems across the US, for reasons of manageability, this chapter focuses on hospital reimbursement under Medicare, a national health insurance programme for those aged 65 and over; those under 65 years with certain disabilities; and those with end-stage renal disease (Centers for Medicare and Medicaid Services, 2005). Medicare Part A covers acute inpatient hospital services (Ettelt *et al.*, 2010).

⁵ Public and private hospitals may be co-located in Australia. In England, independent sector treatment centres were purposely established to specialise in elective treatment, such as hip or knee replacement or cataract removal (Street, 2006).

⁶ While hospitals may be privately owned in the Netherlands, they are currently not allowed to be for-profit (Klein Lankhorst *et al.*, 2008; Schäfer *et al.*, 2010). However, there are plans to remove this prohibition on for-profit hospitals in 2012 (Maarse, 2007).

⁷ See McPake *et al.* (2008) for a discussion of the evidence.

It is important to note that identical reimbursement mechanisms may apply to public and private hospitals, as in Germany and the Netherlands (Ettelt *et al.*, 2010).⁸ Conversely, perverse incentives could arise if differential reimbursement mechanisms apply to public hospitals and to their private counterparts. In Australia, the same funding method is used to reimburse activity in public hospitals and publicly funded activity in private hospitals (Ettelt *et al.*, 2010).

Responsibility for hospital services in most of the countries under review has been devolved from the national government to a sub-national or regional level (see Table 4.3). Decentralisation is widely perceived as allowing the delivery and organisation of health-care services to be more responsive to local needs, but could, of course, also create a disconnect between national and local objectives and may also have adverse consequences on equity. Although responsibility for hospital services in Australia lies with the individual States, central government also provides some funding. This division across two levels of government has been criticised for creating inefficient duplication and has provided States with an opportunity to shift costs to central government (Healy *et al.*, 2006). To reduce such '*cost shifting and blame shifting*', the Government is proposing to establish Local Hospital Networks, which would comprise of a small number of hospitals (Australian Government, 2010; 3). These Networks would enter into service agreements with States, be responsible for managing hospitals, and receive the majority of hospital funding from central government (Australian Government, 2010).

In 2004, the English Government introduced the concept of Foundation Trusts, with the aim of devolving decision-making from central agencies to local organisations (Lewis, 2005; Monitor, 2008a). High-performing hospitals may apply for Foundation Trust status, which means that they are not directly accountable to government, but rather to their local community and to the independent regulator, Monitor, and they can retain any financial surpluses (Monitor, 2008a; b). The early evidence shows that the representation of patients and the general public on the boards of Foundation Trusts has certainly increased (Lewis, 2005), although the influence of these groups on decision-making is another matter. Interestingly, on average, Foundation Trust status did not significantly affect Trusts' financial management (Marini *et al.*, 2007), although one Trust has been found to have concentrated on cutting costs to the detriment of the quality of patient care (Francis, 2010).

⁸ It is not clear whether the hospital funding mechanism in Germany contributed to the trend towards privatisation in that country (Ettelt *et al.*, 2006). Section 4.3.2 discusses the specific funding mechanisms adopted in the eight selected countries in some detail.

TABLE 4.3
Responsibility for Hospital Services

Country	Level	Responsibility
Australia	Decentralised	Hospitals are funded and administered by the States with financial assistance provided by central government. The balance between States and central government will shift with the proposed creation of Local Hospital Networks.
Canada	Decentralised	For example, in Ontario, local health integration networks assumed responsibility for hospital operations and funding on 01 April 2007.
England	Decentralised	Management of the NHS has been devolved to ten Strategic Health Authorities.
Germany	Decentralised	Responsibility for funding hospital services is shared between the federal states and sickness funds/private health insurance.
Netherlands	Decentralised	Hospitals are funded by regulated private health insurers within a social health insurance framework.
New Zealand	Decentralised	District Health Boards are responsible for the provision of hospital services and own and operate hospitals.
Sweden	Decentralised	County councils are responsible for hospital care.
US (Medicare)	Mixed	Medicare is a federal programme. The Centers for Medicare and Medicaid Services are responsible for devising the mechanism to reimburse hospitals that treat Medicare patients.

Note: In Northern Ireland, the Department of Health, Social Services and Public Safety has devolved responsibility for hospital services to the Health and Social Care Board (incorporating five local commissioning groups), which oversees service commissioning, resource management and performance management.

Sources: Busse *et al.*, 2004; Glenngård *et al.*, 2005; Ettelt *et al.*, 2006; Healy *et al.*, 2006; Centers for Medicare and Medicaid Services, 2009a; Department of Health Social Services and Public Safety, 2009; Ministry of Health and Long-Term Care, 2009; Australian Government, 2010; Ettelt *et al.*, 2010; NHS, 2010; Schäfer *et al.*, 2010

In some countries, the responsibility for both the organisation and delivery of hospital services rests with the same institution. There is evidence, however, that the absence of an effective split between the purchasing and provision of hospital services may distort incentives (see Chapter 2). In New Zealand, for example, District Health Boards were encouraged to direct patients to their own hospitals (rather than to private ones), thereby failing to exploit any potential benefits from competition (OECD, 2009).

4.3.2 Allocation of Funds to Acute Hospitals

Two main methods are used to allocate funding to acute hospitals in the eight selected countries. Casemix funding, which establishes a direct link between hospitals' income and their activity adjusted for complexity, is now more common than global budgets (see Table 4.4).⁹

⁹ In the literature, casemix funding is synonymous with activity-based funding or reimbursement on the basis of diagnosis-related groups (DRGs). However, strictly speaking, the phrase 'activity-based funding' may equally apply to other payment mechanisms, such as fee-for-service payments, which also link reimbursement to activity. Therefore, throughout this section, casemix funding will be used.

TABLE 4.4
Payment Mechanisms for Acute Hospital Services

Country	Mechanism to Allocate Funds
Australia	All States have adopted, or are in the process of adopting, casemix funding. New South Wales was the most recent State to announce plans to move to episode-based payments, a type of casemix funding.
Canada	Regional health authorities allocate global budgets to hospitals, although some provinces are experimenting with casemix funding.
England	Payment by Results (a form of casemix funding) has replaced block contracts. ^a
Germany	A two-tier system of <i>per diem</i> rates was replaced by casemix funding.
Netherlands	Casemix funding replaced a budgetary system covering different types of costs (e.g. location costs, fixed costs, variable costs).
New Zealand	Hospitals receive a fixed operating budget. Casemix funding was used between 1993 and 2000, but now only applies to inter-district flows.
Sweden	Some county councils use global budgets; others have adopted casemix funding (which may be used in conjunction with budgets or capitation payments). Casemix funding is also used to pay for inter-county flows to specialist hospitals.
US (Medicare)	Casemix funding is used in all States (except Maryland) to reimburse hospitals for the treatment of Medicare patients.

Notes: In Northern Ireland, Trusts receive reimbursement through annual service-level agreements. The Department of Health, Social Services and Public Safety is currently considering introducing casemix funding.

^a Payment by Results was first applied to Foundation Trusts (Marini *et al.*, 2007).

Sources: French *et al.*, 2001; Glengård *et al.*, 2005; Marchildon, 2005; Ettelt *et al.*, 2006; Healy *et al.*, 2006; Street, 2006; NSW Health, 2008; Centers for Medicare and Medicaid Services, 2009a; Ettelt *et al.*, 2010; Department of Health, Social Services and Public Safety, personal communication [16 February 2010]

In an attempt to control rising costs, casemix funding was first introduced for inpatient care for US Medicare patients in 1983 (Kahn *et al.*, 1990 and see Table 4.5). It was adopted by some county councils in Sweden in 1992 during an economic recession, amid pressure to contract health care budgets (Ettelt *et al.*, 2006), as part of a wider reform package, which also aimed to establish an internal market by separating purchasing and provision (Gerdtham *et al.*, 1999a). Australia and New Zealand were the next to implement casemix funding, starting in 1993, with the objectives of improving hospital efficiency and reducing waiting lists (Ettelt *et al.*, 2006). However, following a change in government and a move away from a market-based approach to health care, the scope of this funding mechanism was greatly diminished in New Zealand from 2000 and now applies only to inter-district flows (Ettelt *et al.*, 2006). In contrast, the Commonwealth Government of Australia has positively encouraged States to adopt casemix funding for hospitals and almost all have done so, usually in combination with another form of resource allocation (Healy *et al.*, 2006).¹⁰

¹⁰ New South Wales has recently announced proposals to implement funding based on episodes of care (NSW Health, 2008).

TABLE 4.5
Objectives for Casemix Funding

Country	Year of Introduction	Objectives					
		Stimulate productivity to reduce waiting times and waiting lists	Increase efficiency of hospital production to reduce (the growth in) hospital costs	Encourage hospital competition to increase efficiency	Reduce excess capacity in the hospital sector	Increase transparency in hospital costs and care and encourage benchmarking and monitoring	Facilitate patient choice
Australia	1993 ^a	✓	✓				
England	2003/04	✓				✓	✓
Germany	2004		✓	✓	✓		
Netherlands	2005	✓		✓		✓	✓
Sweden	1992	✓				✓	
US (Medicare)	1983		✓				

Notes: Relates to selected countries that are currently using casemix funding as a main payment mechanism (i.e. excludes New Zealand and Canada).

^a Introduced in Victoria.

Sources: Adapted from Kahn *et al.*, 1990; Ettelt *et al.*, 2006; Ettelt *et al.*, 2010

In the early 2000s, casemix funding was adopted by three more of the European countries under review. In both England and the Netherlands, this move sought to improve efficiency, encourage transparency and facilitate patient choice (Ettelt *et al.*, 2006). Block contracts were abandoned in England, even though they had been shown to contain costs effectively (Street, 2006; Street *et al.*, 2007a). In the Netherlands, the need to reduce long waiting lists necessitated the change (Exter *et al.*, 2005). The precursor to casemix funding in Germany was a mixed system of per case and *per diem* payments (Lungen *et al.*, 2003; Böcking *et al.*, 2005), which appear to have incentivised hospitals to prolong hospitalisation beyond that medically necessary (Böcking *et al.*, 2005).

As Table 4.4 shows, hospital payment systems in Northern Ireland and Canada are still predominantly budget-based. However, the Integrated Population Based Allocation in Ontario does incorporate some activity adjustment into the funding formula (Sutherland *et al.*, 2009). The possibility of introducing casemix funding is currently being considered in Northern Ireland, where a shadowing exercise has been undertaken to assess the financial impact of such a change for Trusts (Department of Health, Social Services and Public Safety, personal communication; 16 February 2010).

Although the use of casemix funding is common to several countries, the following sub-sections show that there is substantial cross-country variation in how this mechanism has been implemented and developed. What follows highlights similarities and differences in the main components of casemix funding in the six countries where it is utilised as the principal mechanism to reimburse hospitals. This is done under three headings: hospital activity, hospital costs and setting the tariff.

4.3.2.1 Hospital Activity included in Casemix Funding

Countries using casemix funding differ with regard to the types of hospital activity that are incorporated in the scheme (see Table 4.6). When introduced for US Medicare patients, casemix funding only covered inpatient activity, leading to a shift from inpatient to outpatient treatment, which was funded through alternative means at the time (Rosenberg *et al.*, 2001; Friesner *et al.*, 2004; Böcking *et al.*, 2005; Ellis *et al.*, 2007). To counteract this perverse incentive, casemix funding was extended to include outpatient activity in 2000 – almost two decades after it was applied to inpatient activity (Rosenberg *et al.*, 2001). Thus, compared to many other contemporary casemix reimbursement systems, the US Medicare system is relatively more comprehensive with regard to the scope of hospital activity covered. This is perhaps unsurprising given that the US pioneered the introduction of casemix funding.

TABLE 4.6
Types of Activity Subject to Casemix Funding

Country	Inpatient and Day Case Activity	Outpatient Activity
Australia	✓	✓ ^d
England	✓ ^a	✓
Germany	✓	X ^e
Netherlands	✓	✓
Sweden	✓ ^b	✓ ^b
US (Medicare)	✓ ^c	✓ ^c

Notes: ^a Used in conjunction with budgets.
^b Varies by county council. Casemix funding is used for approximately 30 per cent of outpatient visits (Ettelt *et al.*, 2010).
^c Different casemix systems apply to inpatient/day case and outpatient services.
^d Varies by state.
^e Funded through fee-for-service (although dialysis treatment provided in a hospital outpatient setting is reimbursed through the casemix system).

Sources: Boyle, 2005; Ettelt *et al.*, 2006; Department of Health, 2010a; Ettelt *et al.*, 2010

The Netherlands uses casemix funding both for inpatient and day case activity, as well as outpatient activity. Indeed, the unit of activity for reimbursement in the Netherlands is the patient's entire episode of care, incorporating all contacts with hospitals for a particular condition, from the initial consultation to the final check-up (Schut *et al.*, 2005; Ettelt *et al.*, 2006; Schäfer *et al.*, 2010). The US is similarly moving towards payment for the totality of a patient's care.¹¹ Under the Acute Care Episode Demonstration, the Centers for Medicare and Medicaid Services pay a single bundled payment to reimburse both physicians' and hospital fees for orthopaedic and cardiovascular surgery (Centers for Medicare and Medicaid Services, 2010a; b). One of the main benefits of the US arrangements is to encourage co-ordination and collaboration across providers, although some have questioned the ability to implement and operate such a scheme effectively given the current fragmented

¹¹ See also Section 4.4.3 for a discussion of how payments based on episode of care are being used to incentivise improvement in the quality of care.

nature of US health care (Goldfield *et al.*, 2008; Hussey *et al.*, 2009; Miller, 2009).¹² While bundled payments also encourage efficiency, by eliminating unnecessary health care (Crosson *et al.*, 2009; Mechanic *et al.*, 2009; Miller, 2009), there are concerns that they may also reduce necessary (especially preventive) care and create incentives to increase income by unbundling services (Robinson, 2001; Crosson *et al.*, 2009; Miller, 2009).

In England, interestingly, the payment system appears to be heading in the opposite direction. Rather than combining payments for multiple providers into a single payment, there are plans to separate out certain elements of care, such as post-acute rehabilitation and diagnostic imaging (Department of Health, 2009a). The rationale for this unbundling is to derive explicit prices to allow Primary Care Trusts to commission particular services outside of the hospital and thereby ensure that they are not paying more than once for these services (Department of Health, 2007). However, establishing the appropriate prices in post-acute settings may be difficult (Boyle, 2007). In addition, this could potentially introduce a fee-for-service element into casemix funding.

In Germany, there is strict organisational division between the provision of inpatient and outpatient services: regional physicians' associations have an effective monopoly over the provision of ambulatory care, while hospitals are permitted only to undertake inpatient care (Busse, 2004; Schreyögg *et al.*, 2005a; Greß *et al.*, 2006). This separation has prohibited the extension of casemix funding to ambulatory care. Typically, mental health services have been excluded from casemix funding due to the difficulty in classifying such diagnoses and the considerable variation in patient costs (Ettelt *et al.*, 2006).¹³

The scheme for classifying activity into groups with similar resource use and clinical characteristics (diagnosis-related groups or DRGs) is a crucial component of casemix funding (see Table 4.7). In this, too, significant differences are apparent across countries. Interestingly, each country has adopted its own classification scheme for inpatient activity, although these are all closely related to the first DRG classification system developed by the US Health Care Financing Administration (Schreyögg *et al.*, 2006a). The Australian scheme, Australian Refined DRGs (AR-DRGs), was subsequently adopted, following modifications, in New Zealand and Germany.

¹² It has been argued by de Brantes *et al.* (2009; 1035) that providers do not necessarily have to be involved in allocating payment to other providers; rather, the funder may assume this role of 'financial integrator'. However, this process may have high transactions costs, which would need to be less than the benefits of bundling.

¹³ There are some exceptions. In the Netherlands, for example, a casemix funding system has been developed for mental health and is used to pay providers for patients who stay in hospital for less than one year (Schäfer *et al.*, 2010). In the US, too, inpatient psychiatric facilities receive a prospective payment per day, which is adjusted for complexity and other patient characteristics (Centers for Medicare and Medicaid Services, 2010c).

TABLE 4.7
Classification Schemes and Number of DRGs

Country	Current Classification Scheme for Hospital Activity	Number of DRGs
Australia	Australian Refined-DRG (AR-DRG)	698 ^a
England	Healthcare Resource Group (HRG)	>1,400 ^b
Germany	German DRG (GDRG)	1,200 ^c
Netherlands	Diagnose Behandelings Combinaties (DBC)	30,000 (approx.) ^d
Sweden	Nord DRG	983 ^e
US (Medicare)	Medicare Severity DRG (MS-DRG)	746 ^f

Notes: DRG = diagnosis-related group.

^a Based on Version 6.0.

^b Based on HRG4.

^c Based on the 2010 grouper.

^d A project, started in 2007, is underway to reduce the number of DBCs to approximately 3,000 (Schäfer *et al.*, 2010).

^e Nord DRG Version 2009.

^f As in 2009.

Sources: Healy *et al.*, 2006; Busse, 2008; Ettelt *et al.*, 2010; McNutt *et al.*, 2010; NHS Information Centre, 2010

The system of DRGs used in the Netherlands, called Diagnose Behandelings Combinaties (DBC), is divided into two groups: Part A DBCs relate to emergency activity and account for the majority of a hospital's budget, with Part B DBCs covering elective procedures only (Ettelt *et al.*, 2006).¹⁴ In contrast to other countries where specialist coders classify patients to DRGs, clinicians assume this responsibility for DBCs.¹⁵ The DBC system is used for both inpatient and outpatient care, whereas other countries may use separate systems for each type of care (Steinbusch *et al.*, 2007).¹⁶

Even ignoring the outlying case of the Netherlands, there is considerable variation in the number of DRGs each country scheme uses (Table 4.7). Where there are fewer groups, DRGs must be broadly defined, thereby encouraging efficiency and reducing the scope for data manipulation (Busse *et al.*, 2006). However, these benefits might be achieved at the expense of quality and access, since hospitals will have an incentive to select lower cost patients within each DRG. These adverse consequences may be negated by expanding the number of DRGs, although in addition to increasing the complexity of data coding, this may then encourage over-treatment through attempting to categorise patients into DRGs with higher reimbursement rates. The large number of DBCs has certainly complicated the insurance contracting process in the Netherlands: in March 2009, contracts between insurers and hospitals for 2009 had still to be finalised (Schäfer *et al.*, 2010).

¹⁴ The share of hospital budgets accounted for by Part B DBCs has increased (Ettelt *et al.*, 2006). When the DBC system was introduced in 2005, 10 per cent of DBCs were Part B. This share increased to 20 per cent in 2008 and 34 per cent in 2009, and further increases are anticipated (Schäfer *et al.*, 2010).

¹⁵ The fact that clinicians' fees are included in the price paid for each DBC (together with a hospital cost component) has led to concerns that clinicians in Dutch hospitals may have a financial incentive to upcode patients into DBCs with higher payment rates (Exter *et al.*, 2004; Ettelt *et al.*, 2006).

¹⁶ A further notable difference between DRGs and DBCs is that a patient is classified into a single DRG, but may be assigned to multiple DBCs, reflecting each diagnosis-treatment combination (Schäfer *et al.*, 2010).

4.3.2.2 Hospital Costs

The costs assigned to each DRG may be derived using a bottom-up or top-down methodology, as shown in Table 4.8 (Leister *et al.*, 2005). The bottom-up approach, as used in Australia, is essentially based on patient-level data on resource utilisation to which unit cost data are applied (Jackson, 2001; Street *et al.*, 2007b). Patient-level costing is considered more accurate because it is based on actual, rather than average, resource utilisation (Leister *et al.*, 2005; Street *et al.*, 2007b). In the absence of the requisite patient-level data, a top-down approach, as implemented in England, involves the allocation of relevant hospital expenditure to particular services (Street *et al.*, 2007b).¹⁷

TABLE 4.8
Costing Methodology Used in Casemix Funding Systems

Country	Costing Methodology	Treatment of Capital Costs
Australia	Bottom-up/patient-level	May or may not be reimbursed through casemix funding according to the particular State.
England	Top-down	Partly covered through casemix funding and partly under separate grants
Germany	Bottom-up	Not covered through casemix funding. Financed by the Federal Government.
Netherlands	Top-down	Capital investments have been included in the negotiation process since 2009.
Sweden	Top-down	Funded separately.
US (Medicare)	Top-down	Casemix funding covers the costs of depreciation, interest, rent, property-related insurance and taxes.

Sources: Phelan *et al.*, 1998; Jackson, 2001; Leister *et al.*, 2005; Ettelt *et al.*, 2006; Street, 2006; Street *et al.*, 2007b; Centers for Medicare and Medicaid Services, 2009a; Ettelt *et al.*, 2010; Schäfer *et al.*, 2010

Estimating the unit costs associated with each of at least several hundred DRGs entails substantial administrative demands and data requirements. Consequently, costs are derived using only a sample of hospitals in Germany and also in the Netherlands up until recently (Ettelt *et al.*, 2006; Schreyögg *et al.*, 2006a; Schreyögg *et al.*, 2006b).¹⁸ However, the German sampling frame has been strongly criticised for overrepresentation of medium (i.e. 300-600 beds) and large (i.e. over 600 beds) hospitals (Schreyögg *et al.*, 2005b; 2006b). In the Netherlands, cost data were initially derived from a pilot exercise involving 12 hospitals, but since 2005 all hospitals have been required to collect and provide the necessary data (Ettelt *et al.*, 2006).

The mechanisms for financing capital costs vary across (and sometimes within) casemix countries (see Table 4.8). By excluding capital costs from casemix funding, governments have retained control over decisions regarding, in particular, the planning of new hospital buildings and equipment. That hospitals should be able to

¹⁷ The English NHS is implementing patient-level information and costing systems (PLICS). However, as of yet, the PLICS is not mandatory (Department of Health, 2009b).

¹⁸ The voluntary data sharing programme comprised 12 per cent of all hospitals participating in the funding scheme (Schreyögg *et al.*, 2006a). In 2009, the number of participating hospitals represented approximately 13 per cent of acute hospitals (Ettelt *et al.*, 2010). As recompense for collecting and providing the data, these hospitals received reimbursement, consisting of a fixed component and a variable fee dependent on the number of cases that passed plausibility checks (Schreyögg *et al.*, 2006b).

control their DRG costs, at least in the short term, is a further argument for omitting capital costs from this funding system (Schreyögg *et al.*, 2006a). Yet, irrespective of the costing approach and the inclusion of capital costs, standardised accounting rules are essential to minimise the potential for cost shifting (e.g. from areas included in casemix funding to those outside this funding scheme).

4.3.2.3 Setting the Tariff

There is some divergence across countries regarding the level at which the tariff is set (see Table 4.9). Tariffs are determined at a state/county council level in Australia, Germany and Sweden. In Australia, tariffs are not simply set as the average cost per DRG, but also take account of the availability of public funds. Consequently, hospital funding is subject to considerable political influence (Ettelt *et al.*, 2006; Ettelt *et al.*, 2010). Swedish county councils use different calculation methods to determine prices: even within counties, prices may be negotiated with individual local hospitals, leading to potentially very different outcomes across counties (Ettelt *et al.*, 2006). Conversely, tariffs are determined nationally in England and for inter-county services in Sweden (Ettelt *et al.*, 2006). Until very recently, the national elective tariff in England was equal to the weighted average costs for inpatients and day cases (Boyle, 2005; Ettelt *et al.*, 2006; Street, 2006; Ellis *et al.*, 2007; Street *et al.*, 2007a). With this fixed tariff, the incentive for hospitals to minimise costs would encourage a shift from (relatively more expensive) inpatient to (relatively less expensive) day case treatment (Street, 2006). With the resulting increase in day case treatment, the national tariff would over time converge towards the average day case cost, thereby reducing the proportion of inpatient costs covered (Street *et al.*, 2007a). However, from 2009/10, a separate tariff applies to elective day case treatment and another to inpatient activity. The rationale for this new differentiation appears to be to align the tariffs to the actual costs of treatment in each setting (Department of Health, 2009a).¹⁹

¹⁹ Siciliani (2006) has developed a theoretical model whereby, under asymmetric information, the optimal tariff may not be the same for all providers. Rather, the tariff may depend on the proportion of surgical and medical treatments provided; therefore, different hospitals may receive different payments for providing the same treatment to a particular patient. Siciliani argues that unlike the current DRG systems, these arrangements do not provide an incentive for hospitals to increase the intensity of treatment by increasing the number of surgical procedures undertaken.

TABLE 4.9
Determination of Tariff in Casemix Funding Systems

Country	Tariff Setting	Additional Adjustments
Australia	State level. Determined by the average cost per DRG and the amount of public funding available in a given year.	<ul style="list-style-type: none"> - Payment rates vary for outliers. - Co-payments for certain patients whose treatment costs may be more variable (e.g. intensive care patients receiving mechanical ventilation, new technologies such as colonoscopy for gastroscopy patients). - Other supplementary payments – incentive grants to improve hospital performance; specific funding to improve quality of care; training and development and research grants; non-admitted emergency service grants; non-admitted outpatient services grants.
England	National level.	<ul style="list-style-type: none"> - Exclusions from casemix funding for very specialist services. - Top-up payments to compensate for complex cases. - Reduced payment for emergency activity to reduce subsequent admissions.
Germany	State level. ^a Average cost per case, with adjustment for income of regional sickness funds.	<ul style="list-style-type: none"> - Supplementary fees for certain complex and cost-intensive services and expensive drugs. - Additional funding for highly-specialised services. - Certain specialist facilities or hospital departments may be excluded from casemix funding. - Surcharges apply to teaching hospitals; innovative diagnostic and treatment procedures; teaching and research; quality assurance measures; accommodation costs for accompanying persons.
Netherlands	Set centrally for Part A DBCs. Negotiated between hospitals and insurers for Part B DBCs.	<ul style="list-style-type: none"> - No adjustment for length of stay. - As well as direct costs, DBC tariffs also cover indirect costs, such as education and research.
Sweden	County councils. Negotiation between county councils and individual hospitals. Tariff for inter-county services set at national level.	<ul style="list-style-type: none"> - <i>Per diem</i> payments for outliers. - Grants for research, development and education. - Separate reimbursement of new technologies for the first two years of their introduction, after which time they are incorporated into the casemix funding system.
US (Medicare)	Set nationally. Tariff is the sum of the operating base payment (covering the cost of labour and supplies) and the capital base payment (covering depreciation, interest, rent, property-related insurance and taxes).	<ul style="list-style-type: none"> - Separate payments cover direct and indirect costs of graduate medical education. - Hospital-based research is generally funded through research grants. - Additional payments (in the form of an adjustment to the DRG base rate) may be provided to hospitals that treat a disproportionate share of low-income patients; sole community hospitals; and Medicare dependent hospitals. - Separate funding for organ acquisition. - The base rate is adjusted for outliers. - Additional payments may be received for the use of new technology. - The national rate may be adjusted to take account of local market conditions (e.g. local wages relative to those nationally).

Note: ^a It has been agreed that the state rates will gradually adjust to a federal rate between 2010 and 2014. At the end of this period, the acceptable variation from the federal rate will be between +2.5 per cent and -1.25 per cent. After 2015, a decision, informed by research on the reasons for variation in the state base rates, will be made about the possibility of having a single federal rate (Ettelt *et al.*, 2010).

Sources: Ettelt *et al.*, 2006; Centers for Medicare and Medicaid Services, 2009a; Ettelt *et al.*, 2010; Schäfer *et al.*, 2010

In England (and elsewhere), the use of average costs as the basis for the national tariff has been criticised on two major grounds. First, hospitals are rewarded at full average cost for additional (marginal) activity, providing an incentive to increase activity as long as marginal cost is less than or equal to average cost; this could prove to be financially unsustainable and medically inappropriate (Mannion *et al.*, 2008). Second, the association between prices and average cost encourages convergence to the mean, rather than incentivising improvement in performance (Street *et al.*, 2007a).

The process for setting the tariff differs for Part A and Part B DBCs in the Netherlands (Ettelt *et al.*, 2006). The tariff for Part A DBCs is determined centrally. Reimbursement for Part A DBCs operates within a budgetary framework: where the hospital's revenue from Part A DBCs is greater than the associated budget, the difference is paid by the hospital to the Dutch Health Care Authority (and where the revenue is less, the Authority reimburses the difference to the hospital; Schäfer *et al.*, 2010). Negotiations between insurers and hospitals determine the tariff for Part B DBCs and, therefore, hospitals can exercise discretion in setting the charge for the hospital cost component for Part B DBCs (Ettelt *et al.*, 2006; Schäfer *et al.*, 2010). As insurers lack independent information on hospitals' costs, they are at a disadvantage in these negotiations. Largely as a consequence of this informational asymmetry, price inflation for Part B DBCs has exceeded that for Part A DBCs (Ettelt *et al.*, 2006). Where there is no contract with an insurer for Part B DBCs, hospitals levy 'walk-in' tariffs on patients of that insurer. Patients may be liable to pay any difference between these walk-in tariffs and the insurer's contracted tariffs, and they therefore have a financial incentive to receive treatment in hospitals with which the insurer has a contract (Schäfer *et al.*, 2010).²⁰

Almost all countries have introduced adjustments and supplementary payment mechanisms in recognition of the inherent limitations of casemix funding calculations (see Table 4.9). Prices for DRGs are determined in advance, but adjustments for extreme outlier cases (using *per diem* payments based on length of stay) mean that the system is not truly prospective. Highly specialised services may be exempted from casemix funding and instead reimbursed through grants. Most typically, hospitals receive additional funding for teaching and research activities, the costs of which may not be adequately reflected in DRG prices.

4.4 EMPIRICAL EVIDENCE ON EFFICIENCY AND QUALITY OF HEALTH CARE IN CASEMIX FUNDING SYSTEMS

In theory, under casemix funding schemes, it is predicted that hospitals will strive to minimise costs and improve efficiency by reducing length of stay and adopting cheaper treatments, at the possible expense of quality of care and patient access. This section reviews the international empirical literature assessing how the introduction of casemix funding affected the efficiency and quality of hospital care in the six countries under consideration. The review will focus mainly on the impact on quality of care since there have been significant recent developments in this area, especially with casemix funding systems being used as an instrument to improve the quality of care. The effect on the accuracy of data coding is also considered. An important preliminary caveat is that, although casemix funding systems are commonly used in industrialised countries to reimburse hospitals, systematic evidence on their impact is to a large extent lacking (Scheller-Kreinsen *et al.*, 2009).

²⁰ Recall from Section 4.3.2.1 that Part B DBCs are intended to cover elective treatment, not emergencies.

4.4.1 Casemix Funding and Efficiency

For countries moving to casemix funding, a common objective was to improve hospital efficiency by some combination of increasing activity, reducing costs and introducing an element of competition between hospitals (see Table 4.5). Given this policy aim, surprisingly few studies have explicitly attempted to measure the impact of casemix funding on efficiency. Of those that have, the focus has principally been on technical efficiency (minimising inputs required to produce a given level of outputs, or alternatively maximising outputs for a given level of inputs), thereby ignoring any impacts of casemix funding on the appropriate mix of inputs (allocative efficiency). Furthermore, studies on the impact of casemix funding have mostly adopted a longitudinal approach, comparing hospital efficiency before and after the reform. Drawing conclusions from such research is, however, complicated by different lengths of follow-up periods. Where the duration of the follow-up period is short, any changes may not be sustained. Conversely, it may be difficult to establish causality where the study period is of a longer duration. This sub-section first reviews studies that have assessed the direct impact of casemix funding on (technical) efficiency and then discusses those that have examined its effect on components of efficiency – in particular, activity, length of stay or costs.

In the US, where casemix funding replaced a fee-for-service system, research has consistently indicated no improvements in technical efficiency. In a study of 52 hospitals in New Jersey over the period 1979 to 1984, Borden (1988) concluded that the funding reform (introduced in that State in 1980) did not have a positive impact on technical efficiency. Chern and Wan (2000) came to a similar conclusion when comparing a sample of hospitals in Virginia in 1984 and 1993 – although a higher percentage of hospitals were found to be technically efficient in the latter year.

Conversely, technical efficiency was found to be higher in Swedish county councils that introduced casemix funding as part of a wider reform package, compared to those councils that retained a budget system (Gerdtham *et al.*, 1999a; Gerdtham *et al.*, 1999b). However, these immediate benefits were short-lived. Pressures to control overall health-care expenditure lead to adjustments in the operation of the casemix funding system, notably the introduction of caps on activity and budgets (Docteur *et al.*, 2003; Anell, 2005; Kastberg *et al.*, 2007; Street *et al.*, 2007b; Ettelt *et al.*, 2010). Consequently by 1997, five years after the move to casemix, productivity had regressed to pre-reform levels and waiting lists were reappearing (Street *et al.*, 2007b).

Although the evidence is relatively limited, there are a number of important lessons from the apparent US and Swedish experiences. First, the potential for efficiency gains may depend on the funding mechanism that is replaced by casemix funding. The switch to casemix funding in Sweden introduced a link between activity and

funding which was previously absent from the incumbent budgetary framework. However, such a link was already present in the US under the fee-for-service arrangements, which may help to explain casemix funding's lack of impact there. Second, the specific objectives and operation of casemix funding within each country will influence the extent of realised efficiency improvements. Thus, casemix funding was introduced in the US with the explicit objective of containing costs, but not increasing activity (US Congress Office of Technology Assessment, 1985; Davis *et al.*, 1988), while the subsequent imposition of activity ceilings in Sweden constrained incentives under its casemix funding system. Finally, in the absence of a controlled environment, it is difficult to isolate the impact of casemix funding from that of any other health-care reforms introduced simultaneously (most obviously in the Swedish case).

The individual components of efficiency have been the subject of much more study, which may reflect the difficulties of measuring overall technical efficiency.²¹ Hospital activity increased following the introduction of casemix funding in Australia (Ettelt *et al.*, 2006; Street *et al.*, 2007b), England (Farrar *et al.*, 2007; Audit Commission, 2008a; Farrar *et al.*, 2009), Germany (Böcking *et al.*, 2005; Hensen *et al.*, 2008) and, at least initially, in Sweden (Anell, 2005; Kastberg *et al.*, 2007). However, it did not in the US (US Congress Office of Technology Assessment, 1985; Davis *et al.*, 1988; Guterman *et al.*, 1988; Manton *et al.*, 1993; Muller, 1993; Rosenberg *et al.*, 2001). Since casemix funding has only been introduced relatively recently in the Netherlands, there has as yet been no formal evaluation of its impact on efficiency or its components (Maarse, 2007).

The evidence on average length of stay is even more unambiguous: in all studies, the move to casemix funding was associated with shorter stays in hospital (see, for example, Kahn *et al.*, 1990; Böcking *et al.*, 2005).²² On costs, there is a divergence between the findings for total and unit costs. Generally, the introduction of casemix funding has been associated with higher total costs, which is not surprising considering the increase in activity in most instances (Forgione *et al.*, 1999; Anell, 2005; Kastberg *et al.*, 2007), but lower unit costs (Böcking *et al.*, 2005; Farrar *et al.*, 2009).

In short, then, the question of the impact of casemix funding on hospital efficiency is not straightforward to address. The answer appears to depend on the specific characteristics of the casemix funding model introduced, as well as other factors such as the pre-existing funding mechanism.

²¹ To measure technical efficiency, data are required on all inputs used to produce outcomes. Analyses should also be concerned with quality-adjusted health outcomes, but given the inherent difficulties associated with measuring these, typically researchers have instead used alternative indicators of outputs (such as the number of patients treated).

²² A number of studies have questioned the relationship between casemix funding and length of stay since the decline in the latter was merely consistent with a general trend (Rosenberg *et al.*, 2001; Schreyögg *et al.*, 2005b; Audit Commission, 2008a).

4.4.2 Casemix Funding and Quality of Care

The even-greater paucity of academic studies seeking to measure the association between casemix funding and the quality of patient care is undoubtedly due to the intrinsic measurement challenges, including the complex nature of health care and the adequacy of existing data. Those analyses that do exist must, therefore, be interpreted with caution (Rosenberg *et al.*, 2001; Scheller-Kreinsen *et al.*, 2009). Researchers have predominantly compared the quality of care before and after the introduction of casemix funding, attempting to control for confounding factors. Rogers *et al.* (1990) were among the first to consider the impact of Medicare's prospective payment system on both process- and outcome-based measures of quality of care in the US. This comprehensive study found mixed effects. The introduction of casemix funding did not adversely affect health outcomes, as measured by mortality rates, or the processes of care, which continued to improve (Rogers *et al.*, 1990). That patients were more likely to be discharged in an unstable condition, however, provided credence to the 'quicker and sicker' hypothesis (Kosecoff *et al.*, 1990; Rogers *et al.*, 1990). These results are broadly consistent with those of subsequent US studies, which found a modest or no effect on health outcomes arising from the introduction of casemix (see the review by Rosenberg *et al.*, 2001).

It is not surprising that a larger number of studies have focused on the US experience, given that it was the pioneer in implementing a casemix-based system for hospital reimbursement. Although the European experience with casemix funding has been more recent than that in the US, the initial – albeit limited – evidence suggests that the impact on quality of care has been generally similar. Despite initial public concerns in England, two evaluations found that the quality of hospital care was not, in fact, adversely affected by the introduction of casemix funding (Farrar *et al.*, 2007; Audit Commission, 2008a; Farrar *et al.*, 2009).²³ The Audit Commission (2008a) actually argued that by encouraging hospitals to increase their day case activity, casemix funding may even reduce the risk of hospital-acquired infections and hence improve patient outcomes. The financial incentive present under casemix funding to reduce the length of hospital stays (e.g. by increasing admissions on the day of surgery rather than, say, the day before) can also enhance patient health for the same reason, provided that patients are discharged when medically stable and that there is no concomitant rise in the readmission rate.

In Sweden, Ljunggren *et al.* (2001; 2003) found an apparent disparity between the impact of casemix funding on patients' perceived quality of care and their perceived quality of life. Surveys of patients at two surgical clinics indicated a belief that their

²³ Two studies considered in-hospital mortality, 30-day surgical mortality and emergency readmission following treatment for hip fracture (Farrar *et al.*, 2007; Farrar *et al.*, 2009). The Audit Commission (2008a) studied readmission rates for elective and non-elective cases.

quality of care had fallen, but the same patients perceived no change to their quality of life. However, the authors found it difficult to isolate the specific effect of casemix funding since it was introduced as part of a wider reform programme.

Apart from these national longitudinal studies, only one attempt has been made thus far to compare quality of care in cross-sections of countries with and without casemix funding. Forgione *et al.* (2004) found evidence that quality improved at a slower rate in OECD countries that had adopted casemix funding compared to those that had not. It was not possible, however, to test the statistical significance of this result due to the relatively small number of countries included in the study.

Even after their initial introduction, casemix funding systems have been found in US studies to affect quality of care due to changes in reimbursement rates. Shen (2003) concluded that short-term health outcomes after acute myocardial infarction were adversely affected by financial pressure and that this effect was statistically significant.²⁴ Cutler (1995) found that the timing of patient death was affected by differences in the tariff – where hospitals faced lower tariffs, there was a statistically significant increase in the mortality rates both in hospital and shortly after discharge. With such results, concerns must remain over the potential adverse impact of casemix funding on the quality of patient care.

4.4.3 Using Casemix Funding to Incentivise Quality of Care

More recently, standard casemix funding systems have been used to attempt to financially incentivise improvements in the quality of hospital care.²⁵ Since casemix funding may not be entirely prospective (e.g. if there are *ex post* adjustments based on length of stay in exceptional cases), events during hospitalisation can influence the hospital's payment. This could provide hospitals with a perverse incentive to skimp on quality if they are not financially penalised for the higher costs associated with treating the patients affected by such behaviour.

Indeed, hospitals may ultimately receive higher payment for patients who experience preventable hospital-acquired infections or complications, even though these conditions may be attributed to the care received at the hospital (Rosenthal, 2007; Averill *et al.*, 2009; Milstein, 2009). In the US, policy makers sought to address this issue under the 2005 Deficit Reduction Act, which *inter alia* terminated higher payments for specified hospital-acquired conditions (Averill *et al.*, 2009). Thus, with effect from 01 October 2008, the Centers for Medicare and Medicaid Services do not

²⁴ Two aspects of financial pressure were considered – a reduction in the tariff a hospital receives for treating Medicare patients and changes in the penetration rate of health maintenance organisations.

²⁵ For a general discussion of how casemix funding may be used to achieve policy objectives other than efficiency, see Duckett (2008).

provide additional payments to hospitals for the conditions listed in Table 4.10 if they were not present on admission.

TABLE 4.10
Hospital-Acquired Conditions not Covered under Medicare's Inpatient Prospective Payment System

- Foreign object retained after surgery	- Catheter-associated urinary tract infection
- Air embolism	- Vascular catheter-associated infection
- Blood incompatibility	- Pressure ulcer
- Surgical site infection, mediastinitis, following coronary artery bypass graft	- Deep vein thrombosis and pulmonary embolism following certain orthopaedic procedures <ul style="list-style-type: none"> • Total knee replacement • Hip replacement
- Falls and trauma <ul style="list-style-type: none"> • Fracture • Dislocation • Intracranial injury • Crushing injury • Burn • Electric shock 	- Manifestations of poor glycaemic control <ul style="list-style-type: none"> • Diabetic ketoacidosis • Nonketotic hyperosmolar coma • Hypoglycaemic coma • Secondary diabetes with ketoacidosis • Secondary diabetes with hyperosmolarity
- Surgical site infection following certain orthopaedic procedures <ul style="list-style-type: none"> • Spine • Neck • Shoulder • Elbow 	- Surgical site infection following bariatric surgery for obesity <ul style="list-style-type: none"> • Laparoscopic gastric bypass • Gastroenterostomy • Laparoscopic gastric restrictive surgery

Note: Assuming (where relevant) conditions not present on admission.

Source: Adapted from Centers for Medicare and Medicaid Services, 2008

This Medicare initiative illustrates the potential to use a casemix funding system to enhance the quality of care by establishing a clear link between payment and adverse care outcomes, where the latter are deemed to be within the hospital's control (Rosenthal, 2007). However, it has also been subject to some criticism. While measurement and prevention of several of the complications listed in Table 4.10 is relatively straightforward (e.g. foreign object retained after surgery), some have argued that the prevalence of other so-called preventable conditions cannot be eliminated entirely and that their diagnosis may be prone to error (Wald *et al.*, 2007; Pronovost *et al.*, 2008). A further disadvantage of the initiative (which could also apply to pay-for-performance schemes more generally) is that hospitals may be encouraged to select healthier patients and to avoid higher-risk cases (Gemmill, 2006; Rosenthal, 2007). Moreover, any cost savings for Medicare may be offset by higher costs associated with increased screening and changed coding practice (Pronovost *et al.*, 2008; Wachter *et al.*, 2008; McNutt *et al.*, 2010). Estimates based on 2006 data for California indicate that the magnitude of reduction in hospital payments from six avoidable hospital-acquired conditions is indeed likely to be small – between US\$1.1m and US\$2.7m nationally (McNair *et al.*, 2009).²⁶ If the financial savings are likely to be small, then so too will be hospitals' incentives to improve quality. Consequently, McNair *et al.* (2009) recommended that the impact of the initiative may be strengthened by incorporating additional conditions or expanding it to include readmissions.

²⁶ The six preventable conditions considered were foreign objects retained after surgery; air emboli; blood incompatibility; falls and traumas; catheter-associated urinary tract infection; and mediastinitis after coronary artery bypass graft.

Reducing avoidable readmissions and improving post-acute care are objectives of the latest US health care reforms, which specified the use of bundled payments based on episodes of care for Medicare patients (Office of Management and Budget, 2010).²⁷ Under the new arrangements, bundled payments will be allocated to hospitals, covering the cost of initial hospitalisation, together with certain post-acute care provided during the 30 days following discharge (Office of Management and Budget, 2010). Since these single payments are fixed and relate to the entire episode of care (i.e. hospitalisation and post-acute care), hospitals are given a financial incentive to avoid the extra costs associated with readmission and, therefore, to improve the quality of care provided during hospitalisation (RAND, 2010).²⁸ Thus, whereas providers with fewer readmissions would not have been rewarded under a fee-for-service system, these providers can now retain additional revenue from bundled payments (Davis *et al.*, 2010). Evidence from a small number of recent US and Medicare initiatives suggests that there is potential for bundled payments to reduce costs, length of stay and the volume of services provided, but the effects on health care outcomes are mixed (RAND, 2010).²⁹

Before the introduction of non-payment for hospital-acquired conditions, the Centers for Medicare and Medicaid Services operated several other quality initiative schemes, including the Premier Hospital Quality Incentive Demonstration (PHQID).³⁰ Hospitals that volunteer to participate in this programme (currently about 230) are obliged to report on an agreed set of indicators covering five clinical areas – heart attack, heart failure, pneumonia, coronary artery bypass graft, and hip and knee replacements (Centers for Medicare and Medicaid Services, 2009b; Mehrotra *et al.*, 2009; Maynard *et al.*, 2010). On the basis of their performance against these indicators, hospitals may be eligible to receive one or more of the incentive payments reported in Table 4.11.

²⁷ Linking payment to avoiding preventable readmissions had also been previously considered by the Centers for Medicare and Medicaid Services (Averill *et al.*, 2009; Goldfield, 2010).

²⁸ In addition, hospitals with already high readmission rates will receive lower payment rates if their patients are readmitted to the hospital during the 30-day period following readmission (Office of Management and Budget, 2010). However, according to de Brantes *et al.* (2009), there is potential for bundled payments to result in conflicts between providers.

²⁹ Examples of initiatives included Medicare's Participating Heart Bypass Center Demonstration, Geisinger's ProvenCare, the Prometheus Payment Model and, as previously mentioned, Medicare's Acute Care Episode Demonstration. Under the first of these, four hospitals were allocated a single payment for coronary artery bypass graft surgery to cover both hospital and physician services (Miller, 2009). ProvenCare provides a fixed payment to cover surgery and any care in the 90 days following discharge (Mechanic *et al.*, 2009). The incentive to reduce complications and readmissions was built into the calculation of the payment rate, which was based on a 50 per cent reduction in the complication rate. The Prometheus Model provides payment for a package of care – covering services provided by the hospital, physicians, laboratory, pharmacy, rehabilitation, *etc.* (de Brantes *et al.*, 2009). Interestingly, three of these four examples relate to surgical conditions. Miller (2009) has argued that since the basis of payment is typically identical for hospitals and surgeons (i.e. case-based payments), the transition to bundled payments based on episodes of care is easier than for medical conditions.

³⁰ The PHQID is operated in conjunction with Premier Inc., a nationwide organisation of not-for-profit hospitals, and has been in operation since 2003 (Ryan, 2009).

TABLE 4.11
Quality Incentive Payments under Medicare

Award	Description
Attainment award	Allocated to hospitals that have attained or exceeded median level performance. Accounts for 40 per cent of the total quality payment incentive.
Top performer award	An additional incentive payment for hospitals in the top 20 per cent in each clinical area (additional to the attainment award).
Improvement award	An additional incentive payment to hospitals that achieve an attainment award and are also among the top 20 per cent of hospitals with the largest quality improvements.
Threshold penalty	Hospitals that do not score above the lowest two deciles will receive a 1-2 per cent reduction of their Medicare payment in that clinical area.

Sources: Adapted from Centers for Medicare and Medicaid Services, 2009b; Mehrotra, 2009

The voluntary nature of this scheme raises concerns regarding a possible selection problem whereby hospitals only elect to participate if they already had achieved a high quality of patient care – potentially negating the purpose of the programme to produce large additional improvements in overall quality. This issue highlights the particular need for appropriate evaluation of the initiative's impact, including the requirement to control for any such selection bias. In a review of the literature, Mehrotra *et al.* (2009) identified just three studies that had examined the impact of the PHQID on hospital performance. Two of the three (Grossbart, 2006; Glickman *et al.*, 2007) were deemed to suffer from methodological limitations due to, *inter alia*, small and selective sample sizes and a failure to control for baseline differences. The third, more reliable study (Lindenauer *et al.*, 2007) did find a larger improvement among participating hospitals compared to controls, but as might be expected given the selection issue alluded to above, the size of this effect diminished following adjustment for baseline differences. Also, quality improved in the control groups of all three studies even without the pay-for-performance intervention (Mehrotra *et al.*, 2009). Overall, it is uncertain whether the broadly positive results of the PHQID evaluations could be replicated nationally, particularly given the likelihood that only hospitals already achieving high quality volunteered to participate in the scheme (Mehrotra *et al.*, 2009). Citing more recent studies, Ryan (2009) also expressed concern over the lack of evidence on the ability of the PHQID to improve health outcomes.

In contrast to the US, the incentive framework for quality improvements is not yet as well developed in European countries. German hospitals are obliged to publish quality reports (Busse *et al.*, 2009). Similarly, from 2010 all providers of NHS care in England are required to publish 'quality accounts' (Department of Health, 2008).³¹ As yet, however, neither country has linked the contents of these reports to payment. While public reporting alone has been associated with a positive impact on quality, greater improvements could be achieved where publication is used in conjunction with financial incentives (Lindenauer *et al.*, 2007). The potential threat of the introduction of such a link in the future may be sufficient to yield some increases in

³¹ It is envisaged that the quality accounts will contain information on safety, experience and outcomes (Department of Health, 2008).

quality. But alternatively, if hospitals anticipate that payment will be linked to quality improvements in the future, this might provide an incentive not to improve quality in the meantime, so that they are starting from an artificially low baseline when rewards for quality enhancement are introduced.

The Commissioning for Quality and Innovation (CQUIN) payment framework, introduced in 2009, is the first attempt in England to provide pecuniary rewards (within existing financial resources) to hospitals for quality improvements (Department of Health, 2008). Under the framework, a small percentage of a provider's contract value is dependent on achieving a number of quality improvement goals, agreed between the provider and the commissioner (Department of Health, 2008, 2010b). The percentage is set at 1.5 per cent for 2010/11, up from 0.5 per cent in 2009/10, and is expected to increase further in the future (Department of Health, 2010b). In 2010/11, CQUIN schemes for acute hospitals must include two national goals – to reduce avoidable death, disability and chronic ill-health from venous thromboembolism (as summarised in Table 4.12) and to improve responsiveness to the personal needs of patients.

TABLE 4.12

Extract of a National Goal in 2010/11 Acute CQUIN Scheme (England)

Goal	Reduce avoidable death, disability and chronic ill-health from venous thromboembolism (VTE)
Description of indicator	Percentage of all adult inpatients who have had a VTE risk assessment on admission to hospital using the national tool.
Numerator	Number of adult inpatient admissions reported as having had a VTE risk assessment on admission to hospital using the national tool.
Denominator	Number of adults who were admitted as inpatients (includes day cases, maternity and transfers; both elective and non-elective admissions).
Rationale for inclusion	Although VTE is a significant patient safety issue, outcome data on VTE are poor – post-mortem studies suggest that only 1-2 in every 10 fatal pulmonary emboli are diagnosed. While work is underway to improve reliability of outcome data, the process measure of VTE risk assessment will set an effective foundation for appropriate prophylaxis. This gives the potential to save thousands of lives each year.
Baseline value	[Local baseline value to be inserted]
Final indicator period/date (on which payment is based)	[Final indicator period to be inserted – relates to at least a full quarter]
Final indicator value (payment threshold)	90 per cent
Rules for partial achievement of indicator at year-end	N/A
Rules for any agreed in-year milestones that result in payment	N/A
Rules for delayed achievement against final indicator period/date and/or in-year milestones	[Rules for delayed achievement against final indicator period to be inserted]

Note: N/A = not applicable.

Source: Adapted from Department of Health (2010b)

Of course it is too soon to properly assess the impact of the CQUIN framework on quality of care. However, based on the past experience of other similar initiatives in the English NHS (such as the Quality and Outcomes Framework, discussed in Case Study 2.3), there is some scepticism over its potential benefits. In particular, there

are concerns that effort will be targeted at areas covered by the goals, to the detriment of other areas (Maynard *et al.*, 2010). More generally, the lack of robust systematic evaluations of such pay-for-performance schemes means that there is as yet no rigorous evidence base about their effects (Mehrotra *et al.*, 2009).

4.4.4 Casemix Funding and Quality of Clinical Data

Using DRGs as a basis for remuneration provides opportunistic hospitals with a financial incentive to undertake 'upcoding' (i.e. the systematic misrepresentation of patient data to receive higher reimbursements; Steinbusch *et al.*, 2007). The prevalence of this practice depends on the characteristics of the reimbursement system as well as those of the providers. Upcoding is more likely where for-profit providers operate, where (financial) benefits for coders and clinicians are linked to the outcome of the classification process, and where secondary diagnoses can be assigned (Silverman *et al.*, 2004; Steinbusch *et al.*, 2007). Compared to the Australian system, then, the US DRG system is considered to be more susceptible to upcoding because of the presence of for-profit hospitals and the use of secondary diagnoses in assigning DRGs (Steinbusch *et al.*, 2007). Steinbusch *et al.* (2007) acknowledge that there are strengths and weaknesses associated with the Dutch DBC system: while it is more detailed (which helps to reduce issues with the appropriate classification of patients), it is also more difficult to maintain. In Sweden, counties using casemix funding experienced faster growth in the number of secondary diagnoses compared to counties utilising other reimbursement mechanisms (Serdén *et al.*, 2003).³²

The primary mechanism used internationally to identify upcoding is audit. In its first national audit of clinical data in 2007/08, the Audit Commission in England found a mean error rate of 9.4 per cent but concluded that there was little evidence of deliberate upcoding since errors were random, resulting in both positive and negative financial outcomes (Audit Commission, 2008b). The error rate fell to 8.1 per cent in the next financial year (Audit Commission, 2009). One obvious alternative to audits, prosecution, has not proved particularly effective in preventing upcoding in the US (Steinbusch *et al.*, 2007). Lorence *et al.* (2002) suggest that financial rewards from data misclassification outweigh the threat of prosecution in the US.

4.5 PAYMENT MECHANISMS FOR HOSPITAL-BASED PHYSICIANS

Chapter 3 discussed the economic theory and international evidence on mechanisms for allocating resources to individual providers in primary care. That theoretical discussion on individual providers is also relevant for hospital-based physicians. As with primary care practitioners, payment mechanisms for hospital physicians range

³² Serdén *et al.* (2003) note that the observed change in coding practice may not necessarily have been a result of upcoding. The introduction of casemix funding may improve coding practice, particularly if hospitals focus more resources to the coding process. In addition, other factors may account for observed changes in recorded patient characteristics (including diagnoses and procedures).

from a salary to a fee-for-service. The financial incentives under a salaried payment mechanism are very different from those under fee-for-service (see Table 3.1). A salary does not allow scope to increase payment in line with increased activity. One theoretical advantage of this is the ability to control costs effectively, but a key disadvantage is that providers have no financial incentive to increase productivity and may even engage in patient selection to minimise their workload. Under a fee-for-service payment regime, however, hospital physicians may be encouraged to increase their workload – yet this could occur to an unnecessarily high extent if they induce demand. Hence, productivity may be increased, but possibly alongside higher costs and inappropriate/unnecessary treatment for patients.

Section 4.5.1 outlines the reimbursement mechanisms that have been implemented in the eight countries under study to pay hospital-based physicians. Section 4.5.2 discusses how the payment mechanism can vary depending on the hospital's ownership status (public or private) and on the physician's ability to engage in private, as well as public, practice.

4.5.1 Mechanisms of Remuneration for Hospital-Based Physicians

There is a clear dichotomy in the approaches adopted by the public and private sectors to pay hospital-based physicians (see Table 4.13). In general, hospital physicians receive a salary for their services in the public sector. Recognising that the absence of an explicit link between pay and activity could inhibit physician productivity, in 2003/04 the English NHS introduced a new consultant contract with several elements intended to stimulate consultant activity (Maynard *et al.*, 2004). For example, the contracted working week increased from 38.5 to 40 hours, with any agreed additional hours reimbursed (National Audit Office, 2007). Whether these arrangements will significantly increase productivity is unclear given that, on average, consultants actually worked 51 hours a week under the previous contract – 12 hours per week above their contractual commitments, for which they received no additional reimbursement (National Audit Office, 2007). Mandatory job planning and clinical excellence awards were also introduced to boost activity.³³ Critics, however, have questioned the adequacy of these measures (Maynard *et al.*, 2004; Williams *et al.*, 2006): attempts to devise job plans have been obstructed by inadequate information and the ability of Hospital Trusts to cancel elective surgery (Williams *et al.*, 2006).

³³ Clinical excellence awards are bonus payments rewarding outstanding contributions and replaced the discretionary points and awards that existed under the previous contract (Williams *et al.*, 2006).

TABLE 4.13
Payment Mechanisms for Hospital-Based Physicians

Country	Payment Mechanism
Australia	Public sector – salary Private sector – fee-for-service
Canada	Predominantly fee-for-service
England	Public sector – salary ^a Private sector – fee-for-service
Germany	Public sector – salary Private sector – fee-for-service (senior doctors)
Netherlands	Two out of three hospital-based specialists are self-employed and paid on a capped fee-for-service basis. The remainder are salaried. Fees for private patients are negotiated with insurance companies.
New Zealand	Public sector – salary Private sector – fee-for-service
Sweden	Predominantly salary
US (Medicare)	Depends on relationship between hospital and doctor

Note: ^a As for Northern Ireland.

Sources: French *et al.*, 2001; Busse *et al.*, 2004; Exter *et al.*, 2004; Maynard *et al.*, 2004; Glenngård *et al.*, 2005; Marchildon, 2005; Jordan *et al.*, 2006; Simoens *et al.*, 2006; Anell, 2008; Boyle, 2008; Busse, 2008; Department of Health and Ageing, 2008; Klazinga, 2008

In contrast, in private hospitals fee-for-service is the predominant mechanism used to reimburse physicians. One purported reason for this is that fee-for-service aligns the incentives of profit-maximising private hospitals with those of physicians who place greater importance on income (Klazinga, 2008). International experience has highlighted the theoretical disadvantages associated with a fee-for-service payment system vis-à-vis over-provision of treatment, the associated high costs and the potential adverse consequences for the quality of care (see Chapter 3 and also Gosden *et al.*, 1999; Chaix-Couturier *et al.*, 2000). A further contributor to costs is the higher level of remuneration associated with fee-for-service systems, compared to salaried reimbursement regimes (Fujisawa *et al.*, 2008). To attempt to constrain costs, controls on fee levels were introduced in the Netherlands, although these proved ineffective since physicians were able to circumvent them by increasing the quantity of services provided. These controls were eventually replaced by an overall cap on expenditure on physician services (Exter *et al.*, 2004).

4.5.2 Public and Private Practice by Hospital-Based Physicians

In a number of the countries under review, hospital-based physicians are allowed to supplement their public sector income by engaging in private practice. Such dual practice, it is argued, enables the public sector to recruit and retain quality physicians at a relatively low cost (Eggleston *et al.*, 2006). However, the different reimbursement mechanisms used by public and private hospitals may also generate perverse financial incentives for hospital-based physicians, diverting resources away from public patients and/or using public practice to boost their private workload (González, 2004; Siciliani *et al.*, 2005; Eggleston *et al.*, 2006). Consequently, where physicians are permitted to supply services to both sectors, restrictions may be imposed on private practice, although these may not always be entirely successful.

One of the key areas of change in the reformed consultant contract in England involved new limitations on the ability of consultants to perform private activity. Under the previous contract, the '10 per cent rule' was applied to full-time consultants, whereby their private practice should not exceed 10 per cent of their NHS salary; some part-time consultants, meanwhile, could engage in unlimited private practice while receiving 10/11ths of the salary of their full-time counterparts (Maynard *et al.*, 2001). Subsequent analysis of individual consultants' income from the NHS and private care found that full-time consultants were, on average, in breach of the 10 per cent rule (Morris *et al.*, 2008). Furthermore, private income was shown to be positively correlated with NHS waiting lists – a finding consistent with the hypothesis that, under this system, consultants possessed a financial incentive to keep their NHS waiting lists high, thereby stimulating demand for their private practice (Williams *et al.*, 2006).

To address this apparently unsatisfactory state of affairs, under the renegotiated 2003/04 contract, consultants wishing to undertake private activity while continuing to be eligible for pay progression in the NHS were obliged to offer an additional four hours per week service to the NHS and not to see private patients while they were on call (National Audit Office, 2007). The evidence suggests that, in practice, the impact of the revised arrangements on private activity has not been as great as anticipated due to various factors, including poor take-up of the new contract in specialties associated with '*lucrative private practice*' (Williams *et al.*, 2006; 25), the inability of trusts to pay consultants for extra sessions and the potential for guidance on the implementation of the contract to be subject to local interpretation (National Audit Office, 2007). However, at least trusts now possess information on their consultants' private practice. Maynard *et al.* (2004) argue that policies to reduce NHS waiting lists, for example, may have implications for private practice and, consequently, may warrant a revision of the terms of the 2003/04 contract.

In Australia, doctors can be given 'a right to private practice' which permits them to treat both public and private patients in public hospitals (Department of Health and Ageing, 2008).³⁴ The reimbursement mechanism differs for the two patient groups – doctors with the right to private practice are paid a salary for the treatment of public patients and a fee-for-service for private patients (Table 4.14 sets out the latter, as utilised in the Australian Capital Territory). Rules exist regarding the treatment of income from private practice. In the Australian Capital Territory, for example, doctors must surrender all income from private practice to the State government, which maintains a private practice fund (Australian Capital Territory Department of Health, 2010). Doctors can then apply to the fund for money to finance research and professional development activities.

³⁴ Some doctors may, however, be permitted to treat only private patients in public hospitals.

TABLE 4.14
Private Practice Payments for Hospital Physicians in the Australian Capital Territory

Scheme	Description
A	<ul style="list-style-type: none"> - Specialists will be paid a private practice payment equal to 20 per cent of the specialist's base salary including allowances. - The specialist will also be entitled to an additional payment of AUS\$0.50 for every dollar of private practice revenue generated by the specialist exceeding an amount equivalent to 10 per cent, but not exceeding 30 per cent, of the specialist's base salary.
B	<ul style="list-style-type: none"> - Specialists will be paid a private practice payment of AUS\$1.00 for every dollar of private practice revenue generated by the specialist exceeding the threshold applicable to the specialist's specialty, but not exceeding an amount equivalent to 50 per cent of the specialist's base salary. - If the specialist does not generate private practice fees in excess of 20 per cent of his or her salary, the specialist will still be entitled to a payment equivalent to the amount of fees generated.
C	<ul style="list-style-type: none"> - This scheme is available to specialists who have been granted leave without pay for 25 per cent of the time worked by full-time specialist medical officers. - Specialists will be paid a private practice payment of AUS\$1.00 for every dollar of private practice revenue generated by the specialist exceeding the threshold applicable to the specialist's specialty, but not exceeding an amount equivalent to 133 per cent of the specialist's base salary.

Source: Adapted from Australian Capital Territory Department of Health, 2010

4.5.3 Discussion

In summary, there is a clear distinction between the mechanisms used by the public and private sectors to reimburse hospital-based physicians. Salaries have largely been adopted in the public sector. To offset the potentially unfavourable impact of salary-based payments on physician productivity, some of the countries under consideration have introduced bonus awards for undertaking additional activity. Conversely, there are concerns regarding overprovision and cost escalation under the fee-for-service systems that have typically been utilised by the private sector. Where hospital-based physicians may engage in dual practice, the co-existence of two divergent reimbursement mechanisms appears to have led to financial incentives that may encourage private practice. Consequently, policy makers have attempted to impose restrictions on physicians' private activity, although in the English case at least these do not appear to have had the intended effects.

4.6 SUMMARY

A multitude of mechanisms are available to reimburse institutional providers such as acute hospitals. These range from budgets, which are set on a prospective basis and do not vary with activity levels, to activity-based payments, where providers are reimbursed based on their activity levels. From a theoretical perspective, these two key payment methods (as discussed in Section 4.2) have implications for achieving four broad common objectives of international health systems – accessibility, efficiency, quality and cost containment. Fixed budgets may be effective at controlling costs, but can encourage hospitals to select low-cost patients and skimp on the quality of care. Activity-based payments, meanwhile, tend to incentivise greater productivity, which, in turn, may increase total health-care expenditure. Thus, no single payment mechanism can simultaneously achieve all of the desired objectives of the health-care system. Instead, the theoretical literature recommends the use of a mixture of reimbursement methods.

Casemix funding, based on prospective activity-based payments, is now the preferred mechanism for allocating resources to hospitals in six of the eight industrialised countries considered in this chapter. Microeconomic theory suggests that there are some advantages associated with casemix funding relative to its alternatives. For example, unlike retrospective cost-based reimbursement mechanisms, the prospective nature of casemix funding removes any link between payment and cost, and therefore should encourage efficiency and cost minimisation. Moreover, the link between activity and payment under casemix funding, which is absent from global budgets, provides a financial incentive for hospitals to increase their activity – but possibly at the expense of the quality of patient care.

Prior to the introduction of casemix funding, the six countries discussed herein operated different reimbursement mechanisms. Casemix funding replaced fee-for-service in the US, but budgets were the norm elsewhere. There was some similarity across the six countries in the objectives for the casemix funding system, including increasing productivity, improving efficiency, promoting transparency and encouraging benchmarking. Cross-country comparisons highlight both differences and similarities in the actual operation of casemix funding systems. This heterogeneity only exacerbates the difficulties of drawing definitive conclusions on the actual impacts of casemix funding from a relatively limited evidence base. For example, the empirical evidence on the effect of casemix funding on hospital efficiency is mixed and appears to be quite strongly influenced by the specific design of the casemix funding mechanism, as well as the country-specific context.

Although casemix funding systems have been in operation for almost 30 years in some parts of the world, they are continually evolving. Most recently, developments have typically focused on using the casemix funding system as an instrument to encourage improvements in the quality of care (which economic theory suggests may be adversely affected under casemix funding). These new initiatives operate on the premise that hospitals should not be reimbursed for poor quality care (e.g. avoidable complications or readmissions within 30 days of the initial discharge). As yet, it is too early to evaluate the impact of these programmes properly, but there are concerns regarding their unintended consequences on hospital behaviour, such as hospitals engaging in patient selection.

For hospital-based physicians too, financial incentives vary with the methods utilised to remunerate services provided. A clear distinction is generally apparent between the public and private sectors, with salary more commonly used for physicians based in public hospitals and fee-for-service typically paid to their counterparts in private hospitals. Physicians' ability to engage in both public and private practice is a further complicating factor that could result in incentives encouraging private activity if different reimbursement mechanisms are adopted for public and private practice.

This chapter has detailed the reimbursement mechanisms for acute hospitals in isolation from those for hospital-based physicians. The nature of the relationship between acute hospitals and their physicians, however, is such that their reimbursement mechanisms, and consequent financial incentives, are inexorably linked. How physicians' incentives align with those of the hospital in which they are based is crucial. A hospital's incentive to increase activity under prospective activity-based funding, for example, could be inconsistent with that of its physicians if the latter have no financial incentive to engage in additional activity (as would be expected under salaried payments). Thus, having examined in detail – but in isolation – the resource allocation mechanisms for both individual and institutional providers in this and the preceding chapters, Chapter 5 considers resource allocation in the health-care system as a whole. Adopting a system perspective highlights the importance of aligning the financial incentives of all health-care providers to ensure that health care is provided in the most appropriate setting. The empirical evidence on initiatives in the eight selected countries is reviewed to examine some common characteristics that are crucial for achieving a fully integrated health-care system.

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Chapter 5

Resource Allocation for Integrated Health Care

5.1 INTRODUCTION

Traditionally, the health-care sector was designed to deal with people with acute or emergency problems that can be quickly resolved through one-off medical interventions. However, this approach does not cater well for the needs of individuals living with chronic diseases, individuals with multiple complex health and social problems and older, increasingly frail individuals. In this context, countries worldwide are recognising the importance of integrated health care, whereby services are co-ordinated across the full range of service providers. Resource allocation mechanisms that support the delivery of integrated health care are key. However, as will become clear in the review of international evidence presented in this chapter, the importance of integrated health care has only recently been identified in international policy circles. This has meant that the evidence on integrated care initiatives and supporting mechanisms is diverse and has not always been subject to economic evaluation; nonetheless, a number of key messages can be identified and these are discussed below.

In this chapter, we discuss the importance of integrated health care, international experience with integrated health-care initiatives (including chronic disease management (CDM) programmes) and the resource allocation mechanisms to support the delivery of integrated health care. Section 5.2 introduces the concept of integrated health care and discusses its importance. Section 5.3 discusses the importance of incentivising providers to deliver integrated health care, while Section 5.4 focuses on the management of chronic diseases. Section 5.5 provides an overview of the international literature and draws on detailed case studies contained in the appendix to Part 2. Section 5.6 summarises and concludes the chapter.

5.2 WHAT DO WE MEAN BY INTEGRATED HEALTH CARE AND WHY IS IT IMPORTANT?

Integrated care is characterised by coherent and co-ordinated service delivery to individual service users across a broad range of health and social care organisations, various professionals and informal caregivers (Mur-Veeman *et al.*, 2008). A distinction is often made between horizontal and vertical integration, with horizontal integration referring to strategies linking similar levels of care (e.g. linking hospitals providing similar services), while vertical integration refers to strategies linking different levels of care (WHO, 2002).

The model of health care is necessarily changing. The traditional approach that treated acute episodes cannot provide effective care for a population that, because of its increased longevity, is facing an increased prevalence of (multiple) chronic diseases (see also Commonwealth of Australia, 2009). Integrated care aims to improve the performance of the health-care system. It is not an end in itself, but rather a means to achieve outcomes such as quality, patient satisfaction, access and efficiency and, ultimately, an improvement in population health.

While usually discussed in the context of CDM, integrated care is a broader concept that describes a goal of 'seamless' care for patients with acute and chronic health problems at any point in the health-care system (Rea *et al.*, 2007). However, the management of chronic conditions can be most effective when established within a wider system of integrated care. As the burden of disease shifts from those with acute conditions to those with long-term and/or multiple chronic conditions, the need for integrated care becomes ever-more pressing.

5.3 HOW CAN WE INCENTIVISE PROVIDERS TO ENSURE INTEGRATED CARE?

High expense is not the reason that care for chronic disease in particular, and integrated care in general, is poor. An influenza vaccine costs very little and co-ordinating care would often save money (after the initial expense to implement the computer systems necessary for co-ordination). The key problem is that providers are generally not paid for getting patients to attend for screening or preventive care; they are only paid for providing care when patients present (Cutler, 2006). Time spent co-ordinating records or advice for different providers is generally not reimbursed. Providers are not incentivised to provide many of the less intensive services (lifestyle advice, reminding patients about appointments, medication reviews) that are crucial to population health (Cutler, 2006). Despite the growing need for co-ordination, health-care services are primarily paid for on an episodic, visit-related basis with few, if any, incentives for providing comprehensive, co-ordinated and continuous care for the prevention and management of chronic illness (American College of Physicians, 2008).

In most industrialised countries, current payment systems do not reward or support the spread of delivery systems that provide a continuum of preventive, acute and chronic care. As a result, patients are often on their own to find the best specialists and hospitals for their conditions and to patch together medical information and advice from multiple practitioners. In effect, no one is accountable for the total care of the patient. In addition, medical records that contain all of a patient's medical history, test results and treatment information from multiple providers are rare. Currently, incentives are often misaligned as providers can, in some cases, lose money by providing higher quality and better outcomes at lower costs (Commonwealth Fund, 2009).

The combination of ageing populations with increased chronic diseases and new technologies demands complex models of care, requiring co-ordinated interventions by professionals at different levels of the health-care system. However, most contracting systems make it impossible to contract for packages of care that span different sectors and levels of care. Many contracting developments reflect an opposite trend, seeking to package health care into well-defined products and homogeneous interventions that can be easily linked to payment systems and incentives (Figueras *et al.*, 2005). Contracting, therefore, should move in an opposite direction, focusing on disease management programmes (DMPs) – rather than on episodes of care – which span different levels of the health-care system and allow integrated care pathways. (See Case Study 2.12 for an overview of the German experience with DMPs.)

A number of conditions are important in facilitating the development of an integrated health-care system. In a recent summary of lessons from the US on integrated health care, three key factors that characterise an effective integrated health-care system were identified, namely: appropriate governance, use of incentives and integrated health IT (Fleury *et al.*, 2009). A further study identified ten characteristics of a high-performing chronic care system as: universal coverage; the provision of care that is free at the point of use (or at least at a cost that does not deter sick patients from seeking necessary health care); a focus on preventive health; priority for support for self-management; priority to primary health care; emphasis on population management (i.e. stratification of the population according to risk); the ability for primary health-care teams to be able to access specialist advice and support when needed; effective IT systems; care co-ordination (particularly for those transitioning between different levels of care); and finally, *'linking these nine characteristics into a coherent whole as part of a strategic approach to change'* (Ham, 2010; 84).

Strong accountable governance structures, which develop through sound clinical leadership and robust management practices, are critical to achieving integration. One of the major challenges to be overcome in developing an integrated health-care system is changing provider behaviour; traditionally, providers are trained, and, more importantly, remunerated on the basis of the provision of discrete episodic forms of care.

The development of technologies to facilitate the exchange of information among different providers and care settings is a key requirement of a functioning integrated health-care system. In particular, shared patient record systems can improve the division of work between providers, reduce duplication, aid diagnosis and help in the development and monitoring of treatment plans (WHO, 2002). Effective clinical protocols, which describe recommended treatment pathways, are also important. Health systems with centralised planning and financing functions have an advantage

over systems with dispersed providers and diverse methods of financing. The structural characteristics of a health system can, therefore, greatly facilitate the integration of health care (WHO, 2002). (See Case Study 2.9 for an illustration of how the structure of a health-care system (in Canada) is being reorganised in an effort to support the delivery of integrated health care.)

5.4 CHRONIC DISEASE MANAGEMENT

The increasing prevalence of chronic disease is posing serious challenges for health-care systems worldwide. In the US Medicare programme, the challenges presented by chronic disease and the cost and quality consequences of poorly co-ordinated care are substantial. An estimated 83 per cent of Medicare beneficiaries have at least one chronic condition (Anderson, 2005). The proportion of beneficiaries with five or more chronic conditions grew from an estimated 31 per cent in 1987 to more than half of all Medicare beneficiaries by 2002 (Thorpe *et al.*, 2006). These beneficiaries must navigate a daunting number of provider relationships, treatment decisions and follow-up prescriptions. One study estimated that beneficiaries with five or more chronic conditions see an average of 13 physicians per year and fill an average of 50 prescriptions over the same period (Medicare Payment Advisory Commission, 2009).

Chronic disease, therefore, requires complex models of care, involving co-operation among providers and institutions that have traditionally been separate (Nolte *et al.*, 2005). Models of CDM have traditionally targeted individuals with a single chronic disease or condition. Integrated care extends to encompass preventive care, social care and care and support in the home. Chronic care management can be most effective when established within a wider system of integrated care. One of the core features of health-care systems that facilitate effective CDM includes the use of other health-care professionals. For example, the use of nurses in managing chronic disease takes the form of nurse-led clinics, discharge planning and/or case management in countries such as Sweden, England and the Netherlands (Nolte *et al.*, 2008a). The approach in the English NHS to CDM consists of three strands: case management for those with complex or co-morbid conditions, disease management for those at some risk and self-management support for the majority of patients who are at lower risk (Rogers *et al.*, 2008). Under the latter, the patient is pivotal in managing his/her own condition (see Case Study 2.10), while the community matron acts as the patient's representative for the first strand (see Case Study 2.11).

The chronic care model (CCM) was developed in the US in the 1990s, partly in recognition of the failure of health systems that were largely built on an acute episodic model of care, with little emphasis on patient self-management. The CCM is based on the premise that high-quality chronic care is characterised by productive interactions between the practice team and patients, involving assessment, self-

management support, optimisation of therapy and follow-up support. The CCM comprises four interacting components: self-management support, delivery system design, decision support and clinical information systems. A meta-analysis of a number of studies evaluating the CCM found that no single element in the model was essential to improving outcomes. However, changes to delivery system design significantly improved processes and outcomes, as did self-management support (Tsai *et al.*, 2005).

5.5 INTERNATIONAL EVIDENCE

While there is no shortage of integrated care initiatives, they are rarely evaluated and so evidence on best practice is sparse (Segal, 2008).¹ In addition, while the concept of integrated care is logically appealing, the '*available evidence on the effectiveness of different forms of integration or co-ordination of care remains uncertain*' (Nolte *et al.*, 2008b; 2). While the general consensus is that integrated care reduces costs and hospital admissions, provides more appropriate care and improves quality of life for patients, the extent to which these effects are statistically significant is unclear. Table A2.1 illustrates the main features of CDM programmes across the eight countries examined in this report, as well as Ireland.

In addition, most initiatives currently in use are ad hoc, narrow in focus and fail to offer a coherent, co-ordinated and sustainable approach to improving the delivery of integrated health care. For example, while the UK published a White Paper entitled *Our health, our care, our say: A new direction for community services* in 2006, which set out a vision for community-based care, the actual implementation of integrated care approaches has been largely left up to the initiative of individual Primary Care Trusts (Nolte *et al.*, 2008a). The importance of incentives for doctors to participate was highlighted in an evaluation of the US Medicare 'Case Management Demonstrations', which ran from 1993 to 1995 and which provided case management services for Medicare beneficiaries with catastrophic illnesses and high medical costs. Expenditures in the intervention group showed no improvements due to the case management intervention and there was no significant effect on self-care or health status. One of the main reasons for these disappointing results was that physicians had no target outcomes on which reimbursement was based, so there was no incentive for more efficient use of services (Centers for Medicare and Medicaid Services, 1995).

The American College of Physicians recently proposed Medicare demonstrations of the 'patient-centered medical home' concept (in which physicians and practices provide care that is accessible, centred on patients and families, comprehensive and continuous, co-ordinated, equitable and culturally sensitive). Congress provided for a

¹ For example, in Australia in 2001, over 20 distinct Australian Government initiatives were concerned with primary health-care integration and data sharing, in addition to numerous state, local and hospital-based programmes (Segal, 2008).

demonstration in the Tax Relief and Healthcare Act of 2006 to test whether paying such physician practices for assuming all the responsibilities of a patient-centred medical home results in lower total Medicare costs (Davis, 2007). See Case Study 2.7 for further discussion of the Medicare 'Medical Home Demonstration'.

On a more macro scale, the integrated health-care delivery system, Kaiser Permanente, is often referred to as an example of best practice in integrated health care (see Case Study 2.8). Also in the US, the Veterans Administration (VA) provides health-care services to approximately 5.5m eligible veterans and their dependants, primarily by salaried doctors working in government-owned facilities (American College of Physicians, 2008). The VA is a single-payer system, with funds allocated to geographic regions that typically contain several hospitals. If funding runs out before the end of a fiscal year, services are curtailed. Reforms in the mid-1990s included the adoption of an electronic medical record system and an increased emphasis on primary care, preventive services and case management for long-term care. Comparisons of VA patients with the general population consistently show higher quality of care, particularly for preventive and long-term care. The VA actively manages prescription budgets by relying on a formulary that encourages the use of generic and lower-cost drugs.

In Germany, polyclinics were a common feature of the health-care system in the German Democratic Republic. Following German re-unification in 1990, they were almost entirely replaced by the model of independent office-based practices. However, in recognition of their potential to enhance co-ordination and integration of care, the model of polyclinics was reintroduced into the German health-care system in 2004 under the re-branded name of Medizinische Versorgungszentren (medical care centres, MVZs). MVZs are allowed to provide care across several health-care specialties and their establishment requires a minimum of two physicians with different specialisations. Teams usually include at least one GP, but may also involve nurses, pharmacists, psychotherapists or psychiatrists and other health-care professionals. Although MVZs have to be professionally supervised by a fully qualified and registered physician, any health-care provider may establish and operate a centre. Sickness funds are excluded from ownership to avoid vertical integration. MVZs are usually run by professional managers, who deal with the administrative issues. MVZ physicians may be salaried or contracted as self-employed practitioners. Anecdotal evidence suggests that MVZs are becoming increasingly attractive to physicians because joining a MVZ minimizes the financial risk associated with establishing an independent private practice, while at the same time maintaining freedom of clinical practice (Ettelt *et al.*, 2006).

Several countries have introduced financial incentives for providers and/or purchasers to strengthen care co-ordination or implement structured DMPs. In Germany, legislation in 2002 created DMPs for chronic illnesses in order to give

sickness funds a financial incentive to care for chronically-ill patients (see Case Study 2.12). There are financial incentives for both providers and patients to participate in DMPs. In contrast, one approach to CDM has been criticised for the initial absence of financial incentives (see Case Study 2.13). In Australia, the Australian Enhanced Primary Care (EPC) scheme, introduced in 1999, aims to improve co-ordination of care for people with chronic conditions and complex care needs. The scheme provides a framework for a multidisciplinary approach to health care, which, along with the Service Incentives Program and Practice Incentives Program (see Case Study 2.5), offers financial incentives to GPs to encourage co-ordination of care for patients with chronic conditions (Nolte *et al.*, 2008a). However, the extent to which the EPC really facilitates integrated multidisciplinary care is open to question since the payments available are available only for GPs.

In England, strategies to improve the care for those with chronic conditions in primary care have been supported by a new system of paying for primary care, the Quality and Outcomes Framework (QOF). The QOF is designed to provide appropriate financial incentives to encourage general practices to provide ongoing high-quality management of ten chronic conditions including diabetes, hypertension and asthma. However, there are concerns over the quality of care for patients with conditions not covered by the QOF, although ongoing updates of the QOF aim to overcome this to some extent (Nolte *et al.*, 2008a). See also Case Study 2.3.

5.6 SUMMARY

As the burden of disease shifts from those with acute conditions to those with long-term and/or multiple chronic conditions, the need for integrated care is increasing. Integrated care is characterised by coherent and co-ordinated delivery of health-care services across a broad range of health and social care organisations, various professionals and informal caregivers. A distinction is often made between horizontal and vertical integration, with horizontal integration referring to strategies linking similar levels of care (e.g. linking hospitals providing similar services), while vertical integration refers to strategies linking different levels of care. While usually discussed in the context of CDM, integrated care is a broader concept that describes a goal of 'seamless' care for patients with acute and chronic health problems at any point in the health-care system.

In terms of resource allocation, ensuring that the financial incentives faced by providers support the provision of integrated health care is crucial. In most countries, current payment systems do not reward or support the spread of delivery systems that provide a continuum of preventive, acute and chronic care. Other key requirements for an effective integrated health-care system include IT (incorporating consistent clinical protocols) and good governance structures. Incentives for patients have also been highlighted in the international literature and Chapter 15 discusses

the importance of financial incentives for all actors in the system that support the use, and delivery, of integrated health care. In terms of international experience with integrated care initiatives, most examples focus on the management of chronic disease, are relatively small scale and have not been subject to formal economic evaluation. The potential burden of increasing rates of chronic disease has only recently come to policy attention in developed countries; it is therefore not surprising that strategies and mechanisms to support integrated health care are still very much in the development phase.

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PART 2

Appendix

CASE STUDY 2.1

UK – GP Fundholding and Practice Based Commissioning

GP Fundholding

Overview

In 1991, GP fundholding was established in the UK and 303 GP practices received budgets to purchase selected services directly for their patients. The standard fundholding budget covered approximately 20 per cent of the hospital and community health service budget, including most elective surgery (cataract extraction, hip replacement, etc.), outpatient assessment, diagnosis and treatment, as well as prescription costs. The local health authority purchased all other services, including emergency care. The fundholding budget excluded the GP's personal income, which was paid separately. Practices could reallocate fundholding savings to other services (e.g. IT) but not to supplement GPs' incomes. Fundholding evolved to incorporate more complex procedures and services (e.g. cardiovascular surgery and specialised nursing care). Fundholding practices were also encouraged to limit their prescribing costs. A key aim of fundholding was to ensure better value for money by encouraging practices to scrutinise their prescribing and referral patterns and to shop among competing providers for the best price and quality (Dixon *et al.*, 1995; Horrocks *et al.*, 2002). Fundholding was also extended to smaller practices; from April 1996, practices with lists of 5,000 or more patients were eligible to apply.¹ The proportion of the population covered by fundholding increased from 7 per cent in 1991 to over 50 per cent in 1997 (McCallum *et al.*, 2006). Fundholding was abolished by the new Labour government in 1997.

Evaluation

Fundholding was not subject to a formal national evaluation (Mannion, 2005). Research on the impact of fundholding on waiting times suggests that fundholding practices were able to secure significant reductions in waiting times for their patients; comparing waiting times for fundholding and non-fundholding practices before and after the abolition of fundholding in 1997, Dusheiko *et al.* (2003) found that fundholding status reduced the waiting times of patients by an average of 4-7 per cent for all elective admissions. Dusheiko *et al.* (2003) showed also how elective admission rates decreased by approximately 3.3 per cent as a result of fundholding

¹ Initially, practices with lists of 9,000 individuals or greater were eligible to participate in the scheme (Kay, 2002).

incentives.² Fundholding practices appear to have had slower growth in pharmaceutical costs (Mannion, 2005), with savings in prescribing costs largely 'once-off' in the form of increased use of generic prescriptions, the use of practice formularies and feedback to practitioners on their prescribing behaviour (Smith *et al.*, 2004).

However, gaming on the part of GPs prior to the introduction of fundholding was demonstrated by Croxson *et al.* (2001) who found that fundholders increased referrals in the year before budgets were set. In addition, GP fundholding is generally accepted to have led to increased inequities and two-tier access to care, largely as a result of differing waiting times (Smith *et al.*, 2004). There is also evidence to show that large numbers of small practice-based purchasers (such as fundholders) inflated transaction costs compared to a small number of larger commissioning agencies (Smith *et al.*, 2004). In terms of the contribution of initiatives such as GP fundholding to service change, it has been demonstrated that primary care providers were most effective and most motivated as commissioners in bringing about service change and development in areas close to primary health care and which they were most familiar with as clinicians (Smith *et al.*, 2004).

Primary Care Trusts

After the abolition of fundholding in 1997, a new nationwide system of primary care groups (PCGs) was established. Unlike fundholding, which was voluntary, membership of a PCG was compulsory for all GP practices (Langenbrunner *et al.*, 2005). Each PCG was allocated a cash-limited budget for hospital and community health services, prescribing and general practice infrastructure (Kay, 2002). In April 2002, Primary Care Trusts were established as independent organisations across England (replacing the earlier PCGs) and district health authorities were abolished (replaced with 28 Strategic Health Authorities).³ Primary Care Trusts make primary care the centre of decision-making and local health strategy. They commission all but highly specialised services for their populations and are responsible for 75-80 per cent of the total National Health Service (NHS) budget.⁴ This structure is intended to facilitate commissioning of care that is integrated across the health, social care and independent sectors.

² In an analysis of a similar initiative in New Zealand (independent practitioner associations), it was found that the increased control over budgets enabled the associations to make significant savings against historic budgets for services such as laboratory tests and investigations (Smith *et al.*, 2004).

³ Health and Personal Social Services Boards, NHS Boards and Local Health Boards fulfil many of the same functions in Northern Ireland, Scotland and Wales respectively.

⁴ The average population size of English Primary Care Trusts in 2008 was 338,500 (see also Chapter 2).

Practice-Based Commissioning (PBC)

Overview

Practice-Based Commissioning (PBC) was gradually introduced to the NHS from 2004 onwards in order to generate front-line clinical engagement with the commissioning process. The essence of PBC is that GP practices are provided with an 'indicative budget' with which to commission services for their patients. In other words, GP practices have been given 'virtual' budgets with which to buy health services for their population, with Primary Care Trusts continuing to hold the 'real' money (Curry *et al.*, 2008). Under GP fundholding, real budgets were devolved to GPs. It was expected that practices, or groups of practices (consortia), would seek to redesign services so as to provide better experiences for patients as well as save money. Money saved on these budgets was to be available for practices, or consortia, to invest in improved patient services. Practices were allowed to access at least 70 per cent of any savings achieved, with the remaining 30 per cent available to the Primary Care Trust.

Participation in PBC is voluntary. PBC was not officially specified in detail so that implementation varied locally (Coleman *et al.*, 2009). In the early years, the indicative budget was calculated on the basis of historical spend, with all practices moving to a weighted capitation formula over a period of three years. Since the budget is indicative rather than fully devolved, Primary Care Trusts remain legally responsible for any overspends (Curry *et al.*, 2008). However, if practices are unable to balance their budget over three years, they forfeit the right to hold an indicative budget (except in exceptional circumstances such as an unusually high cost patient) (Department of Health, 2004). However, as the budget is indicative, it is not clear the extent to which such a sanction is effective. Primary Care Trusts have signalled that removal of the GP contract is also a potential sanction, although only in very extreme cases (Curry *et al.*, 2008).

In addition to any savings, which can only be spent on the provision of services, an initial incentive payment (the 'Directed Enhanced Service' payment) was paid to practices agreeing to take part in the scheme for the first two years. By December 2006, uptake of the incentive payment was reported at 96 per cent. Subsequently, Primary Care Trusts were responsible for developing their own local incentive schemes. Payments under these schemes count as practice income and there are no restrictions on how they can be spent (Coleman *et al.*, 2009). By wave 5 of PBC (2008), 74 per cent of practices engaging in PBC were provided with a financial incentive for participating by their Primary Care Trust (Department of Health, 2008).

In terms of the characteristics of those engaging in PBC, a survey of Primary Care Trusts in 2007 found that the collective 'consortium' approach to PBC (i.e. groups of practices) was the most frequent arrangement for the operation of PBC, with slightly

less than half of Primary Care Trusts reporting any PBC by 'stand alone' individual practices (Coleman *et al.*, 2009). They also found a large number of new services were facilitated by the operation of PBC. These ranged from local, small scale practice-level innovations (e.g. ECGs) to much larger schemes (e.g. new local clinics). All of the PBC sites surveyed were keen to provide services themselves. Some had set up or were planning a formal 'provider arm'. This generated considerable disquiet among many Primary Care Trusts, who were concerned about potential conflicts of interest.

Evaluation

An early review of PBC found that while there was little evidence that PBC made any strategic or significant impact on secondary care services, it did however lead to improved responsiveness in terms of shorter waiting times for treatment and more information on patients' progress. PBC has its greatest impact on primary- and intermediate care services; in particular, it stimulates a greater range of practice-based services, changes prescribing practices and facilitates the establishment of new community-based alternatives to hospital care. Attributing such developments to the incentives embodied in PBC is difficult however, as there was no before-after evaluation of PBC (Curry *et al.*, 2008). The majority of GPs are supportive of the principles of the policy, but this has not translated into active engagement, with most GPs reporting they were happy to observe passively and let others lead on their behalf (Curry *et al.*, 2008). In addition, PBC does entail significant transaction costs (Smith *et al.*, 2004).

The evidence suggests that it takes time for those involved to come to terms with the scope and remit of the different players, such as the issues of budgetary control, administrative support, commissioning and business case development (Curry *et al.*, 2008). It is clear from the four case study sites in the King's Fund study that the balance of power in PBC lies firmly with the Primary Care Trusts; GPs who had expected a greater degree of autonomy to purchase and provide services in a manner similar to GP fundholding have been disappointed (Curry *et al.*, 2008). In order to be effective practice-based commissioners, GPs require good data analysis skills, business acumen and a good knowledge of commissioning (not necessarily skills that GPs possess). The capacity of the Primary Care Trust to support PBC is affected by the cluster structure, with larger clusters of practices being more resource-efficient in terms of the support required.

PBC was intended to improve the use of resources by providing an incentive for GPs to reduce referrals to secondary care, either through demand management or by shifting services into community settings with lower costs. Research by the King's Fund found that PBC was indeed being used as a vehicle for improving the use of resources, but that these efforts were largely driven by Primary Care Trusts rather than GPs. PBC creates incentives to move services into the community if they can be

provided more efficiently there. Concerns about clinical risk were particularly acute in cases where hospital professionals had not been involved in designing new services. Conflicts of interest arise from GPs having the opportunity to be both the commissioners and providers of services. The definition of what constitutes core GP work, as reimbursed under the GP contract and what should be paid for in addition under PBC, is ambiguous for many GPs (Curry *et al.*, 2008).

Discussion

Over the last twenty years, the UK has experimented with many forms of devolved primary care commissioning. However, the experience with the latest initiative, practice-based commissioning, is disappointing. In terms of facilitating effective PBC, the evidence suggests that there is no 'ideal' size for a commissioning organisation; different population bases are needed for commissioning different services. Adequate levels of management support and engagement by doctors, as well as timely and accurate information is also required for effective commissioning. Complexities around the management of financial and clinical risk have slowed the adoption of PBC (Curry *et al.*, 2008).

Curry *et al.* (2008) proposes that there are at least three levels at which commissioning could take place within the Primary Care Trust unit:

- GPs
- PBC clusters
- Primary Care Trusts

At the GP level, they suggest that it might be appropriate to devolve real budgets for specific, well-defined areas of care, such as that for patients with long-term conditions. At the next level, a PBC cluster could be given devolved budgets for a defined range of primary and community care services of relevance to the communities they are accountable for. PBC clusters would need to develop statutory organisational identities. At the other end of the scale, Primary Care Trusts would be responsible for more strategic commissioning, relating to public health, health inequalities and acute sector reconfiguration, for example.

A recent report by the Nuffield Trust in the UK recommended that PBC should be replaced by consortia with 'real' budgets but comprising professionals from both primary and secondary care. Such multi-specialty groups of professionals (termed 'local clinical partnerships') would take responsibility for the provision and commissioning of health services for their local population (Smith *et al.*, 2009).

CASE STUDY 2.2

New Zealand – Primary Care Reforms

Overview

The 2001 New Zealand Primary Care Strategy introduced a set of reforms aimed at improving health and reducing health inequalities by reducing co-payments, moving from fee-for-service to capitation⁵, promoting population health management and developing a not-for-profit infrastructure with community involvement to develop primary care (Hefford *et al.*, 2005). Implementation of the Strategy involved significant changes in the funding, payment system and organisation of primary health care (Cumming *et al.*, 2009). The funding announced to support the reforms was NZD\$468m over three years, an annual increase of approximately 43 per cent over spending on primary care prior to the introduction of the reforms in 2002.⁶ One of the key components of the strategy was the establishment of Primary Health Organisations (PHOs).

Primary Health Organisations (PHOs) are funded by District Health Boards (DHBs) to provide essential primary health services to all individuals enrolled with a PHO.⁷ PHOs bring together doctors, nurses and other health professionals in the community to serve the needs of their enrolled populations. PHOs are not-for-profit and provide services either directly by employing staff or by contracting with independent providers. DHBs allocate resources to PHOs using capitation payments (adjusted for age, sex, ethnicity, community service card or high user service card status and deprivation). Although primary health care practitioners, such as GPs and allied health professionals, are encouraged to join PHOs, membership is voluntary. The first PHOs were established in July 2002 and there are now 82 PHOs around the country (Cumming *et al.*, 2009). At present, 95 per cent of the New Zealand population are enrolled in a PHO, with most general practices now part of a PHO. Primary care providers are not required to join a PHO; they can continue to operate under the old fee-for-service regime if they wish. However, fee-for-service subsidies have been frozen at existing levels, while PHO funding is more generous and is being increased regularly (Hefford *et al.*, 2005).

The Strategy changed the method of allocating the public share of primary health care funding from fee-for-service patient subsidies paid at the GP level to largely capitation funding of PHOs (Cumming *et al.*, 2009). A key reason for moving to capitation funding was to ensure that PHOs are funded according to the needs of their populations, rather than according to the number of services delivered. In

⁵ Capitation applies to the public element of payment only.

⁶ At current exchange rates (June 2010), NZD\$1.00=€0.71 (www.xe.com) [last accessed 28 June 2010].

⁷ DHBs (of which there are currently 20) are responsible for providing, or funding the provision of, health and disability services in their district. One of the statutory objectives of the DHBs is the promotion of integrated primary and secondary care services. In 2007, populations served by DHBs ranged from 32,000 in the West Coast to 516,000 in Waitemata (www.moh.govt.nz/moh.nsf/indexmh/dhb-faq) [last accessed 27 June 2010].

addition, a move to capitation was also considered essential to encourage multidisciplinary/team approaches to care and a focus on wellness rather than sickness (Cumming *et al.*, 2009). PHOs must meet minimum requirements in order to receive capitation funding, including the provision of 24 hour, 7 day week access to primary care services. Practices also receive fee-for-service payments from patients and small incentive payments for achieving agreed performance targets (see 'Care Plus' discussion below).

GPs in New Zealand are self-employed, for-profit independent providers. Prior to the 2002 reforms, eligibility for government-subsidised primary care services was based on age (all children under 18 years), income and medical need (those with more than 12 or more primary care visits in a year).⁸ With the exception of children under 6 years of age, the government subsidy covered only around one-third to two-fifths of the average charge (Cumming *et al.*, 2009). The remainder of the population paid the full cost of GP services out-of-pocket.

Transitional Arrangements (Access and Interim PHOs)

Due to the significant financial implications, the government decided to phase in the introduction of universal access to low cost primary care services by targeting areas with needy populations first (i.e. those with large proportions of Maori or Pacific Islanders and deprived areas). PHOs with more than 50 per cent of their enrolled population defined as 'high need' were funded under the 'access' formula (all other PHOs were regarded as 'interim' PHOs) (Cumming *et al.*, 2009). Across all PHOs, capitation rates adjusted for age and gender, with access PHOs receiving an additional higher capitation payment for each enrollee (regardless of their individual need) (Cumming *et al.*, 2009).⁹ In return, the PHO contract placed constraints on the co-payments that could be charged to access patients. Co-payments for an access funded practice typically reduced from NZD\$40 to NZD\$15 for unsubsidised adults and from NZD\$25 to NZD\$15 for subsidised adults (Hefford *et al.*, 2005). Providers serving less needy populations were also encouraged to form PHOs; however, their capitation funding was based largely on historic levels of fee-for-service subsidy (the 'interim' formula).

Since 2003, the government has provided further funding to gradually increase the capitation funding for those enrolled with interim PHOs to the level paid to access PHOs (Cumming *et al.*, 2009). The government increased the interim formula by age increments; subsidies for 6-17 year olds increased from October 2003, while those for the over 65s increased from July 2004 (Hefford *et al.*, 2005). From July 2007, both PHOs have the essentially the same level of funding per capita, although capitation

⁸ Approximately 30 per cent of the population were eligible for a Community Services Card.

⁹ Criticism of the transitional approach focused on the potential inequity inherent in the approach, as it meant that higher income or healthy enrollees in access PHOs could obtain cheaper care than lower income or less healthy enrollees in interim PHOs (Cumming *et al.*, 2009).

payments in access PHOs are still slightly higher than in interim PHOs for those under 18 years (Cumming *et al.*, 2009). PHOs may also be eligible for additional capitation funding for services for deprived population and for chronic care management ('Care Plus').

Funding for Deprived Populations

A further funding stream aimed at deprived populations ('services to improve access') is also available to PHOs. A premium of 20 per cent on the base capitation rate is calculated for every individual living in a most deprived area and a further 20 per cent is added for every Maori or Pacific enrollee (and these payments are cumulative). The premium is paid to the PHO subject to an approved plan describing the additional services that will be provided with the additional funding, i.e. it is not intended to subsidise low cost access, but to pay for supplementary health services such as mobile nursing, community health workers, etc. (Hefford *et al.*, 2005).

PHO Performance Management Programme¹⁰

From 2007, a new PHO Performance Management Programme (PMP) introduced payment for performance against a small number of agreed performance indicators and targets (note that payments are to PHOs, not individual GPs). Improvements in performance against a range of nationally consistent indicators results in incentive payments to PHOs. In order to participate in the programme and be eligible for the incentive payments, PHOs are expected to meet a number of pre-requisites demonstrating how they intend to implement the programme, including clinical governance structures. Establishment funding is available, in the form of a fixed amount of NZD\$20,000 per PHO and a variable amount of 60 cents per enrolled person in the PHO.

There are three categories of indicator:

- Clinical (eight indicators, e.g. children fully vaccinated by their 2nd birthday)¹¹
- Process/capacity (three indicators, e.g. progress against the performance plan)
- Financial (two indicators, e.g. pharmaceutical expenditure relative to benchmark)

The sum of the clinical indicators attracts more points than the process and financial indicators combined. Currently, 60 per cent of the performance payments are available for the clinical indicators, 10 per cent for the process indicators and 30 per cent for the financial indicators. Payments for the majority of indicators are on the

¹⁰ See [www.moh.govt.nz/moh.nsf/pagesmh/5817/\\$File/PHOperfmagmtsummaryinfo.pdf](http://www.moh.govt.nz/moh.nsf/pagesmh/5817/$File/PHOperfmagmtsummaryinfo.pdf) for further details on the PHO Performance Management Programme [last accessed 27 June 2010].

¹¹ For certain indicators (e.g. children fully vaccinated by their 2nd birthday), performance is measured for both the total enrolled population and for the high needs enrolled population, with performance payments weighted towards progress on the targets for the high needs population.

basis of percentage attainment of the target, with the amount of payment increasing as the PHO moves towards the target. The maximum available payment is NZD\$6 per enrolled patient if all targets are achieved.

Reducing Fees and Improving Access

While GPs are free to set their own fees, fees charged for primary care services must be published on DHB websites. Individuals may only enrol with one PHO at a time and the practice visited most often receives any funding for visits. If individuals are away from home and need to make a visit to another practice, they may be liable for the full fee (unless they hold a Community Services Card).

As new funding was rolled out, the government became concerned about whether enough of the new funding was being passed on to patients in the form of lower fees. As a result, with each new round of funding, local agreements have been reached between DHBs and PHOs about the degree to which new funding should result in reduced scheduled GP fees, about fee review processes if new funding does not result in expected level of GP fee reductions and about how much GP fees may rise each year without triggering a formal fees review (Cumming *et al.*, 2009).¹² Nonetheless, the government has avoided the statutory regulation of GP fees '*most likely because of a fear of the political furore that this would likely generate from the GP community*' (Cumming *et al.*, 2009; 7).

*'Care Plus'*¹³

In New Zealand, 'Care Plus' was rolled out nationally on 1 July 2004 as a new primary health care initiative targeting people with high health needs due to chronic conditions, acute medical or mental health needs, or terminal illness. The programme aims to improve chronic care management, reduce inequalities, improve primary health care teamwork and reduce the cost of services for high-need primary health users. For patients, the main incentive to join 'Care Plus' is the prospect of a free annual health check-up, along with a further three subsidised visits per annum.

Overall funding allows for five per cent of the New Zealand population to be 'Care Plus' patients. Over time, 'Care Plus' will replace the High Use Health Card (HUHC) as the means of targeting high-needs patients. 'Care Plus' differs from the HUHC, in that it coordinates a comprehensive approach to improve outcomes for people with chronic conditions, including lower cost access, whereas the HUHC is a subsidy approach tied to GP visits.

¹² Scheduled fees are those that GP practices advertise to patients to standard GP consultations and not the fees that are actually charged to patients. In theory therefore, this would allow practices to not pass on to patients the full value of the new funding they receive, while still complying with the requirement to reduce their scheduled fees by a certain amount, allowing them to retain the difference (Cumming *et al.*, 2009).

¹³ See www.moh.govt.nz/moh.nsf/indexmh/phcs-projects-careplusservice for further information on 'Care Plus' [last accessed 27 June 2010].

To be eligible for 'Care Plus' funding a patient has to meet specified criteria.¹⁴ Funding is provided to PHOs based on a capitation formula and distributed by PHOs to practices in a variety of arrangements. Funding is adjusted for the age, sex, ethnicity and deprivation profile of the patient, with payments per practice per annum ranging from NZD\$11.73 per patient to NZD\$153.59 per patient (current at December 2009). Eighty per cent of PHOs were delivering 'Care Plus' in some or all of their practices by April 2006. Even in practices that have been delivering 'Care Plus' for some time, enrolment growth has been much slower than expected. By April 2006 only 39 per cent (range 3 to 122 per cent) of predicted eligible patients were enrolled in PHOs that had started 'Care Plus'.

In a 2006 evaluation of the 'Care Plus' programme, it was found that hospital admissions for those enrolled in 'Care Plus' rose 40 per cent in the following year (Ministry of Health, 2006). This may have been due to improved monitoring of conditions (and subsequent appropriate referral) and/or the natural history of certain chronic illnesses. However, the current structure of 'Care Plus' is that it rewards patient enrolment, with as yet, no link to performance or quality of care. In addition, there is no specific link with secondary care, but a recent report from the New Zealand National Health Committee recommended the further development of such chronic care models, with funding moving towards a needs-basis and moving contracting towards an outcomes focus (National Health Committee, 2007).

Discussion

Initial evaluation of the reforms suggest that they have been successful in expanding access to low cost primary care services; in September 2003, 40 per cent of those receiving lower cost primary care services were previously unsubsidised (Hefford *et al.*, 2005).¹⁵ A recent study showed that patient copayments have fallen and consultation rates have increased as a result of the reforms. In access practices, fees fell and the government's target fee rates were, on average, being achieved in 2004/2005 for young people aged 6-17 years and for adults, although not quite achieved for children under six years. In interim practices, average reductions in fees were not at the levels set by government (Cumming *et al.*, 2009). A possible explanation for this was that practices were previously discounting fees for some patients and thus were subsequently recovering some of these discounts as the public capitation payments to them increased (Cumming *et al.*, 2009). In addition, the income of GPs increased significantly after the introduction of the reforms.

¹⁴ A person is eligible for 'Care Plus' if they are enrolled in a PHO and they are assessed by a doctor or nurse at their general practice as being able to benefit from at least two hours of care from one or more members of the primary health care team over the following six months *and* has two or more chronic health conditions or has a terminal illness or has had two acute medical or mental health-related admissions in the past 12 months or has had six first-level service or similar primary health care visits in the past 12 months or is on active review for elective services.

¹⁵ At time of writing (June 2010), no evaluation of the PHO Performance Management Programme had been carried out.

Consultation rates increased in both access and interim practices, although at a higher rate in access practices.

It is too soon however to judge what effect the reforms have had in terms of averting health problems, improving health and reducing health inequalities and whether the new spending has been cost effective (Cumming *et al.*, 2009). There are also a number of unresolved issues, such as whether to retain the new universal funding system or revert to the former targeted approach; how to achieve the potential gains from capitation when GPs continue to receive their income from a variety of sources in a variety of ways; and how to manage the potential for 'cream skimming' (Cumming *et al.*, 2009). In particular, it is thought that the current crude funding formula (based on age and gender alone for first contact funding) provides incentives for 'cream skimming', although the availability of additional funding for deprived populations and under 'Care Plus' has mitigated this to some extent (Cumming *et al.*, 2009).

CASE STUDY 2.3**UK – Quality and Outcomes Framework (QOF)***Overview*

The national Quality and Outcomes Framework (QOF) was introduced as part of the new General Medical Services (GMS) contract on 01 April 2004. Participation by practices in the QOF is voluntary, though participation rates are very high, with most Personal Medical Services (PMS) practices also taking part.¹⁶ In 2007/2008, 8,294 English GP practices participated in the QOF, accounting for 99.8 per cent of registered patients in England. Payments under the QOF make up approximately 25 per cent of GPs' income (Campbell *et al.*, 2009).

Achievement on the QOF is assessed according to 136 indicators across five domains: clinical, organisational, patient experience, additional services and holistic care. Practices can achieve a maximum of 1,000 points, with nearly two-thirds of points (655) allocated for achievement on the clinical domain (see Table 2.3.1).¹⁷ Average payment per practice in Northern Ireland in 2007/2008 amounted to £119,812 (Department of Health Social Services and Public Safety, 2009).¹⁸ There have been two revisions to the QOF since its introduction in April 2004, with the latest revision taking effect from April 2008. A national IT system, Quality Management Analysis System, collects data from general practices to calculate individual practices' QOF achievement.¹⁹ Practice achievement can be compared with national targets and individuals can access online results on GP surgeries.

¹⁶ Where PMS practices use the national QOF, their 2007/08 achievement (in terms of the 1,000 QOF points available) is subject to a deduction of approximately 109 points before QOF points are turned into QOF payments. This is because many PMS practices already have a chronic disease management allowance, a sustained quality allowance and a cervical cytology payment included in their baseline payments (www.qof.ic.nhs.uk/faqs.asp#pms_deduction) [last accessed 27 June 2010].

¹⁷ In 2007/2008, the baseline payment per point was £122 (www.dhsspsni.gov.uk/qof_context) [last accessed 27 June 2010].

¹⁸ At time of writing (June 2010), UK£1.00=€1.22 (www.xe.com) [last accessed 28 June 2010].

¹⁹ In Northern Ireland, the Payment Calculation and Analysis System fulfils the same role.

TABLE A2.3.1
UK Quality and Outcomes Framework Domains and Indicators

Domain	Indicators	Example ^a	Max Pts
Clinical	80 indicators across 19 clinical areas (asthma, atrial fibrillation, coronary heart disease, dementia, depression, diabetes, epilepsy, heart failure, hypertension, hypothyroidism, learning disabilities, mental health, obesity, palliative care, smoking, stroke/transient ischaemic attack).	The percentage of patients with hypertension in whom the last blood pressure reading (measured in the previous 9 months) is 150/90 or less (57 points).	655
Organisational	43 indicators across 5 areas (records and information, information for patients, education and training, clinical and practice management, medicines management).	The percentage of patients aged over 15 years whose notes record smoking status in the past 27 months (11 points).	181
Patient experience	4 indicators across 2 areas (patient survey and consultation length).	The percentage of patients who, in the appropriate national survey, indicate that they were able to book an appointment with a GP more than 2 days ahead (35 points).	108
Additional services	8 indicators across 4 areas (cervical screening, child health surveillance, maternity services, contraceptive services).	The percentage of patients aged from 25 to 64 (in Scotland from 21 to 60) whose notes record that a cervical smear has been performed in the last five years (11 points).	36
Holistic care	1 indicator ^b		20
All	136 indicators across five domains		1,000

Notes: ^a For many indicators a practice must provide a certain level of clinical care to 90 per cent of patients on a particular clinical register to achieve the maximum points. It can therefore deliver the required care to fewer than 100 per cent of its patients (90 per cent in this case) to achieve the full (100 per cent) points available. The 100 per cent score is not necessarily an objective for all practices; clinical indicators relate to specific subgroups of patients and if the practice does not have any such patients it cannot score points against the relevant indicators. A practice that exclusively serves a student population, for instance, may not have patients on some of the clinical registers that are covered by the QOF and although its QOF points total would be less than 1,000 (or 100 per cent), it may be providing all the appropriate care in respect of the clinical registers that it does hold.

^b Holistic care payments to practices are designed to recognise the breadth of achievement across the clinical domain and 20 QOF points are available. To calculate holistic care points, the practice's points totals in each of the clinical areas of the clinical domain are ranked on the basis of the proportion of available points achieved. The points relating to the highest proportion are ranked first. The proportion relating to the points total that is third-to-last is then taken as the proportion of 20 holistic care points to which the practice is entitled as the basis for its holistic care payment.

Source: www.qof.ic.nhs.uk [last accessed 27 June 2010]

Prevalence Reporting

Assessment on the clinical domain requires information on disease prevalence. For 17 of the 19 clinical areas, the number of patients on the clinical register for each practice is recorded (the depression and smoking indicators are based on subsets of other clinical registers), allowing for the calculation of disease prevalence measures. For five registers (diabetes, epilepsy, chronic kidney disease, obesity and learning disabilities), the count is age-specific. Information on co-morbidity is not available and coding and definition differences may mean that QOF registers do not necessarily equate to prevalence as defined by epidemiologists.

Exception Reporting

'Exception reporting' refers to the potential exclusion of individual patients from calculations of practice achievement for specific clinical indicators. Practices may exclude specific patients from data collected to calculate QOF achievement scores within clinical areas. For example, patients on a specific clinical register can be excluded from individual QOF indicators if a patient is unsuitable for treatment (e.g. where medication cannot be prescribed due to an allergy or side-effect), is newly

registered with the practice, is newly diagnosed with a condition or in the event of informed dissent. The GMS contract sets out valid exception reporting criteria. Practices are not required to report on why patients were exception-reported, although practices may be required to provide justification for exception reporting if asked to do so.

Achievement on the QOF

Table A2.3.2 presents results on achievement on the QOF for England, Northern Ireland, Scotland and Wales in 2007/2008. Average levels of achievement are consistently high across the four countries, with average total points ranging from 968.0 in England to 986.7 in Northern Ireland. In all cases, average achievement improved over the period 2006/2007 to 2007/2008.²⁰ The variation across domains is minor and for England and Northern Ireland the proportion of practices with perfect scores is highest for the patient experience domain.

TABLE A2.3.2

UK Quality and Outcomes Framework Results (2007/2008)

Domain	Max Pts	England		Northern Ireland		Scotland		Wales	
		Average Points	% with Max Pts	Average Points	% with Max Pts	Average Points ^a	% with Max Pts ^b	Average Points	% with Max Pts
Clinical	655	638.4	18.2	647.7	26.9	n/a	n/a	642.1	n/a
Organisational	181	171.0	13.2	176.1	20.5	175.2	n/a	170.3	n/a
Patient experience	108	104.9	94.5	108.0	100.0	106.2	n/a	106.9	n/a
Additional services	36	34.9	72.8	35.4	80.3	35.6	n/a	35.2	n/a
Holistic care	20	18.7	42.8	19.5	56.0	19.3	n/a	19.0	n/a
All	1,000	968.0	7.5	986.7	12.2	982.2	n/a	983.5	n/a
All (2006/2007)	1,000	954.5	5.1	977.8	5.0	971.2	n/a	948.6	n/a

Notes: ^a Average points across the clinical domain are not available for Scotland.

^b % of practices achieving maximum points is not available for Scotland or Wales.

Sources: www.qof.ic.nhs.uk [last accessed 27 June 2010]; www.isdscotland.org/isd/5731.html [last accessed 27 June 2010]; www.dhsspsni.gov.uk/qof_bulletin_07_08.pdf [last accessed 27 June 2010]; www.wales.nhs.uk/sites3/page.cfm?orgid=480&pid=34176 [last accessed 27 June 2010]

Discussion

Objective evaluation of the QOF is difficult because the scheme was introduced nationally, i.e. there was no randomised control element. In addition, there is no pre-QOF time series for the QOF indicators, meaning that it is difficult to determine the extent to which the QOF rewarded GPs for what they were already doing, what they would have done anyway and what was really a genuine response to a change in financial incentives (Hutchinson, 2008). However, Campbell *et al.* (2007) found that there were improvements in some aspects of clinical care over and above the underlying trend (for asthma and diabetes the improvement was significant, but not for coronary heart disease) after the introduction of the pay-for-performance

²⁰ Comparisons with earlier years are not valid as the set of indicators (and available points) was revised in April 2006. In addition, data for 2008/2009, while available, are not presented, as the set of indicators and available points changed again in 2008.

scheme. Later analysis (Campbell *et al.*, 2009) found that although these initial improvements were maintained, for two of the three conditions studied (heart disease and asthma), improvements in the quality of care reached a plateau a year after the scheme's introduction. However, within these overall trends for care, they found significant differences between aspects of care that were linked to incentives and aspects of care that were not linked to incentives. For asthma and heart disease, mean quality score for aspects of care that were not linked to incentives dropped between 2005 and 2007, whereas mean scores for aspects of care that were linked to incentives continued to increase. For all aspects of care (whether associated with incentives or not) and for all three conditions, rates of quality improvement slowed considerably after 2005.

A number of criticisms have been levelled against the QOF. Firstly, it is unclear whether the high levels of quality attained after QOF was introduced in 2004 reflect improvements that were already underway or whether existing trends towards improvement were accelerated. While it was expected that GPs on average would attain 75 per cent of total points for performance-related payments, it turned out that attainment exceeded 95 per cent in some clinical domains for the first year following introduction (Fujisawa *et al.*, 2008). The studies above suggest that many of the improvements were already underway. Secondly, the structure of the QOF has been criticised on the basis that it does not reward further improvement once targets have been attained. As GPs' net incomes rose by an average of 33 per cent over the two years after the introduction of the new contract in April 2004 (Kmietowicz, 2007), it may simply be the case that GPs had sufficient income and little personal motivation to improve performance and income further. Alterations to the pay-for-performance scheme in 2006 introduced higher thresholds for maximum clinical-quality payments and a wider range of indicators.

It has also been suggested that continuity of care declined after pay-for-performance; practices focused on meeting rapid-access targets in which access to any doctor in the practice within 48 hours was linked to incentives but access to a particular doctor was not. The requirement in the UK to enter information electronically (to feed back in to the QOF data collection exercise) has led some UK GPs to note that the nature of an office visit has changed, with less direct interaction with the patient and more concern with filling out the various fields that pop up electronically (McDonald *et al.*, 2009).

The potential for 'gaming' must be considered; the prevalence and exclusion reporting aspects of the QOF has been mentioned in this regard. While the proportion of patients excluded from the calculation of QOF points is approximately 5 per cent (and has remained relatively unchanged since introduction), practices below the threshold for an indicator have an incentive to increase exception reporting rates. Gravelle *et al.*(2008) found that this was indeed the case, with

practices performing worse in 2004/2005 significantly more likely to engage in exception reporting in 2005/2006. They also found that practices with lower performance in 2004/2005 had significantly lower prevalence rates in 2005/2006.

General criticisms of pay-for-performance schemes is that their main effect is to promote better recording of care rather than better care (Campbell *et al.*, 2007). There are also potential, unintended consequences of such schemes. These include 'myopia' (the pursuit of short-term targets at the expense of long-term objectives, including the neglect of 'non-targeted' work areas), 'misrepresentation' (deliberate manipulation of data so that reported behaviour differs from actual behaviour) and decrease in motivation (where external incentives crowd out to desire to do a task well for its own sake). Unintended effects on other aspects of care or on physician motivation include encouraging physicians to avoid sicker patients, exacerbating disparities and neglecting types of care for which quality is not measured (McDonald *et al.*, 2009).

CASE STUDY 2.4

US (Medicare) – Physician Group Practice Demonstration (PGP)

Overview

In April 2005, the Centers for Medicaid and Medicare Services (CMS) established the Physician Group Practice (PGP) demonstration, the first pay-for-performance initiative for physicians under the Medicare programme.²¹ It offers ten large physician practices the opportunity to earn performance payments for improving the quality and cost efficiency of health care delivered to Medicare beneficiaries. The ten physician groups each have at least 200 physicians and together represent 5,000 physicians and 220,000 Medicare beneficiaries (Trisolini *et al.*, 2008). Eight of the 10 groups are part of an integrated delivery system and are therefore affiliated with a hospital. The remaining two groups collaborate with hospitals in their service area. The demonstration was established initially for three years and then extended to five and was due to end in April 2010.

Physician groups continue to be paid on a fee-for-service basis. Performance indicators on both quality and cost efficiency are used to calculate additional payments. Each PGP earns quality performance payments based on the size of its quality performance pool and the proportion of quality targets it has met. The demonstration includes 32 quality measures which focus on measures from five condition modules: coronary artery disease, diabetes, heart failure, hypertension and preventive care. The quality measures have been phased in over the course of the demonstration; diabetes in year one, heart failure and coronary artery disease in year two and all five modules active from year three. As quality measures were progressively added in years two and three of the programme, the quality portion of the payment has increased to 50 per cent (Centers for Medicare and Medicaid Services, 2009a). See Table A2.4.1 for an overview of the quality measures and points available.

²¹ In the US, a demonstration is essentially a pilot programme.

TABLE A2.4.1

US Medicare Physician Group Practice (PGP) Demonstration

Indicator	Example	# Measures	# Points
Diabetes Mellitus	HbA1c (blood sugar) management	10	22
Congestive Heart Failure	Left ventricular function assessment	10	13
Coronary Artery Disease	Antiplatelet therapy	7	10
Hypertension	Blood pressure screening	3	3
Cancer Screening	Breast cancer screening	2	5
Total		32	53

Notes: PGPs become eligible for quality performance payments by meeting threshold and improvement-over-time targets. For each quality measure, PGPs must satisfy at least one of three targets:

- The higher of either 75 per cent compliance, or where comparable data are available, the mean value of the measure from the Medicare Health Plan Employer Data and Information Set (HEDIS).
- The 70th percentile Medicare HEDIS level (again, where comparable data are available).
- A 10 per cent or greater reduction in the gap between the level achieved by the PGP in the demonstration's base year and 100 per cent compliance in year 1 (Trisolini *et al.*, 2008).
- In year one, the total number of possible points was 22, while it was 45 in year two and 53 in year three onwards (Centers for Medicare and Medicaid Services, 2009a).

Source: Centers for Medicare and Medicaid Services, 2009a

For the assessment of cost control performance, a comparison population is also defined for each PGP. Under the demonstration, Medicare savings for each PGP are calculated by comparing actual spending to a target. The target is set as the PGP's own base year per capita expenditure trended forward by the comparison group's expenditure growth rate. Case mix adjustments are applied to account for changes over time in the type of patients treated by the PGP and included in the comparison group. Medicare savings in excess of 2 per cent are distributed to each PGP partly on the magnitude of savings achieved by the PGP and on its performance on the set of quality measures. Medicare retains 20 per cent of the cost savings (Trisolini *et al.*, 2008).

Results

During year one (April 2005-March 2006), all ten groups achieved benchmark or target performance levels on at least seven of the ten diabetes quality measures. In addition, two of the demonstration groups achieved savings in expenditure sufficient to earn performance payments of US\$7.3m (out of a total of US\$9.5m).²² The groups that shared in savings had inpatient and outpatient risk-adjusted expenditure growth rates for their assigned populations that were lower than those for their comparison group populations (Trisolini *et al.*, 2008).

In year two, all 10 of the participating physician groups continued to improve the quality of care for chronically ill patients by achieving benchmark or target performance on at least 25 out of 27 quality markers for patients with diabetes, coronary artery disease and congestive heart failure. Five of the physician groups achieved benchmark quality performance on all 27 quality measures. Four physician

²² At time of writing (June 2010), USD\$1.00=€0.81 (www.xe.com) [last accessed 28 June 2010].

groups shared in savings of US\$13.8m (as their share of a total of US\$17.4m in Medicare savings).

Over the first three years of the demonstration, physician groups increased their quality scores an average of 10 percentage points on the diabetes, 11 percentage points on the congestive heart failure measures, 6 percentage points on the coronary artery disease measures, 10 percentage points on the cancer screening measures and 1 percentage point on the hypertension measures. In addition to achieving benchmark performance for quality, five physician groups shared in savings of US\$25.3m as their share of a total of US\$32.3m in Medicare savings (Centers for Medicare and Medicaid Services, 2009a).

Discussion

Health-care providers traditionally place little emphasis on care transitions, largely because clinical responsibilities and associated reimbursements are often divided between providers. The PGP demonstration rewards practices for contributing to reductions in overall Medicare spending, so they have a financial incentive to better manage the care transitions that may be required for the treatment of chronic disease. A barrier to previous attempts to establish direct financial incentives for quality and efficiency on the part of providers has been the inability of providers to accept financial risk; by eschewing a downside risk for underperformance, the PGP demonstration focuses instead on the gains from better than expected performance (Trisolini *et al.*, 2008). The PGP also incentivises the expansion in the role of non-physician providers of care, as well as increasing patient engagement and self-management.

The latest evaluation report for the CMS concluded that *'access has been improved while providing high quality care. The effect of the demonstration on promoting expenditure savings is less certain'* (Centers for Medicare and Medicaid Services, 2009b; 17). In particular, for the four practices earning performance payments in year two, actual expenditures per person were 3.5 per cent lower than target expenditure (and this difference was statistically significant). However, this performance was also observed in the pre-demonstration period (in the pre-demonstration period the difference was 3.9 per cent, again statistically significant, meaning that the difference between the pre- and post-demonstration periods was not statistically significant). This suggests that such practices had favourable cost trends before the demonstration and such trends may have occurred in the absence of the demonstration (Centers for Medicare and Medicaid Services, 2009b).²³

²³ In addition, it is observed that practices with affiliated hospitals found it more difficult to reduce expenditures. As the largest component of Medicare expenditure is inpatient services, the presence of a hospital within the practice organisation may interfere with the strategy for reducing expenditure on inpatient services (Centers for Medicare and Medicaid Services, 2009b).

A number of complementary Medicare demonstrations are also evaluating initiatives with pay-for-performance components. The 'Medicare Care Management Performance' demonstration is a pay for performance demonstration with approximately 2,300 physicians representing almost 700 practices in four states (Arkansas, California, Massachusetts and Utah). It started in July 2007 and provides financial rewards for practices' performance on 26 clinical quality measures covering care for diabetes, congestive heart failure, coronary artery disease and the provision of preventive health services to beneficiaries with chronic conditions. It also will reward physicians who are able to report measures electronically (Kuhn, 2008).

Earlier this year, a new Medicare demonstration, which aims to provide as many as 1,200 small to medium-sized primary care practices across 12 sites nationwide with incentive payments for increasing electronic health record (EHR) functionality and improving care through the use of EHRs, was announced. Individual physicians could earn up to US\$58,000 over the course of the five-year demonstration or up to US\$290,000 per practice. By design, the demonstration will be budget neutral, requiring that associated costs be offset by savings resulting from more efficient health care delivery. See also Case Study 2.7 on the US Medicare 'Medical Home Demonstration'.

CASE STUDY 2.5

Australia – Practice Incentives Program (PIP) and Service Incentives Program (SIP)

Overview

The Practice Incentives Program (PIP) and Service Incentives Program (SIP) are part of a blended payment system for Australian GPs. The PIP was introduced in 1999 and from 2001, practices registered for the PIP could also avail of payments under the SIP (Scott, 2005). Both are voluntary programmes, although access to the programmes is available only to practices that are fully accredited or new practices that are registered for accreditation and must be fully accredited within 12 months of joining. As of May 2009, 4,804 GP practices in Australia were participating in the PIP, representing 82 per cent of the total patient population. A slightly lower number were participating in the SIP; representing approximately 79 per cent of the total patient population (Commonwealth of Australia, 2008).²⁴ SIP payments are targeted more towards the achievement of measured health outcomes, while PIP payments are primarily geared towards improvements in process and structures of care.

Payments made through the programme are in addition to other income earned by the general practitioners and the practice, including Medicare rebates.²⁵ The aim of the PIP and SIP is to overcome some of the limitations of the fee-for-service arrangements in Australian general practice; under fee-for-service, practices that provide numerous quick consultations receive higher payment than those that take the time to look after the ongoing health care needs of their patients. Payments under the PIP and SIP are (generally) per patient; the blended method of payment is therefore intended to mediate the more extreme incentives of over-provision associated with fee-for-service and under-provision associated with salary and capitation methods (Scott, 2005).

There are currently thirteen broad elements to the payment formula for PIP/SIP, some with several tiers of payment. Practices may qualify for any or all payments, which are cumulative. Payments are calculated quarterly. Table A2.5.1 illustrates the specific indicators across all areas. The majority of the payments refer to process or structures of care, rather than outcomes. The incentive payments that specifically focus on health outcomes (the SIP) relate to asthma care, cervical screening and diabetes management, with a new SIP for 'Indigenous Health' introduced in May 2010. These incentives follow a similar pattern of payments, in that they all provide:

²⁴ See also www.medicareaustralia.gov.au/statistics/div_gen_prac.shtml [last accessed 27 June 2010].

²⁵ Medicare is the Australian programme that provides free general practitioner care for all resident Australians. The federal government reimburses doctors for services provided to patients on a fee-for-service basis (the fee is set and patients are only liable for charges where the GP sets a charge in excess of the Medicare fee, i.e. does not engage in 'bulk billing').

- a sign-on payment;
- a registration payment; and
- a service incentive payment: where a payment is made to providers (working within a PIP practice) for the provision of the specified service to the relevant population.

In 2003, income from the PIP was estimated to account for approximately 9 per cent of the gross income of a GP (Scott, 2005), while in 2008/2009, a total of AUD\$298.2m in PIP/SIP payments were made to 4,804 GP practices (implying an average payment of AUD\$62,073 per practice) (Commonwealth of Australia, 2008).²⁶

²⁶ At time of writing (June 2010), AUD\$1.00=€0.57 (www.xe.com) [last accessed 28 June 2010].

TABLE A2.5.1

Australia Practice Incentives Payment and Service Incentives Payment Indicators and Payments

Indicator	Description	Value
After Hours Care	Tier 1: The practice must ensure all practice patients have access to 24-hour care including access to out of hours visits at home, in a residential or aged care facility and in hospital, where necessary and appropriate Tier 2: The practice general practitioners (GPs) must provide at least 10 hours per week of after hours cover (on average) to practice patients (15 hours in practices with over 2,000 SWPEs ^a) Tier 3: The practice GPs provide after hours cover to practice patients 24 hours, seven days a week	AUD\$2 per SWPE
Aged Care Access	Tier 1: The practice provides at least 60 Medicare Benefits Schedule (MBS) services Tier 2: The practice provides at least 140 Medicare Benefits Schedule (MBS) services	AUD\$1,000 (per practice) AUD\$1,500 (per practice)
Asthma Care	The Asthma Incentive consists of the following components: 1. sign-on payment: one-off payment to PIP practices that implement a cycle of care for patients with moderate to severe asthma 2. service incentive payment: payment to practitioners working within a PIP practice who complete an asthma cycle of care for patients with moderate to severe asthma, payable once per year per patient	AUD\$0.25 per SWPE (sign-on) AUD\$100 per eligible patient (service)
Cervical Screening	The Cervical Screening Incentive consists of the following components: 1. sign-on payment: one-off payment to PIP practices that engage with the state/territory Cervical Screening Registers 2. outcomes payment: payment to PIP practices where a specified proportion of women aged between 20 and 69 years has been screened in the last 30 months 3. services incentive payment: a payment to practitioners working within a PIP practice for screening women between 20 and 69 years, who have not had a cervical smear within the last four years	AUD\$0.25 per SWPE (sign-on) AUD\$3 per eligible patient (outcomes) AUD\$35 per eligible patient (service)
Diabetes Care	The Diabetes Incentive consists of the following components: 1. sign-on payment: one-off payment for notifying the Australian Government that the PIP practice uses a diabetes register and recall/reminder system 2. outcomes payment: payment to PIP practices that complete an annual cycle of care for a target proportion of their patients with diabetes 3. service incentive payment: payment to providers working within a PIP practice for each annual cycle of care for a patient with diabetes, payable once per year per patient	AUD\$1 per SWPE (sign-on) AUD\$20 per eligible patient (outcomes) AUD\$40 per eligible patient (service)
Domestic Violence Support	All practices in rural and remote areas who have an appropriately trained and qualified practice nurse or Aboriginal health worker available for a minimum number of sessions per week for domestic violence support	not available
Indigenous Health	The Indigenous Health Incentive consists of the following components: 1. sign-on payment: a once-off payment to practices that join the incentive and agree to undertake specified activities to improve the provision of care to their Aboriginal and Torres Strait Island populations with a chronic disease 2. a patient registration payment: a payment for each Aboriginal and Torres Strait Islander patient that is registered with the practice for the management of chronic disease in a calendar year 3. outcomes payment: Tier 1: a payment for each registered patient for whom a targeted level of care is provided by the practice in a calendar year Tier 2: a payment for each registered patient for whom the majority of care is provided by the practice in a calendar year	AUD\$1,000 (per practice) AUD\$250 (per patient) AUD\$100 (per patient) AUD\$100 (per patient)
e-Health	To be eligible for the PIP e-Health Incentive, practices must: 1. have a secure messaging capability, which is provided by an eligible supplier 2. have (or have applied for) a location/site Public Key Infrastructure (PKI) certificate for the practice and each practice branch and make sure that each medical practitioner from the practice has (or has applied for) an individual PKI certificate 3. provide practitioners from the practice with access to a range of key electronic clinical resources	AUD\$6.50 (per SWPE per quarter), capped at €50,000 per annum
Practice Nurse	To employ or retain the services of an appropriately trained and qualified practice nurse and/or Aboriginal health worker for the minimum number of sessions per week (the number of sessions depends on practice list size)	AUD\$7 per SWPE per year (AUD\$8 in urban areas), capped at AUD\$35,000 per annum (AUD\$40,000 in urban areas)

Indicator	Description	Value
Procedural	<p>This initiative acknowledges that general practices in rural and remote areas are often required to deliver a wide range of services such as obstetrics, surgery and anaesthetics which in urban areas are typically delivered by specialists. For a practice to be eligible for the payment it must participate in the PIP, be located within the target area Rural, Remote and Metropolitan Area classification (RRMAs) 3-7 and have at least one GP who provides one or more of the procedural services described in the definition of a procedural general practitioner. There are four tiers:</p> <p>Tier 1: A GP in a rural or remote practice who provides any service in the six month reference period that meets the definition of a procedural service</p> <p>Tier 2: A GP meets the Tier 1 requirement and provides after hours procedural services on a regular or rostered basis (15 hours per week on average) throughout the six month reference period</p> <p>Tier 3: A GP meets the Tier 2 requirements and provides surgical and/or anaesthetic and/or obstetric services totalling 25 or more eligible procedures in the six month reference period</p> <p>Tier 4: A GP meets the Tier 2 requirements and delivers 10 or more babies in the six month reference period or meets the obstetric needs of the community</p>	<p>AUD\$1,000 per GP per 6 month reference period</p> <p>AUD\$2,000 per GP per 6 month reference period</p> <p>AUD\$5,000 per GP per 6 month reference period</p> <p>AUD\$8,500 per GP per 6 month reference period</p>
Quality Prescribing	On average, the practice participates in three activities (one of which is a clinical audit) per FTE GP, by 30 April each year.	AUD\$1 per SWPE per annum
Rural Practice	All practices whose main location is situated outside capital cities and other major metropolitan areas are be paid a rural loading.	Ranges from 15 per cent in large rural centres to 50 per cent in other rural locations
Teaching	A teaching payment of is made to practices for each three hour teaching session provided to an undergraduate medical student.	AUD\$100 (for each three-hour session)

Note: ^a Standardised Whole Person Equivalent (SWPE) is used to measure practice size and includes a weighting factor for the age and gender of patients. The average FTE (Full Time Equivalent) GP sees approximately 1,000 SWPEs annually.

Source: www.medicareaustralia.gov.au/provider/incentives/pip/index.jsp [last accessed 27 June 2010]

Discussion

Formal evaluations of the PIP/SIP are not available, so it is difficult to assess the extent to which the PIP/SIP contributes to improved health outcomes. However, an examination of the contribution of the PIP to the health of the Aboriginal and Torres Strait Islander population noted that there is little evidence that the PIP had any effect on health outcomes (Couzos *et al.*, 2010). In an effort to mitigate health inequalities and to encourage practices to better identify this group of the population, the PIP was extended in May 2010 to include an 'Indigenous Health Incentive'. As with many of the other components of the PIP/SIP, the 'Indigenous Health Incentive' contains a sign-on payment, a patient registration payment and an outcomes payment, although the latter is relatively less lucrative. As discussed in Chapter 3, a general criticism of 'pay for performance' incentives is that they tend to focus on structural and procedural aspects of care, largely due to measurement issues, rather than health outcomes and the Australian PIP/SIP is no different in this regard.

CASE STUDY 2.6

Sweden – ÄDEL Reform

Overview

The 1992 Care of the Elderly Reform (the 'Ädel' Reform) transferred responsibility for the financing and provision of care of the elderly from the counties to the municipalities. Essentially, municipalities became financially liable for patients who have completed their treatment in an acute hospital. The local municipalities were required to pay the county councils *per diem* for care delivered to any patient in hospital when that individual was considered fully medically treated by a doctor. In a similar vein, the 1995 Mental Health Reform, aimed at improving the quality of life for mental health patients, made the municipalities financially responsible for these patients when they no longer required hospital care, i.e. when they were fully medically treated (Glenngård *et al.*, 2005).²⁷

Discussion

It has been estimated that this transfer resulted in a reallocation of 20 per cent of financing and provision from county to municipal level (Nolte *et al.*, 2008a). The main reason for the ÄDEL reform was a perceived over-medicalisation of the care of older people in geriatric facilities and in nursing homes that were operated much like hospitals. Also, in many hospitals, as many as 20 per cent of patients in internal medicine occupied beds despite not requiring acute hospital care; they remained in hospital because of a shortage of nursing home beds.

Transferring financial responsibility from county to municipality level following the 1992 reform resulted in an almost immediate reduction of the number of 'bed blockers', falling from approximately 15 per cent in acute hospital care in 1990 to 6 per cent in 1994 and subsequently stabilising at a low level (Nolte *et al.*, 2008a). The average length of stay also fell to four days for surgery and five days for internal medicine. This led to a reduction of the number of acute hospital beds from 12 per 1,000 in 1988 to 4 per 1,000 in 1998.

However, this was accompanied by a significant increase in long-term care capacity, with 7.5 per cent of over 65s receiving long-term care in institutions and 9.5 per cent receiving formal care at home in 2004. In a comparison of 17 OECD countries in 2004, only Hungary had a higher proportion (8.0 per cent) of the over 65s population in long-term institutional care (Wren, 2009). The transfer of many ill, older people into their care placed great strains on municipalities, significantly changed the hitherto generous access to home help services and increased informal care demands (Wren, 2009). During the 1990s, the municipalities did not have the

²⁷ After patients have had 3 months of consecutive inpatient psychiatric treatment, the local municipalities must provide housing, occupational services and some rehabilitation services (Glenngård *et al.*, 2005).

financial capacity to expand care for older persons to substitute for the reduction in hospital care. In 1993, 23 per cent of people aged 80 years and over received home-help services and this had reduced to 19 per cent in 2003. There has been a consequent shift in resources to those who are in greatest need of assistance (Glenngård *et al.*, 2005).

CASE STUDY 2.7

US (Medicare) – Medical Home Demonstration

Overview

In 2006, the Tax Relief and Health Care Act mandated a demonstration in up to eight states to provide targeted, accessible, continuous and co-ordinated care to Medicare beneficiaries with chronic or prolonged illnesses. The Medicare 'Medical Home Demonstration' was expected to begin in January 2010 and continue through to December 2012, with the evaluation continuing for another year. The main purpose of the Medical Home Demonstration is to determine whether Medicare 'medical homes' reduce costs to Medicare by avoiding unnecessary care, co-ordinating and rationalising care and avoiding preventable hospitalisations and readmissions. The demonstration is also designed to determine whether medical homes improve the quality of health care by avoiding inconsistent treatments and medications, increasing the amount of preventive care and improving patient adherence (Mathematica Policy Research, 2008).

The demonstration is directed specifically at 'high need' patients, i.e. those with prolonged or chronic illnesses that require regular monitoring, advising and treatment. The majority (86 per cent) of Medicare beneficiaries have one or more chronic conditions and many suffer from five or more chronic conditions. Most Medicare beneficiaries with chronic conditions receive care from 10 or more physicians in any given year. One well documented result of this fragmentation in care for Medicare beneficiaries is the rising cost of care (Mathematica Policy Research, 2008).

It is a three year programme providing reimbursement in the form of a care management fee to practices for the services of a personal physician. Practices qualify for either Tier I or Tier II 'medical home' status on the basis of achievement under six general domains (continuity of care, clinical information systems, delivery system design, decision support, patient/family engagement and care co-ordination) and up to 28 specific core capabilities. Tier I practices will be required to have 17 core capabilities, while Tier II practices will be required to have all 19 of the core capabilities, plus any three of the additional capabilities.²⁸ It is anticipated that 50 practices in each of the 8 states would be chosen for the demonstration, yielding a total of 400 practices, 2,000 physicians and 400,000 beneficiaries.

²⁸ An example of a core capability is 'the practice reviews all medications a patient is taking including prescriptions, over the counter medications and herbal therapies/supplements' while an example of an additional capability is 'the practice uses electronic information to generate lists of patients and take action to remind patients or clinicians proactively of services needed, such as patients needing clinician review or action or reminders for preventive care, specific tests or follow-up visits' (see www.cms.hhs.gov/DemoProjectsEvalRpts/ [last accessed 27 June 2010]).

As with all Medicare services, the Relative Values Scale Update Committee of the American Medical Association determines the work relative value units (RVUs) required in providing different services. CMS used the Medicare physician fee schedule for 2009 to convert the medical home RVUs into per patient per month fees of US\$40.40 for Tier I practices and US\$51.70 for Tier II practices. Payments are further adjusted using the Hierarchical Condition Code (HCC) scores, which reflect severity and burden to the physician. For patients with an HCC score less than 1.6 (who are less ill and require less physician effort to manage), payments are US\$27.12 per month and US\$35.48 per month for Tier I and II practices respectively. For patients with an HCC score greater or equal to 1.6²⁹, payments are US\$80.25 per month and US\$100.35 per month for Tier I and Tier II practices respectively. In addition, if the medical home demonstration generates more than 2 per cent savings to Medicare, CMS will share up to 80 per cent of the savings with the participating practices.

Discussion

While no evaluation of the Medicare 'Medical Home Demonstration' is currently available, it is worth reviewing the evidence on 'medical homes' more generally. The general concept of a 'medical home' is defined as primary care that is accessible, continuous, comprehensive, family-centred, coordinated, compassionate and culturally effective (Abrams *et al.*, 2009).³⁰

The need for a patient-centred medical home is particularly acute in the US, where only 65 per cent of adults report that they have an accessible primary care provider and where there are wide variations by income, insurance status and race (Beal *et al.*, 2007). Only a little more than half of all Americans report open and clear communication with their primary care provider. When there is good communication and care is delivered in a timely and coordinated manner, patients are more likely to adhere to treatment plans, fully participate in decisions and receive better care overall (Abrams *et al.*, 2009).

²⁹ It is estimated that 25 per cent of Medicare beneficiaries have an HCC score greater than or equal to 1.6 (Mathematica Policy Research, 2008).

³⁰ In the US, the National Committee for Quality Assurance has announced that, to qualify as a patient-centred medical home, a primary care practice must demonstrate proficiency in at least five of the following 10 areas:

- Written standards for patient access and patient communication
- Use of data to show they are meeting this standard
- Use of paper-based or electronic charting tools to organise clinical information
- Use of data to identify patients with important diagnoses and conditions
- Adoption and implementation of evidence-based guidelines for three conditions
- Active support of patient self-management
- Tracking system to test and identify abnormal results
- Tracking referrals with paper-based or electronic system
- Measurement of clinical and/or service performance by physician or across a practice
- Reporting performance across the practice or by physician (Abrams *et al.*, 2009).

Creating medical homes requires significant restructuring of the existing health care delivery system to ensure that currently isolated doctors' offices and hospitals are incentivised to work together (and electronic information systems are key in this regard). Another key component of the medical home model is ensuring that payment mechanisms incentivise physicians to strengthen and reward primary care. Fee-for-service payments in particular do not incentivise providers to engage in preventive care.

Medical homes are associated with improved preventive care and chronic disease management. According to a 2007 survey by the Commonwealth Fund, 42 per cent of individuals with a medical home have regular blood pressure checks, compared with 20 per cent without a regular source of care or medical home. Patients with medical homes are also more likely to report better access to care, better coordination of care, improved communication with their primary care provider and fewer medical errors (Beal *et al.*, 2007). Medical homes are also efficient, with patients in medical homes less likely to have medical reports unavailable during a visit or to undergo duplicate tests (Abrams *et al.*, 2009).

CASE STUDY 2.8**US – Kaiser Permanente Integrated Health Care***Overview*

Kaiser Permanente is the leading integrated health-care system in the US.³¹ Founded in 1945, it is a not-for-profit, multi-specialty, group-practice prepayment programme serving the health care needs of 8.6m members in 9 states (Hawaii, California, Oregon, Washington, Colorado, Ohio, Maryland, Virginia and Georgia) and the District of Columbia. Kaiser Permanente North California (KPNC) is the largest of the eight regional entities (with 75 per cent of all members). Due to its history of being a support facility for an industrial production line, the Kaiser Permanente system focussed on keeping workers healthy and treating the early signs of ill-health. Kaiser Permanente built its own hospitals, becoming a self-contained delivery system with its own full-time doctors, nurses and other staff. The electronic health record is a key component in supporting the focus on preventive care. Coverage provided depends on the individual's chosen health plan, ranging from low coverage health plans with relatively high co-payments to plans providing extensive coverage and minimal co-payments. During recent decades, Kaiser Permanente has also introduced disease management programmes for coronary artery disease, heart failure, diabetes and asthma.

The Kaiser Permanente Medical Care Program comprises three separate but interdependent groups: the Kaiser Foundation Health Plan (KFHP), Kaiser Foundation Hospitals (KFH) and Kaiser Permanente Medical Groups (PMG). These entities co-operate to organise, finance and deliver medical care under contracts built on a common vision, joint decision-making and aligned incentives (McCarthy *et al.*, 2009). The PMGs are multi-specialty groups of physicians who accept a fixed capitation payment to provide medical care exclusively for Kaiser health plan members in Kaiser facilities.³² Facilities include 35 in-patient medical centres in three states (California, Oregon and Hawaii), along with 431 out-patient medical facilities in all regions.³³ Kaiser Permanente's workforce comprises almost 167,000 employees of KPNC and KPNC and 14,600 physicians working in the PMGs (McCarthy *et al.*, 2009). To the public, the hospital and general practitioner type facilities are seen as one

³¹ Other large integrated health care systems in the US include the Veterans' Administration (VA) and Geisinger (McCarthy *et al.*, 2009). The VA provides health care services to approximately 5.5m eligible veterans and their dependents, primarily by salaried doctors working in government-owned facilities (American College of Physicians, 2008). It is a single-payer system. Funds are allocated to geographic regions that typically contain several hospitals. If funding runs out before the end of a fiscal year, services are curtailed. Reforms in the mid-1990s included the adoption of an electronic medical record system and an increased emphasis on primary care, preventive services and case management for long-term care. Comparisons of VA patients with the general population consistently show higher quality of care, particularly for preventive and long-term care. The VA actively manages prescription budgets by relying on a formulary that encourages the use of generic and lower-cost drugs.

³² Physicians are also eligible to earn an annual performance incentive payment of up to 5 per cent based on measures of workload, group contribution, quality, service and patient satisfaction (McCarthy *et al.*, 2009).

³³ In the other states, full integration does not exist because Kaiser does not own hospitals; in these cases, while local organisations seek to develop good working relationships with contracted hospitals to facilitate case management, lack of electronic linkages can hinder the transfer of information (McCarthy *et al.*, 2009).

organisation. An electronic health record facilitates information exchange.³⁴ Kaiser Permanente may also contract with other providers for the provision of health care services (e.g. long-term care).

A central component of the Kaiser Permanente approach is a focus on preventive care and care for those with chronic diseases. The approach is built on the philosophy that a strong primary care system offers the most efficient way to interact with most patients most of the time, while recognising that some patients may need additional support in other settings. Patients are stratified into three groups, with differing levels of engagement by the primary care team and ancillary staff such as nurses and medical assistants (McCarthy *et al.*, 2009):

- Primary care with self-care support (for the 65 to 80 per cent of patients whose conditions are generally responsive to lifestyle changes and medication)
- Assistive care management (for the 20 to 30 per cent of patients whose diseases are not under control at level one and who require assistance to address adherence problems, complex medication regimes and co-morbidities)
- Intensive case management and specialty care (for the 1 to 5 per cent of patients with advanced disease and complex co-morbidities)

The Colorado region also offers a telephone-based care co-ordination service to improve follow-up care for patients discharged from hospital or a skilled nursing facility. The programme also targets patients who frequently present at the emergency department (ED), or who are at risk of hospitalisation because of multiple chronic conditions. Care co-ordinators (typically, specially trained nurses or social workers) contact discharged patients within 24 hours to assess needs and determine appropriate services such as medication review, development of self-care skills, making referrals to community resources, etc. The annual cost savings from reduced re-admissions (2.4 per cent of intervention patients versus 14.0 per cent of usual-care patients) and ED visits (7.0 per cent versus 16.0 per cent respectively) associated with the programme were estimated to be \$4m (McCarthy *et al.*, 2009).

³⁴ Central to the system is KP HealthConnect, a comprehensive health information system that integrates an electronic health record (EHR) with the tools to support physicians in delivering evidence-based medicine, combined with an online patient portal that enhances members' access to, and involvement in, their care. Patients in the Northwest region who used online services made 10 per cent fewer primary or urgent care visits than before they had online access (7 per cent fewer visits when compared with the control group of patients) (McCarthy *et al.*, 2009). However, while an EHR enhances physicians' ability to deliver high-quality medicine and meet the needs of patients, it does require more time for information recording and management. Realising that while such a system may increase a physician's workload initially, but increases the efficiency of visiting as more patients use it, is key to the acceptability of the EHR (McCarthy *et al.*, 2009).

Discussion

Feachem *et al.* (2002) compared the costs and performance of the English NHS with those of Kaiser Permanente in California. They concluded that Kaiser Permanente provided much better value, largely by using only one third of the acute bed days used in the NHS. This was explained by better integration throughout the system, efficient management of hospital use, the benefits of competition and greater investment in IT. Ham *et al.* (2003) put forward a number of explanations for the much lower rates of hospital admission and length of stay in Kaiser in comparison with the NHS, including integration of funding with provision of service, integration of inpatient care with outpatient care and prevention, a focus on minimising hospital stays, a focus on self-care, emphasis on skilled nursing and patients' ability to leave for another system if care is unsatisfactory. However, the claims were disputed and serious criticisms were levelled at the methods used in conducting the comparison (Strandberg-Larsen *et al.*, 2007). The superiority of the Kaiser Permanente model was largely attributed to greater resources.

The extent to which the Kaiser Permanente model is transferable to other health care settings is debateable. Despite its focus in the literature, Kaiser Permanente covers less than three per cent of the US population. During the 1980s and 1990s, Kaiser Permanente tried to expand its operations, but succeeded in establishing operations only in Georgia and the mid-Atlantic states. The Kaiser model may be difficult to replicate in markets with competing providers, or in those with medical practitioners paid on a fee-for-service basis (McCarthy *et al.*, 2009). Notwithstanding these concerns, the essential features of the Kaiser Permanente model, i.e. an organisation that supports the delivery of preventive, acute and chronic care via appropriate governance arrangements, payment methods and IT, has the capacity to deliver better quality care.

CASE STUDY 2.9

Canada – A Structure for Integrated Health Care in Ontario

Overview

At a provincial level, responsibility for health care in Canada is typically divided between ministries of health and regional health authorities (RHAs) (Marchildon, 2005; Elson, 2006). Funding was devolved to the RHAs to be allocated on a population health needs basis, while health-care delivery was established on a geographical basis (Marchildon, 2005).³⁵ The new regional structure has been considered successful in achieving horizontal and vertical integration by reducing the size of acute care facilities and improving the continuity and coordination of care (Marchildon, 2005).

This case study will concentrate on the organisation of health care in Ontario, which has introduced regionalisation only relatively recently (Marchildon, 2005; Elson, 2006; Jiwani *et al.*, 2008).

Local Health Integration Networks (LHINs)

Under the Local Health System Integration Act, 2006, 14 local health integration networks (LHINs) were created as not-for-profit organisations in April 2007 to take full responsibility for planning and managing health-care services for their populations (KPMG, 2008; Ministry of Health and Long-Term Care, 2009a). There is considerable variation both in the size (in terms of population) of LHINs and the number of health service providers within each area (see Table A2.9.1). Adjusting for population size, networks with large populations appear to have relatively small numbers of health service providers and certainly less than the average. However, this crude comparison does not take account of the health status of the population.

³⁵ Provinces retained responsibility for remuneration of physicians and for pharmaceuticals. Critics argue that this limits RHAs' powers to manage health-care delivery (Marchildon, 2005).

TABLE A2.9.1

Population and Health Service Providers by Local Health Integration Network, 2008

LHIN	Population	Health Service Providers	
		Number	Per 100,000 population ^a
North West	242,500	155	63.92
North Simcoe Muskoka	425,000	85	20.00
South East	485,500	126	25.95
North East	567,900	265	46.66
Erie St Clair	650,000	113	17.38
Waterloo Wellington	685,400	103	15.03
Central West	772,973	49	6.34
South West	1,000,000	224	22.40
Mississauga Halton	1,040,800	81	7.78
Champlain	1,100,000	213	19.36
Toronto Central	1,146,800	243	21.19
Hamilton Niagara Haldimand Branta	1,400,000	233	16.64
Central East	1,400,000	173	12.36
Central	1,600,000	135	8.44
Average	894,062^a	157	19.77

Notes: Data relate to 31 March 2008.

^a Calculated using population data provided.

^b Calculated using data provided on population and number of health service providers.

Sources: KPMG, 2008.

Population data for Hamilton Niagara Haldimand Brant LHIN obtained from Hamilton Niagara Haldimand Brant LHIN (2009).

LHINs do not have comprehensive responsibility for all health-care services and even for those services within their remit, they do not necessarily have full authority (Elson, 2006; Ministry of Health and Long-Term Care, 2009a; b). For instance, LHINs have responsibility for funding public and private hospitals, but they are not permitted to order amalgamation or closure of providers or changes to provider boards (Ministry of Health and Long-Term Care, 2009a). Other services within the charge of LHINs include community care access centres, community support service organisations, mental health and addiction agencies, community health centres and long-term care homes (Ministry of Health and Long-Term Care, 2009a). The provincial government has responsibility for individual practitioners, family health teams, ambulance services, laboratories, provincial drug and other programmes, independent health facilities and public health (Ministry of Health and Long-Term Care, 2009a).

LHINs act as the intermediary between their local community and health service providers. There is a strong emphasis on local involvement in decisions regarding the health-care system and as such, LHINs are required to engage with the local communities; although each network has discretion with regard to the format and frequency of this interaction (Ministry of Health and Long-Term Care, 2009a). LHINs are intended to achieve integrated health care through contracts with providers (Ministry of Health and Long-Term Care, 2009a). There is clearly a challenge facing LHINs to integrate care to meet all the needs of its population when some services are not within their control.

There is a clear governance framework for LHINs. Annual accountability agreements between each LHIN and the Ministry of Health and Long Term Care (MoHLTC) specify performance goals, objectives and targets, as well as an expenditure plan (Ministry of Health and Long-Term Care, 2009a). In addition, the LHINs must submit annual reports and service plans (Ministry of Health and Long-Term Care, 2009a).

Discussion

As a relatively recent development, LHINs are still evolving into their role. Already, however, the short experience with this new structure has highlighted some areas of concern. In particular, there has been ambiguity regarding the responsibilities of the LHINs and the MoHLTC (KPMG, 2008). In addition, there has been criticism of the powers devolved to the LHINs, with some questioning how the LHINs may be responsible for system coordination and management when they do not have full direct control over the delivery of all health services (Elson, 2006).

CASE STUDY 2.10

England/UK – The Expert Patients Programme

Overview

In their 1999 White Paper, the UK government introduced the Expert Patients Programme (EPP) as part of an initiative to ensure that people have the appropriate knowledge and expertise to make decisions about their health (Department of Health, 1999). Acknowledging the increasing prevalence of chronic diseases among the UK's ageing population, it was envisaged that the EPP would harness and build on the experience and expertise developed by people who have to live with and manage their own chronic condition on a daily basis (Department of Health, 1999; Donaldson, 2003). Thus, the EPP abandons the conventional view of patients as consumers, recognising their role in influencing their own health (Lorig, 2002). A dedicated task force recommended the introduction of the EPP in the NHS (Department of Health, 2001). With a commitment to implement an EPP in the 2000 NHS plan (Secretary of State for Health, 2000), England pioneered the adoption of this initiative at a national level (Lorig, 2002).

The EPP evolved from a chronic disease self-management programme developed by Stanford University in the US (Rogers *et al.*, 2008).³⁶ Self-management programmes provide patients with the knowledge and skills necessary to enable them to cope with their condition and solve problems they encounter on a daily basis and extend beyond education (Bodenheimer *et al.*, 2002). The operation of the EPP is similar to that of the US chronic disease programme. For both, the duration of the programme is six weeks, involving weekly 2.5-hour sessions provided by two lay tutors who themselves have a chronic condition (see Table A2.10.1). The programmes generally do not differentiate between diseases because the skills learnt are common across conditions (Kennedy *et al.*, 2007).

³⁶ A self-management programme for those with arthritis was operated in the Netherlands (Barlow *et al.*, 2002; Rijken *et al.*, 2008).

TABLE A2.10.1

Content of Standard Six-Week Chronic Disease Self-Management Programme

Content	Session					
	1	2	3	4	5	6
Course overview	✓					
Comparison of acute and chronic conditions	✓					
Cognitive symptom management	✓					
Better breathing	✓					
Introduction to action plans	✓					
Feedback		✓	✓	✓	✓	✓
Dealing with anger, fear and frustration		✓				
Introduction to exercise		✓				
Making an action plan		✓	✓	✓	✓	
Distraction			✓			
Muscle relaxation			✓			
Fatigue management			✓			
Monitoring exercise			✓			
Healthy eating				✓		
Communication skills				✓		
Problem solving				✓		
Use of medication					✓	
Depression management					✓	
Self talk					✓	
Treatment decisions					✓	
Guided imagery					✓	
Informing the health-care team						✓
Working with your health-care professional						✓
Looking forward						✓

Source: Adapted from Griffiths *et al.* (2007)

During its pilot phase between 2002 and 2006, the EPP was delivered through the NHS by Primary Care Trusts (Rogers *et al.*, 2008). This structure changed in 2007 with the establishment of the EPP Community Interest Company (CIC), a not-for-profit social enterprise with responsibility for developing and providing courses.³⁷ Health and social care organisations now commission courses from the EPP CIC at pre-specified prices, but there is no charge for participants to attend (Expert Patients Programme Community Interest Company, 2008a, b; Department of Health, 2009; Expert Patients Programme Community Interest Company, 2010).³⁸

Discussion

The EPP is a key element for disease management for the majority of those living with a chronic disease who are low risk. Yet relative to the size of the population of interest, participation in the EPP has been relatively poor to date (Rogers *et al.*, 2008). By 2008, over 40,000 people had attended an EPP course in England (Expert Patients Programme Community Interest Company, 2008a). Some insight into why people may decline the opportunity to attend a course is provided in the randomised trial undertaken as part of a national evaluation of the EPP. While there are no direct

³⁷ CICs are limited companies that reinvest surpluses and have assets that are designated for a particular community (Department of Health, 2009). Unlike charities, CICs do not have tax benefits and are under the supervision of the Community Interest Companies Regulator.

³⁸ The price for the chronic disease self-management course is £3,750 without support for recruitment or £4,950 including recruitment support (Expert Patients Programme Community Interest Company, 2008b).

financial barriers to participants, people were unwilling to take part due to access problems (with regard to availability of local courses and suitable times and disabled access); poor current health state; a belief in already being proficient in managing their condition; dislike of the group-based approach; and an inability to commit to the course (Kennedy *et al.*, 2007). As participation is voluntary, there is some uncertainty surrounding future demand for the EPP. Nevertheless, the government has committed to increase capacity from 12,000 to 100,000 course places by 2012 (Department of Health, 2006).

The principal motivation for introducing the EPP was to improve the health of people with chronic disease and to ensure appropriate utilisation of health and social care services by this group. On health outcomes, the EPP had a moderate effect on self-efficacy (that is, confidence to change behaviour) and a smaller effect on energy (Kennedy *et al.*, 2007; Rogers *et al.*, 2008). Furthermore, improvements in health-related quality of life for participants were equivalent to providing them with an extra week of perfect health per year (Rogers *et al.*, 2008). However, the evidence on health-care utilisation is less encouraging. Health-care costs were generally lower for participants, although this result was not statistically significant (Kennedy *et al.*, 2007; Richardson *et al.*, 2008; Rogers *et al.*, 2008). A number of possible explanations have been suggested for this finding, including the existence of established contact with health services, supply-side influences (which has highlighted the need to inform health-care professionals of advice provided through the courses) and substitution between different types of health care (Griffiths *et al.*, 2007). In contrast, other studies outside the UK found statistically significant reductions in health-care utilisation, which may be related to the different contextual arrangements for health care in these countries (e.g. Lorig *et al.*, 1999; Griffiths *et al.*, 2007).

CASE STUDY 2.11

England/UK – Community Matrons and Case Management in the NHS

Overview

While self management has been advocated for the majority of the population with long-term conditions (see Case Study 2.10), a different approach was deemed necessary for those with chronic diseases who had more complex care needs (Rosen *et al.*, 2007). This group typically comprises elderly individuals with multiple chronic diseases, who use disproportionately high levels of health-care resources (Bird *et al.*, 2006). It has been estimated that only 2 per cent of those with chronic diseases account for one out of every three unplanned hospital admissions and four out of every five GP consultations (Murphy, 2004). To improve the care for this group, the Government introduced case management administered by community matrons in 2004. This section examines how community matrons and case management have operated in the NHS.

Role of Community Matrons

Community matrons were modelled on advanced nurse practitioners who managed patient care in the US under Evercare's model of case management, which reported benefits in terms of reductions in both the number of hospital admissions and bed days (Murphy, 2004; Woodend, 2006; Sargent *et al.*, 2007). In England, the role of community matron was to be filled by highly-skilled nurses with experience in the primary and/or hospital sectors (Bird *et al.*, 2006; Sargent *et al.*, 2007). Primary Care Trusts are responsible for funding community matrons (de Silva *et al.*, 2008). A community matron is charged with managing and coordinating a patient's care by assessing needs, developing a personalised care plan, undertaking regular monitoring and performing clinical interventions (such as prescribing) (Mayor, 2005; Bird *et al.*, 2006; Woodend, 2006). Acting as the liaison between primary and secondary health-care providers, social care organisations and the patients, community matrons coordinate and integrate a patient's care. However, there is no specific guidance on how these responsibilities are to be discharged; consequently there is some variation in how the programme operates (Sargent *et al.*, 2007).

The government envisaged that 3,000 community matrons would be in post by the first quarter of 2007 (Nolte *et al.*, 2005; de Silva *et al.*, 2008). However, recruitment has been problematic, mostly because of a lack of familiarity with case management (Bird *et al.*, 2006). Thus, the initiative has resulted in a substantial need for training, with the associated cost implications (Murphy, 2004; de Silva *et al.*, 2008).

There has also been much discussion of the caseload for each community matron, which the government expected to be between 50 and 80 cases (Mayor, 2005; Bird *et al.*, 2006; Sargent *et al.*, 2008). Research suggests that there is a trade-off between volume of cases and outcomes. Larger caseloads were perceived to be

associated with a poorer quality of care and an increase in hospital admissions (Sargent *et al.*, 2008). Consequently, there have been calls to identify the optimum caseload (Sargent *et al.*, 2008).

Evaluation

Evidence on the effectiveness of case management, the instrument available to community matrons to reduce hospitalisations, is mixed (Murphy, 2004; Hutt *et al.*, 2005; Bird *et al.*, 2006). What little evaluation there has been of community matrons has also highlighted varied results (Nolte *et al.*, 2005; de Silva *et al.*, 2008). An evaluation that compared pilot and control practices found no statistically significant difference in emergency admissions or bed days, or mortality, for either the high-risk or general population aged over 65 years (Gravelle *et al.*, 2007). One possible explanation for this is that the scheme identifies cases who had previously not been in contact with the health service (Woodend, 2006; Gravelle *et al.*, 2007). As Gravelle *et al.* (2007) themselves acknowledge, their study suffers from a number of limitations; one of which includes the rather limited range of outcomes studied. However, other evaluations undertaken by Primary Care Trusts also found mixed success (de Silva *et al.*, 2008). The results of these evaluations highlight the difficulties of transferring a successful intervention outside the health-care system for which it was originally designed (Nolte *et al.*, 2005).

Discussion

The community matron scheme represents a nurse-led approach to chronic disease management. Other countries (e.g. the Netherlands) have similarly sought to involve nurses in chronic disease management on the basis of evidence that nurses and physicians provide care of equivalent quality, but that the former may be more cost-effective (see Case Study 2.13). However, introducing community matrons and case management in the NHS has encountered a number of challenges. The initiative has had implications for the existing mix of health-care resources. District nurses have tended to fill posts for community matrons, thereby shifting resources away from district nursing and contributing to an existing scarcity in this area (de Silva *et al.*, 2008). In addition, concern has been expressed that there may be duplication between the tasks performed by community matrons and those undertaken by GPs, leading to confusion for patients and providers, which would defeat the intended purpose of community matrons (Murphy, 2004; Bird *et al.*, 2006).

CASE STUDY 2.12

Germany – Disease Management Programmes and Integrated Care Projects

Disease Management Programmes

Overview

The development of integrated care in Germany has been severely hindered by the strict separation between ambulatory care and hospital care (Busse, 2004; Schreyögg *et al.*, 2005; Greß *et al.*, 2006; Siering, 2008). Legislation to overcome this barrier and promote the coordination of care has principally entailed financial incentives (Greß *et al.*, 2006). This section examines two initiatives that were specifically designed to integrate care for those with chronic diseases, where the quality of care has been particularly poor (Busse, 2004).

Up until 1996, membership of sickness funds was determined on the basis of geography and/or occupation (Busse, 2004). With the introduction of legislation in 1992, this situation changed so that insured individuals were allowed free choice of sickness fund (effective from 1996). Under this new arrangement, however, concerns arose that those with chronic illnesses would be regarded as 'bad risks' by sickness funds (Busse, 2004; Stock *et al.*, 2007). Consequently, a form of risk equalisation (risk structure compensation scheme, RSC) was implemented between 2003 and 2008 (Bundesversicherungsamt, 2009), which amended the conventional risk adjustment mechanism (based on age and sex) to establish a link between compensation and disease management programmes (DMPs).³⁹ A sickness fund would, thereby, receive higher compensation for those of its members who participated in DMPs. In doing so, the government intended not only to provide an incentive for sickness funds to enrol those with chronic diseases, but also to improve the quality of their care (Siering, 2008).

First introduced in the US in the 1990s, DMPs are structured approaches to care, involving the coordination of treatment and care for those with chronic diseases (Siering, 2008).⁴⁰ In Germany, the introduction of DMPs was expected to improve the quality of care through adherence to evidence-based clinical practice and to ensure cost-effectiveness by reducing the provision of care in inappropriate settings (Busse, 2004). There is a rigorous system in place for the regulation of DMPs, with initial approval required from the Bundesversicherungsamt and subsequent external evaluation (Bundesversicherungsamt, 2009).

³⁹ Since 01 January 2009, the sickness funds receive a fixed payment, set at €180 in 2009, to cover the costs of documentation or coordination services for those on DMPs (Bundesversicherungsamt, 2009). Sickness funds receive an additional allocation for insured individuals who have at least one of 80 chronic diseases (Busse *et al.*, 2010).

⁴⁰ DMPs have also been used in other European countries. In the Netherlands, for example, a DMP for diabetes developed from transmural care (Klein Lankhorst *et al.*, 2008).

In Germany, DMPs are currently in operation for diabetes mellitus types I and II, breast cancer, coronary heart disease, asthma and chronic obstructive pulmonary disease. As at the end of December 2008, roughly 22,400 DMPs had been approved, with nearly 5.3m individuals registered on these programmes (Bundesversicherungsamt, 2009). Estimates suggest that one out of every three insured persons with type II diabetes was registered on a DMP and three-quarters of all primary care providers in Germany (with some variation across regions) were enrolled in a programme (Nagel *et al.*, 2006).

Patients' Role and Incentives

Participation in a DMP is voluntary for patients; although once registered, patients are expected to cooperate, otherwise they will be asked to leave the programme (Siering, 2008). The incentives for the patient to participate include exemptions from quarterly practice fees (€10) and reduced co-payments on, for example, prescriptions (Siering, 2008).⁴¹

Providers' Role and Incentives

The family physician generally acts as the coordinator of patient care in accordance with the guidelines and protocols set out in the DMP. There is some scope to deviate from the agreed treatment pathway, although physicians may have to justify such actions (Siering, 2008). Physicians may receive reimbursement for registering a patient on a DMP, providing disease-specific education to registered patients and preparing the standardised DMP documentation (Greß *et al.*, 2006; Siering, 2008).⁴²

Discussion

Undoubtedly, DMPs illustrate the potential for financial incentives to influence behaviour. The achievement of DMPs is evident from the rapid increase in programmes offered by sickness funds, as well as the high levels of participation from both patients and providers. Despite such success, DMPs have nevertheless been the subject of much criticism (particularly from physicians) since their introduction. First, the competency and capacity of sickness funds to plan programmes was called into question (Busse, 2004; Schreyögg *et al.*, 2005). Second, physicians feared that DMPs would not encourage improvements in the quality of care because only minimum standards were set (Busse, 2004; Schreyögg *et al.*, 2005). Third, the administrative burden facing physicians participating in a DMP was perceived to be considerable (Siering, 2008). Moreover, there was the additional concern that data collated by physicians would be used by sickness funds to their financial advantage (Busse, 2004). Finally and most importantly, DMPs have failed to achieve their primary goal of integrated care; the programmes concentrate on single

⁴¹ Patient participation has been assessed on the basis of receipt of the required documentation. However, this is an imperfect indicator of patient participation since documentation may be missing for reasons unrelated to patients' participation (Siering, 2008).

⁴² These payments for physicians may vary across sickness funds and DMPs.

indications and are not designed to integrate care for those with multiple morbidities (Greß *et al.*, 2006).

The experience with DMPs in Germany has been relatively short and, consequently, evidence on their effectiveness and cost-effectiveness is limited (Busse *et al.*, 2010). However, results from early studies do suggest that DMPs have the potential to improve the process and outcome of care (Schlette *et al.*, 2009); although DMPs have not always been assessed against usual care (Siering, 2008). A large-scale DMP for diabetes has resulted in a reduction in the death rate among participants (Busse *et al.*, 2010) and participants perceived their care to be more structured and coordinated than standard care (Szecsenyi *et al.*, 2008; Busse *et al.*, 2010).

Systematic reviews of the international evidence suggest mixed results for DMPs (Busse *et al.*, 2010). The quality of care provided under DMPs – as measured by providers' adherence to clinical guidelines and patients' ability to monitor their condition – was considered to have improved (Weingarten *et al.*, 2002; Velasco-Garrido *et al.*, 2003; Mattke *et al.*, 2007). DMPs have been found to be effective in managing and controlling diabetes (Norris *et al.*, 2002; Knight *et al.*, 2005); in improving quality of life in patients with coronary heart disease (McAlister *et al.*, 2001); and in reducing readmissions for elderly patients with heart failure (Gonseth *et al.*, 2004). On the basis of their review, Ofman *et al.* (2004) suggest that the improvements to the processes and quality of care were greater than those for clinical outcomes. Mattke *et al.* (2007) concluded that there was no evidence that DMPs improved long-term outcomes. Interpreting these results is difficult due to the variety of different components that may be included in DMPs (Weingarten *et al.*, 2002; Gonseth *et al.*, 2004) and, therefore, the external validity of the studies may be restricted.

Integrated Care Projects

As with DMPs, integrated care projects (ICPs) were introduced with the objective of coordinating care across the segmented ambulatory care and hospital sectors. However, unlike DMPs, the conditions covered under the ICPs were not prescribed and compensation was not linked to the RSC (Schreyögg *et al.*, 2005). It was only after the introduction of a financial incentive that the uptake of ICPs began to increase (Greß *et al.*, 2006; Schlette *et al.*, 2009). For a limited period, sickness funds were allowed to retain up to 1 per cent of their hospital expenditure and up to a similar proportion of their physician payments to finance ICPs. Should the sickness fund fail to invest in these projects, the retained funds would have to be repaid to hospitals and physicians. Thus, providers have an incentive to participate in an ICP or face the loss of income to other providers. Sickness funds may also be motivated to establish ICPs to gain a competitive advantage over their rivals.

There has been a ten-fold increase in ICPs from approximately 600 in 2005 to more than 6,000 in 2008 (Schlette *et al.*, 2009). Most of these projects have been instigated by hospitals, reflecting the direct impact of the potential financial loss on their budget; in contrast, a physician may be only indirectly affected because they are part of a regional association (Greß *et al.*, 2006). ICPs have received similar criticism as DMPs in that they do not integrate care across conditions (Greß *et al.*, 2006).

CASE STUDY 2.13

Netherlands – Transmural Care

Overview

Transmural care has been hailed by the Dutch Government as the solution to coordinating care across the financial and organisational barriers that exist between primary and acute care. These barriers have impeded the ability of the Dutch health-care system to meet the needs of those with chronic diseases (Klein Lankhorst *et al.*, 2008). Introduced in 1994, transmural care is defined as '*care geared towards the needs of the patient, provided on the basis of cooperation and coordination between general and specialized caregivers, with shared responsibilities and specification of delegated responsibilities*' (van der Linden *et al.*, 2001; Exter *et al.*, 2004; Klein Lankhorst *et al.*, 2008; Nolte *et al.*, 2008b).⁴³ Its main objective was to improve the quality of care by ensuring the coordination and continuity between primary and acute care (Klein Lankhorst *et al.*, 2008). This section examines how transmural care has evolved and concludes by highlighting the challenges that have been encountered.

The Evolution of Transmural Care

The evolution of transmural care can be attributed entirely to the initiative of local health-care providers, in the absence of guidance and direction from the government (van der Linden *et al.*, 2001). Consequently, a wide range of different programmes were developed, including specialised nurses; protocol development; home-based care; discharge planning; consultation by medical specialists; creation of rehabilitation wards; and pharmaceutical care (van der Linden *et al.*, 2001). By the end of the last century, over 500 initiatives had been developed, with every hospital operating at least one programme (van der Linden *et al.*, 2001).

An oft-cited example of a transmural care project is the Matador (Maastricht Diabetes Care Group) programme, which developed into a disease management programme (Klein Lankhorst *et al.*, 2008; Suhrcke *et al.*, 2008).⁴⁴ With the objective of moving care from the doctor to the nurse and from the hospital to the primary care setting, the core team under the Matador programme consisted of an endocrinologist, a specialist nurse and a GP (Klein Lankhorst *et al.*, 2008).⁴⁵ Complex cases were assigned to the endocrinologist, patients with unstable disease were treated by the specialist nurse and the remaining patients were seen by the GP (Klein Lankhorst *et al.*, 2008). There was regular communication between the three members of the core team and, if necessary, the GP could consult both the endocrinologist and specialist nurse (Klein Lankhorst *et al.*, 2008). Protocols

⁴³ The term 'transmural' was derived from an amalgam of 'intramural' care, referring to care in a hospital or nursing home and 'extramural' care, denoting primary care (Klein Lankhorst *et al.*, 2008).

⁴⁴ Previously known as the Maastricht Diabetes Organisation (Klein Lankhorst *et al.*, 2008).

⁴⁵ The transfer of care to nurses acknowledges that patients with chronic diseases may receive a similar quality of care from physicians and nurses (Horrocks *et al.*, 2002; Klein Lankhorst *et al.*, 2008).

determine the nature of treatment and the frequency of contact with the members of the team. There was some evidence that the programme improved health outcomes and reduced hospitalisation costs, although the total costs of care remained unchanged (Klein Lankhorst *et al.*, 2008; Suhrcke *et al.*, 2008).

More generally, the experience of transmural care projects has been mixed (see, *inter alia*, Klein Lankhorst *et al.*, 2008). A project's success has been linked to involvement with academic centres or large hospitals, raising concerns regarding the equality of access (Klein Lankhorst *et al.*, 2008).

Funding Transmural Care

Funding arrangements for transmural care have been extensively criticised (van der Linden *et al.*, 2001; Exter *et al.*, 2004; Klein Lankhorst *et al.*, 2008). The availability of funding was deemed inadequate. Organisations relied on short-term funding, which threatened the long-term sustainability of these programmes (Exter *et al.*, 2004). Financial incentives to provide transmural care were considered lacking (van der Linden *et al.*, 2001). To address this, regulations were introduced to permit hospitals to redistribute up to 3 per cent of their budget to the provision of home care (van der Linden *et al.*, 2001). However, the opportunity cost of this budgetary reallocation was longer waiting lists for hospital treatment (van der Linden *et al.*, 2001).

More recently, health insurers have become involved in funding and designing chronic disease management programmes, via contracts with providers (Klein Lankhorst *et al.*, 2008).⁴⁶ Offering transmural care is attractive for insurers since it allows them to compete on aspects other than premiums, but such practices may not be financially sustainable in the absence of appropriate risk adjustment for those with chronic diseases. There are concerns that the terms of these contracts (particularly fee-for-service payments) may be divisive to integrating primary and acute care as GPs have an incentive to treat patients in primary care.

Discussion

The main criticism of transmural care concerns the structure or framework (or, more accurately, the lack thereof) for implementation. The absence of any government direction and enforcement has led to a wide variety of programmes, with incomplete geographical coverage, inadequate funding and financial incentives and no formal evaluation framework (van der Linden *et al.*, 2001; Klein Lankhorst *et al.*, 2008). In contrast to methods adopted in other countries, there also seemed to be a distinct lack of explicit patient involvement. Rigidity in the ability to transfer tasks between health-care professionals (and particularly to nurses) also inhibited the introduction

⁴⁶ The government has also permitted patient groups to contract with health insurers (Bartholomé *et al.*, 2007; Nolte *et al.*, 2008b). Health insurers were more likely to agree to contracts with the patient group if the latter represented a large number of patients and if the patients' condition was covered under the risk equalisation fund (Bartholomé *et al.*, 2007).

of transmural care (Klein Lankhorst *et al.*, 2008). Ironically, there is a perception that the approach to transmural care has contributed to the problem of segmentation which it was designed to address (Klein Lankhorst *et al.*, 2008).

TABLE A2.1
Resource Allocation for Integrated Care – International Experience with Chronic Disease Management Programmes (Selected Examples)

Country	Chronic Disease Management Examples
Australia	<p>The <i>Service Incentives Program</i> (SIP) provides payments to practices for care of patients with asthma and diabetes, comprising sign-on payments and service-incentive payments for providers who complete an annual cycle of care for eligible patients (see Case Study 2.5).</p> <p>All states have developed additional chronic disease management programmes to varying degrees. For example, in New South Wales, the <i>NSW Chronic Care Program</i> targets the care of people with chronic and complex problems who are frequent users of the hospital system and is currently in its third phase. The aim is to reduce avoidable hospitalisations and improve quality of life for people with chronic illness and their carers. The priority diseases for phase three of the <i>Chronic Care Program</i> are cardiovascular disease, chronic respiratory disease, cancer, diabetes, arthritis and musculoskeletal diseases and dementia.</p>
Canada	<p>Most provinces have their own specific frameworks for healthy living and the prevention of chronic disease. For example, British Columbia has an <i>Expanded Chronic Care Model</i> where report cards are published regularly on disease prevalence, incidence, patient survival, costs and performance gaps, using information from newly established chronic disease registries. A web site has been created to give patients and practitioners access to information and tools to support them in managing chronic diseases.</p> <p>The <i>Alberta Netcare Electronic Health Record</i> is a province-wide health information system that links physicians, pharmacists, hospitals, home care and other providers across the province. The electronic health record stores pertinent patient information online to allow health care providers instant electronic access to a patients' prescription history, allergies and laboratory results.</p> <p><i>Family Medicine Groups</i> (FMGs) in Quebec are very similar to Family Health Teams (FHTs) in Ontario. A FMG brings together 6 to 12 GPs who commit to providing a full range of medical case management services and extended hours to patients who have chosen to enrol with them. Services include patient assessment, care and follow-up, diagnosis and treatment of acute and chronic problems, along with disease prevention and health promotion. These services are provided 24 hours a day, 7 days a week. FMGs services are intended to complement those provided by local community service centres, hospitals and emergency departments. They increasingly make use of nursing staff to support physicians in the different stages of the care process.</p> <p>Ontario has a history of chronic disease initiatives at provincial, municipal and community levels, but they are very fragmented. <i>Family Health Teams</i> (FHTs) were implemented across the province since 2004 as part of the health transformation agenda in Ontario to promote patient-centred, integrated health care, reduce waiting times and increase access. FHTs are to provide comprehensive, coordinated, interdisciplinary primary care services to a defined population on a round-the-clock basis with physicians working as a part of a team involving nurse practitioners, mental health care staff and social workers. The core services provided by FHTs include health promotion and disease prevention, chronic disease management and self-management support. Patient enrolment with an FHT physician is voluntary; incentives for physicians to participate in the scheme include choice of governance model, blended compensation, working in interdisciplinary teams and flexibility to meet population needs. However, it is not known at the time of writing whether all FHTs are operating according to the intended interdisciplinary model as no systematic evaluation has been carried out thus far.</p>
England	<p>A key component of the approach to improving the care for those with chronic conditions in primary is the <i>Quality and Outcomes Framework</i> (QOF), introduced in 2004 and with data published annually. The QOF is designed to provide appropriate financial incentives to encourage GP practices to provide ongoing high-quality management of a number of chronic conditions including diabetes, hypertension and asthma. See Case Study 2.3.</p> <p>The <i>Expert Patients Programme</i> (EPP) develops the role of the patient in their own care and is a chronic disease self-management programme which comprises a six week generic training course for adults with a chronic disease run in Primary Care Trust sites (although with no GP involvement). A key driver of chronic disease management initiatives is the policy of practice based commissioning, where general practices purchase services on behalf of their patients. The rationale is that this may lead to better services for those with long-term conditions if providers are encouraged to seek ways of providing more local care. See Case Studies 2.1 and 2.10 for further details.</p>
Germany	<p><i>Disease Management Programmes</i> (DMPs) are offered by the Social Health Insurers, and by 2008, there were approximately 14,000 DMPs across Germany covering breast cancer, diabetes type I and II and coronary heart disease. This seemingly large number of programmes is deceptive however, as their content and organisational structure are very similar. DMPs provide considerable financial incentives to service providers, as providers receive reimbursement for disease-specific education programmes for registered patients. They also receive additional compensation for the registration of an insured person into a DMP and for the regular production of standardized DMP documentation. It has been estimated that 65–70 per cent of those with type 2 diabetes are registered with a DMP. See Case Study 2.12.</p>
Ireland	<p>The <i>Heartwatch</i> programme, the national programme in general practice for the secondary prevention of cardiovascular disease, was established in 2003 and is still run on a pilot basis in</p>

Country	Chronic Disease Management Examples
	<p>20 per cent of GP practices. It specifies a set of defined clinical protocols, based on proven international guidelines, for the continuing care of eligible patients, including a schedule of four visits per annum and details of the risk factors to be measured with target levels of control to be achieved. See Chapter 8 for further details.</p> <p>There are a number of structured care programmes for the care of patients with diabetes, of which the longest established is the <i>Midlands Structured Diabetes Project</i>, which provides for the management of diabetes in a primary care setting. See also Chapter 8 for further details.</p> <p>As in other countries, there are numerous localised initiatives that aim to improve the management of chronic disease by treating patients in a primary care setting wherever possible. A good example is the pilot programme in St. James's Hospital for the treatment of patients with epilepsy, described in greater detail in Chapter 8.</p>
Netherlands	<p>The concept of transmurals care was introduced in 1994 in an attempt to overcome persistent barriers between non-acute and acute services. Nurses have been playing an increasingly important role in transmurals care, which seeks to bridge the divide between secondary care and alternative settings for those who are not able to return to a fully independent life. See Case Study 2.13.</p> <p>The <i>Matador</i> programme (Maastricht Transmural Diabetes Organisation) was established in 1981 with the aim of enhancing the diagnostic skills of GPs, in partnership with the local hospital. The programme was subsequently extended to incorporate the development of common protocols and joint consultations involving specialists and GPs. The programme has since transformed into a disease management programme in which nurses have the primary responsibility for the treatment of patients with diabetes, asthma and/or COPD. The programme was formally launched in 2000 and is open to all GPs in the Maastricht region. It involves two main transfers of roles, from doctors to nurses and from hospital to primary care.</p> <p><i>Care Plus</i> is a national programme that was introduced in 2004 that funds primary care to provide two hours of practice nurse and/or GP time over 6 months to people who are considered to benefit from more intensive clinical input. The key feature of the <i>Care Plus</i> programme is the identification of people with chronic disease who require intensive case management. Once identified and enrolled, patients are entitled to reduced cost nurse or doctor visits, care planning with quarterly checks and self management support. The Primary Health Organisations (PHOs) receive around 10 per cent extra funding to target 5 per cent of the enrolled population. See Case Study 2.2.</p>
New Zealand	<p>The <i>Frequent Adult Medical Admissions</i> (FAMA) scheme, introduced in 2003 in Manukau County targets individuals who have been admitted to hospital more than twice in 12 months for a total of 5 or more days. The programme offers case management by practice nurses and GPs together with care coordinator nurses who are based in secondary care.</p>
Sweden	<p>All primary care centres run nurse-led clinics for diabetes, hypertension and some for allergy, asthma, COPD, psychiatry and heart failure. Some of the larger centres also provide nurse-led clinics for chronic neurological disorders. The current setting for people with chronic conditions, especially older people, aims to link primary health care, hospital care and community care through chains of care or care pathways. Care of chronic disease is greatly facilitated in Sweden by national registries and guidelines. There are registries and national guidelines for diabetes, coronary heart disease, renal failure, hip fracture and hip replacement, cataract surgery, stroke and all forms of cancer.</p>
USA – Medicare	<p>The <i>Physician Group Practice (PGP) Demonstration</i>, introduced in April 2005 on a pilot basis, provides for quality performance payments to physician groups who reach targets in relation to diabetes, congestive heart failure, coronary artery disease, hypertension and cancer screening. See Case Study 2.4.</p> <p>The <i>Medical Home Demonstration</i> is directly at high need patients, i.e. those with prolonged or chronic conditions that require regular monitoring, advising and treatment. The purpose of the Demonstration is to reduce Medicare costs by avoiding unnecessary care, co-ordinating and rationalising care and avoiding preventable hospitalisations and re-admissions. Practices qualify for medical home status on the basis of achievement under a number of criteria, including continuity of care, clinical information systems, delivery system design, decision support, patient/family engagement and care co-ordination). See Case Study 2.7.</p>

Note: As noted in Chapter 5, most chronic disease management initiatives are still very much in the development phase. Here, we concentrate on the main programmes in each country, with a particular focus on those that are focussed at the primary care level.

Sources: www.medicareaustralia.gov.au/provider/incentives/pip/index.jsp [last accessed 27 June 2010]; www.health.gov.bc.ca/cdm/cdmnbc/chronic_care_model.html [last accessed 27 June 2010]; www.moh.govt.nz/moh.nsf/indexmh/phcs-projects-carepluservice [last accessed 27 June 2010]; www.cms.gov/DemoProjectsEvalRpts/ [last accessed 27 June 2010] Department of Health, 2001; Busse *et al.*, 2004; Marchildon, 2005; Healy *et al.*, 2006; Rea *et al.*, 2007; Klein Lankhorst *et al.*, 2008; Mathematica Policy Research, 2008; Nolte *et al.*, 2008a; Siering, 2008; Trisolini *et al.*, 2008; Department of Health, 2009; NSW Department of Health, 2009

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PART 3

Health Care in Ireland: Resource
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CHAPTER 6

Current Systems in Primary, Community and Continuing Care

6.1 INTRODUCTION

In this chapter, we focus on resource allocation in primary, community and continuing care (PCCC). While the PCCC Directorate of the HSE no longer exists (it was merged with the National Hospitals Office (NHO) in October 2009 to form an Integrated Services Directorate), for the purposes of this chapter we discuss resource allocation in PCCC. Chapter 7 examines resource allocation in the acute hospitals sector (previously under the remit of the NHO). Chapter 8 moves on to discuss the extent and nature of integration within the health service in Ireland (both within and between PCCC and acute hospital services).

We document where the resources are directed and how providers are reimbursed for the services they provide. The absence of consistent data systems, as well as the differential application of eligibility rules across the country makes it difficult to document current methods of resource allocation, with the exception of payments to primary care providers for services provided under the various community health schemes (administered by the Primary Care Reimbursement Service or PCRS). Nevertheless, where possible, we also examine in detail the implications of current methods of resource allocation in PCCC; in particular, we focus on the incentives generated by the particular payment methods.

Section 6.2 begins by providing a brief overview of PCCC services. We then move on to outline the basis for the initial allocation of resources in PCCC, as well as the methods by which providers are reimbursed for the services they provide (Sections 6.3-6.5). Recently, a number of attempts have been made to move to more rational methods of resource allocation for selected areas of expenditure; Section 6.6 discusses the methods by which resources are allocated for the provision of certain services for older persons, as well as the allocation of new funding for adult mental health teams. Notwithstanding recent initiatives, Section 6.7 highlights a number of areas of concern with regard to current systems of resource allocation in PCCC, while Section 6.8 summarises the chapter.

6.2 PCCC SERVICES – OVERVIEW

PCCC encompasses a wide range of health and social care services. The services that are funded range from those that are highly professionalised and medical in nature, such as pharmacy services, to those that are more social in nature, such as sheltered housing services for those with mild disabilities. A common debate concerns the extent to which many items of expenditure included in PCCC in Ireland constitute health care as defined in other countries. In making returns to the OECD for the compilation of comparable statistics on health expenditure across the OECD, Irish figures are adjusted downwards to account for the fact that many components of Irish health expenditure are actually classified as social spending by the OECD.¹ It is estimated that approximately 20 per cent of Irish health expenditure as currently defined is social spending (Wren, 2004). There are frequent calls for the adoption of the OECD System of Health Accounts (SHA) in Ireland, which would enable the collection of consistent and comparable information on health spending, both public and private.²

Gross expenditure on PCCC services amounted to €8.2bn in 2009, an increase of 16.2 per cent in real terms since 2006. Over the period 2006-2009, expenditure on PCCC has declined slightly as a proportion of total HSE gross expenditure and accounted for 56.4 per cent of (gross) current HSE expenditure in 2009 (in comparison with 57.2 per cent in 2006) (see Table 1.2 of Chapter 1). As presented in Table 6.1, expenditure in PCCC can be broadly divided into three components:

- non-scheme expenditure by Local Health Offices (LHOs)
- scheme expenditure by the PCRS and LHOs
- direct grants to voluntary providers (as per Schedule II of the Eastern Regional Health Authority (ERHA) Act 1999)

¹ In particular, the OECD System of Health Accounts (SHA) excludes spending on institutional care for the elderly or the disabled when the care provided is not predominantly medical (Wren, 2004).

² The Standing Committee on Health Statistics – a body chaired jointly by the Department of Health and Children (DoHC) and the Central Statistics Office (CSO) and also including representatives from various health bodies, including the Health Service Executive (HSE), Health Research Board (HRB) and the Health Information and Quality Authority (HIQA) – provides, among other things, a strategic direction in relation to improved collection, dissemination, analysis and use of health information. The Committee has identified, as a priority, the need to improve health expenditure data to ensure the availability of comprehensive data that both meets international standards for the purpose of comparability and facilitates more in-depth analysis at national level. In 2007, the Committee established a Steering Group to oversee a project to progress the implementation of the OECD SHA in Ireland www.ga.etenders.gov.ie/search/show/search_view.aspx?ID=JUL088727 [last accessed 27 June 2010]. At time of writing (June 2010), no further update was available.

TABLE 6.1
PCCC Expenditure, 2006-2009 (€m, %)

	2006		2007		2008		2009		% change 06-09 ^a
	€m	%	€m	%	€m	%	€m	%	
Non-Scheme Expenditure by Care Group ^b	4,057.7	59.7	4,564.0	60.2	4,808.4	58.8	4,792.3	58.3	13.3
<i>of which:</i>									
Direct provision by LHO	3,216.2	47.4	3,605.6	47.5	3,737.7	45.7	3,632.0	44.2	8.3
Grants to outside agencies	841.5	12.4	958.4	12.6	1,070.8	13.1	1,160.3	14.1	32.3
PCRS and Other Scheme Expenditure ^c	2,232.2	32.9	2,470.9	32.6	2,797.9	34.2	2,874.8	35.0	23.6
Direct Voluntary Grants	501.3	7.4	547.9	7.2	574.5	7.0	556.2	6.8	6.4
Total	6,791.2	100	7,582.8	100	8,180.9	100	8,223.2	100	16.2

Notes: All figures refer to net expenditure.

^a % change refers to real expenditure growth over the period 2006-2009.

^b From 2007 onwards, responsibility for the administration of many schemes passed from the LHOs to either the PCRS (e.g. hardship medicine) or the Department of Social and Family Affairs (now the Department of Social Protection) (e.g. domiciliary care allowance). In recognition of this, from the end of 2009, the HSE no longer recorded scheme expenditure separately for the PCRS and LHOs. The HSE therefore provided us with an adjusted time series that ensures that the same items of expenditure occur under the 'PCRS and other schemes' heading in each of the years 2006-2009.

^c 'Non-Scheme Expenditure by Care Group' refers to services directly provided by LHOs, as well as those provided by certain voluntary providers. See Table 6.2 for a further breakdown by care group area. 'PCRS and Other Scheme Expenditure' refers to expenditure on the various schemes administered by the PCRS, such as the medical card and community drugs schemes, as well as other schemes administered via the LHOs (such as the maternity cash grant scheme). However, the responsibility for administering many of these LHO schemes is being transferred to the Department of Social Protection (formerly Social and Family Affairs). 'Direct Voluntary Grants' refers to direct grants to voluntary agencies that are listed in the second schedule of the ERHA Act 1999 (see Section 6.4).

Source: HSE, personal communication [01 April 2010]

In 2009, non-scheme expenditure by LHOs amounted to €4.8bn (amounting to 58.3 per cent of total PCCC expenditure in 2009). The majority of this (€3.6bn) involved expenditure on direct service provision by the LHOs, with the remaining €1.2bn accounted for by grants from the LHOs to outside agencies for the provision of services to the population of the LHO.³ Scheme expenditure amounted to €2.9bn in 2009 (35.0 per cent of total PCCC expenditure) and while predominately accounted for by expenditure by the PCRS on the medical card, community drugs and other schemes (see Section 6.3), also includes expenditure on schemes that are administered by the LHOs (such as the domiciliary care and blind welfare allowances).⁴ The remaining component (€0.6bn in 2009, or 6.8 per cent of total PCCC expenditure) is accounted for by direct grants to voluntary providers (as per Schedule II of the ERHA Act 1999) (see Section 6.4).⁵

³ In 2008, over 500 agencies received what are termed 'revenue grants' from the HSE (see Note 8 of the Annual Report and Financial Statements 2008 for the full list). In the HSE Annual Report and Financial Statements, it is not possible to distinguish those receiving grants for the provision of PCCC services to LHO resident populations and those receiving grants for the provision of acute hospital services (notwithstanding assumptions based on agency names). Examples that are PCCC-relevant include Drumcondra Home Help (€1.4m), Irish Hospice Foundation (€475,000) and Westdoc (GP Out-of-Hours Service) (€840,000) (HSE, 2009a).

⁴ Increasingly, responsibility for the administration of many of the schemes administered by the LHOs is being transferred over time to the Department of Social Protection (e.g. domiciliary care allowance) (see also HSE, 2010a).

⁵ The list of voluntary providers set out in Schedule II of the ERHA Act 1999 have a direct funding relationship with the HSE, i.e. resources are not administered via the LHOs or any other agency (e.g. PCRS) (Prospectus, 2003). Examples include the Disability Federation of Ireland (€0.9m in 2009) and St John of God Hospital (€92.3m in 2009).

Total non-scheme expenditure by LHOs is recorded under eight 'care group' headings, with the three largest accounted for by expenditure on services for older persons, disability services and mental health services respectively (see Table 6.2).⁶ Together they accounted for 35.0 per cent of total PCCC expenditure in 2009. While expenditure on services for older persons and disability services increased in real terms over the period 2006-2009 (by 32.0 and 26.4 per cent respectively), expenditure on mental health services declined by 9.2 per cent in real terms over the period. With the exception of expenditure on services for children, adolescents and families (which remained relatively stable over the period), expenditure on the remaining components of PCCC non-scheme expenditure increased in real terms over the period 2006-2009. Consistent with the discussion in Section 6.3 on the 'demand-led' schemes, expenditure on schemes increased strongly over the period 2006-2009.

TABLE 6.2
PCCC Expenditure (Detail), 2006-2009 (€m, %)

	2006		2007		2008		2009		% change 06-09 ^a
	€m	%	€m	%	€m	%	€m	%	
Non-Scheme Expenditure by Care Group ^{b,c}									
<i>of which:</i>									
Children, Adolescents and Families	561.2	8.3	572.8	7.6	584.0	7.1	583.4	7.1	-0.3
Disability Services	831.9	12.2	1,057.3	13.9	1,133.4	13.9	1,095.9	13.3	26.4
Mental Health	800.1	11.8	756.3	10.0	768.1	9.4	757.5	9.2	-9.2
Multi-Care Group Services	573.1	8.4	604.0	8.0	685.6	8.4	609.5	7.4	2.0
Older Persons	875.0	12.9	1,049.0	13.8	1,150.5	14.1	1,203.6	14.6	32.0
Palliative Care and Chronic Illness	39.6	0.6	42.2	0.6	44.3	0.5	54.6	0.7	32.1
Primary Care	235.6	3.5	324.2	4.3	285.6	3.5	337.9	4.1	37.6
Social Inclusion	110.5	1.6	122.5	1.6	135.8	1.7	136.2	1.7	18.3
Other Regional Services ^c	30.7	0.5	35.8	0.5	21.2	0.3	13.6	0.2	-57.4
PCRS and Other Scheme Expenditure	2,232.2	32.9	2,470.9	32.6	2,797.9	34.2	2,874.8	35.0	23.6
Direct Voluntary Grants	501.3	7.4	547.9	7.2	574.5	7.0	556.2	6.8	6.4
Total	6,791.2	100	7,582.8	100	8,180.9	100	8,223.2	100	16.2

Notes: All figures refer to net expenditure.

^a % change refers to real expenditure growth over the period 2006-2009.

^b Due to differences in reporting, total expenditures for certain care group areas may be different to those reported by other sources, e.g. Department of Finance Revised Estimates (Department of Finance, 2010).

^c It was not possible to get a breakdown of 'direct provision by LHO' and 'grants to outside agencies' by non-scheme expenditure care group (see Table 6.1).

^c In the January to September 2009 monthly HSE Supplementary Reports, 'Other Regional Services' expenditure appears under the heading 'PCCC Corporate'; from October 2009, the same expenditure appears under the renamed heading 'Other Regional Services' (see for example, HSE, 2009b, 2010b).

Source: HSE, personal communication [01 April 2010]

In the following sections, we detail the resource allocation mechanisms for non-scheme expenditure (Section 6.2), scheme expenditure (Section 6.3) and expenditure on grants to large voluntary bodies (Section 6.4). Information on methods of resource allocation for many components of PCCC expenditure is

⁶ As noted in Tables 6.1 and 6.2, unless otherwise stated, all information is based on 2009 returns as presented in the HSE monthly Performance Monitoring Reports (with additional work by the HSE to construct a consistent and comparable time series for the period 2006-2009).

difficult to obtain (with the exception of the detailed information available from the PCRS). The report, 'Towards the Development of a Resource Allocation Model for Primary, Community and Continuing Care in the Health Services' (Staines *et al.*, 2010a; b) (hereafter referred to as the 'Staines report'), which examined the allocation of resources to LHOs in 2007, stated that '*at present it is difficult to ascertain exactly how resources are allocated between care groups at LHO level. Budgets do not reflect service provision to the population at LHO level, and there is no real systematic approach to resource allocation*' (Staines *et al.*, 2010b; iii). However, Table 6.3 attempts to summarise the basis for the initial allocation of resources by PCCC 'care group' area. As is evident from the table, up to 2009 the majority of resources in PCCC were allocated on the basis of historic budgets with adjustments for incremental spend.

TABLE 6.3

PCCC Resource Allocation Mechanisms

Care Group	Basis for Allocation (2009)	Basis for Allocation (2010)
Children, Adolescents and Families	Historic budget plus incremental spend. ^a	Historic budget plus incremental spend.
Disability Services	Historic budget plus incremental spend	Historic budget plus incremental spend.
Mental Health	New funding for adult mental health teams based on population need (proxied by deprivation). Remaining funding allocated as per historic budget plus incremental spend.	The 2010 HSE National Service Plan states that a population based methodology has been devised and agreed for mental health services ' <i>to guide resource allocation to address inequity in service access</i> ' (HSE, 2010a; 30).
Older Persons	Allocation for Nursing Homes Support Scheme ('A Fair Deal') based on individual needs assessment (from October 2009). Remaining funding allocated as per historic budget plus incremental spend.	Allocation for Nursing Homes Support Scheme ('A Fair Deal') based on individual needs assessment. Remaining funding allocated as per historic budget plus incremental spend.
Palliative Care and Chronic Illness	Historic budget plus incremental spend.	Historic budget plus incremental spend.
Primary Care (non-PCRS)	Historic budget plus incremental spend.	Historic budget plus incremental spend.
Primary Care (PCRS and other schemes) ^b	Previous year's allocation plus adjustments for new developments (e.g. funding for new medical cards based on average cost of medical cards).	Allocation for medical card spending (doctor and drug costs) based on the number of cards in existence plus forecasted need for new cards (by age, sex and geographic location). Remaining funding allocated as per 2009.
Social Inclusion	Historic budget plus incremental spend.	Historic budget plus incremental spend.

Notes: ^a The term 'plus incremental spend' may also incorporate downward adjustments to budgets, as has occurred recently. The presentation on which this table is based (Woods, 2010) did not detail how funding for 'multi-care group services', 'other regional services' or 'direct voluntary grants' are allocated (see also Table 6.2). However, the majority of 'direct voluntary grants' (over 80 per cent in 2009) were directed towards the provision of disability services.

^b Funding for the PCRS in 2009, while largely based on the previous year's allocation, did allocate new funding based on the anticipated number of new patients, albeit using average cost (it is therefore not accurate to describe the basis for the allocation as 'historic budget plus incremental spend' as per other care groups). The 2010 mechanism for the allocation of medical card funding refines the estimate of future demand by adjusting average cost by age, sex and geography.

Sources: Adapted from Woods, 2010; with additional information from; Amnesty International and Indecon, 2010 and HSE, personal communications [02 November 2009; 16 April 2010]

6.3 PCCC NON-SCHEME EXPENDITURE

6.3.1 Overview

In 2009, non-scheme expenditure by the HSE amounted to €4.8bn (amounting to 58.3 per cent of total PCCC expenditure in 2009). Approximately 24.2 per cent of this expenditure relates to grants to outside agencies for the provision of services to LHO resident populations, while the remainder is spent directly by the LHOs on the provision of services. Non-scheme expenditure may be further divided on the basis of eight 'care groups', the three largest of which in 2009 comprise spending on services for older persons, disability services and mental health services (accounting for 25.1, 22.9 and 15.8 per cent respectively of total PCCC non-scheme expenditure in 2009).⁷ The remaining €1.7bn (35.9 per cent of PCCC non-scheme expenditure) is accounted for by expenditure on the five other care groups, namely, services for children, adolescents and family, multi-care group services, palliative care and chronic illness, primary care and social inclusion. A small and declining share of PCCC non-scheme expenditure (0.3 per cent in 2009) relates to what is termed 'Other Regional Services'.⁸

6.3.2 Services for Older Persons

In 2009, spending on services for older persons amounted to €1.2bn (or approximately 14.6 per cent of total PCCC expenditure). Services for older persons aim to support older people to remain at home in independence for as long as possible or, where this is not possible, in an appropriate residential setting. A range of services is provided for older people and their families and carers by public, private and voluntary providers. Expenditure on services for older persons comprises expenditure on residential services and expenditure on community services, although the number of individuals supported in a community setting is larger (e.g. in 2008, the numbers receiving home help, home care package and long-term and limited stay residential care services were 55,366, 8,990 and 22,613 respectively) (DoHC, 2009a; HSE, 2010c).^{9,10}

Historically, the allocation of resources for the provision of services to older persons was directed towards institutions, particularly for the provision of long-term residential care. Even for community services, resources have been traditionally allocated to institutional-type providers of such services as meals on wheels, home care, etc. The new Nursing Homes Support Scheme ('A Fair Deal') offers an

⁷ However, it is not possible to ascertain the proportion of each care group that is accounted for by expenditure on the direct provision of services by the LHO and that which is accounted for by expenditure by voluntary agencies.

⁸ In the January to September 2009 monthly HSE Supplementary Reports, this expenditure appears under the heading 'PCCC Corporate'; from October 2009, the same expenditure appears under the renamed heading 'Other Regional Services' (HSE, 2009c, 2010c).

⁹ A small proportion of long-stay and limited stay residential care patients (7.4 per cent) were aged under 65 years (DoHC, 2009a).

¹⁰ The latest available data on long-stay and limited stay residential care services for older people relates to 2008. The data are based on survey returns (with a response rate of 81.6 per cent in 2008) (DoHC, 2009a).

alternative method of resource allocation for residential care services for older people. See Section 6.6 for further discussion of this scheme. Before the introduction of the Nursing Homes Support Scheme in October 2009, all resources for services for older persons were allocated on the basis of historic budgets adjusted for incremental spend (see Table 6.3).

It is not clear that all expenditure under the services for older persons care group area is strictly health care (e.g. meals on wheels). In addition, while the resource allocation mechanisms for the Nursing Homes Support Scheme (and the Home Care Support Scheme) are well documented, it is not always clear how resources are allocated for the remaining components of services for older persons. The remainder of expenditure on services for older persons, which are provided either directly by the HSE or in many cases in partnership with non-statutory voluntary service providers, is largely allocated to institutions on an historic block grant basis.

6.3.3 Disability Services

In 2009, approximately €1.1bn was spent on the provision of disability services (Table 6.2), amounting to approximately 13.3 per cent of total PCCC resources. The development of services for people with disabilities is informed by the 2004 National Disability Strategy. Funding for disability services is allocated on the basis of historic budgets adjusted for incremental spend (Table 6.3).

Under the Disability Act 2005, eligible individuals have a statutory entitlement to an assessment of need, which sets out the services appropriate for their disability. To date the statutory assessment of needs has been applied to those aged 0-5 years only (DoHC, 2009b). For planning purposes, the needs of people with disabilities are identified through the National Intellectual Disability and the National Physical and Sensory Disability Databases, which detail the existing level of specialised health provision and an assessment of need for the following five years (HSE, 2010a).¹¹ Services to people with disabilities are provided either directly by the HSE, or in many cases in partnership with non-statutory service providers. In the latter case, resources are largely allocated to service providers on an historic block grant basis.¹²

¹¹ Information contained on both databases is provided on a voluntary basis by those with disabilities or their families, and as such, does not represent a complete picture of either service delivery or need for disability services. In addition, the databases concentrate on those aged up to 65 years, even though rates of disability are highest among those over 65 years of age (National Disability Authority, 2005).

¹² The submission to the Expert Group by the National Federation of Voluntary Bodies notes that 'A major weakness with the current funding arrangement is the "Block Grant Allocation". In effect, what this means is that services receive a funding allocation based purely on the previous year's allocation with incremental increases (or more recently decreases) to provide a quantum of service by reference only to places, buildings etc. and not individual people. This funding mechanism is a major obstacle to the development of individual person centred approaches and takes little or no account of the changing needs of people who are likely to be receiving services and supports for the duration of their lives. In effect, it supports the perpetuation of a status quo, which limits the scope for innovation or more creative thinking about finding alternative, more cost effective, solutions to the complex needs of many individuals with disabilities. This also gives rise to serious inequity in the sense that up to now all new investment has been focussed on putting in place new service

Historically, the funding of services for disabled individuals was concentrated on the medical model, whereby individuals resided in institutions whose staffing, general routines and managerial ethos reflected a medical orientation. The current 'social' model stresses the rights of the individual to participate in society and to this end, is more concerned with the provision of social services to support independent living. With the exception of funding for new service developments, which is indexed to individuals, current resource flows largely follow the old model however, in that resources are allocated to service providers rather than to individuals. The result of this 'legacy' funding is that funding per capita can vary substantially across service providers (see also National Disability Authority, 2009). In addition, the provision of historic block grants to service providers fails to incentivise the provision of person-centred or community-based services. Finally, there is no link between funding and the achievement of quality in the disability sector; there is no independent inspection of disability services and the funding model does not drive improvements in quality (National Disability Authority, 2009).

Both the National Disability Authority and the Comptroller and Auditor General have highlighted similar concerns with resource allocation mechanisms for disability services. The Comptroller and Auditor General's 2005 report on the *Provision of Disability Services by Non-Profit Organisations* identified the need for more robust service arrangements between the HSE and non-statutory disability service providers, as well as the need to link funding to the quantum of service delivered (CAG, 2005). In its submission to the Department of Health and Children's *Strategic Review of Disability Services* in 2005, the National Disability Authority was concerned that significant investment in services over the previous five years had not resulted in the development of the expected services; the absence of clear costings and standards for services was at the heart of this discrepancy (National Disability Authority, 2005).

6.3.4 Mental Health Services

In 2009, approximately €0.8bn was spent on the provision of mental health services (Table 6.2), accounting for 9.2 per cent of total PCCC expenditure. Mental health services span a broad range of services, from home and community-based services to inpatient acute care and residential care services. Services are provided in a number of different settings, including inpatient facilities, outpatient clinics, day hospitals, day centres and supported community accommodation. A significant recent development was the publication in 2006 of the mental health strategy *A Vision for Change*, which recommends a move towards a community-based mental health service with far less reliance on hospital admission (HSE, 2010a).

developments for people who are on waiting lists, with little or no investment in enhancing the quality of life of many people already receiving services, for example, those resident in congregated settings' (National Federation of Voluntary Bodies, 2009; 3).

Historically, the allocation of funds for mental health services has been based on the medical model of care, with services delivered largely in institutional settings. Indeed, the current (i.e. up to 2010) pattern of resource allocation would suggest that the presence of large institutions still drives much of the allocations to LHOs.¹³ Indeed, a recent independent report on the implementation of *A Vision for Change* notes a lack of efficiency and accountability on the part of the HSE on where and how funds for mental health services are spent; it recommends that the funding model on which implementation plans for mental health services are based be published (Amnesty International and Indecon, 2010). In 2006, in recognition of the inadequacy of the current resource allocation system for mental health services, an alternative resource allocation methodology for new funds for adult mental health teams was developed. It attempts to tie the distribution of 'additional' resources to population need (as proxied by deprivation), rather than existing levels of service provision (see Section 6.6). Furthermore, the HSE's *National Service Plan 2010* notes that a population-based methodology has been devised and agreed, with a target timescale of Q2 2010, 'to guide resource allocation to address inequity in service access' (HSE, 2010a; 30; see also Table 6.3).

6.3.5 Remaining PCCC Care Groups

In 2009, expenditure on the remaining components of PCCC non-scheme expenditure amounted to €1.7bn (or 21.1 per cent of total PCCC expenditure). Expenditure on multi-care group services and services for children, adolescents and families each accounted for approximately €0.6bn in 2009. In all cases, resources are allocated to each of the care groups on a largely historic basis (see Table 6.3). As services under these care groups are provided by such a diverse range of providers, it is difficult to document how exactly providers are reimbursed for the services they provide. In cases where providers are directly employed by the HSE, salary is the dominant form of reimbursement. For services provided by other providers under contract with the HSE, resources are essentially allocated on an historic block grant basis (with an increasing movement towards the use of standardised service-level agreements, SLAs).¹⁴

The 'multi-care group services' care group covers payments made by the HSE where the specific client group in receipt of services cannot be further identified. An example is the salary of a public health nurse who may provide services in his or her daily work to children, older people, people with disabilities and others (Staines *et al.*, 2010b).

¹³ For example, in 2007, LHO Dublin North received €420.10 per capita for mental health services, in comparison to an average LHO allocation of €179.90 (Staines *et al.*, 2010b). The presence of St. Ita's Hospital in Portrane, one of the largest acute mental health facilities in the State, obviously accounts for some of this discrepancy.

¹⁴ The HSE's *National Service Plan 2010* contains a commitment to record the percentage of agencies with which the HSE has a service-level agreement (SLA)/grant aid agreement in place (HSE, 2010a).

Services for children, adolescents and families aim to promote and protect the health and well-being of children and families, particularly those who are at risk of abuse and neglect. A wide range of services are provided, including early years services, family support services, child protection services, adoption services, services for homeless youth, child and adolescent psychological and psychiatric services and registration, inspection and monitoring of children's residential centres. Services are provided directly by the HSE or by agencies grant-aided to provide similar or ancillary services (HSE, 2010a).

The remaining €0.5bn of expenditure relates to expenditure under the care group headings of palliative care and chronic illness, primary care and social inclusion. Palliative care services are those that are provided to patients and their families when disease is no longer responsive to treatment. Services are provided across a range of settings including acute hospitals, specialist palliative care inpatient units, day care and community-based supports (e.g. bereavement supports).

Primary care services aim to support and promote the health and wellbeing of the population by providing locally based accessible services (HSE, 2010a). Non-scheme expenditure under the primary care heading is accounted for by expenditure on primary care services such as physiotherapists, occupational therapists and chiropodists/podiatrists, as well as expenditure on the public dental service, which provides oral health services to primary school children and people with special needs. Where LHOs engage in direct provision of primary care services (e.g. physiotherapy), individuals are employed on a salary basis. However, it is difficult to assess the extent to which such services are provided by salaried employees or under contract with private operators (e.g. chiropody/podiatry services where the provider simply bills the LHO on a fee-for-service basis).¹⁵ The variation in the availability of non-GP primary care services (e.g. physiotherapy, chiropody/podiatry) across different LHOs necessarily complicates the analysis of resource flows for primary care services.¹⁶

Social inclusion services aim to improve access to mainstream services, target services to marginalised groups and address inequalities in access to health services. Services provided include homeless services, services for minority ethnic communities, Traveller health services, drug and alcohol services, HIV/STI services and community welfare/participation programmes (HSE, 2010a).

¹⁵ For example, there is no statutory obligation on the HSE to provide chiropody services to GMS (medical card) patients; however, in practice, arrangements have been made in several regions to provide these services. As of April 2009, there were 34.25 WTE chiropodists directly employed by the HSE, with the majority of chiropody services provided by chiropodists on contract with the HSE or other voluntary agencies (HSE - Parliamentary Affairs, 2009a). Due to concerns over podiatrists/chiropodists engaging in 'balance billing', the HSE is currently in the process of preparing an interim contract for chiropody/podiatry services, which will eliminate the potential for this practice (HSE - Parliamentary Affairs, 2009b).

¹⁶ An Eligibility Review Group in the DoHC is currently examining this issue.

6.4 SCHEME EXPENDITURE

In 2009, €2.9bn was spent on the various schemes administered by the PCRS and the LHOs. Up to 2010, funding for the PCRS was allocated on the basis of the previous year's allocation adjusted for new developments (e.g. funding for new medical cards was based on the average cost of medical cards) (see Table 6.3). Commencing in 2010, the HSE is developing an alternative model for the allocation of the *medical card* (i.e. GMS) component of PCRS funding. Allocation of funds will be based on the number of cards in existence together with new cards anticipated by age group, sex and geographic area. Both the drug costs and the doctor payments attached to these cards are costed. Forecasted new cards are spread across age groups, sex and LHO areas using the trend information for the previous 12 months as well as anticipated economic factors (HSE, personal communication; 16 April 2010).¹⁷ For the remaining PCRS budget (i.e. allocations under other schemes) and for schemes that are still administered by the LHOs (although most are now administered and funded via the PCRS), funding for 2010 will continue to apply on the same basis as in 2009.

6.4.1 Primary Care Reimbursement Service

6.4.1.1 Overview

The PCRS processes payments to all of the GPs, dentists, pharmacists and other professionals who provide free or reduced cost health services to the public under a variety of community schemes (commonly referred to as the 'demand-led schemes').¹⁸ The schemes involved are the General Medical Services (GMS) (i.e. Medical Card/GP Visit Card), Drugs Payment (DP), Long Term Illness (LTI), Dental Treatment Services (DTS), European Economic Area (EEA), High Tech Drugs (HTD), Primary Childhood Immunisation, Health (Amendment) Act 1996, Methadone Treatment and HSE Community Ophthalmic Services (see Table 1.4 of Chapter 1 for a detailed description of the various schemes).

In 2008 the PCRS processed in excess of 70m transactions with an associated expenditure of €2.5bn. Expenditure on the PCRS in 2009 was approximately €2.9bn (HSE, 2010a). Table 6.4 illustrates that expenditure on the PCRS has increased by 159.5 per cent in real terms over the period 2000-2009, with the largest increases occurring for the High Tech Drugs (HTD), Primary Childhood Immunisation, Long Term Illness (LTI) and General Medical Services (GMS) schemes. While the HTD Scheme accounted for only 11.6 per cent of total PCRS expenditure in 2009, it has increased its share of expenditure from 6.4 per cent in 2000. However, by far the largest component of expenditure on the PCRS is expenditure on the GMS and DP schemes, which together account for nearly 80 per cent of total PCRS expenditure.

¹⁷ The HSE's *National Service Plan 2010* states that 'targets for both medical cards and GP visit cards are based on trend lines in the last quarter of 2009, taking cognisance of the movement in the Live Register. These estimates are based on the assumption that policy, income and fee savings will be achieved as specified by the DoHC' (HSE, 2010a; 22).

¹⁸ Prior to 2005, the PCRS was known as the General Medical Services (Payments) Board (GMSPB).

TABLE 6.4
PCRS Expenditure by Scheme, 2000-2009 (€m)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009e	% change 00-09 ^a
General Medical Services (GMS)	515.4	649.4	842.1	952.1	1,085.9	1,247.0	1,342.2	1,482.6	1,614.6	1,767.3	166.1
Drugs Payment (DP)	140.6	177.6	192.4	204.4	226.8	246.7	285.8	310.1	311.5	335.1	85.0
Long Term Illness (LTI)	41.7	52.1	61.6	73.3	85.6	100.5	115.5	124.5	137.2	148.3	175.8
High Tech Drugs (HTD)	51.9	65.1	84.6	109.1	148.2	177.5	217.8	250.2	286.4	312.4	367.3
European Economic Area (EEA)	1.3	1.4	1.5	1.6	1.8	1.9	2.1	2.3	2.3	2.3	34.4
Dental Treatment Services (DTS)	38.0	41.6	45.7	49.8	52.4	54.4	55.4	58.1	63.4	78.5	60.3
Community Ophthalmic Services (HSE-COS)	8.7	9.8	13.9	13.7	17.4	17.0	18.0	21.5	22.4	22.4	99.8
Primary Childhood Immunisation	2.0	6.2	5.3	4.1	3.9	4.8	7.0	6.2	6.7	9.7	272.8
Methadone Treatment	5.7	6.6	8.7	8.5	12.0	10.9	13.4	14.1	15.3	16.7	127.9
Health (Amendment) Act 1996	1.0	1.1	1.3	1.4	1.7	1.8	2.0	2.1	2.1	2.2	71.7
Other (Heartwatch)	-	-	-	1.2	1.7	1.8	1.6	1.5	1.6	1.7	-
Total	806.4	1,010.9	1,257.2	1,419.3	1,637.3	1,864.3	2,060.7	2,273.3	2,463.4	2,696.6	159.5

Notes: See Table 1.4 for further details on each of the various schemes.

Data for 2009 is estimated as the 2009 PCRS Annual Report has yet to be published. See PCRS (2009) for latest version.

^a % change refers to real expenditure growth over the period 2000-2009.

Source: PCRS, personal communication [31 August 2009]

Essentially, the PCRS reimburses GPs, pharmacists, dentists and optometrists/ophthalmologists for services provided under the various community schemes outlined above. Chapter 12 discusses the reimbursement of community pharmacists in greater detail.

6.4.1.2 GPs

GPs enter into contract with the HSE for the provision of services under the GMS Scheme, the Primary Childhood Immunisation and Meningococcal Immunisation Scheme, the Influenza, Pneumococcal and Hepatitis B Immunisation Scheme, the Health (Amendment) Act 1996 Scheme and the Methadone Treatment Scheme. Table 6.5 describes the methods of reimbursement for GPs for services provided under these various schemes.¹⁹

¹⁹ All rates quoted take account of the reduction in fees announced in the Financial Emergency Measures in the Public Interest Act 2009. The reductions applied to most fees payable to GPs, community pharmacists, ophthalmologists/optometrists and dentists and are set out in the Health Professionals Regulations 2009 (Government of Ireland, 2009a, b, c, d) which came into effect on 07 July 2009. On 09 December 2009, the Minister for Health and Children announced, as part of the Health Estimates for 2010, that Government decisions on public pay reductions would propose a further reduction in the fees payable to certain health professionals. The details of this measure have yet to be finalised.

TABLE 6.5
Methods of Reimbursement (General Practitioners)

Method of Reimbursement	Examples (2010 rates of payment) ^a
GMS	
Capitation	Capitation payments range from €75.09 per annum for a female under 5 years of age living within 3 miles of the doctor's surgery to €280.31 for all those over 70 years living in the community. ^b
Fee-for-service for 'Special Items of Service'	GPs receive payments for 18 'special items of service' ranging from €29.14 for excisions/cryotherapy/diathermy of skin lesions to €154.13 for Hepatitis B vaccinations. They are also eligible for a fee of €31.09 for a second medical opinion.
Out-of-Hours Payments	Payments depend on distance and range from €46.59 for surgery consultations to €93.24 for home consultations over 10 miles.
Allowances	GPs are eligible to receive payments for practice in rural areas (up to a maximum of €19,055.31 per annum), practice secretary (up to a maximum of €25,591.70 per annum), practice nurse (up to a maximum of €40,215.55 per annum) and for a practice manager (up to a maximum of €32,903.63 per annum). ^c
Contributions to Medical Indemnity Insurance	Calculation of refund of premium for medical indemnity insurance is based on GMS panel size and premium amount.
Contributions to Locum Expenses	For annual, sick, study, adoptive, maternity and paternity leave, GPs are eligible for contributions towards locum expenses up to a maximum of €1,622.39 per week. They are also eligible for a payment of up to €231.77 per day for attendance at statutory bodies or GP committees.
Registration Fee for Asylum Seekers	A once-off superannuable registration fee of €179.25 per relevant patient is paid to GPs in respect of each such patient on their GMS list.
Registration Fee for GP Visit Card Holders	A once-off registration fee of €32.20 per relevant patient is paid to GPs in respect of new GP Visit card holder patients.
Primary Childhood Immunisation and Meningococcal Immunisation	
Registration Fee	For each child registered with a GP for childhood immunisations, a fee of €40.84 is paid to the GP.
Fee-for-service	GPs receive €136.08 for each child completing a full course of childhood vaccinations.
Bonus payment	GPs receive a bonus payment of €65.54 for 95 per cent uptake of the vaccinations.
Influenza, Pneumococcal and Hepatitis B Immunisation	
Fee-for-service	GPs receive fees per vaccination ranging from €42.75 (influenza and pneumococcal vaccinations) to €154.13 for Hepatitis B vaccinations for GMS-eligible patients. ^d
Health (Amendment) Act, 1996	
Fee-for-service	GPs receive a fee of €35.87 for every surgery visit and €47.31 for every domiciliary visit.
Methadone Treatment	
Capitation	A patient care fee ranging from €159.97 to €176.43 per annum is payable to GPs.
Fee-for-service	A fee of €50 per visit is payable to GPs.

Notes: ^a All rates are adjusted for the reductions in fees to health professionals announced as part of the Financial Emergency Measures in the Public Interest Act 2009.

^b As GPs receive the same amount for all those over 70 years living in the community, the payment is not risk adjusted in the same way as payments for younger age groups are adjusted for age, gender and distance from the doctor's surgery. In addition, a capitation rate of €978.08 per annum applies to anyone aged 70 years or over in a private nursing home (approved by the HSE) for any continuous period of five weeks.

^c Subsidies are based on the number of years' experience of the individual concerned; for example, a GP employing a practice nurse with one year's experience is eligible for a payment of €32,903.63, rising to €40,215.55 for a practice nurse with four or more years' experience.

^d Under an agreement reached in October 2009, GPs are also eligible to receive a fee of €10 for the provision of the swine flu vaccine.

Sources: GMS-PB, 2005; PCRS, 2007a; and Government of Ireland, 2009a

6.4.1.2.1 GMS Scheme

The current GMS contract, dating from 1989, provides for the payment of an annual capitation payment to GPs for each eligible patient on their list.²⁰ The capitation payment is comprised of a demographic component (a weighting for age and sex) and a geographic component (a weighting for distance from the doctor's surgery), with the latter intended to reflect the expenses incurred in visiting patients in their

²⁰ A minority of doctors are paid a fee for each visit under a fee-per-item agreement (the system that existed prior to 1989). In 2008, fees totalling €1,064,036 were paid to 11 GPs who continued to provide services under the fee-per-item of service agreements (down from 34 in 1998) (GMS-PB, 2005).

own homes. For example, the capitation rate for a female GMS patient aged 45-64 ranges from €125.17 for those living within three miles of the doctor's surgery to €155.43 for those living over ten miles away from the doctor's surgery.²¹ However, there is a single capitation rate of €280.31 for all those over 70 years, regardless of sex or geographic location. GPs also receive a higher capitation rate of €896.07 per annum for patients in private nursing homes.²²

Apart from a range of fees for 'special items of services' and out-of-hours fees, the cost of services provided in normal hours by GPs for GMS patients, including the prescribing of necessary medication, is encompassed by the capitation fee.^{23,24} GPs are also eligible for fees for temporary residents, a fee for rural dispensing, a fee for a second medical opinion, various practice support payments (e.g. for employing a practice nurse), for contributions to locum expenses and a once-off registration fee for asylum seekers and GP Visit card patients.²⁵ They are also eligible for annual payments for participation in the *Heartwatch* Scheme (see Chapter 8), although it is still run on a pilot basis with 20 per cent of GPs participating.

In 2008, capitation payments accounted for 49.6 per cent of total remuneration to GPs under the GMS Scheme. Other fees (including out-of-hours fees and fees for 'special items of service') accounted for 19.8 per cent of the total. Taken together, the various allowances accounted for 23.9 per cent of total payments, with the majority of payments for secretarial/nursing support. Payments to District Medical Officers (and their dependants) amounted to 1.5 per cent of the total, while superannuation benefits amounted to 5.2 per cent (see Table 6.6 for further details).²⁶ In 2008, the average annual payment per GMS agreement amounted to €221,737, with the average annual payment per GMS patient amounting to €344 (see Table 6.7).²⁷ In 2008, the average payment per visit by a GMS patient was €65 (see also Competition Authority, 2009a), a figure broadly comparable, and even slightly in excess, of that charged by GPs privately.

²¹ However, the majority of GMS patients live within three miles of their doctor's surgery (69.3 per cent in 2008) (PCRS, 2009).

²² In March 2009, there were 11,177 such patients (HSE - Parliamentary Affairs, 2009c).

²³ Currently, GPs receive additional fees for the provision of 18 'special items of service', ranging from €29.14 for the 'suturing of cuts and lacerations' to €154.13 for Hepatitis B vaccinations. The most frequent claimed special service in 2008 was influenza vaccination (329,030), at a cost of €42.75 each (PCRS, 2009).

²⁴ Normal hours are considered to be 09.00-17.00 Monday to Friday.

²⁵ In rural areas where a GP is located three miles or more from the nearest community pharmacy, the GP may dispense medication. The GP is paid a dispensing fee for each person. The GP's medicine requirements are obtained on a stock order from a community pharmacy. In 2008, 117 GPs were engaged in dispensing duties (PCRS, 2009).

²⁶ District medical officers (DMOs) were the dispensary doctors that existed prior to the establishment of the GMS in 1972 (and who continued to be reimbursed on a salary basis after 1972). They provided free primary care to those on low incomes. Wren (2003) provides a detailed account of the history of the GMS Scheme.

²⁷ While only one GP may hold a GMS contract, multiple GPs may be treating the patients on that particular GMS list. Essentially, a GMS patient may be treated by the GMS contract holder, other GPs in partnership with the GMS contract holder, assistants to the contract holder, locums working for the contract holder or other GPs involved in a GP out-of-hours co-op with the GMS contract holder.

TABLE 6.6

Components of GP Remuneration under the GMS Scheme, 2004-2008 (€m, %)

	2004		2005		2006		2007		2008		% change 04-08 ^a
	€m	%	€m	%	€m	%	€m	%	€m	%	
Capitation	157.4	51.4	206.1	51.1	195.0	49.9	218.8	50.5	230.9	49.6	26.1
Out-of-Hours	23.2	8.0	34.6	8.3	31.6	8.9	35.3	9.7	39.6	10.0	63.8
Special Items of Service	24.4	7.6	33.5	8.6	34.7	8.1	42.1	8.1	46.4	8.5	46.3
Other Fees	4.7	1.5	6.1	1.5	7.3	1.9	6.7	1.5	6.1	1.3	11.1
Allowances	72.7	23.7	93.8	23.3	93.0	23.8	99.7	23.0	111.0	23.9	31.2
DMOs ^b	7.8	2.6	8.1	2.0	8.9	2.3	7.8	1.8	7.3	1.5	-19.8
Superannuation	16.1	5.3	20.8	5.2	20.5	5.2	23.0	5.3	24.1	5.2	28.7
Total	306.3	100	403.1	100	391.0	100	433.3	100	465.2	100	30.6

Notes: Data are not presented for the period 2000-2004, as pre-2004 recording of GPs' fees and allowances is not consistent with that used after 2004.

^a % change refers to real expenditure growth over the period 2004-2008.

^b DMOs represents payments, mainly pensions, to District Medical Officers (i.e. the dispensary doctors that existed prior to the establishment of the GMS in 1972 and who continued to be reimbursed on a salary basis after 1972).

Sources: GMS-PB, 2005; and PCRS, 2006, 2007a, 2008a, 2009

TABLE 6.7

Average Payment per GP Agreement, GMS Patient and GMS Visit, 2004-2008 (€)

	2004	2005	2006	2007	2008	% change 04-08 ^a
Total Payment per GP Agreement	154,360.02	199,737.90	186,648.81	203,543.76	221,736.75	23.5
Total Payment per GMS Patient ^b	267.56	348.76	320.07	339.56	344.06	11.0
Total Payment per GMS Visit	50.29	65.80	60.39	64.07	64.92	11.0
Capitation Payment per GP Agreement	79,318.22	102,130.12	93,082.11	102,786.87	110,039.51	19.3
Capitation Payment per GMS Patient ^b	137.97	178.33	159.62	171.48	170.74	7.2
Capitation Payment per GMS Visit	25.84	33.65	30.12	32.35	32.22	7.2

Notes: ^a % change refers to real growth over the period 2004-2008.

^b Based on an average of 5.3 GMS GP visits per annum (reported in the Q3 2007 Quarterly National Household Survey (QNHS) Special Module on Health Status and Health Service Utilisation) (CSO, 2008)

Sources: Calculated from GMS-PB, 2005; and PCRS, 2006, 2007a, 2008a, 2009

While the current GMS contract involves a mixed method of payment, with a predominant capitation component, elements of the reimbursement method are worthy of comment. In the first instance, it is not clear that the risk adjustment method for the capitation payment adequately captures differences in need between the various population groups. The 'need' factors that are taken into account are age and sex, and while age and sex explain a large proportion of variation in need for health care, no account is taken of other 'need' factors such as extent and nature of illness or deprivation.²⁸ A 2001 study examined the appropriateness of the demographic (i.e. age and sex) adjustment for the prescribing budgets assigned to GPs as part of the now-defunct Indicative Drug Target Scheme.²⁹

²⁸ In England in contrast, the weighted capitation formula for allocations to GP practices adjusts the allocation per practice for population size (adjusted for age and sex), rurality, the cost of employing staff, i.e. the 'market forces factor' (which captures differences in rates of pay between areas) and morbidity (Department of Health, 2008).

²⁹ See Chapter 12 for a more detailed discussion of the Indicative Drug Target Scheme.

It found that the inclusion of chronic illness would significantly improve the accuracy of the risk adjustment mechanism (McElroy, 2000).

Even if the current capitation adjustment is accurately reflecting differences in need for care across the population, it is almost certainly not capturing differences in need among those over 70 years, for whom a single capitation rate of €280.31 exists, regardless of sex or distance from the doctor's surgery.³⁰ GPs with an older and more deprived over 70s GMS population are disadvantaged in comparison with GPs with a younger and more affluent over 70s GMS population.³¹ In addition, the current capitation rate of €896.07 which is paid to GPs who provide services to registered patients over the age of 70 who are resident in a private nursing home for any continuous period of five weeks does not incentivise efforts to return such patients to their own homes as soon as possible (noting however that such patients may be in worse health than their community-dwelling counterparts).³² An examination of the difference across age/sex groups in the average capitation payment per GP per GP visit (by a GMS patient) in 2008 reveals that there is little variation in the average capitation payment per GP visit for those aged 16-69 years. While the distinction between 'newly eligible' and 'existing' medical cards for those over 70 years does not now exist, the 2008 capitation payments per GP visit illustrate the differences involved. For those over 70 years resident in private nursing homes, the average capitation payment per GP visit is nearly seven times greater than that for those under 70 years resident in the community. While utilisation is not necessarily a good proxy of need, the data nonetheless illustrate the range of average capitation payments per GP visit (see Table 6.8).

³⁰ In the aftermath of the controversy surrounding the abolition of means testing for medical cards for those over 70 years in October 2008 and the need to achieve significant savings in the GMS budget, the Sullivan report recommended a single capitation rate of €270 for all GMS patients over 70 years (Sullivan, 2008). This fee excluded the €3.89 supplementary out-of-hours fee and two 2.5 per cent increases under the *Towards 2016* partnership agreement, resulting in a final fee of €308.77 (reduced to €280.31 as part of the Financial Emergency Measures in the Public Interest Act, 2009). While considerably in excess of the previous average capitation payment of €162 for GMS patients that were entitled to a medical card on the basis of means, at least the new rate removes the previous distortion whereby GPs were reimbursed in two different ways for those over 70 years, depending on whether the individual previously held a medical card. GPs received a capitation payment for GMS patients over 70 years who became newly eligible for a medical card (i.e. no means test) that was between 2.6 and 4.6 times higher than that received for GMS patients over 70 years who previously held a medical card (based on 2004 data; see GMS-PB, 2005). As those over 70 years who previously held a medical card were on average on lower incomes and in poorer health than those newly eligible over 70 years, this created an incentive for GPs to minimise workload for a very vulnerable section of the population.

³¹ In theory, GPs cannot refuse to accept an eligible GMS patient onto their GMS list and as such there should be no 'cream-skimming' behaviour by GPs in Ireland. However, it is possible that GPs may choose to locate in areas with more favourable health and social profiles and there is some evidence for this based on claims that GMS appointments have been difficult to fill in rural and certain deprived urban areas (FÁS, 2005).

³² The Sullivan Report was not tasked with recommending any changes to this rate of remuneration.

TABLE 6.8
Average Capitation Payment per GP GMS Visit by Age and Sex, 2008 (€)

	Male	Female
0-4 years	24.38	31.74
5-15 years ^a	18.80 / 35.82	22.17 / 36.94
16-44 years ^b	17.83	20.67
45-64 years	18.51	18.45
65-69 years	20.33	21.28
70 + years (new/existing) ^c	21.96 / 100.61	21.00 / 86.79
70 + years (private nursing home) ^c	145.81	125.78

Notes: This analysis was carried out using 2008 capitation rates applied to 2000 GP visiting micro-data; more recent GP visiting micro-data by age and sex from the 2007 QNHS Special Module on 'Health Status and Health Service Utilisation' were not available at time of writing [June 2010].

Capitation rates by age and sex are those for the group living under three miles from the doctor's surgery (as of December 2008, 69.3 per cent of GMS patients lived within three miles of their doctor's surgery (PCRS, 2009)).

^a For children, two sources of data on GP visiting rates are available. GP visiting rates for children 0-4 years and 5-15 years are available from the 1987 *Survey of Income Distribution, Poverty and Usage of State Services* (ESRI, 1987). In addition, GP visiting rates for those aged 5-15 years may be approximated by GP visiting rates for 9 year olds taken from the 2009 *Growing up in Ireland Survey* (Williams, 2010). Therefore, for the 5-15 year age group, two estimates are presented. The low figure corresponds to that using data from the 1987 *Survey of Income Distribution, Poverty and Usage of State Services*, while the high figure corresponds to that using data from the 2009 *Growing up in Ireland Survey*.

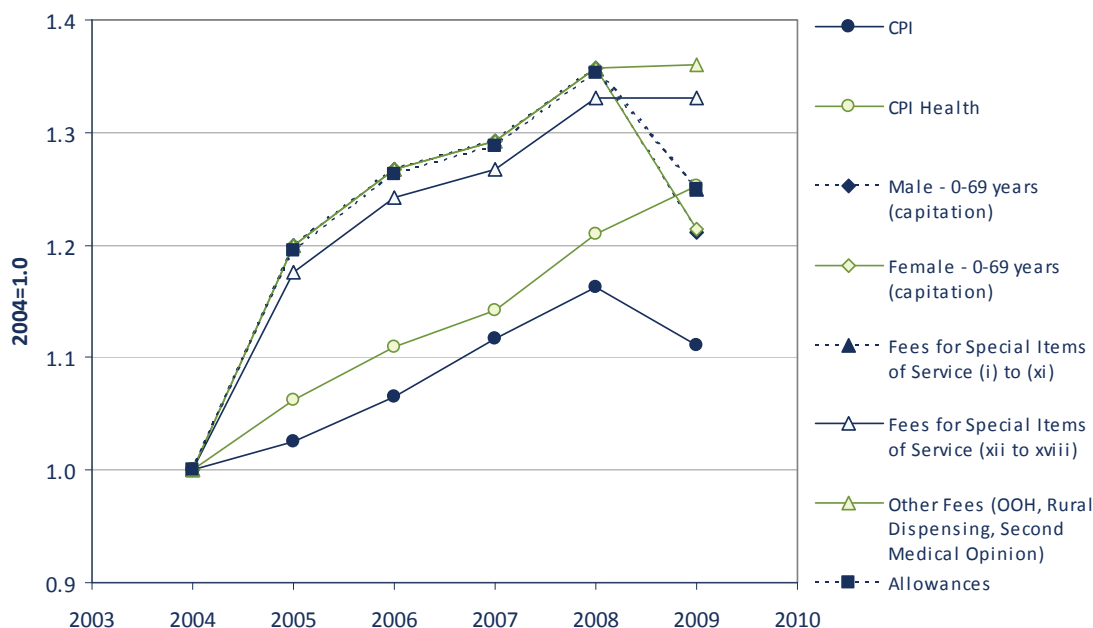
^b GP visiting rates for medical card holders aged 16 years and older by age and sex are taken from the 2000 *Living in Ireland Survey* (ESRI, 2000).

^c A single over 70s GP visiting rate is used. GP visiting rates for the over 70s (as available in the Living in Ireland Survey) cannot distinguish between those 'newly eligible' GMS patients, or an individual entitled to a GMS card prior to the abolition of means testing for the over 70s in 2001. In addition, as the Living in Ireland survey was a household survey, GP visiting rates for over 70s resident in (private) nursing homes are not available.

Sources: Calculated from Williams, 2010; PCRS, 2009; ESRI, 2000; and ESRI, 1987

Since 2004, the various components of the GMS contract have increased at a rate in excess of general inflation, but these increases have been broadly comparable with increases in private doctors' fees. With the exception of the changes for the capitation fees for those over 70 years, fees for certain items of service have experienced increases in excess of both general and health inflation (see Figure 6.1).

FIGURE 6.1
Components of GP GMS Contract, 2003-2010 (2004=1)



Notes: The distinction between newly eligible and existing over 70 GMS patients does not now exist (a single capitation rate of €280.31 applies to all over 70 GMS patients resident in the community). The Sullivan report recommended a single capitation rate of €270 for all GMS patients over 70 years (Sullivan, 2008); the agreed rate of €308.77 was reduced to €280.31 as part of the Financial Emergency Measures in the Public Interest Act, 2009. In 2004 however, differential rates existed (for example, for existing male over 70 GMS patients, the capitation payment was €108.74, while for newly eligible over 70 GMS patients, the capitation payment was €495.07).

^a For ease of presentation, capitation indices are presented for those living within three miles of their doctor's surgery (in 2008, 69.3 per cent of medical card holders lived within three miles of their doctor's surgery (PCRS, 2009).

^b While different capitation rates are available for males (and females) aged 0-4, 5-15, 16-44 and 45-64 years, the rate of increase in these capitation payments was largely the same across the period. In addition, the male 0-69 capitation and female 0-69 capitation payments increased at the same rate over the period 2004-2009; therefore, the two lines cannot be distinguished above.

^c The full list of special items of service (i) to (xviii) are available in PCRS (2009).

Fees for special items of service (i) to (xi) and allowances increased at the same rate over the period 2004-2009; therefore, the two lines cannot be distinguished above.

Sources: Calculated from GMS-PB, 2005; PCRS, 2006, 2007a, 2008a, 2009; and CSO Database Direct (www.cso.ie/px) [last accessed 27 June 2010]

Despite the fact that a capitation system of payment effectively transfers the risks associated with service use to the provider, the majority of Irish GPs have GMS contracts (currently around 75 per cent).³³ In the first instance, while only approximately 30 per cent of the population are eligible for medical or GP visit cards, this population group accounts for approximately 50 per cent of all GP consultations (Competition Authority, 2009a). It provides GPs with a guaranteed annual income and, importantly, also subsidises superannuation payments by GPs. Under the GMS contract, 10 per cent of GPs' capitation payments are paid by the HSE into a superannuation fund, while the GPs themselves contribute another 5 per cent into

³³ As GMS patients may be treated by the GMS contract holder, other GPs in partnership with the GMS contract holder, assistants to the contract holder, locums working for the contract holder or other GPs involved in a GP out-of-hours co-op with the GMS contract holder, it is difficult to ascertain the total number of GPs providing services under the GMS (as distinct from the number of GPs with GMS contracts).

the same fund (Competition Authority, 2009a).³⁴ In addition, GPs are eligible to receive allowances for practice support staff (secretaries, practice managers, practice nurses) and as GPs cannot discriminate between GMS and private patients, neither can their practice staff. Thus, practice allowances that are available under the GMS contract are also used to support the provision of services to private patients by Irish GPs.

6.4.1.2.2 *National Primary Childhood Immunisation, Meningococcal Immunisation, Influenza, Pneumococcal and Hepatitis C Immunisation and Methadone Treatment Schemes*

For services provided under the National Primary Childhood Immunisation and Meningococcal Immunisation Scheme, GPs receive a registration payment of €40.84 per patient, as well as a payment of €136.08 for the complete immunisation course and a bonus payment of €65.54 for 95 per cent uptake of the vaccine. For the Influenza, Pneumococcal and Hepatitis C immunisation Scheme, GPs receive fees ranging from €42.75 for the influenza vaccine to €154.13 for the Hepatitis B vaccine (see Table 6.5). For each surgery (domiciliary) visit by an eligible patient on the Health (Amendment) Act 1996 Scheme, GPs receive a fee of €35.87 (€47.31). In contrast, GPs receive a capitation payment of between €159.97 and €176.43 per annum for patients registered under the Methadone Treatment Scheme.

6.4.1.2.3 *Private Patients*

Currently, GPs are paid a fee-for-service for each visit by a private patient. GPs may thus be incentivised to maximise the amount of services provided, including encouraging repeat consultations and discouraging referral to other practitioners and secondary care. Fee-for-service may not incentivise the provision of preventive health services, since GPs only earn income when patients are ill, not healthy (see also Chapter 3).

GPs can display prices as specified in the newly updated Guide to Professional Conduct and Ethics for Registered Medical Practitioners (Medical Council, 2009) and this has been welcomed by the Competition Authority (Competition Authority, 2009b).³⁵ An informal survey by the Competition Authority suggests that the current

³⁴ The GMS Superannuation Plan is a defined contribution scheme (www.imo.ie/Documents/Pensions%202009.ppt) [last accessed 27 June 2010].

³⁵ The updated *Guide to Professional Conduct and Ethics for Registered Medical Practitioners* (published in November 2009) eases advertising restrictions on medical practitioners. In particular, paragraph 54.2 states 'you may advertise your practice by publishing the name and address of the practice, the practice hours and contact details. You may include your area of speciality if it is one that is recognised by the Medical Council and you are entered for that speciality in the Specialist Division of the Register'. Paragraph 54.4 states 'if you consider publicising information further than that specified in paragraph 54.2 in relation to services you provide, either directly or indirectly, you must make sure that the information published in the advertisement is true, verifiable, does not make false claims or have the potential to raise unrealistic expectations. This should include information about the inherent risks associated with the services provided' (Medical Council, 2009; 49).

cost of a GP visit is approximately €50–€55 in urban areas, with slightly lower charges in rural areas. A range of €45–€60 in the price charged to private patients is typical (Competition Authority, 2009a). A recent survey of 123 GPs found that 50 per cent display prices, with the cost of a routine visit averaging at €51 (ranging from a minimum of €35 in Tralee to a maximum of €70 in Ballsbridge/Sandymount) (National Consumer Agency, 2010). Data from the CSO suggest the increase in doctors' fees has been substantially greater than that for average prices, or indeed for average health prices over the period 2003–2009.³⁶ In addition, despite falling prices over the course of 2009, doctors' fees actually increased in the early months of 2009, before falling and stabilising in mid-2009 and increasing again from October 2009 (see Chapter 11).

6.4.1.3 Pharmacists

The pricing and reimbursement of pharmaceuticals on the GMS and various community drugs schemes (e.g. DP, LTI, HTD) is dealt with in more detail in Chapter 12, but Table 6.9 details the main features of the payments that participating pharmacists receive for dispensing medicines to eligible patients. From the perspective of the pharmacist, the DP, LTI, EEA and Health Amendment schemes are more lucrative than the GMS, since in addition to the fixed dispensing fee per item, the pharmacist also receives a 20 per cent mark-up on the ex-wholesale price of the drug. For medicines dispensed to patients under the HTD Scheme, pharmacists receive a monthly 'patient care fee' of €60.52 (the HSE supplies participating pharmacies with the relevant drugs). For services provided to those eligible under the Methadone Treatment Scheme, pharmacists receive a 'patient care fee' of €60.49 per month, as well as the fixed dispensing fees per item. In 2008, the average annual payment to pharmacists for services and medications provided to GMS patients was €706,970, while the average annual payment per pharmacist for services and medications provided to DP patients was €192,530 (see Table 6.10).

³⁶ The CSO data do not distinguish between GP fees and those for other doctors (principally hospital consultants). However, GP fees account for approximately 70 per cent of all payments to doctors and thus the series is a reasonably good approximation of growth in GP fees (Competition Authority, 2009a).

TABLE 6.9
Methods of Reimbursement (Community Pharmacists)

Method of Reimbursement	Examples (2010 rates of payment) ^a
GMS	
Fixed Dispensing Fee	Pharmacists receive a fee per item of €5.00 for the first 1,667 items dispensed per month, €4.50 per item for the next 833 items per month and €3.50 per item for all remaining items per month.
DPS/LTI/EEA/Health Amendment	
Fixed Dispensing Fee	Pharmacists receive a fee per item of €5.00 for the first 1,667 items dispensed per month, €4.50 per item for the next 833 items per month and €3.50 per item for all remaining items per month.
Retail Mark-Up	20 per cent on the ex-wholesale price. ^b
HTD	
Capitation ('Patient Care Fee')	Pharmacists receive a patient care fee of €60.52 per month for the dispensing of pharmaceuticals to eligible patients.
Methadone Treatment	
Capitation ('Patient Care Fee')	Pharmacists receive a patient care fee of between €52.07 and €60.49 per month for the dispensing of pharmaceuticals to eligible patients.
Fixed Dispensing Fee	Pharmacists receive a fee per item of €5.00 for the first 1,667 items dispensed per month, €4.50 per item for the next 833 items per month and €3.50 per item for all remaining items per month.

Notes: ^a All rates adjusted for the reductions in fees to health professionals announced as part of the Financial Emergency Measures in the Public Interest Act 2009.

^b The ex-wholesale price is the manufacturer's posted price (in some countries also referred to as the list price) plus the wholesale mark-up (currently 10 per cent on the manufacturer's posted price) (see Chapter 12 for further discussion).

Sources: Government of Ireland, 2009b; PCRS, 2009; and PCRS, 2007a

TABLE 6.10
Average Payment per Pharmacy Agreement and GMS/DP/LTI Patient, 2004-2008 (€)

	2004	2005	2006	2007	2008	% change 04-08 ^a
GMS Payment per Pharmacy Agreement	572,631.71	581,428.41	610,932.15	660,622.82	706,970.14	6.2
GMS Payment per GMS Patient	664.38	719.41	769.61	821.52	847.03	9.6
GMS Payment per Item	21.79	22.21	23.18	23.63	23.76	-6.3
DP Payment per Pharmacy Agreement	168,011.17	170,969.19	183,955.89	193,657.27	192,529.90	-1.5
DP Payment per DP Patient	152.43	165.34	185.56	194.06	192.01	8.3
DP Payment per Item	22.55	23.10	23.85	22.88	22.43	-14.5
LTI Payment per Pharmacy Agreement	64,179.35	70,312.34	75,023.61	78,423.53	85,122.84	14.0
LTI Payment per LTI Patient	914.95	1,012.76	1,086.11	1,105.51	1,145.27	7.6
LTI Payment per Item	51.08	52.12	53.32	52.90	52.17	-12.2

Note: ^a % change refers to real growth over the period 2004-2008.

Sources: Calculated from GMS-PB, 2005; and PCRS, 2006, 2007a, 2008a; 2009)

6.4.1.4 Dentists and Optometrists/Ophthalmologists

Dentists who participate in the Dental Treatment Services (DTS) Scheme are remunerated on a fee-for-service basis; for example, for a routine oral examination, a participating dentist receives €33.00 (see Table 6.11). In 2008, the average annual payment per dentist for participating in the DTS was €56,300 (see Table 6.12). Optometrists/ophthalmologists who participate in the HSE Community Ophthalmic Services (HSE-COS) Scheme are reimbursed on a fee-for-service basis (e.g. for an eye examination by an ophthalmic optician, the fee is €23.35). In 2008, the average

payment per optometrist/ophthalmologist participating in the HSE-COS was €39,248. For dentists and optometrists/ophthalmologists, the fee-for-service remuneration method incentivises the production of increased quantities of services, although the levels of expenditure on these schemes are small in comparison with the GMS and community drugs schemes.³⁷ Nonetheless, it is not clear why dentists and optometrists/ophthalmologists providing services to medical card patients are not also reimbursed on a (predominately) capitation basis, as per the GP services component of the GMS.

TABLE 6.11
Methods of Reimbursement (Dentists and Optometrists/Ophthalmologists)

Scheme	Method of Reimbursement	Examples (2010 rates of payment) ^a
DTS ^{b,c}	Fee-for-Service	Dentists receive a fee of €33.00 for an oral examination
HSE-COS	Fee-for-Service	An eye examination by an Ophthalmic Optician generates a fee of €23.35, while an eye examination by an Ophthalmologist generates a fee of €53.01

Notes: ^a All rates adjusted for the reductions in fees to health professionals announced as part of the Financial Emergency Measures in the Public Interest Act 2009.

^b In an effort to reduce spending on the DTS Scheme in 2010, the HSE announced that the DTS Scheme would provide only emergency treatment to medical card patients from April 2010 (The Irish Times, 2010a). In June 2010, two dentists secured a High Court injunction preventing the HSE from implementing the changes (The Irish Times, 2010b).

^c For some services (e.g. apicectomy/amputation of roots), the dentist is reimbursed on the basis of their own estimate of the cost (in agreement with the HSE).

Sources: PCRS, 2007b, 2008b, 2009; and Government of Ireland, 2009c, d

TABLE 6.12
Average Payment per Dentist and Optometrist/Ophthalmologist Agreement and DTS/HSE-COS Patient, 2004-2008 (€)

	2004	2005	2006	2007	2008	% change 04-08 ^a
DTS Payment per Dentist Agreement	45,357.12	45,487.38	45,711.82	55,855.80	56,300.06	6.7
DTS Payment per DTS Patient	220.47	224.00	216.37	225.23	240.55	-6.2
DTS Payment per Item	48.84	50.87	50.60	53.89	54.65	-3.8
HSE-COS Payment per Optometrist/ Ophthalmologist Agreement	33,279.39	29,819.10	30,665.04	38,730.65	39,248.16	1.4
HSE-COS Payment per COS Patient	93.98	90.43	87.88	96.61	94.34	-13.7
HSE-COS Payment per Item	39.29	37.92	36.43	41.12	39.60	-13.3

Notes: There are no micro-data available on the average number of dental and optical visits by DTS and HSE-COS claimants in each of these years.

^a % change refers to real growth over the period 2004-2008.

Sources: Calculated from GMS-PB, 2005; and PCRS, 2006, 2007a, 2008a; 2009)

³⁷ However, as the numbers eligible for a medical card increased sharply over the course of 2009, expenditure on the DTS scheme was 35 per cent over budget at the end of 2009 (HSE, 2010c).

6.4.2 LHO Scheme Expenditure

The remaining schemes are administered by the LHOs and primarily relate to expenditure on 'primary care schemes'. Expenditure on these schemes primarily relates to the provision of certain allowances and cash grants such as domiciliary care allowances, mobility allowances, blind welfare allowances and maternity cash grants.^{38,39,40,41} Expenditure on 'hardship medicine' is also included in PCCC scheme expenditure and is currently administered by the LHOs.⁴² It is clear that a large portion of primary care scheme expenditure is not what would be conventionally described as 'primary care' and current initiatives in relation to the transfer of responsibility for certain schemes to other agencies (see below) reflects this.

In 2007 there was a major reclassification of primary care services from LHOs to PCRS; services that were previously administered via the LHOs were transferred to the PCRS (such as the Long Term Illness Scheme, the Drugs Payment Scheme, High Tech Drugs Scheme, Health Amendment Act 1996 Scheme and the Dental Treatment Service Scheme). In addition, some of the schemes administered by the LHOs under the primary care care group are in the process of being transferred to the responsibility of the Department Protection (formerly Social and Family Affairs), such as domiciliary care allowances. Allocations to LHOs for such schemes are made on the basis of historic budget with adjustments for incremental spend (see Table 6.3).

6.5 GRANTS TO LARGE VOLUNTARY PROVIDERS

In 2009, €0.6bn was allocated directly to the 23 large voluntary groups providing primary, community and continuing care services.⁴³ In 2009 for example, the Disability Federation of Ireland received €0.9m, while St John of God Hospital received €92.3m. The majority of expenditure under this heading is accounted for by providers of disability services (€458.4m or 82.4 per cent), while a further 10 per cent is accounted for by grants to providers of mental health and older persons

³⁸ Domiciliary care allowance is a monthly allowance paid to the parent or guardian of a child under 16 who has a severe disability requiring continuous care and attention. The condition must be likely to last for at least one year and eligibility may be reviewed from time to time. The means of the parent are not considered, just the child. Since 1 April 2009, responsibility for domiciliary care allowances has been transferred from the HSE to the Department of Social Protection (formerly Social and Family Affairs).

³⁹ The mobility allowance is a means tested allowance paid to all those between the ages of 16 and 65 years who are unable to walk or use public transport.

⁴⁰ The blind welfare allowance is a means tested payment paid to those over 18 years who are blind or visually impaired and is usually paid in addition to the blind pension (administered by the Department of Social Protection).

⁴¹ A once-off maternity cash grant of €10.16 is paid to all mothers with medical cards on the birth of a child.

⁴² The Hardship Medicine Scheme involves the provision of medicines, medical and surgical appliances appropriate to the treatment of their condition to persons with full eligibility (i.e. medical card holders) and persons suffering from a long-term prescribed illness, where the item is not reimbursed by the PCRS (this usually happens when an individual is prescribed an item that does not have a marketing authorisation in Ireland). On presentation of the prescription the pharmacist contacts the HSE to see if the HSE will reimburse the cost of this drug. If appropriate, the HSE would agree to reimburse the pharmacist because to expect the patient to pay the full cost of the drug would cause unnecessary hardship. A pharmacist gaining approval for reimbursement in that circumstance does not mean that the product is added to the 'Common List' of reimbursable items (DoHC, personal communication; 03 March 2010).

⁴³ The list of voluntary providers set out in Schedule II of the ERHA Act 1999 have a direct funding relationship with the HSE, i.e. resources are not administered via the LHOs or any other agency (e.g. PCRS) (Prospectus, 2003).

services (HSE personal communication, 01 April 2010). In most cases, SLAs between the HSE and these non-statutory providers specify the broad nature of the service to be provided in return for the funding received. A number of recent reports by the Comptroller and Auditor General have criticised the funding arrangements between the HSE and such service providers, particularly in terms of the lack of SLAs which detail the link between the funding, the service provided and the standards to be met (CAG, 2005; 2009).⁴⁴ During 2009, the HSE initiated a process whereby SLAs would be standardised for all voluntary providers (as required under the Health Act 2004) (HSE, 2009d).

6.6 NEW INITIATIVES

6.6.1 Overview

Sections 6.3, 6.4 and 6.5 document, where information is available, the resource flows and allocation mechanisms for the main components of PCCC expenditure in 2009. In terms of the allocation of resources, Table 6.3 indicates that while the majority of care groups continue to receive funding on the basis of historic budgets with adjustments for incremental spend, there are recent movements towards the development and application of alternative resource allocation methods for particular areas of expenditure (namely, mental health services, certain services for older persons and for medical card funding). In terms of the reimbursement of providers, while GPs are reimbursed on a part capitation basis for services provided to medical card patients and LHOs directly employ many health-care providers on a salary basis, many non-statutory service providers are essentially reimbursed on an historic block-funding basis. The consequences of such funding arrangements for equity, efficiency, quality and sustainability will be discussed further in Chapter 8. In recognition of the inadequacy of many of the current resource allocation mechanisms in PCCC, a number of initiatives have recently been implemented with a view to introducing a more rational allocation of resources for certain areas of expenditure.

6.6.2 Nursing Homes Support Scheme and Home Care Support Scheme

6.6.2.1 Overview

Government policy in relation to older people is '*to support people to live in dignity and independence in their own homes and communities for as long as possible and, where this is not possible, to support access to quality long-term residential care*' (DoHC, 2009c; 1). As an illustration of new approaches to the resource allocation process with regard to expenditure on older people, this section examines in further detail expenditure on long-term residential care services (under the new Nursing Homes Support Scheme) and expenditure on community support services (under the Home Care Support Scheme). Together these schemes accounted for only €237m of

⁴⁴ This applies equally to the smaller voluntary providers funded via the LHOs (see Section 6.3).

annual expenditure on services for older persons in 2009; total expenditure on services for older persons was approximately €1.2bn in 2009 (HSE, 2010b). However, in advance of the introduction of the Nursing Homes Support Scheme, a dedicated subhead for long-term residential care was established within the Vote from the Exchequer to the HSE. The total funding in under this subhead for 2010 will be €0.979bn. This represents the total State funding available for long-term residential care in 2010 (Department of Finance, 2010).

6.6.2.2 Nursing Homes Support Scheme

The Nursing Homes Support Scheme ('A Fair Deal') is a new scheme of financial support for people who need long-term nursing home care. It replaces the previous subvention scheme that has been in existence since 1993.⁴⁵ The State contributes to the cost of nursing home care, regardless of whether the service is provided in a public, private or voluntary facility.⁴⁶

Individuals apply to their Local Nursing Home Support Office (currently there are 18) for the scheme. They undergo a care needs assessment and a financial assessment and in some cases, apply for 'ancillary state support', i.e. a nursing home loan. The care needs assessment identifies whether the individual needs long-term nursing home care and is carried out by an appropriate health-care professional appointed by the HSE.⁴⁷ The financial assessment considers the individual's income and assets in order to calculate their contribution towards their own care (the HSE pays the balance).⁴⁸ Individuals contribute 80 per cent of their assessable income and 5 per cent of the value of any assets per annum.⁴⁹ However, the first €36,000 of the individual's assets, or €72,000 for a couple, is excluded from the financial assessment. Once an individual is deemed eligible for the scheme, the HSE provides the individual with a list of approved nursing homes, from which the individual is free to choose.

⁴⁵ Under the previous arrangements, an individual who obtained a public long-term care bed was charged a maximum of up to 80 per cent of the State pension (non-contributory) towards the cost of care. By contrast, the same individual availing of a private long-term care bed was entitled to a subvention but was otherwise obliged to meet the full cost of care. Under this system, the State effectively covered 40 per cent of the cost of care provided in private facilities and 90 per cent in public facilities (DoHC, 2009c).

⁴⁶ Only those private facilities that have agreed prices with the National Treatment Purchase Fund (NTPF) are eligible to provide services under this scheme (currently, 439 facilities are eligible) (HSE, 2010a).

⁴⁷ The *Common Summary Assessment Report* (CSAR) is a standardised form used by the person carrying out the needs assessment. However, it is not clear that the decision by each Nursing Home Support Office to grant an individual support under the Nursing Homes Support Scheme is based on a common set of criteria, despite that fact that literature on the scheme states that '*the scheme will be based on a national standardised care needs and means assessment*' (DoHC, 2009c; 7).

⁴⁸ The HSE covers the cost of nursing and personal care appropriate to the level of care needs of the person, basic aids and appliances necessary for the activities of daily living, bed and board and laundry services. A person who avails of the Nursing Homes Support Scheme should not be charged any additional fee over and above the published cost/price, except where he or she chooses to obtain additional services, e.g. hairdressing (HSE, 2010d).

⁴⁹ Where assets include land and property, the 5 per cent contribution based on such assets may be deferred and collected from the individual's estate (this is the optional Nursing Home Loan element of the scheme which is legally referred to as 'ancillary state support'). However, the principal residence will only be included in the financial assessment for the first 3 years of the individual's time in care.

The NTPF negotiates with private nursing homes to agree prices for the purposes of the scheme. These agreed prices form the basis for the balance of cost to be paid by the State in respect of individuals who qualify for support. It is therefore in the interests of the State to negotiate the best deal on prices. All prices (for both public and private facilities) are publicly available on the HSE website. It is not clear how prices are negotiated or whether the NTPF uses any additional information to inform their decision (e.g. international costs of care). Table 6.13 illustrates the mean, median, minimum and maximum charges per week in public and private/voluntary facilities. The figures reveal substantial variation in the cost of care between public and private nursing homes, although care must be taken in making comparisons of this kind.⁵⁰ In addition, there are considerable variations within public nursing homes (ranging from €441 per week to €3,182 per week) and within private nursing homes (ranging from €365 per week to €1,335 per week for a single room). To what this variation reflects genuine competition, rather than differences in patient profile, is not clear.

TABLE 6.13
Weekly Nursing Home Charges, 2010 (€)

	Mean	Median	Minimum	Maximum	#
Public	1,371	1,319	441	3,182	118
Private/Voluntary ^a	829	795	365	1,335	439

Note: ^a The cost per week in private and voluntary nursing homes refers to single room accommodation.

Sources: HSE, 2010e, f

6.6.2.3 Home Care Support Scheme

The Home Care Support Scheme, which is commonly known as the Home Care Package (HCP) Scheme, is operated by the HSE and provides care in the home, mainly for older people who are at risk of admission to acute or residential care.⁵¹ HCPs are primarily targeted at people with medium to high dependency needs. The scheme is also available to others needing care in the community, such as the disabled.⁵² The scheme was introduced in 2006 and as of December 2009, 8,959 individuals were in receipt of HCPs (HSE, 2010a). Funding devoted to HCPs in 2009

⁵⁰ In particular, while the figures for the cost of care in public nursing homes are presented in terms of 'average weekly cost', the figures for private and voluntary facilities are presented in terms of 'price agreed per week', separately for single and shared rooms (although in practice, the majority report the same price for single and shared rooms). Public nursing homes typically employ a greater number of nursing staff and therefore have higher nursing-to-patient ratios than many nursing homes in the private sector, which partly accounts for the higher cost of care (higher pay costs may also contribute to the higher costs of care). These higher staffing ratios are in place because public nursing homes have traditionally provided care to patients with high dependency levels and care needs, where their needs cannot be met in other care facilities. HSE long-stay residential units have the highest proportion of maximum dependent older people at just over 60 per cent compared to that of private nursing homes with almost 35 per cent (www.hse.ie/eng/services/Find_a_Service/Older_People_Services/nhss/costs.html) [last accessed 28 June 2010].

⁵¹ A range of measures aim to help older people to live independently in their own homes and communities for as long as possible, including home care packages, the home help service, meals on wheels, community intervention teams and respite/day care services (National Economic and Social Forum, 2009).

⁵² In December 2009, 93 per cent of those in receipt of HCPs were over 65 years of age (HSE, 2010c).

amounted to €120m (HSE, 2010a).⁵³ The administration of HCPs is carried out by the LHOs, with funding for HCPs channelled through the 'services for older persons' care group area of PCCC funding.

Each HCP is tailored to the needs of the individual and is based on a needs assessment. Services provided included nursing, home care attendants, home helps and various therapies such as physiotherapy and occupational therapy.⁵⁴ Unlike the Nursing Homes Support Scheme, the HCP Scheme is an administrative scheme, i.e. there is no automatic right to the HCP Scheme nor to avail of services under it. As guidelines to provide a standardised national approach to its implementation are not yet operational, each LHO implements the scheme differently.⁵⁵ While this may allow for flexibility in delivery, it also leads to inconsistencies, inequities and duplication of work (National Economic and Social Forum, 2009).⁵⁶ The National Economic and Social Forum (NESF) found that there were variations by LHO in eligibility criteria, methods of assessment, the financial value of a HCP and what type of organisation delivers the care (HSE, commercial agencies, voluntary organisations, etc.).⁵⁷ In particular, double or triple assessments of needs and means are often carried out. For example, assessments of the care needs of an older person were often carried out by medical staff in hospital, by a public health nurse co-ordinating HCPs and by the organisation appointed to provide the care. Similarly, double or triple means testing of an older person also occurred, e.g. for home help services, for HCPs and for a medical card (National Economic and Social Forum, 2009).

Those in receipt of HCPs are generally very positive about their experiences with the scheme and the improvement in quality of life that has resulted from the scheme (National Economic and Social Forum, 2009). However, in terms of resource allocation, while the overall allocations to the four HSE areas are broadly equitable in terms of the proportion of the population aged over 65, there are substantial

⁵³ A defining feature of the HCP scheme was the provision of dedicated development funding; the first of this funding was allocated in 2006 (€55m), increasing to €110m in 2007 and €120m in 2008 and 2009 (PA Consulting Group, 2009).

⁵⁴ There may be some confusion about the difference between the HCP scheme and the existing home help scheme. HCPs are essentially a more comprehensive service, incorporating medical services as well as home help services. In December 2009, 53,791 individuals availed of home help services (HSE, 2010a).

⁵⁵ The PCCC Directorate of the HSE produced guidelines in mid-2006. The guidelines set the average cost of a HCP at €525 per week, although they allowed this amount to be exceeded in exceptional cases. A financial means test was also included. Single people with an income of €292 or less per week (€484 per couple), with the first €20,000 of savings disregarded, would receive full funding for a HCP. Where a person's assessed income exceeded that amount, a sliding scale of financial provision would be provided. The guidelines stated that the first point of contact for those seeking a HCP should usually be a public health nurse. A standardised needs assessment was also not put in place and thus different LHOs used different ones. Draft *National Quality Guidelines for Home Care Support Services* were prepared by the Services for Older People Expert Advisory Group of the HSE in late 2008, but have yet to be implemented (although the HSE's *National Service Plan 2010* states that an implementation plan is due to be rolled out in 2010) (HSE, 2010a).

⁵⁶ The evaluation of the HCP scheme carried out by PA Consulting on behalf of the Department of Health and Children also made reference to the consequences of the lack of a national approach to service delivery, i.e. '*older people can be expected to be assessed and receive different services as part of their HCP depending on where they live*' (PA Consulting Group, 2009; 8).

⁵⁷ Cash grants, which individuals use to arrange their own care, are being gradually phased out (principally because they entailed the older person becoming an employer). However, 28 per cent of new HCP recipients received a cash grant to organise their own care in December 2008 (National Economic and Social Forum, 2009).

variations in the allocations to individual LHOs that cannot be explained by differences in age profile, let alone need. For example, in 2008 the allocations under the HCP Scheme per person aged 65+ ranged from €91.70 in Wicklow to €502.76 in Dublin North Central. In terms of the actual value of HCPs, a survey of eight LHOs found that the maximum amount payable per week per recipient varied from €252 to €1,500, with the result that *'this provides at best inconsistencies, and at worst inequities, in the amount of care which people can access through a HCP'* (National Economic and Social Forum, 2009; 56).

In terms of data collected which would aid evaluation and further development of the HCP Scheme, the HSE requires that each LHO provide monthly data on the number of HCPs being provided, the number of recipients, their age, where they are referred from, as well as pay and non-pay costs. However, these are essentially inputs and no information on outputs or outcomes are currently collected. *'When inputs and outputs and outcomes cannot be compared, then the efficiency and effectiveness of the monies being spent cannot be assessed'* (National Economic and Social Forum, 2009; 78).

In terms of the delivery of HCPs, lack of integration with other service providers has been highlighted. This manifests itself most obviously in terms of assessment, where duplications in assessments are common (for further discussion, see PA Consulting Group, 2009 and National Economic and Social Forum, 2009). It also arises in respect of confusion over the various schemes administered by the HSE, most notably the relationship between the HCP Scheme and the existing Home Helps Scheme. NESF have noted that inconsistencies between the funding and mean tests for HCPs and nursing home care mean that nursing home care is still favoured, even though policy on older people aims to maintain as many as possible at home.⁵⁸ Finally, while it is envisaged that providers of services covered by HCPs would be part of primary care teams, this is currently not the case.⁵⁹

6.6.2.4 Discussion

Both the Nursing Homes Support Scheme and the Home Care Support Scheme involve the use of alternative methods of allocating resources for the delivery of services for older persons. In contrast to previous methods of allocating resources for these services, there is now an attempt to tie the allocation of resources more closely to need. In the absence of *operational* standardised needs assessment

⁵⁸ A submission from a social worker noted that *'the amount that a patient can apply for (€680 minus weekly income) to fund support at home is far less than the amount of funding granted for admission to long-term care through the Delayed Discharge Initiative funding or through Enhanced Nursing Home Subventions or what would be provided through the Fair Deal in the future. This highlights that there is still a bias toward the funding of residential placements over supporting people at home in the community'* (National Economic and Social Forum, 2009; 70).

⁵⁹ An evaluation of the implementation of the HCP scheme in eight LHOs noted that *'in most of the LHOs consulted as part of the evaluation, this connection was starting to develop'* (PA Consulting Group, 2009; 42), although the precise form of this connection was not specified.

guidelines and criteria, however, the allocation of resources may serve to perpetuate existing inequities in the delivery of such services. In terms of the initial allocation of resources for the two schemes, funding for the Home Care Support Scheme is still based on an historic budget basis, while funding for the Nursing Homes Support Scheme is based on a statutory assessment of need as laid out in the Nursing Homes Support Scheme Act 2008 (Government of Ireland, 2009e).

In terms of integration, a concern arises in relation to the administration of the two schemes. Individuals wishing to avail of the Nursing Homes Support Scheme must apply to one of 18 Nursing Home Support Offices, while those wishing to avail of the Home Care Support Scheme must apply to their LHO. The NESF evaluation of the Home Care Support Scheme highlighted the lack of operational standardised guidelines for the assessment of need. It is clear that standardised guidelines on care and financial assessments need to be enforced for both schemes. In addition, given that the relevant populations are likely to be very similar, it would make sense to have standardised needs and financial assessment guidelines for all services for older persons.

6.6.3 Mental Health Resource Allocation Model

6.6.3.1 Overview

The HSE's *National Service Plan 2010* states that a population-based methodology has been devised and agreed for mental health services, 'to guide resource allocation to address inequity in service access' (HSE, 2010a; 30). At time of writing however, no information was available on the methodology or the type of data used to inform the 'population-based methodology'. This section therefore concentrates on the situation that existed prior to 2010 regarding the allocation of new funding for adult mental health teams (see also DoHC, 2009d). As with other areas of primary care, existing levels of service delivery largely determined the allocation of mental health resources to different areas of the country. Quite apart from the possibility that such a model limits the development of new services, it is most importantly not tied to any concept of 'need' for mental health services. Variations in per capita funding for mental health services across LHOs were considerable and it is likely that some of these differences reflected differences in service availability rather than any difference in need for mental health services (see Table 6.14 for the situation in 2007) (Staines *et al.*, 2010b).

TABLE 6.14
Population and Per Capita Allocation for Mental Health Services by LHO, 2007

	Population	Per Capita Allocation (€)
Galway	231,670	271.08
Dublin North	222,049	148.38
Kildare/West Wicklow	203,327	72.36
Dublin North West	185,900	63.30
South Lee - Cork	179,260	104.87
North Lee - Cork	167,701	160.59
Meath	162,831	31.69
Limerick	151,290	212.58
Dublin South West	147,422	222.90
Donegal	147,264	173.59
Kerry	139,835	169.61
Laois/Offaly	137,927	190.22
Dublin South City	134,344	119.52
Dublin West ^a	134,020	0.00
Wexford	131,749	148.57
Dublin North Central	126,572	420.10
Dublin South	126,382	194.16
Mayo	123,839	256.77
Carlow/Kilkenny	120,631	266.65
Waterford	120,017	153.24
Cavan/Monaghan	118,791	213.61
Longford/Westmeath	113,737	284.95
Louth	111,267	171.40
Clare	110,950	238.32
Dublin South East	110,487	161.52
Wicklow	109,202	104.56
North Tipperary/East Limerick	98,788	28.70
Sligo/Leitrim/West Cavan	91,053	304.35
South Tipperary	88,441	255.24
North Cork	80,769	285.40
Roscommon	58,768	275.02
West Cork	53,565	54.83
Mean		179.94
Median		172.49
Minimum		0.00
Maximum		420.10
Range		420.10

Notes: LHOs are ranked in descending order of population size.

^a LHO 5 Dublin West had no mental health allocation in 2007. This is due to the practice whereby there are differing budget allocation practices within regions (i.e., some LHOs may hold the total allocation for neighbouring LHOs). See also notes to Table 6.16.

Source: Staines *et al.*, 2010b

In 2006, a subgroup of the Mental Health Expert Advisory Group (EAG) recommended that an alternative resource allocation model be developed. In 2006, the HSE introduced a population-based resource allocation model for new funding for adult mental health teams. The actual population of each LHO is weighted by a measure of social deprivation to produce what is known as the 'burden population'.⁶⁰ Deprivation levels per electoral division (ED) are used to weight the population as follows:

- individuals with a SAHRU rank of 1, 2 and 3 (most affluent) - weighted as 1.0
- individuals with a SAHRU rank of 4, 5, 6 and 7 (mid range) - weighted as 1.2
- individuals with a SAHRU rank of 8, 9 and 10 (most deprived) - weighted as 1.4⁶¹

The ratio of 'consultant-to-burden population' forms the basis of the new allocation, with each LHO ranked according to this ratio. New resources are allocated to the areas most in need on this measure.

6.6.3.2 Discussion

While new funding for adult mental health teams is tied to population 'need' as proxied by deprivation, this amounted to a tiny proportion of overall funding for mental health services over the period 2006-2009. The DoHC estimate that additional funds of €51.2m for such services have been provided since 2006 (DoHC, 2009d), which amounts to approximately 1.7 per cent of the total €3.1bn that was allocated to mental health services over the period 2006-2009. While only in the initial stages of development and therefore subject to further refinement in terms of weights, proxy for need, etc., the fact that the 'consultant-to-burden population' forms the basis of allocation for new mental health teams ignores the role played by other professionals and staff in the delivery of adult mental health services.

The HSE's *National Service Plan 2010* states that a population-based methodology has been devised and agreed for mental health services, 'to guide resource allocation to address inequity in service access' (HSE, 2010a; 30). However, at time of writing, no information was available on the methodology or the type of data that will be used to inform the 'population-based methodology'. In addition, the recommendations in *A Vision for Change* require a significant re-orientation of resources away from crisis care and long stays in hospital to properly resourced community-based mental health services (Amnesty International and Indecon, 2010).

⁶⁰ The measure of social deprivation is that developed by the Small Area Health Research Unit (SAHRU) in Trinity College Dublin.

⁶¹ The EAG acknowledge that the values of these weights require further validation and testing (DoHC, personal communication; 02 November 2009).

6.7 ISSUES AND IMPLICATIONS

In reviewing current methods of resource allocation in PCCC, a number of issues of concern arise. Notwithstanding the recent initiatives in relation to funding for certain services for older persons, funding for adult mental health services and the future allocations for medical cards, the following section summarises the main implications of the current system of resource allocation in PCCC.

6.7.1 Population Need-Based Allocations

Table 6.3 summarises the basis for the initial allocation of resources in 2009 and 2010 under the seven main care groups discussed in Section 6.3, as well as the allocation to the PCRS (discussed in Section 6.4). In the vast majority of cases, resources are allocated on the basis of historic budgets, with adjustments for incremental spend. The difficulty with the historic approach to service funding (i.e. largely based on historic levels of service provision, with additional funding for new service developments) is that it is not based on any concept of population need, and indeed, may simply serve to perpetuate existing inequalities in service provision across areas. The Comptroller and Auditor General's report on non-profit disability services in 2005 highlighted concerns of this nature in the disability sector (CAG, 2005), although the findings are applicable to many other areas of PCCC expenditure.

Exceptions are the allocations for medical card funding for the PCRS (from 2010 onwards), funding for the new Nursing Home Support Scheme and new development funding for adult mental health services (see Section 6.6 for a further discussion of the new initiatives with regard to funding certain services for older persons and mental health). However, the new initiatives, while important in moving towards a more rational allocation of these particular areas of expenditure, also highlight that there is, at present, no systematic approach towards the development of population health-based allocations across all care groups and areas of expenditure within PCCC. Indeed, the recent review of mental health services noted that the implementation of the new approach '*is taking place in an incremental, piecemeal fashion*' (Amnesty International and Indecon, 2010; 140).

In terms of allocations to individual and institutional providers for the provision of primary, community and continuing care services, the only area in which payments are tied to need is GMS payments to GPs for the provision of services to medical card patients (for which GPs receive a predominately capitation payment).⁶² For other

⁶² However, even if the capitation payment adequately captures differences in population need, over 50 per cent of GP remuneration in 2008 was accounted for by fees and allowances. In addition, for the 70 per cent of the population who cannot avail of the GMS scheme, GPs are remunerated on a fee-for-service basis. The remainder of PCRS funding (for the provision of services by dentists, opticians, etc.) is largely allocated on a fee-for-service basis, as are private payments for private primary care services.

components of PCCC funding, where the HSE is not involved in direct provision (by employing district nurses, for example), allocations are largely based on historic levels of funding to service providers. The method by which providers are paid is important as currently, the resource allocation methods do not incentivise the production of efficient person-centred services. By paying providers to provide the same as last year, or by paying them on a fee-for-service basis, *'the message we are sending to health-care providers is that we want more services and procedures, but we do not care very much about how well those services are provided or how much they help patients achieve better health'* (Guterman, 2006; 14; see also Chapter 3). Essentially, the approach to resource allocation is a passive one, with the allocation of resources to providers responding in large part just to the needs of presenting patients which may or may not reflect the true underlying level of need in the population.

Focusing on PCCC resources that are administered by the LHOs, the Staines report on resource allocation in PCCC examined per capita allocations per LHO for 10 care groups funded via the LHOs and found considerable variation in per capita allocation across all care groups.⁶³ For example, Table 6.15 illustrates that per capita spending on services for older persons across LHOs ranged from €365.79 to €7,769.63 in 2007, with an average (median) per capita allocation of €2,253.46 (€2,184.81). While these figures are crude per capita allocations and are therefore not adjusted for population need or patient flows across areas, it is unlikely that all of the variations are due to differences in population need or patient flows.⁶⁴ It is more likely that many of the observed patterns are due to differences in levels of (historic) service provision across areas (although recognising that some are also due to differing historic areas of responsibility across LHOs - see notes to Table 6.16). Some may also be due to differences in the assessment procedures and thresholds for service provision that are in place in different LHOs. Indeed, in a recent review of services for older persons, substantial variations across LHOs were found in allocations for nursing home services and much of this variation was due to differing assessment procedures and thresholds for eligibility (National Economic and Social Forum, 2009). See also the discussion on the new resource allocation system for certain services for older persons in Section 6.5.

⁶³ The presentation of the data by 'care groups' in the Staines report is slightly different to that presented here (in particular, the Staines report also includes scheme expenditure by LHOs) (see Staines *et al.*, 2010b).

⁶⁴ The HSE has carried out a number of internal analyses of PCCC budgets, focusing in particular on the impact of patient flows. An analysis of PCCC budgets using 2008 data, combined with the needs adjustment formulae contained in Staines *et al.* (2010b), found that adjusting for patient flows reduced the variation in per capita allocations across areas (in this case, across the eight former health board areas). The percentage variation between the average per capita allocation and the needs adjusted per capita allocation before adjustment for patient flows ranged from -21 per cent to +42 per cent, while the percentage variation after adjustment for patient flows ranged from -3 per cent to +10 per cent (HSE, personal communication; 02 June 2010).

TABLE 6.15
Variation in LHO Allocations Per Capita, 2007 (€)

Care Group	Average	Median	Minimum	Maximum	Range
Children, Adolescents and Family	469.02	384.06	196.97	1,369.18	1,172.21
Disability Services	259.25	135.73	1.64	3,292.68	3,291.04
Mental Health	179.94	172.49	0.00	420.10	420.10
Older Persons	2,235.46	2,184.81	365.79	7,769.63	7,403.84
Multi-Care Groups	149.70	129.82	16.84	384.24	367.40
Palliative Care and Chronic Illness	9.53	3.59	0.00	107.17	107.17
Primary Care	243.53	162.43	50.33	1,633.39	1,583.06
Social Inclusion	23.75	3.58	0.00	264.32	264.32
Total	1,800.00	742.18	0.00	8,781.73	8,781.73

Notes: The care groups examined by Staines *et al.* (2010b) are slightly different to those presented in Table 6.2 (i.e. they include PCCC corporate and population health). For the purposes of this table, only those care groups identified in Table 6.2 are presented. In addition, according to Staines *et al.* (2010b), expenditure on primary care services by LHOs was the second largest area of PCCC expenditure in 2007; with the transfer of responsibility for the administration of many schemes from the LHOs to the PCRS and Department of Social Protection (formerly Social and Family Affairs) after 2007, expenditure on the primary care component of PCCC expenditure is now much smaller (see Table 6.2). In addition, the data for LHO expenditure presented in Staines *et al.* (2010b) do not distinguish between scheme and non-scheme expenditure, as is done in Table 6.2.

As LHOs vary considerably in terms of demographic and socio-economic structure, some degree of variation in LHO allocations per capita is to be expected. The above just illustrates the degree of variation in allocations between LHOs that may or may not be explained by differences in need and patient flows.

For the palliative care and chronic illness care group, the minimum allocation was actually a negative figure in 2007. For ease of presentation, this has been amended to €0.

In some cases, LHOs received no allocations for certain care groups. For example, LHO Dublin West had no mental health allocation in 2007. This is due to the practice whereby there are differing budget allocation practices within regions (i.e. some LHOs may hold the total allocation for neighbouring LHOs). See also notes to Table 6.16.

Source: Staines *et al.*, 2010b

Table 6.16 presents a summary of the main results of the Staines report, which attempted to come up with an alternative needs-based allocation of PCCC resources for LHOs (Staines *et al.*, 2010b). Using 2007 data, they adjusted the per capita allocations by care group area by the age, sex and deprivation profile of each LHO. As is evident from Table 6.16, the difference between the crude per capita allocations and the adjusted per capita allocations is substantial for some LHOs (and this table presents only the results of the exercise for the care groups concerned with older persons, disability and mental health services). The variations are even larger for other care groups, in particular, social inclusion. See Staines *et al.*, 2010b for the full list of care group allocations (actual and adjusted) in 2007. Of course, adjusting for patient flows would reduce the differentials, but it is clear that significant variations in per capita allocations would remain.⁶⁵

⁶⁵ See the earlier note on internal HSE analyses of PCCC budgets adjusted for patient flows.

TABLE 6.16
PCCC LHO Per Capita Allocation and Adjusted Allocation, 2007 (€m)

LHO	Older Persons			Disability Services			Mental Health		
	Per capita	Adjusted per capita	Variation	Per capita	Adjusted per capita	Variation	Per capita	Adjusted per capita	Variation
Carlow/Kilkenny	2,323.03	2,210.24	-112.79	233.01	196.96	-36.05	266.65	176.55	-90.10
Cavan/Monaghan	2,556.98	2,392.06	-164.92	197.14	216.39	19.25	213.61	193.97	-19.64
Clare	1,925.06	2,097.47	172.41	118.40	190.56	72.16	238.32	170.82	-67.50
Donegal	3,179.97	2,359.95	-820.02	271.25	219.23	-52.02	173.59	196.51	22.93
Dublin North	575.14	1,979.29	1,404.15	259.56	175.28	-84.28	148.38	157.12	8.73
Dublin North Central	2,555.37	2,383.31	-172.06	134.84	209.92	75.08	420.10	188.17	-231.94
Dublin North West	4,139.25	2,287.05	-1,852.20	139.77	185.16	45.39	63.30	165.98	102.68
Dublin South	628.63	1,964.32	1,335.70	152.95	188.26	35.31	194.16	168.75	-25.41
Dublin South City	1,932.88	2,059.49	126.61	46.44	166.01	119.57	119.52	148.81	29.29
Dublin South East	7,769.63	2,010.03	-5,759.60	316.92	178.41	-138.51	161.52	159.92	-1.60
Dublin South West	908.19	2,329.51	1,421.32	55.04	204.55	149.51	222.90	183.35	-39.55
Dublin West	365.79	2,337.03	1,971.25	24.16	185.89	161.73	0.00	166.63	166.63
Galway	1,434.40	2,156.95	722.55	75.92	189.80	113.88	271.08	170.13	-100.95
Kerry	3,091.23	2,272.05	-819.18	1.64	217.88	216.24	169.61	195.30	25.69
Kildare/West Wicklow	2,221.16	1,963.81	-257.34	59.24	158.20	98.95	72.36	141.81	69.44
Laois/Offaly	2,158.42	2,261.14	102.72	331.62	199.66	-131.95	190.22	178.98	-11.24
Limerick	2,298.01	2,299.89	1.88	165.61	206.13	40.53	212.58	184.77	-27.80
Longford/Westmeath	2,226.10	2,291.90	65.80	325.08	203.05	-122.03	284.95	182.01	-102.94
Louth	2,765.60	2,374.36	-391.24	122.76	206.22	83.46	171.40	184.85	13.45
Mayo	2,111.59	2,394.91	283.32	117.03	230.88	113.85	256.77	206.95	-49.81
Meath	1,798.98	2,001.63	202.64	191.08	165.15	-25.93	31.69	148.04	116.35
North Cork	1,733.89	2,223.76	489.87	5.57	205.18	199.61	285.40	183.92	-101.48
North Lee - Cork	853.11	2,180.07	1,326.96	8.47	189.39	180.92	160.59	169.76	9.17
North Tipperary/East Limerick	1,385.07	2,083.18	698.11	136.62	185.21	48.59	28.70	166.02	137.32
Roscommon	2,212.31	2,246.20	33.89	49.42	217.69	168.26	275.02	195.13	-79.89
Sligo/Leitrim/West Cavan	3,044.40	2,267.25	-777.15	553.51	215.02	-338.49	304.35	192.74	-111.60
South Lee - Cork	2,211.20	1,970.56	-240.64	3.76	171.90	168.14	104.87	154.09	49.22
South Tipperary	2,383.86	2,286.41	-97.46	117.98	212.26	94.27	255.24	190.26	-64.98
Waterford	1,852.74	2,225.82	373.07	301.99	203.97	-98.02	153.24	182.84	29.60
West Cork	3,670.66	2,177.43	-1,493.22	3,292.68	215.78	-3,076.90	54.83	193.42	138.59
Wexford	1,957.36	2,286.30	328.94	121.28	210.52	89.25	148.57	188.71	40.14
Wicklow	1,264.82	2,041.89	777.07	365.38	178.64	-186.74	104.56	160.13	55.57
Minimum	365.79	1,963.81		1.64	158.20		0.00	141.81	
Maximum	7,769.63	2,394.91		3,292.68	230.88		420.10	206.95	
Median	2,184.81	2,236.01		135.73	201.36		172.49	180.49	
Mean	2,235.46	2,200.48		259.25	196.85		179.94	176.45	

Notes:

Population sizes in 2007 ranged from 53,565 in West Cork to 231,670 in Galway (Staines *et al.*, 2010b).

Data are presented for the top three care groups by expenditure in 2009, namely services for older persons, disability services and mental health services (see Table 6.3). According to Staines *et al.*, 2010b, expenditure on primary care services by LHOs was the second largest area of PCCC expenditure in 2007; with the transfer of responsibility for the administration of many schemes from the LHOs to the PCRS and Department of Social and Family Affairs after 2007, expenditure on the primary care component of PCCC expenditure is much smaller (see Table 6.2). The data for LHO expenditure presented in Staines *et al.*, 2010b do not distinguish between scheme and non-scheme expenditure, as is done in Table 6.2.

There are some anomalies in the per capita information as a result of differing budget allocation practices within regions. Some regions spread the budget for their care groups evenly across LHOs and some allocate the budget to a specific LHO with overall responsibility for the service. For example, the per capita allocation for older persons services in Dublin South East is reported as €7,769. This appears very high in comparison to, for example, €1,932 for South City. The anomaly occurs as the full nursing home budget for the former South West and East Coast Health Board Areas are held in LHO Area 2 Dublin South City. A similar situation arises within Disability Services for the South where it appears that LHO West Cork has a much larger per capita allocation for disability than other areas within the South (Kerry, North Cork, North Lee and South Lee). The diversity in these figures occurs because the total disability budget for the South region is held in West Cork (HSE, personal communication; 23 April 2010).

The adjusted allocations use PCCC utilisation data (by age and sex), adjusted for deprivation, to proxy population need.

As the adjusted allocations are sensitive to the choice of weights, caution must be used in interpreting these results (see Staines *et al.*, 2010b for a more detailed discussion and sensitivity testing around the choice of weights).

Source: Staines *et al.*, 2010b

6.7.2 Incentives for Integration

Notwithstanding the 'multi care group services' care group area, the current system of resource allocation does not facilitate the integration of services within PCCC and between services provided by the NHO (see Chapter 8).⁶⁶ Over the course of 2009, responsibility for the assessment of eligibility for medical cards was being transferred away from individual LHOs to PCRS HQ in Dublin. This should facilitate a standardised approach to the assessment of eligibility for a medical card, particularly when the income threshold is exceeded. However, the situation is not so clear for other care group areas. For example, assessment for eligibility for the Nursing Homes Support Scheme is currently centralised in Athlone, while assessment of eligibility for the Home Care Support scheme is administered through each of the 32 LHO offices around the country.

The lack of a unique health identifier means that services cannot be integrated across care group areas or even within individual care group areas. For example, while data on the numbers of individuals that avail of various services for older persons are available (e.g. meals on wheels, home helps), it is not clear the extent to which these groups overlap. For the application of appropriate population-needs adjusted methods of resource allocation, it is essential that service planners have comprehensive information on all aspects of service delivery.

The methods by which providers are reimbursed does not, in general, facilitate the delivery of integrated health-care services. For example, GPs are remunerated on a predominately capitation basis for GMS patients and a fee-for-service basis for private patients. As discussed further in Chapters 8 and 15, GPs therefore have an incentive to minimise time spent with GMS patients, to reduce the number of return consultations and to refer GMS patients on to other providers as early as possible. For private patients, the incentives are exactly the opposite, albeit tempered to some extent by the fact that private patients must pay out-of-pocket for the full cost of a GP consultation (unless eligible for part-subsidisation via private health insurance). Ensuring that incentives are aligned across all actors in the system - so as to facilitate the delivery of an integrated health-care service, with individuals receiving care in the most appropriate setting - is a key requirement of an effective resource allocation system (see Chapters 8 and 15).

⁶⁶ In effect, the multi-care group services care group is designed to capture expenditure on services that cannot be grouped under any other care group, rather than designed to record expenditure on integrated services.

6.7.3 Information Deficiencies

In terms of public funds allocated to PCCC, while information on the PCRS component of PCCC expenditure and methods of resource allocation is comprehensive and transparent, the same is not true of other components of PCCC expenditure. These problems are particularly pronounced when examining non-scheme expenditure that is allocated via the LHOs (and such expenditure accounted for nearly 60 per cent of total PCCC expenditure in 2009). In many cases, it is not clear who is being funded, how they are funded and what services are provided. The lack of consistent information on all aspects of resource allocation hinders the development of a coherent resource allocation system.

The 2007 annual report of the Comptroller and Auditor General (CAG, 2008) contained a number of criticisms of current practices in relation to resource allocation on the part of the HSE. Issues highlighted for concern included the absence of a system for establishing costs, the absence of SLAs with certain providers, the lack of systems to assess outcomes and in some instances, the absence of audited accounts (see also National Disability Authority, 2009). Essentially, the resource allocation process was described as one in which *'the Finance Directorate of the HSE determines the budget allocations for individual hospitals and local health offices. In practice, the starting point is a roll forward of the previous year's closing budget (adjusted down by once-off items specific to that year) with additions for known new developments specific to the current year. These baseline allocations are then adjusted for pay awards, increments, non-pay inflation and other current year cost increases'* (CAG, 2008; 128). Table 6.3 summarises the basis for the initial allocation of resources by broad care group areas in 2009 and 2010.

The National Disability Authority has highlighted a number of weaknesses inherent in this approach, most notably in terms of coping with higher-than-anticipated spending on 'demand-led' schemes. When spending on such schemes is higher than anticipated, the spending shortfall is taken up by other areas, where eligibility for service is less well-defined and where access to services is often rationed by availability (National Disability Authority, 2009). A lack of comprehensive data on resource flows, service providers, staffing levels and costs makes service planning more difficult and leads to discrepancies between budgeted and actual levels of spending. In more recent years, the discrepancy has been particularly pronounced for the GMS Scheme administered by the PCRS; in 2009, expenditure on the GMS was projected to amount to €1.85bn, but was actually €1.96bn, partly accounted for by the sharp rise in unemployment over the period and the consequent increase in eligibility for medical and GP Visit cards (HSE, 2010b).⁶⁷

⁶⁷ See discussion in Section 6.4.

6.7.4 Interaction of the Public and Private Sectors

This chapter has dealt largely with the current system of allocating public expenditure for PCCC services; however, only 30 per cent of the population is eligible for free primary care services and, as such, a large proportion of primary care resources accessed by the Irish population is allocated entirely on the basis of ability to pay. The incentives generated by resource allocation in the public sector therefore often conflict with those generated by resource allocation in the private sector. Individuals without medical cards generally pay a fee-for-service for a variety of primary care services, such as GP services, dental services, physiotherapy, etc. In terms of GP services, this difference in payment methods for GMS (medical card) and private patients creates differences in incentives with regard to the treatment of these two groups of patient (the discussion on GP remuneration in Section 6.4.1.2 discusses this in further detail). For pharmacists, the presence of a mark-up on the DP/LTI/EEA/Health Amendment schemes actively incentivises the dispensing of more expensive products for such patients (see Chapter 12).⁶⁸ Therefore, resource allocation methods in the private sector must also be considered since their interaction with the incentives generated by the resource allocation methods in the public sector have important implications for equity, efficiency, quality/patient safety and sustainability. See Chapter 15 for further discussion.

6.8 SUMMARY

The purpose of this chapter was to provide an overview of current methods of resource allocation for PCCC services, focusing in particular on the way in which initial allocations are made and the way in which providers are reimbursed for the services provided in PCCC. Notwithstanding the creation of an Integrated Services Directorate in October 2009 (thereby abolishing the PCCC and NHO directorates), the review in this chapter highlights the extent to which resources are largely allocated on a historic funding basis. However, there are a few exceptions where a movement towards more rational systems of resource allocation is taking place. In terms of the reimbursement of providers, a complex system of reimbursement exists for many services, in particular GP services and this creates conflicting incentives with regard to the delivery of services (see Chapter 8).

Notwithstanding the new initiatives in relation to funding for services for older persons, new mental health services and medical cards, issues of concern arise in relation to the degree to which allocations are tied to population need, the extent to which the resource allocation system supports the delivery of integrated services, the degree to which inadequate data hinders the development of a coherent resource allocation system, and, crucially for Ireland, the extent to which the incentives generated by the various payment methods in the public sector conflict

⁶⁸ This only applies where the prescription does not specify a branded drug, but rather an ingredient.

with those existing in the private sector. Chapters 8 and 15 discuss these and related issues in greater detail.

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Chapter 7

Current Systems in the Acute Hospital Sector

7.1 INTRODUCTION

The current resource allocation systems in the primary, community and continuing care (PCCC) sector were discussed in Chapter 6. The main purpose of this current chapter is to examine the mechanisms used to allocate financial resources to providers in the acute hospital sector. Following the organisational reform of the health-care system in 2005, responsibility for hospital services was centralised within the National Hospitals Office (NHO) within the Health Service Executive (HSE). In October 2009, the Integrated Services Directorate (ISD) was created from the merger of the NHO and the PCCC Directorate, and is now charged with overall responsibility for the PCCC and acute hospital services.¹

In 2009, expenditure on the NHO amounted to approximately €5.4bn, accounting for more than 35 per cent of the HSE's total gross expenditure and the second largest expenditure category after the PCCC Directorate (see Table 1.2). Although NHO expenditure grew in real terms between 2006 and 2009, this rate of increase was the lowest of all the HSE directorates. Consequently, the NHO's share of gross HSE expenditure fell from 37.2 per cent in 2006 to 35.6 per cent in 2009. The PCCC Directorate's expenditure share also declined during this time period, albeit to a lesser extent (by 0.8 percentage points).

Before discussing the mechanisms used to allocate these resources to acute public hospitals, Sections 7.2 and 7.3 describe the current structure and organisation of the acute public and private hospital sectors respectively. The major reconfiguration currently underway in the acute public hospital sector is also outlined. The resource allocation mechanisms used in the acute public hospital sector are discussed in Section 7.4, while Section 7.5 examines the methods used to reimburse hospital consultants within the acute public hospital sector. As in other chapters, some of the discussion in Sections 7.4 and 7.5 relating to the impact of financial incentives on provider behaviour is inevitably hypothetical and based on the theoretical implications discussed in Chapter 4, given the paucity of easily-available empirical evidence at the necessary level of detail on many of the specific points discussed. Another general caveat is that what follows focuses on the potential influence of financial incentives when in reality there are many other factors that affect provider

¹ It is worth noting that, for the most part, the data used in this chapter refer to the period when the NHO was separate from the PCCC Directorate.

behaviour, in particular an ethos of public service to patients. Some key issues are highlighted in Section 7.6 and Section 7.7 provides a summary.

7.2 CURRENT STRUCTURE AND ORGANISATION OF ACUTE PUBLIC HOSPITALS

7.2.1 Responsibility for Acute Public Hospitals

Between 2005 and 2009, the NHO within the HSE had responsibility for resource allocation, service delivery and performance management of acute public hospital services. The Director of the NHO was supported by four Assistant National Directors, covering the areas of pre-hospital emergency care; contracts and utilisation; quality, risk and consumer affairs; and planning and development (HSE, 2005; 2009a). Hospital services were managed through eight networks – two networks in each of the four regional administrative areas. A network manager was responsible for the delivery of hospital services within each network and was directly accountable to the NHO Director. Annual service-level agreements between the NHO and each network manager were intended to specify the cost, volume and quality of hospital services to be delivered (HSE, 2009a). Under this structure, each network manager was accountable for the budgets of all public hospitals (including public voluntary hospitals²) in their network (HSE, 2009b), even though an individual budget was distributed to each hospital.

This structure changed with the merger of the NHO and the PCCC Directorate to create the ISD in October 2009. The ISD is charged with coordinating and integrating care across the PCCC and acute sectors (HSE, 2010a). One of the two National Directors within this new directorate has responsibility for reconfiguration and the other is charged with performance and financial management. Supervision of the delivery of acute public hospital services has been decentralised to regional level and is the responsibility of four Regional Directors of Operations (RDOs), one for each of the four administrative regions, which are unchanged (see Figures 1.2 and 1.3 in Chapter 1). An annual performance contract, specifying the delivery of services and targets, is agreed between the ISD National Directors and each RDO (HSE, 2010a). Thus, the role of the RDOs is similar to that of the network managers, in that the former, like the latter, have responsibility for ensuring that services are delivered in line with contractual obligations. However, unlike network managers, the remit of the RDOs extends beyond the acute public hospital sector and also incorporates PCCC services and will also cover a larger geographical area (as discussed in Chapter 8). Integrated services area (ISA) managers are intended to act as the liaison between the RDOs and service managers, and to work with regional management teams (HSE, 2010a).

² Public voluntary hospitals are typically owned by voluntary organisations, but receive funding from the HSE (see Section 7.2.2).

7.2.2 Organisation of Acute Public Hospital Services

There are 52 acute public hospitals operating in Ireland (HSE, 2010b).³ Of these, 34 are owned and operated by the HSE. The remainder, public voluntary hospitals, are typically owned by voluntary organisations (e.g. religious orders) and provide acute services to the HSE under service-level agreements (Robbins *et al.*, 2008; Citizens Information Board, 2009; Health Research and Information Division, 2009; McDaid *et al.*, 2009).⁴ All public hospitals – both voluntary and HSE – receive funding from the HSE. The number of hospitals in 2008 by ownership, type and size, together with the distribution of beds by hospital size, is reported in Table 7.1. A substantial percentage (43.1 per cent) of the bed stock was located in just 17.3 per cent of hospitals. The majority of public hospitals provide general services, across a broad range of specialties. Only 12 public hospitals concentrate on a single specialty (e.g. maternity or orthopaedics). These specialist hospitals are typically smaller than general hospitals.

TABLE 7.1
Acute Public Hospitals by Ownership, Type and Size, 2008

		Number of Beds ^a							Total
		<100	100–199	200–299	300–399	400–499	500–599	≥600	
Number of Hospitals ^b									
HSE	General	5	5	10	5	0	3	1	29
	Special	4	1	0	0	0	0	0	5
	Total	9	6	10	5	0	3	1	34
Voluntary	General	2	2	2	0	0	1	4	11
	Special	1	4	2	0	0	0	0	7
	Total	3	6	4	0	0	1	4	18
Total (HSE and Voluntary)	General	7	7	12	5	0	4	5	40
	Special	5	5	2	0	0	0	0	12
	Total	12	12	14	5	0	4	5	52
Total Beds		916 (6.8)	1,715 (12.8)	3,350 (25.0)	1,647 (12.3)	0 (0)	2,214 (16.5)	3,572 (26.6)	13,414 (100)

Notes: Percentages in parentheses.

General hospitals include regional and county hospitals operated by the HSE, as well as those operated by voluntary organisations.

Special hospitals provide services in a single specialty only.

Does not include data on psychiatric beds for four hospitals.

^a Includes day and inpatient beds.

^b Cork University Hospital and Cork University Maternity Hospital are counted separately.

Source: HSE (via the DoHC, personal communication; 16 February 2010)

One key difference between public HSE and voluntary hospitals relates to their management and governance structure. Public voluntary hospitals are '*publicly funded but privately owned*' (Brennan, 2003). In contrast, individual managers oversee the delivery of services in public HSE hospitals and are directly accountable to the HSE's Chief Executive Officer (whereas the lines of accountability to the HSE may be somewhat ambiguous for public voluntary hospitals). Thus, the HSE

³ This figure counts Cork University Hospital and Cork University Maternity Hospital separately. This figure includes the 51 acute public hospitals listed by the HSE (2010b) plus St Joseph's Hospital, Raheny.

⁴ Two hospitals changed ownership status from voluntary to state – one in 1997 and the other in 2001 (Robbins *et al.*, 2008).

effectively has a dual role as both funder and manager of services delivered by public HSE hospitals. Chapter 2 discusses the possible implications of combining these two roles.

To ensure adequate volumes of services and expertise for good quality and safe care, certain specialties are only performed in approved hospitals at a national or supra-regional level. National specialist services incorporate areas such as heart, lung and liver transplants, bone marrow transplants, spinal injuries, paediatric cardiac services, medical genetics, renal transplantation and haemophilia (HSE, 2009c). Other services provided on a supra-regional basis include neurosurgery and cardiac surgery (HSE, 2009c). Cancer care services are now provided through four managed cancer control networks, each with two referral centres (DoHC, 2006; HSE, 2010c).⁵ It is envisaged that an analogous approach, using designated centres, will also be adopted for some other conditions (e.g. cardiovascular care).⁶ There will, of course, be lessons for these other areas from the recent experience with cancer services, but as yet, it is too early to evaluate properly the impact of the restructuring of cancer services.

The total number of acute public hospital beds has risen only slightly in recent years; on average, total bed numbers (including psychiatric beds) increased by 1.8 per cent per annum between 2002 and 2007 (DoHC, 2009a), raising the total from 12,498 in 2002 to 13,668 in 2007 (see Table 7.2). However, the composition of these beds has changed substantially. In 2007, 11.3 per cent of total beds were designated for the treatment of day cases, a notable increase from 6.5 per cent in 2002. This expansion in day facilities, together with technological advances, has facilitated a significant shift towards day case treatment. Almost 55 per cent of total discharges from acute public hospitals in 2007 were treated on a day case basis, compared to just under 40 per cent five years earlier (Health Policy and Information Division, 2007a; Health Research and Information Division, 2009).⁷ It should be noted, however, that some (but certainly not all) of this recorded day case increase may be attributed to advances in data collection.⁸ Concomitantly, the average length of stay among inpatients has marginally reduced, with acute inpatients spending 4.7 days in

⁵ The eight cancer referral centres are Beaumont Hospital and Mater Misericordiae Hospital in the Dublin North East network; St. James's Hospital and St. Vincent's Hospital in the Dublin Mid Leinster network; Cork University Hospital and Waterford Regional Hospital in the South network; the Mid Western Regional Hospital in Limerick; and University College Hospital, Galway in the West network (HSE, 2010c).

⁶ The National Cardiovascular Health Policy (DoHC, 2010) recommended that for the purposes of cardiovascular services, a hospital should be designated as a comprehensive centre that provides a full range of cardiac services on-site or a general centre that operates in formal partnership with other hospitals.

⁷ Day case activity has continued to increase. In 2008, over 56 per cent of total discharges were treated as day cases (Health Research and Information Division, 2010).

⁸ In particular, data collection under the Hospital In-Patient Enquiry (HIPE) was expanded in 2006 to capture day patient activity from dedicated dialysis units and from all radiotherapy centres (Health Research and Information Division, 2008a). (For a description of HIPE, see Health Research and Information Division, 2010.)

hospital in 2007 compared with 5.0 days in 2002 (Health Policy and Information Division, 2007a; Health Research and Information Division, 2009).⁹

TABLE 7.2

Number of Daycare and Inpatient Beds in Public Hospitals, 2002-2007

Year	Daycare Beds	Inpatient Beds		Total Beds ^a	
		Including psychiatric beds	Excluding psychiatric beds	Including psychiatric beds	Excluding psychiatric beds
2002	811	11,686	11,151	12,498	11,962
2003	908	11,806	11,184	12,714	12,092
2004	1,132	11,883	11,310	13,015	12,442
2005	1,251	12,093	11,498	13,344	12,749
2006	1,418	12,109	11,516	13,527	12,934
2007	1,545	12,123	11,532	13,668	13,077

Notes: Data relate to the average number of acute hospital beds available for use over each year. All psychiatric beds are inpatient beds and, therefore, this distinction is not applicable to daycare beds. Figures may be subject to rounding.

^a Comprises daycare and inpatient beds.

Source: Data provided by the DoHC, personal communication [18 May 2010]

There is, however, considerable variation both across and within public hospitals in relation to both the share of day case activity and inpatient length of stay (O'Reilly *et al.*, 2009). For example, in 2007, the average length of stay for acute inpatients in public voluntary hospitals was 6.1 days compared to 4.7 days in regional hospitals and 4.3 days in county hospitals (Health Research and Information Division, 2009). O'Reilly *et al.* (2009) found that voluntary general hospitals had a higher average length of stay even after controlling for some patient characteristics (although part of the difference may be explained by other factors, such as teaching status). International comparisons suggest that there is further potential to expand day case activity and reduce the duration of hospitalisations in Irish acute public hospitals (see, for example, PA Consulting Group, 2007). It must be noted, however, that reducing hospital utilisation almost certainly will have spillover effects on the demand for other health-care services (e.g. rehabilitation and nursing facilities, as well as community care).

Finally, the volume of attendances at outpatient clinics and emergency departments (ED) in acute public hospitals has also increased over time. ED attendances increased from 1.2m in 2003 to 1.3m in 2007, while outpatient attendances exceeded 3m in 2007, up from 2.3m in 2003 (DoHC, 2009a). Taking account of population growth over this period, the annual rate of ED attendances per 1,000 members of the population declined marginally from 304 to 299, but the rate of outpatient attendances increased substantially from 567 to 712 per 1,000 head.¹⁰

⁹ Acute inpatients are defined as those inpatients with a length of stay of 30 days or less (Health Research and Information Division, 2010).

¹⁰ Rates calculated using population data reported from the DoHC (2009a).

7.2.3 Planned Reorganisation of Acute Public Hospital Services

In its *Transformation Programme 2007-2010*, the HSE acknowledged the need to restructure the configuration of acute public hospital services and to strengthen the primary care sector (HSE, 2006). The purpose of this reorganisation is to reduce dependency on acute public hospitals and to ensure safe effective care in the appropriate setting (HSE, 2006). Ireland's need to reconfigure service provision was also highlighted prior to, and since, the publication of the HSE's *Transformation Programme* (Hanly, 2003; Prospectus, 2003; OECD, 2008; CAG, 2009a; HIQA, 2009).

The first in a series of HSE-commissioned studies into the adequacy of the acute public hospital structure reviewed services in the North East (Teamwork Management Services, 2006). This report concluded that the operation of five acute public hospitals in the region led to unnecessary duplication of services and was unsustainable due to the small size of the area's population. Informed by the review's recommendations, the HSE decided to proceed with the reconfiguration of the acute public hospital services in the North East (Teamwork Management Services, 2006; HSE, 2008).

Subsequent reports were similarly commissioned to examine acute public hospital services in the Mid West and the South (Horwath Consulting Ireland and Teamwork Management Services, 2008a; b). In addition, specialty-specific reviews were undertaken on paediatric, maternity and gynaecology services in Dublin (RKW, 2007; KPMG, 2008) and on emergency services in Cork and Kerry (HSE South, 2009). Plans for further service reconfigurations were set out in the HSE's 2009 and 2010 National Service Plans (HSE, 2008; 2010a), and the HSE's 2009 Annual Report (2010d) gives the latest update on the ongoing changes. The recommendations of the commissioned reports and the HSE's proposals are summarised in Table 7.3.

TABLE 7.3
Summary of Proposed Hospital Reconfigurations

Year	Region/ Existing hospital configuration	Recommendations and Proposals
2006	<i>North East</i> Five acute public hospitals.	- One new regional hospital to be located in the southern part of the North East.
2007 (Oct)	<i>Dublin/Ireland</i> Three specialist paediatric centres.	- One paediatric hospital for Ireland. - To be co-located with an adult hospital. - Mater Misericordiae University Hospital, Dublin, is the chosen location.
2008 (Apr)	<i>HSE Mid-West</i> Six acute public hospitals.	- Three local centres – to be situated at Ennis, Nenagh and St. John's in Limerick City. - One regional centre to be located at the Dooradoyle site in Limerick. - Mid-Western Regional Orthopaedic and Obstetric Hospitals to be re-located to the Dooradoyle site.
2008 (May)	<i>HSE South (Cork/Kerry and South East)</i> Seven acute public hospitals in Cork and Kerry. Five acute public hospitals in the South East.	- Two regional centres and up to ten local centres in HSE South. <i>Cork and Kerry:</i> - One regional centre and five local centres to be situated in Cork and Kerry. Regional centre to be responsible for providing acute care. Local centres to be responsible for providing non-acute care. - Regional centre should be located on a single site at Cork University Hospital. - Five local centres to be situated in North Lee and South Lee in Cork City, North Cork, West Cork and Kerry. Possibly involving redevelopment of existing voluntary hospital sites. <i>HSE South East:</i> - One regional centre and four or five local centres in HSE South East.
2008 (Aug)	<i>Dublin</i> Three maternity hospitals.	- Three new facilities to be developed in the Greater Dublin area to deliver maternity and gynaecology services. - Two of these facilities to be co-located with an adult hospital. - One facility to be tri-located on the site of the new national paediatric hospital. - Tertiary services centralised on one site, with all three facilities providing secondary care elements of services. - Rotunda Hospital to be moved to the Mater Misericordiae University Hospital; Coombe Women's Hospital to be moved to Tallaght Hospital; National Maternity Hospital to be moved to St. Vincent's University Hospital.
2008	<i>National</i>	- Reconfigure emergency services. - Reconfigure critical care services. - Development of tertiary and national specialist services (e.g. Beaumont neurosurgical services). - Reconfigure maternity services (in Dublin and the Mid-West) and configure maternity units. - Configure paediatric services.
2009	<i>HSE South (Cork and Kerry)</i> Six public hospitals with EDs.	Create an integrated emergency care network comprising Cork University Hospital, Mallow General Hospital, Mercy University Hospital, and South Infirmary and Victoria University Hospital. This network would entail: - A single trauma centre and complex acute care 24/7 ED at Cork University Hospital; - Medical Assessment and Admissions Units at each of the four hospitals; - Urgent Care Centres at Mallow General Hospital, Mercy University Hospital and South Infirmary and Victoria University Hospital; - Ambulance bypass protocols to Cork University Hospital for particularly ill or seriously-injured patients; - Telemedicine links between the four hospitals; - Linked ICT systems.

Note: ED = Emergency Department. ICT = Information and Communication Technology.

Sources: Teamwork Management Services, 2006; RKW, 2007; Horwath Consulting Ireland and Teamwork Management Services, 2008a, b; HSE, 2008; KPMG, 2008; HSE South, 2009

7.3 CURRENT STRUCTURE AND ORGANISATION OF PRIVATE ACUTE ACTIVITY

Successive Irish governments have committed to maintaining a mix of public and private sector involvement in the provision of acute hospital services on the premise that it ensures *'the public and private sectors can share resources, clinical knowledge, skills and technology'* (DoHC, 2001; 43). The sub-sections that follow separately outline private activity as undertaken in public hospitals (Section 7.3.1) and in private hospitals (Section 7.3.2), and then consider the interaction between the two (Section 7.3.3).

7.3.1 Private Practice in Acute Public Hospitals

Private practice is permitted within public HSE and voluntary hospitals. This public/private mix has been justified on the basis that it ensures recruitment and retention of high-quality medical staff in the public sector, the efficient use of consultants' time by accessing both public and private patients on the same site and facilitates transfer of knowledge about the latest best practices (DoHC, 1999). To ensure equity of patient access to public hospitals, approximately 80 per cent of all beds in acute public hospitals nationally have been designated by the Minister for Health and Children for use by public patients.¹¹

Data on the designation of beds in public hospitals between 2002 and 2007 are reported in Table 7.4. In absolute terms, the number of public and non-designated/other inpatient beds increased over the period, while the number of private inpatient beds declined. Hence the percentage share of public inpatient beds increased slightly between 2002 and 2007. The number of public and private daycare beds grew over the time period, although the rate of increase was substantially higher for the former (growth of over 130 per cent). Consequently, while two out of every three daycare beds were public in 2002, this had increased to four out of every five in 2007 (with only 14.4 per cent of daycare beds being designated as private in the same year). Overall, just over 75 per cent of total beds in public hospitals in 2007 were designated as public, with 18.1 per cent being private and 6.7 per cent non-designated/other. These national data also show that the total number of private beds in public hospitals was within the allowable limit of 20 per cent in each year between 2002 and 2007 – and, indeed, their percentage share on aggregate has drifted downwards over time.¹²

¹¹ A private patient may occupy a public bed only if admitted as an emergency when a designated private bed is not available (Government of Ireland, 1991a, b, c). Non-designated beds, which comprised 6.7 per cent of total beds in 2007 (see Table 7.4), may be used by public or private patients.

¹² As part of a policy objective to improve access for public patients, the 2001 Health Strategy specified that additional beds (with the exception of those in intensive care units and other specialised beds) were to be designated for public patients (DoHC, 2001). The marginal increase in the total number of private beds in public hospitals over the period 2002 to 2007 suggests that this policy was generally met.

TABLE 7.4

Beds in Public Hospitals by Bed Designation, 2002-2007

	Public		Private		Non-Designated/Other		Total	
	N	%	N	%	N	%	N	%
Inpatient Beds								
2002	8,598	73.6	2,267	19.4	821	7.0	11,686	100
2003	8,663	73.4	2,269	19.2	874	7.4	11,806	100
2004	8,835	74.3	2,202	18.5	846	7.1	11,883	100
2005	8,908	73.7	2,286	18.9	899	7.4	12,093	100
2006	9,036	74.6	2,248	18.6	824	6.8	12,109	100
2007	9,034	74.5	2,249	18.6	840	6.9	12,123	100
Daycare Beds								
2002	540	66.6	177	21.8	95	11.7	811	100
2003	548	60.4	202	22.2	157	17.3	908	100
2004	787	69.5	216	19.1	129	11.4	1,132	100
2005	975	77.9	224	17.9	52	4.2	1,251	100
2006	1,150	81.1	223	15.7	45	3.2	1,418	100
2007	1,245	80.6	222	14.4	78	5.0	1,545	100
Total Beds^a								
2002	9,138	73.1	2,444	19.6	916	7.3	12,498	100
2003	9,211	72.4	2,471	19.4	1,032	8.1	12,714	100
2004	9,622	73.9	2,418	18.6	975	7.5	13,015	100
2005	9,884	74.1	2,509	18.8	951	7.1	13,344	100
2006	10,186	75.3	2,471	18.3	869	6.4	13,527	100
2007	10,279	75.2	2,471	18.1	918	6.7	13,668	100

Notes: Data relate to the average number of acute hospital beds available for use over each year.
Data on inpatient and total beds include psychiatric beds. This distinction does not apply to daycare beds.
Figures may be subject to rounding.

^a That is, daycare and inpatient beds.

Source: Data provided by the DoHC, personal communication [13 May 2010]

The number of public and private (day and inpatient) discharges increased between 2002 and 2008 (see Table 7.5). Despite a higher growth rate among private inpatient discharges compared to their public counterparts during this period, public inpatients continued to comprise about 75 per cent of total inpatient discharges in Ireland in 2008 as they did in 2002. The corresponding trends in day case activity should be interpreted with caution due to improvements in data collection in 2006 (as previously mentioned). Concentrating on the period following these changes, the percentage share of private day cases declined marginally between 2006 and 2008 and this pattern was also observed for total discharges.

TABLE 7.5

Inpatient, Day Case and Total Discharges by Public/Private Status, 2002-2008

	Public		Private		Total	
	N	%	N	%	N	%
Inpatients						
2002	405,711	75.2	133,523	24.8	539,234	100
2003	407,123	74.3	141,146	25.7	548,269	100
2004	411,555	73.3	150,082	26.7	561,637	100
2005	412,744	73.1	152,100	26.9	564,844	100
2006	428,222	73.5	154,572	26.5	582,794	100
2007	445,294	74.4	153,481	25.6	598,775	100
2008	447,683	74.9	149,766	25.1	597,449	100
Day Cases						
2002	268,008	75.8	85,392	24.2	353,400	100
2003	297,189	76.3	92,448	23.7	389,637	100
2004	323,727	76.0	102,251	24.0	425,978	100
2005	336,222	75.8	107,432	24.2	443,654	100
2006	535,398	80.9	126,698	19.1	662,096	100
2007	592,290	82.4	126,561	17.6	718,851	100
2008	630,234	81.7	140,911	18.3	771,145	100
Total Discharges^a						
2002	673,719	75.5	218,915	24.5	892,634	100
2003	704,312	75.1	233,594	24.9	937,906	100
2004	735,282	74.5	252,333	25.5	987,615	100
2005	748,966	74.3	259,532	25.7	1,008,498	100
2006	963,620	77.4	281,270	22.6	1,244,890	100
2007	1,037,584	78.7	280,042	21.3	1,317,626	100
2008	1,077,917	78.8	290,677	21.2	1,368,594	100

Notes: Data collection under HIPE was expanded in 2006 to capture day patient activity from dedicated dialysis units and from all radiotherapy centres.

Coverage of HIPE was consistently over 95 per cent during the period 2002-2008.

^a That is, day cases and inpatients.

Sources: Health Policy and Information Division, 2007a, b, c; Health Research and Information Division, 2008a, b; 2009; 2010

If the characteristics of public and private discharges are the same, then one would expect the 20 per cent limit on private beds in public hospitals to translate to 20 per cent of discharges being private. That just over 20 per cent of total discharges are private might be explained by a number of factors, such as differences in the relative complexity of public and private discharges and/or differential access to acute public hospital services for public and private patients, perhaps manifested in the accommodation of private patients in public or non-designated beds. Research has found evidence of the latter, as well as public patients occupying private-designated beds (Nolan *et al.*, 2000; O'Reilly *et al.*, 2007).

Public hospitals and consultants face important differences in the payment mechanisms for treating public and private patients, the implications of which will be discussed in Sections 7.4 and 7.5 respectively.

7.3.2 Private Hospitals

A total of 19 private hospitals, affiliated with the Independent Hospital Association of Ireland, are also involved in the provision of acute care. According to Table 7.6, there will be an estimated 3,525 beds (including acute psychiatric inpatient beds) in private hospitals in 2010, an increase of over 34 per cent since 2002. Thus, together with private beds in public hospitals in 2007, the stock of private beds in the acute hospital system amounts to approximately 35 per cent of total (public and private) beds. As in the public hospital system, there has been a considerable disparity in the growth of daycare and inpatient beds in private hospitals. Between 2002 and 2010, the number of inpatient beds (including psychiatric beds) in private hospitals increased by approximately 21 per cent, while the number of daycare beds almost tripled (albeit from a somewhat low base). As well as providing a large number of diagnostic services, private hospitals treated over 200,000 day and inpatient discharges, typically on an elective basis, in 2009; this amounted to nearly 13 per cent of total discharges from public and private hospitals combined.¹³

TABLE 7.6
Number of Daycare and Inpatient Beds in Private Hospitals, 2002-2010

Year	Daycare Beds	Inpatient Beds		Total Beds ^a	
		Including psychiatric beds	Excluding psychiatric beds	Including psychiatric beds	Excluding psychiatric beds
2002	194	2,432	1,629	2,626	1,823
2003	195	2,430	1,627	2,625	1,822
2004	194	2,406	1,603	2,600	1,797
2005	247	2,403	1,648	2,650	1,895
2006	297	2,398	1,668	2,695	1,965
2007	305	2,371	1,629	2,676	1,934
2008	484	2,742	1,975	3,226	2,459
2009	477	2,742	1,975	3,219	2,452
2010 ^b	570	2,955	2,174	3,525	2,744

Notes: All psychiatric beds are inpatient beds and therefore this distinction does not apply to daycare beds. Data have not been verified by the DoHC or the HSE.

^a That is, daycare and inpatient beds.

^b Includes proposed new beds in a number of private hospitals that are scheduled to be available from 2010.

Source: Data provided by hospitals and their representative organisation via the DoHC, personal communication [18 May 2010]

7.3.3 Interaction between Public and Private Hospitals

There are potential advantages and disadvantages associated with so extensive a co-existence of public and private sectors in the provision of acute hospital services in Ireland. Some of the issues are discussed in Nolan *et al.* (2000), Nolan *et al.* (2004), O'Reilly *et al.* (2007) and Smith *et al.* (2009). One benefit for the public sector has been the ability to purchase spare capacity from the private sector (and also from public hospitals) to treat public patients waiting for treatment in public hospitals under the National Treatment Purchase Fund (NTPF) (Maarse *et al.*, 2009; McDaid *et*

¹³ Data on the number of private hospitals and their activity were obtained from a paper and a presentation prepared by members of the Expert Group on Resource Allocation and Financing in the Health Sector.

al., 2009; NTPF, 2010).¹⁴ Since it was established in 2002, the NTPF has been successful in reducing waiting times and has made some progress towards the targets as set out in the 2001 Health Strategy (DoHC, 2001). Nonetheless, the patients treated in private hospitals annually under the NTPF represent only 3 per cent of the total volume of public hospital elective activity (CAG, 2009b). When it was established in 2002, the NTPF received a budget of €30m; this has more than tripled to €91.7m by 2007 (McDaid *et al.*, 2009).

It is unclear whether the NTPF has been able to take advantage of spare capacity at cost-effective rates. The Comptroller and Auditor General (2009b) found that the contracted prices in private hospitals were 5 per cent lower on average than the national casemix cost, but that the prices actually charged for some cases were subject to *ex post* increases.¹⁵ In contrast, the prices agreed by public hospitals were even lower (25 per cent lower than their private counterparts), with almost no *ex post* adjustment, although it is difficult to make direct comparisons because public hospital charges to the NTPF do not explicitly include consultant remuneration since consultants receive a public salary (CAG, 2009b).

Under the NTPF, there may be perverse incentives facing both public hospitals and their consultants to generate additional income by increasing waiting times among public patients and referring them for treatment to the NTPF. Indeed, the NTPF was criticised for weak controls over referrals during the early years of its operation (CAG, 2004). Subsequently, however, the volume of NTPF treatments that can be sourced from the public hospital sector has been limited to 10 per cent (DoHC, personal communication; 01 July 2010), which will mitigate to some extent any perverse redistribution of public resources.¹⁶ The Patient Treatment Register allows the NTPF to monitor consultant referral patterns. While the potential additional income from NTPF activity may provide an incentive for public hospitals, the effect is likely to be marginal given that this activity only accounts for a relatively small proportion of their total activity.

From a planning perspective, the public and private hospital sectors have largely developed independently since there is no mechanism for whole-system planning. This means that there may be needless and inefficient duplication of equipment and facilities between the two sectors. Where services are provided in only one sector, there is scope for the other sector to access them through service-level agreements and planned patient transfers (e.g. public hospitals can access facilities in private

¹⁴ The NTPF negotiates service-level agreements with private hospitals on an annual basis and with public hospitals over a longer period (CAG, 2009b). Prices for each procedure are agreed in advance with each hospital, with some potential for retrospective adjustments if there is deviation from the standard treatment (CAG, 2009b).

¹⁵ These *ex post* increases were determined retrospectively for cases that required additional work or longer stays. The National Casemix Programme is discussed in Section 7.4.2.

¹⁶ For particular specialties (e.g. paediatrics), it may be necessary to utilise public hospital capacity if there is insufficient private sector capacity (DoHC, personal communication; 01 July 2010).

hospitals, and *vice versa*, although the ability of the private sector to purchase services from public hospitals may depend on the availability of capacity within the latter). These formal agreements generally specify payment arrangements (the mode of payment may vary from a lump sum payment for a specified volume of activity to a fee per patient/service) and mechanisms for monitoring performance/quality assurance. Such arrangements might provide scope for reducing/eliminating the inefficiencies that may currently exist with duplication of facilities and equipment in both the public and private sectors.

7.4 CURRENT SYSTEMS OF RESOURCE ALLOCATION IN ACUTE PUBLIC HOSPITALS

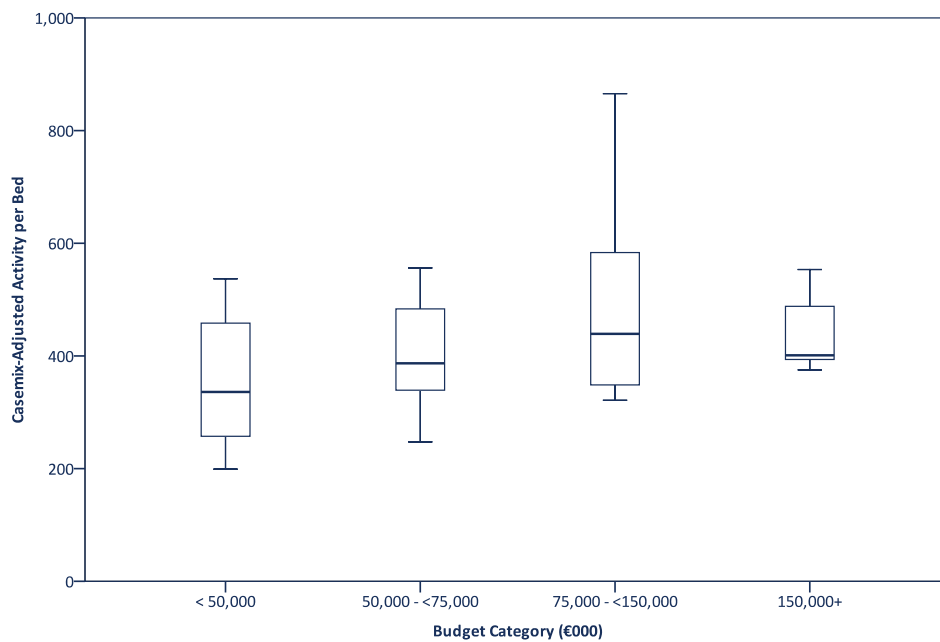
7.4.1 Public Reimbursement of Acute Public Hospitals

All acute public hospitals receive budgetary allocations in return for undertaking activity levels as specified in the HSE's annual National Service Plans. These activity levels are based on the previous year's outturn. The budgets are predominantly determined on the basis of historic factors, with adjustments for pay awards, once-off funding, etc. As shown in Figure 7.1, there is considerable variability in the activity levels of hospitals with broadly similar budgetary allocations. For example, for hospitals with budgets between €50m and €60m, complexity-adjusted activity ranged from 250 to 550 units per bed. There was a weak (and statistically insignificant) positive relationship between hospitals' funding (budgets) and their casemix-adjusted activity per bed in 2008.¹⁷ To the extent that this analysis may not completely capture all hospital activity (e.g. teaching and research are not explicitly included), these results should be interpreted with caution.¹⁸ Nevertheless, this analysis does illustrate how historic budgets may not be effective in maximising value for money for funders. While historic budgets may contain costs (relative to activity-based payments), they may not incentivise productivity because of the absence of a clear link between funding and outputs, together with the predetermined activity level. In addition, quality of care may be adversely affected under a budgetary system if hospitals engage in patient selection or skimp on care for admitted patients in an effort to minimise costs (Aas, 1995; Jegers *et al.*, 2002; Langenbrunner *et al.*, 2002). This is discussed in more detail in Chapter 4.

¹⁷ The correlation remained statistically insignificant even when outlying observations were excluded.

¹⁸ The relationship was also statistically insignificant for the small sample of teaching hospitals (as defined by the National Casemix Programme) and for the remaining hospitals.

FIGURE 7.1
Relationship between Hospital Budgets and Casemix-Adjusted Activity per Bed, 2008



- Notes:** Casemix-adjusted activity is calculated as the sum of inpatient and day case discharges, and ED and outpatient attendances, adjusted for complexity.
Beds include daycare and inpatient beds.
Data for Cork University Hospital and Cork University Maternity Hospital were combined.
Includes 38 hospitals that participated in the 2009 casemix models (resulting in 2010 casemix adjustments) and that had data available on beds.
For each set of hospitals grouped by budget, the box represents the 25th and 75th percentiles; the line inside the box denotes the median value; and the lines outside the box signify outlying values.
- Sources:** Data on casemix-adjusted activity from the 2009 casemix models were obtained from the National Casemix Programme, 2010a
Beds data were obtained from the HSE (via the DoHC)
Budget data were obtained from HSE, 2009d

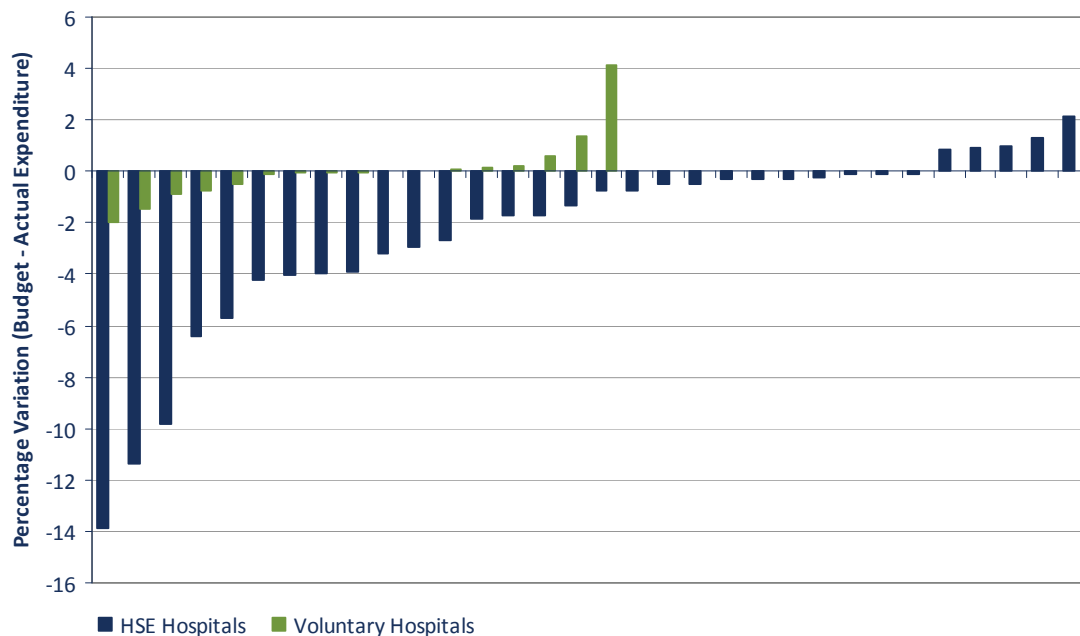
Under the health board/regional authority system (prior to the creation of the HSE), hospitals encountered considerable uncertainty over the timing and magnitude of their annual budgets. While there may be some uncertainty regarding the timing of budgets assigned by the HSE, once budgets have been notified hospitals have more direct control regarding the deployment of these resources. Moreover, determining budgets on an historic basis means that budgets for future years are not completely unknown. However, the annual nature of budgetary allocation (as opposed to budgets being allocated in advance for multi-year periods) may militate against long-term planning.

When hospitals were managed on a network basis between 2005 and October 2009, network managers were responsible for hospital budgets at a network level. In 2008 and 2009, total hospital expenditure at hospital network and regional levels was broadly kept within budget despite cuts in budgets (HSE, 2009d; 2010e).¹⁹ Managing hospital budgets at network level, however, means that it may be possible to cross-

¹⁹ In 2009, only the West region had a budget overrun (HSE, 2010f).

subsidise budget deficits within some hospitals with budget surpluses in others. Therefore, it is interesting to compare expenditure with budgets for individual hospitals. The percentage difference between actual expenditure and budgetary allocation for 49 acute public hospitals in 2009 is shown in Figure 7.2. Actual expenditure exceeded the budgetary allocation for 84 per cent of the public HSE hospitals compared to 53 per cent for public voluntary hospitals. Another difference between the two groups is the magnitude of the divergence between expenditure and budgets. Actual expenditure in public voluntary hospitals ranged from -2 per cent to +4 per cent of their 2009 budget. The variability is typically greater for public HSE hospitals: budget surpluses reached a maximum of approximately 2 per cent, while at the other extreme, one public HSE hospital overspent by almost 14 per cent.

FIGURE 7.2
Percentage Difference between Actual Expenditure and Budgetary Allocation by Hospital Type, 2009



Notes: Calculated as the difference between the budget and actual expenditure as a percentage of the budget. A positive difference implies that actual expenditure was within the budgetary allocation (i.e. a budget surplus). A negative difference indicates that actual expenditure exceeded the budgetary allocation (i.e. a budget deficit). A larger value for the percentage variation means that a higher percentage of the budget was over- or under-spent.

Data were not available for Cork University Maternity Hospital or St. Mary's Orthopaedic Hospital, Gurrabraher.

Does not include data for Our Lady's Hospital, Cashel.

Sources: Percentage variation was calculated using data on hospitals' budgets and actual expenditure from HSE, 2010e
Public hospitals' HSE/voluntary status was obtained from Health Research and Information Division, 2010

It is also interesting to note that budgetary rules differ for public HSE and voluntary hospitals. As McDaid *et al.* (2009) note, public HSE hospitals are required to return any underspend or additional revenue to the State, while public voluntary hospitals may retain additional revenue or savings. This difference means that the incentive for public HSE hospitals is to spend their budget, but public voluntary hospitals are encouraged to minimise costs.

For a large number of acute public hospitals (most recently 39, see DoHC, 2009b), budget allocations are adjusted for the volume and complexity of activity and their performance relative to their peers. This process is described in some detail in Section 7.4.2.

7.4.2 The National Casemix Programme

By comparing the costs across hospitals of delivering similar treatment, the overall objective of the National Casemix Programme is to allocate resources on the basis of efficient service delivery. The National Casemix Programme in Ireland came into operation in 1993 following the recommendation of the Commission on Health Funding (Hederman O'Brien, 1989) that hospital funding should be based on activity and take account of hospitals' casemix. The importance of establishing a resource allocation system where funding at hospital-level was dependent on performance and outputs has since been reiterated several times (see, for example, the 2001 Health Strategy, DoHC, 2001). Responsibility for the National Casemix Programme transferred from the DoHC to the HSE in 2006 (National Casemix Programme, 2010b).

The number of acute public hospitals participating in the National Casemix Programme has increased since its inception. Initially, the Programme covered 15 hospitals when introduced in 1993 (National Casemix Programme, 2010b). By 2010, this number had more than doubled to 39 hospitals, including specialist maternity and paediatric hospitals which joined in 2003 and 2004 respectively (National Casemix Programme, 2010b). Together, these 39 hospitals accounted for 92 per cent of total activity in acute public hospitals in 2009 (DoHC, 2009b; HSE, 2010g).

To ensure broad comparability, participating hospitals are assigned to one of four different peer groups in the National Casemix Programme. The eight hospitals in Group 1 are considered to face different cost profiles (due to the extent of their teaching activities) compared to those of the 26 hospitals in Group 2. The three maternity and two paediatric hospitals constitute the remaining two groups. Casemix budget adjustments are calculated separately for Group 1 and Group 2 hospitals, and the maternity and paediatric groups.

To optimise their performance in the National Casemix Programme, participating hospitals might face an incentive to transfer patients as soon as possible to non-participating hospitals or other institutions (such as community-based facilities). However, this incentive would be moderated to some extent if plans to expand the number of (both general and specialist) hospitals participating in the National Casemix Programme are implemented (National Casemix Programme, 2010b).

The casemix models draws on data relating to hospitals' activity and costs to determine the casemix budget adjustment. The Programme is operated on a retrospective basis, with the casemix adjustments in year t relating to activity and cost data for year $t-2$.²⁰ This lag, which reflects the delay inherent in obtaining the requisite data, has been reduced to some degree by the inclusion of a workload adjustment, which means that part of the casemix adjustment is calculated using data relating to the first half of year $t-1$. The components of the casemix models are discussed below.

7.4.2.1 Hospital Discharge Activity

The activity data relate to day and inpatient discharges from the HIPE (described in Health Research and Information Division, 2010). Discharges are categorised into groups with similar resource use (diagnosis-related groups, DRGs) based on their characteristics (e.g. age, sex, status on discharge, principal diagnosis, secondary diagnoses and procedures performed). Inpatients can be grouped into one of 665 Australian Refined DRGs (AR-DRGs), while the grouping scheme for day cases comprises up to 399 possible adjacent DRGs (ADRGs).²¹ Treatment Related Groups, developed in conjunction with the HSE, were used for the first time in the 2009 casemix models to classify outpatient visits. Emergency attendances, however, are not currently adjusted for complexity.

7.4.2.2 Hospital Costs

In determining the costs associated with these activity data, a top-down approach is adopted commencing with hospitals' Annual Financial Statements (AFS).²² For the purposes of the National Casemix Programme, the AFS data are adjusted to exclude superannuation costs and capital expenditure, and to include costs relating to Health Board Central Services and treatment of a hospital's patients in another hospital (National Casemix Programme, 2010c). The adjusted AFS costs are then allocated to specialties before being allocated to 13 cost centres, which together with cost weights are used to calculate an average cost for each DRG.²³ Thus, the casemix models are dependent on specialty-level costing since it is not presently feasible to use patient-level costing. However, the HSE is currently undertaking a project to explore the possibility of collecting patient-level costs (HSE, 2010a).

²⁰ For example, the casemix-adjusted financial allocation for 2010 was calculated using the 2009 casemix model, which consisted of 2008/09 activity and cost data (HSE, 2010g). Thus, the National Casemix Programme is concerned with 'reviewing last year's actual activity/costs and applying a "balancing" Casemix adjustment to next year's budget' (Casemix Ireland, 2010).

²¹ For example, there were 332 ADRGs in the 2007 casemix model (National Casemix Programme, 2008a).

²² Hospitals' AFS are subject to audit, typically by the Comptroller and Auditor General (National Casemix Programme, 2008b).

²³ Cost weights are based on those used in Victoria, Australia, adapted to Ireland.

7.4.2.3 Casemix Adjustment

Separate casemix models – one model for day case activity and another for inpatient activity – calculate the average cost of treating a casemix-adjusted (day case or inpatient) discharge for each hospital and for each hospital group. Not surprisingly, the casemix-adjusted costs for day case activity are generally lower than those for inpatient activity, which reflect the greater complexity associated with inpatient treatment. For example, the resource requirements for an appendicectomy undertaken on a day case basis were valued at €1,582 in the 2009 casemix model. The corresponding figures for inpatients were €8,791 in the presence of a catastrophic or severe complication and/or comorbidity and €4,663 in the absence of such complications (National Casemix Programme, 2010d). This cost differential could, *ceteris paribus*, incentivise hospitals to undertake more inpatient, rather than day case, treatment. In contrast, historic budgets would encourage hospitals to shift to day case activity in order to minimise costs.

A hospital's casemix budget adjustment is determined by some blend of the hospital's own casemix-adjusted costs and those of its peers. In the 2009 casemix model, a blend rate of 70 per cent was applied to day case and inpatient activity, i.e. the casemix budget adjustment is calculated on the basis of 70 per cent of the costs of the peer group and 30 per cent of the hospital's own costs (National Casemix Programme, 2010a).²⁴ Therefore, every hospital has a financial incentive to improve efficiency and minimise the costs of delivering services because it will receive a positive casemix budget adjustment if its costs are, on average, below those of its peer group.²⁵ Using a blend rate also ensures that the financial risk is not fully borne by the hospital if it has above average costs because it will receive some pecuniary compensation partially based on its own cost profile.

The blend rate was set at a low level of 15 per cent in the 2002 casemix model, the intention being to prevent a potentially destabilising effect on individual hospital budgets. As Figures 7.3 and 7.4 show, the blend rate increased in subsequent years and there are plans for further increases on a phased basis until the casemix adjustment is based 100 per cent on the average costs of the peer group and does not separately reflect the hospital's own costs at all. While this would strengthen the incentive for efficiency, it also means that the burden of financial risk will fall entirely on the hospital. The higher blend rates to date, by placing greater weight on the costs of the peer group and hence increased pressure to minimise costs, have helped to produce increased convergence in hospitals' casemix-adjusted average cost within

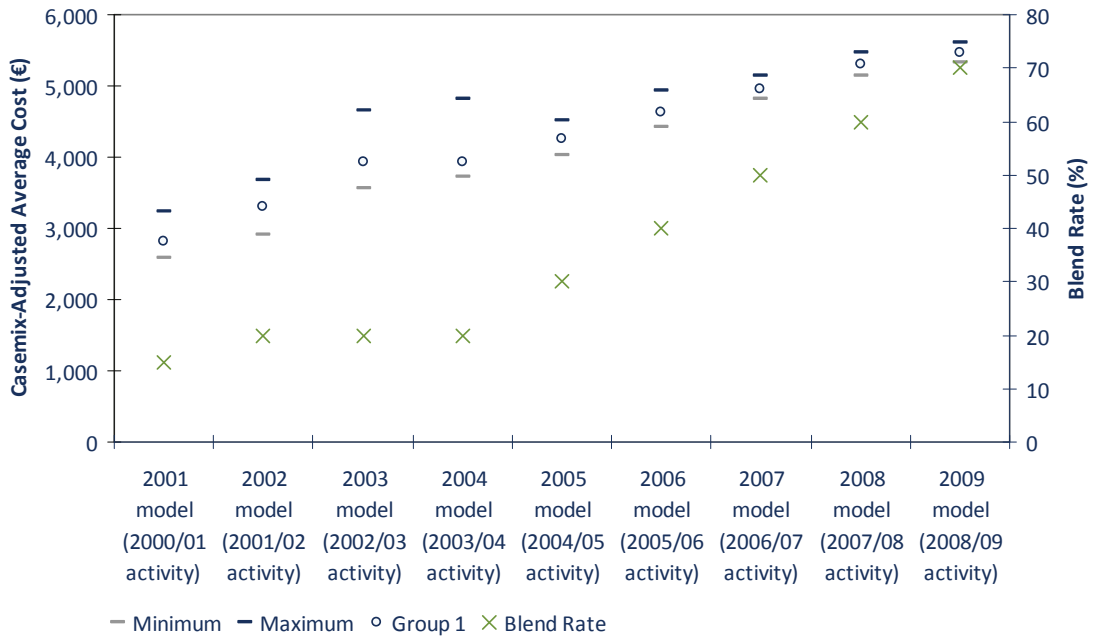
²⁴ For example, if the average cost per casemix-adjusted case in Hospital A in Group 1 is €2,000 and the average across all hospitals in Group 1 is €3,000, then at a blend rate of 70 per cent, the casemix adjustment for Hospital A would amount to €700 per casemix-adjusted case (i.e. Hospital A would receive a positive budget adjustment of an extra €700 per case). From the blend rate of 70 per cent in the 2009 inpatient casemix model, a blend rate of 2 per cent applied to the workload adjustment (National Casemix Programme, 2010a).

²⁵ The blend rate may vary for different types of activity and for hospitals that recently joined the National Casemix Programme.

Group 1 and Group 2 hospitals (see Figures 7.3 and 7.4 respectively). Total casemix adjustments generally have ranged between ± 3 per cent of hospitals' total AFS costs.²⁶

²⁶ Calculated using data from the National Casemix Programme (2004, 2005, 2006, 2007, 2008c, 2009; 2010a).

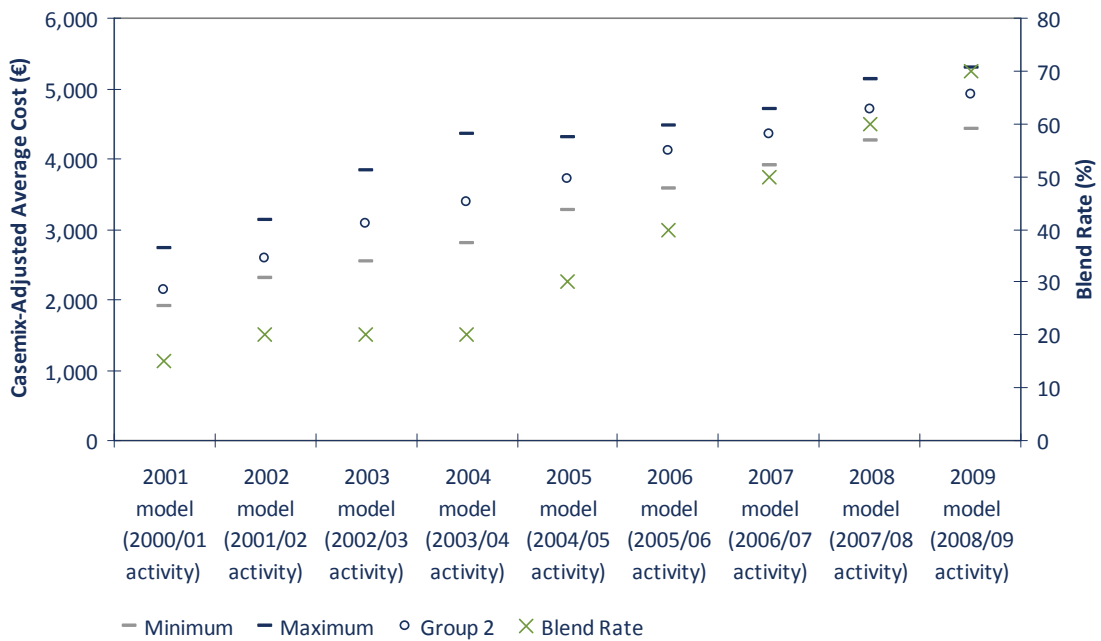
FIGURE 7.3
Inpatient Casemix-Adjusted Average Cost for Group 1 Hospitals and Blend Rate, 2001-2009 Models



Notes: Casemix-adjusted average costs have not been adjusted for inflation. The DRG classification scheme changed over the period, which makes direct comparisons across years difficult. Base prices from the 2001 model were converted into euros using the exchange rate of €1 = IR£0.787564.

Sources: National Casemix Programme, 2002, 2003, 2004, 2005, 2006, 2007, 2008c, 2009, 2010a; Euro Changeover Board of Ireland, 2010

FIGURE 7.4
Inpatient Casemix-Adjusted Average Cost for Group 2 Hospitals and Blend Rate, 2001-2009 Models



Note: As per Figure 7.3.

Sources: National Casemix Programme, 2002, 2003, 2004, 2005, 2006, 2007, 2008c, 2009, 2010a; Euro Changeover Board of Ireland, 2010

Overall, then, the National Casemix Programme appears to have encouraged relative efficiency within the peer groups by introducing an increasing element of yardstick competition by setting the casemix adjustment on the basis of individual hospital's costs benchmarked against those of their peer group. However, the average peer costs may not necessarily reflect the most efficient outcome that could be achieved (for example, even the best performing Irish hospital could fall short of international best practice) and, therefore there may still be some inefficiency in the system. Furthermore, by determining casemix adjustments retrospectively, hospitals' incentives for efficiency would be weaker than those under a prospective payment system, where hospitals would face reimbursement rates set in advance.²⁷

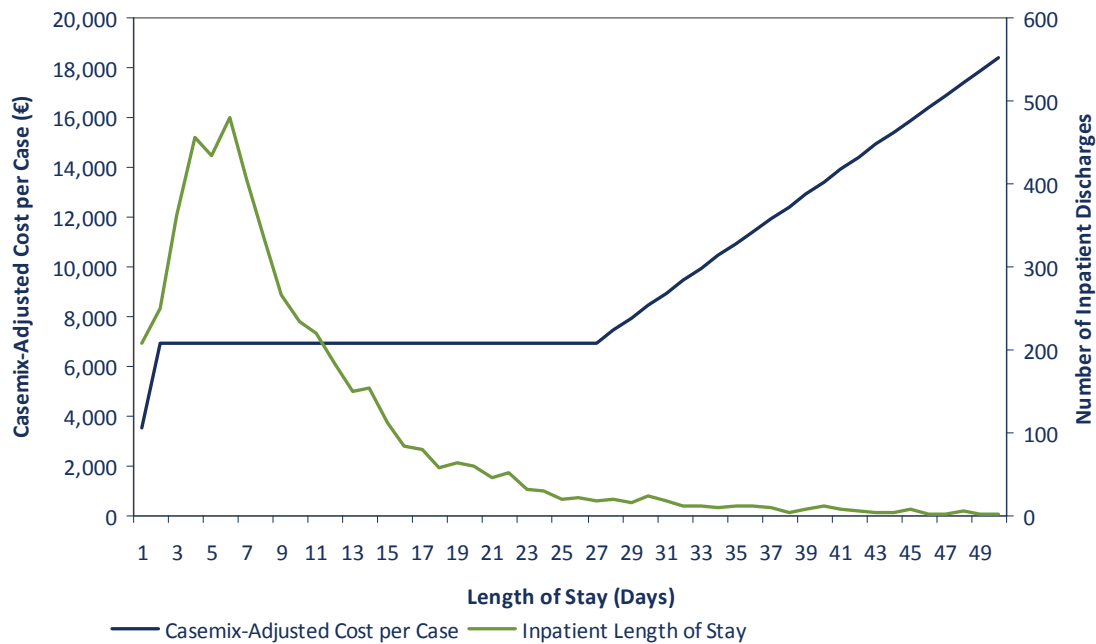
7.4.2.4 Intra-DRG Variability

Although DRGs are groups of discharges with similar clinical attributes and resource requirements, there is inevitably some variability within DRGs across hospitals due to unreported comorbidities, the type of hospital, and/or variation in treatment. Figure 7.5 shows the variation in inpatient length of stay for the example of the DRG relating to Chronic Obstructive Airways Disease with Catastrophic or Severe Complications and/or Comorbidities (AR-DRG E65A). If the more resource-intensive discharges within a given DRG are systematically concentrated in a particular hospital (rather than equally distributed across hospitals), then that hospital's average cost for this DRG will exceed that of its peers. This may provide hospitals with an incentive to 'game' the system by inflating the recorded level of complexity for some discharges. Validation checks and audits of HIPE data are undertaken to ensure coding is consistent with national coding guidelines and standards. Furthermore, the National Casemix Programme is designed so that for particularly complex cases with longer than average lengths of stay, hospitals receive a *per diem* payment for each day of the extended stay. Figure 7.5 illustrates that the casemix-adjusted average cost for Chronic Obstructive Airways Disease with Catastrophic or Severe Complications and/or Comorbidities was just under €7,000 for cases with a length of stay between 2 and 27 days. The average cost was lower for discharges with a stay shorter than 2 days and increased with every additional day in hospital over the threshold of 27 days. Thus, the upside risks of early discharges and downside risks of long-stay patients are shared between the hospital and the HSE, thereby ensuring that the National Casemix Programme does not encourage hospitals to discharge patients 'quicker and sicker' (HSE, 2010g).

²⁷ There are plans to introduce a prospective, activity-based payment system (Casemix Ireland, 2010).

FIGURE 7.5

Casemix-Adjusted Cost per Inpatient Case for Chronic Obstructive Airways Disease with Catastrophic or Severe Complications and/or Comorbidities, 2008/09



Notes: Refers to AR-DRG E65A, Chronic Obstructive Airways Disease with Catastrophic or Severe Complications and/or Comorbidities. There were 5,145 inpatient discharges assigned to this AR-DRG in 2008 (Health Research and Information Division, 2010).

Excludes day cases.

Minimum length of stay is one day.

Length of stay was truncated at 50 days.

Calculated using the outputs from the 2009 inpatient casemix model.

This assumes that those with a length of stay of one day had an overnight stay and were not admitted and discharged on the same day.

The national average cost for an inpatient case (€5,219) was used to calculate the casemix-adjusted cost for this AR-DRG.

Sources: Based on 2008 discharge data from HIPE; casemix parameters from the 2009 inpatient casemix model; and national average price in HSE (National Casemix Programme, 2010d)

7.4.3 Reimbursement of Private Activity in Acute Public Hospitals

Since public hospitals' annual budget and casemix adjustment apply to total activity and costs, these reimbursements also cover treatment of private patients.²⁸ Moreover, the treatment of private patients represents 'an additional income stream' for acute public hospitals due to the associated charges levied on private patients (Colombo *et al.*, 2004; 17). In receiving treatment in a private-designated bed in an acute public hospital, private patients are liable for a maintenance charge (determined by the Minister for Health and Children) in addition to the public hospital inpatient charge.²⁹ From January 2009, the public hospital inpatient charge amounted to €75 per day, up to a maximum of €750 over a period of 12 consecutive months, and is payable by all non-medical card holders irrespective of the designation of the bed they occupied (Citizens Information Board, 2008). The

²⁸ However, public hospitals' budgets are based on total cost less income (including that from private patients) (HSE, personal communication; 19 June 2010).

²⁹ The maintenance charge cannot be levied on private patients in non-designated beds in public hospitals (HSE - Parliamentary Affairs, 2007; HSE, 2009e).

maintenance charge for private patients, which is calculated on the basis of the average cost for treating all (public and private) patients (DoHC, 2009b), differs depending on whether the treatment is on a day or inpatient basis and in the case of the latter, whether the accommodation is classified as private or semi-private (see Table 7.7). Maintenance charges for teaching hospitals are generally higher than those for non-teaching hospitals, reflecting their differences in cost profiles.³⁰

TABLE 7.7

Daily Maintenance Charge for Private Patients in Acute Public Hospitals by Type of Accommodation and Hospital Category, 2005-2009 (€)

	2005	2006	2007	2008	2009	% change 05-09 ^a
Category 1 – HSE regional hospitals and voluntary and joint board teaching hospitals						
Private accommodation	501	551	689	758	910	67.6
Semi-private accommodation	393	432	540	594	713	67.4
Daycare accommodation	361	397	496	546	655	67.4
Category 2 – HSE county hospitals and voluntary non-teaching hospitals						
Private accommodation	418	460	460	506	607	34.0
Semi-private accommodation	336	370	370	407	488	34.0
Daycare accommodation	299	329	329	362	434	34.0
Category 3 – HSE district hospitals						
Private accommodation	179	197	197	217	260	34.1
Semi-private accommodation	153	168	168	185	222	33.9
Daycare accommodation	133	146	146	161	193	33.9

Notes: These charges do not include consultants' fees.
 The latest charges came into effect on 01 January 2009.
 Rates are expressed in nominal terms.
^a Refers to the percentage change between 2005 and 2009 in real terms.

Source: DoHC, 2009b

While some broad adjustment has been made for whether the patient is treated on a day or inpatient basis, the daily maintenance charges levied are otherwise independent of the treatment private patients receive and, therefore, may either exceed, or fall short of, the full economic cost of treatment incurred by the public hospital. In fact, the former case appears to be far more prevalent, with the shortfall having to be made up from the hospital budget (Colombo *et al.*, 2004; CAG, 2009b). The average daily cost in 2009 was estimated to be €1,018 for inpatients and €733 for day cases in Category 1 hospitals and €913 for inpatients and €885 for day cases in Category 2 hospitals (CAG, 2009b; DoHC, 2009b). Hence, estimates suggest that the 2009 maintenance charges for private or semi-private accommodation, together with the statutory inpatient charge, covered respectively 97 per cent and 77 per cent, respectively, of the average cost per inpatient bed in Category 1 hospitals (DoHC, 2009b). For Category 2 hospitals, the 2009 maintenance charges plus the statutory inpatient charge were estimated to amount to 75 per cent of the cost of a private inpatient bed or 62 per cent of the cost of a semi-private inpatient bed (DoHC, 2009b). However, these estimates were based on the average daily cost of

³⁰ Comparing private accommodation in Category 1 and 2 hospitals, for example, the 2009 maintenance charge in the former is almost 50 per cent higher than that in the latter.

total patients (i.e. public and private), rather than the average daily cost of a private patient.³¹ Using the latter, Nolan *et al.* (2000) estimated that subsidy to be 50 per cent in 1996, before the increases in the maintenance charges.

With charges for treating private patients in private hospitals set competitively, private health insurers may have an incentive for private patients to be treated in public hospitals where costs may be relatively lower (DoHC, 1999; Colombo *et al.*, 2004; McDaid *et al.*, 2009).³² Successive governments have acknowledged the importance of addressing this issue (DoHC, 1999; Brennan, 2003; DoHC, 2009b) and, indeed, recent increases in the maintenance rates have gone some way to reducing the cost shortfall (CAG, 2009b). A group has recently been established to examine, and make recommendations on, the issue of economic charging for private patients in public hospitals (DoHC, 2009b).

Under current payment arrangements, then, economic theory would suggest that Irish acute public hospitals would have an incentive to maximise additional income from private patients. However, public hospitals can charge for maintenance if, and only if, private patients occupy a private-designated bed and, therefore there is no financial benefit to hospitals in treating private patients in public beds (HSE - Parliamentary Affairs, 2007; HSE, 2009e). Nevertheless, accommodation of private patients in public has been identified (Nolan *et al.*, 2000; O'Reilly *et al.*, 2007; CAG, 2009b). In a sample of 24 hospitals, half of private patients were not charged for maintenance because they occupied either a public bed (45 per cent) or a non-designated bed (5 per cent) (CAG, 2009b). This would suggest that the implicit subsidy is a bigger issue, which cannot be easily solved by simply increasing charges for private patients in private beds only. In addition, hospitals also lost potential private income by accommodating public patients in private beds (CAG, 2009b).

³¹ Indeed, this point – ‘that the direct costs associated with the delivery of private treatment should be solely allocated to the cost calculation for private patients as opposed to the current method whereby the cost is an average of all patients (both public and private)’ (DoHC, 2009b; 7) – was specifically raised during the recent consultation undertaken for the *Value for Money and Policy Review of the Economic Cost and Charges Associated with Private and Semi-Private Treatment Services in Public Hospitals* (see DoHC, 2009b).

³² It appears that the private sector is relatively more expensive for some treatments, but relatively less expensive for others (DoHC, 2009b).

7.5 REIMBURSEMENT OF HOSPITAL CONSULTANTS

As with acute public hospitals, there are differential payment mechanisms for consultants who undertake public and private activity; they receive a salary for treating public patients and a fee-for-service for the treatment of private patients.³³ Under these arrangements, consultants may have a financial motivation to boost demand for private services and to maximise private practice (in terms of both the number of patients and their treatment intensity; as discussed in Chapter 4).³⁴ As well as these direct effects, public hospital consultants who are permitted to undertake private practice could also use public hospital resources for the treatment of private patients, although HSE guidance specifies that policies should be in place to cover *'the use of public facilities by staff pursuing private business interests'* and to provide charges for this use (HSE, 2009e; 13).

Under the 1997 consultant contract, consultants' private practice was limited by the designation of private beds in public hospitals, which was set by the Minister for Health and Children at 20 per cent nationally. In addition, consultants were required to produce an agreed work schedule that specified how they intended to discharge their full contractual commitment from Monday to Friday. The contract type then determined whether a consultant was permitted to undertake private practice within the public hospital only or also off-site (see Table 7.8). Thus, in return for a lower salary, a consultant could have more flexibility to undertake private practice.

TABLE 7.8
1997 Consultant Contract Category Types

Category Type	Description	Salary Range ^a
Category 1	<ul style="list-style-type: none"> - A scheduled commitment of 11 fixed and flexible sessions (an aggregate of 33 notional hours). - Liable for extended duty and emergency services. - Devote substantially the whole of his/her professional time, including time spent on private practice, to the public hospital(s). 	€160,962 to €178,429
Category 2	<ul style="list-style-type: none"> - A scheduled maximum commitment of 11 fixed and flexible sessions (an aggregate of 33 notional hours). - Liable for extended duty and emergency services. - May engage in private practice on-site and off-site. 	€143,738 to €159,269

Note: ^a As at December 2006.

Source: Memorandum of Agreement, 1997 Consultant Contract Documentation, as contained in Comptroller and Auditor General (2007)

Enforcement of the terms of the 1997 consultant contract has been found to be lacking (Brennan, 2003; CAG, 2007; McDaid *et al.*, 2009). In relation to private practice, the contract was criticised for ambiguity regarding the ability of Category 1 consultants to undertake off-site private practice at the request of another consultant (CAG, 2007). Furthermore, in the absence of a *'meaningful attempt to*

³³ Although legislation prohibits hospitals charging for private patients accommodated in public beds, consultants are permitted to charge for these patients (HSE - Parliamentary Affairs, 2007).

³⁴ Other factors (such as the balance of elective and emergency activity) may affect a consultant's ability to engage in such behaviour.

monitor the level of consultants' private practice for its impact on the fulfilment of the contractual commitment within public hospitals', private practice in some hospitals was in excess of that permitted in accordance with their bed designation (CAG, 2007; 9). Consequently, the Comptroller and Auditor General highlighted that treating private patients in excess of their designated resources had implications not only for equity of access, but also for the availability of resources for the treatment of public patients

Following protracted negotiations, agreement on a new consultant contract was reached on 24 January 2008, to be implemented from 01 September 2008. In light of recommendations from the Comptroller and Auditor General (2007), the 2008 consultant contract was intended to address the drawbacks of the 1997 contract. Most notably, the new contract introduced a public-only contract type (Type A), which prohibited consultants from earning private income from the treatment of private patients (see Table 7.9). In compensation for this prohibition on private practice, Type A consultants were to receive a substantial nominal increase in salary of between 34.5 and 36.7 per cent, or between 38.1 and 53.1 per cent, depending on whether they previously held a Category 1 or Category 2 contract respectively.³⁵ Consultants on Type B or Type B* contracts may engage in private practice. Type B consultants are restricted to private practice on the public hospital campus, but there is no such restriction on Type B* consultants who may undertake private practice outside the public hospital.

³⁵ Percentages were calculated using salaries as at December 2006, reported by Comptroller and Auditor General (2007). However, due to the economic downturn, it has not been possible to deliver the second phase of salary increases (see current salaries in Chapter 13).

TABLE 7.9
2008 Consultant Contract Types

Contract Type	Description	Salary Range ^c
Type A	Works exclusively for the public hospital and will be remunerated solely by way of salary.	€220,000 to €240,000
Type B	Works exclusively for the public hospital, but may engage in limited private practice on campus. ^b	€205,000 to €220,000
Type B* ^a	Entitled to treat private patients on the public hospital campus. May also undertake private practice outside the public hospital campus, where such private practice is: <ul style="list-style-type: none"> - commensurate with the entitlement to off-site private practice of a Category 2 consultant under the Consultants Contract 1997; - confined to period outside the aggregate 37-hour weekly commitment and other scheduled commitments to the public service. 	
Type C	Entitled to treat private patients outside the public hospital campus.	€160,000 to €175,000

Notes: Due to the economic downturn, it has not been possible to deliver these salaries (see current salaries in Chapter 13).

^a Contract Type B* was only available to those consultants who were in post in July 2008.

^b Where a consultant was previously on a Category 1 contract and opts for a Type B contract, then this consultant may undertake private outpatient activity outside the public campus.

^c As at June 2007 (as per agreement).

Sources: HSE - Employers Agency, 2008; HSE, 2009e

As shown in Table 7.10, the vast majority of consultants (over 86 per cent) had accepted the offer of the new contract by October 2009. Almost four out of every five new entrants signed up to a Type B contract, with the remainder opting for Type A contracts. Similar proportions of incumbents previously on a Category 1 contract had switched to Type A and Type B contracts. Almost 26 per cent of Category 2 consultants did not move to the new contract and the majority of those who did opted for either Type B or B* contracts. Following the introduction of the 2008 consultant contract, over 67 per cent of consultants can engage in private practice and only 29 per cent of consultants elected for the public-only contract.

TABLE 7.10
Consultants by Contract Type/Category, October 2009

Contract Type ^a	Previous Contract Type				Total
	New entrant	Category 1 contract	Category 2 contract	No change	
Type A	84 (20.8)	510 (44.6)	88 (12.1)	0 0	682 (29.0)
Type B	320 (79.2)	495 (43.3)	190 (26.1)	0 0	1,005 (42.8)
Type B* ^b	n/a –	76 (6.6)	262 (36.0)	0 0	338 (14.4)
Category 1	0 0	62 (5.4)	0 0	0 0	62 (2.6)
Category 2	0 0	0 0	188 (25.8)	0 0	188 (8.0)
Academics not offered contract	0 0	0 0	0 0	75 (100)	75 (3.2)
Total	404 (100)	1,143 (100)	728 (100)	75 (100)	2,350 (100)

Notes: Percentages in parentheses.

n/a = not applicable.

^a As at 20 October 2009.

^b Contract Type B* is only available to those consultants who were in post in July 2008.

Source: Adapted from DoHC, personal communication [13 May 2010]

Patients admitted under Type A consultants are considered to be public patients for the duration of their hospital stay, *'irrespective of source of referral, any request they may make to be treated privately or subsequent transfer – after admission – to a Consultant entitled to engage in private practice'* (HSE, 2009e; 8). This has a number of implications. First, public hospitals' potential income may be reduced where patients under the care of Type A consultants, who may otherwise have been treated privately, are now deemed to be public and therefore are not liable for hospital maintenance charges (CAG, 2009b). Second, even if a consultant is permitted to undertake private practice, he/she cannot charge fees to a patient who was admitted by a Type A consultant (HSE, 2009e).³⁶

The majority of newly appointed consultants in 2009 were employed under Type B contracts (see Table 7.11).³⁷ That over 36 per cent of Type A consultants operate in emergency medicine may not be surprising given that *'Consultant Contract 2008 explicitly requires that Consultants do not charge private fees in respect of patients attending Emergency Departments in public hospitals ...'* (HSE, 2009e; 4). However, this also increases the likelihood that more patients will be categorised as public if they are admitted under the care of ED consultants with Type A contracts.

³⁶ The example given by the HSE clarifies that a patient, admitted by a Type A consultant, is classified as public for the duration of their stay in hospital even if he/she is subsequently transferred to the care of a Type B/B*/C/Category 1/2 consultant, or the patient wishes to use his/her private health insurance (HSE, 2009e; 9).

³⁷ Unfortunately, data on specialty and contract type were not available for all consultants. For new appointments, the preferred contract type is specified by the relevant hospital to the Consultant Applications Appointment Committee.

TABLE 7.11

Number of Additional Permanent Consultant Posts, by Contract Type and Specialty, Approved in 2009

Specialty	Contract Type			Total
	Type A	Type B	Type C ^c	
Anaesthesia	0	9	0	9
Emergency Medicine	5	0	0	5
Intensive Care	0	4	0	4
Medicine	3	13 ^a	0	16
Obstetrics & Gynaecology	0	3 ^b	0	3
Paediatrics	2	1	0	3
Pathology	1 ^b	10 ^b	0	11
Psychiatry	2 ^b	0	0	2
Radiology	0	10	0	10
Surgery	1 ^b	5 ^b	0	6
Total	14	55	0	69

Notes: ^a Includes 7 academic posts.

^b Includes 1 academic post.

^c A committee to assess applications for Type C consultant appointments is currently being established by the HSE (HSE, 2009f).

Source: HSE - Parliamentary Affairs, 2010

In addition to the continuing restrictions on where private treatment can be provided, the 2008 consultant contract, as with its predecessor, attempts to limit the volume of private practice that can be undertaken on public campuses. For newly appointed consultants on Type B contracts, the ratio of public to private workload is 80:20. The ratio for existing consultants was determined by the public/private mix of their 2006 workload and can be up to a maximum of 70:30 (HSE, 2009e).³⁸ These ratios must be applied separately to four different strands of clinical activity (day cases, inpatients, outpatients and diagnostics) and are applicable to each public hospital in which a consultant works (i.e. aggregation is not permitted across activity or across hospitals). A consultant's public to private ratio will be monitored and enforced by a hospital's Clinical Director (a role specifically created in the 2008 consultant contract) and subject to audit by the DoHC.

The measurement of public and private activity under the 2008 consultant contract represents a significant improvement from that under the 1997 contract. The 2008 contract dictates that public and private consultant workload should be adjusted for complexity, whereas the preceding contract entailed only a crude unadjusted measure of public and private activity. One of the main advantages of using complexity-adjusted activity is that this allows consultants' activity to be measured by a standardised homogeneous method. This information can be used to assess compliance with individual contracts and also to undertake comparisons of workloads across different consultants. Under these arrangements, a consultant may treat more private patients, *ceteris paribus*, by treating more public patients.³⁹

³⁸ Thus, if a consultant's private activity in 2006 was 35 per cent of his/her total activity, the terms of the 2008 consultant contract would require this consultant to reduce his/her private activity to 30 per cent.

³⁹ For example, assume a consultant's public/private ratio, as per their contract, is 80:20. Then, the consultant can treat two additional private patients for every eight additional public patients treated and the overall public/private ratio will

The early experience with the 2008 consultant contract has highlighted compliance issues whereby some consultants have undertaken private practice in excess of their agreed ratio (see, for example, Committee of Public Accounts, 2009; and, more recently Carroll, 2010). If, over a period of nine months, a consultant has been unable to bring their private activity in line with that specified in their contract, income from this excess private practice must be paid into a research and study fund (HSE, 2009e). To date, this sanction has not been used, although warnings have been issued to consultants where their private workload has been in contravention of the terms of their contract (Committee of Public Accounts, 2009). It is important that the terms of the new contract are enforced; otherwise, there may be a risk that there will be no improvement on the unsatisfactory situation that existed under the 1997 contract.

7.6 ISSUES AND IMPLICATIONS

The variety of resource allocation mechanisms operating within Ireland's acute hospital sector appear to result in a system of complex financial incentives that are inconsistent both within and across providers. The discussion in this chapter has narrowly focused on the implications of financial incentives for provider behaviour. It is important to reiterate that other factors may also influence provider behaviour.

7.6.1 Historic Budgets and Casemix Adjustments in Acute Public Hospitals

One theoretical benefit from the current system of historic budgets is that acute public hospitals are encouraged to improve efficiency and to minimise costs (where hospitals face binding budgetary constraints). One disadvantage of this system is that acute public hospitals may have no financial incentive to increase activity above the level agreed with the HSE. Conversely, the use of DRGs to adjust hospitals' budgets through the National Casemix Programme does introduce a link between activity and funding, thereby promoting productivity. By benchmarking hospitals' performances relative to those of their peers, the casemix mechanism provides another incentive for hospitals to improve their efficiency. However, the potential for the casemix adjustment to deliver these benefits may be limited, most obviously because it is calculated on a retrospective basis.

Furthermore, the current funding systems may provide conflicting incentives in regard to providing treatment in the most appropriate setting for the patient. To minimise costs under historic budgets, a hospital could be motivated to provide treatment on a day case basis. However, under the National Casemix Programme day case treatment is generally associated with lower reimbursement requirements compared to undertaking this procedure on an inpatient basis. Hence, under the current arrangements, funders have few financial policy instruments that can be

remain at 80:20 (assuming the two patient groups have the same complexity). A consultant's ability to increase activity in this way is, of course, dependent on the availability of their time and other resources.

used to influence hospital behaviour effectively (such as increasing the use of day case activity for procedures that can be appropriately performed on this basis). The planned move to a prospective payment system, to include all acute public hospitals, has the potential to strengthen incentives for improved efficiency.⁴⁰

7.6.2 Public/Private Mix in Acute Public Hospitals

The public/private mix in public hospitals further complicates the resource allocation model. From the funder's perspective, it may be less expensive to treat private patients in an acute public hospital compared to a private hospital. That public hospitals receive additional revenue from the treatment of private and NTPF patients means that they have a financial incentive to maximise this income, although policy specifies a limit on the capacity available for the treatment of both of these patient groups. There are two major implications of using a *per diem* payment for private patients, which on average does not cover the full costs of their treatment. First, the public hospital may be incentivised to treat low complexity (and hence less expensive) private patients. Second, by extending private patients' length of stay, the public hospital can use the relatively low cost days towards the end of their stay to cross-subsidise the relatively more costly days at the beginning.

7.6.3 Consultants' Public/Private Practice

For consultants, the ability to undertake both public and private practice within public hospitals creates a number of different, and often contradictory, incentives. First, where their contract allows the consultant to engage in private practice in public hospitals, the consultant may wish to treat extra public patients in order to allow them to expand their private workload, or perhaps to ensure that they will not be in breach of their agreed ratio of public to private workload. Second, a consultant could influence demand for his/her private practice by delaying the treatment of public patients (as suggested by Siciliani *et al.*, 2005 – excessive waits for public hospital services may force public patients to opt for private care).⁴¹ Hence a consultant's financial incentives could be strongly influenced by whether or not he/she is permitted to engage in private practice alongside his/her public practice. With financial incentives favouring the treatment of private patients over their public counterparts, enforcement of the agreed public to private ratios under the 2008 consultant contract will be crucial.

⁴⁰ It is acknowledged that other factors, such as performance monitoring through, for example, *HealthStat*, may encourage hospitals to increase their day case rates and/or reduce average length of stay.

⁴¹ As discussed in Chapters 1 and 15, 4 per cent of the population were estimated to hold a medical card, as well as private health insurance cover in 2009.

7.6.4 Consultants and Acute Public Hospitals

Economic theory suggests that the salaries paid to consultants, and the historic budgets used to reimburse public hospitals, produce compatible incentives in that neither encourage increased productivity and both may be effective at controlling costs (relative to activity-based funding mechanisms). That activity in acute public hospitals has actually increased over time, as has the associated expenditure (see Sections 7.1 and 7.2), has probably occurred in spite of – rather than because of – these prevailing financial incentives. The planned move to prospective activity-based payment for acute public hospitals, however, may result in new inconsistencies because hospitals may then be motivated to increase activity, whereas their consultants continue to receive a salary.

Although both consultants and public hospitals face limits on private practice, there are differences in how these restrictions are measured – on the basis of casemix-adjusted activity for consultants and on the basis of beds for hospitals. In addition, while public hospitals only receive payment for private patients in private-designated beds, consultants are paid for treating private patients irrespective of the type of bed they occupy. This represents another potential conflict between consultants and hospitals.

7.7 SUMMARY

The main focus of the chapter was on the mechanisms used to reimburse acute public hospitals and their consultants. Historic budgets are the main mechanism for funding public hospitals for providing public services, although these budgets are retrospectively adjusted for patient complexity and hospitals' relative performance. This chapter also detailed the structure of public and private acute hospital services and discussed the advantages and disadvantages of parallel public and private involvement in the provision of these services. That private patients can be treated in acute public hospitals is an added complication that may generate perverse (and potentially conflicting) incentives for hospitals and their consultants.

Following the separate discussions on PCCC and the acute hospital sector in this chapter and also in Chapter 6, Chapter 8 will consider the extent to which care is integrated across these two sectors.

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Chapter 8

Current Systems for Integrated Health Care

8.1 INTRODUCTION

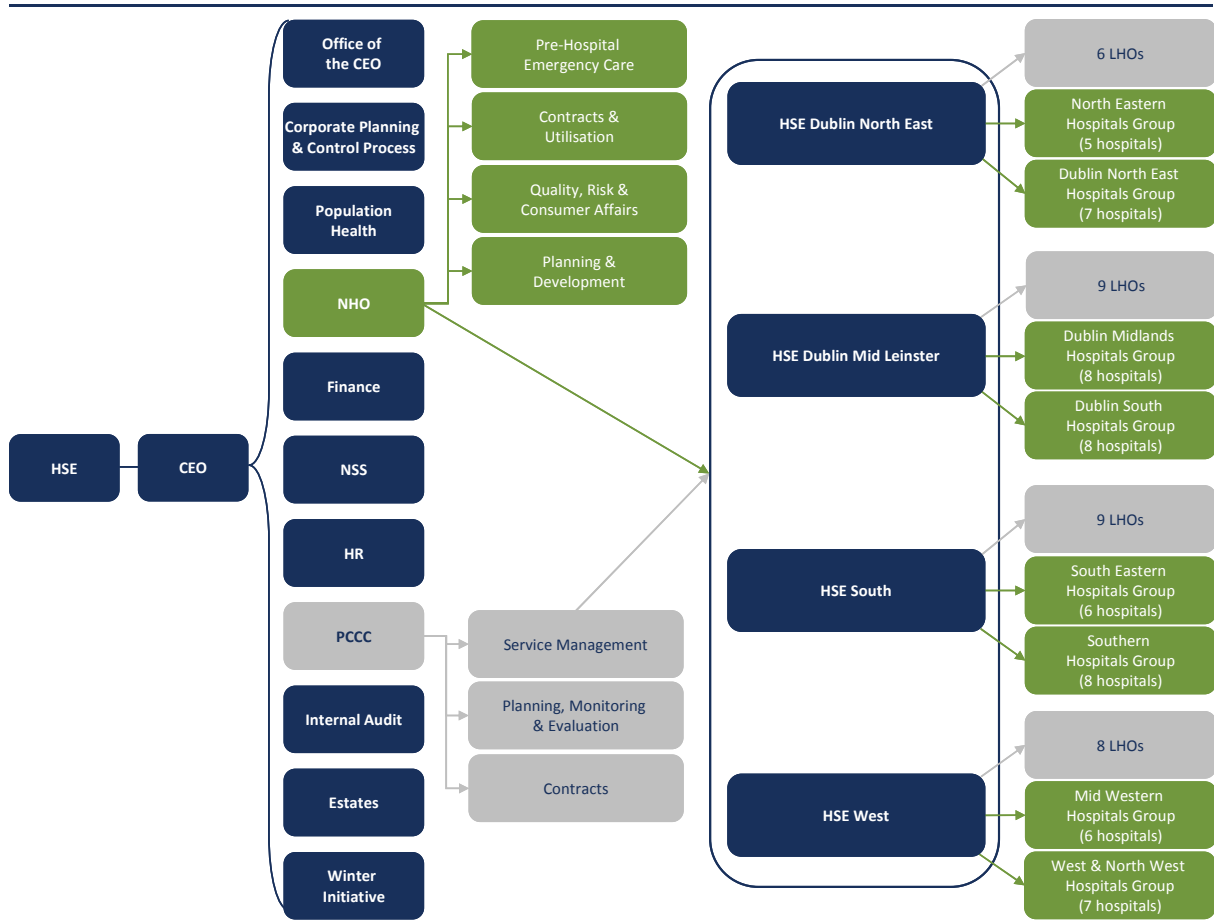
The Health Service Executive (HSE) has expressed its commitment to establishing an integrated health-care system (HSE, 2008a). The principal aim of integrated health care is to improve the patient's journey through the system by coordinating care between providers and by refocusing the emphasis away from the acute sector towards primary care. As envisaged in the 2001 Health Strategy, primary care is central to an integrated health-care system, becoming the lynchpin for providing the vast majority of patients' care (DoHC, 2001a).

Yet, despite this commitment, progress towards achieving this objective has been slow and lacks a national, systemic coherence. Some initiatives are currently underway to eliminate barriers between primary, community, continuing and acute care and to facilitate treatment in the most appropriate setting, but these are, for the most part, driven from the bottom up, small scale and largely dependent on local impetus. This chapter examines national and local moves towards integrated health care (see Sections 8.2 and 8.3) and considers how the financial incentives currently facing both patients and providers (through the resource allocation mechanisms) can often work to undermine an integrated health-care system (see Section 8.4). Key points are summarised in Section 8.5.

8.2 ORGANISATION FOR INTEGRATED HEALTH CARE

Upon the establishment of the HSE in 2005, two separate directorates – Primary, Community and Continuing Care (PCCC) and the National Hospitals Office (NHO) – were individually responsible for overseeing the provision of primary, community and continuing care and acute hospital care respectively (see Figure 8.1).

FIGURE 8.1
Structure of HSE, NHO and PCCC before October 2009



Notes: CEO = Chief Executive Officer. NHO = National Hospitals Office. NSS = National Shared Services. HR = Human Resources. PCCC = Primary, Community and Continuing Care. LHO = Local Health Office.

Within Service Management in PCCC, each of the four Assistant National Directors was charged with overseeing the delivery of PCCC services within their region and was also responsible for a particular service area (comprising primary care; children, youth and family, palliative care and chronic illness; older persons and social inclusion; mental health and disabilities).

Hospital numbers do not reflect recent changes.

Source: Adapted from HSE, 2005a

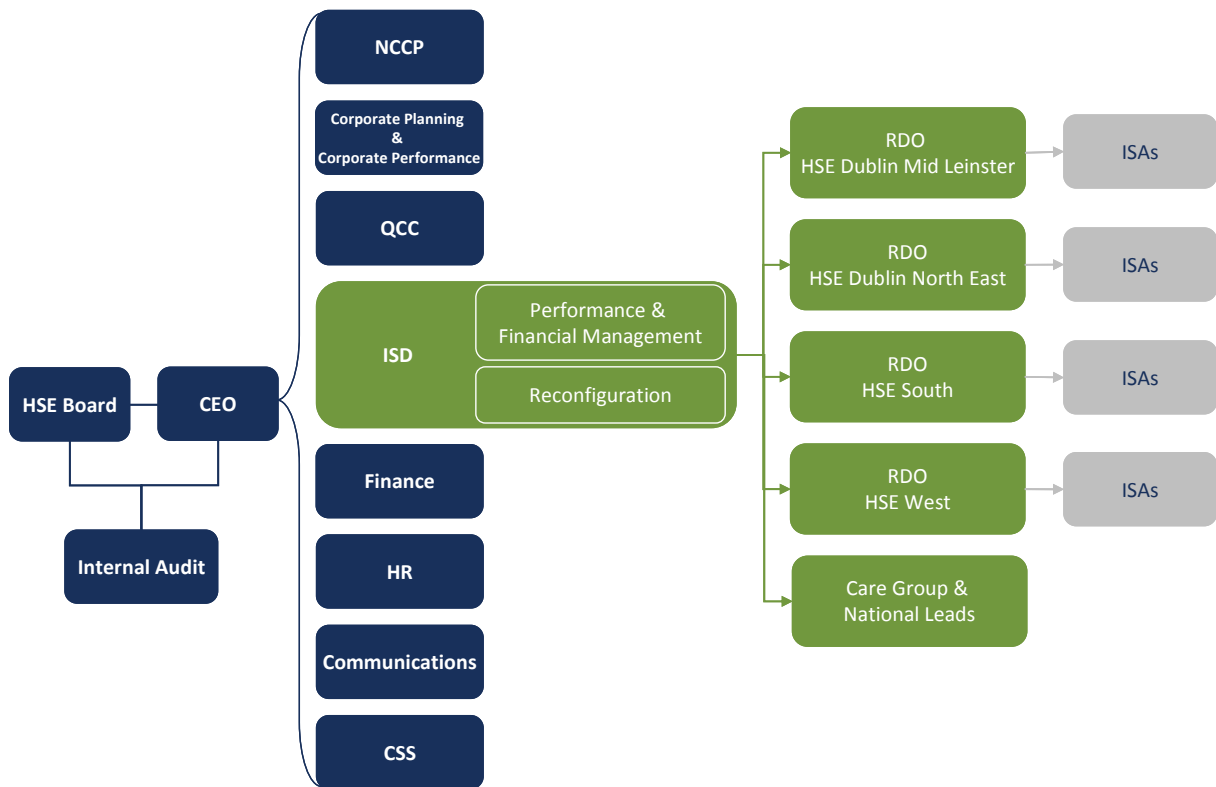
The PCCC Directorate was responsible for a diverse range of services including primary care, mental health, disability, children, youth and families, community hospital, continuing care services and social inclusion services (see Chapter 6). The PCCC Directorate was managed by a National Director and six Assistant National Directors (one managing services in each of the four regions, one for contracts and another for corporate, performance, monitoring and evaluation).¹ Within the PCCC Directorate, 32 Local Health Offices (LHOs) were charged with administering the allocation of resources to various providers, as well as directly providing certain services (particularly community services).

¹ The four Assistant National Directors within Service Management in PCCC had responsibility for the delivery of PCCC services within their respective region, as well as particular for particular care areas nationally (primary care; children, youth and family, palliative care, chronic illness; older persons and social inclusion; mental health and disabilities) (HSE, 2005a).

The NHO within the HSE assumed responsibility for resource allocation, service delivery and performance management of acute public hospital services (see Chapter 7). The Director of the NHO was supported by four Assistant National Directors. Public hospital services were managed through eight hospital networks – two hospital networks in each of the four regional administrative areas (see Figure 8.1). A Network Manager was responsible for the delivery of public hospital services within each network and was directly accountable to the NHO Director. Annual service-level agreements (SLAs) between the NHO and each network manager were intended to specify the cost, volume and quality of hospital services to be delivered. Under this structure, each network manager was accountable for the budgets of all public hospitals in his/her area, even though an individual budget was distributed to each hospital.

More recently, it has been recognised that these separate pillars for PCCC and the NHO were not conducive to integration. For example, the budgets for the PCCC and acute sectors were managed separately. Consequently, the two directorates were merged in October 2009 to create the Integrated Services Directorate (ISD), which is now charged with coordinating and integrating care across the PCCC and acute sectors (see Figure 8.2). There are two National Directors in the new Directorate – one is responsible for performance and financial management (including care groups areas and demand-led schemes) and the other with overseeing reconfiguration of acute hospitals, Primary Care Teams (PCTs) and pre-hospital care (HSE, 2010a).

FIGURE 8.2
Structure of HSE and ISD after October 2009



Notes: CEO = Chief Executive Officer. NCCP = National Cancer Control Programme. QCC = Quality and Clinical Care. ISD = Integrated Services Directorate. HR = Human Resources. CSS = Commercial and Support Services. RDO = Regional Director of Operations. ISA = Integrated Services Area.

Source: Adapted from HSE, 2010b

Each of the four regions now has a Regional Director of Operations (RDO) to supervise the delivery of health and social care services within that area.² An annual performance contract, specifying the delivery of services and targets, is agreed between National Directors within the ISD and each RDO. Integrated Services Area (ISA) managers will act as the liaison between these regional directors and service managers and chair regional management teams. Unlike the network managers and LHOs, ISA managers will be responsible for overseeing hospital services and also PCCC. It has been reported that there will be 18 ISAs nationally, with four or five in each region (Houston, 2010). An appropriate resource allocation framework will be required to support this new structure. One obvious question that arises in devising such a framework concerns the appropriate level at which the budget for integrated health-care services should be held. In answering this question, the issues discussed in Chapter 2 (especially in relation to the optimal size of the budget-holding unit) are of particular relevance.

² Ambulance services and population health are not within the remit of the RDOs (HSE, personal communication; 01 April 2010).

8.3 NEW INITIATIVES

In this section, we detail new initiatives with regard to the delivery of integrated health care in Ireland, focusing on the establishment of Primary Care Teams (PCTs) in Section 8.3.1; hospital discharge planning in Section 8.3.2; and chronic disease management (CDM) in Section 8.3.3.

8.3.1 Primary Care Teams (PCTs)

Internationally, there is extensive evidence that a strong primary care-led health system is associated with improved health outcomes, increased quality of care, decreased health inequalities and lower health-care costs overall (Basu *et al.*, 2002; Starfield *et al.*, 2002; Macinko *et al.*, 2003; Shi *et al.*, 2005; Starfield *et al.*, 2005). National and international statements of health strategy contain commitments to strengthen the role of primary care, and to move away from the traditional focus on diagnosis and treatment of illness to concentrate on prevention and the maintenance of good health (see WHO, 2008; DoHC, 2001b). A key component of a strengthened primary care sector is the development of a team-based approach to the delivery of primary care services, with GPs and other health professionals working together to ensure that the majority of individuals' health-care needs are dealt with in a primary care setting.³

The 2001 Primary Care Strategy *A New Direction* recommended the introduction of an interdisciplinary team-based approach to the delivery of primary care services (DoHC, 2001b). The aims of the new approach were to provide:

- a strengthened primary care system that would play a more central role as the first and ongoing point of contact for individuals with the health system;
- an integrated, inter-disciplinary, high-quality, team-based and user-friendly set of services for the public;
- enhanced capacity for primary care in the areas of disease prevention, rehabilitation and personal social services to complement the existing diagnosis and treatment functions.

It was envisaged that members of the PCT would include GPs, nurses/midwives, health-care assistants, home helps, physiotherapists, occupational therapists, social

³ The lack of integration within PCCC services was highlighted in a recent survey of GPs and public health nurses (PHNs) who were not in PCTs in 2008. It found that:

- 20 per cent of GPs and PHNs had never had face-to-face contact
- 29 per cent of GPs indicated that they did not know the PHNs by name
- 97 per cent of GPs and 81 per cent of PHNs had no working email address for each other
- 56 per cent of GPs and 77 per cent of PHNs did not have each others mobile phone number
- 45 per cent of GPs and PHNs were in weekly phone contact, although 4 per cent reported contact on less than an annual basis (HSE, 2009a).

workers and administrative personnel. A wider network of other primary care professionals including speech and language therapists, community pharmacists, dieticians, community welfare officers, dentists, chiropodists and psychologists would also provide services for the enrolled population of each PCT (contained in a Health and Social Care Network, HSCN) (CAG, 2009). The number and ratio of team members was to be determined on the basis of location, population size and a needs assessment. Wherever possible, teams would be based in single locations, 'to provide easy accessibility for patients and to enhance the multidisciplinary framework' (Houses of the Oireachtas, 2010; 17).

Initially, it was envisaged that each PCT would serve small population groups of approximately 3,000-7,000 individuals, giving a total of 600-1,000 PCTs across the country (based on a population of 3.8m). It was envisaged that approximately 400-600 PCTs would be in place by 2011. However, the HSE subsequently revised upwards the relevant catchment population size and it is now envisaged that each PCT will serve a population of approximately 8,000 individuals (Houses of the Oireachtas, 2010). The wider Health and Social Care Networks would be established to provide more integrated services covering a population of between 30,000 and 50,000 individuals (CAG, 2009).

The Primary Care Strategy recommended the introduction of PCTs on a phased basis through the introduction of 40-60 PCT implementation projects over a period of 3-5 years. At the end of 2002, it was decided to proceed with 10 pilot PCT projects (one in each health board area and two in Dublin) (DoHC, 2004). During 2006 a 5-year programme was initiated to establish approximately 500 PCTs across the country (HSE, 2008b). Since then, €48m has been invested to support the establishment of PCTs, including the creation of an additional 600 multidisciplinary posts (of which 193 had been filled by October 2009) (HSE, 2009a).

Table 8.1 details recent progress on the establishment of PCTs. As of December 2009, there were 222 PCTs in operation (i.e. 'holding clinical meetings'⁴), and a further 184 PCTs in development (HSE, 2010c). In June 2010, the HSE reported that 219 PCTs were holding clinical meetings, with a further 184 in development (HSE, 2010d). By the end of 2011, the HSE plans to have 530 PCTs in place (HSE, 2009a).⁵ As of November 2009, no HSCNs had been established (CAG, 2009).

⁴ The HSE defines operating PCTs as those 'holding clinical meetings, involving GPs and HSE staff, concerning patients and shared care arrangements' (HSE, 2009a; 25).

⁵ There are conflicting statements on the final number of PCTs. The latest report from the Houses of the Oireachtas (which uses data that was supplied to the Committee by the HSE) mentions 542, while a review of PCTs by the HSE in 2009 mentions 530 as the final number, as does the 2009 HSE Annual Report and Financial Statements (HSE, 2009a; Houses of the Oireachtas, 2010; HSE, 2010d).

TABLE 8.1
Recent Progress on Establishment of PCTs

	December 2008	December 2009	June 2010	December 2011 (projected)
Number of PCTs	93	222	219	394
PCTs in development	0	184	184	136
Total	93	406	403	530

Sources: HSE, 2009b, 2010b, c, d

In terms of the staff composition of current PCTs, by end October 2009, 36.4 per cent of PCT staff were GPs, followed by 24.9 per cent who were public health nurses (PHNs) and 9.1 per cent who were registered general nurses (RGNs) (see Table 8.2). The remaining 30 per cent were accounted for by physiotherapists, occupational therapists, speech and language therapists, social workers, administrative staff and other HSE staff (HSE, 2009a).⁶ As of March 2010, 11 PCTs were fully co-located, with GPs and HSE staff located in one building. The remainder have either GPs located in one building and all HSE staff in another, or some HSE staff and GPs located in one building, with other HSE staff located elsewhere (HSE - Parliamentary Affairs, 2010a).

TABLE 8.2
Staff Composition of PCTs (as at end October 2009)

	Number	%
GP	602	36.4
PHN	412	24.9
RGN	150	9.1
Physiotherapist	116	7.0
Occupational Therapist	84	5.1
Speech and Language Therapist	55	3.3
Social Worker	31	1.9
Administrative Staff	25	1.5
Other HSE Staff ^a	177	10.7
Total	1,652	100

Notes: ^a As of end October 2009, 145 PCTs were in operation.

^b No further details are provided.

Sources: HSE, 2009a, c

Localised initiatives for the prevention and treatment of certain chronic diseases are present in some PCTs, as well as some initiatives in relation to access to diagnostic facilities. For example, Arklow PCT provides X-ray and ultrasound facilities for patients who live within a defined local geographic area. It is also estimated that approximately 30 per cent of PCTs provide minor surgery services (HSE, 2009a). According to the Irish Medical Organisation (IMO) however, pilot community-based diagnostic centres to support the PCTs (which were announced as part of the Primary Care Strategy) have yet to be established (IMO, 2009).

⁶ In June 2009, the HSE reported that approximately 1,500 HSE staff and 755 GPs were participating in PCTs (HSE, 2010d).

New performance measures for PCTs (e.g. structured integrated programmes for diabetes and asthma) have been developed with a view to implementation in 2010. These measures are included in the 2010 HSE National Service Plan (HSE, 2010b).

A review of the ten implementation primary care projects was undertaken in the second quarter of 2006, but the review was not published (CAG, 2009). In 2010, the HSE intends to '*carry out a comprehensive evaluation of PCTs ... to demonstrate the benefits of PCTs in terms of cost savings, patient satisfaction, hospital avoidance etc.*' (HSE *et al.*, 2009a; 11). The second report of the Houses of the Oireachtas Committee on Health and Children, *Report on Primary Medical Care in the Community*, reviewed the structure and supply of PCTs, as well as related operational issues such as health information, eligibility and education/training (Houses of the Oireachtas, 2010). The report contained 40 recommendations, of which the most significant related to:

- supply of relevant staff;
- infrastructure;
- definition of catchment populations;
- eligibility;
- access to diagnostic services.

Recent reports by the ESRI, FÁS and the Competition Authority have all predicted a shortfall of GPs in the future (FÁS, 2005; Competition Authority, 2009; Layte, 2009), with such a shortfall having important implications for the extent to which there will be a sufficient number of GPs to facilitate future growth in PCTs and primary care infrastructure. While the recent announcement of an extra 37 GP training places per annum is a welcome development (HSE, 2010e), the projected number of GP training places of 158 per annum is still well below the 250 training places per annum that are needed to approach the EU average in terms of GPs per 1,000 population (Layte, 2009).⁷ However, a reconfiguration of the skills mix in primary care could reduce the need for additional GP training places. According to the HSE, '*an extensive planning exercise is currently under way to review and reconfigure the existing staff working across primary, community and continuing care with a view to meeting the staffing needs of the planned primary care teams and other specialist services*' (HSE *et al.*, 2009a; 4). In addition, a total of 600 new front-line posts have been announced since 2006, with 193 in place at the end of October 2009 (HSE, 2009a). However, it is unclear what effect the current moratorium on recruitment in the public health service will have on the future recruitment of staff for PCTs.

⁷ However, the additional training places does mean that the ratio of GPs per 100,000 population will decline only slightly up to 2021 (from 58.3 in 2009 to 57.4 in 2021) (Layte, 2009).

The HSE emphasise that clear lines of responsibility and accountability are central to the effective management of PCTs (HSE, 2009a). The two key roles proposed to ensure service and clinical governance over PCTs are the PCT Service Manager and the Professional Discipline Lead. However, despite the roll-out of PCTs, *'it is envisaged that the proposed model will be implemented in PCTs in 2010, at a pace and sequence that manages risk and capacity to absorb the change'* (HSE *et al.*, 2009a; 7).

The Primary Care Strategy recommended that PCTs be developed in a single location, wherever possible (HSE, 2009a). Recent data from the HSE show that only 11 PCTs are fully co-located (HSE - Parliamentary Affairs, 2010a), with the IMO suggesting that many of the current PCTs are 'virtual' (IMO, 2009). Currently, the HSE funds the capital development of PCTs either via its own resources or in partnership with the private sector (Houses of the Oireachtas, 2010). In its submission to the Commission on Taxation, the DoHC proposed that a scheme of capital allowances be established in respect of the development of PCTs, similar to those that exist for the development of nursing homes and private hospitals. While not explicitly recommending such a scheme, the Commission did recommend that the *'list of buildings that qualify for deductibility for tax purposes be extended'* (Commission on Taxation, 2009; 21). The report of the Oireachtas Joint Committee on Health and Children recommended the use of financial incentives to facilitate investment in PCTs. While the report presented a menu of possible incentives rather than one preferred option, it did recommend that any incentives be time-limited and that large-scale corporate interests be excluded from availing of such incentives (Houses of the Oireachtas, 2010). A review of the establishment of the Lifford/Castefinn PCT in 2006 recommended that an audit of existing capital be carried out (to provide a clear idea of what the infrastructure needs are before fixing on one particular method of investment) (Vance, 2006).

The Primary Care Strategy did not provide any guidelines on how PCT catchment populations would be defined, and the report of the Oireachtas Joint Committee on Health and Children states that *'there is some debate as to how the parameters of these population cohorts are best determined'* (Houses of the Oireachtas, 2010; 16). As of October 2009, there was substantial variation in the population per GP across the various PCTs in operation (ranging from 640.4 individuals per GP in Blackpool, Co. Cork to 12,393.0 individuals per GP in Slieve Ardagh, Co. Tipperary) (see Table 8.3).

TABLE 8.3

PCT Population per GP (as at end October 2009)

	Number of PCTs	Number of GPs	PCT Population	Average PCT Population per GP	Minimum	Maximum
South	44	188	346,885	1,845.1	640.4 (Blackpool, Co. Cork)	12,393.0 (Slieve Ardagh, Co. Tipperary)
West	40	193	357,989	1,854.9	915.3 (Dromcolliher, Co. Limerick)	4,425.3 (Cappamore, Co. Tipperary)
Dublin Mid Leinster	44	154	375,970	2,441.4	954.7 (Athlone, Co. Westmeath)	11,530.0 (Shankill, Co. Dublin)
Dublin North East	17	67	118,794	1,773.0	1,104.0 (Ballymun, Co. Dublin)	6,829.0 (Ballybough, Co. Dublin)
Total	145	602	1,199,638	1,992.8		

Note: The median could not be calculated because the data are presented in aggregated form for some groups of PCTs.

Source: HSE, personal communication [25 January 2010]

There is some confusion over the entitlements of enrolled patients who do not hold a medical card. In principle, they are entitled to all primary care services except visits to their GP (Vance, 2006). In practice, differential entitlements between medical card and private patients (and differences in the availability of certain services between different areas of the country for private patients) makes it more difficult to provide a truly integrated service (Houses of the Oireachtas, 2010).⁸

A key recommendation of the Oireachtas Joint Committee on Health and Children is the introduction of diagnostic facilities within PCTs (for services that should be provided in a primary care setting), as well as improved access by GPs to diagnostic facilities in hospitals and other settings (Houses of the Oireachtas, 2010). While the Primary Care Strategy announced the development of pilot community-based diagnostic centres to support PCTs, these pilot schemes have yet to be established. While the HSE and the report of the Oireachtas Joint Committee on Health and Children both make reference to Arklow PCT which provides X-rays and ultrasounds for patients who live within a geographically defined area (HSE, 2009a; Houses of the Oireachtas, 2010), it is not clear that such services are available in any other PCTs.⁹

⁸ The statutory basis for eligibility is confined mainly to hospital and GP services. The criteria for eligibility for other community services are not always clear-cut and regional inconsistencies can arise in the way in which assessment mechanisms are applied.

⁹ A recent report from the Comptroller and Auditor General states that a Community Diagnostic Initiative was developed in late 2005 to improve access for GPs to particular diagnostic services in response to concerns about waiting times for access to X-ray and ultrasound services. The initiative was developed within four regional areas between January and December 2007 and was provided with an allocation of €6m towards running costs. The initiative has since been halted (CAG, 2009).

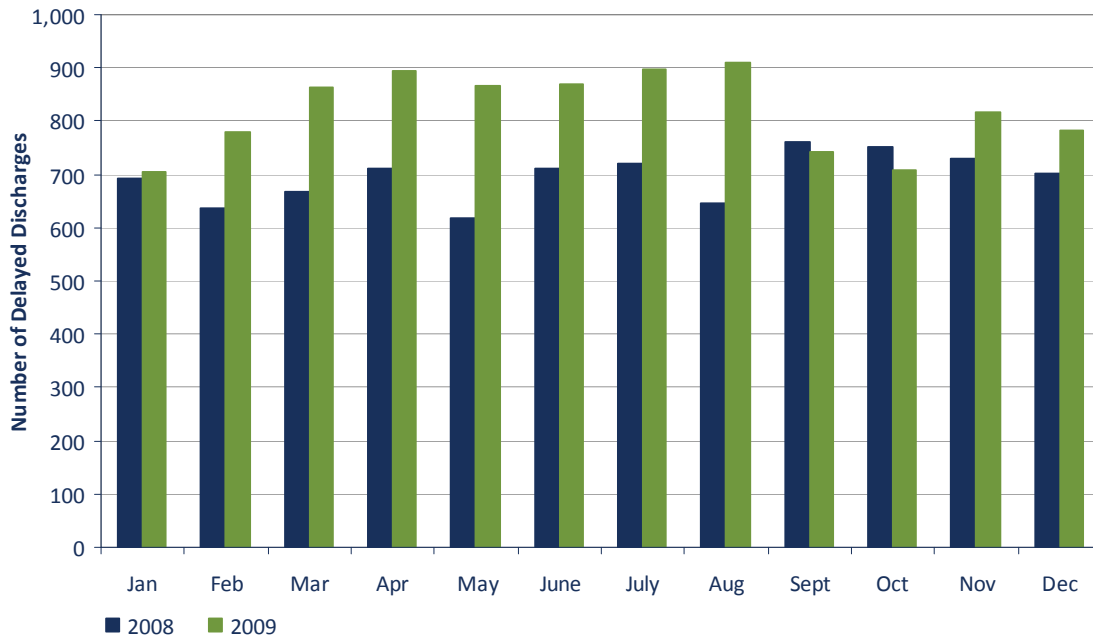
In summary, while PCTs are a key component of an integrated health service (and in particular in terms of integrating services within PCCC), experience to date has highlighted concerns in a number of areas, including structure and skills mix, infrastructure, definition of catchment populations, eligibility and access to diagnostic services. It is clear that while the full complement of 530 PCTs may be on target to be in place by the end of 2011, the extent to which all will be functioning in a manner consistent with that outlined in the 2001 Primary Care Strategy is open to question. In particular, there are concerns that many PCTs were established in advance of adequate planning in terms of staff needs, infrastructure and access to diagnostic and other facilities. Indeed, a 2006 review of experience with the establishment of the Lifford/Castelfinn PCT highlighted team members' concerns that lack of leadership and co-ordination in providing guidelines to support enrolment, needs assessment, ongoing monitoring and evaluation and in setting clear targets for performance was hampering the pace of implementation (Vance, 2006).

8.3.2 Delayed Discharges and Discharge Planning

A functioning integrated health-care system would facilitate rapid access to acute services while minimising the duration of hospital stays with responsibility for care transferred back to the community as soon as possible. It follows then that inappropriately delayed discharges (patients who are deemed medically stable for discharge, but whose discharge cannot proceed) could be perceived as a symptom of disintegration between the various components of the health service. As shown in Figure 8.3, there were, on average, over 820 delayed discharges in Irish acute public hospitals in 2009, higher than the equivalent number in 2008 (696 delayed discharges). The bed days lost over the period when discharge is inappropriately delayed represent a high opportunity cost for the acute hospital sector: there were 144,565 bed days lost in 2009, 35 per cent less than in 2008 (223,704 bed days) (HSE - Parliamentary Affairs, 2009).¹⁰

¹⁰ If these bed days had been available, an estimated additional 24,000 inpatients could have been treated in 2009 (assuming an average length of stay of 6 days, which was approximately equal to the inpatient average length of stay in 2008; DoHC, 2009).

FIGURE 8.3
Number of Delayed Discharges, 2008-2009



Notes: For some months, there were discrepancies between the figures reported in the 2008 reports and those relating to the same period reported in the 2009 reports.
Reports for March to July 2008 did not contain the relevant data. Therefore, the data were obtained from the 2009 reports for the corresponding period in 2008.
Report for August 2008 was not available. Therefore, the data were obtained from the August 2009 report for the corresponding period in 2008.

Sources: HSE, 2008c, d, e, f, g, h, i, j, k, 2009d, e, f, g, h, i, j, k, l, m, n, o, 2010f, g

Table 8.4 illustrates that delays can be attributed to all aspects (albeit to varying degrees) of post-acute care – including PCCC for community services such as home help, county councils for adaptations to the home, and the Nursing Home Subvention Scheme (which has been recently replaced by the Nursing Homes Support Scheme, as discussed in Chapter 6). In the majority of cases, delays arose due to the unavailability of publicly funded long-term and residential care. Thus, the disintegrated nature of some components of the health-care system is evident in the case of delayed discharges, who have to remain in acute public hospitals even though their episode of acute care has concluded.

TABLE 8.4
Reasons for Delayed Discharges from Acute Public Hospitals, 2008-2009

	2008		2009	
	Number	%	Number	%
<i>Delays associated with:</i>				
Patient returning home ^a	59	8.4	45	5.7
External factors ^b	66	9.4	83	10.6
Subvention process ^c	60	8.5	78	10.0
Patient circumstances ^d	204	29.1	319	40.7
Other parts of the health service ^e	273	38.9	196	25.0
Other	40	5.7	62	7.9
Total	702	100	783	100

Notes: ^a Refers to awaiting community services (such as home help) provided through PCCC; re-housing or adaptations (county council); or finalisation or funding home care packages.

^b Refers to awaiting rehabilitation or hospice care, or ward of court.

^c Refers to delays associated with response from the HSE or availability of nursing home. Also includes delays due to ineligibility for subvention or requirement for enhanced nursing home subvention.

^d Refers to patient or family declining discharge or requesting publicly funded long-term care.

^e Refers to awaiting progress on Delayed Discharge Initiative bed or requiring public residential care.

Source: HSE, 2010c

A number of initiatives have been instigated to mitigate the impact of delayed discharges. Among these, the Delayed Discharge Initiative sought to use capacity in private nursing homes to alleviate pressures in acute public hospitals (Dáil Éireann, 2007; HSE - Parliamentary Affairs, 2008). Similarly, additional capacity has been provided through the establishment of Complex Discharge Units for patients whose discharge is delayed (see, for example, HSE, 2009p, 2010d). While both of these initiatives may be effective at transferring delayed discharges out of the acute sector, they do not resolve the underlying causes of the delays.

By contrast, discharge planning can help to prevent delays by eliminating barriers between the acute and non-acute sectors by facilitating communication and coordination across these sectors (in conjunction with compatible ICT systems and unique health identifiers). In so doing, it can reduce length of stay and readmission rates, as well as ensuring that the patient is treated in the most appropriate setting (Shepperd *et al.*, 2010). The potential benefit of discharge planning was acknowledged in the 2001 National Health Strategy (and subsequently reiterated by the Health Boards Executive, 2003), which identified the need to enhance the discharge planning function in each acute hospital 'to ensure that patients do not have to remain in hospital for any longer than necessary' (DoHC, 2001a; 105). However, this failed to recognise that discharge planning goes beyond the domain of the hospital and, therefore, should also involve health-care providers in the community.

Despite the need for action identified in the National Health Strategy, a survey conducted in 2006/07 found that discharge planning was not a routine practice: 60 per cent of patients did not have a discharge plan and 83 per cent had no estimated discharge date (PA Consulting Group, 2007). More recently, however, the HSE has

launched a code of practice for integrated discharge planning (HSE, 2008l) and guidance for nurses and midwives (HSE *et al.*, 2009b). Both documents signify a move towards a greater role for nurses in discharging patients. The extent to which these guidelines will be enacted and the use of discharge planning will be advanced remains to be seen.

8.3.3 Chronic Disease Management

8.3.3.1 Overview

Internationally, the increasing prevalence of chronic disease is posing serious challenges for health-care systems. In the US, an estimated 83 per cent of Medicare beneficiaries have at least one chronic condition (Anderson, 2005), while the proportion of beneficiaries with five or more chronic conditions grew from an estimated 31 per cent in 1987 to more than half of all Medicare beneficiaries by 2002 (Thorpe *et al.*, 2006). In Ireland, approximately one third of men over 60 years of age have two or more chronic conditions (DoHC, 2008) and it is estimated that 80 per cent of GP consultations and 60 per cent of hospital bed days are related to chronic disease and their complications (HSE, 2009a).

In 2008, the DoHC report entitled *Tackling Chronic Disease – A Policy Framework for the Management of Chronic Disease* was launched (DoHC, 2008). It stressed the importance of '*management of chronic disease at different levels through a reorientation towards primary care and the provision of integrated health services that are focussed on prevention and returning individuals to health and a better quality of life*' (DoHC, 2008; 7). Currently, there are strategies in relation to cancer, cardiovascular disease and diabetes. New Programme Leads will focus on the development of clinical protocols and pathways for the treatment and prevention of chronic disease, but have yet to be supported by a resource allocation structure that incentivises the provision of care for chronic disease in the most appropriate setting.¹¹ For the time being however, the DoHC acknowledge that while there are a small number of initiatives that aim to integrate care across the various settings, for most patients with chronic disease, care is fragmented and does not include all the elements to reduce the burden of disease facing the individual (DoHC, 2008).¹² The Heartwatch programme and the Structured Midlands Diabetes Project are two examples of localised initiatives and are discussed in Sections 8.3.3.2 and 8.3.3.4.

¹¹ According to the HSE's 2009 Annual Report and Financial Statements, the following chronic diseases have been prioritised for the initial phase of clinical care programmes: chronic obstructive pulmonary disease/asthma, stroke, acute coronary syndrome, heart failure, diabetes, epilepsy and mental health (HSE, 2010d).

¹² According to the HSE, '*many primary care teams are establishing chronic disease management programmes which have defined linkages and agreed protocols with secondary care services*' (HSE, 2009a; 9).

8.3.3.2 Heartwatch

Heartwatch, the national programme in general practice for the secondary prevention of cardiovascular disease in Ireland, was established in 2002 in response to a recommendation contained in the 1999 national Cardiovascular Strategy *Building Healthier Hearts* (DoHC, 1999).¹³ The overall aim of the programme is to reduce morbidity and mortality due to cardiovascular disease, one of the leading causes of premature death in Ireland.

Heartwatch was launched in the spring of 2003 with an annual budget of €3m per annum. Its pilot phase (running from March 2003 to September 2004) recruited 20 per cent of GPs. The programme is administered by the DoHC and the HSE, in partnership with the Irish College of General Practitioners and the Irish Heart Foundation. Despite calls for the roll-out of the programme nationally, it operates still in only 20 per cent of GP practices. In 2008, 16,303 patients were registered with 456 participating GPs (Lynch, 2008). In 2008, total payments to GPs participating in Heartwatch amounted to €1.6m, which corresponds to an average annual payment of approximately €3,466 per GP participating in the programme in 2008 (averaging at €97 per enrolled patient).¹⁴

The programme provides a set of defined clinical protocols, based on proven international guidelines, for the continuing care of eligible patients, including a schedule of four visits per annum, and details of the risk factors to be measured with target levels of control to be achieved. Patients (GMS and private) on a participating GP's list with a history of myocardial infarction, coronary artery bypass graft, or percutaneous transluminal coronary angioplasty are eligible to participate in the programme.¹⁵ It therefore targets only the highest risk population (Naughton *et al.*, 2007). Heartwatch adopts a multidisciplinary approach with GPs, practice nurses and health promotion staff working in partnership with the patient to achieve the optimum outcome. In some cases, structural changes were put in place, such as the provision of or access to cardiac diagnostic equipment such as ambulatory blood pressure monitoring and electrocardiograms to assist in early diagnosis and treatment of patients in the primary care setting, as well as direct GP access to hospital-based cardiac diagnostics (HSE, 2005b).

¹³ In particular, recommendation R6.21 stated that '*secondary prevention for most patients with cardiovascular disease should be provided in the general practice setting*' (DoHC, 1999; 75).

¹⁴ In 2008, 456 GPs were participating in Heartwatch (Lynch, 2008). The PCRS records total payments of €1,580,637 to GPs participating in the Heartwatch programme in 2008 (PCRS, 2009).

¹⁵ Data on patients and visits are sent electronically from each practice to the Independent National Data Centre (INDC), which was established in 2003 specifically for Heartwatch. Through the INDC, GPs and practice staff can access demographic and clinical data on their Heartwatch patients, as well as regional and national information (Leahy, 2006). However, it is not clear why the PCRS, which administers payments to providers for services provided under various state health schemes, including Heartwatch, could not undertake this role. See also Murphy *et al.* (2009).

To date, there have been three reports on the Heartwatch programme. The first two were clinical reports and were undertaken by the Heartwatch National Programme Centre. The third report was an independent review of the Heartwatch programme undertaken by the Department of General Practice at NUI Galway.

The first clinical report, which examined experience during the pilot phase from April 2003 to September 2004, was not published.¹⁶ The second report covered the period from March 2003 to December 2005 (Heartwatch National Programme Centre, 2006). It found significant improvements in the control of the three main risk factors for cardiovascular disease (smoking, cholesterol and blood pressure), although no significant effects on body mass index (BMI), waist circumference and exercise levels. There were significant improvements in the prescribing of secondary preventive therapies (i.e. ACE inhibitors, beta-blockers and statins) and a considerable reduction in the variation in prescribing between GPs over the two years examined. Epidemiological modelling of the cohort estimated that 81 deaths were prevented or postponed, and 522 life years gained over the two years examined. Additional drug costs were estimated at €656,473, with the total additional cost of the Heartwatch programme estimated at €4,169,023. The incremental cost-effectiveness ratio (ICER) was estimated at €7,987 per life year gained.¹⁷ However, it must be remembered that these analyses of experience with Heartwatch did not include a control group, and did not deal with the potential biases introduced in patient selection into the programme (see also Murphy *et al.*, 2009).

The third report summarised the main findings from the second clinical report, as well as providing additional analyses. Specifically, it showed that the majority of participating patients achieved the blood pressure and cholesterol target levels within one year of participating in the Heartwatch programme and over 70 per cent had achieved these targets within nine months of their visit (Murphy, 2009). Most significantly however, the report compared achievement on the Heartwatch programme with achievement on the same indicators for the control group in the SPHERE study (see Section 8.3.3.3). It found that, with the exception of achievement for systolic blood pressure, the significant improvements in diastolic blood pressure, total and LDL cholesterol and BMI for the Heartwatch group were also achieved by the SPHERE control group, suggesting that there were important secular changes in secondary prevention of cardiovascular disease over this period (Murphy, 2009). Essentially, the Heartwatch improvements '*may be occurring through changes in the*

¹⁶ A draft version of the independent Heartwatch evaluation report was eventually presented to the Heartwatch National Steering Committee on 13 October 2005, which then prepared a response to the report. This response, and the evaluation report, were eventually finalised, updated and presented to the Minister for Health and Children in the spring of 2006. According to the Committee, the independent evaluation considered that it was too early to reach definitive conclusions as to the benefits accrued from Heartwatch and recommended that a more comprehensive body of data be analysed. Its stakeholders thus commissioned a second Heartwatch report (Lynch, 2008).

¹⁷ ICERs less than €20,000 per life year gained are considered very cost-effective (Heartwatch National Programme Centre, 2006).

population and general system rather than through specific interventions in themselves' (Murphy, 2009; 7).¹⁸

8.3.3.3 SPHERE Study

The Secondary Prevention of Heart Disease in General Practice study (also known as SPHERE) was a clustered randomised controlled trial of tailored practice and patient care plans for the secondary prevention of heart disease in general practice, undertaken over the period 2003-2009. The aim of the study was to design, implement and test an intervention to improve the process of care and objective clinical outcomes for patients with established coronary heart disease in primary care in Ireland. The study covered 960 patients in 48 practices in three study sites in the Republic of Ireland and Northern Ireland. In each study site, 16 practices were recruited, with eight allocated to the treatment group and eight to the control.¹⁹ Patients were eligible for participation if they had a history of myocardial infarction, angina, angioplasty or coronary artery bypass surgery.

Evaluation took place over 18 months in each practice (between July 2005 and July 2007). Primary outcomes were blood pressure, total cholesterol, physical and mental health status and hospital readmissions. The final study results showed that participation in SPHERE resulted in significant reductions in hospital admissions (both total and cardiovascular-related), but no significant improvements in cholesterol concentration, management of blood pressure or physical health status (Murphy, 2009). The authors speculate that this paradoxical result may be due to increased patient self-efficacy, which increased patients' ability to manage their illness without access to health services. They also suggest that a ceiling effect may have been reached in the secondary management of cardiovascular disease in primary care.

Increased chronic disease management (CDM) in a primary care setting is a key component of Irish health policy. The Heartwatch programme, the national programme in general practice for the secondary prevention of cardiovascular disease in Ireland, while only active in 20 per cent of GP practices, has been shown to reduce significantly systolic blood pressure among eligible patients. However, the significant improvements in diastolic blood pressure, total and LDL cholesterol and

¹⁸ Indeed, Bennett *et al.* (2006) examine the significant fall in cardiovascular mortality in Ireland over the period 1985-2000 and attribute 48.1 per cent of the improvements to favourable population risk factor trends, such as declining smoking prevalence, mean cholesterol concentrations and blood pressure levels (although offset by increases in adverse population trends related to obesity, diabetes and inactivity). Approximately 44 per cent of the observed decrease was attributable to medical and surgical therapies, specifically cardiopulmonary resuscitation, aspirin and thrombolysis.

¹⁹ Within each of the three study centres, practices were first stratified by practice size and then allocated to intervention or control groups. To be eligible for participation, a practice must have: had a practice nurse involved in general patient care; had a minimum NHS list size of 1800 patients (Northern Ireland) or General Medical Scheme (GMS) list size of 700 patients (Republic of Ireland); had not participated in the pilot phase of the study; and had not participated in Heartwatch (Republic of Ireland). Practices that agreed to participate were offered an honorarium of €1,000 (or the sterling equivalent) upon completion of the study (Murphy *et al.*, 2005).

BMI that have been observed for the Heartwatch group were also achieved by the SPHERE control group. This suggests that there were important secular changes in secondary prevention of cardiovascular disease over the period. Notwithstanding the deficiencies in the Heartwatch programme, the SPHERE study has demonstrated the significant reductions in hospital admissions (both total and cardiovascular-related) that can be associated with the management of cardiovascular disease in the community.²⁰

The 2005 audit of the Cardiovascular Strategy called for the extension of secondary prevention nationally to cover all patients with established heart disease, as well as calling for a particular focus on achieving improvements in lifestyles (diet and exercise) (HSE, 2005b). In addition, the recent national Cardiovascular Strategy has stated that *'while there have been useful advances in the management of cardiovascular disease and cardiovascular disease risk in primary care, particularly through the implementation of the Heartwatch Programme as recommended by the first cardiovascular health strategy (Building Healthier Hearts, 1999), the full potential of primary care to contribute to the containment of cardiovascular disease morbidity and mortality has yet to be realised'* (DoHC, 2010; 68).

8.3.3.4 Midlands Structured Diabetes Project²¹

In the absence of a local hospital-based specialised diabetes unit, the Midlands Structured Diabetes Project (covering the counties Longford, Westmeath, Laois and Offaly) was established in 1997/98 between a number of GPs with an interest in diabetes and the then Midland Health Board. Patients with diabetes are managed in primary care with structured specialised support provided to participating practices, including nurse specialists, enhanced access to dietetic, ophthalmology and chiropody services, and 'fast track' referral to the vascular services at the Midland Regional Hospital in Tullamore (Brennan *et al.*, 2008). Currently there are 34 GP practices participating in the programme, with 2,637 patients providing consent for participation (HSE, 2009a).²²

²⁰ However, no significant improvements were observed in cholesterol concentration, management of blood pressure or physical health status (Murphy *et al.*, 2009).

²¹ In addition to the Midlands Diabetes Structured Care Project, three PCTs are currently involved in rolling out the X-PerT Diabetes Programme (a structured patient education programme for individuals with Type 2 diabetes). The East Coast Area Diabetes Scheme, which was established in 2002 after discussions with the 3 hospitals in the area (St. Vincent's, St. Michael's and Loughlinstown), is a shared care scheme in which patients with Type 2 diabetes are seen twice annually in general practice and annually in the hospital clinic (HSE, 2009a).

²² In counties Cavan, Monaghan, Louth and Meath, there are 23 GP practices enrolled on a structured care programme for Type 2 diabetes. There are 1,400 patients enrolled in the programme, who receive 2-3 visits per year in the GP practice (HSE - Parliamentary Affairs, 2010b).

An examination of the project in 2003 found that, in comparison with comparable data from the 2003/04 National Diabetes Audit in England, the level of recording of process-of-care measures was near or above the upper quartile for England. The proportion of patients with HbA_{1c} concentrations at target levels (<6.5 per cent) in the Midlands HSE project (26.8 per cent) was virtually identical to the upper quartile level for Primary Care Trusts in England (27.4 per cent). The proportion of patients reaching target total cholesterol levels (<5.0 mmol/l) (54.6 per cent) was close to the mean for Primary Care Trusts in England (56.6 per cent) and performance with regard to target blood pressure levels was equally poor in both the Midlands HSE (18.0 per cent) and in Primary Care Trusts in England (20.8 per cent) (Brennan *et al.*, 2008). It is estimated that between 11,500 and 15,600 appointments *per annum* are provided in the community that would otherwise be referred to hospital outpatient departments (HSE, 2009a).

The findings from the review of the performance of the Midlands Structured Diabetes Project suggest that primary care-led structured care provides a viable option for health systems dealing with the challenge of improving the quality of care for patients with diabetes. However, the Midlands project evolved in the specific context of a region that did not have access to a local specialist diabetes unit; in the absence of clear evidence for the superiority of hospital-based care, there is a strong case for anchoring care in the community, specifically in well-resourced primary care networks offering structured care and supported by local specialist diabetes units (Brennan *et al.*, 2008). In 2006, the national Diabetes Working Group established by the DoHC produced the report *Diabetes: Prevention and Model for Patient Care*, which sets out a model of care for people with diabetes in Ireland (DoHC, 2006). In the 2010 HSE National Service Plan, diabetes is one of the six areas highlighted for initial work by the new Directorate of Quality and Clinical Care in developing an implementation plan for care of diabetes and it is also the subject of a new performance indicator for 2010 (measuring the percentage of PCTs that are implementing, and the number of patients participating in, structured integrated diabetes care) (HSE, 2010b).

8.3.3.5 Shared Care: The Example of Epilepsy

Epilepsy is a chronic neurological disease that affects approximately 40,000 people in Ireland (Beaumont Hospital Epilepsy Research Group, 2010). The management of epilepsy involves practitioners at primary and acute levels, as well as the involvement of the patient (Varley *et al.*, 2009). Under these arrangements, access to, and communication between, health-care providers are two crucial factors to ensure appropriate service delivery.

With regard to the first of these, demand- and supply-side factors have together generated barriers to access. On the supply side, GPs perceived the current supply of appropriately trained nurse specialists and neurologists to be inadequate, resulting in long waits for patients and an unequal geographic distribution of services (Varley *et al.*, 2010). On the demand side, patients with private health insurance were considered to obtain faster access to care (Varley *et al.*, 2009; Varley *et al.*, 2010). As a consequence of these perceived difficulties, three-quarters of GPs referred patients to the emergency department (ED), at least sometimes, to access urgent neurology services (Varley *et al.*, 2009). To address these issues, an initiative in St. James's Hospital sought to develop a CDM programme for patients with epilepsy which facilitates communication between GPs and specialists through rapid access to specialist opinion and, therefore, enables continued treatment in the community wherever possible. In addition, patients are involved in the management of their condition through nurse-led education, support and counselling. Although this programme has been in operation for a relatively short time period of time, preliminary findings suggest that it can potentially reduce ED attendances and length of stay (Iyer *et al.*, 2010).

On the second issue, poor communication between health-care providers was cited by GPs as a barrier to providing care to patients with epilepsy and the vast majority were in favour of using an electronic patient record to address this information deficit (Varley *et al.*, 2009). Research is currently underway to develop an electronic patient record (EPR) for patients with epilepsy. It is envisaged that the EPR would provide up-to-date relevant information to all health-care providers, thereby improving the interface between primary and acute care. This initiative, together with the more general use of information technology (e.g. electronic referrals, unique health identifier), will facilitate models of shared care (McQuaid *et al.*, 2010).

8.3.4 Discussion

To conclude, there has been recent progress towards the development of a structure for an integrated health-care system. The examples of national and local initiatives, discussed above, are crucial elements in addressing the current fragmented nature of the health-care system. In addition to considering the appropriate structural framework for integrated care, it is important to have consistent and coherent systems for resource allocation that can support these structures. Section 8.4 considers how the current resource allocation mechanisms affect providers' incentives and, consequently, the delivery of integrated care.

8.4 EXAMPLE OF THE IMPLICATIONS OF THE CURRENT RESOURCE ALLOCATION SYSTEMS FOR INTEGRATED HEALTH CARE

This section considers how the financial incentives present under the existing resource allocation systems might influence providers' behaviour and, consequently, access to, and delivery of, integrated health-care services (the financial incentives for service users are discussed in Chapter 15). As in Chapters 6 and 7, this discussion is unavoidably hypothetical (given the limited availability of empirical evidence) and may not necessarily reflect what happens in reality. Moreover, it ignores the likely existence of other factors that could offset financial incentives: for example, in practice GPs, consultants and hospitals may not be able to exercise full control over patient selection or the decision to treat, and providers might well possess non-pecuniary motivations arising from a personal desire and a moral obligation to do a 'good job'.²³ These caveats notwithstanding, the discussion that follows highlights the complexity of, and contradictions in, the current resource allocation regimes for Ireland's health-care system.

Given the various mechanisms used in the Irish health-care system to allocate resources to health-care providers for different patients (as discussed in Chapters 6 and 7), it has been necessary to focus the discussion in this section on the example of a hypothetical patient with a medical card who suffers from a chronic disease that can be managed in the community. Furthermore, we examine the incentives facing five groups of providers, including GPs, other individual primary care providers (divided into those paid on a salary basis and those paid on a fee-for-service basis) and acute public HSE hospitals and their consultants.²⁴ Providers are assumed to be paid using a single payment mechanism (e.g. capitation for GPs and budget for hospitals).²⁵ Based on these simplifying assumptions, the incentives facing providers in the PCCC and acute hospital sectors are summarised in Table 8.5. The incentives differentiate between the decision to treat or admit, the intensity of treatment and the duration of treatment (which is the frequency of visits in the case of primary care and the length of stay in the case of acute hospitals).

²³ See Chapter 3 for further discussion of the factors motivating GP behaviour.

²⁴ This discussion excludes pharmacists (since they are currently not permitted to prescribe) and institutional providers in the PCCC sector (given the diversity across these providers).

²⁵ In practice, providers may be reimbursed using different mechanisms for different patients (e.g. consultants receive a salary for treating public patients and a fee-for-service for private patients) or even for the same type of patient (e.g. GPs predominantly receive a capitated payment for medical card holders, but can receive a fee for providing specified services to these patients).

TABLE 8.5
Financial Incentives Facing Health-Care Providers

Provider	Payment Type	Decision to Treat/Admit	Intensity of Treatment	Duration of Treatment
GP	Capitation	+/-	+/-	+/-
Other primary care provider	Salary	-	-	-
	Fee-for-service	+	+	+
Acute public hospital (HSE)	Budget	+/-	-	+/-
Consultant	Salary	-	-	+/-

Notes: + = positive incentive. - = negative incentive. +/- = uncertain.

Assuming that the patient has a medical card and suffers from a chronic disease that can be managed in the community; there is a single method of payment for providers; and the acute public hospital is funded and operated by the HSE.

The current resource allocation mechanisms in the Irish health-care system generate perverse and conflicting financial incentives both for providers in the same sector and for providers across sectors. For example, as shown in Table 8.5, the capitation payment for a GP may discourage patient care for this medical card holder, but other primary care providers who are paid on a fee-for-service basis (e.g. dentists and opticians) may have strong financial incentives to treat medical card patients. From the perspective of the acute public HSE hospital, the financial incentives to admit a medical card holder may depend on its budgetary position. For example, if the hospital is seeking (say) to close wards (e.g. Taylor, 2010) in order to remain within their budget, this could reduce patient access.

Considering how financial incentives facilitate integrated care across the health-care system as a whole, under a capitation payment, the GP may be encouraged to refer the medical card patient to other health-care providers. For other primary care providers, their incentive to refer depends on their method of payment: a strong incentive to refer exists in the case of those receiving a salary, while a strong incentive to keep the patient in primary care exists for those receiving a fee-for-service. However, as discussed above, the incentive for hospitals to treat such referrals may depend on their budgetary position. The salary payment provides no financial incentives for consultants to treat the patient.

This illustrates the complexity of the current systems of resource allocation for the simplistic example of a single patient type and a single payment method for providers. With the added complexity of different payment methods for different patient types, it is apparent that there may be inconsistencies in the financial incentives facing providers across different patient types, as well as across providers in the different sectors of Ireland's health-care system. Rather than supporting an integrated health-care system – where appropriate care is provided in the appropriate setting – it is more likely that these financial incentives actually promote fragmentation and discourage treatment in a primary care setting for some patients.

8.5 SUMMARY

It has been recognised that historically, the Irish health-care system has been fragmented and overly reliant on the acute public hospital sector (HSE, 2008a). But recent developments, particularly the establishment of the Integrated Services Directorate (ISD) in October 2009, demonstrate the commitment within the HSE to an integrated model of health care and the end of the ‘two pillars’ of the NHO and the PCCC Directorate.

An integrated health-care system has at its centre primary care, involving multidisciplinary teams. However, the experience to date with PCTs suggests that it is difficult to strengthen the role of primary care under the current structural, resource allocation and financing arrangements and that even with multidisciplinary teams in place, there are further confounding issues regarding staffing, infrastructure, definition of catchment populations, eligibility and access to diagnostic services. The example of delayed discharges highlights that no one sector can be solely responsible for delivering integrated care: deficiencies in one sector will have consequences for the other sectors of the health-care system. Thus, a system-based approach must be adopted, recognising that the solution will involve all health-care providers at all levels.

Other initiatives, focusing mostly on chronic diseases, have highlighted the inadequacy of existing contractual arrangements to encourage participation in integrated care and, consequently, the need for appropriate financial incentives and care protocols. Furthermore, these initiatives illustrate that it is possible to improve the interface between PCCC and the acute sector by involving the patient in their own care, facilitating access for GPs to specialist opinion and encouraging communication between providers across different sectors through compatible IT systems.

Unarguably, these structural and organisational reforms, together with the changes in the delivery of care, are necessary for an integrated health-care system. It is questionable, however, whether these measures alone would be sufficient to achieve this objective given the mechanisms currently in place to allocate resources to providers. These mechanisms result in a system of complex and incompatible financial incentives that may undermine the provision of care in the most appropriate setting. Chapter 15 proposes a possible framework that would better align the financial incentives of patients and providers to support the delivery of an integrated health-care system, while Chapter 10 focuses on the current financial incentives facing the patient. First, Chapter 9 reviews the methods of financing health care.

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