

The Potential Role of Pay-for-Performance in Irish Health Care

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Abstract

The current recession dictates that large decreases in public expenditure are required. As the second largest component of public expenditure, health is particularly vulnerable to the effects of the further cuts in expenditure that are required over the period 2012-2014. In the context of diminishing financial resources, there is increasing emphasis on maximising the value of expenditure by achieving efficient delivery of high-quality health-care services. In addition, the Irish health system is characterised by a complex set of financial incentives which have important implications for efficiency and equity. This paper examines international evidence on pay for performance (P4P) schemes to inform policymakers on the potential for implementing P4P in the Irish health-care system. In P4P, payments are tied to performance. P4P is becoming increasingly common in international health-care systems despite the lack of evidence on its effectiveness and a lack of consensus on how to design and implement such programmes. It is therefore important to understand the implications of existing P4P programmes before recommending their introduction in the Irish context. We provide an overview of the literature relating to large-scale P4P schemes, focusing on programmes that have been instituted by national public sector organisations. The literature highlights the poor quality of evidence on P4P schemes, stemming partly from technical challenges inherent in evaluating P4P schemes. Notwithstanding these technical difficulties, the available evidence does not provide a clear answer to the question of whether P4P should be implemented. Limitations include difficulties in obtaining valid performance indicators, unintended consequences, and the absence of evidence on cost effectiveness of P4P schemes. We assess how a P4P scheme would interact with the payment structures already in place in the Irish health-care system. We conclude that while there is an obvious need for greater efficiency and quality in the system, there are reasons why P4P initiatives are not recommended at this stage at least until the many complexities in provider reimbursement, public/private interaction, and patient access to the system are resolved.

1. INTRODUCTION/CONTEXT

Over the period 2000-2009, public health expenditure (both capital and current) more than doubled in real terms (Brick *et al.*, 2010). Since then, a severe and prolonged recession, the banking crisis and the resulting EU-IMF bailout have combined to create an environment in which large real decreases in public expenditure are required. Already, public health expenditure has fallen by €1.3bn (or over 8 per cent in nominal terms) between its peak in 2009 and 2011 (DoHC, 2010a; Department of Public Expenditure and Reform, 2011). As the second largest component of public expenditure, health care is particularly vulnerable to the effects of the further cuts in expenditure that are required over the period 2012-2014 (Department of Public Expenditure and Reform, 2011).

In this context of diminishing financial resources, there is increasing emphasis on maximising the value of expenditure by improving efficient delivery of high-quality health-care services. While the recent Public Service Agreement contains a number of commitments to reform work practices, the use of involuntary redundancies is prohibited. With this constraint, ensuring that existing resources within the health-care sector are used efficiently, without compromising on quality of care, is crucial. As a labour intensive sector, supply-side measures that influence provider behaviour offer a clear avenue for improving efficiency (Simeons and Giuffrida, 2004). Pay for performance (commonly referred to by the acronym P4P), in which payments are tied to performance, is becoming increasingly common in international health-care systems.¹ This trend is occurring despite the lack of evidence on its effectiveness and a lack of consensus on how to design and implement such programmes (Cromwell *et al.*, 2011; Maynard, 2012). Furthermore, it has been argued that P4P is not applicable to health care, where the payment is made to a provider who is responsible for diagnosing, as well as curing, the patient's condition (Prendergast, 2011).²

Nevertheless, P4P is attracting notable attention in the international literature and there has also been reference to the potential role for P4P in the Irish health-care sector.³ In addition, the recent Programme for Government contains a number of commitments that relate to how health-care providers in the system are paid (e.g., planned reform of the contract for general practitioners (GPs), changes to hospital funding).

¹ In some cases, pay is not strictly for performance, but rather sanctions for underperformance. While it may be more accurate to refer to performance-related pay, we follow the convention in the literature of referring to the concept as P4P.

² It is important to clarify what we mean by P4P (see also Section 2). While there are a number of current initiatives in the Irish health-care system that are experimenting with alternative methods of provider payment (e.g., the Heartwatch programme in primary care, the orthopaedic prospective funding pilot in acute hospitals, *etc.*), they are not explicitly characterised by defined payments for achievement of efficiency or quality goals.

³ The Health Service Executive Primary Care Clinical Director has signalled that P4P for GPs may be introduced in the future (Gantly, 2011).

This reflects the growing realisation that the structure of financial incentives is crucial for improving efficiency and equity in health care. Financial incentives have been shown to influence both provider and patient behaviour in health care (Newhouse and Insurance Experiment Group, 1993; Croxson *et al.*, 2001; Dusheiko *et al.*, 2003) and thus it is important that they are structured so as to support efficient and equitable health-care delivery. The recent Expert Group on Resource Allocation and Financing in the Health Sector highlighted the many, and often conflicting, financial incentives in the Irish health-care system, most of which arise from the complex interaction between the public and private sectors (Ruane, 2010). Private sources account for a relatively small proportion of total health financing in Ireland. However, across the system, publicly financed and privately financed care are very often administered by the same staff, using the same facilities. In many cases, different provider payment methods exist for public and private health care, generating financial incentives on the part of providers that differ by patient type.⁴

The consequences of these often conflicting financial incentives for efficiency and equity have been well documented (Brennan, 2003; Tussing and Wren, 2006; Brick *et al.*, 2010). For example, the distinction in provider payment method between public and private patients in primary care creates financial incentives on the part of GPs to treat public and private patients differently (with regard to follow-up visits, length of consultation, *etc.*). On the patient side, once a private patient has been admitted to hospital, it is often in his/her financial interest to avoid being discharged back to primary care. As emphasised in the Expert Group's recommendations, complexities such as these need to be addressed as a matter of priority to ensure improvements in efficiency and equity in the system.

Thus, in light of the need for measures to enhance value for money in Irish health care, and in the context of the current financial incentive structures in the system, this paper examines international evidence on P4P and determines its potential role as a policy tool in Ireland. Overall, the available literature indicates that there is insufficient evidence of significant positive effects of P4P initiatives on health-care outcomes. This, coupled with an already complex set of financial incentives in Irish health care, has implications for the use of P4P in the Irish system.

The outline of the paper is as follows. Section 2 defines the concept of P4P in the health-care context. Based on a review of the relevant available evidence in

⁴ Unless otherwise stated, throughout this paper, the term 'incentives' refers to financial incentives, which can be generated by the method by which health-care providers are paid, or by the method by which users/patients pay for care. It is also important to acknowledge that although outside the scope of this paper, non-financial incentives such as ethical standards, professional norms, altruism, *etc.* also impact on the behaviour of health-care providers (Scott, 2011).

Section 3, we draw out key conclusions and offer some lessons for Irish policymakers in Section 4. Section 5 briefly concludes.

2. PAY FOR PERFORMANCE IN HEALTH CARE

Cromwell *et al.* (2011; 7) define P4P as 'an approach used to provide incentives to physicians and health care provider organisations to achieve improved performance'. P4P was originally designed to improve quality of care, but with increasingly scarce resources, it is also used as a mechanism to reduce costs. The development of P4P was in part motivated by concerns about relying solely on medical professionals to ensure sufficient quality in health care. In addition, there are failings in the traditional methods of provider payment (Cromwell *et al.*, 2011). P4P mechanisms provide a way to reinforce the desired financial incentives embodied in existing payment mechanisms, or to provide incentives for performance that the traditional reimbursement mechanisms are lacking.

There are four main categories of P4P, namely programmes that pay for reporting of quality-related data, for quality, for efficiency (i.e., reduction or containment of costs), or for value (combined quality and cost measures). Cromwell *et al.* (2011) provide a useful framework for describing P4P programmes. First, P4P programmes can be voluntary or mandatory. Voluntary programmes are likely to be easier and cheaper to implement but may be subject to selection effects whereby providers who expect to do well are more likely to participate. Programmes that involve penalties for poor performance may need to be mandatory. Second, in any P4P programme, there are three core elements concerning whom to pay, how to measure performance, and how and how much to pay. For each element, there are a number of options, indicating that P4P programmes can be structured in many different ways, and as yet the optimal combination of options has not been identified (Table 1).

Payments can be directed at individual, or groups of, providers, or larger organisations such as hospitals. Where payments are directed at small groups of providers, the payment incentives affect only a small proportion of the patient's overall care, which could exacerbate fragmentation in the system. Measuring performance requires decisions on the domains of performance (e.g., clinical outcomes or processes), and appropriate indicators. Good performance indicators should be valid, reliable, important, relevant, controllable and easy and cheap enough to measure. Paying for performance can draw on existing resources (i.e., redistribution), on savings generated by high performance, or on new money. Adding new money could be justified if improving and reporting performance requires new investment and higher costs, but the cost

effectiveness of the programme needs to be assessed in this case. Decisions are also needed on the benchmarks for assessing performance (e.g., targets, relative performance). The type of financial incentive can vary. The incentives facing providers can be 'positive' (e.g., bonuses, extra per-patient pay), or 'negative' in terms of withholding payments or penalties. The size of the incentive relative to what the provider normally gets paid can also vary.

Finally, it is important to recognise that P4P programmes can incorporate non-financial incentives (e.g., publicising provider performance, providing technical assistance) and need not rely exclusively on financial incentives.

Section 3 presents available evidence on selected P4P programmes applied in health care. For ease of presentation, we discuss programmes undertaken in primary and acute care settings separately, followed by P4P programmes that focus on facilitating integrated health care. The emphasis is on providing an overview of the literature relating to large-scale P4P schemes, almost all of which have been instituted by national public sector organisations.⁵

Table 1: Elements of P4P Programmes

| | | |
|-----------------------------------|--|--|
| PARTICIPATION: | Voluntary/Mandatory participation | |
| WHO TO PAY: | Solo practitioner/Small group of providers Larger organisations | |
| MEASURING PERFORMANCE: | What domain(s)? | Outcomes/process/patient safety/access and availability of care/service quality/patient experience or satisfaction/cost efficiency or cost of care/cost effectiveness/adherence to evidence-based medical practice/productivity/administrative efficiency and compliance/adoption of information technology/reporting of performance indicators/participation in performance-enhancing activities, <i>etc.</i> |
| | What indicators? | Valid, reliable, important, relevant, specific, controllable, actionable, efficient, cost-effective |
| HOW & HOW MUCH TO PAY: | Funding source/magnitude? | Existing payments/generated savings/new money |
| | Performance benchmark? | Target/improved performance /relative performance/combined benchmark approaches/graduated or tiered rewards/continuous rewards/rebasing benchmarks, <i>etc.</i> |
| | Type of incentive? | Bonus or withhold/penalty/fee schedule adjustment/payment for provision of a specific service/payment for participation or payment for reporting/lack of payment for poor performance, <i>etc.</i> |
| | Non-financial incentives | Performance profiling/public recognition/technical assistance/practice sanctions/reduced administrative requirements, <i>etc.</i> |

Source: Extracted from Cromwell *et al.* (2011)

⁵ P4P has been widely adopted outside public health-care settings (see, for example, Mehrotra *et al.*, 2009; Cromwell *et al.*, 2011).

3. EVIDENCE

3.1 Primary Care

Traditional methods of provider payment in primary care include fee-for-service (FFS), capitation and salary. Gosden *et al.* (2006) provide an overview of the theoretical and empirical literature on the various methods, highlighting the lack of consensus on the 'ideal' method of payment, and the trade-offs involved in choosing any one method.⁶ In light of these trade-offs, many countries are experimenting with blended methods which include a capitation or salary component, FFS payments for the provision of defined services (e.g., out-of-hours, house calls, *etc.*), and P4P elements for the achievement of specific objectives (e.g., quality, chronic disease management, *etc.*).

Following the template in Table 1, Appendix Table A1 summarises the main features of three selected case studies of the largest international P4P programmes in primary care, the UK Quality and Outcomes Framework (QOF), the Australian Practice Incentives Program (PIP) and the US Physician Group Practice (PGP) Demonstration. As is evident from the table, the characteristics of the three schemes differ considerably, principally in terms of the number and type of indicators used to measure performance. Despite the popularity of P4P in primary care, there is little rigorous evidence on the effects of P4P on quality of care and other outcomes (Christianson *et al.*, 2008; Scott *et al.*, 2011). There is conflicting evidence on the impact of P4P in primary care on improvements in quality of care for chronic disease. For example, Campbell *et al.* (2007) found that while there were significant improvements in quality of care for asthma and diabetes after the introduction of QOF, later research suggests that the rates of improvement in care for these diseases have slowed (Campbell *et al.*, 2009). Campbell *et al.* (2007) also observed no significant differences for chronic heart disease before and after the introduction of QOF. Serumaga *et al.* (2011) similarly found that the QOF hypertension targets had no significant impact on blood pressure measures, intensity of treatment or on hypertension-related clinical outcomes such as stroke. Scott *et al.* (2009) found that GPs working in practices that participated in the PIP were more than 20 per cent more likely to order an HbA1c diabetes test than a comparable GP in a non-participating practice.^{7,8}

⁶ For example, while FFS 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 costs (Brick *et al.*, 2010).

⁷ An HbA1c test is a blood test that indicates the average Hb amount of sugar in the blood over 3 months. It is a marker for how well diabetes is managed (www.nlm.nih.gov/medlineplus/ency/article/003640.htm; last accessed 07/12/11).

⁸ Research on the asthma component of the PIP has found that rates of claims for completing cycles of care for patients with moderate or severe asthma have increased (Australian Institute of Health and Welfare, 2008). However, this assumes that increased output is indicative of better quality.

A number of studies have questioned whether improvements attributed to P4P incentives were simply the continuation of pre-P4P trends (NHS Information Centre, 2007; Calvert *et al.*, 2009; Centers for Medicare and Medicaid Services, 2009; Iglehart, 2011). One key area of concern with any form of financial incentive is the potential for unintended consequences⁹ whereby the incentives encourage behaviours that are not aligned with the underlying objectives. One such consequence is gaming, whereby providers engage in undesirable behaviour (e.g., selecting patients who are healthier in order to make targeted levels of performance easier to achieve). There is mixed evidence of gaming on the part of providers as a result of P4P in primary care. Gravelle *et al.* (2010) found that lower rates of achievement in the first year of the QOF in Scotland were associated with higher exception reporting in the following year, while Doran *et al.* (2006) could not determine whether the positive association between performance and exception reporting was due to gaming.¹⁰ Doran *et al.* (2008) noted that, in general, exception reporting rates were low and suggested that exception reporting is being used appropriately to exclude patients on clinical grounds.

Selection of activities is also a concern; Doran *et al.* (2011) found that improvements on indicators associated with the QOF seem to have been achieved at the expense of small detrimental effects on areas of care that were not incentivised. In Australia, concerns have been raised that the structure of the PIP allows providers to select those areas in which they have the greatest potential for award (e.g., electronic reporting), with much lower uptake of the incentives related to service delivery for chronic conditions, which require much more effort on the part of the practices (Cashin and Chi, 2011).

The potentially negative impact of P4P on the motivation of GPs, and the relationship between GPs and patients has also been highlighted. Gillam *et al.* (2011) report that the focus on targets and record-keeping may discourage GPs from taking a broader population health perspective (also highlighted by Roland, 2004; Smith and York, 2004; McDonald and Roland, 2009). Indirect effects of the QOF on practice organisation in terms of the diversification of nurse roles has been viewed as a positive development (Gillam and Siriwardena, 2011). The role of the QOF in reducing health inequalities is also subject to conflicting evidence (Millett *et al.*, 2008; Dixon *et al.*, 2011; Gillam and Siriwardena, 2011).

⁹ Unintended consequences are not necessarily unanticipated; Smith *et al.* (2004), in the very early stages of the QOF, discuss the potential consequences (such as gaming) that might arise from the way in which the QOF was structured.

¹⁰ Exception reporting refers to the practice whereby GP practices can exempt patients from inclusion in the QOF for a number of reasons (patient non-attendance, extreme frailty, non-tolerant or allergic reaction to prescribed medication, *etc.*). The overall exception rate was 5.4 per cent in 2009/10 (Audit Commission, 2011).

The QOF is the only P4P programme that has been subject to any evaluation of its cost effectiveness (see Cashin and Chi, 2011 and Centers for Medicare and Medicaid Services, 2009 for discussion of the PIP and PGP). In the UK, there is some tentative evidence in favour of the cost effectiveness of certain QOF indicators (Fleetcroft and Cookson, 2006; Mason *et al.*, 2008; Walker *et al.*, 2010; Dusheiko *et al.*, 2011). However, the indicators evaluated were those with a direct therapeutic effect, they represented a small subset of all QOF indicators and they were drawn from areas of clinical activity for which cost-effectiveness evidence was available. In addition, the administrative costs associated with the QOF were not considered, nor was the impact on total lifetime health-care costs if the patient lived longer as a result of better primary care. The administrative burden of P4P has also been discussed in Australia and the US (Mathematica Policy Research, 2009; Australian National Audit Office, 2010). Gillam *et al.* (2011) note that the larger question of whether the £1bn per annum spent on the QOF might have been better spent on something else (e.g., tobacco control) has not been answered.

3.2 Hospital Care

In the hospital sector, P4P programmes are a relatively recent innovation, implemented to fine-tune existing payment mechanisms so that funders' financial incentives are aligned with those of providers (Mehrotra *et al.*, 2009; Cromwell *et al.*, 2011). This section briefly reviews the literature on two case studies from the USA (the first country to apply P4P to hospitals)¹¹ to assess the extent to which P4P programmes have delivered on their theoretical promise to improve the quality of hospital care while simultaneously enhancing efficiency.

Considering the first case study, the Premier Hospital Quality Incentive Demonstration (PHQID) combines quality reporting with a conventional P4P programme (see Appendix Table A2). Evidence on its effectiveness is mixed. Comparing relatively small samples of four participating hospitals with a control group of six non-participants over the relatively short period 2002-2004, Grossbart (2006) found quality of care improved by a greater extent in the former group for all three conditions under consideration.¹² Studying the same three conditions in a larger sample over 2003-2005, using more robust analytical techniques, Lindenauer *et al.* (2007) concluded that PHQID hospitals achieved larger improvements in quality of care compared to those undertaking public reporting only. However, in a recent paper, Werner *et al.* (2011) found that initial performance improvements among 260 PHQID hospitals relative to non-

¹¹ Specifically, the Centers for Medicare and Medicaid Services (CMS) have initiated a number of P4P programmes over the last two decades (Cromwell *et al.*, 2011), although the associated payments account for a disproportionately small percentage of the overall CMS budget (OECD, 2010).

¹² The three conditions studied comprised acute myocardial infarction, heart failure and pneumonia.

participants were not sustained over the five-year study period between 2004 and 2008. The results from these three studies were based on process measures; the estimated empirical effects of PHQID participation on health outcomes are even less encouraging. Glickman *et al.* (2007) found no statistically significant difference in acute myocardial infarction (AMI) mortality between PHQID hospitals and those participating in a voluntary quality improvement initiative – a finding subsequently supported by Ryan (2009), not only for AMI but also for three other conditions.¹³ Limited evidence is currently available on other impacts of the PHQID: Ryan found that it had no statistically significant effect on patient costs for four conditions (Ryan, 2009), and concluded that there was weak evidence of patient selection (Ryan, 2010).¹⁴

The second case study – non-payment for poor performance – is the antithesis of the PHQID and other schemes that pay for quality (see Appendix Table A2). While it is too soon to evaluate its impact properly, the initiative has generated much discussion on its potential to produce cost savings and unintended consequences (Hoff and Soerensen, 2010). Regarding the former, estimates of the potential cost savings from not paying for preventable complications range from 0.001 per cent of hospital payments (McNair *et al.*, 2009) to 9 per cent of total inpatient cost (Fuller *et al.*, 2009) depending, to a large extent, on the number and type of conditions deemed preventable. Consequently, McNair *et al.* (2009) recommended that the impact of the initiative could be strengthened by incorporating additional conditions or expanding it to include readmissions (as proposed by Averill *et al.*, 2009). The potential for unintended consequences pertains to the extent to which the preventable complications are entirely within the control of the hospital. If they are not, unintended consequences and opportunity costs might arise if hospitals' efforts focus on minimising the incidence of such events to the detriment of other aspects of quality of care (Wald and Kramer, 2007; Pronovost *et al.*, 2008). For example, Inouye *et al.* (2009) argued that patient falls during hospitalisation are unlikely to be completely within the control of hospitals and, consequently, could encourage the use of physical restraints to reduce patient mobility, possibly adversely affecting patient outcomes.¹⁵ A further potential disadvantage of the initiative is that hospitals may be incentivised to select healthier patients and to avoid higher-risk cases (Gemmill, 2006; Rosenthal, 2007). Consequently, any cost savings could be offset by higher expenses due to increased screening and

¹³ In a systematic review, Mehrotra *et al.* (2009) deemed the studies by Grossbart (2006), Glickman *et al.* (2007) and Lindenauer *et al.* (2007) to be 'the most rigorous evaluations' of the impacts of hospital-based P4P then conducted, despite their obvious methodological shortcomings.

¹⁴ To date, only one known cost-effectiveness analysis of a hospital-based P4P initiative has been published. Although the study did not include a control group, the authors calculated that the initiative, operated by Blue Cross Blue Shield of Michigan, was cost effective (Galvin, 2006; Nahra *et al.*, 2006; Conrad, 2010).

¹⁵ Wald *et al.* (2007) and Saint *et al.* (2009) have discussed analogous implications for catheter-associated urinary tract infection, another complication covered by the initiative.

changed coding practice (Pronovost *et al.*, 2008; Wachter *et al.*, 2008; McNutt *et al.*, 2010).

These and other hospital sector P4P programmes are becoming increasingly popular internationally, despite the available empirical evidence on their effectiveness being, at best, limited and inconclusive. Public reporting schemes for hospitals operate in Germany and England, for instance, although there are national differences in the content of the quality reports and the role of financial incentives (Busse *et al.*, 2009; Department of Health, 2010a; Raleigh and Foot, 2010; Foot *et al.*, 2011; Or and Häkkinen, 2011; see Appendix Table A2). As with the PHQID, the Commissioning for Quality and Innovation (CQUIN) payment framework, introduced in England in 2009, provides financial rewards to hospitals for quality improvements; although unlike the PHQID, it operates within existing financial resources (Department of Health, 2008, 2010b; see Appendix Table A2). The concept of not reimbursing hospitals for emergency readmissions that occur within 30 days of the initial episode is expected to result in estimated cost savings of £490m in England, and a similar scheme is in operation in Germany (NHS Confederation, 2011; Or and Häkkinen, 2011). Formal evaluation of these and other initiatives will add to the evidence base on P4P, although the cross-country differences in how these programmes have been implemented could limit the ability to draw definitive conclusions on their effectiveness.

3.3 Integrated Care

While Sections 3.1 and 3.2 focused on P4P within primary care and the hospital sector, the application of financial incentives to reward performance across sectors of the health-care system is even less developed. Although not a P4P initiative *per se*, bundled or episode-based payments offer one potential mechanism to incentivise quality improvements within an integrated system (Davis, 2007).¹⁶ By paying a fixed price to all health-care providers involved in an episode of care, bundled payments should encourage increased efficiency, improved quality of care, and reduced risk of cost shifting between sectors and there is some empirical evidence to support this (Cromwell *et al.*, 1997; Hackbarth *et al.*, 2008; Miller, 2009; RAND, 2010; Sutherland, 2011).

Further benefits may arise where P4P elements are incorporated explicitly into bundled payments. For example, under Geisinger Health System's ProvenCare in the US, an incentive to reduce complications and readmissions was built into the calculation of the fixed payment rate, which covered coronary artery bypass

¹⁶ Conversely, there are plans to unbundle elements of care in England to allow Primary Care Trusts to commission specific services outside of the hospital (Department of Health, 2007, 2009).

surgery and any care in the subsequent 90-day period following discharge (Mechanic and Altman, 2009).¹⁷ In its first year, ProvenCare achieved reductions in readmissions (10 per cent), hospital charges (5 per cent) and length of stay (16 per cent) (Casale *et al.*, 2007; Mechanic and Altman, 2009). Extrapolating from available evidence, Hussey *et al.* (2009) estimated that 5.4 per cent of health expenditure in the US could be saved over the period 2010-2019 if bundled payments were applied to all chronic diseases and all payers. However, it is not clear whether the success of initiatives – such as ProvenCare, which operates within an integrated delivery network and a system of electronic health records – could be replicated at a national level given the fragmented nature of most health-care systems (Goldfield *et al.*, 2008; Paulus *et al.*, 2008; Hussey *et al.*, 2009; Miller, 2009).

Implementing bundled payments is not without challenges. Miller (2009) has argued that the transition to bundled payments may be easier for surgical, rather than medical, conditions where hospitals and surgeons are paid on the same basis (i.e., case-based payments). Conflict between providers is another potential problem, although this could be negated to some extent if an independent ‘financial integrator’ was responsible for allocating funds to providers (de Brantes *et al.*, 2009). There are concerns that bundled payments may reduce necessary (especially preventive) care, but increase unnecessary episodes, and encourage unbundling of services to increase income (Robinson, 2001; Crosson *et al.*, 2009; Miller, 2009).

3.4 Summary of the Evidence on P4P

The preceding sections highlight the wide variation in the structures of P4P programmes and the often inconclusive evidence on their effectiveness. Generating policy recommendations is difficult due to the limited number of rigorous evaluations of P4P. Three recent systematic reviews of P4P – two in primary care (Giuffrida *et al.*, 2009; Scott *et al.*, 2011) and one in the hospital sector (Mehrotra *et al.*, 2009) – deemed only a small number of studies to be of sufficient quality to draw definitive conclusions on P4P effectiveness. Limited and often poor quality evidence stems partly from technical challenges inherent in evaluating P4P schemes. Attributing performance improvements to P4P is difficult in the absence of pre-P4P baseline data. One of the main criticisms of the UK QOF was that the absence of baseline data and the apparent ease with which practices were able to hit targets raised questions about the extent to which the QOF incentive payments produced better quality care, improved recording of care (McDonald *et al.*, 2009), or merely rewarded what had already been

¹⁷ Other examples of bundled payments include the Prometheus Model (de Brantes *et al.*, 2009) and the Acute Care Episode Demonstration (Centers for Medicare and Medicaid Services, 2010a; Greenwald, 2011).

achieved (NHS Information Centre, 2007; Calvert *et al.*, 2009).¹⁸ P4P initiatives are often accompanied by other interventions (e.g., IT investment, enhanced practice support and education, and sometimes changes to eligibility requirements), making it difficult to isolate the effect of the scheme itself. This problem can be compounded by the duration of the study: the evaluation may fail to identify changes in outcomes if the study period is too short or may be subject to confounding if the study period is too long. Participation in such schemes is often voluntary meaning that selection effects are a concern (Lindenauer *et al.*, 2007; Scott *et al.*, 2011). Finally, there is the problem of generalisability; the context in which such schemes operate can be influential in explaining the results (McDonald *et al.*, 2009).

Notwithstanding these technical difficulties in evaluating P4P initiatives, the available evidence does not provide a clear answer to the question of whether P4P should be implemented. However, the research literature does suggest a number of limitations with existing P4P initiatives (e.g., Cromwell *et al.*, 2011). Obtaining valid, reliable and important performance indicators in health care is difficult and leads to P4P programmes that are focused on areas that can be measured easily, but are not necessarily highly correlated with health outcomes (Bhattacharyya *et al.*, 2009). The performance measurement approach can also be too prescriptive, interfering with provider autonomy and professional judgement (Cromwell *et al.*, 2011).

The scope for unintended consequences is a concern. P4P may encourage patient selection, misrepresentation of performance data, or decisions to practice in geographic areas with 'compliant' patient populations. This may reinforce/increase disparities between providers and areas (Buetow, 2008) although appropriate risk adjustment of payments can help (Cromwell *et al.*, 2011). In addition, there are concerns that P4P 'crowds out' intrinsic motivation and discourages innovation and elements of personal and holistic care not easily measured or rewarded financially (Buetow, 2008).

The lack of evidence on cost effectiveness coming from these studies is of particular concern in the context of limited resources. P4P programmes may impose large costs on funders (especially where new money is required) and on providers in the form of administrative costs. The business case for P4P may be particularly hard to make when the costs are immediate, but any financial gains are likely to accrue mostly in the future (as may arise for example with improved chronic disease management).

¹⁸ Some commentators have described the QOF not so much as a P4P system, but as a 'pay-for-reporting' system (Gillam and Siriwardena, 2011).

While most evaluations have reported only limited impact of P4P, it must be remembered that the size of the financial incentives is often quite small relative to overall remuneration (Cromwell *et al.*, 2011). However, one review suggests that incentives of about five per cent of total physician earnings are enough to induce behavioural change from physicians (Young *et al.*, 2005). It is also important to recognise the role of non-financial incentives, as well as the incentives facing patients, in enhancing or diluting the effects of financial incentives.

4. POLICY IMPLICATIONS AND LESSONS

4.1 General Lessons for the Future of P4P

Given the mixed experience and potential limitations with existing P4P programmes, a number of recommendations have been made for their future development. A central message is to proceed with caution, to learn from available experience and to undertake rigorous evaluation of pilot programmes (Propper and Wilson, 2003; Davis, 2007).

Cromwell *et al.* (2011) identify a set of requirements for what they term 'second generation' P4P initiatives. A central theme is the importance of integrated health care and the need for P4P programmes to support integration. This includes directing payments towards large provider organisations rather than individual physicians (to encourage team-based care) and making providers more accountable for reducing fragmentation in health care (e.g., requiring one provider organisation to take responsibility for the complete care of a patient, as envisaged with the development of accountable care organisations in the US (Iglehart, 2011)).

Other recommendations for second generation P4P programmes include the adoption of bundled payment methods (as discussed in Section 3.3), increases in the size of both financial risks and rewards, more ambitious quality improvement goals, use of electronic health record systems to implement patient-specific quality targets and involving patients as well as providers in the programmes (e.g., lower co-payments). In contrast to the QOF approach in the UK, the recommendation is to ensure that the performance payments in second generation P4P programmes are self-financing, particularly pertinent during an economic recession. Crucially, the recommendations also emphasise the need to acknowledge the limitations of P4P. Evidence-based guidelines are, and will continue to be, unavailable for many medical situations meaning that there will be limits on the size and scope of P4P programmes. P4P may be necessary, but not sufficient, for improving quality; other policy, IT, health-care delivery and

organisational factors must also be aligned towards the same goals (Cromwell *et al.*, 2011).

4.2 Lessons for Ireland

Although there is an obvious need for greater efficiency and quality in the Irish health-care system (Ruane, 2010), there are reasons why P4P initiatives are not recommended at this stage. First, many of the supportive factors are not in place, including integrated IT systems, adequate data reporting, particularly in primary and community care, and a unique health identifier. Progress on these factors is required regardless of the introduction of P4P in the Irish system.¹⁹

Second, applying P4P initiatives to existing provider payment mechanisms would add new complications to an already complex system. In primary care, GPs are currently paid on the basis of capitation (plus additional allowances and fees for special items of service) for public (i.e., medical/GP Visit card) patients, but on a FFS basis for private patients.²⁰ Any P4P initiative by the Government for GP care would apply only for the 35 per cent of the population covered by a medical/GP Visit card. In fact, the mechanism for paying GPs to care for medical card/GP Visit card holders already incorporates a mix of capitation and FFS (for special items of service). As such, it could be interpreted as a P4P initiative, except that the additional FFS payments are not directed at specific areas of performance, or subject to monitoring and adjustment in line with policy priorities.²¹

Financial incentives in the hospital sector are complex due to the treatment of private patients in public hospitals. As described by Brick *et al.* (2010), consultants in public acute hospitals are paid a salary for public patients and, where relevant, FFS for private patients. Under existing arrangements, public hospitals can levy

¹⁹ It is important to note that clinical protocols for 24 areas of care (e.g., diabetes, epilepsy, stroke) are currently being developed by the HSE Directorate for Clinical Strategy and Programmes.

²⁰ There are two broad 'patient types' in the system. Medical card holders are eligible for a range of primary, community and acute care services free of charge. Non-medical card holders are eligible for treatment in public hospitals (subject to co-payments) but are required to pay out-of-pocket for GP and other primary and community services. A relatively small group of people hold a GP Visit card, granting them access to free GP visits only. Full medical cards are granted on the basis of a means test with income as the primary criterion. The income thresholds for the GP Visit card are 50 per cent higher than the thresholds for the full medical card. In 2009, 35 per cent of the population held a medical card or a GP Visit card (Brick *et al.*, 2010).

²¹ The list of 18 special items of service reimbursed by the Primary Care Reimbursement System to GPs in respect of medical card holders has not changed in at least 10 years and includes: excisions, suturing of cuts and lacerations, draining of hydroceles, treatment and plugging of dental and nasal haemorrhages, recognised vein treatment, electrocardiography tests and interpretation, instruction in fitting of a diaphragm, removal of adherent foreign bodies from the conjunctival surface of the eye, removal of lodged/impacted foreign bodies from ear, nose and throat, nebuliser treatment in case of acute asthmatic attack, bladder catheterisation, attendance at case conferences, advice and fitting of a diaphragm, counselling and fitting of an intra uterine contraceptive device, pneumococcal vaccination, influenza vaccination, pneumococcal/influenza vaccination, hepatitis B vaccination (PCRS, 2009). Since 2009, the payments for most of these items of service have been reduced (Government of Ireland, 2009, 2010, 2011).

maintenance charges on private patients who occupy a private-designated bed, in addition to the statutory inpatient bed charge. There is evidence that private patients in acute public hospitals are publicly subsidised and for many treatments, private health insurers have an incentive for private patients to be treated in public, rather than private, hospitals. In this context, acute hospital care comes under criticism for being a two-tier system and for crowding out public patients (Wren, 2003; Ruane, 2010). Introducing a P4P initiative in this context without first addressing the underlying perverse incentives that potentially favour the treatment of private patients over their public counterparts in public hospitals would be unlikely to succeed as intended in influencing patient care and patient outcomes.²²

Finally, to follow the recommendations for second generation P4P programmes, the core theme of health-care integration needs first to be addressed in the Irish case before considering P4P initiatives. As outlined by Ruane (2010), demand and supply factors contribute to the lack of integration in Irish health care. On the demand side, the requirement by the majority of the population to pay the full cost of primary care at point of use may interfere with patients' decisions on seeking care at the most appropriate time and at the most appropriate level in the system. On the supply side, there is as yet limited capacity to oversee and monitor performance and delivery of integrated care. Introducing P4P without first dealing with these factors is unlikely to succeed in taking forward the integration agenda.

Notwithstanding the complex structure of financial incentives in the Irish health-care system, the above examples illustrate that the potential for using existing payment mechanisms within the Government's control to encourage enhanced quality and value for money has yet to be fully explored. The commitments in the recent Programme for Government to renegotiate the GP contract and to reform the hospital funding system provide an important opportunity in this regard. For example, the pilot initiative of prospective funding for selected elective orthopaedic procedures in a subset of public hospitals has already yielded initial efficiency improvements (increased activity, shorter hospital stays and higher rates of day of surgery admission) (Donovan, 2011).²³ There is also potential for further benefits if the prospective tariff is utilised as an instrument to promote the delivery of efficient, high-quality care, following experience in other countries. In England, for instance, where tariffs were explicitly set to incentivise

²² In Budget 2012, the Government announced a further increase in the charge for private patients in public hospitals (in line with the methodology recommended by the DoHC (2010b)) and its intention to initiate legislation to abolish the existing system of designated private and public beds and to allow public hospitals to levy charges on all private patients (Department of Public Expenditure and Reform, 2011).

²³ These results relate only to those procedures under study. In evaluating the full impact of the pilot project, it is important to also consider any spillover effects on other areas of hospital activity.

a shift away from inpatient treatment, there was a statistically significant increase in the proportion of day case activity (Farrar *et al.*, 2009). As highlighted by the shortage of rigorous studies of P4P schemes, appropriate *ex post* evaluation of the Government's new initiatives will be crucial to assess their performance in achieving the stated health policy objectives.

5. CONCLUSION

The current recession dictates that large decreases in public expenditure are required. Already, public health expenditure has fallen substantially since its peak in 2009. As the second largest component of public expenditure, health care is particularly vulnerable to the effects of the further cuts in expenditure that are required over the period 2012-2014. In this context of diminishing financial resources, there is increasing emphasis on maximising the value of expenditure by improving efficient delivery of high-quality health-care services.

As a labour intensive sector, initiatives that focus on provider behaviour offer a clear avenue for improving efficiency. P4P, in which payments are tied to performance, is becoming increasingly common in international health-care systems, and the recent Programme for Government contains a number of commitments that relate to how providers in the system are paid. This reflects the growing realisation that the structure of financial incentives is crucial for improving efficiency and equity in health care. The Irish health system is characterised by a complex set of financial incentives which have important implications for efficiency and equity. In light of the need for measures to enhance value for money in Irish health care, and in the context of the current financial incentive structures in the system, this paper examined international evidence on P4P and assessed its potential role as a policy tool in Ireland.

Overall, the available literature indicates that there is insufficient evidence of significant positive effects of P4P initiatives in health care. Given the emphasis on evidence-based policy in health systems, it is perhaps surprising that so many countries are now considering, or have already introduced, P4P programmes. Of course, a lack of conclusive empirical evidence does not necessarily imply that P4P should not be adopted (or at least piloted), particularly given the weaknesses of the P4P evaluations already highlighted. It follows that Ireland can benefit from 'second mover' advantage if the time then comes to learn from future P4P experience (particularly from the 'second generation' of initiatives) in other countries. Experience elsewhere highlights the importance of programme design and on-going data collection in facilitating appropriate *ex-post* evaluation of any new initiatives.

If nothing else, we must acknowledge the role of P4P in '*shifting attention towards the outcomes of medical care and for creating awareness for the return-on-investment in medicine ('do we get what we pay for?')*' (Janus, 2011; 34). In conclusion, as discussed above, there are legitimate arguments as to why Ireland should not consider introducing P4P mechanisms at least until the many complexities in provider reimbursement, public/private interaction, and patient access to the system are resolved.

APPENDIX TABLES

Table A1 P4P in Primary Care

| Name of scheme | | Quality and Outcomes Framework (2004) ^a |
|------------------------|---------------------------|---|
| Country | | UK |
| Participation? | | Voluntary |
| Who to pay? | | GP practices |
| Measuring performance | What domains? | Clinical, organisation, patient experience, additional services |
| | What indicators? | 134 indicators across four domains up to a maximum of 1,000 points ^b : 1. Clinical (86 indicators; 697 points) - Example: the percentage of patients with newly diagnosed angina (diagnosed after 1 April 2003) who are referred for exercise testing and/or specialist assessment (4 points) 2. Organisation (36 indicators; 67.5 points) - Example: the practice has a system for transferring and acting on information about patients seen by other doctors out of hours (1 point) 3. Patient experience (3 indicators; 91.5 points) - Example: the length of routine booked appointments with the doctors in the practice is not less than 10 minutes. For practices with only an open surgery system, the average face to face time spent by the GP with the patient is at least 8 minutes (33 points) 4. Additional services (9 indicators; 44 points) - Example: 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 (4 points) |
| How & how much to pay? | Funding source/magnitude? | Existing payments and new money |
| | Performance benchmark? | Target |
| | Type of incentive? | Additional payments |
| | Non-financial incentives | Detailed achievement reports for individual GP practices may be viewed online (www.qof.ic.nhs.uk/index.asp) |

Notes: a Year of introduction.

b Reflects the structure of the QOF in 2010. The list of indicators is reviewed annually by the National Institute for Health and Clinical Excellence. For 2011/2012, the value of a QOF point has increased from £127.29 to £130.51 (British Medical Association, 2011).

Source: NHS Employers Agency, 2009

Table A1 P4P in Primary Care (contd.)

| | | |
|-----------------------------------|---|---|
| Name of scheme | Practice/Service Incentives Program^a (1999)^b | |
| Country | Australia | |
| Participation? | Voluntary | |
| Who to pay? | GP practices | |
| Measuring performance | What domains? | eHealth, after-hours, teaching, quality prescribing, GP procedural, practice nurse, asthma, diabetes, cervical screening, domestic violence, indigenous health, aged care |
| | What indicators? | For some domains (eHealth, practice nurse, quality prescribing, teaching, domestic violence), payments are based on achievement on one indicator . For example, for the eHealth indicator, practices are eligible to earn payments of AU\$6.50 per SWPE ^c per year and payments are capped at AU\$12,500. To earn these payments, practices must: have a secure messaging capability; have (or have applied for) a location/site Public Key Infrastructure (PKI) certificate for the practice; provide practice GPs with access to a range of key electronic clinical resources. For other domains (after-hours, aged care, GP procedural), there are two or more tiers of payment representing higher levels of achievement . For example, for the after-hours domain, practices are eligible to receive AU\$2.00 per SWPE per year per tier. There are three tiers of after-hours payments based on the level of after-hours activity provided by the practice. For the remaining domains (asthma, diabetes, cervical screening, indigenous health), there is a separate sign-on payment in addition to outcome payments and a service incentive payment (SIP) for completing an annual cycle of care . For example, for the cervical screening domain, practices are eligible to receive a sign-on payment of AU\$0.25 per SWPE per year, an outcomes payment of AU\$3.00 per SWPE per year and a SIP of AU\$35.00 per patient per year for each cervical smear taken on an under-screened woman aged between 20 and 69 years. |
| How & how much to pay? | Funding source/magnitude? | Existing payments and new money ^d |
| | Performance benchmark? | Target |
| | Type of incentive? | Additional payments |
| | Non-financial incentives | Necessary accreditation with Royal Australia College of General Practitioners (RACGP) <i>Standards for General Practices</i> |

Notes: a To be eligible to participate in the PIP, a practice must be accredited or registered for accreditation, against the Royal Australia College of General Practitioners (RACGP) *Standards for General Practices*. Practices must achieve full accreditation within 12 months of joining the PIP and maintain full accreditation thereafter.

b Year of introduction.

c Standardised Whole Patient Equivalent (SWPE) is used to measure practice size and includes a weighting factor for the age and gender of patients. As a guide, the average full-time GP has a SWPE value of around 1,000 SWPEs annually (Medicare Australia, 2011).

d The cost of the PIP is substantial, although it has been declining as a share of expenditure on primary care, from 8 percent in 2002-03 to 5.5 percent in 2008-09 (Australian National Audit Office, 2010).

Sources: Australian National Audit Office, 2010; www.medicareaustralia.gov.au/provider/incentives/pip/forms-guides.jsp (last accessed 10 October 2011)

Table A1 P4P in Primary Care (contd.)

| | | |
|-----------------------------------|--|---|
| Name of scheme | Physician Group Practice Demonstration (2005)^a | |
| Country | US (Medicare) | |
| Participation? | 10 large physician groups selected by CMS | |
| Who to pay? | Physician groups | |
| Measuring performance | What domains? | Overall expenditure, diabetes, heart failure, coronary artery disease, hypertension, preventive care ^b |
| | What indicators? | <p>Performance payments were divided between achievement on expenditure savings and performance on quality. As quality measures were added in performance years two and three, the quality portion increased so that in the third, fourth and fifth performance years 50 per cent of any performance payment was for expenditure savings achievement and 50 per cent was for achieving national benchmarks or improvement targets on quality.</p> <p>For overall expenditure, total Medicare per capita spending was calculated for assigned beneficiaries and compared to a base year period to calculate an assigned beneficiary growth rate (and was appropriately risk-adjusted). Physician group practices whose Medicare spending growth rate for assigned beneficiaries was more than two percentage points lower than their comparison population shared up to 80 per cent of Medicare savings. The comparison population was derived from each physician group's local market area.</p> <p>For the other quality domains, each group was eligible to earn quality performance payments based on achievement across 32 quality measures. National benchmarks and group-specific quality improvement targets were used to define indicators.</p> |
| How & how much to pay? | Funding source/magnitude? | Savings and new money |
| | Performance benchmark? | Targets (quality indicators) and relative performance (expenditure) |
| | Type of incentive? | Shared savings and additional payments |
| | Non-financial incentives | Public reporting - the PGP terms and conditions include that CMS may publicly disclose site-specific annual quality and financial performance results. |

Notes: a Year of introduction.

b In the PGP Demonstration Transition program (beginning in 2011), a further three domains have been added (frail elderly, transitions of care/care co-ordination and use of core clinical quality measures).

Sources: Centers for Medicare and Medicaid Services, 2011; Wilensky, 2011

Table A2 P4P in the Hospital Sector

| | | |
|-----------------------------------|--|---|
| Name of scheme | Premier Hospital Quality Incentive Demonstration (PHQID) (2003)^a | |
| Country | US (Medicare) | |
| Participation? | Voluntary | |
| Who to pay? | Hospitals | |
| Measuring performance | What domains? | Outcomes, process measures |
| | What indicators? | Acute myocardial infarction (e.g., aspirin at arrival ^b) Isolated coronary artery bypass graft (e.g., coronary artery bypass graft using internal mammary artery ^b) Heart failure (e.g., evaluation of left ventricular systolic function ^b) Pneumonia (e.g., appropriate initial antibiotic selection ^b ; influenza vaccination ^b) Also collected for the above four conditions: inpatient mortality rate; 30 day mortality rate; readmission within 30 days rate ^c Hip and knee replacement (e.g., postoperative haemorrhage or haematoma ^a ; readmission within 30 days to acute inpatient rate ^b) |
| How & how much to pay? | Funding source/magnitude? | New money/generated savings |
| | Performance benchmark? | First phase (October 2003-September 2006): Hospitals in the top (second) decile receive a bonus of 2 per cent (1 per cent) of the DRG-based prospective payment for Medicare patients in the measured condition. Hospitals that by the end of the third year of the programme had failed to exceed the performance of hospitals in the lowest two deciles in the first year of the programme incur penalties ranging between 1 and 2 per cent of Medicare payments. Second phase (October 2006-September 2009): <i>Attainment award:</i> Hospitals that achieve or exceed median level performance, as measured in Year 2 for each clinical area, will receive 40 per cent of the total available quality incentive payment. <i>Top performer award:</i> Hospitals in the top performer group, defined as the top 20 per cent of hospitals in each clinical area, will receive an additional incentive payment. <i>Improvement award:</i> Hospitals that achieve attainment and are among the top 20 per cent of hospitals with the largest quality improvements will receive an additional payment. <i>Threshold penalty:</i> Hospitals that do not score above the ninth decile threshold (Year 2) in any clinical area will receive a reduction of 1 per cent of their Medicare payment in that clinical area for Year 4; hospitals that do not score above the 10 th decile threshold in any clinical areas (Year 2) will receive a 2 per cent reduction of their Medicare payment in that clinical area for Year 4. The same will occur in Years 5 and 6. |
| | Type of incentive? | Bonus/penalty |
| | Non-financial incentives | Public reporting |

Notes: a Year of introduction.

b Measures used in the first and second phases.

c Measures that will be tested under the second phase, but not included in the calculation of the composite quality score for the incentive payment.

Source: Centers for Medicare and Medicaid Services, 2008a, b, 2010b, c

Table A2 P4P in the Hospital Sector (contd.)

| | | |
|-----------------------------------|---|--|
| Name of scheme | Reporting Hospital Quality Data for Annual Payment Update (2003)^a | |
| Country | US (Medicare) | |
| Participation? | Mandatory | |
| Who to pay? | Hospitals | |
| Measuring performance | What domains? | Outcomes, process measures, patient experience |
| | What indicators? | 42 indicators in the following areas: 1. Acute myocardial infarction (e.g., aspirin at arrival; timing of receipt of primary percutaneous coronary intervention) 2. Heart failure (e.g., left ventricular function assessment; discharge instructions) 3. Pneumonia (e.g., timing of receipt of initial antibiotic following hospital arrival) 4. Surgical care improvement project (e.g., venous thromboembolism prophylaxis ordered for surgery patients) 5. Mortality (30-day mortality in acute myocardial infarction, heart failure, pneumonia) 6. Patients' experience of care 7. Readmission measure (heart failure 30-day risk standardised readmission measure for Medicare patients) 8. Nursing sensitive measure (failure to rescue for Medicare patients) 9. AHRQ patient safety indicator measures (e.g., death among surgical patients with treatable serious complications) 10. AHRQ inpatient quality indicator measures (e.g., hip fracture mortality rate) 11. Cardiac surgery measure (participation in a systematic database for cardiac surgery) |
| How & how much to pay? | Funding source/magnitude? | Existing payments |
| | Performance benchmark? | NA – financial incentive to report quality data. Failure to report results in a 2 percentage point reduction in the annual market basket update (the measure of inflation in costs of goods and services used by hospitals in treating Medicare patients). |
| | Type of incentive? | Penalty |
| | Non-financial incentives | Public reporting |

Notes: NA, not applicable. AHRQ, Agency for Healthcare Research and Quality.
a Introduced under the Medicare Prescription Drug, Improvement, and Modernization Act of 2003.
Source: Centers for Medicare and Medicaid Services, 2008c

Table A2 P4P in the Hospital Sector (contd.)

| | | |
|-----------------------------------|--|--|
| Name of scheme | Hospital quality reports (2001)^a | |
| Country | Germany | |
| Participation? | Mandatory | |
| Who to pay? | Hospitals | |
| Measuring performance | What domains? | Outcomes, process measures, patient experience |
| | What indicators? | In 2007, there were 26 modules covering 194 indicators, which were predominantly procedure-based. Examples of indicators include appropriate indication for percutaneous coronary interventions, reinterventions after cholecystectomy and antibiotic prophylaxis in hysterectomy. |
| How & how much to pay? | Funding source/magnitude? | Existing payments |
| | Performance benchmark? | NA – financial incentive to report quality data. Hospitals receive €0.58 per documented case If reported cases are less than 80 per cent of reimbursed cases, then payment is cut by €150 per case for the unreported cases €6,000 penalty for late submission |
| | Type of incentive? | Penalty |
| | Non-financial incentives | Public reporting |

Notes: NA, not applicable.

a Year of introduction.

Sources: Busse *et al.*, 2009; Busse, 2011; Reiter *et al.*, 2011

Table A2 P4P in the Hospital Sector (contd.)

| | | |
|-----------------------------------|---|--|
| Name of scheme | Quality accounts (2009/2010)^a | |
| Country | England | |
| Participation? | Mandatory | |
| Who to pay? | Hospitals ^b | |
| Measuring performance | What domains? | Quality accounts are required to contain a statement on quality from the organisation's Chief Executive; priorities for improvement; statements relating to the quality of services provided (common across all providers and include volume and range of services provided and participation in the Commissioning for Quality and Innovation framework, national clinical audits, national confidential enquiries, and clinical research); and a review of quality performance. |
| | What indicators? | Indicators are largely determined locally. The most common priorities for 2011/12 related to the three domains of quality on which quality accounts are intended to concentrate – namely, patient safety, clinical effectiveness and patient experience. Within the domain of patient safety, reducing the number of hospital acquired infections was the most common priority, while hospital mortality rates and improving patient experience were the main focus in the clinical effectiveness and patient experience domains respectively. |
| How & how much to pay? | Funding source/magnitude? | NA |
| | Performance benchmark? | NA |
| | Type of incentive? | NA |
| | Non-financial incentives | Public reporting |

Notes: NA, not applicable.

a The deadline for producing the first set of quality accounts was June 2010.

b There are plans to extend this to primary care and continuing care providers.

Source: Department of Health, 2010a; MHP Health Mandate, 2010; Raleigh and Foot, 2010; Foot *et al.*, 2011

Table A2 P4P in the Hospital Sector (contd.)

| Commissioning for Quality and Innovation (CQUIN) Framework (2009)^a | | |
|--|---------------------------|--|
| Name of scheme | England | |
| Country | Mandatory | |
| Participation? | Hospitals | |
| Who to pay? | What domains? | Safety, effectiveness, patient experience, innovation. May include patient reported outcome measures. |
| | What indicators? | Local quality improvement goals The 2011/12 CQUIN schemes had to include two national goals: 1. Reduce avoidable death, disability and chronic ill health from venous thromboembolism 2. Improve responsiveness to personal needs of patients |
| Measuring performance | Funding source/magnitude? | Existing payments |
| | Performance benchmark? | In 2009/10, 0.5 per cent of providers' contract value was conditional on achieving goals agreed under the locally-agreed CQUIN schemes. This percentage increased to 1.5 per cent in 2010/11. |
| | Type of incentive? | Withhold |
| | Non-financial incentives | Public reporting |

Note: a Year of introduction.

Source: Department of Health, 2008, 2010b, c

Table A2 P4P in the Hospital Sector (contd.)

| | | |
|-----------------------------------|---|---|
| Name of scheme | Non-payment for preventable complications (2008)^a | |
| Country | US (Medicare) | |
| Participation? | Mandatory | |
| Who to pay? | Hospitals | |
| Measuring performance | What domains? | Outcomes |
| | What indicators? | Ten categories of hospital-acquired conditions: 1. Foreign object retained after surgery 2. Air embolism 3. Blood incompatibility 4. Stage III and IV pressure ulcers 5. Falls and trauma: - Fractures, dislocations, intracranial injuries, crushing injuries, burns, electric shock 6. Manifestations of poor glycemic control 7. Catheter-associated urinary tract infection 8. Vascular catheter-associated infection 9. Surgical site infection following: - Coronary artery bypass graft – mediastinitis - Bariatric surgery (laparoscopic gastric bypass, gastroenterostomy, laparoscopic gastric restrictive surgery) - Orthopaedic procedures (spine, neck, shoulder, elbow) 10. Deep vein thrombosis/pulmonary embolism: - Total knee replacement - Hip replacement |
| How & how much to pay? | Funding source/magnitude? | Existing payments |
| | Performance benchmark? | NA |
| | Type of incentive? | Withhold/penalty |
| | Non-financial incentives | – |

Notes: NA, not applicable.

a Applies to discharges on or after 01 October 2008.

Source: Centers for Medicare and Medicaid Services, 2008d

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