

POLICY PAPER

Conflicting Financial Incentives in the Irish Health-Care System

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Abstract: In health care, there is extensive empirical evidence that the behaviour of both providers and users is affected by the financial incentives that they face. In this paper, we adopt a system-wide perspective and develop a conceptual framework to examine how current financial incentives in Irish health care conflict along four dimensions: provider versus user, user across type of provider, provider versus provider, and provider across type of user. We highlight areas within each of these four dimensions where current financial incentive structures are incompatible with existing policy priorities. The analysis in the paper also provides a framework to assess the effects of proposed policy changes on financial incentives within the health-care system using a joint analytic approach.

I INTRODUCTION

In health care, as in many other sectors, financial incentives influence behaviour. There is extensive empirical evidence that the behaviour of both providers and users is affected by the financial incentives that they face, i.e., principally by the way they are paid (providers) and how they pay for care (users). With increasing incidence of chronic diseases and the need for a more integrated health-care system, ensuring that financial incentives generate behaviour that is consistent with an integrated health-care system is crucial.

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Financial incentives that are aligned across the various actors and levels of care in the health-care system can also ensure alignment with health policy priorities such as efficiency, quality, access, etc.¹ In practice, however, financial incentives may generate behaviour that is incompatible with such objectives (e.g., discouraging the appropriate use of general practitioner (GP) services as the first port of call for health care).

Financial incentives in Irish health care are further complicated by the role of private health care in the system. While private sources account for a relatively small proportion of total health financing in Ireland, 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. The extent to which provider incentives conflict across patient types, particularly in primary care, is a feature of Irish health care that is unusual internationally.

The key role of financial incentives in Irish health care has been highlighted recently by the work of the Expert Group on Resource Allocation and Financing in the Health Sector (Ruane, 2010), as well as by Smith (2010) and Brick *et al.* (2010). The current Programme for Government contains a number of commitments of relevance to the issue of financial incentives in health care.² In this context, it is timely to examine financial incentives in the Irish health-care system in greater detail. In addition, existing analyses of financial incentives in Irish health care have examined the incentives facing providers and users in isolation; the analysis in this paper extends previous research to consider financial incentives in Irish health care using a joint analytic approach. In this paper, we outline a framework which describes the various ways in which financial incentives in a health-care system conflict with undesirable consequences.³ We apply the framework to the Irish context and draw out implications for policy. Given the major changes to Irish health-care structures and incentives envisaged in the current Programme for Government, we discuss the implications of our analysis for these proposals. Of course, financial incentives are not the only influences on behaviour; other factors such as use of information technology, governance structures, clinical protocols, ethics are all important in explaining the behaviour of the various

¹ See Ruane (2010) for a discussion of the core guiding principles governing Irish health-care policy.

² These commitments have been translated into high-level aims and objectives for the Irish health-care system in the Department of Health's Statement of Strategy (Department of Health, 2012).

³ In some cases, we may want financial incentives to conflict (see Section V for further discussion).

actors in a health-care system. However, in this paper, we concentrate primarily on the role of financial incentives.

Section II provides a brief description of the current Irish health-care system. Section III outlines the theory and empirical evidence on financial incentives in health care. Section IV presents our conceptual framework and considers four main conflicts identified in Irish health-care financial incentives. Section V summarises the main issues and policy implications. Section VI concludes.

II THE IRISH HEALTH-CARE SYSTEM

2.1 *Introduction*

This section outlines the key features of the current Irish health-care system. It is important to note that many of the complexities and structures in the current system evolved from a long history of incremental policy decisions, influenced by economic and non-economic factors as well as by specific institutions (e.g., Catholic hierarchy, medical professionals). The numerous influences on policy decisions are discussed comprehensively in the literature (for example, see Barrington, 1987; Wren, 2003). As detailed in Section V, the current Programme for Government contains commitments to radically change the structure and financing of Irish health care, and many of these proposals have implications for financial incentives in the system.

2.2 *Governance and Financing*

The Irish health-care system is governed at the policy level by the Department of Health while the Health Service Executive (HSE) manages the daily operation of the service. The system is financed by a mix of public and private expenditure. 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. Private health expenditure includes direct out-of-pocket payments by households (10–15 per cent of the total) and private health insurance (PHI, 8–9 per cent) (Brick *et al.*, 2010). Out-of-pocket payments include spending on GP and other professionals' fees (e.g., dentists, opticians), medicines, other medical equipment and services, and hospital charges. The extent to which out-of-pocket payments are made by individuals depends on their eligibility for publicly subsidised health care, outlined below. The majority of health insurance cover is for hospital care (in both public and private hospitals) although a growing number of PHI 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 copayments (Brick *et al.*, 2010).

2.3 Entitlement/Eligibility⁴

There are currently two main categories of eligibility for public health services:

- 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).

In Category I, individuals are issued with a medical card (referred to here as the “full medical card” for clarity). The full medical card grants the recipient and dependants free access to public inpatient and outpatient hospital services, GP and pharmaceutical services,⁵ dental, ophthalmic, and aural services, medical appliances, maternity and infant care services and a maternity cash grant on the birth of a child. Eligibility for a full medical card is granted on the basis of a means test with income as the primary criterion.^{6,7} The HSE also has the discretion to issue full medical cards on the basis of undue financial hardship due to ill health. 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 services. 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. Thus, GP Visit cardholders are included in Category I in terms of access to publicly funded GP care, but for all other care, GP Visit cardholders have the same levels of entitlement as individuals in Category II.

Individuals in Category II, excluding GP Visit cardholders, 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

⁴ 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 cardholders.

⁵ Prescription items are subject to a 50 cent co-payment, up to a maximum of €10 per family per month.

⁶ See Brick *et al.* (2010) for a description of the means testing process (e.g., the weekly income limits).

⁷ 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.

charge (for a specific number of visits). Category II individuals, plus GP Visit cardholders, are liable for statutory inpatient and outpatient charges for public care in public hospitals although exemptions apply.⁸ Individuals in this category, plus GP Visit cardholders, can avail of a range of public assistance schemes including the Drugs Payment (DP) Scheme which reimburses prescription costs above a specified monthly threshold (€132 per month from January 2012). 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 PHI.

Many people in Category II, and a small proportion of those in Category I, purchase supplementary PHI. Thus, the population can be categorised into a number of entitlement groups depending on whether they hold a medical card, with or without PHI (see also Nolan and Smith, 2012). In 2009, 35 per cent of the population held a full/GP Visit medical card (with or without PHI);⁹ an estimated 46 per cent of the population held PHI only; and 19 per cent of the population were non-covered (Brick *et al.*, 2010). Based on descriptive data, the entitlement groups may be broadly ranked in terms of socio economic status from the medical card (lowest), to the non-covered, to the privately insured (highest), but overlaps in various measures of deprivation and socio-economic status suggest that these do not describe mutually exclusive socio-economic categories (Smith and Normand, 2009).

2.4 Health-care Delivery

Primary care is delivered by private GPs who act as gatekeepers for hospital treatment, providing letters of referral to hospital care for their patients (Nolan and Nolan, 2007). The majority of GPs hold a contract with the government to provide primary care services to medical cardholders (full and GP Visit) and for other publicly subsidised primary care services (e.g., child vaccinations) (O'Dowd *et al.*, 2006). GPs are paid on a capitation basis for full and GP Visit cardholders and receive a further registration payment for each new GP Visit cardholder. GPs also receive fees for “special items of service” administered to medical cardholders,¹⁰ as well as various practice support payments and other allowances (Brick *et al.*, 2010). Primary, continuing and community care is also provided by a range of other health professionals including community-based pharmacists (private practitioners),

⁸ 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 ED, except where a referral letter is provided (other exemptions apply) (Brick *et al.*, 2010).

⁹ An estimated 5 per cent of the population had dual cover from a medical card (of either type) and PHI (Brick *et al.*, 2010).

¹⁰ We use the generic term “medical cardholders” to refer to full and GP Visit cardholders.

public health nurses, health-care assistants, home helps, midwives, occupational therapists and physiotherapists, etc. There are a number of public and private facilities that provide non-acute long-term health care. Acute health-care services are delivered in public and private hospitals. There are over 50 acute public hospitals and approximately 20 purely private hospitals (McDaid *et al.*, 2009). Private hospitals are independent and receive no direct state grant funding. While the private hospitals operate in parallel to the public hospitals there are some services that are not available in the private sector (e.g., complex treatments such as liver transplants).

One important feature of the Irish health-care delivery system is the interaction between the public and private systems. In both primary and 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 self-employed, although most have both public (full/GP Visit medical card) and private patients. There are separate public and private hospitals, but within public hospitals consultants are permitted to treat patients on a private basis, depending on the type of contract that they hold. Consultants with a Type A contract are paid on the basis of a salary only and are not permitted to engage in supplementary private practice. Consultants with a Type B or B* contract are paid on the basis of a salary for treatment of public patients and are permitted to earn fee-for-service payments for the treatment of private patients.

III THEORETICAL BACKGROUND AND EMPIRICAL EVIDENCE

3.1 *Methods of Provider Payment*

3.1.1 Theory

In recognition of the importance of the question of how to pay health-care providers, there is a vast literature on the theoretical impacts of payment mechanisms on providers' financial incentives and behaviour (see Brick *et al.*, 2010). The purpose of this section is to synthesise this extensive literature, focusing on the theoretical predictions for the payment mechanisms that are most directly relevant in the Irish health-care system and to consider their potential to meet key system-level policy priorities of efficiency, quality and access¹¹ (as summarised in Table 1).¹²

¹¹ In this context, access relates to the ability to access the service when necessary and does not distinguish between access to different types of services (e.g., preventive versus curative services) or by different types of patients (equity of access).

¹² It is important to note that the payment mechanisms discussed in this section are stylised and may differ from those implemented in practice.

Table 1: *Overview of Theoretical Impacts of Provider Reimbursement Mechanisms on Selected Priorities within the Health-Care System*

	Type of Provider	Access ^a	Quality	Efficiency Productivity ^b	Cost Containment	Financial Risk Burden
Budget	Individual (e.g., GP)/ Institutional (e.g., hospital)	–	+/-	–	+	Provider ^c
Capitation	Individual/ Institutional	+/-	+/-	–	+	Provider
Salary	Individual	–	+/-	–	+	Provider
Casemix funding	Individual/ Institutional	+	+/-	+	–	Provider/ Purchaser ^d
Fee-for-service	Individual/ Institutional	+	+/-	+	–	Purchaser ^d

Notes: +, positive incentive; –, negative incentive; +/-, uncertain.

^a Relates to the ability to access the service when necessary and does not distinguish between access to different types of services (e.g., preventive versus curative services) or by different types of patients (equity of access).

^b Defined as the volume of activity or services provided once patients have accessed the service.

^c Assuming that budget constraints are binding.

^d Refers to both third party payers (e.g., state, insurance companies) as well as individual health-care users.

Source: Adapted from Brick *et al.* (2010).

Under a budgetary framework, providers receive a lump sum payment determined *ex ante*, conditional on an agreed level of service. To the extent that the budget constraint is credibly enforced (and there is no *ex post* adjustment), providers are not remunerated for undertaking additional activity and bear the entire financial risk of cost over-runs (Langenbrunner *et al.*, 2005). Budgets are generally considered to be effective in containing overall costs and improving efficiency, although this may be achieved at the expense of quality of patient care, and potentially access (Aas, 1995; WHO, 2000; Kutzin, 2001; Jegers *et al.*, 2002; Langenbrunner *et al.*, 2005).

Capitated and salaried payments are similar to budgets in that payment is independent of the level and type of service provided. Under capitation, the provider receives a fee for each registered individual, which is determined in advance and adjusted for individual characteristics considered to be drivers of

health-care utilisation. Thus, providers face incentives to attract, compete for, and retain potential patients (Saltman and Figueras, 1997). However, once registered, there is a strong incentive to minimise costs by promoting preventive health care and delivering services using less expensive staff (Holden and Madore, 2002). Depending on the adequacy of the risk adjustment, this reimbursement system can also encourage 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 system (WHO, 2000; Kutzin, 2001; Scott, 2001; Jegers *et al.*, 2002; Langenbrunner and Wiley, 2002). Cost containment and patient selection are also common to salaried payments (Jegers *et al.*, 2002; Gosden *et al.*, 2006). However, the impact of salaries on preventive care depends on the trade-off between the additional work involved in providing such care now and the future reward in terms of potential cost savings and reduced workload.

In contrast to budgets, capitated payments and salaries, casemix-based funding and fee-for-service (FFS) are both forms of activity-based funding where payment is explicitly linked to the level and type of care provided. Therefore, providers face a strong incentive to increase activity, which may put upward pressure on aggregate health-care expenditure in the absence of external limits on activity and/or expenditure. If reimbursement rates are fixed in advance, activity-based funding promotes minimisation of unit costs, which may improve efficiency. However, this benefit may be offset by other perverse incentives, such as creaming low-cost patients, dumping high-cost patients, or skimping on quality (Aas, 1995; Newhouse, 1996; Ellis, 1998).

Thus, there are shortcomings with each of the reimbursement mechanisms considered (Newhouse, 1996). Consequently, economic theory suggests that a mixture of reimbursement systems will be required to minimise any adverse effects of individual methods and to meet all desired health policy priorities (see, for example, Ellis and McGuire, 1996).

3.1.2 Evidence

While there is some debate over the relative importance of provider payment in influencing behaviour (see, for example, Robinson, 2001), there is extensive empirical evidence that financial incentives generated by provider payment methods influence behaviour. One of the key challenges in empirical research on the effect of provider payment is obtaining data on provider behaviour; often, provider behaviour is inferred by observing changes in the utilisation of services on the part of patients. However, this assumes that providers respond to financial incentives purely in terms of the frequency of treatment (and not in terms of other aspects of care that are not easily measured such as the quality of treatment). In addition, strong assumptions regarding patient behaviour are required.

Notwithstanding this limitation, an extensive empirical literature has analysed the links between method of provider payment and output in both primary care and acute hospital settings. A comprehensive literature review of primary care payment methods by Gosden *et al.* (1999) concludes that salary is associated with a lower level of service delivery (e.g., fewer visits, diagnostic tests and referrals) in comparison with FFS and capitation, and fewer procedures per patient, longer consultations and more preventive care compared with FFS alone. Reviews by Chaix-Couturier *et al.* (2000) and Scott *et al.* (2011) found similar results. In terms of acute hospital care, Hickson *et al.* (1987) examined the influence of salary compared to FFS payment on the behaviour of US paediatricians; they found that while patients of FFS doctors missed fewer recommended visits than patients of salaried doctors, they also made more visits in excess of recommended guidelines. Shafrin (2010) found that switching specialist payment from capitation to FFS in the US increased outpatient surgery rates significantly. Results from a recent multivariate analysis of changes in hospital reimbursement in countries in Eastern and Central Europe and Central Asia indicate that changes from budgets to activity-based payments or FFS impacted on the volume of activity and average length of hospital stay (Moreno-Serra and Wagstaff, 2010; see also the review by Street *et al.*, 2011). Inferring a causal relationship between provider payment method and behaviour using cross-sectional data is difficult; a number of studies have exploited the availability of policy changes (Krasnik *et al.*, 1990; Helmchen and Lo Sasso, 2000) or controlled experiments (Hickson *et al.*, 1987) to identify the causal influence of payment method on provider behaviour and find significant effects.

A large literature has analysed the extent to which providers respond to financial incentives more generally in the form of income shocks (caused by a change in provider payment, an increase in doctor/patient ratio, etc.) and how, in the context of FFS payment, they compensate by engaging in demand inducing behaviour, otherwise known as supplier-induced demand (SID). The available evidence on SID is mixed,¹³ largely due to the difficulty in distinguishing between patient- and doctor-initiated consultations (although a number of studies have attempted to do so; see Tussing, 1983; Wilensky and Rossiter, 1983; Rossiter and Wilensky, 1984; Grytten and Sorensen, 2001).

¹³ For example, Gruber *et al.* (1996) found that declines in fertility in the US over the period 1970-1982 (representing a negative income shock for obstetricians/gynaecologists) were significantly associated with an increase in caesarean section deliveries (which were more favourably reimbursed). On the other hand, Tussing *et al.* (1992) found that the caesarean section delivery rate in New York City was not significantly associated with payment level, although doctors did occasionally perform caesarean section deliveries to better manage their time (which is a form of economic self-interest).

Analyses of primary care provider behaviour in Ireland have focused on the impact of the difference in provider payment methods between public and private patients, with conflicting results (see, for example, Tussing, 1983, 1985; Madden *et al.*, 2005). A recent analysis of dentists by Woods *et al.* (2010) concluded that the removal of the requirement for routine dental treatment pre-approval and the increase in the fee for amalgams from the year 2000 for the Dental Treatment Service Scheme in Ireland changed the ratio of amalgams to extractions.

3.2 *Methods of User Payment*¹⁴

3.2.1 Theory

There are two main ways in which users pay for health care, namely pre-payment, or payment at the point of use. With pre-payment, payments for health care are made in advance and when a patient subsequently avails of a service (e.g., attends a GP, receives treatment in hospital), the service is provided free at the point of use. Examples of pre-payment include public taxation, social health insurance and PHI. In each of these cases individuals make financial contributions (e.g., income tax payments, social insurance contributions, PHI premiums) which are collected and pooled by an intermediary (e.g., government, health insurance fund) and used to finance health-care services. The payments are made by individuals according to the established payment procedures for the mechanism in question (e.g., tax laws, insurance premium rates) and are not linked to the use of health care. By removing the direct link between payment for health care and use of health care, pre-payment has less influence on a patient's health-care utilisation decision and demand for health care is more likely to be determined by some other factor such as health-care need. Pre-payment has a positive impact on use of health care and in fact there may be a risk of moral hazard whereby individuals partake in riskier behaviour than normal because of the pre-payment status. Voluntary insurance schemes may also bring risks of adverse selection with only those most at risk of ill health taking out insurance cover.

Where user fees are charged for health care at the point of use, demand for health care depends directly on the willingness and ability to pay for care, posing a negative impact on health-care demand. User fees are often advocated on the grounds that they can reduce moral hazard (i.e., ration unnecessary use by patients) and generate additional revenue (Creese, 1997; Robinson, 2002). However, empirical evidence has found that user fees are just

¹⁴ A mix of terms is used in the literature to refer to people who use health services (e.g., user, service user, patients, etc.). The term "user fees" is widely applied in the literature and refers to payments made by patients.

as likely to deter appropriate use as they are to deter inappropriate use (Newhouse and Insurance Experiment Group, 1993). User fees are also at risk of being inequitable whereby a flat rate payment has a greater proportional impact on a lower income relative to a higher income. Demand for health care is relatively price inelastic, but poorer people have a higher price elasticity of demand relative to richer people (McPake and Normand, 2008). Thus, the deterrent effect of a user fee for health care is greater for poorer people given their higher price elasticity of demand. In addition, because user fees are only levied on those who use the service, people with chronic illness who need to use health services more frequently than others are faced with higher payments for health care.

3.2.2 Evidence

Moral hazard has been examined in the context of non-health insurance cover and there is evidence that the behaviour of the insured does respond to insurance status (e.g., reductions in prevention and increases in accidents in the case of increased generosity of automobile insurance, see Dave and Kaestner, 2009). While theory predicts that health insurance cover will also lead to a reduction in prevention activities, there is less empirical evidence to support the prediction (Dave and Kaestner, 2009). In terms of adverse risk selection into health insurance, evidence from Ireland in 2001 actually showed the opposite with people at risk of ill health less likely to purchase PHI (Harmon and Nolan, 2001).

User fees have been observed to have a deterrent effect on utilisation and findings are consistent across a wide range of settings, in both developed and developing countries, and in both natural experiment and controlled trial conditions. Examples of the deterrent effect from developed countries include France (Grignon *et al.*, 2008), Ireland (O'Reilly *et al.*, 2007) and the US (Newhouse and Insurance Experiment Group, 1993). In the Netherlands, recent health reforms require all individuals to purchase PHI. While there is no restriction in the choice of health insurer or type of health plan, it is noted that the majority choose plans without deductibles (Bartholomé and Maarse, 2006), consistent with a preference for pre-payment for health care. Other examples are available from middle and lower income countries (e.g., Uganda, Deininger and Mpuga, 2004; Georgia and other former Soviet Union countries, Gotsadze *et al.*, 2005).

As noted, evidence suggests that user fees are not an effective instrument for rationing inappropriate health-care demand, particularly since they deter both effective and ineffective health-care utilisation (Robinson, 2002). The inability of patients to discriminate between appropriate and inappropriate demand means that they are likely to be deterred from some very important

interventions (such as having a timely diagnosis of asymptomatic hypertension) as well as from some chronic disease management services. Where use of a service is to be rationed only for when it is really needed, user fees will be ineffective in discriminating between appropriate and inappropriate demand. In Canada, Tamblyn *et al.* (2001) reported a reduction in the use of essential drugs by elderly persons following an increase in cost-sharing for prescription drugs in the late 1990s. Analysis also found a higher rate of serious adverse events and ED visits associated with the reductions in essential drugs utilisation. In a US study on diabetes, out-of-pocket expenses prevented access to relevant medications in more than one-third of a sample of patients with diabetes/at risk of diabetes (Fox *et al.*, 2008). Analysis of mammography screening in the US identified significantly lower mammography rates where co-payments were required. The effect of cost-sharing was greater for females living in areas of lower income/education levels (Trivedi *et al.*, 2008). Conversely, where users are to be deterred from using a specific service as far as possible, for example use of branded drugs where generic alternatives are available, user fees are effective in deterring *any* demand for that service (and this is the theory behind the systems of therapeutic reference pricing that many countries have adopted; see Gorecki *et al.*, 2012).

In practice, most health-care financing systems include a mix of payment mechanisms, both pre-payment and payment at the point of use. Payment at the point of use can be supplementary to what has already been pre-paid, known as cost-sharing (e.g., small per diem charges for hospital inpatient care), or it can serve as the only source of payment (e.g., out-of-pocket fee for private GP visit for non-medical cardholders in Ireland). In Western Europe, pre-payment is the dominant form of health-care financing in order to protect individuals from paying the full financial costs of health care at the time of use in light of the uncertainty around health-care demand (Robinson, 2002).

IV FINANCIAL INCENTIVES IN IRISH HEALTH CARE

4.1 Introduction

In this section, we outline a conceptual framework to better understand how financial incentives in a health-care system are structured. We apply the framework to the Irish context to highlight potential conflicts that occur in the current system. For ease of presentation a number of simplifying assumptions are made. First, we focus only on financial incentives (although we return to the possible influence of, and interaction with, non-financial incentives in Section V). Second, we assume that the health-care system is comprised of two

broad groups of actors, providers and users. Third, we examine the financial incentives at one point in time although the discussion in Section V considers the consequences of relaxing this assumption. Fourth, where we examine the financial incentives facing one group (and the theoretical predictions about their behaviour), we assume that the incentives facing the other group are fixed (e.g., in examining how a FFS payment influences the behaviour of GPs, we assume that user financial incentives are constant). The discussion in Section V considers the implications of relaxing this assumption. Finally, we assume that providers face three main decisions: whether to admit/treat a patient, how intensively to treat a patient and how frequently to treat a patient, while we assume the key decision facing users is whether or not to seek medical attention.

Given these simplifying assumptions, we focus on how the financial incentives facing providers and users in Irish health care interact with each other. In particular, we identify the combinations that have potentially negative implications for the health policy priorities of efficiency, quality of care and access. The framework sets out four key ways in which potential conflicts can occur that encourage behaviours on the part of providers or health-care users that are not consistent with these health policy priorities. First, for a given health-care service, the incentives facing the provider may conflict with those facing the user (Dimension 1: provider versus user). Second, within a health-care system, there are different levels of care from primary and community through to acute care. It is important to examine what incentives face the user at each of these levels of care and how they interact with each other (e.g., encouraging greater use of one health service over another, controlling for other factors) (Dimension 2: user across type of provider). Third, incentives for different providers may influence how they interact with one another (e.g., supportive of an integrated health-care system) (Dimension 3: provider versus provider). Finally, in the Irish context, a fourth dimension needs to be considered, namely the implications of financial incentive structures for equity of access. Different sets of provider incentives operate for different user groups in the population and the implications of these for equity of access must be assessed (Dimension 4: provider across type of user).

In the Irish context, we examine the behaviour of three different types of provider, GPs, hospital consultants and acute public hospital managers. For users, five mutually exclusive groups of interest are identified: full medical card (with or without supplementary PHI); GP Visit card (with or without PHI); privately insured only (with cover for GP expenses); privately insured only (without cover for GP expenses); no cover (no full medical card, GP Visit card or PHI).

It is important to note that we focus on potential conflicts with adverse implications for meeting health policy priorities; in some cases, policymakers may want to design incentive structures that conflict. For example, policymakers may want user incentives to conflict across different types of care. Imposing a higher user fee on ED visits that are not accompanied by a GP referral may be appropriate as it discourages the inefficient and inappropriate use of (relatively more expensive) ED services as the first point of contact for medical complaints that should be treated in primary care. The analysis in this paper necessarily involves some normative judgements about the desirability of certain conflicts; in general, we evaluate the potential conflicts in terms of their alignment with the broad health policy priorities outlined above. However, we make no assumptions about the relative weights assigned to the different health policy priorities within the Irish context.¹⁵

Rather than provide an exhaustive description of the financial incentives within the Irish health-care system (see Appendix), the aim here is to highlight specific examples illustrating the potential conflicts in incentives for each of the four dimensions of the framework. We highlight cases in which incentives conflict with potentially adverse implications for alignment with health policy priorities. Section V discusses the implications of our analysis in greater detail, while also discussing the consequences of relaxing some of the simplifying assumptions of the conceptual framework outlined here.

4.2 *Dimension 1 – Provider Versus User*

In order to ensure that care is provided in a timely manner at the most appropriate location by the most appropriate provider, it is vital to align the incentives of providers and users. Incentives must exist for users to register with a primary care provider, to seek care at the earliest opportunity, to use primary care in the first instance (except in the case of serious medical or surgical emergency) and to use primary care in most cases (i.e., it should not be cheaper to use acute hospital care services where primary care is more appropriate). Similarly, providers' incentives must be consistent with these principles. For example, they must be incentivised to treat patients appropriately (i.e., primary care providers must not be incentivised to shift patients to acute hospital care when they are most appropriately treated in primary care). Aligning the incentives of providers and users ensures that

¹⁵ As outlined in Section 2.1, the development of Irish health policy over time has been shaped by numerous influences. Chapter 1 in Ruane (2010) provides an overview of the key health policy principles and goals in Ireland, while Chapter 1 in Brick *et al.* (2010) discusses the coherency of Irish health policy priorities, in particular issues surrounding the concept of equity in Irish health care.

health care is provided and used efficiently, in terms of the appropriate location and timing of care.

We use the example of GP care as an illustration of the way in which provider and user incentives conflict in Irish health care. As shown in Table 2, provider and user financial incentives conflict for those with PHI or with no cover. Taking the example of those with no cover, users pay a fee each time they visit their GP. This may discourage users from seeking primary care when needed (and there is extensive Irish and international evidence on the impact of user fees on the utilisation of primary care services; see Section 3.2.2). In contrast, the FFS method of payment creates strong incentives on the part of GPs to admit and treat the patient (but not to engage in preventive care, as GPs only receive payment when the patient is ill).

4.3 Dimension 2 – User Across Types of Provider

To ensure that users are directed to the most appropriate level of health care, it is important that financial incentives for users encourage consistent health-care seeking behaviour. Users can access services at different levels of the health-care system from primary and community through to acute care services. As discussed earlier, the method of payment for health care can influence the pattern of demand for health-care services. To ensure efficient use of limited resources, it is important that these financial incentives are structured so as to direct users to the most appropriate level of health care. For example, as far as possible, expensive high-technology environments (e.g., EDs, hospital outpatient clinics) should not be used for non-urgent, primary-

Table 2: *Conflicting Provider and User Financial Incentives (e.g., GP Care)*

	<i>Provider Treatment Decision</i>			<i>User</i>
	<i>Admission</i>	<i>Intensity</i>	<i>Frequency</i>	<i>Visit</i>
Medical card	+	+/-	+/-	+
GP Visit card	++ ^a	+/-	+/-	+
PHI ^b (some cover for GP expenses)	+	+	+	-
PHI ^b (no cover for GP expenses)	+	+	+	--
No cover	+	+	+	--

Notes: ++, strong positive incentive; +, positive incentive; -, negative incentive; --, strong negative incentive; +/-, uncertain.

^a As GPs receive a separate sign-on payment for new GP Visit card patients (but not for full medical card patients), the financial incentive facing GPs to admit GP Visit card patients is strongly positive.

^b PHI refers to private health insurance.

care level complaints. Unless financial incentives for users are aligned across different types of providers, users may seek health care in ways that lead to inefficient and inappropriate use of resources. For example, user fees have been imposed on ED attendances in a number of systems in order to discourage non-urgent use of services in expensive high-technology environments (see Smith, 2007).

As shown in Table 3, the financial incentives in the Irish health-care system are not always aligned across the different levels of care. A person without a full/GP Visit medical card or any other source of subsidy for primary care is faced with a user fee for attending a GP. Where a patient is referred for outpatient treatment, there is no charge for that service. As noted by Ruane (2010) this incentivises patients to go to acute public hospitals for the management of chronic diseases, whether appropriate or not, rather than to pay out-of-pocket to have the condition managed by their GP. As noted "... a patient with a chronic mental illness or a patient with stable angina pays less for care if they receive regular outpatient appointments than if their care is managed by their GP" (Ruane, 2010, p. 60). There is anecdotal evidence that some consultant specialists find it difficult to discharge patients back to primary care due to the higher cost to (non-medical card) patients at the primary care level (Brick *et al.*, 2010).

Table 3: *Conflicting User Incentives Across Types of Provider (e.g., GP and Outpatient Department (OPD) Care)*

	<i>GP Visit</i>	<i>OPD Visit</i>
Medical card	+	+
GP Visit card	+	+/-
PHI (some cover for GP expenses)	-	+/-
PHI (no cover for GP expenses)	--	+/-
No cover	--	+/-

Note: See Table 2.

4.4 *Dimension 3 – Provider Versus Provider*

A crucial ingredient for any integrated health-care system is the alignment of financial incentives across health-care providers. Conflicting provider incentives may be costly, not only in financial terms and inefficiency, but also in terms of poor quality care and restricted access. The Irish public hospital sector provides an ideal setting in which to consider potential areas of conflict – exacerbated by the renegotiated consultant contract, effective from September 2008 – between the hospitals themselves and the consultants who work in them (see Table 4).

Table 4: *Conflicting Provider Incentives (e.g., Hospital Consultants and Acute Public Hospitals)*^a

	Type A Consultant			Type B/B* Consultant			Acute Public Hospital		
	Admis- sion	Inten- sity	Fre- quency	Admis- sion	Inten- sity	Fre- quency	Admis- sion	Inten- sity	Fre- quency
Medical card	-	-	+/-	+/-	+/-	+/-	+/-	+/-	+/-
GP Visit card ^b	-	-	+/-	+/-	+/-	+/-	+/-	+/-	+/-
PHI	-	-	+/-	+/-	+/-	+/-	+ ^c	-	+ ^c
No cover ^b	-	-	+/-	+/-	+/-	+/-	+/-	+/-	+/-

Notes: See Table 2.

^a For the purposes of this example, frequency relates to length of hospital stay.

^b Assuming that users in these two categories are treated as public patients.

^c Where the patient is accommodated in a private-designated bed for the duration of their hospital stay.

Consultants with a Type A (“public-only”) contract are reimbursed solely by way of a salary. While a Type A consultant can treat a private patient, he/she cannot charge fees.¹⁶ Therefore, a Type A consultant is indifferent between treating a public patient or a private patient *ceteris paribus* and his/her salary provides no financial incentive to admit or treat an additional (public or private) patient. A Type B or B* consultant also receives a salary in return for discharging his/her duties to public patients.¹⁷ However, the situation is complicated by the fact that a Type B/B* consultant is permitted to engage in private practice, which makes the overall direction of his/her financial incentives uncertain for three reasons. First, the Type B/B* consultant receives a FFS payment for treating private patients, which may be expected to incentivise the treatment of private patients (although in practice, private practice is limited to between 20-30 per cent of total complexity-adjusted activity (Brick *et al.*, 2010)). Second, the amount of private activity a Type B/B* consultant can undertake is dependent on his/her level of public activity: treating more public patients allows these consultants to treat more private patients. Third, a Type B/B* consultant could generate demand for his/her private practice by delaying the treatment of public patients (Siciliani and Hurst, 2005). Furthermore, it is in the interests of the Type B/B* consultant to ensure that the Type A consultant does not admit a patient who could otherwise have been private because that patient can then

¹⁶ Type A consultants were to receive a salary premium for forsaking the right to undertake private practice (Brick *et al.*, 2010).

¹⁷ Type B and B* contracts were offered respectively to new entrants and existing consultants (Health Service Executive, 2009).

only be treated as a public patient throughout their hospital stay (Health Service Executive, 2009).

Treating private patients represents an “additional income stream” in the form of a per diem payment for public hospitals if and only if the patient is accommodated in a private-designated bed (Department of Health and Children, 1999, p. 13). This may give rise to a potential conflict with the financial incentives facing the Type B/B* consultant who is paid for treating the private patient irrespective of the type of bed they occupy. Once the patient is admitted, the public hospital has a financial incentive to minimise treatment intensity because the per diem payment is independent of the type of treatment received (Department of Health and Children, 2009, 2010). However, the Type B/B* consultant may have a financial incentive to increase treatment intensity, which would increase his/her income. The financial incentive for the public hospital to extend the stays of private patients (and thereby cross-subsidise high-cost days at the beginning of the episode with lower-cost days towards the end of the stay) may be compatible with those facing both the Type A and Type B/B* consultants.

4.5 Dimension 4 – Provider Across Types of User

As well as aligning the incentives of providers and users, it is important that financial incentives for providers are correctly aligned so that all users are treated equally in terms of treatment decisions. We use the example of GP care to illustrate how the current system may incentivise different treatment decisions across the different user types (see Table 5).

In terms of admission, the incentive for the GP is always to admit regardless of user type. The GP receives a capitation payment for each full medical card and GP Visit card user registered with their practice and receives a further sign-on payment for each new GP Visit card user. In addition, the size of allowances for staff such as practice nurses and secretaries is dependent on the number of registered full medical card/GP Visit card patients. For non-medical cardholders the GP is compensated on a FFS basis and has a financial incentive to admit.

Once the user has been “admitted”, the intensity and frequency of the treatment may vary across user types. For full medical card and GP Visit card users GPs have both positive and negative incentives in terms of the intensity and frequency of treatment. The GP will receive his/her capitation payment no matter how intensely or frequently the user is treated; however, the additional FFS payments available for certain services (e.g., vaccinations) create positive financial incentives to treat more intensively and more frequently for certain conditions. For non-medical card users there only appear to be positive financial incentives as the GP is compensated on a FFS basis so the user is more likely to receive more intense and frequent treatment.

Table 5: *Conflicting Provider Incentives Across User Types (e.g., GP Care)*

	<i>Treatment Decision</i>		
	<i>Admission</i>	<i>Intensity</i>	<i>Frequency</i>
Medical card	+	+/-	+/-
GP Visit card	++	+/-	+/-
PHI (some cover for GP expenses)	+	+	+
PHI (no cover for GP expenses)	+	+	+
No cover	+	+	+

Note: See Table 2.

V DISCUSSION AND POLICY IMPLICATIONS

Financial incentives are one of a number of factors that influence the behaviour of providers and users in a health-care system. As discussed in Section III, theory and available empirical evidence suggest that behaviour is influenced by financial incentives. Incentive structures can therefore be established in ways that support health policy priorities, for example encouraging care to be sought (by users) and delivered (by providers) in the most appropriate locations at the most appropriate time. Given the interactions between providers and users, and among providers within the system it is important to consider how each of the individual incentives are structured using a joint analytic approach rather than considering them each in isolation. Taking this approach, this paper has demonstrated some of the conflicts that can potentially occur in the context of the Irish health-care system.

The analysis of potential conflicts in Section IV focused on financial incentives and was entirely theoretical. The extent to which these conflicts translate into observed behaviour is an empirical question and is dependent on a number of additional factors. First, the relative strength of non-financial factors is important to consider. Provider behaviour may be influenced by the existence of clinical protocols, professional standards, ethics codes, education and training, etc., while users may be influenced by attitudes, education, public health campaigns, transport costs and accessibility, etc. Empirical evidence on the relative strengths of financial and non-financial factors is difficult to find, although Hausman and LeGrand (1999) provide a good overview of the trade-offs involved in terms of GPs' incentives in the UK NHS. Where there are clear regulations on behaviour (e.g., GPs must act as gatekeepers), the theoretical predictions may not translate into observed behaviour. For example, while a non-medical cardholder may be incentivised

to seek treatment in an outpatient setting over primary care (Brick *et al.*, 2010), the existence of a system of GP referral to outpatient care may dilute the strength of this incentive.

Second, where provider and user incentives conflict, the extent to which observed behaviour reflects provider or user incentives or some combination of both is difficult to determine. For example, in primary care in the Irish system, there is direct access to GPs (i.e., no gatekeeper) and the factors influencing user demand are likely to have an important impact on the use of GP care. Thus, the financial disincentive facing many non-medical cardholders in respect of making GP visits is expected to offset to some degree, or even outweigh, the conflicting incentives facing GPs (which encourage GP care for non-medical cardholders). Empirical evidence from both Ireland and elsewhere on the impact of user fees supports this expectation. In the Irish context, it has been demonstrated that even after controlling for health need, medical cardholders (for which GPs receive a capitation payment and users do not pay a fee) have a higher number of GP visits per annum than non-medical cardholders (for which GPs receive a fee each time the patient visits) (Nolan, 2007). Similarly, where incentives among providers conflict, it is difficult to determine a priori the resulting impact on behaviour without understanding more about the interactions between the providers in question (e.g., the influence of professional ranking, etc.).

As noted, a number of factors contribute to observed patterns of inequity and inefficiency in health-care delivery. Efficient, integrated and equitable health care is certainly not compatible with a structure of inconsistent financial incentives and resolving these inconsistencies is therefore a necessary, if not sufficient, measure to move closer to the desired objectives. Policy responses to problems relating to financial incentives are emerging in the Irish context. The importance of aligning financial incentives of both users and providers with health policy priorities was highlighted recently by the Expert Group on Resource Allocation and Financing in the Health Sector (Ruane, 2010). For example, the Group recommends that "... user fees in primary and community care should be lowered where they are likely to deter use of services, where they place a heavy burden on sick people, where they make it more difficult to put in place integrated models of care or where they incentivise inappropriate use of hospital care where primary care would be appropriate" (Ruane, 2010, p. 120).

In addition, the recent Programme for Government contains a number of commitments of relevance to the issue of financial incentives in health care. First, the commitment to introduce a system of universal health insurance is a radical change in the system of health-care financing in Ireland. Second, the commitments to renegotiate the GP contract and to reform hospital funding

offer an opportunity to examine the financial incentives generated by the existing and proposed payment methods. The analysis in this paper highlights the importance of considering financial incentives (and their interactions) when designing new systems of provider reimbursement and user fees.

For example, moving to a system of universal health insurance, whereby users will pay for health care on the basis of ability to pay, and providers will be indifferent between different types of user, addresses, and could potentially eliminate, the fourth conflict identified in our framework (i.e., provider across types of users). However, as illustrated by the framework, this does not remove the potential for other conflicts to persist, or new conflicts to appear. In particular, the new system of GP reimbursement needs to be carefully designed to ensure that providers are incentivised to offer preventive care. At the same time, users need to be incentivised to register with a GP and to seek care (when appropriate) in a primary care setting. This will ensure that provider incentives are aligned with user incentives which encourages the delivery of care at the most appropriate level of the system. In addition, the government's proposal to reimburse public hospitals on a "money follows the patient" basis (Government of Ireland, 2011a) is intended to replace the existing system of casemix-adjusted budgets, which creates a complex set of (potentially conflicting) financial incentives dependent on the hospital's budgetary position, the role of the casemix adjustment, and whether the hospital was operated by the HSE or a voluntary organisation (McDaid *et al.*, 2009; Brick *et al.*, 2010). While improving the transparency of hospital funding, there is a risk that the planned reform might introduce new inconsistencies. In particular, the proposed arrangements could encourage public hospitals to increase activity (see Section III),¹⁸ which conflicts with the incentives facing consultants if they continue to receive a salary for treating public patients. The government has also announced its plan to introduce legislation to abolish the system of public/private bed designation, with the intention of ensuring that public hospitals can impose charges on all of their private patients (Government of Ireland, 2011b, see also Department of Health, 2012), although this might potentially incentivise the treatment of private patients over their public counterparts. The analysis in this paper, which considers the operation of financial incentives in Irish health care with regard to the theoretical predictions from the existing literature, provides a framework within which issues such as these can be examined.

Internationally, there is increasing interest in pay-for-performance programmes (Cromwell *et al.*, 2011). These programmes continue the

¹⁸ This is also suggested by preliminary evidence from the pilot of activity-based funding for elective hip and knee replacements in a subset of public hospitals (Smyth, 2012).

approach of instituting financial incentives to influence behaviour but go beyond existing payment mechanisms, introducing additional layers of financial incentives that reward specific aspects of behaviour to encourage greater quality and efficiency. However, from the discussion here it is clear that building additional incentives onto incentive structures that are already internally inconsistent is unlikely to be effective. The baseline structures for provider and user payments and their interactions in the Irish health-care system need to be addressed in the first instance (see also Nolan *et al.*, 2011).

VI CONCLUSIONS

This paper has taken a systems perspective to highlight fundamental inconsistencies in how financial incentives facing both providers and users in the Irish health-care system are structured. While an exhaustive description of the incentives structure in the system has not been provided, the paper outlines a conceptual framework for analysing financial incentives in a health-care system. The framework illustrates four key conflicts in a health-care system, namely provider versus user, user across types of provider, provider versus provider and provider across types of user. When applied to the Irish context, the framework highlights conflicts that are undesirable in terms of Irish health policy priorities such as efficiency, quality of care and access. The first three conflicts have implications mainly for efficiency and quality of care, while the latter has implications for access and equity of access, and is a particular feature of the Irish health-care system that is unusual internationally.

The prevalence of these conflicts in practice is essentially an empirical question and will be influenced by the importance of the financial incentives compared to other non-financial factors that impact on provider and user behaviour. Furthermore, the influence of financial incentives will depend on whether provider or user incentives dominate in the case of conflicting incentives. While there is plenty of international and Irish evidence on the importance of provider payment method and user fees respectively, empirical evidence on their interactions is, by comparison, relatively scarce.

In the Irish context, a number of recent developments suggest that the issue of financial incentives is garnering more attention from researchers and policymakers. In particular, the current Programme for Government contains a number of commitments with direct relevance for financial incentives. In the context of future changes to provider reimbursement and user fees, the analysis in this paper provides a framework within which these issues can be examined using a joint analytic approach.

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APPENDIX:
Overview of Financial Incentives in the Irish Health-Care System

	<i>Provider</i>			<i>User</i>
	<i>Admission</i>	<i>Treatment Intensity</i>	<i>Decision Frequency</i>	<i>Visit</i>
GENERAL PRACTITIONER				
Medical card	+	+/-	+/-	+
GP Visit card	++	+/-	+/-	+
PHI (some cover for GP expenses)	+	+	+	-
PHI (no cover for GP expenses)	+	+	+	--
No cover	+	+	+	--
LONG-TERM CARE				
Medical card	+	+	+	~
GP Visit card	+	+	+	~
PHI	+	+	+	~
No cover	+	+	+	~
PHARMACIST				
Medical card	+	n/a	n/a	+/-
GP Visit card	+	n/a	n/a	+/-
Long Term Illness Scheme	+	n/a	n/a	+
High Tech Drugs	+	n/a	n/a	+
PHI (no cover for pharmacy expenses)	+	n/a	n/a	+/-
No cover – Drug Payment Scheme	+	n/a	n/a	+/-
TYPE A CONSULTANT (PUBLIC ONLY) – INPATIENT, DAY CASE, OP, ED				
Medical card	-	-	+/-	~
GP Visit card	-	-	+/-	~
PHI	-	-	+/-	~
No cover	-	-	+/-	~
TYPE B/B* CONSULTANT – INPATIENT, DAY CASE				
Medical card	+/-	+/-	+/-	~
GP Visit card	+/-	+/-	+/-	+/-
PHI	+/-	+/-	+/-	+
No cover	+/-	+/-	+/-	+/-
HSE/PUBLIC VOLUNTARY HOSPITAL – ED				
Medical card	+/-	n/a	n/a	+
GP Visit card	+/-	n/a	n/a	+/-
PHI (some cover for ED expenses)	+/-	n/a	n/a	+/-
PHI (no cover for ED expenses)	+/-	n/a	n/a	+/-
No cover	+/-	n/a	n/a	+/-

Overview of Financial Incentives in the Irish Health-Care System (contd.)

	<i>Provider</i>			<i>User</i>
	<i>Treatment Decision</i>			<i>Visit</i>
	<i>Admission</i>	<i>Intensity</i>	<i>Frequency</i>	
HSE/PUBLIC VOLUNTARY HOSPITAL – INPATIENT, DAY CASE				
Medical card	+/-	+/-	+/-	+
GP Visit card	+/-	+/-	+/-	-
PHI	+ ^a	-	+ ^a	+/-
No cover	+/-	+/-	+/-	-
HSE/PUBLIC VOLUNTARY HOSPITAL – OP^b				
Medical card	+/-	+/-	n/a	+
GP Visit card	+/-	+/-	n/a	+/-
PHI	+/-	+/-	n/a	+/-
No cover	+/-	+/-	n/a	+/-

Notes: ++, strong positive incentive; +, positive incentive; -, negative incentive; --, strong negative incentive; +/-, uncertain; ~, indifferent; n/a, not applicable.

For the long-term care and acute hospital sectors, frequency relates to the length of stay.

^a Where the patient is accommodated in a private-designated bed for the duration of their hospital stay.

^b Outpatient care.

