Equality in Irish Healthcare - Time for a New Deal

Paul Goldrick-Kelly and Tom Healy

May 2018

NERI WP 2018/No 54

For more information on the NERI working paper series see: www.NERInstitute.net

PLEASE NOTE: NERI working papers represent un-refereed work-in-progress and the author(s) are solely responsible for the content and any views expressed therein. Comments on these papers are invited and should be sent to the author(s) by e-mail. This paper may be cited.
Equality in Irish Healthcare -
Time for a New Deal

Paul Goldrick-Kelly* (NERI) Nevin Economic Research Institute, Dublin, Ireland
Tom Healy (NERI) Nevin Economic Research Institute, Dublin, Ireland

Keywords: Health; Health Inequality; Health Insurance, Public and Private
JEL Codes: I10; I14; I13

ABSTRACT
Health is of central importance to well-being. The standard and reach of health services have improved in Ireland over recent decades as indeed have health outcomes. However, not all of this progress has been experienced equally by all sections of the population. In particular, there are significant and persistent disparities in healthcare outcomes adjusted for socio-economic status. Similar disparities in the level of access to healthcare and the scope of healthcare provision point to a systemic problem. This paper considers a policy approach that could deliver a single, universal, comprehensive and integrated health service fit for purpose and one to which all people can have access on the basis of need and not ability to pay. Our costing exercise demonstrates that health system transition and reform will entail additional demands on public resources with implications for fiscal policy.

This version: 16 May 2018

* The authors gratefully acknowledge helpful feedback and encouragement from a number of reviewers including NERI colleagues. Particular thanks are extended to colleagues Lisa Wilson, Paul MacFlynn and Tom McDonnell. The usual disclaimer applies. All correspondence to paulgl@nerinstitute.net
Equality in Irish Healthcare - 
Time for a New Deal

Paul Goldrick-Kelly (NERI) Nevin Economic Research Institute, Dublin, Ireland 
Tom Healy (NERI) Nevin Economic Research Institute, Dublin, Ireland

1. INTRODUCTION

The Report of the Houses of the Oireachtas Committee on the Future of Healthcare, hereafter referred to as the Sláinte Care Report, (Houses of the Oireachtas, 2017) potentially marked an important milestone as it represents a broad political consensus on the need to move away from a multi-tier system of healthcare provision to one based on need and funded overwhelmingly from public sources. Given the historical difficulty in delivering sufficient reform in the way healthcare is managed and funded, a political momentum to achieve a publicly-funded, single healthcare system within a decade is to be welcomed. The vision of the health service contained within the report is consistent with European norms of universality and crucially, the principle of universality is consonant with a system of provision that recognises healthcare’s status as a merit good. A merit good is one that should be provided to everyone on an equal basis regardless of ability to pay.

The Republic of Ireland has made significant strides forward in healthcare outcomes along with most other Western economies. However, not all of this progress has been experienced equally by all sections of the population. In particular there are significant and persistent disparities in healthcare outcomes based on socio-economic status. There are similar disparities between different groups in terms of barriers and degree of access to healthcare.

Healthcare provision in Ireland is heavily determined by socio-economic status. Those at the bottom of the distribution are more likely to be covered by a state-funded medical card with those at upper end of the distribution enjoying private medical insurance. A large group in the middle of the distribution relies on limited entitlements to state care and out-of-pocket expenditure.

Whilst the determinants of healthcare outcomes are many and diffuse, we propose that there is a link between the inequality of outcomes, inequality in access to health care and
inequality in the provision of healthcare. Treating healthcare as a merit good and moving toward a publicly-funded, single healthcare system, as Sláintecare proposes is the only way to break this link.

This paper builds on the work of the Sláintecare report while addressing these areas. In Section 2 we discuss the characteristics of healthcare as an economic good. Section 3 provides a brief overview of the healthcare system in the Republic of Ireland and its recent history while Section 4 focuses on healthcare outcomes and access. In Section 5 we provide some estimates of the fiscal cost of delivering the needed changes. Section 6 concludes.
2. THE ECONOMICS OF HEALTHCARE

2.1 Economic characteristics

Healthcare is often treated in the economics literature in a way that focuses on individual decision-making and consumption. This arises due to the tendency of healthcare to exhibit the features of rivalrous and excludable goods.

Rival goods refer to goods and services where the quantity available to others falls when consumed (Fisman and Laupland, 2009). Healthcare can be seen as a rival good in this sense, as the use of a hospital bed or an appointment with a health practitioner precludes its use by others. Unlike with public goods, there is some cost to extend the provision of a rival good to an additional individual or group.

Excludability is a characteristic of goods and services where access and consumption by consumers can be limited in some way (Sandler, 2001). Excludability can apply to healthcare services to varying extents. In this context, healthcare can be seen as a "private good" in certain respects (Hsiao, 1995).

Public goods refer to goods whose consumption by an individual does not preclude its consumption by others and whose use by third parties cannot be prevented i.e. goods that are non-rivalrous and non-excludable goods. Examples include a fireworks display or national defence. However, insofar as healthcare exhibits or can exhibit the characteristics of rivalrousness and/or excludability it cannot be considered a pure public good. Some types of healthcare do display public good characteristics. For example, advances in the state of medical knowledge and research can be considered types of public goods in the sense that their use is non-rivalrous. The non-rivalrousness of new medical knowledge means there is a declining average cost to the use of that knowledge and provides a rationale for government intervention and financial support to ensure the socially optimal level of provision of medical research.

Healthcare is best understood as a merit good. Merit goods have two notable characteristics. (1) The net private benefit is not fully recognised at the time of consumption - there is an information failure in terms of expected benefits and there is potentially a time lag in terms of realisation of the benefits - this leads to under-
consumption by private individuals. (2) Consumption of a merit good generates an external benefit to others (positive externality), from which society gains, e.g. family, friends and employers, and, if we assume decisions to consume are driven by self-interest, these benefits to others are unlikely to be fully recognised by the individual at the point of consumption. Inoculation against an infectious disease is the classic example. The individual will not fully internalise the benefits to the rest of society. Overall, these characteristics of merit goods (information failure and positive externality) mean that private consumption is likely to be lower than the socially efficient level of consumption. Society needs healthy individuals and a healthy workforce to function. This under-consumption is likely to be relatively more pronounced for low-income households as such households have less resources to spend on non-day-to-day essentials and their consumption decisions are more constrained by price. In this context the only way to ensure equality of healthcare outcomes is to reduce the cost of healthcare to zero.

Hsiao (1995) identifies several types of merit goods including examples occurring in healthcare provision. The first type entails those goods/services whose benefits primarily accrue to society at large rather than individuals. This category includes certain primary care services. Another type is tied to significant externalities, such as vaccination. The third type, relates to provision on the basis of social altruism and solidarity, such as medical care for children or for chronic disease sufferers. This also relates to a certain rights-based approach, where the society deems non-access unacceptable for individuals who may lack the ability or resources to avail of health services that would be beneficial to them. Finally, merit goods can include services where individuals alone are unable to assess the benefits of consumption, such as preventative screening (Hsiao, 1995).

Providers of healthcare are represented, in traditional economics literature, as rational economic agents responding to monetary and non-monetary incentives (Sloan and Hsieh, 2012). However, healthcare markets exhibit a number of unique features. Some of these are discussed below:

*Uncertainty and Risk*

Healthcare is often characterised by a high degree of uncertainty and risk both with regard to a given condition or the scale of its impact if it were to occur. For many people and many ailments, the incidence, severity and cost of conditions is difficult to predict. Insurance provides a possible way to handle unforeseen conditions. Insurance may take many forms
from direct public subvention of social insurance systems to privately organised systems of health insurance. Private insurance models operate on the principle of pooled risk and costs with a profit margin factored in for insurance companies.

*Moral hazard*

Depending on the way healthcare is funded and organised, different actors may have economic incentives to behave in particular ways. Patterns of treatment or drug prescription as well as prioritisation of particular patients or treatments may reflect in-built financial incentives. Such behaviour may, or may not, be in the best interests of patients. Similarly, the methods used to pay doctors or to fund hospitals may, intentionally or otherwise, have behavioural effects mediated through monetary incentives (Zweifel and Manning, 2000). By the same token, a system of universal healthcare and insurance could incentivise individuals to take less responsibility for healthy behaviour and over-utilise health services.

‘Fee for service’, fixed salary and capitation payments offer three different ways of remunerating health and professionals and a mix of these operate across the Irish health service. An example of how funding methods can influence clinician behaviour in Ireland is provided by the Primary Care Reimbursement Service operated by the Health Service Executive (HSE). Under this scheme, doctors, dentists and pharmacists are paid on a capitation basis in respect of medical card holders. There may be an incentive to transfer or refer patients with ailments that involve higher costs or treatment time to other areas of the health service. In the case of hospital consultants, there would appear to be an in-built incentive for consultants to give priority to private patients for whom they are directly reimbursed by item of service (Wren and Connolly, 2016). In the case of public patients, the same consultants are remunerated on the basis of a fixed annual salary regardless of the number of patients they attend to (Tussing and Wren, 2006). This can enable private patients to effectively skip the queue past poorer public patients in order to obtain the rivalrous good, for example a timely professional diagnosis. The implication is a potentially inferior outcome for the poorer non-privately insured individuals whose own diagnosis is consequently delayed.

*Information asymmetry*

Patients and healthcare professionals have very different levels of access to and understanding of medical information encompassing diagnosis or treatment. In specific
situations supplier-induced demand can arise: clinicians encourage patients to demand more care than a patient would otherwise consume given the same information. This is particularly relevant where doctors are remunerated according to ‘fee for service’.

Externalities
Healthcare has impacts over and beyond those experienced by recipients or providers of healthcare. These are referred to as externalities because the total social cost and social benefit of health are not readily measured or captured (internalised) by providers or recipients. Ill-health impacts on productivity, well-being and societal cohesion in ways that transcend the private or individual loss involved in ill-health (Cote and Healy, 2001). In market transactions, it is sometimes assumed that individuals are not encouraged to consider the effects of consumption on others. Prices may not reflect the full social costs or benefits of certain activities leading to over or under-utilisation. As a result, market failure may ensue. In such circumstances, there is a case for governments to intervene so that full social costs and benefits are brought into line.

Externalities in healthcare may arise in different ways. One person’s consumption may impact on others such as, for example, when someone leads an unhealthy lifestyle or refuses vaccinations. Taxes on unhealthy consumption can transfer some of the social costs to individuals or companies. Indeed, there are major debates about the role of individuals, business, and the state in taking responsibility for the social costs of health (See Thaler and Sunstein, 2008). In this sense, economists speak of ‘internalising’ the cost to those whose behaviour has spill-over effects on others, on healthcare costs, as well as more generally on society and the economy. Excise taxes are often justified in this way.

Adverse Selection
Adverse selection is exemplified in the case of private health insurance. One party to a contract may have more information than the other party (Belli, 2001). High premia may be set by insurance companies to cover the risk of insuring for undisclosed conditions. Companies may target relatively young persons or might avoid insuring clients for particular costly conditions or charge very high premia. For further discussion of adverse selection effects in private health insurance see Rothschild and Stiglitz (1978).

2.2 The limits of healthcare economics
In what many regard as a seminal article in this field, Kenneth Arrow (1963) argued that
healthcare markets diverge from classical conceptions of competitive markets for the following reasons:

- Providers, clinicians and patients are guided by a range of incentives only some of which is monetary.
- ‘Asymmetry’ of information exists between the clinician and the patient about treatment.
- Significant barriers exist to entry for healthcare suppliers. Healthcare work and goods are frequently relatively expensive.
- Inability to afford healthcare costs on the part of low-income households.

All of the above may be regarded as possible examples of market failures justifying the emergence of compensatory non-market institutions in the form of public regulation or state intervention. Moreover, while healthcare provision is amenable to some of the insights of economic treatment, provision also entails a normative element. Healthcare is often seen as a prerequisite for political participation and foundationally important to the enjoyment of basic freedoms. This view implies that healthcare, or elements of it, should be provided on the basis of need rather than ability to pay (McPake, Normand and Smith, 2013).
3. A BRIEF OVERVIEW OF THE HEALTH SYSTEM IN IRELAND

3.1 Development of healthcare over two centuries

Over the centuries, organised healthcare was frequently undertaken on the basis of charitable or religious grounds providing essential care and recovery for the very ill or infirm. In the course of the 19th and 20th century, the State along became a key actor in the funding, regulation, provision and purchase of healthcare. A mix of institutional and ownership types characterise healthcare in the Republic of Ireland today. Central to the delivery of health services are doctors whether working in hospital or in general practitioner settings. A wide array of health professionals and specialists as well as administrative staff form parts of the health sector workforce.

The Irish healthcare system has its roots in the late 19th and early 20th centuries. Whereas other European states began to move towards more universal access in the 20th century, Irish healthcare continued in a vein reflective of a private or voluntarist principle (McDaid, Wiley, Maresso and Mossialos, 2009). In the early 20th century, Irish MPs in Westminster, along with the Roman Catholic Church and some medical professionals resisted reforms by the Liberal Government to use the National Insurance Act to fund GP care and medications (Wren and Connolly, 2017). While discussions occurred within the Fianna Fáil government of the early 1940s concerning the possibility of establishing a National Health Service, some clinicians and members of the Church hierarchy continued to resist what they called “socialised medicine” (McDaid et al., 2009).

The Department of Health was established in 1947 to oversee public health services that had been overseen by the Department of Local Government and Public Health. The “Mother and Child Scheme”, which would have offered free primary healthcare for children along with pre and post-natal care for mothers, was effectively stopped by a coalition of professional and ecclesiastical interests in 1951 and with the consent of the then Government. However, the 1953 Heath Act extended free access to public hospital and specialist care to 85 per cent of the population. In 1957, The Voluntary Health Insurance Board (VHI) was established to offer private insurance to the remaining 15 per cent of the population. The VHI would continue to operate a virtual monopoly in the Irish health
insurance market until the entry of BUPA Ireland in 1997 in compliance with EU regulatory requirements.¹

In 1970, The Health Act established eight regional health boards and extended the remit of The Department of Health to the development and implementation of public health policy. In addition, the Act established categories of persons by eligibility for paid access to various health services. Category 1 residents were granted access to most services free at the point of delivery, with the exception of certain services. Category 2 citizens incurred some charges for service use. Initially covering the poorest third of the population, coverage was subsequently extended to other segments of the population on the basis of age and other discretionary awards (Daly, 2012). This categorisation still forms the basis of healthcare entitlements in the Irish system (Burke, 2009). The General Medical Services Scheme (GMS) was introduced in 1972 to facilitate access to private GPs and pharmaceuticals for Category 1 residents. This scheme still forms the basis for reimbursement for those patients to private providers (McDaid et al., 2009).

### 3.2 The management and organisation of public health services in the 21st century

Funding for the system increased through the 1970s and 1980s, though an acute fiscal crisis led to reductions in public health expenditure, particularly on the capital side of expenditure. Hospital care became, in principle, universal in 1991. Despite this, consultants working in the public system have continued to retain the ability to earn private income from private practice in both public and private hospitals. Reform efforts up to 2000 tended to focus on recommendations for addressing specific health conditions rather than system or structural reforms. The Eastern Health Board was replaced by the Eastern Regional Health Authority ERHA in 2001 with the introduction of three new area boards.

In 2001, the government published a health strategy: Quality and Fairness: A Health System for You, aimed at reforming the system over the subsequent decade. This strategy identified a number of weaknesses in the system and proposed reforms to strengthen primary care provision and acute hospital care, improve funding, augment planning capacities and clinician skills, and review and improve current healthcare delivery and information systems. Ten years after the publication of the strategy, most of the recommended reforms had not been implemented (Burke, 2009).

¹ Today, there are four main insurance companies offering, between them, hundreds of different and complex insurance plans.
A number of subsequent independent reviews of the health system elaborated on the government’s health strategy, most notably The Prospectus Audit of the Health System and the Commission on financial management and control systems in the Health service which formed the basis of the Health Service Reform programme in 2003. This programme aimed to reform the structure of the health system through the establishment of a national executive. The new Health Service Executive (HSE) was established on foot of these recommendations, replacing the 11 existing health boards along with other agencies. This reform also saw the establishment of the Health Information and Quality Authority (HIQA) in 2007 regulating quality and safety within the Irish health and social care systems (Burke, 2016).

The HSE as originally constituted comprised three pillars: The National Hospitals Office (NHO), The Primary, Community and Continuing Care (PCCC) Directorate and an independent board (Burke, 2016). The National Hospitals Office (NHO) was responsible for managing the acute hospital sector in eight HSE and voluntary hospital groups. The Primary, Community and Continuing Care (PCCC) Directorate organised general practice and broad community care services (including social care) through 32 Local Health Offices. These Pillars were recomposed into Integrated Services Areas under regional structures covering the South, West, Dublin North East and Dublin Mid-Leinster areas in 2009. In 2013, the HSE Board was abolished and replaced with a directorate under the auspices of the HSE Director General. 2014 saw the establishment of Community Health Organisations (CHOs) unifying non-hospital services (Burke, 2016).

In the context of substantial fiscal retrenchment in the health system, the Fine Gael/Labour Coalition government proposed reforms with the intent of introducing a single-tier universal healthcare system. The 2011 programme for government included commitments to introduce free GP care at the point of access for all residents and reform funding through a Universal Health Insurance (UHI) model based on competition among private insurers. The model envisaged the creation of a single mandatory, comprehensive, competitive private insurance model. Ahead of its introduction, lifetime community rating was introduced for voluntary insurance, stipulating that insurers must charge the same premia to all persons regardless of age and health status after purchasing coverage (Burke, 2016). Late entry loadings apply for those who enter the market over the age of 35 (Department of Health, 2014). While free GP care for under-sixes and individuals over 70 was introduced in 2015, universal free care remains unrealised. The proposed UHI, modelled to some
extent on the Dutch Healthcare systems insurance mandate in a managed private insurance system, floundered as cost analyses suggested that the reform would lead to increases in aggregate expenditures (Wren and Connolly, 2017).

A commitment to universal health insurance by 2016 and free GP care by 2015 was contained in the 2011 Programme for Government but were abandoned or postponed indefinitely.

3.3 Healthcare today in the Republic of Ireland

Hospitals fall into one of three categories:

- Health Service Executive (HSE) hospitals owned and managed by the HSE and not for profit. These comprise the majority of regional, county, district and community hospitals.
- Private voluntary hospitals established by charities, churches or religious orders, mainly publicly funded and not run for profit.
- Private hospitals owned by individuals or companies and run on a for-profit basis.

The prevalence of a two and multi-tier system in the acute hospital sector is well known. Given existing contractual arrangements, there is a strong incentive for consultants to prioritise private patients both in public hospitals and off-site in private hospitals. The lack of accountability, cost control and regulation of working hours by consultants is a matter of public concern. Though the entire population is entitled to free or heavily subsidised hospital care (with non-medical card holders liable to a maximum annual charge of €800 for inpatient care), private health insurance provides a back-stop for a large number of persons to avail of priority consultation and treatment in many cases and at some cost to the exchequer given that direct charges and private insurance payments do not cover the entire economic cost of private patient care in public hospitals. As Tussing and Wren (2006:141) pointed out in 2006:

“Consultants treat as private patients each other’s’ public patients whom they have failed to schedule for prompt treatment.”

Responsibility for healthcare lies with the Irish state which, through the Department of Health, organises strategic development within the system. The Government allocates budgets for health. The majority of these funds go to the HSE. The HSE’s Director General leads the Directorate and is accountable to the minister for Health. The Health Service
Executive comprises seven hospital Groups and nine area community healthcare organisations (HSE, 2018). The Health Information and Equality Authority (HIQA) is an independent organisation responsible for developing standards and ensuring compliance across a range of health and social care settings. The organisation also undertakes what are known as Health technology assessments, which refer to the process of evaluating the implications of new health technology to inform policy (Nolan, 2017; World Health Organisation, 2018).

While the state funds the majority of healthcare expenditures, private provision plays a major role within the system, with many public services delivered through privately contracted entities. The Primary Care system engages a range of healthcare professionals ranging from nurses, physiotherapists, occupational therapists, dental clinicians to other specialists. General practitioners (GPs) play a major role within the system. GPs are self-employed providers who play a gate-keeping role in the Irish system, directing access to secondary care, where appropriate (McDaid et al, 2009). Their income is derived from fees paid by non-GMS patients plus a fixed sum per GMS patient with adjustments for age.

GPs often work with state employees in primary care settings. The state contracts GPs through the National Primary Care Reimbursement Service for eligible (Category 1) individuals through the General Medical Services (GMS) Scheme. The scheme also covers prescription payments, dental services, ophthalmic, aural care, maternity services as well as in, and outpatient services in public hospitals (Burke, 2016; Nolan, 2017).

However, recent measures have entailed the introduction of co-payment fees for cardholders. GMS recipients now pay a fixed charge of €2.50 per prescription, capped at €25 per month. Category 2 persons face market-based fees to access primary care, paying between €40 and €70 per GP visit (Burke, 2016). Category 2 persons also pay for all dental and ophthalmic treatments, some social insurance benefits notwithstanding (Nolan, 2017). These residents also face prescription charges of up to €134 a month per household, above which the state foots the cost.

Private insurance does not generally cover primary care payments, so the majority of category 2 residents pay out of pocket. This covers a majority of the population, as GMS coverage through full medical cards or more limited coverage GP visit cards applies to some 42.8 per cent of the adult population (Chart 3.1). While medical card coverage has been
extended to under sixes and over 70s by the last government, the World Health Organisation identifies primary care as a key area of weakness in the Irish healthcare system, as Ireland is the only state in Western Europe that does not offer universal primary care coverage. Ireland, in addition, is an outlier in terms of user charges faced by its residents (Thomson, Jowett, and Mladovsky, 2014).

The population of the Republic of Ireland may be categorised into the following three groups:

- Those with private health insurance (43 per cent of the adult population in 2015).
- Those entitled, under various eligibility criteria, to a medical card (36 per cent).
- Those who do not fall in the above two categories.

Private insurance plays a significant role in the state with 43 of the population availing of cover in 2016 (Department of Health, 2017). The state offers substantial tax reliefs for the purchase of private insurance, amounting to €355 million in 2014 (Tax Strategy Group, 2017).

**Chart 3.1 Categories of Health Access for the Adult Population 2015**

![Chart](image)

**Note:** Percentage estimates reflect weightings applied that adjust sample values to aggregate population statistics based on the probability of sampling a given household.

**Source:** CSO (2017), authors calculations

Secondary and tertiary care tends to occur in acute hospital settings. Access usually requires a letter of referral from a GP, though patients can present in emergencies. The

---

2 The precise definition of primary and specialist (secondary and tertiary) care differs between countries. Primary care for example can be defined by care level, content, process or team membership (World Health
public acute sector incorporates both HSE owned hospitals and “Voluntary” organisations contracted by the state. These voluntary hospitals are generally owned and operated on a non-profit basis by private groups. Traditionally, religious organisations or Trusts played a prominent role in the sector but this has declined over time (McDaid et al, 2009). Private for-profit hospitals have played an increasingly large role in the sector stimulated, in part, by tax incentives especially since the early 2000s (Burke, 2016 and Mercille, 2018). Secondary care access is intended as universal in terms of access and public subsidy. However, Category 2 persons face substantial co-payments for public hospital care. Acute inpatient care is capped at €800 annually or €80 per night while emergency visits cost €100 per presentation (OECD, 2017). Inpatient fees also apply at €75 a day, capped at €750 annually (Burke, 2016).

Private patient care takes place in both public and private (for-profit) hospitals. This private care is often funded by voluntary insurance. Access to private care is seen as a means of ensuring fast access to care and is incentivised by waiting lists which remain a structural problem within the healthcare system. This access, and the distribution of private insurance, which tends towards higher income residents raises equity concerns. Close to 87 per cent of individuals in the top (richest) decile have private cover, falling to a little over 11 per cent in the second lowest decile (Chart 3.2). Private insurance coverage among lower deciles also raises affordability issues as households may struggle with the costs of premia. This complex mix of health care provision has raised concerns that a person’s circumstances and their income in particular, may have an influence on the likelihood of accessing the health system, or the speed at which they may receive care. These issues are picked up on again in Section 4 where it will be shown that while health care provision is determined by social position, so is likelihood of accessing health care services and medical examination and treatment. Together this paints a worrying picture about the ability of the current system of health provision to provide on the basis of need, rather than socio-economic status and ability (in-ability) to pay.

Organisation, 2004). The HSE refers to primary care as all health and social care services within the community outside the hospital setting (Health Service Executive, 2018). Secondary care refers to specialist services which are commonly (though not exclusively) hospital based (Department of Health and Children, 2001). Tertiary care refers to further specialist consultative care, though this isn’t clearly distinct from secondary services in the Irish case (Varley et al, 2010).
**Chart 3.2 Distribution of Categories of Health Access by Equivalised Income Decile for the Adult Population 2015**

![Chart Image]

**Note:** Percentage estimates reflect weightings applied that adjust sample values to aggregate population statistics based on the probability of sampling a given household. Equivalised Disposable income refers to total household income after taxation divided by the number of equivalised household members. Household size is calculated using an equivalence scale which weights household members (CSO, 2014). This accounts for the fact that, a three-person household, for example, doesn’t have three times the consumption requirements of a single person household.

**Source:** CSO (2017), authors calculations

### 3.4 Expenditure on Healthcare

Comparison of health spending (whether public or private) is challenging, especially across different countries. The System of Health Accounts (SHA) provides the most widely used and most up to date international system of classification. Yet still, there are likely to be grey areas where national interpretation of various items of health-related spending can vary, for example in regards to social care of the elderly or non-health related activities embedded in health institution settings.

When comparing health spending over time and across countries it is important to have regard to the demographic structure, cultural norms, evolving medical and healthcare practices as well as the overall level of economic development. Comparisons based on Gross Domestic Product are useful in so far as they relate health spending to total national income.
and therefore potential resources for spending. However, such comparisons can be disrupted by distortions to the measurement on National Income. Such distortions are particularly severe in the Republic of Ireland on account of the outside influence of a number of US multinationals. The latest available CSO data based on SHA refers to three years only (2013-2015). Table 3.1 shows total current (public and private spending) decreased from 10.4 per cent to 7.8 per cent of GDP between 2013 and 2015. However, this decline should be seen in the context of a step-shift in GDP in 2015.

Table 3.1 Total current spending on healthcare in Ireland (2013-2015)

<table>
<thead>
<tr>
<th>Category</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Health Expenditure (€ billion)</td>
<td>19.9</td>
<td>19.9</td>
<td>19.9</td>
</tr>
<tr>
<td>Gross Domestic Product (GDP, € billion)</td>
<td>180.2</td>
<td>193.2</td>
<td>255.8</td>
</tr>
<tr>
<td>Current Health Expenditure % GDP</td>
<td>10.4</td>
<td>9.9</td>
<td>7.8</td>
</tr>
</tbody>
</table>

**Source:** Central Statistics Office, (2017)

The breakdown of total current spending by public and private funder is shown in Chart 3.3. In 2015, 70 per cent of total current spending was from public sources while the remaining 30 per cent was split evenly between private health insurance and what is referred to as ‘Household Out-of-Pocket’ payments. In 2015, Irish households spent just over €3 billion on healthcare. This estimate included, for example, payments for medicine, visits to a General Practitioner doctor or user charges associated with hospital visits or overnight stays as well as costs associated with dental care. Total General Government current spending on health was just short of €14 billion in 2015. This estimate, based on SHA, includes health related spending by Government Departments and Agencies other than the Department of Health or the Health Service Executive. The estimate excludes some components of social care or benefit packages for the elderly which fall outside health institution settings. All expenditure relating to long-term care in residential institutions are deemed to be part of total healthcare spending and are included in these numbers. Categorised by healthcare provider, using the SHA classification, hospitals account for the biggest single slice of funding and, together with long-term care, make up over 50 per cent of total spending (Chart 3.4).
International comparisons of health spending are beset with many problems. Chart 3.5 shows total current health spending as a percentage of GDP for a comparator group of nine European Union Member States. We refer to these as the Northern European Comparator Group (or NECG for short). This group of countries shares a number of features such as income per capita, overall size of GDP as well as membership of the European Union.
Chart 3.5 Total public and private health spending across European Union states as a proportion of GDP, 2016


Chart 3.5 shows a comparison of NECG countries, including Ireland, and along with an unweighted arithmetic mean for this group. Total current spending on health (SHA-based measure) was 7.8 per cent in Ireland in 2016 – the lowest of those countries or country-averages shown in Chart 3.6. However, this comparison is distorted by the large one-off jump in the level of GDP in Ireland in 2015 reflecting certain multinational activity. Using Gross National Income, Ireland emerges with a total spend close to 9.1 per cent and still below the average for the NECG countries. Using the CSO’s GNI* indicator, which is GNI modified to remove certain activities of multinational corporations, gives a very different picture. At 11 per cent of GNI*, expenditure on health seems very high by European or OECD standards. However, using GNI* is also problematic to the extent that the value-added of particular economic activities that are taxed and that yield revenue for the funding of public services including health (such as aircraft leasing, contract manufacturing or intellectual property reclassification) are excluded from the measure. Total public current
spending on health remains below that for the average of the NECG group even when using the GNI* measure.

An alternative approach is to compare total spending per capita adjusted by Eurostat for differences in prices in relation to Actual Individual Consumption for the NECG group. Chart 3.6 shows that expenditure per capita, in Ireland, is below the NECG average but above the EU27 average. Compared to other European countries, Ireland relies more heavily on what is referred to as ‘voluntary healthcare payments’. Private health insurance forms the bulk of such payments. Household ‘out-of-pocket’ payments are also relatively high compared to other jurisdictions.

**Chart 3.6 Total current expenditure on health (SHA) per capita in 2015 (constant purchasing power standard)**

![Chart showing total current expenditure on health (SHA) per capita in 2015 (constant purchasing power standard).]

**Source:** Eurostat (2018a)

Using Eurostat data and adjusting for price differences suggests that Ireland is spending similar amounts per capita as the NECG countries. We should bear in mind that given Ireland’s relatively younger population, we would expect, other things equal, that spending would be higher in the comparator countries.
3.5 Healthcare Capacity
Acute hospital inpatient bed capacity is an important indicator of system capacity. Though, changes in medical practice allied to improved treatment and investment in primary healthcare may lessen the medical need for inpatient bed capacity it remains an important indicator of system capacity.

Chart 3.7 Acute Hospital Inpatient Bed Capacity (Beds per 1,000 of population) in 2015 (excluding long-term nursing care)


Clearly, the need for acute hospital bed capacity is related to the age-profile of the population. With a relatively younger (but gradually ageing) population, Ireland does not need as many acute hospital beds. This is quite apart from bed capacity in long-term nursing or rehabilitative care which is likely to be highly correlated with population age-structure. Chart 3.8 recasts the data comparison to the population aged 65 and over.
Chart 3.8 Acute Hospital Inpatient Bed Capacity (Beds per 1,000 of population aged 65 and over) in 2015 (excluding long-term nursing care)


The ratio of acute beds to 1,000 of population aged 65 and over has been falling, in Ireland, over time. In addition, the ‘rate of ageing’ as measured by the growing share of 65 year olds and over between 2015 and 2030 is projected to be among the fastest among EU Member States. The share is set to rise from just over 13 per cent currently, to 18 per cent by 2030 and 25 per cent by mid-century.

Chart 3.9 provides an overview of hospital bed occupancy rates as reported by the OECD. There has been a sharp rise in occupancy rates for acute hospital beds in Ireland since the beginning of the century. At close on a 95 per cent rate, Ireland had the highest recorded occupancy rate of any OECD country in 2015. Such a high occupancy rate is far from desirable or safe given the need to maintain a certain proportion of beds for unforeseen needs as well as flexible allocation. The actual occupancy rate is likely to be in excess of 100 per cent in some hospitals for particular times of the year given the extent of reported over-capacity with patients on trolleys or in hospital day departments kept open at night time on an emergency basis. While conditions and patterns of patient turnover can vary, the optimum accepted bed occupancy rate is probably somewhere in the region of 85 per cent according to the health literature (Fotovich, Hughes and McCarthy, 2009).
3.6 Healthcare Staffing

A whole-time equivalent of 115,468 persons were employed in the public health sector in February 2018 of whom 75,000 were directly employed by the HSE and a further 40,000 were employed in voluntary health institutions. Out of a total of 10,120 medical and dental staff, 2,977 were hospital consultants, 6,327 were non-consultant hospital doctors and 815 were classified as other medical or dental professionals. The overall total of public health service staff has recovered, slowly, since a trough of just below 100,000 in 2014. While total numbers employed in February 2018 exceeded those in 2017, the total of nurses in the public system was still below the pre-recession level notwithstanding growth in population as well as a somewhat older population compared to a decade ago.

Chart 3.10 shows that, in 2015, Ireland had 11.9 nurses to 1,000 of population which was similar to the NECG average. The Irish figure includes not only nurses providing direct care to patients, but also those working in the health sector as managers, educators and researchers.
Table 3.2 Total whole-time equivalent staff employed in the public health service, 2007-2017 (HSE and Section 38 staff)

<table>
<thead>
<tr>
<th>Category</th>
<th>2007</th>
<th>2014</th>
<th>2018 (Feb.)</th>
<th>% change 07-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical/dentist</td>
<td>8,005</td>
<td>8,817</td>
<td>10,120</td>
<td>26.4</td>
</tr>
<tr>
<td>Nursing</td>
<td>39,006</td>
<td>34,509</td>
<td>37,857</td>
<td>-2.9</td>
</tr>
<tr>
<td>Health and social care</td>
<td>15,705</td>
<td>13,640</td>
<td>15,990</td>
<td>1.8</td>
</tr>
<tr>
<td>Management/Administration</td>
<td>18,044</td>
<td>15,112</td>
<td>17,803</td>
<td>-1.3</td>
</tr>
<tr>
<td>General support</td>
<td>12,900</td>
<td>9,419</td>
<td>9,429</td>
<td>-26.9</td>
</tr>
<tr>
<td>Other patient &amp; client care</td>
<td>17,846</td>
<td>17,829</td>
<td>24,269</td>
<td>36</td>
</tr>
<tr>
<td>Overall total</td>
<td>111,506</td>
<td>99,326</td>
<td>115,468</td>
<td>3.6</td>
</tr>
</tbody>
</table>

Source: Department of Health (2018) and Health Service Executive (2018b)

Chart 3.10 Numbers of practicing nurses per 1,000 of population in 2015


Chart 3.11 shows the OECD data on numbers of practising doctors. There is an evident shortfall in practicing doctors per 1,000 of population in Ireland. As with Chart 3.10, some non-European English-speaking countries have been included given the tradition of medical staff mobility among these countries.
Chart 3.11 Numbers of practising doctors per 1,000 of population in 2015


In common with health systems elsewhere a large part of the public health budget is consumed by wages and salaries. Given the nature of healthcare, workers in the health system are likely to be more highly educated, on average, than elsewhere in the labour force. Specialists and medical staff are paid in line with historical as well as cross-country patterns, especially in the English-speaking world. Care is needed in comparing salaries and conditions given the wide variation in circumstances as well as differences in the cost of living and the 'social wage' in different countries.

It is possible to compare salaries of different categories of health personnel using published OECD data. A comparison of absolute wage or salary levels of specific health professionals is complicated by a number of factors including the level of GDP per capita, price level differences as well as definitional or classification difficulties. For example, using data on remuneration of health professionals from the OECD database, it is possible to calculate the absolute annual average salary of nurses in public hospitals. This shows that hospital nurses, in Ireland, earned on average US $63,875 per annum in 2016 (adjusted by Purchasing Power Parity to reflect differences in overall prices).
This number was below that of Australia and the USA but above that in Canada and the United Kingdom and was the highest among the NECG countries for which data were available in 2016. The corresponding figure in nominal Euro values for hospital nurses in Ireland in 2016 was €50,817. A number of caveats apply. The definition of nursing professionals varies across countries and the data for Ireland may not be directly comparable. Care is needed in comparisons especially as the inclusion of various categories of nurse aids or nurse students under the heading of practicing nurses in other countries may bias estimates of average remuneration.

An alternative comparison of the relative remuneration of healthcare professionals can be achieved by looking at pay in the healthcare sector as a ratio of the average wage occurring in each country. As Chart 3.12 shows, Ireland has one of the lowest rates of remuneration of the NECG countries, with the average nursing salary almost equivalent to the overall average wage.

Evidence on the total incomes of General Practitioner Doctors is not readily available. However, it has been possible to access Irish Revenue Commissioner data on the remuneration of General Practitioner Doctors. In the case of self-employed GP doctors, the average annual income, in 2015, was €121,833. This number includes all income from public and private practice and is net of costs incurred by GP in their business practices. Chart 3.13 shows published OECD data on the remuneration of consultant doctors in an international context, once again reported as a ratio of overall average pay.

---

3 The OECD definition of nurses is as follows (OECD, 2017:153): ‘The number of nurses includes those employed in public and private settings providing services directly to patients (‘practising’) and in some cases also those working as managers, educators or researchers.’

4 These data were obtained by the CSO under statistical confidentiality and in strict adherence to the relevant legislation on national statistics.

5 Source: Online OECD database at http://stats.oecd.org under ‘Remuneration of Health professionals’
Chart 3.12 Remuneration of Nurses (ratio to average wage in 2015)

<table>
<thead>
<tr>
<th>Country</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>1.24</td>
</tr>
<tr>
<td>New Zealand</td>
<td>1.24</td>
</tr>
<tr>
<td>Australia*</td>
<td>1.19</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1.15</td>
</tr>
<tr>
<td>Germany*</td>
<td>1.13</td>
</tr>
<tr>
<td>Belgium</td>
<td>1.11</td>
</tr>
<tr>
<td>Canada</td>
<td>1.09</td>
</tr>
<tr>
<td>EU18</td>
<td>1.06</td>
</tr>
<tr>
<td>NECG</td>
<td>1.05</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1.04</td>
</tr>
<tr>
<td>Ireland</td>
<td>1.01</td>
</tr>
<tr>
<td>France*</td>
<td>0.95</td>
</tr>
<tr>
<td>Finland</td>
<td>0.94</td>
</tr>
</tbody>
</table>

**Note:** Data for countries with * refer to 2014.

**Source:** Organisation for Economic Cooperation and Development (2018).
Evidence on the ‘total’ remuneration of consultants is not available. In the case of what OECD terms ‘specialists’ (consultant doctors), the reported average annual income was €159,724 in 2016. However, this estimate refers, only, to income from public practice. The comparison shown in Chart 3.14 is potentially misleading due to the absence of any data on the private income of Irish Hospital Consultants. The method used by the Department of Health in relation to hospital consultants differs from that in the case of GPs. In the case of hospital consultants, gross salary in respect of public patient or public hospital work is estimated on the basis of salary scale averages. To this is added a small flat annual payment. The estimate excludes call- out, on-call allowances and all private practice income. Data refer to hospital consultants and exclude non-consultant hospital doctors.
Chart 3.14 Remuneration of salaried specialists doctors (ratio to average wage in 2015)

4. INEQUALITIES IN HEALTH OUTCOMES AND ACCESS

4.1 Health outcomes in Ireland: Comparisons over time and across countries

Significant improvements in a number of key health outcomes have been achieved over recent decades across most countries of the world, including Ireland (OECD, 2018). Whilst there is no single explanation for these improvements, a number of factors have been cited as key, including reductions in infant mortality, rising living standards, improved lifestyles and better education, as well as advances in healthcare and medicine (Drevenstedt et al, 2008; Marmot, 2007). More recent improvements in population health have been attributed to lower mortality and better survival from conditions such as heart disease and cancer affecting older age groups (Crimmins and Beltran-Sanchez, 2011; OECD, 2017).

Health however is a multifaceted concept, with no single indicator able to provide a comprehensive assessment of population health (Berger et al, 2016; McDowell, 2006; Murray et al, 2002). Even so, measurements of health remain of fundamental importance as they allow us to obtain a picture of and quantify the overall health status of a population, as well as to monitor population health over time (Murray et al, 2002). The most commonly used measures for these purposes tend to include life expectancy, rates of mortality and morbidity, health-adjusted life expectancies and self-reported health (Berger et al, 2016; Farrell et al, 2008). These measures have added utility in that internationally harmonised measures based on each of these indicators are available, making it possible to not only monitor changes to health outcomes over time, but also to compare health outcomes across countries in a valid and reliable way (Berger et al, 2016).

Life expectancy measures how many years, on average, a person is expected to live based on current age and sex-specific death rates. The data presented in Chart 4.1 looks at how improvements in life expectancy in Ireland compare to improvements in other EU countries. From this it is clear that significant advances have been made, with life expectancy at birth increasing from 73.5 years in 1986 to 81.5 in 2015. Ireland has overtaken a number of EU countries including Austria, Denmark and Germany, although, interestingly, the rate of improvement in life expectancy in Ireland has not been as fast paced as it has been in some other countries.

Among OECD states, Ireland is close to the OECD average life expectancy at birth of 79.6 years for males and 83.4 years for females, while at age 65, life expectancy is 19.7 years in
Ireland, compared to and OECD average of 19.5 (OECD, 2017).

Chart 4.1 Life expectancy at birth across the European Union in 1986 and 2015

Source: Eurostat (2018b)

Chart 4.2 shows trends in life expectancy at birth and at age 65 in Ireland over the period 1986 to 2015, by gender. There has been a steady improvement in life expectancy both at birth and at age 65 for both males and females. Those who have looked at factors which have been driving these increases in life expectancy have found that the greatest gains in life expectancy have been achieved in the older age groups, which is argued to reflect decreasing mortality rates from major diseases (OECD, 2017).

Moreover, Chart 4.2 shows evidence that the gender gap in life expectancy has narrowed over the past 30 years. Nonetheless, women still have a life expectancy at birth which is 3.8 years more on average than men. At the age of 65 the gap in life expectancy between males and females is 2.6 years. This compares to a gendered gap in life expectancy at birth in 1986 of 5.6, and 3.8 for life expectancy at age 65.
Chart 4.2 Trends in life expectancy (at birth and at age 65) for men and women in the Republic of Ireland, 1986-2015

Source: Eurostat (2018b)

The incidence of certain conditions and diseases has also exhibited a positive trend. Circulatory diseases account for over one third of deaths in OECD countries (OECD, 2017). For example, the rate of death from ischaemic heart disease dropped by 62 per cent in Ireland between 1990 and 2015. However, the rate remains above the OECD average and well above the average for EU states in 2014 (OECD, 2017). On the other hand, the rate of death from cerebrovascular disease which can cause strokes was below the OECD average, but still above the EU average in 2015.

Chart 4.3 shows that age-standardised death rate per 100,000 of population was slightly lower in Ireland, than it was across EU-28 countries. For some principal causes of death however the likelihood of dying was higher in Ireland per 100,000 of population than it was across EU-28 countries, Specifically, Ireland had a higher age-standardised death rate for non-respiratory cancers and respiratory diseases.
While rates of mortality are useful, it is also worthwhile to consider rates of amenable and preventable mortality as these indicators are increasingly recognised as ‘better’ indicators of the effectiveness of the health care system (Lavergne and McGrail, 2013). The concepts of amenable and preventable mortality are based on the idea that certain deaths could be ‘avoided’ if there had of been more effective public health and medical interventions in place (Eurostat, 2017). A death can be considered amenable if it could have been avoided through optimal quality health care, whilst a death can be considered as preventable if it could have been avoided by public health interventions focusing on wider determinants of public health, such as behaviour and lifestyle factors, socioeconomic status and environmental factors.

Whilst the amenable and preventable mortality indicators do not provide a definitive measurement of the quality of the health care, they do provide some indication for the quality and performance of health care and indeed wider public health policies (Gubb, 2007). In addition to health care and public health policies, other factors related to the likelihood of individuals to contract a disease or to seek medical advice - such as education, social class, health beliefs, levels of concerns, costs of diagnosis and treatment - are likely to influence the number of amenable and preventable deaths (Gay et al, 2011; Nolte and McKee, 2004). Improvements in health policies should translate into lower numbers for amenable and preventable death. However, there is likely to be a long-time lag between implementation of health (care) policies and changes in the mortality rates, and hence...
conclusions need to be drawn with caution (National Institute for Health and Clinical Excellence, 2007).

For both amenable and preventable mortality the figures for Ireland are below the EU-28 average, but nonetheless remain substantially higher than for a number of countries. In 2014 the incidence of amenable mortality was higher in Ireland than it was in Austria, Denmark, Sweden, Belgium, Cyprus, Italy, Norway, Spain, Netherlands, Luxembourg, France, Switzerland and Liechtenstein. The incidence of preventable mortality was closely approximate to that of Germany but higher than in albeit higher than in Luxembourg, Portugal, Netherlands, France, Greece, Sweden, Malta, Norway, Switzerland, Spain, Cyprus, Italy and Liechtenstein.

Chart 4.4 Amenable and preventable mortality, standardised deaths rates per 100,000 inhabitants

![Chart showing amenable and preventable mortality rates per 100,000 inhabitants across different countries.]

Source: Eurostat (2018d)

Moreover, whether extra years of life gained through increased longevity are spent in good or bad health remains a crucial question. Since life expectancy and patterns of mortality and morbidity are not able to fully answer this question, indicators of health expectancies, such as healthy life years have been developed in an attempt to capture quality of life spent in a healthy state, rather than the quantity of life. Healthy life years is an important indicator which has been designed to monitor whether the extra years of life are spent in a healthy state. The current main indicator of healthy year life expectancy is a measure which indicates how long people can expect to live without a disability which may limit their usual
activities.⁶ Chart 4.5 shows that Ireland compares relatively well to EU countries in terms of healthy year life expectancy and is significantly above the EU average, with a healthy year's life expectancy rate at birth for females of 69.8, and 67.3 for males.

Chart 4.5 Healthy Years Life Expectancy at birth across the European Union, by gender, 2016

Looking at changes in healthy year life expectancy over time within Ireland for both males and females we again see evidence of considerable improvement, with an increase from 65.6 to 69.8 for females over the period 2007 to 2016. The improvement has been slightly better for males, increasing from 62.9 to 67.3 for males over the same period. Moreover, the gender gap in healthy year life expectancy at birth is narrower than what it is for life expectancy at birth. Interestingly, whilst the data above relate to healthy years life expectancy at birth the data for healthy years life expectancy at age 65, show that although women have a higher life expectancy than men, men will experience a slightly higher proportion of healthy life years than women.

⁶ HLY is calculated annually by Eurostat for each EU country, based on life table data and age-specific prevalence data on long-term activity limitations. The underlying health measure utilised for this is the Global Activity Limitation measure, which measures limitation in usual activities, and comes from the EU-SILC survey.
We turn next to how Ireland compares in terms of self-reported health. Consideration is given to a well-known and commonly utilised indicator which is based on asking individuals to self-report the presence of some or severe long-standing limitations in ability to carry out usual activities due to health problems. Chart 4.7 shows the most recent cross-country comparison of these results, where we again see that Ireland compares relatively well, with the percentage of both males and females who self-report long-standing limitations in usual activities due to health problems below the EU average. 18.5 per cent of females and 17 per cent of males reported such limitations, compared to an EU average of 26 per cent for females and 21.9 per cent for males. Nonetheless, Ireland does perform worse in this area than some other countries, namely Sweden, Malta, Cyprus and Bulgaria. Long-standing limitations in usual activities due to health problems are also substantially lower for males in Norway and Iceland.
Looking at the overall picture of health outcomes it is clear that on the whole Ireland compares relatively well for each of the overall population measures of health, including life expectancy, patterns of mortality and morbidity, health year life expectancy, and self-reported health. In many cases Ireland not only performed above average, but also has been witnessing significant improvements in average population health. Nonetheless, in recent decades there has been increasing interest in moving beyond cross-country comparisons of health outcomes based on average population measures, towards measures which capture within-country inequalities in health outcomes. In this sense, there is increasing recognition that average achievement or improvement in health outcomes is not a sufficient indicator of a country’s performance on health, with inequalities in the distribution of health based on socio-economic status becoming an increasingly prominent feature of policy agendas, and so it is this to which we next turn.

### 4.2 Socio-economic inequalities in health outcomes

The close tie between socio-economic status and health is clear, with a strong international evidence base showing that markers of socio-economic status such as social class, employment status, absolute and relative income, and levels of education do matter for the different health outcomes considered in the previous section (Farrell et al, 2008; Marmot, 2007; Wilkinson, 1996; Wilkinson and Marmot, 2003; Marmot, 2007). The evidence on this is clear with a robust body of evidence which shows that health outcomes vary across a
clear social gradient, whereby health outcomes generally improve the higher one’s socio-economic status (Lynch et al, 2000; Marmot, 2007; Wilkinson and Marmot, 2003). Moreover, numerous studies have shown that these relationships remain across various markers of socio-economic status and a range of different health outcomes including life expectancy, morbidity, disability, healthy year life expectancy, and self-reported health (Acheson, 1998; Marmot et al, 1978; Marmot et al, 1984; Marmot, 2010; Marmot and Shipley, 1996; Townsend et al, 1986).

The broad evidence base also shows, very clearly, that there is not a simple social threshold below which health outcomes get worse (Marmot, 2007; Wilkinson and Marmot, 2003; Pickett and Wilkinson, 2009). There is instead, a social gradient in health, with people with a higher socio-economic status tending to have better health outcomes on average when compared to those in positions slightly lower than themselves. For example, those in the most senior management jobs live longer, on average, than those in slightly less senior management jobs. This latter group, in turn, will live longer, on average, than people in junior management jobs, and so on (Marmot, et al., 1978; Marmot, et al., 1984; Marmot and Shipley, 1996; Marmot, 2010). Health inequality is not therefore, an issue just of poverty, but is related to socio-economic inequality more widely.

Interestingly, much of the evidence base in this area was carried out in the 1990s when there was an intense, lively debate amongst scholars about the need to move beyond a focus on average health outcomes and the importance of taking into account inequalities in health outcomes within the population, and amongst different social groups. At this time then there existed much research evidence which documented the extent of socio-economic inequality in health (Balanda and Wilde, 2001). However, once the extensity of socio-economic inequality in health outcomes was demonstrated the focus of scholarly attention shifted on to examine causal explanations for the relationships found, which led to a lack of frequent publication from academics presenting a descriptive picture of health in terms of socio-economic inequalities. Nevertheless, across many countries Governments and statistical agencies took up this role and alongside the monitoring of average health outcomes, also began to monitor and report on socio-economic inequalities in health outcomes.

This however has not been the case in Ireland where published statistics on the relationship between socio-economic inequality and health are not nearly as timely as they
could be. Indeed, disappointingly at European level where data does exist to compare socio-economic inequalities in health across countries, in many cases data for Ireland is missing. More frequent and detailed analysis by Government is required in relation to socio-economic inequalities in health outcomes in order to increase understanding of the socio-economic inequalities on the island. As said, this is common practice in many countries, including the UK.

Nevertheless, to the extent that data are available for Ireland, the evidence shows a clear correlation between key indicators of socio-economic position and health. In so far as possible, the most up-to-date data on the relationship between socio-economic position and health will be presented for each of the health outcomes considered in the previous section. Where possible the data for a number of different indicators of socio-economic position are presented, although there are some notable limitations in published statistics. Namely, whilst data are available at European Union level for healthy year life expectancy by income quintile, and level of educational attainment for the majority of countries, no such data are available for Ireland. This represents a significant limitation in the available published statistics as evidence for other countries tend to find a steeper social gradient in healthy years life expectancy, than what is found for life expectancy (Bajekal, 2005; Kelly, Baker and Gupta, 2000).

Chart 4.8 details the relationship between life expectancy at birth by area of deprivation ranking, which shows an increase in life expectancy for both males and females at each incremental step of the income hierarchy, providing evidence of the social gradient in life expectancy at birth. A baby boy born in 2006 in a geographical area of acute deprivation can expect to live, on average, 4 years less than a baby boy born in the least deprived areas in the same year. A gap of almost 3 years exists for females. It is also noticeable that male life expectancy is particularly impacted in the most deprived areas.
A similar social gradient is found in the relationship between life expectancy at birth by social class, whereby those in higher occupational positions having a higher average life expectancy (Chart 4.9). Male managerial and technical workers had the second highest life expectancy (79.8 years) followed by skilled manual workers (78.7 years). The situation for females was broadly similar with professional workers having the highest life expectancy (86 years) and unskilled workers the lowest (81 years). Moreover, similarly to the relationship between life expectancy at birth and income there is a steeper gradient in life expectancy for males by occupational social class than there is for females, with a gap of just over 6 years in life expectancy at birth between male professional workers and unskilled workers. This compares to a gap of 5 years for females.

There also exist considerable variations in life expectancy at age 20 by level of education for both males and females (Chart 4.10). Specifically, there is a gradient in life expectancy at age 20 with those with only primary level education having a significantly lower average life expectancy, compared to those with secondary education. Similarly, those with only secondary level educational qualifications have a considerably lower average life expectancy than those with third level education. There is almost 10-year gap in life expectancy at age 20 for males with only primary education compared to those who have completed third level. The gap for females is not as large, although a difference of almost 6 years remains.
Chart 4.9 Life expectancy at birth, by occupational social class

Source: Central Statistics Office (2010)

Chart 4.10 Life expectancy by level of education, at age 20

Source: Central Statistics Office (2010)

Chart 4.11 also demonstrates evidence of clear occupational social class gradients in the standardized death rates for both males and females. For example, unskilled workers are almost twice as likely to die as professional workers (standardized death rate per 100,000 unskilled workers was 790, versus 459 for professional workers). The likelihood of death varied across all occupational social class groups and was generally lower the higher one’s occupational social class standing. Furthermore, in spite of increases in life expectancy, men continue to have higher death rates. This relationship holds across each occupational social class, with the exception of skilled manual and semi-skilled occupations where the death rate for females is slightly higher. Thus, in both professional occupations and unskilled
occupations males are more likely to die, than females. Moreover, the gap between males and females is larger the lower the occupational social class. Specifically, males in professional occupations are 11 per cent more likely to die than their female counterparts. This compares to males being 13 per cent more likely to die in unskilled occupations than females.

Chart 4.11 Standardised death rates (per 100,000 population) by occupational social class

Source: Central Statistics Office (2010)

In looking at trends across European countries in socio-economic inequality in amenable mortality Mackenbach et al (2017) found remarkable declines in mortality from conditions amenable to health care occurred across all socio-economic groups over the period 1980 to 2010. This they explain probably reflects gradual improvements in the quality or accessibility of health care services, as well as changes in health behaviours and social environments. They found that whilst absolute inequalities have been largely stable (that is, differences in terms of deaths per 1,000 people), widening relative inequalities are developing between those with a low-level of education and those with a high-level of education. This they argued can be explained by the fact that relative declines in amenable mortality - that is, declines measured as a fraction or percentage of mortality rates at the start of the study period - have been larger among people with high education, compared to those with low education. The authors conclude that these findings are suggestive of socio-economic inequalities in the quality or accessibility of health care services.
These results are in line with the findings of numerous other international studies which have examined socio-economic inequalities in amenable mortality which have included Ireland as one of the countries for observation (Feller et al, 2017; Plug et al, 2007). Nevertheless, a more detailed study for Ireland which focuses on the extent, trends and changes in the relationship between different markers of socio-economic status and amenable and preventable mortality, and which puts this data in an international context would make an important contribution to the debate.

Looking at how socio-economic status impacts upon self-reported health Chart 4.12 shows the relationship between those who self-report that they have very good or good health by income quintile. What is evident is that there is significant variation in self-reported good/very good health, with health dependent on where on the income hierarchy one sits. In this sense, there is evidence of a social gradient in self-reported health with the percentage share of those reporting good or very good health increasing the higher up the income ladder one goes. 72.2 per cent of those in the bottom quintile report good or very good health, compared to 72.5 per cent in the second income quintile, 78.2 per cent in the third income quintile, 83.4 per cent in the fourth income quintile and 85.9 per cent in the top income quintile.

**Chart 4.12 Share of persons aged 16 and over with self-reported very good or good health, by income**

![Chart showing the percentage of people reporting very good or good health by income quintile](chart)

**Source:** Eurostat (2018f)
There is also evidence of a clear relationship between level of education and likelihood of self-reporting good or very good health. Indeed, 71 per cent of those with lower secondary education or less self-reported good or very good health. This compared to 86 per cent of those with upper secondary and post-secondary non-tertiary educational qualifications, and close to 90 per cent of those with a third level qualification reported who reported very good or good health.

**Chart 4.13 Share of persons aged 16 and over with self-reported very good or good health, by level of education**

![Chart 4.13](chartimage)

**Source:** Eurostat (2018g)

Overall, a number of inter-related reasons have been put forward to explain inequalities in health. These include:

- Material and structural explanations which identify the problem as inequality in access to resources in society (Shaw et al 1999). Importantly, access to resources is an important determinant of people’s abilities to access health care, with evidence showing that inequalities in health outcomes are compounded by socio-economic inequalities in access to health care.

- Behavioural explanations which focus on the roles and responsibilities of individuals and societies in ensuring their health and welfare (Bartley, 2004).

- Psycho-social and social cohesion explanations which concentrate on the effects of social cohesion on the health of different groups (Kawachi and Kennedy, 2002; Marmot, 2004; Marmot, 2007; Pickett and Wilkinson, 2009).
4.3 Access to health care

A strong evidence base shows that access to health care is a fundamental determinant of health. As we have seen Ireland has a complex multi-tier system of healthcare, in which people on lower or middle incomes sometimes struggle to access needed healthcare while people with private voluntary health insurance get preferential access to care in state hospitals or to higher-quality treatment in the separate private hospital sector (Bigood, 2013). These problems have led to a feeling in the Irish population that the current healthcare system is tiered and unequal, with access to health care not being determined based on need (Bigood, 2013; McDaid et al, 2009).

We therefore turn now to look at the extent to which demand for health care is fulfilled in Ireland, and also how Ireland compares to other countries. Moreover, it is worth comparing and assessing the specific reasons for unmet health needs, as it is not necessarily the case that the system of health care provision will have the capacity to meet all health care needs. In this sense, access to health care is not only determined by the model of provision in the health system, but also by the ability of the system to efficiently handle the health care needs of the population.

Nevertheless, the WHO (2008) point out that ‘health-care systems contribute most to improving health and health equity where the institutions and services are organised around the principle of universal coverage …and where the system as a whole is organized around Primary Health Care’ (PHC).

Unmet need has been identified as a critical indicator for identifying health care access problems Unmet need can be a result of issues of availability, affordability or proximity of access to health care. Unmet needs can also arise for personal reasons (including fear of not being understood, dismissal of the need to access health care, or not having the time to seek health care). Information on unmet need is usually obtained by asking individuals if there was a time when they needed health care but did not receive it (Allin and Masseria 2009).

The analysis begins by looking at the unmet needs for health care which refers to the proportion of persons aged 16 or over that felt they needed health care in the previous 12 months but did not receive it for reasons of financial barriers, long waiting lists and transportation problems.
In terms of unmet needs for health care Chart 4.14 shows that a total of 26.5 per cent of the EU-28 population aged 16 and over in need of health care reported to have unmet needs for health care. The share of persons was highest in Latvia at 41.8 per cent and was lowest in Cyprus at less than 10 per cent. Ireland had the second highest share of persons reporting unmet needs for health care at 40.6 per cent - substantially higher than the EU-28 average of 26.5%.

Chart 4.14 Share of persons aged 16 and over reporting unmet needs for health care

Source: Eurostat (2019h)
Note: (1) Estimates (2) Provisional data (3) Data for 2015.

Focusing on the three types of reasons considered for not receiving health care when needed in Ireland it turns out that finances was the most frequently reported issue, with 35.9 per cent of persons aged 15 and over reporting finances as an issue. As shown in Chart 4.15 this was the highest proportion of persons across all EU-28 countries. Long waiting lists were reported as the reason for unmet needs for health care for 27.2 per cent of persons aged 15 and over. This is significantly above the EU-28 figure of 18.7 per cent, and again amongst the highest reported figure across all countries, with only four countries having a higher share of persons reporting unmet needs for health care as a result of long-waiting lists.
Chart 4.15 Share of persons aged 15 and over reporting unmet needs for health care, by specific reason, 2014 or nearest year

![Chart showing unmet needs for health care by reason and country]

Source: Eurostat (2018h)
Note: (1) Unreliable data for distance or transportation reason.

Next we look at the extent to which there is unmet need specifically in terms of medical examination or treatment. Around 4.5 per cent of the population on average across the EU-28 reported unmet needs for medical examination in 2016. As shown in Chart 4.16 there are large variations across countries, with the highest reported share in unmet needs for medical examination found in Estonia, whilst the lowest was Austria. The percentage share of unmet needs for medical examination in Ireland was just below the EU-28, with 3.3 per cent of persons aged 16 and over reporting unmet needs for medical examination. Nevertheless, this represents an increase from 2.4 per cent in 2004. Moreover, whilst the share in Ireland was below the EU-28 average, a higher share of persons had an unmet need for medical examination than numerous other countries including the United Kingdom, Germany, Spain, Norway, and Switzerland.

In Ireland the majority of those reporting an unmet need for medical examination or treatment noted that their unmet healthcare need was due to affordability issues (60 per cent) or waiting lists (24 per cent). Other reasons accounted for 16 per cent of unmet needs for medical examination of treatment. Indeed, in looking at the data across countries presented in Chart 4.17 it becomes clear that Ireland has among the highest share of persons who have reported unmet needs for medical examination of treatment due to the issue of cost.
Chart 4.16 Share of persons aged 16 and over reporting unmet needs for medical examination or treatment

Source: Eurostat (2018i)
Note: (4) Estimates (5) Provisional data (6) Data for 2015.

Chart 4.17 Share of persons aged 16 and over reporting unmet needs for medical examination or treatment, by main reason

Source: Eurostat (2018i)
Note: (1) Estimates (2) Provisional data (3) Data for 2015.

Taking altogether the evidence suggests that Ireland performs relatively poorly in terms of the share of persons with unmet health care needs, but modestly in terms of the share of persons with unmet needs for medical examination or treatment. In looking at the specific reasons for unmet needs it is clear that cost/financial issues and waiting lists are the key.
reasons for unmet health care demands in Ireland. This evidence confirms the findings from existing national studies, as well as numerous international studies that charging for health services does influence its use (Nolan and Nolan, 2007).

Research by Connolly and Wren (2017) provides further insight to these findings, and in particular provides an assessment of how the system of health care provision influences unmet health care needs. They found that those with private health insurance were least likely to report an unmet health care need and only those with neither a medical card nor private insurance were significantly more likely than medical card holders to report an unmet health care need.

In terms of the specific reasons for unmet health care needs Connolly and Wren (2017) show that those with largely free public healthcare entitlement were more likely than all other eligibility categories to report that their unmet need was due to waiting lists, rather than cost. They go on to argue that it is probable that unmet needs due to cost is picking up on the relatively high out-of-pocket payments for primary care for those who must pay for GP visits; while unmet need due to waiting is identifying the relatively long waiting times within the acute hospital sector for those within the public system (Connolly and Wren, 2017).

Moreover, Connolly and Wren (2017) amongst others point to the importance of socio-economic status in determining likelihood of having unmet health care needs. Importantly however previous studies have found that the relationship between socio-economic status and unmet need varies depending on the indicator of socio-economic status used. We therefore turn next to the latest available data and assess the extent of socio-economic inequalities in health care access.

4.4 Socio-economic inequalities in health access
In looking at the socio-economic distribution of unmet needs for health care it is clear that socio-economic status is correlated with unmet needs. Looking specifically at the distribution of unmet needs for health care by educational attainment level it becomes clear that a higher level of educational attainment is associated with a lower likelihood of having unmet needs. That is, there is a social gradient, in terms of likelihood of having unmet needs for health care dependent on level of educational attainment. As Chart 4.18 shows, those with less than primary and lower secondary levels of educational attainment, have the
highest levels of unmet needs for health care. A slightly lower share of persons with upper secondary and post-secondary non-tertiary educational attainment report unmet needs for health care, followed by those with tertiary level educational attainment.

Looking next at the breakdown of reasons for unmet health care needs across different levels of educational attainment it is clear that across all levels of educational attainment financial reasons are the most frequently reported reason, with 47.5 per cent of those with primary and lower secondary levels of educational attainment, 40.8 per cent of persons with upper secondary and post-secondary non-tertiary educational attainment and 23.8 per cent of those with tertiary level educational attainment reporting financial reasons for unmet health care needs.

Waiting lists are also an important determinant of unmet health care needs. Interestingly, whilst there is evidence that those with the highest levels of educational attainment i.e. tertiary (23.5 per cent) are the least likely to report long-waiting list as reason for unmet health care needs, those with upper secondary and post-secondary non-tertiary educational attainment (30.3%) are the most likely to report long-waiting lists as an issue.

**Chart 4.18 Self-reported unmet needs for health care by sex, specific reasons and educational attainment level**

![Chart 4.18](image-url)

*Source: Eurostat (2018)*

In terms of unmet needs for medical examination it can be seen that the frequency of
reporting such unmet needs for reasons of cost decreased with increasing income. Indeed, those in the lowest income quintile have the highest likelihood of reporting unmet needs for medical examination. This proportion continually declines at each incremental step up the income distribution, with those in the highest income quintile the least likely to report unmet needs for medical examination.

Cost is the main reason those lower down the income distribution report unmet need for medical examination. Similarly, those in the lowest income quintile are most likely to report long waiting list as a reason for unmet needs for medical examination. At each incremental income quintile an increasingly declining proportion of people report long-waiting lists as the reason for unmet medical examination (Chart 4.19).

Together the findings, in terms of the relationship between income and unmet need for medical examination due to cost and waiting list, provides evidence of the importance of social position in ability to access healthcare. The findings suggest that reporting unmet needs for medical examination due to cost may go beyond the necessity of having to pay for care directly. It could be that people with lower incomes are less able to by-pass waiting lists compared with higher income groups, because they are not able to afford private health insurance. It could also be that those reporting issues of cost are less able to take time off work. Low-income groups have been shown to be more effected by a fear of loss of income, and a higher degree of job insecurity all which may lead the respondent to report the expense of medical examination as an issue.

**Chart 4.19 Self-reported unmet needs for medical examination by specific reason, by income quintile 2016**

*Source: Eurostat (2018k)*
These data are in line with those reported by Connolly and Wren (2017) whereby a significant, stepwise gradient was observed between income quartile and the likelihood of reporting an unmet healthcare need. Specifically, lower income groups more likely to report unmet healthcare needs, even with adjustment for eligibility category. That said, Connolly and Wren (2017) do find that the impact of income on the likelihood of reporting an unmet need was particularly strong for those without free primary care and/or private insurance.

Using another indicator of socio-economic status - educational attainment level – there is further evidence of the importance of social position in terms of access to healthcare. Interestingly however, the relationships found are slightly different than what was seen between income and unmet needs for medical examination. Here, as shown in Chart 4.20 whilst again those with tertiary levels of educational attainment are the least likely to report unmet needs for medical examination, those who have upper secondary and post-secondary non-tertiary are the most likely to report unmet needs for medical examination. Furthermore, those with upper secondary and post-secondary non-tertiary levels of educational attainment are the most likely to report cost as an issue, followed by those with tertiary level. Those with less than primary and lower secondary levels of education have the highest likelihood of reporting waiting list as the reason for their unmet needs for medical examination.

**Chart 4.20 Self-reported unmet needs for medical examination by sex, age, main reason declared and educational attainment level**

![Chart 4.20](chart.png)

**Source:** Eurostat (2018)

The evidence presented above demonstrates that access to health care in Ireland is determined by one’s socio-economic status. Those with a lower social position are more
likely to report unmet health care needs, as well as medical examination and treatment needs. Thus, when looking at the situation for Ireland as a whole it is clear that cost and waiting lists were the key reasons for unmet health care need, these issues are more problematic for those with lower income and lower levels of education attainment.

Thus, whilst possible inequities are mitigated by the medical card system, inequities persist in health care with relatively higher levels of unmet demand arising from long waiting lists for those towards the bottom of the socio-economic ladder. It is such evidence which supports the contention of many that those with access to private health insurance get to skip the queue.

Evidence of the importance of cost for those in a lower to middle socio-economic position is also unsurprising given that those who have neither access to medical card nor private health insurance face relatively high levels of unmet demand due to the cost of accessing health care. These people tend to be in the lower to middle income position on the income distribution.

Taken together the findings presented in terms of socio-economic inequalities in health suggest a role for the health system to seek to eradicate socio-economic inequalities in unmet need. This becomes all the more important when we take into consideration the extent of socio-economic inequalities in health outcomes. In this sense, unequal health care access is an important determinant of socio-economic inequality in health outcomes, which in itself is a consequence of our current complex, and multi-faceted system of health care provision. In this sense the evidence would suggest that access to health care is currently strongly related to ability to pay, and that provision is not based purely on need.
5. THE COST OF DELIVERING CHANGE

5.1 The merits of different approaches to health care funding

The extent to which individuals and households share the cost of healthcare with the State or with other actors varies considerably across the world. In terms of the share of total funding for health, the State accounts for around 85 per cent in Norway and 30 per cent in India with OECD and EU averages falling typically in the 70 to 80 per cent range (OECD, 2017). At just under 70 per cent, the Republic falls towards the bottom half of EU Member States in terms of the proportion accounted for by public funding.

The advantages and disadvantages of different healthcare models according to the basic typology of Busse, Schreyögg and Gericke (2007) are outlined in this section. Healthcare systems in which general taxation are predominant are sometimes referred to as conforming to a ‘Beveridge’ model following the ground work that was laid for the Post-World-War Two welfare state in the United Kingdom. Universal access to a wide range of public health care services is assured while the cost is covered by general taxation. The extent of universality and width of coverage varies across the countries that adopt this model (Gottret and Schieber, 2006).

Funding models reliant on general taxation have the advantage of income progressivity – the more one earns, the more one pays into a common public pool of resources (Wagstaff et al., 1999). A general taxation approach may involve lower administrative costs compared to private or social health insurance models found in many European countries. Healthcare funded mainly or exclusively out of general taxation is vulnerable to the economic and political cycle as a considerable portion of national income and government revenue is claimed by health care (Reeves, McKee, Basu and Stuckler, 2014), (Gottret and Schieber, 2006).

Social insurance financing is similar to general taxation in as much as payment into the system generally reflects ability to pay and that these payments fund access that is not dependent on individual means. These systems are distinct, however, in that payments are directed to funds that cannot be drawn upon for other purposes (McPake, Normand Smith, 2013). Payments into the system are drawn from regular contributions on the part of the insured, usually funded by wage-based payments, and directed towards quasi-public bodies which manage care and procure provision (Normand and Busse, 2002). Social insurance systems tend to be slightly more costly than general taxation systems, though performance
is similar in many respects (Wagstaff, 2010). Earmarked funding often enhances transparency as direct linkages are made between contributions and expenditures, which help secure political support (Thomas, Normand and Smith, 2006). Social insurance funding also exhibits some resilience in the face of austerity and variations in state revenues, although recessions can also impact revenues (Reeves, McKee, Basu and Stuckler, 2014). In line with tax funded models, social insurance models which utilise a single purchaser can benefit from the simplicity of arrangements arising from a single purchaser of healthcare and efficiencies arising from monopsony power\(^7\) in negotiations with providers, driving down costs (Thomas and Darker, 2013).

Universal systems built around private insurance rely on competition between profit seeking insurers and a government mandate to purchase a package of care, which can be subsidised in the case of lower income families. Depending on the degree of subsidisation, private insurance-based systems are relatively regressive. Despite the presence of competition, these systems can entail escalating costs, potentially associated with marketing costs and the necessity of a profit margin on sold packages (Wren and Connolly, 2016). Theoretically, competition should drive down administrative costs, improve delivery efficiency and reduce the price of a given package (Wren and Connolly, 2016). However, competition is often limited in practice, and the package switching necessary for efficiency does not occur in practice (Thomson, Busse, Crivelli, Van de Ven and Van de Voorde, 2013). Ryan, Thomas and Normand (2009) observe that efficiencies from economies of scale have driven consolidation in the Dutch case, limiting competition. However, some efficiency has been realised regarding the procurement of prescription medication for the larger insurers (Ryan, Thomas and Normand, 2009). In the case of Ireland, it is questionable whether a number of insurers could coexist at sufficient scale to realise these efficiencies, given the small size of the Irish population limits the potential for competition and realised efficiency gains (Ryan, Thomas and Normand, 2009). Empirical analysis suggests that increased administrative costs arise with competitive private insurance models (Mathaeur and Nicolle, 2011).

Whatever the merits of the different funding arrangements there are strongly inherited incentives and cultural norms associated with health provision and funding that makes reform difficult. Private insurance is strongly embedded in the Irish case and is seen as a type of essential good given a perceived lack of capacity or efficiency or both in the public

\(^7\) Monopsony describes a market with a single buyer for a product or service.
health care system. The government's failed 'Universal Health Insurance' proposal of 2013 floundered on concerns about costs and capacity to deliver universal coverage though such a proposal (Wren and Connolly, 2016). The misnamed Universal Health Insurance proposal was a type of mandatory, competitive private health insurance model with unclear boundary lines and very uncertain cost implications.

While universal healthcare is far from entrenched in the Irish case, the existence of a system of tax provision of substantial size (even if less so than in Western European comparators) suggests that a plausible programme for transition would likely draw on and expand the tax funded public sector. The social insurance system in Ireland remains underdeveloped and shifting the funding of the health service to social contributions is unlikely given the current lack of institutional capacity. Even so, significant funds could be drawn from social insurance. Rates of incidence of social insurance remain low and increases in social contributions could be used in conjunction with general taxation to fund reform. However, a policy to expand funding and provision would need to be firmly linked to a programme of structural reform staged over a number of years in such a way as to demonstrate that a publicly-funded system ensuring universal access to all essential health care services is worth paying for and worth supporting.

<table>
<thead>
<tr>
<th>Table 5.1 Broad merits of different funding models</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Private Insurance</strong></td>
</tr>
<tr>
<td>Financial (raising sufficient revenue)</td>
</tr>
<tr>
<td>Economic efficiency and affordability</td>
</tr>
<tr>
<td>System (complexity and degree of change)</td>
</tr>
<tr>
<td>Political (fit with values)</td>
</tr>
</tbody>
</table>

**Source:** Thomas (2017)

### 5.2 How much will it cost?

The 2017 Sláintecare report has estimated the likely costs associated with a transition to a single tier public system in the Republic of Ireland. These costs encompass permanent budgetary changes associated with an expanded entitlement package in the public system, as well as one-off payments designed to effect systemic transition and address historic shortfalls in investment for public provision. The potential for success of Sláintecare lies in its consensus-based approach to bringing about a single-tier healthcare system. Its
weakness lies in its avoidance of the need to discuss how such a transition could be funded. The Report stated (Houses of the Oireachtas, 2017:133):

*The Committee appreciates that it is for the Government of the day to resolve how this transitional funding should be resourced.*

Three key areas where ‘out-of-pocket’ expenditure households should be gradually reduced according to the recommendations in the Sláinte Care Report are:

- GP service free for all.
- Free drugs subject to strict cost control or public procurement regulations.
- Removal of public hospital overnight charges (€80 per night and capped at €800 per annum).

**Table 5.2 Additional Costs Associated with Introduction of Single Tier System**

<table>
<thead>
<tr>
<th>Expenditure Item</th>
<th>Total (Billion €)</th>
<th>Average Annual Expenditure (Millions €)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expansion of Entitlements</td>
<td>2.8</td>
<td>284</td>
</tr>
<tr>
<td>Universal Health Care Transition</td>
<td>0.9</td>
<td>157</td>
</tr>
<tr>
<td>System Legacy</td>
<td>2.1</td>
<td>347</td>
</tr>
</tbody>
</table>

*Source:* Sláinte Care Report (Houses of the Oireachtas, 2017:134)

The report estimated that a once off injection of approximately €3 billion over six years would be required to facilitate expanded capacity. The report highlighted deficiencies in infrastructure and staffing levels as matters stand. It proposed, in addition to a programme of entitlement expansion which would permanently raise expenditure by an estimated €3 billion per annum, two other funding streams as follows: a System Legacy fund designed to address shortfalls arising from substantial cuts in system funding (particularly capital funding) in the aftermath of the recession and subsequent austerity measures and a Transitional funding. The latter would include the implementation of the e-health initiative, investment in primary care as well as ‘Out-of-Hours’ facilities, training for medical professionals and community diagnostics. The largest single item, comprising 41 per cent of Transitional funds, is attached to renovation in the hospital sector and expansion of bed capacity.

The other broad expenditure heading listed is Expansion of Entitlements. This expansion
incorporates seven main areas:

- Expansion of the health and well-being budget,
- Reduction and abolition of user fees,
- Expansion of primary care provision,
- Expanded social care,
- Additional funds for mental health initiatives,
- Funds for dentistry and

Spending within this category amounts to a step shift in funding, phased over a ten-year period. This means that annual funding would rise, cumulatively, over a ten-year period giving an additional cumulative spend of €2.8 billion euro per annum.\(^8\) It should be noted that much of this cost directly offsets savings on direct out of pocket costs incurred by households and would therefore represent a shift in payments from households to Government paid for out of general taxation or social insurance. Significant out of pocket savings were estimated, in Sláintecare:

- remove inpatient charges for public care (€25 million),
- reduce prescription charges for medical cardholders (€133.6 million), and
- lower the drug payment threshold (€259 million).

The proposals also entail the introduction of free GP funding at the point of access (€455 million) and ending the private costs faced by patients who currently face market rates.

Likewise, additional public funding would be required to eliminate private medical practice from public hospitals as recommended in Sláintecare. Over time, this may entice some households to lower or abandon private health insurance if the provision of public health was deemed more satisfactory. The estimated cost of public subsidy of private health care in public hospitals has been given as €649 million per annum (Houses of the Oireachtas, 2017). This should free resources for more public elective care. €119 million was recommended for additional hospital consultants in public hospitals, which if it were implemented and accompanied by adequate resources and training would improve access and lower waiting lists.

Entitlement expansion was proposed to happen over a ten-year period, at an average rate

\(^8\) This figure will be subject to pressures arising from demographics and changes in healthcare costs, along with the rest of the system.
of some €284 million a year. A front-loading of the projected increase is proposed in the report with the bulk of it happening in the first six years of the programme. Projected annual increases reach a maximum in year three, trailing back until year seven, where additional funding drops to €70 million per annum. This frontloading of expenditure has important budgetary implications in terms of available fiscal space, an issue to which we return below.

**Table 5.3 Additional annual expenditure associated with expansion of care entitlements (Sláintecare)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Annual Increase Relative to Previous Year (Millions €)</th>
<th>Cumulative Increase in Annual Expenditure (Millions €)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>396</td>
<td>396</td>
</tr>
<tr>
<td>2</td>
<td>459</td>
<td>854</td>
</tr>
<tr>
<td>3</td>
<td>464</td>
<td>1,318</td>
</tr>
<tr>
<td>4</td>
<td>409</td>
<td>1,727</td>
</tr>
<tr>
<td>5</td>
<td>411</td>
<td>2,138</td>
</tr>
<tr>
<td>6</td>
<td>384</td>
<td>2,522</td>
</tr>
<tr>
<td>7</td>
<td>71</td>
<td>2,594</td>
</tr>
<tr>
<td>8</td>
<td>90</td>
<td>2,684</td>
</tr>
<tr>
<td>9</td>
<td>75</td>
<td>2,759</td>
</tr>
<tr>
<td>10</td>
<td>77</td>
<td>2,836</td>
</tr>
</tbody>
</table>

*Source: Sláintecare Report (Houses of the Oireachtas, 2017:134)*

Over and above additional transitional costs, funding will be required to:

- maintain healthcare provision at its current level to meet price inflation;
- meet the potentially rising costs of new drugs, interventions and technologies (some of which may also save money); and
- provide for a growing population as well as shifts in the demographic composition of the population due to an aging population.

The Sláintecare Report has provided an estimate of 1.6 per cent growth per annum to cover the additional expenditure associated with demographic change. This is broadly in line with Department of Health estimates (2014; 2016). This is also consistent with the range of average annual cost growth elsewhere in the literature (Goldrick-Kelly, 2016) (Connors, Duffy and Newman, 2016).

The other major cost driver is price inflation. This comes into two parts: (i) general price inflation across the economy (ii) additional price inflation specific to health care goods and
technology. Following the Sláintecare Report, we assume an annual average price inflation rate of 1.4 per cent over and above the economy-wide rate (Houses of the Oireachtas, 2017). The ECB’s medium-term target for the economy-wide rate is just under 2 per cent per annum.

These cost driver assumptions form the basis of the expenditure exercise we undertake here. What may be referred to as ‘stand-still costs’ incorporating demographic, general public sector cost-inflation and health sector specific cost-inflation tend towards approximately 5 per cent per annum – just above the long-term average growth in GDP assumed under benign economic growth conditions. These relatively modest growth rates assume some gains in efficiency relative to historical trends which exhibit higher growth rates in many instances (De la Maisonneuve and Martins, 2015).

This growth rate determines the growth of aggregate total current health expenditures. In addition, we assume the public portion of these expenditures, which influences demands on government resources going forward, is determined by a convergence condition. Specifically it is assumed here that, by 2029, public expenditures reach 85 per cent of total current expenditure. Compositional changes reflect expansions in public provision from 2019 onwards consistent with Sláintecare’s Expansion of Entitlements.

In this scenario, total health expenditure, incorporating both public and private funding sources, rises significantly in nominal terms out to 2030, nearly doubling in nominal terms over the period from an estimate of €20.8 billion in 2016 to a projected figure of €40.6 billion in 2030 under the central cost driver assumptions. With a transition to a single-tier healthcare system, current public spending grows faster than aggregate expenditure, at an annual rate of between 6 and 7 per cent over the course of the transition period. These increases in public expenditure are associated with declines in total private expenditure from their peak in 2019. Private spending falls from an estimated high of €6.8 billion in 2018 to €6.0 billion in 2030. This results in a larger portion of total current spending falling under public provision, which reaches 85 per cent in 2029. A figure of 85 per cent public share of current spending would correspond to the upper end of the data range internationally in 2016. This expansion is broadly consistent with the thrust of Sláintecare.

---

9 A second growth model adds an additional 2 per cent annual growth factor which can be seen as growth in the absence of efficiency, additional medical inflation, or additional unforeseen demand.
10 This model approximates costings within the Sláintecare report. See Appendix for comparisons.
11 See Appendix for comparisons between the two models.
12 The second assumption set results in higher cost growth and thus a larger expenditure claim.
If no such transition occurs, public expenditures would be €6 billion lower in 2030 with a matching increase in private expenditure.\(^\text{13}\)

**Chart 5.1** Nominal Current Expenditure on Health by Financing Scheme 2016-2030 (Millions €)

Incorporating capital expenditure estimates from the National Development Plan (Government of Ireland, 2018) and Sláintecare, we can display the implications of system transition for fiscal space.\(^\text{14}\) In the absence of system transition, health costs still place significant demands on annual fiscal space. These costs climb to €1.4 billion by 2030. Costs associated with an increase in the relative size of public health expenditure as well as additional capital investment range from approximately €200 to €800 million. Since demands on fiscal space arise due to additional expenditures, the impact of additional Sláintecare capital is once off, only occurring as the transition programme begins.\(^\text{15}\) The

---

\(^{13}\) This assumes no additional demand arising from expanded public provision.

\(^{14}\) The no transition case maintains current public spending at 2016 levels as a function of total current expenditures (c. 70.2 per cent) and excludes additional capital expenditure from the Sláintecare report.

\(^{15}\) This is due to the even spread of investment over time.
The vast majority of annual additional resources required come from additional current public expenditure.\textsuperscript{16}

It should be noted that any programme to realise change within the public health system will do so in the context of funding demands for other public projects and departmental funding. To try to capture something of the magnitude of these additional pressures, an approximation of additional non-health exchequer spending in light of demographic and general inflation costs is included within the model.\textsuperscript{17} These estimates also include provision for investment spending as outlined in Sláintecare and the latest budgetary releases by government.

**Chart 5.2 Additional Resources Required to Realise Health System Transition and Accommodate Stand-still Costs in Other Public Services (€ Millions)**

[Bar chart showing expenditures from 2019 to 2030]


\textsuperscript{16} Insofar as this gap is generated from the convergence in the transition scenario towards 85 per cent of total current spending arising from public sources, the gap represents the possible range. Targets between c. 70-85 per cent fall within this range.

\textsuperscript{17} The "stand-still" costs used here are outlined further in Appendix.
Our exercise implies that these claims (inclusive of capital expenditure) are likely substantial (Chart 5.2). Average required additional spending associated with health averages at just under €1.6 billion between 2019 and 2030, though additional expenditures of over €2 billion are required as the transition programme is completed in 2029. The additional resources required to maintain other expenditures and realise capital investment plans average over €2.4 billion and approach €3 billion by 2030.

The implications of additional public expenditure in the context of available ‘fiscal space’ under EU rules must be considered. The fiscal space will depend on rates of growth in GDP, among other factors. Chart 5.3 shows available additional ‘fiscal space’ under three economic scenarios ranging from ‘benign’ to ‘initial recessionary’, after transition and maintenance costs are considered for health and the public service. This can be understood as additional budgetary resources available after these costs are accounted for.

**Chart 5.3 Estimated fiscal space left over after Sláintecare is implemented (Millions €)**

Assuming a transition to 85 per cent public current funding by 2030, we estimate that under all three scenarios there is likely to be a need for some additional discretionary revenues at some point over the course of the transition process from 2019 to 2030. This is particularly true in the opening phase of the transition in 2019. Health will have to fight its corner within a constrained fiscal space given cost pressures in competing areas of spending such as education, public transport, water infrastructure and income support for an ageing population.

Discretionary revenue measures can be put in place to increase the fiscal space for public spending and help fund a transition to a new system of healthcare. A government may relieve the pressure on fiscal space and remain within fiscal rules by matching spending increases with revenue increases. Allowing for ‘standstill costs’ as well as transition under Sláintecare proposals, the amount of ‘fiscal space’ left varies according to which economic scenario is assumed. Even under ‘benign’ conditions, total fiscal space left over only amounts to less than 2 per cent of total annual public spending in 2022 – the year when fiscal space is at its largest. This in the context of existing under-spends in other areas of public spending (McDonnell and Goldrick-Kelly, 2017).

Adjustments on the revenue side are very likely to be required to accommodate a transition in the public health system reform, address cost pressures in the existing public system and rectify shortcomings in public spending even under relatively benign economic conditions and cost growth assumptions. Our estimates suggest that it will be difficult to accommodate the necessary growth in health spending through buoyancy arising from economic growth alone. Moreover, allowance must be made for economic shifts and shocks associated with world trade conditions, changing corporate tax rules, and the gradual unwinding of UK membership of the European Single Market and Customs Union if such is to happen.

Additional revenue measures will need to be considered carefully in line with general proposals to reform income tax and social insurance. There may be a case for some degree of ‘ring-fencing’ of health spending and associated revenue streams. However, there are political and administrative limits to this. Ultimately, we must be ready to pay for health either from our own pockets (which many cannot afford to do) or through some form of private health insurance (which many cannot afford to do either) or through a reformed system of progressive taxation.
Despite the implied increase in taxation many households could see net gains arising out of savings on private insurance premiums as well as a substantial reduction in out of pocket payments. The Sláintecare report (2017) suggests that this may save households close to €1.5 billion, or between €285 and €294 per person. Thus, many households may see their financial situation improve despite revenue raising measures at higher income households and individuals. This indicates there is scope to increase taxes by €1.5 billion without damaging final domestic demand.
6. CONCLUSION

This paper describes an Irish healthcare system that has achieved much in the last number of decades but also one that is being hampered by congenital inequality. There is a need for a new healthcare system to seek to eradicate socio-economic inequalities in unmet need by broadening and deepening access to healthcare. This becomes all the more important when we take into consideration the extent of socio-economic inequalities in health outcomes. Moving toward a publicly-funded, single healthcare system, as SlainteCare proposes, is the best way to achieve these aims.

To fund a unitary public health service free at the point of access to all residents will require considerable additional funding. Government revenues will have to be bolstered by increases in discretionary taxation above and beyond increases in the tax take generated by economic growth. It will not be possible to garner popular support for higher taxes without a root and branch reform of the service. Rather than seek a big bang approach to reform it would seem better to achieve progress in particular areas with new innovations and pilots building up to a critical mass effect where people see the benefits of a unitary public health service that does not compromise patient safety and offers equal access to everyone on the basis of need and not ability to pay.
REFERENCES


Department of Health (2014) Introduction of Lifetime Community Rating (LCR) to the Private Health Insurance, Department of Health: Dublin

Department of Health (2014)Projected Demographic Effect on Health Service Costs in 2015, Dublin: Department of Health

Department of Health (2016) Planning for Health: Trends and Priorities to Inform Health Service Planning 2017, Dublin: Department of Health

Department of Health (2017) Health in Ireland: Key Trends 2017, Department of Health: Dublin

Department of Health (2018) Employment in the Health Service, Department of Health: Dublin


Eurostat (2018a) Health Care Expenditure by Provider

Eurostat (2018b) Life Expectancy by Age and Sex

Eurostat (2018c) Causes of death - standardised death rate by residence
Eurostat (2018d) Causes of Death by Sex

Eurostat (2018e) Amenable and Preventable deaths of residents

Eurostat (2018f) Healthy life Years (from 2004 onwards)

Eurostat (2018g) Self-Perceived health by sex, age and income quintile

Eurostat (2018h) Self-perceived health by sex, age and educational attainment level

Eurostat (2018i) Self-reported unmet needs for health care by sex, age, specific reasons and educational attainment level

Eurostat (2018j) Self-reported unmet needs for medical examination by sex, age, main reason declared and labour status

Eurostat (2018k) Self-reported unmet needs for medical examination by sex, age, main reason declared and income quintile

Eurostat (2018l) Self-reported unmet needs for medical examination by sex, age, main reason declared and educational attainment level


Health Services Executive (2018a) *Our Structure*, HSE:Dublin


Ireland. The Provision, p.63.


Townsend, P., Phillimore, P. and Beattie, A. (1986) Inequalities in health in the Northern region: an interim report. Published jointly by the Northern Regional Health Authority and the University of Bristol.


APPENDIX

Modelling Health and Public Services Costs

Within Section 5, estimates are made concerning the fiscal impact of systemic change and reform in the Irish health system in line with the recommendations of Sláintecare. This is in the context of costs arising from demands on other public services. This Appendix outlines the assumptions underpinning these approximations.

Firstly, a model of healthcare costs is constructed with the following assumptions:

- The transition period begins from 2019. Health expenditure to that point is allowed expand at an annual rate of 5 per cent from the latest available preliminary SHA data for 2016 (OECD, 2018). The 5 per cent rate approximately reflects the most recent growth data between 2015 and 2016.
- Total Current Health expenditure (Public and Private) growth is driven by three factors. Current expenditure growth is driven by demography, medical technology and generalised economy wide inflation. Demographic costs and medical technology inflation reflect annual rates outlined in the Sláintecare report - or 1.6 per cent and 1.4 per cent respectively. The GDP deflator reflects SPU 2018 estimates to 2021 and is set thereafter to 1.99 per cent.18
- Two cost conditions are applied to reflect potential variation in cost growth reflecting unforeseen pressures and/or a failure to realise efficiency gains. The first, central scenario utilises the cost pressures outlined above (Scenario 1). The second, higher growth scenario, adds an additional 2 per cent annual spending growth (Scenario 2).
- Current Public health expenditure (and hence current private spending) is determined by overall health cost growth alongside convergence towards a target level of public to total expenditure by the end of the transition period. This amounts to a target of 85 per cent by 2029, which similarly continues to 2030.
- Capital spending comes from two sources. Within the Sláintecare report, reference is made to a €3 billion “Transitional and Legacy Fund” allocated over 6 years from 2019. This is adjusted to incorporate capital commitments laid out in the National Development Plan. These plans include investment towards the “eHealth initiative” contained within Sláintecare costings. Thus, adjusted Sláintecare costs are added to commitments in the NDP to avoid duplication.

18This reflects the ECB’s mandate for “price stability” defined as less than 2% inflation.
• NDP capital expenditure for health specific projects is reported to 2022. Thereafter, totals inflate by 4 per cent reflecting the behaviour of Gross Voted Exchequer spending within the report. This occurs out to 2030.19
• In addition to this, expenditures on other public services are allowed expand to reflect “standstill costs”.
• Data come from estimates of public expenditure from the SPU 2018 for 2018. Health costs are subtracted from total expenditure excluding capital spending. This current expenditure is allowed expand subsequently.
• Cost growth reflects demographic pressure and generalised inflation. Demographic pressures here are approximated here by an annualised growth rate of 1.25 per cent.20
• Gross Fixed Capital allocated within the Stability Programme Update (net of adjusted Health totals which include Slaintecare) reflects totals within the report to 2021. Figures for 2022 to 2030 are generated from 4 per cent annual growth from that point on.

**Comparison of Projection Model to Slaintecare Costings**

Sláintecare provides costings for a 10-year cumulative programme of once off investment (which ends after 6 years) and progressive expansion in expenditure on a permanent larger set of entitlements. The former programme of once off investment is incorporated into the model used within this paper in adjusted form. Sláintecare entitlement expansion allocations are not, however, directly commensurate with the health expenditure data presented here. This is due to the differing definitions of health (as distinct from other expenditures such as social care). While these costings are consistent with expenditures on health as defined by government presently, System of Health Accounts (SHA) Data allows one to account for total health spending in a consistent fashion.21

---

19 The National Development Plan reports public gross capital expenditure split between a number of sources and for various specific departments out to 2027.
20 This approximation reflects demographic pressures associated with an increase in the aggregate resident population of the Republic of Ireland as well as the net effects of an ageing populace. In the Irish case, considerable uncertainty arises around population levels due to the historically large impact of net migration, which tends to reflect the economic cycle.
21 It should be noted that definitional changes and shifts in the purview of departments could lead to inconsistent health data over time as measured by government data.
However, in aggregate terms, these definitional differences may not necessarily lead to large aggregate discrepancies in additional public expenditures if properly specified. Movement towards an 85 per cent target within the model used here seems to approximate the costs associated with entitlement expansion within the Sáintecare report.\textsuperscript{22} To 2026, the difference between the models appears to be minimal. From 2027, a gap opens progressively over time driven by higher fiscal claims associated with Health in the central model, although this gap closes in 2030. The use of the Sláintecare implies that approximately €1.9 billion less would be required for system transition and reform between 2019 and 2030 relative the model using SHA data.

**Chart A.1 Comparison of Fiscal Space Required for Health System and Other Public Services for Two Expenditure Models**

![](chart.png)

**Assumptions concerning Fiscal Space**

Fiscal space refers to the amount of additional public expenditure allowable over and above existing spending on public services such as health, education, social protection etc. Available fiscal space is dependent on an Expenditure Benchmark, which links allowable

---

\textsuperscript{22} The assumptions surrounding standstill costs are identical in both models for both health and other public expenditures.
expenditure growth to overall economic performance, as well as a Medium Term Budgetary Objective (MTO) reflecting what is known as the structural balance. The Expenditure Benchmark is the relevant factor determining how much government expenditure is allowed increase on a no change basis.\textsuperscript{23}

Fiscal space estimates under each growth scenario entail the following assumptions:

- Baseline calculation data are sourced from the latest Stability Programme Update or SPU (Government of Ireland, 2018) to 2021. This incorporates estimates of potential GDP growth, GDP deflator estimates as well as underlying expenditure prior to adjustment for Health transition and Reform. GDP growth is the only factor adjusted under the growth conditions examined.

- The reference rate represents a rolling 10-year average incorporating potential growth estimates. The expenditure benchmark is arrived at by adding this reference rate to the GDP deflator.

- Gross Fixed Capital Expenditure reflects estimates within the SPU to 2021. This is allowed expand by 4 per cent from 2021 onwards. This approximates growth within the National Development Plan (Government of Ireland, 2018).

- Interest expenditure is frozen at estimated 2021 levels and does not vary by scenario. Similarly, discretionary revenues, one off measures and cyclical unemployment adjustments. Pre-committed and other expenditure is given a value of zero beyond 2021.

- Available fiscal space and related calculations compare forecast space to required expenditures on a no policy change basis. That is, expenditure on system transition, reform, and associated standstill costs for health and the rest of the public service are not included within expenditure aggregates which, in turn, determine fiscal space. If enacted, fiscal space estimates will subsequently change as expenditures are benchmarked against a new corrected expenditure benchmark incorporating these measures.

To create three growth scenarios, potential GDP growth is adjusted to reflect three growth scenarios: the Benign, Moderate and Recession conditions.

- Under benign economic conditions, potential economic growth matches forecast estimates to 2021. Thereafter, real potential GDP is set at a constant 2.5 per cent annually.

- The moderate growth condition sees growth slow from 2020 onwards, converging at 2 per cent at the end of the transition period.

\textsuperscript{23} The Republic of Ireland has reached its MTO at the time of writing. This means further fiscal adjustment is not needed according to the Structural Balance Rule and expenditure growth is more or less directly tied to economic growth performance.
The Recession condition entails a three year recession from 2019 with contractions of 4 per cent, 2 per cent and 1 per cent. Catch-up growth occurs in year 4 and 5 of 4 per cent and 3 per cent. Growth is subsequently allowed tend towards 2% in 2029.

**Alternative Health Cost Growth Scenario**

As outlined above, projections were also undertaken to account for higher than estimated cost growth in current expenditures. This can be taken as possibly simulating higher than estimated demographic growth, inefficiency within the system or other factors.

Total Current Expenditure in 2030 is nearly €10.3 billion higher, amounting to over €50 billion under Scenario 2 assumptions than the central cost growth assumption set.

**Chart A.2 Nominal Current Expenditure on Health by Cost Growth Scenario 2015-2030**

These estimates have substantial effects on estimates of available fiscal space. In all cases, additional resources are needed above and beyond available fiscal space to meet demands. Between 2019 and 2030, an additional €8.7 billion is required to realise system change and
reform. These cost pressures exceed the available fiscal space for those years in all economic growth conditions, reaching close to €6.3 billion in the recession case.

Chart A.3 Estimated fiscal space left over after Slaintecare is implemented Scenario 2 (Millions)
# RECENT NERI WORKING PAPERS

The following is a list of recent research working papers from the NERI. Papers are available to download by clicking on the links below or from the NERI website: [http://www.nerinstitute.net/research/category/neriworkingpaperseries/](http://www.nerinstitute.net/research/category/neriworkingpaperseries/)

<table>
<thead>
<tr>
<th>Number</th>
<th>Title/Author(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>53</td>
<td>Labour Market Trends in the Republic of Ireland – Tom McDonnell &amp; Ciarán Nugent</td>
</tr>
<tr>
<td>52</td>
<td>Housing provision in Northern Ireland and its implications for living standards and poverty – Paul Mac Flynn &amp; Lisa Wilson</td>
</tr>
<tr>
<td>51</td>
<td>Wage sufficiency in the context of the Irish Housing Emergency: Rents and Access to homeownership – Ciarán Nugent</td>
</tr>
<tr>
<td>2017:</td>
<td>The gendered nature of employment and insecure employment in Northern Ireland: A story of continuity and change - Lisa Wilson</td>
</tr>
<tr>
<td>50</td>
<td>A Low skills equilibrium in Northern Ireland? – Paul Mac Flynn</td>
</tr>
<tr>
<td>49</td>
<td>Taxation and Revenue Sufficiency in the Republic of Ireland – Paul Goldrick-Kelly &amp; Thomas A. McDonnell</td>
</tr>
<tr>
<td>48</td>
<td>Northern Ireland, the Republic of Ireland and the EU Customs Union – Paul Mac Flynn</td>
</tr>
<tr>
<td>47</td>
<td>Public Spending in the Republic of Ireland: A Descriptive Overview and Growth Implications – Thomas A. McDonnell &amp; Paul Goldrick-Kelly</td>
</tr>
<tr>
<td>46</td>
<td>Patterns and Trends in employment arrangements and working hours in Northern Ireland – Lisa Wilson</td>
</tr>
<tr>
<td>45</td>
<td>A long-term assessment of Irish house price affordability- Dara Turnbull</td>
</tr>
<tr>
<td>44</td>
<td>A time series analysis of precarious work in the elementary professions in Ireland– Ciarán Nugent</td>
</tr>
<tr>
<td>43</td>
<td>Industrial Policy in Northern Ireland: A Regional Approach – Paul Mac Flynn</td>
</tr>
<tr>
<td>42</td>
<td>Ireland's Housing Emergency – Time for a Game Changer –Tom Healy &amp; Paul Goldrick-Kelly</td>
</tr>
<tr>
<td>41</td>
<td>Innovative Competence, How does Ireland do and does it matter? – Thomas A. McDonnell</td>
</tr>
<tr>
<td>2016:</td>
<td>Productivity and the Northern Ireland Economy – Paul Mac Flynn</td>
</tr>
<tr>
<td>39</td>
<td>Divisions in Job Quality in Northern Ireland – Lisa Wilson</td>
</tr>
<tr>
<td>38</td>
<td>Employees on the Minimum Wage in the Republic of Ireland –Micheál L. Collins</td>
</tr>
<tr>
<td>37</td>
<td>Modelling the Impact of an Increase in Low Pay in the Republic of Ireland – Niamh Holton and Micheál L. Collins</td>
</tr>
<tr>
<td>36</td>
<td>The Economic Implications of BREXIT for Northern Ireland – Paul Mac Flynn</td>
</tr>
<tr>
<td>35</td>
<td>Estimating the Revenue Yield from a Financial Transactions Tax for the Republic of Ireland – Micheál L. Collins</td>
</tr>
<tr>
<td>34</td>
<td>The Fiscal Implications of Demographic Change in the Health Sector – Paul Goldrick-Kelly</td>
</tr>
<tr>
<td>33</td>
<td>Understanding the Euro Crisis: Causes and Fixes – Thomas A. McDonnell</td>
</tr>
</tbody>
</table>