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L&RS NOTE

Irish health expenditure: the comparative context

Updated 26 October 2017

Introduction

This *L&RS Note* provides an overview of Irish health expenditure in a comparative context.

Key points are:

- Comparing health expenditure across countries is not straightforward, and there are a variety of ways of measuring health spend e.g. as a proportion of Gross Domestic Product (GDP)[1], or per capita; or the public versus private spend;
- To get a full picture it is necessary to look at a combination of indicators. While comparison can be challenging for all countries, difficulties relating to GDP present particular problems in Ireland;
- A key point is that comparative expenditure data need to be interpreted carefully. Additionally, spending data do not necessarily tell us about the *effectiveness or value for money* of spending;
- The most recent data on health spending in Ireland are for 2015, and indicate that current health expenditure in Ireland was €19.9 billion in 2015, up from €19.1bn in 2014;

- The biggest share of expenditure (35%) is in hospitals, followed by ambulatory care (mostly GPs and dentists) at 20%, and long term residential care at 19%. Approximately 14% of the health spend is on retailers of medical goods, largely pharmacies;
- Health expenditure in 2015 in Ireland comprised 7.8% of GDP, a decrease from 9.9% of GDP in 2014. The decrease in the proportion of spending as a share of GDP, despite an increase in actual expenditure, is due to a rise of 26% in GDP in 2015;
- The increase in GDP in 2015 had an impact on efforts to compare Ireland's health spending with other countries, as one of the key comparative measures is 'expenditure as a percentage of GDP';
- In 2014, in terms of spending as a proportion of GDP, Ireland was in 12th place, above the OECD average of 9%. In 2015, however, Ireland fell to 27th place, below the OECD average;
- The dramatic increase in GDP in 2015 led to the development of a new indicator (modified Gross National Income (or GNI*) to exclude globalisation effects which disproportionately affect the Irish economy.[2] Using this indicator, Ireland spent 11.5% of GNI* on health in 2015, and lies in third position in the OECD (using GDP as a base for other countries);

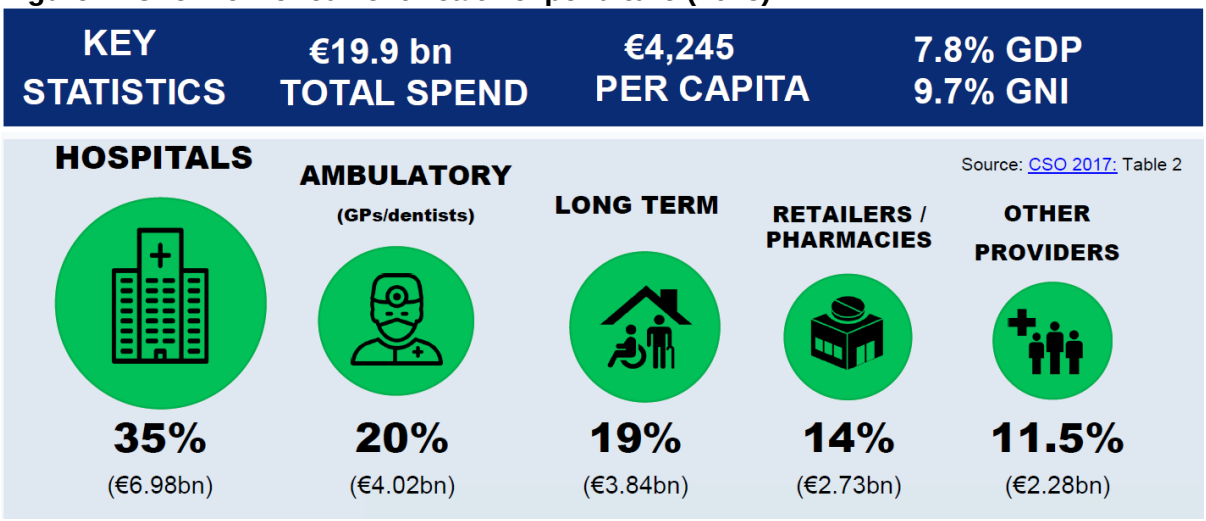
This *Note* first briefly summarises the headline data from the most recent release, before discussing issues in comparing health expenditure.

Headline health expenditure data

Since 2013, Irish health data has been compiled according to the System of Health Accounts (SHA). The SHA is a common framework[3] used across the OECD for the collection of health data, aiming to ensure that data are consistent and internationally comparable. Additional background information on the SHA is available in the Appendix to this *Note*.

Headline data from the most recent release (June 2017 with data for 2015) are outlined in Figure I below, and are discussed in more detail below.

Figure 1: Overview of current health expenditure (2015)



Source: CSO 2017: SHA 2015. Per capita data: OECD Health Statistics 2017. Other providers include ancillary providers, providers of preventative health care, providers of health care administration and financing, and others

How much do we spend?

Table 1 below summarises the headline data from the three years of Irish SHA to date. The data indicate a small increase in current health expenditure[4] from €18.8bn in 2013, to €19.9bn in 2015, comprising 7.8% of GDP or 9.7% of GNI.

Table 1: Health Expenditure (Current) in Ireland, 2013-2015

	2013	2014	2015
Current Health Expenditure (€bn)	€18.8bn	€19.1bn	€19.9bn
Current Health Expenditure % GDP	10.4%	9.9%	7.8%
Current Health Expenditure % GNI	12.3%	11.6%	9.7%

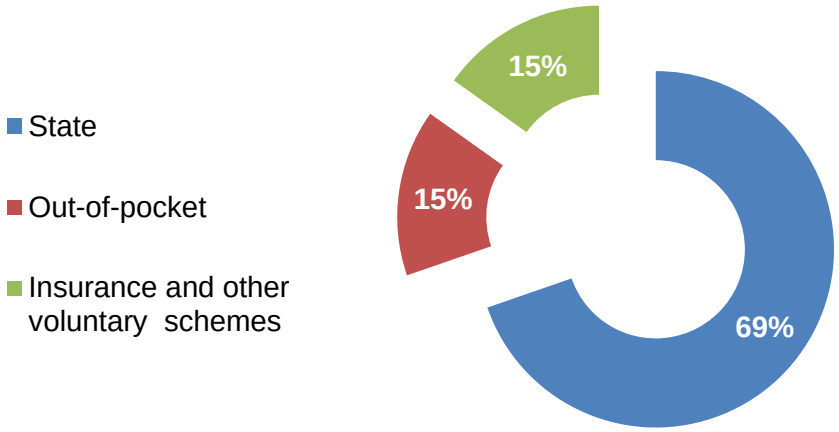
Source: CSO (2017) *SHA Annual Results 2015*

As the CSO (2017) note, the decrease in the percentage share of expenditure as a % of GDP between 2014 and 2015 is due to the increase in the GDP level over this period.

Who pays?

The bulk of financing is provided by the State (69%) with 15% from household out-of-pocket payments (see Figure 2), and the remainder from health insurance (13%) and other voluntary care payment schemes.

Figure 2: Health care expenditure by financing scheme, 2015

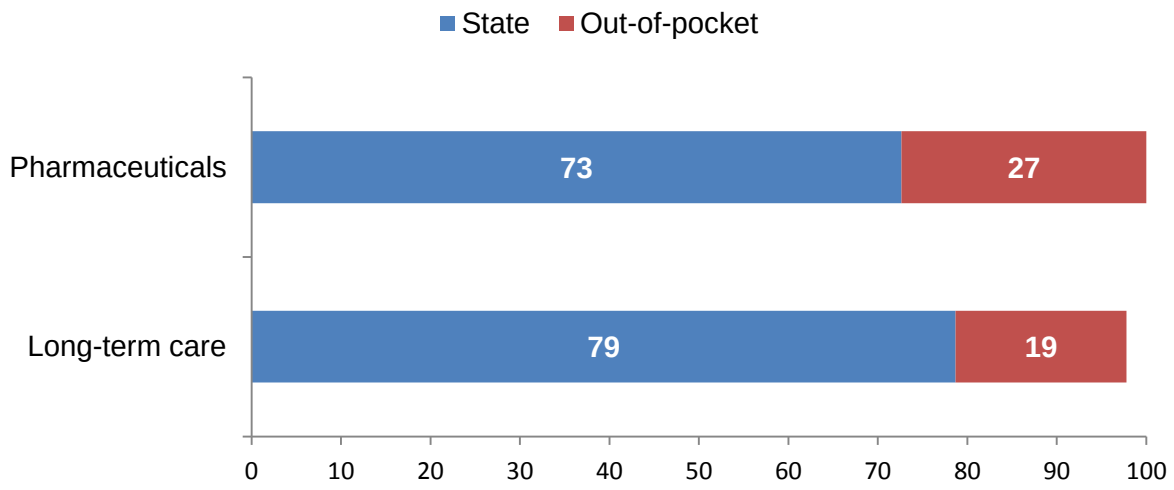


Source: CSO (2017) - SHA 2015 Table 1

However, the proportions vary by what type of health care we are looking at, as indicated by Figure 3, which contrasts State and out-of-pocket funding for long-term care and pharmaceuticals.

This shows that 27% of funding for pharmaceuticals comes from the out-of-pocket spending of households, versus 19% of funding on long-term care.

Figure 3: Financing of long-term care and pharmaceuticals, by financing scheme, 2015

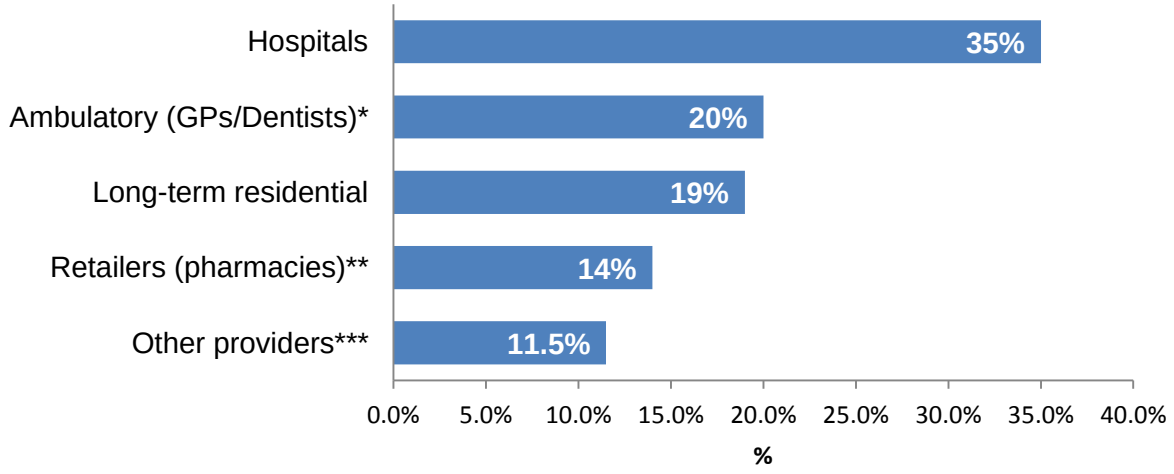


Source: CSO (2017) - SHA 2015 Table 5

Where is the money spent?

SHA data also provides substantial detail on **expenditure by provider** (Figure 4). The bulk of expenditure was in hospitals (35%), followed by ambulatory health care providers (mostly GPs and dentists) at 20%, and long-term residential facilities at 19%.

Figure 4: Current health expenditure by provider, 2015



Source: CSO (2017) - SHA 2015 Table 2. . *GPs/dentists refers to ambulatory care providers, who are predominantly GPs and dentists. **Retailers refers to retailers of medical goods generally, but predominantly pharmacies ***Other providers include ancillary providers, providers of preventative health care, providers of health care administration and financing, and others

Comparing expenditure: what is the best indicator?

The most widely used comparative dataset on health is the annually updated OECD Health Statistics and the most recent year for which comparable Irish data is available is 2015.

Amongst the advantages of OECD health expenditure data is that it compares spending efforts in terms of **purchasing power parities (PPPs)**, which are an attempt to equalise the purchasing powers of different currencies. According to the OECD definition, PPPs are 'the rates of currency conversion that equalise the cost of a given 'basket' of goods and services in different countries.' However, they are statistical constructs and as result, minor differences between countries should be treated with caution.[5] In using comparative measures generally, small differences between countries should not be over stressed, as some degree of estimation is involved in many of the measures, including the calculation of Gross Domestic Product (GDP) and Gross National Income (GNI).

Which indicator best reflects comparative health spend?

There is no single indicator which unambiguously captures how Irish health spending compares with spending in other countries. This *Note* looks at a number of indicators to compare levels of health expenditure. As will be seen, each provides a different perspective on expenditure.

- **Percentage of GDP:** this is probably the most commonly used indicator in the OECD. However, because there are large divergences between Irish GDP and Gross National Income (GNI), some commentators consider it more appropriate to express Irish health expenditure as a proportion of GNI. Additionally, the CSO have recently developed a modified GNI* indicator.[6] Comparative international data are not routinely available in either form, however, some data in relation to GNI and GNI* is provided for illustrative purposes below. (See *Glossary*, p. 16 for definitions of GDP, GNI, GNI*);
- **Per capita spending**: spending per head of population provides an alternative measure. It is useful in addition to share of GDP. Countries which have a relatively high health spend as a percentage of GDP could have a relatively low spend per capita, and the reverse could also apply. For example, both Luxembourg and Poland spend around 6% of their GDP on health, but Luxembourg spends nearly four times more per capita than Poland (see Figures 5 and 6). However, given Irish problems with the GDP measure, this may be a particularly useful measure for Ireland;
- **Composition of spending – public and private share**: in all countries, health spending is composed of a mixture of public (state) spending and private spending

(individual 'out of pocket' or private insurance company). Countries differ considerably in the relative proportions of the spend, and the proportions can also vary significantly over time;

- **Trends in health spending**: it is often interesting to see how countries compare to others in terms of trends over time. Precisely how this can be measured varies, but it is common to look at average annual growth rates over time.

How does Ireland compare?

This section compares Irish expenditure on the following measures:

- Health expenditure as a percentage of GDP;
- GDP, GNI and modified GNI compared;
- Health expenditure per capita, US$PPP;
- Composition of spending;
- Trends in health spending;
- Public/private health spending

Health expenditure as a proportion of GDP

In 2015, current health expenditure across the OECD varied from 16.9% of GDP in the US to 4.1% in Turkey (see figure 5, over). Current health spending in Ireland in 2015 accounted for 7.8% of GDP, below the OECD average of 8.9%.

In 2014, Irish expenditure (10.1%) was above the OECD average. However as noted above, the decrease in the Irish percentage is due to the large increase in the Irish GDP level in 2015.

Comparing health expenditure as a proportion of GDP, GNI or modified GNI (GNI*)

As discussed above, how Ireland compares can look different depending on the measure chosen. There are long standing debates about whether GDP or GNI is the appropriate measure for Ireland. In the Irish case, as is generally well known, there has been a larger than average difference between GDP and GNI, largely due to the repatriation of profits by multinational companies. Because of this, it has been argued that using GDP may underestimate how large a share of national income is being spent on health, and that GNI is a better measure. However, there are also issues with the use of GNI – in particular, GNI may discount some potential revenue by putting zero weight on the revenue generated by multinational corporations.[7]

Following the publication of the national accounts in July 2016, in response to recommendations of the Economics Statistics Review Group (ESRG) the CSO developed a modified GNI* indicator, adjusted for the retained earnings of re-domiciled firms and depreciations on foreign-owned domestic capital assets.[8]

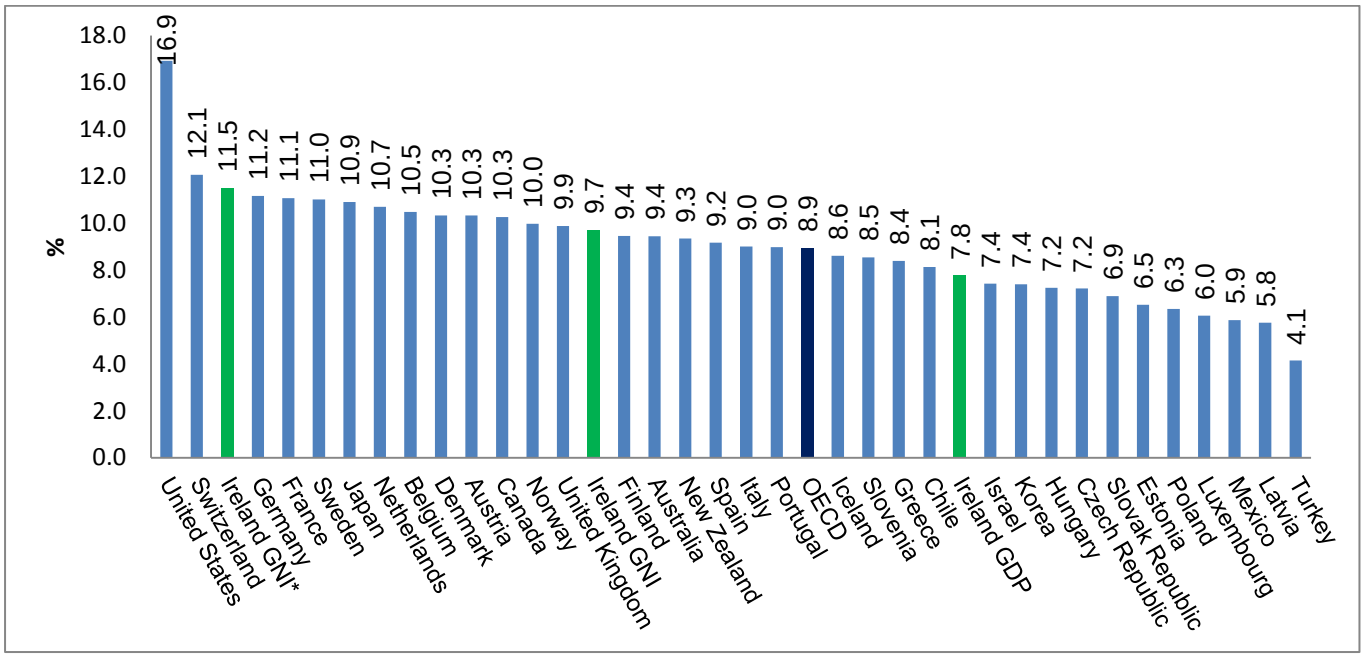
> "GNI* is designated to be a national indicator that excludes the globalisation effects that disproportionately affect the measurement of the size of the Irish economy."

Figure 5 below contrasts outcomes for Ireland for all three measures (continuing to use GDP as the base measure for other OECD countries):

- If modified GNI* is used, Ireland is well above the OECD average, and in third place below the US and Switzerland, with spending at 11.5% of GNI*;
- If GNI is used, then Ireland is just above the OECD average, just below the UK, with spending at 9.7% of GNI;
- If GDP is used, Ireland is below the OECD average, at 7.8% of GDP;

The results suggest that this is a problematic indicator for Ireland and should be used with some caution, especially if used to make policy decisions.

Figure 5: Current health expenditure as a share of GDP (OECD) and of GDP, GNI, and GNI* (Ireland) 2015



Source: OECD Health Statistics 2017 Data for GNI* calculated by L&RS based on CSO (2017) - SHA 2015 (Provisional or estimated data for some countries.)

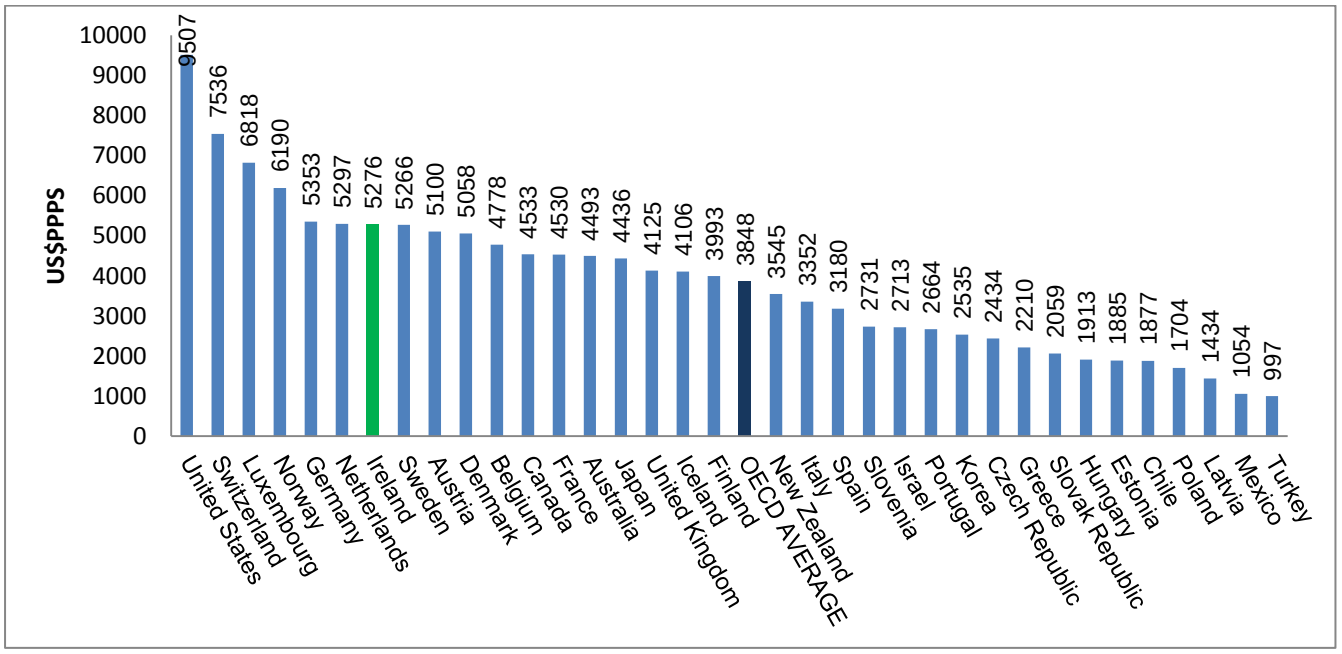
Other analyses suggest adjusting the OECD measure to take account of demographic factors i.e. the number of over 65s relative to the population as a whole.[9]

Health expenditure per capita, US$PPP

An alternative measure is to look at health spend per capita. Figure 6 illustrates spending per capita in US$ PPP, which as noted above, is an attempt to correct for the differing purchasing powers of the different currencies.

In 2015, current health spending per capita was US$5,276, which was above the OECD average of US$3,848. By this measure Ireland lies in seventh place in the OECD.

Figure 6: Current health expenditure per capita, US$ PPS, OECD countries, 2015.



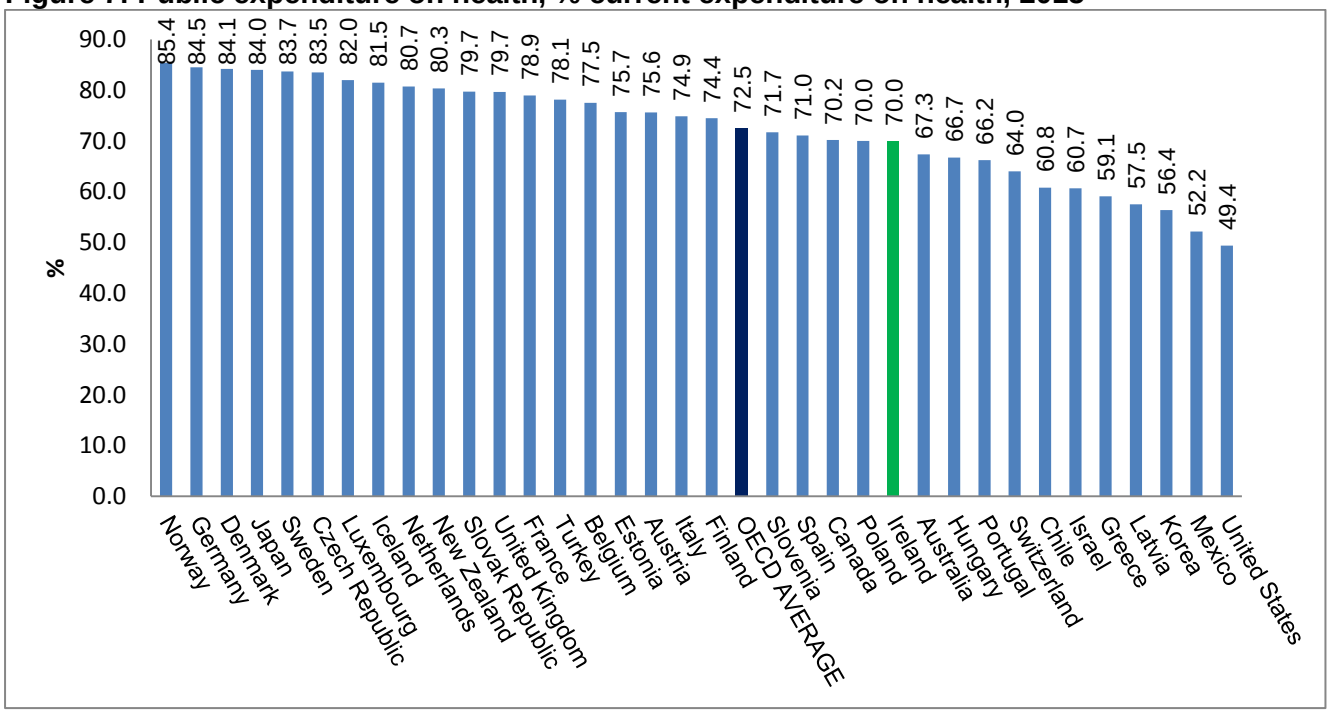
Source: OECD Health Statistics 2017 (Provisional or estimated data for some countries.)

Composition of spending

For most of the OECD, the public sector is the main source of spending – the main exception is the United States where the share of public spending is below 50% (see Figure 7). Additionally, public expenditure is below 60% in Latvia, Greece, Korea and Mexico.

In 2015, the Irish share of public current expenditure was just over 69%, below the OECD average of 72.5%. As discussed further below, the amount of health spending accounted for by the public sector in Ireland has declined in recent years.

Figure 7: Public expenditure on health, % current expenditure on health, 2015*



Source OECD Health Statistics 2017 (*or nearest year) (Provisional or estimated data for some countries.)

Trends in health spending

All the data above offers a snapshot at a particular moment in time. It is informative as to where Ireland stands in 2015 relative to the OECD as a whole, or relative to individual countries. However, as this section of the *L&RS Note* discusses, there have been shifts over time in the level and composition of Irish health expenditure. This section uses two measures to capture these shifts:

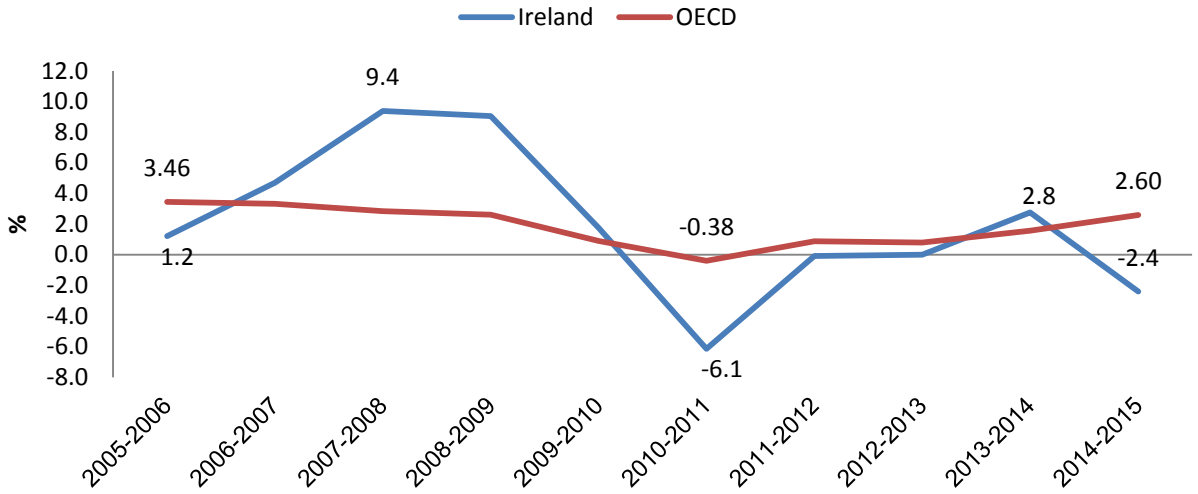
- Changes in annual average growth in health spending; and
- Changes in the share of public health expenditure.

Annual average growth in health spending

Figure 8 illustrates the average annual growth rate of current expenditure on health, in real terms, for the OECD and Ireland between 2005-2006 and 2013-2015. As this illustrates, Irish trends differ somewhat from OECD trends.

In particular, the figure shows that health spending in Ireland increased up to 2007-2008, before it reduced sharply in 2010-2011. This reduction has been attributed to cuts in wages and fees paid to professionals and pharmaceutical companies, and to reductions in the number of health workers.[10] Health spending began to increase in 2011/2012 but 'at a very modest rate'.[11] There was some decline in 2014-15.

Figure 8: Annual growth rate of current expenditure on health, per capita, in real terms 2005-2015

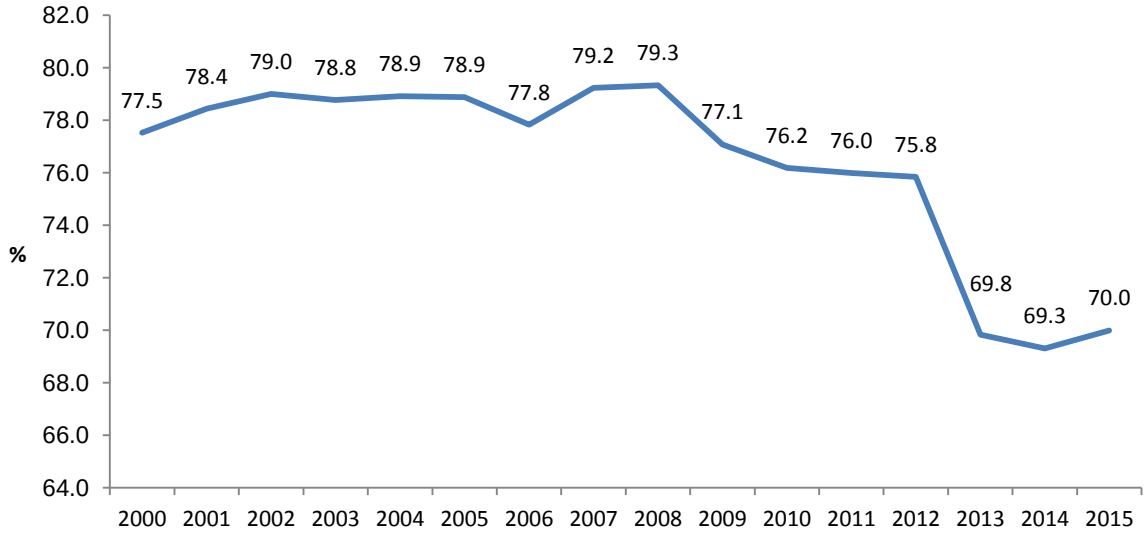


Source: OECD Health Statistics 2017 *arithmetic average.

Public/private health spending

The composition of health spending has changed over time also. As Figure 9 illustrates, between 2000 and 2015, the public share of the health spend declined from a high of 79.3% in 2008 to 69.3% in 2014, rising very slightly to 70% in 2015.

Figure 9: Public expenditure on health as % current expenditure on health, Ireland 2000-2015



Source: OECD Health Statistics, 2017

Other issues to note

There are a number of issues to bear in mind in interpreting comparative health data. For one thing, such comparisons do not tell us anything about the efficiency of the health system, or about value for money either within individual countries or across countries. The cuts in public sector wages referred to above illustrates this point. Cuts in public sector wages may lead to a cut in the absolute level of public expenditure, but not necessarily in the quality or amount of services provided.

An additional factor to bear in mind when comparing countries is demographic factors (how old or young the population is). In general, we might expect that older populations might require more expenditure on health. Ireland has one of the youngest populations in the OECD.[12]

Lastly, an issue which has long been recognised internationally as an issue affecting comparability is that the definitions and boundaries between health and social long-term care spending are not clear or fully consistent across countries. The SHA distinguishes between long-term care with a 'health purpose' and long-term care with a 'social' purpose.

As discussed further in the Appendix to this paper, since the transition to the SHA in 2013, more long-term care for older people and people with a disability are now included under the definition of Irish health care than previously, which has had an impact on levels of Irish health spending generally. The CSO note that:

> "Given that health care and social care are often delivered in the same package of services, it has been hard to separate the two types of services and thus the predominant activity (generally health care) has been used to classify the activity and associated expenditure. This has resulted in the amount of health care being somewhat over-stated in some areas."[13]

In a presentation in November 2016 on the SHA , Wren et al (2016) reviewed the data with particular focus on the issue of the long-term care comparability and noted that the data needed to be interpreted with care:

> 'Deriving lessons (or worse, policy) "at a glance" from international comparisons is potentially misleading'[14]

Appendix: The SHA - mandatory method for reporting health expenditure data from 2016

The SHA is a common framework for the collection of health data, aiming to ensure that data are consistent and internationally comparable. Reporting of health expenditure data under the general framework of the SHA is mandatory under European regulation from 2016 for 2014 data. The CSO summarised the purpose of the SHA as reproduced in Box 1 below.

Box 1: What is the system of health accounts?

System of Health Accounts (SHA) is designed to provide information about health care systems:

- How much is spent on health care provision?
- Where does the money to finance the health system come from?
- Who do we pay to provide the services?
- What kinds of services are performed and what type of goods are purchased?

Source: CSO 2016[15]

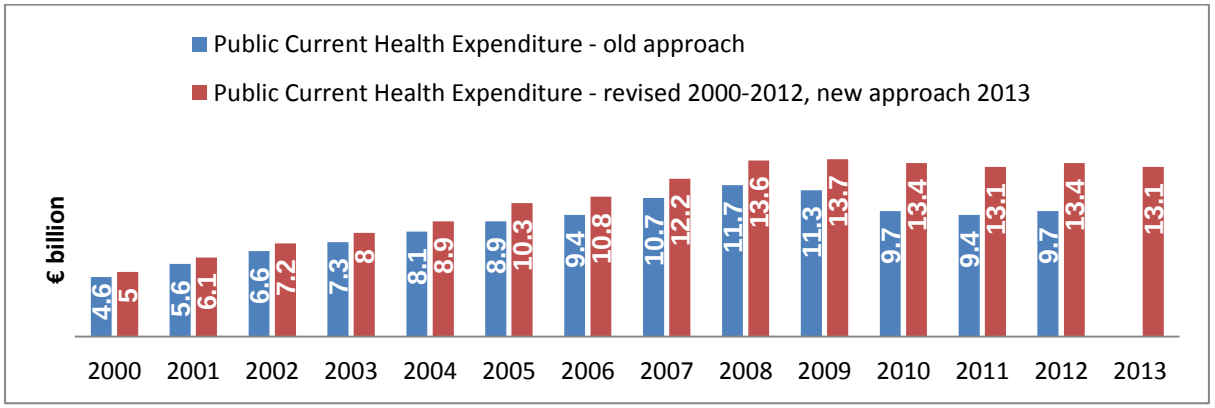
The first reporting of Irish data according to the system was published in December 2015 (preliminary data for 2013). Data for 2014 and revised 2013 data were published in June 2016.

The CSO have provided a briefing note on the SHA which outlines the purpose and methodology of the system, as well as highlighting what changes have resulted from previous estimates. Key changes identified by the CSO are:

- A detailed breakdown of current spending by 3 classifications (funders, providers and services) is provided under the SHA, while previously only high level aggregates were reported;
- The review of Irish data has led to inclusion of wider range of services as health care than previously reported;
- The main changes identified are that more long-term care for older people and people with a disability are now included under the definition of health care.

A key outcome is that expenditure levels are higher than reported under previous estimates. Figure 10 compares levels of public current expenditure under the old approach, and the revised 2013 estimates under the SHA.

Figure 10: Health expenditure SHA methodology and previous methodology, 2000-2013



Source: CSO (2015) SHA Annual results 2013 (Preliminary)

Glossary: GDP, GNI, GNI*

The descriptions below are taken from the CSO *National Income and Expenditure Annual Results 2016* 'Background Notes', available here.

- **Gross value added** at factor costs is equal to the sum of the values of the goods and services (or parts thereof) produced in the country without deducting an amount in respect of capital consumption (i.e. depreciation). It excludes taxes on production and includes subsidies on production.

- **GDP** at market prices is equal to Gross Value Added at factor cost plus taxes on production less subsidies on production. It represents total expenditure on the output of goods and services produced in the country and valued at the prices at which the expenditure is incurred.

- **GNP** at market prices is equal to Gross Domestic Product at market prices plus net factor income from the rest of the world and represents the total of all payments for productive services accruing to the permanent residents of the country. Some income accrues to Irish residents as a result of economic activity abroad or property held abroad while some income arising in the state is paid to non-residents.

- **GNI** at market prices is equal to Gross National Product at market prices plus EU subsidies less EU taxes. This is more commonly described as being equal to Gross Domestic Product plus net primary incomes from abroad.

- **Modified GNI** (or GNI*) is equal to Gross National Income at current market prices less the factor income of redomiciled companies, less depreciation on research and development related intellectual property imports and less depreciation on aircraft related to aircraft leasing.

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[1] See *Glossary* (above) for description.
[2] CSO Information Notice: NIE 2016 frequently Asked Questions
[3] It is a collaborative effort between OECD, Eurostat and the WHO.
[4] The OECD defines health spending as follows: "Health spending measures the final consumption of health care goods and services (i.e. current health expenditure) including personal health care (curative care, rehabilitative care, long-term care, ancillary services and medical goods) and collective services (prevention and public health services as well as health administration), but excluding spending on investments."
[5] Department of Health (2014) Health in Ireland: Key Trends 2014
[6] CSO Information Notice: NIE 2016 Frequently Asked Questions
[7] See the Irish Fiscal Council suggestion for use of a hybrid GNI measure which would consist of all of GNP and 40% of the excess of GDP over GNP (GNI). For a discussion of this see Callan, T., Keane, C., Savage, M. Walsh, J.R. (2013) 'Taxes on Income: Ireland in Comparative Perspective' in Callan, Tim. (ed) *Budget Perspectives 2014* ESRI Research Series Number 31, June 2013, available at:
[8] *Central Statistics Office (CSO) Response to the Main Recommendations of the Economic Statistics Review Group (ESRG),* February 2017.
[9] PublicPolicy.ie (2012) 'Expenditure and Outputs in the Irish Health System: A Cross Country Comparison'. 9 October 2012. Ireland ranks 1st of 34 OECD countries under this analysis.

[10] OCED *Health Data 2014: How does Ireland compare?*
[11] Ibid.
[12] Redmond, Paul (2013) *Expenditure and Outputs in the Irish Health System: a cross country comparison*, published online at publicpolicy.ie.
[13] CSO 2016: SHA 2014 *Background Notes*
[14] Health Accounts Seminar, 10th November 2016, Royal College of Physicians, Dublin
[15] Health Accounts Seminar, 10th November 2016, Royal College of Physicians, Dublin