An Roinn Caiteachais
Phoiblí agus Athchóirithe
Department of Public
Expenditure and Reform

Spending Review 2018

HSE Staffing Levels: Management and Sustainability

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Summary

- **The number of staff employed by the HSE has risen by 14,213 WTEs or 15% from the beginning of 2014 to end 2017.** This translates into an average increase in monthly employment rates of 302 WTE staff.

- **In the final quarter of each of the last three years, the HSE has employed on average an additional 1,432 staff. This level is around 40% of their annual increase in employment over just a three month period.** The reoccurring trend of increased recruitment in Q4 has a significant impact on expenditure in the subsequent year.

- **The greatest quantum of additional staff were directed toward Acutes while the areas with the lowest growth in staff were Primary Care and Mental Health at only 4% from 2015 to 2016.** This appears to be counter to current health policy which focuses on increasing and prioritising treatment of patients in a primary care setting.

- **From 2014 to 2017, total pay related spend increased significantly from around €6.1bn to €6.7bn.** This is an increase of €687m or 11% over a four year period.

- HSE estimations around agency staff expenditure have consistently been out of line with actual expenditure. **From 2015 to 2017, actual agency spend was much greater than expected with actual spend ranging from €52m to €154m above the expected/profiled agency spend.** It appears assumptions underpinning agency pay profiles are not realistic or achievable.

- Ireland had a low number of doctors per capita and a high number of nurses per capita compared to other OECD countries in 2015. This resulted in **Ireland having a significantly high ratio of nurses to doctors at 3.8 in 2015, well above the OECD average.**

- There is a significant expenditure impact this year which is primarily driven by recruitment in Q4 of 2017 and the first 4 months of 2018. Over this 7 month period an additional 2,939 WTEs were recruited. **The impact of this recruitment is estimated to add an additional €172 million to the pay bill in 2018 and another €11m in 2019**, this is before any additional health staff are hired beyond April 2018.

- The 2018 Health Budget allocated an additional €494m for current spend. **If recruitment continues at between 150 WTEs to 371 WTEs per month, it is estimated that this will cost an additional €359m to €396m this year. This would mean that 73% to 80% of the total current Health Budget would be spent on pay.** This would only leave €98m to €135m of the additional Budget available to fund other cost pressures in 2018.

Introduction

This paper builds on prior publications produced by IGEES (for example see – Callaghan, 2014; Mullins[A], 2015; Mullins[B], 2015) that explored the various factors influencing the HSE pay bill and set out the implications these factors have on the overall health budget. By way of context, there have been significant increases in staffing levels across the healthcare system. The number of whole time equivalent (WTE) staff in the Health sector increased from 96,582 in January 2014 to 110,795 in December 2017. This represents an increase of 14,213, or 15% over the period, not accounting for agency staff hired by the HSE.

In addition to carryover cost of these staff, there are a number of emerging factors that will impact on the HSE pay bill in the medium term. In this paper, these factors will be explored and the implications for budget sustainability in future years outlined.

The key objectives of this paper are to:

- Examine historical staffing trends reviewing the following:
    - WTE numbers and potential factors impacting historical trends
    - Pay related expenditure and underlying expenditure drivers
    - International evidence

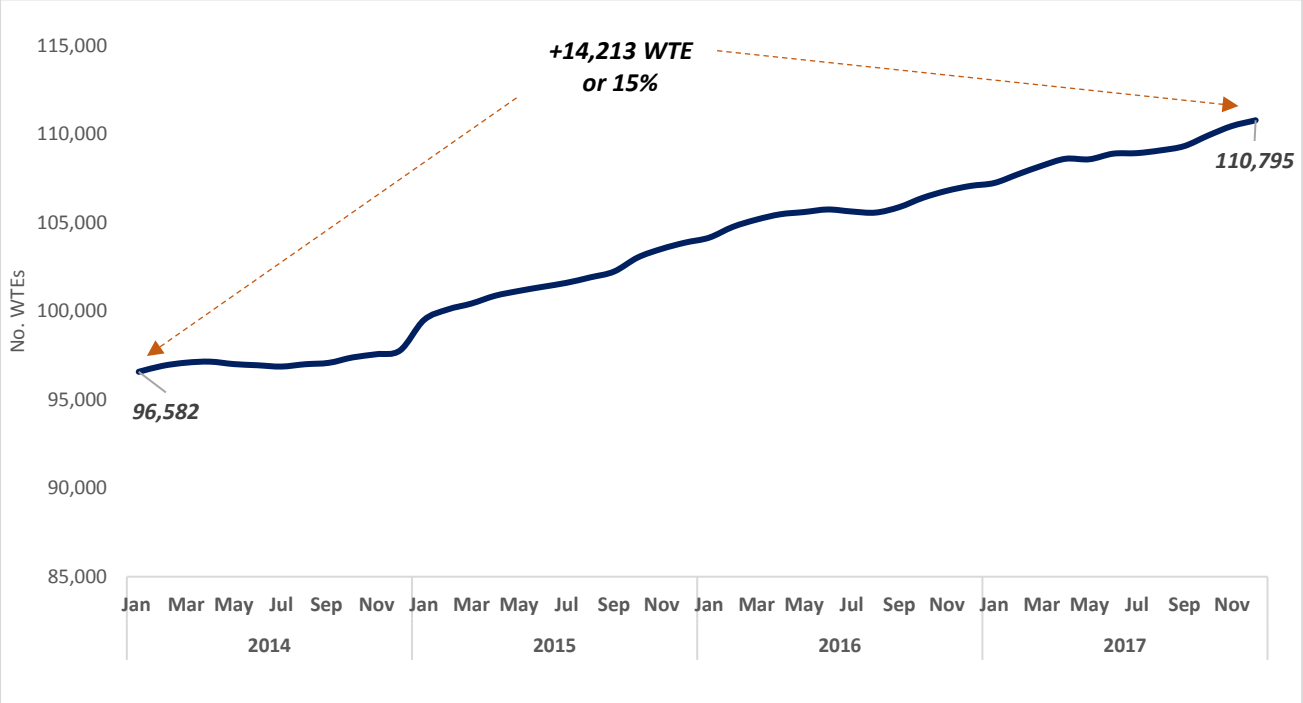
- Identify short term pressures on the pay bill, taking account of:
    - Carryover from historical recruitment
    - Pay agreements

Trend Analysis 2014 – 2017

Staffing Numbers

The HSE has significantly increased the number of WTE health staff across all grades over the last four years. **The number of staff employed by the HSE has risen by 14,213 WTEs or 15% from the beginning of 2014 to end 2017.** This translates into an average increase in monthly employment rates of 302 WTE staff. The continuation of this level of increased employment would not appear to be sustainable in the coming years, this is discussed further in Section 3. See **Figure 1** below for monthly HSE staffing levels from 2014– 2017.

Figure 1: Monthly WTE HSE staff levels 2015 – 2017



Source: *HSE Employment Reports*

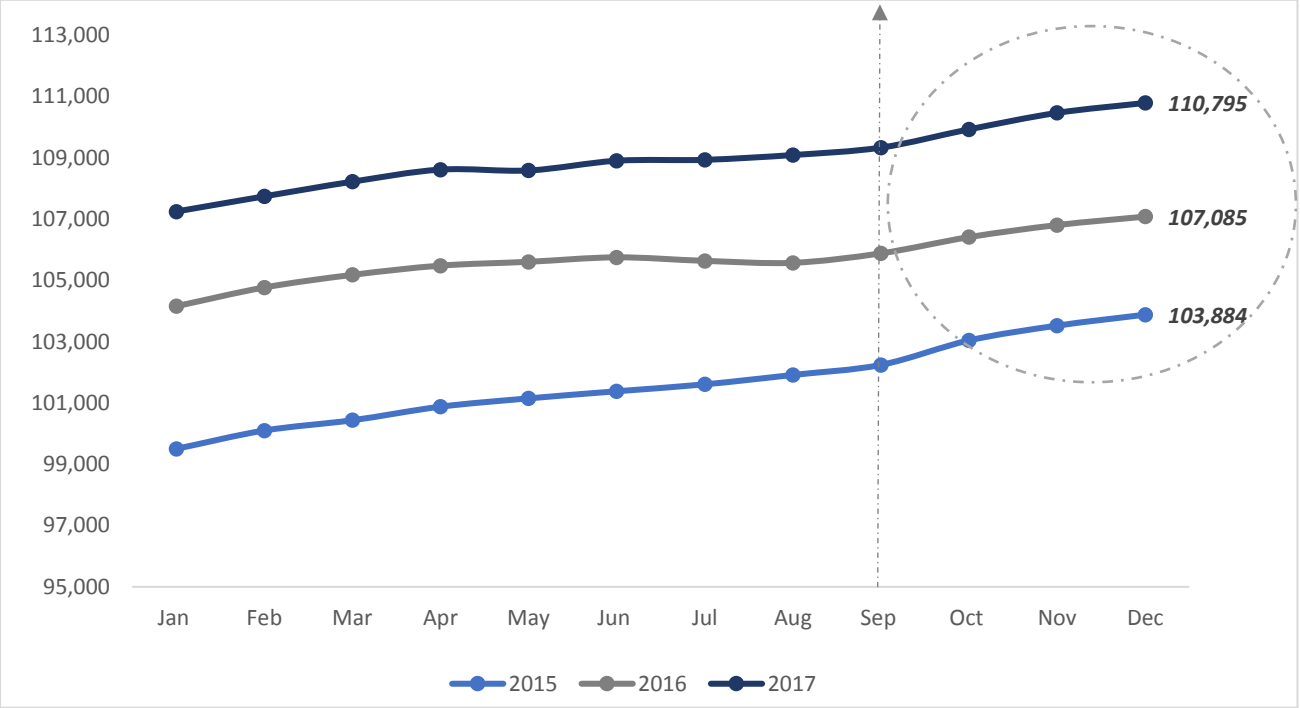
At the end of 2015, the HSE directly employed 103,884 WTE staff. The *2016 HSE Pay & Numbers Strategy* allowed for the HSE to increase staffing levels by 2,512 throughout 2016. However, at the end of 2016 the number of additional WTEs employed was in excess of the levels in the strategy. In total an additional 3,201 WTEs were recruited in 2016. These substantial increases in staff numbers have continued in 2017. **In December 2017, the year on year change in HSE staff numbers was 3,710 WTEs. This is an increase of 3.5% on December 2016 numbers of 107,085.**

Table 1: Year-on-year changes in WTE

	2015	2016	Additional Staff			2016	2017	Additional Staff	
	WTE	*WTE*	*WTE*	*%*		*WTE*	*WTE*	*WTE*	*%*
Staffing Level	103,884	107,085	**3,201**	**3.1%**		107,085	110,795	**3,710**	**3.5%**

On an annual basis the overall number of HSE staff has increased substantially over the last numbers of years, however it is also important to analyse the monthly trends in staff numbers in order to identify seasonal aspects. Figure 2 below sets out the monthly trends in HSE staffing from 2015 to 2017.

Figure 2: Monthly staffing levels 2015 - 2017



Source: *HSE Employment Reports*

In recent years there has been a reocurring trend in recruitment toward the end of the year as monthly HSE recruitment increases significantly in the final three months of the year. **In the final quarter of each of the last three years, the HSE has recruited on average an additional 1,432 staff. This level is around 40% of the HSE annual increase in employment over just a three month period.** This recruitment in the final months of the year does not have a substantial impact on expenditure in that year, but rather has a significant impact in the following year as the expenditure pressure is essentially carried over.

Consideration of Factors Impacting Staff Levels

There are a number of factors which impact the number of additional staff hired across the health system annually. These are primarily based around expected demand for health services in the coming year and funding available. These factors broadly fall into the following categories:

1. **Demographics and population changes**
2. **Funding parameters**
3. **Policy considerations**

The subsequent sections discuss each of these factors in the context of historical changes in staffing levels.

[1] Demographics

The CSO have published results from the April 2016 Census. These figures measure population at 4.76m, an increase of 170,000 or 3.7% since the previous Census in 2011. While the overall population in Ireland is growing, the age structure of this population is relatively young. Ireland has one of the youngest populations across European countries. In 2015, the old-age dependency ratio in Ireland was 20% compared to 33% in Germany. Demographic pressures on health services in Ireland are therefore much lower than other European countries with elderly populations.

The following table sets out historical increases in HSE staff numbers and Ireland's population changes.

Table 2: Historical increases in staff levels, overall population and over 80's 2014 - 2017

	2014	2015	2016	2017	Cumulative Increase
Staff Numbers	97,791	103,884	107,085	110,795	
Annual Change		***6,093***	***3,201***	***3,710***	***13,004***
Annual Change (%)		***6.2%***	***3.1%***	***3.5%***	***13%***
Total Population ('000)	4,645	4,688	4,740	4,793	
Annual Change ('000)		***42***	***52***	***53***	***147***
Annual Change (%)		***0.9%***	***1.1%***	***1.1%***	***3%***
Over 80 years ('000)	139	144	148	153	
Annual Change ('000)		***5***	***4***	***5***	***14***
Annual Change (%)		***3.5%***	***2.9%***	***3.2%***	***10%***

Source: CSO Population Projections 2018, HSE Employment Reports *Staff numbers relate to numbers employed at year end

As illustrated in Table 2, historical increases in HSE staffing levels are in excess of population growth. From 2014 to 2017, the cumulative increase in staff numbers was 13% while growth in the population was only 3%. The growth in staff numbers is well beyond increases in the total population. Similar results are found when isolating growth in the number of persons aged over 80 years from 2014 to 2017. It is seen that over the period 2014 to 2017, the number of persons aged over 80 years increased by around 10% while the increase in numbers employed in the HSE increased beyond this as staff number grew by 13%.

[2] Funding parameters

Given that funding is a finite resource and all Public Services must operate within the funding parameters available to them, management and prioritisation is imperative to delivering more and improved services. The allocations provided to key service areas are assigned following consideration of a number of factors. The

management of staff is an essential part of overall budget management as pay related spend accounts for almost half of total health spend, the pay component accounts for around 47% of total spend.

Over the last number of years, the health service has not operated within their original allocated Budget and as a result have been issued supplementary funding throughout the year. The supplementary estimates provided to health in the last three years have been substantial, ranging from the most recent of €195m in 2017 to €658m back in 2015. See Table 3 below for a walk through of total health funding 2014 to 2017.

Table 3: Total health funding walk through from 2014 outturn to 2017 outturn

	Outturn *€m*	**Annual Change**	
2014 Outturn	**12,358**		
2015 Add:			
Resources allocated in Budget 2015	- 67		
2015 Supplementary Estimate	658		
2015 Outturn	**12,949**	***591***	***5%***
2016 Add:			
Resources allocated in Budget 2016	242		
2016 Revised Allocation	500		
2016 Outturn	**13,695**	***746***	***6%***
2017 Add:			
Resources allocated in Budget 2017	457		
Supplementary Estimate 2017	195		
Revised Allocation 2017	**14,347**	***652***	***5%***

Source: REV 2015 -2017, Appropriation Accounts

In terms of budget management, the overall level of WTEs is not the only concern as the scheduling of recruitment throughout the year is also an issue, the timing of recruitment impacts future budget sustainability. As illustrated in Figure 2 above, the HSE broadly kept the overall number of WTEs flat up to the third quarter of 2016 before increasing staff levels substantially in the final quarter of the year. Such an approach has implications for budget sustainability in 2017. A similar approach to health staff recruitment was adopted in 2015 as shown in Figure 2. These end year recruitment levels significantly increased the pay bill for 2016 and this contributed to the need to substantially increase health funding in 2016 with health spend increasing by €746m or 6% (Revised Estimates for Public Services, 2016).

[3] Policy Consideration

In addition to demand for staff and funding parameters, another factor to consider when studying historical trends in staffing levels is the underlying policy. In most instances policy considerations in this regard relate to

where additional staff are directed or the reorientation of staff. The following table illustrates the breakdown of HSE Staff across various service areas from 2014 to 2017 to identify which service areas have been prioritised.

Table 4: Breakdown of HSE staff across service areas 2015 - 2017

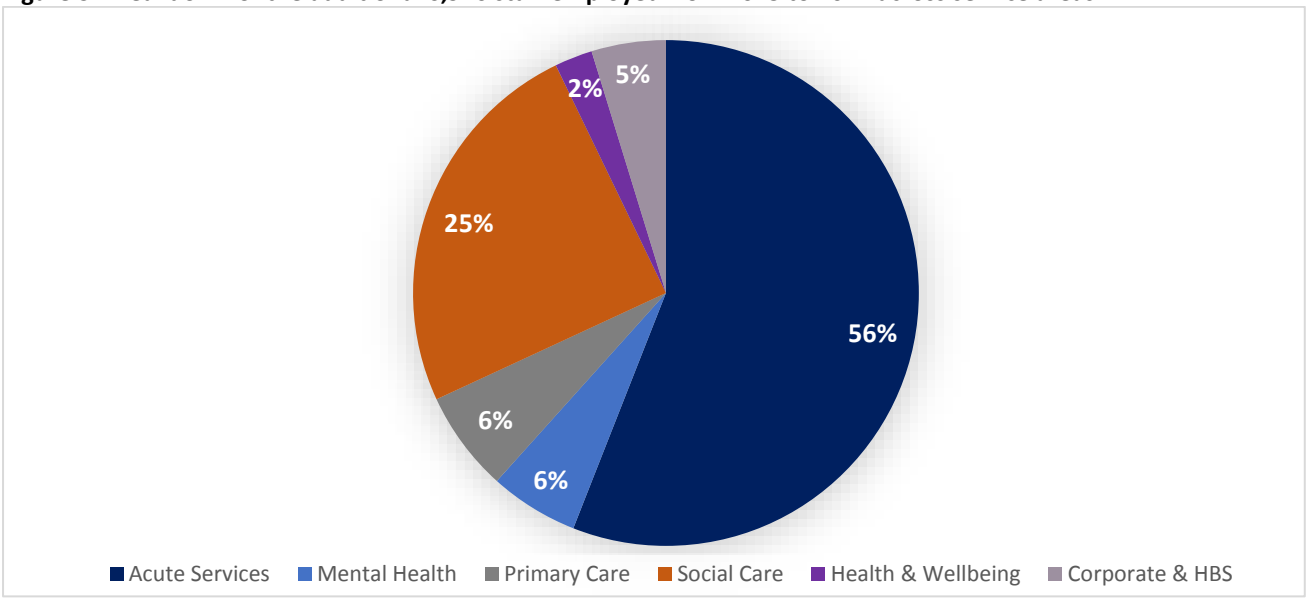
	2015 WTE	2016 WTE	2017 WTE	Change (2015 – 2017)	
Acute Services	54,234	55,889	58,102	**3,868**	**7%**
Mental Health	9,405	9,594	9,798	**393**	**4%**
Primary Care	10,442	10,540	10,886	**445**	**4%**
Social Care	25,786	26,804	27,495	**1,709**	**7%**
Health & Wellbeing	1,283	1,378	1,450	**167**	**13%**
Corporate & Health Business Services	2,735	2,879	3,063	**329**	**12%**
Total	**103,884**	**107,085**	**110,795**	**6,910**	**7%**

Source: HSE Employment Reports 2015- 2017

From 2015 to 2017, Acute Services employed the greatest quantum of additional staff at 3,868 WTEs. Social Care had the second largest increase with 1,709 staff. While the greatest number of additional staff were directed toward acutes, in terms of percentage growth in the staff numbers the service area which experienced the greatest percentage growth is Health and Wellbeing with a 13% increase in staffing over the 2 year period. The areas with the lowest percentage growth in staff were Primary Care and Mental Health with 4% each.

Of the 6,910 additional staff employed over the period as shown in Table 4, only 6% of these were in Primary Care while 56% were employed in hospitals. See Figure 3 below for proportion of the increased staff held across service area.

Figure 3: Breakdown of the additional 6,910 staff employed from 2015 to 2017 across service areas



Source: HSE Employment Reports 2015- 2017

The split between frontline staff and administrative staff in the HSE from 2015 to 2017 is illustrated in the table below.

Table 5: Split of Total staff between frontline and administrative[1]

	2015	2016	2017	Growth	
				WTE	%
Frontline Staff	78,227	80,870	83,627	**5,400**	**7%**
Administrative Staff	25,657	26,214	27,168	**1,511**	**6%**
Total Staff	**103,884**	**107,085**	**110,795**	**6,910**	**7%**
Proportion of Frontline Staff	*75%*	*76%*	*75%*		

Source: HSE Employment Reports 2015- 2017

Summary of Key Findings:

- The HSE has significantly increased the number of WTE health staff across all grades over the last three years. **The number of staff employed by the HSE has risen by 14,213 WTEs or 15% from the beginning of 2014 to end 2017.**

- In recent years there has been a reoccurring trend in recruitment in the final quarter of the year, monthly HSE recruitment increased substantially in the final three months of each of the last three years. **From 2014 to 2017, the HSE has employed on average an additional 1,432 staff in Q4.** These increases have significant expenditure implications in the following year.

- There are a number of factors which potentially impact the number of additional staff hired historically across the health system. See below for trends in the factors from 2014 to 2017:
  1. **Demographics and population changes -** Historical increases in HSE staffing levels were in excess of population growth. From 2014 to 2017, the cumulative increase in staff numbers was 13% while growth in the population was only 3%.
  2. **Funding parameters -** The health service has not operated within their original allocated Budget and as a result has been issued supplementary funding. The supplementary estimates provided to health in the last three years have been substantial ranging from €195m in 2017 to €658m in 2015.
  3. **Policy considerations -** While the greatest quantum of additional staff were directed toward acutes, in terms of percentage growth Health and Wellbeing experienced a 13% increase in staffing over 2 years. The areas with the lowest growth in staff were Primary Care and Mental Health at 4%.

[1] Administrative staff are defined as those included in the "administrative staff" categories in HSE Health Service Employment Reports.

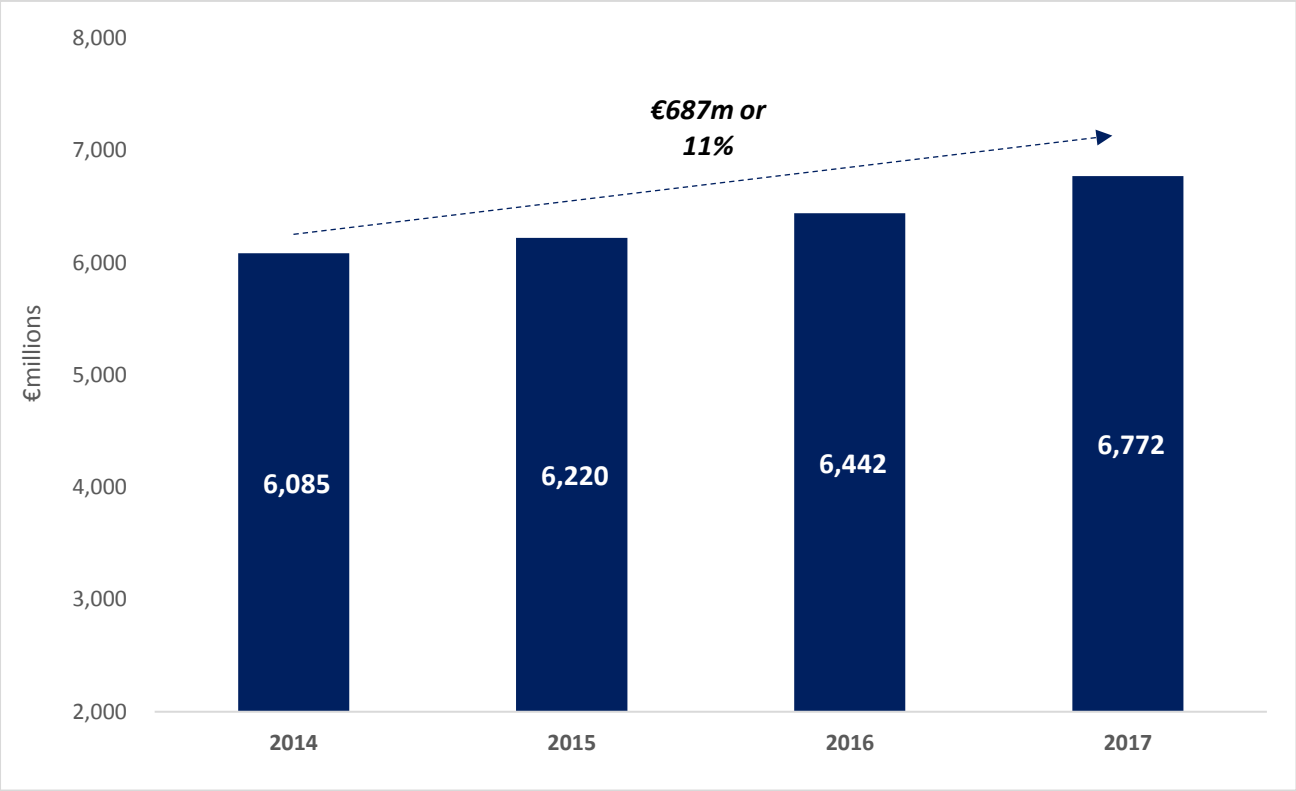
Pay Expenditure

A key driver of pay expenditure is the number of staff employed across the health sector however other factors also drive pay related spend. As historical trends in staffing numbers have been discussed in the previous section, the following section examines growth in overall pay expenditure and identifies other items driving this pay related spend.

Components of Spend

From 2014 to 2017, total pay related spend increased significantly from around €6.1bn to €6.7bn. This is an increase of €687m or 11% over a four year period. This expenditure can be broken into three main components which include; basic pay, overtime pay and agency pay. Basic pay and overtime are directly related to the number of staff employed while agency pay is a reactive response to increased pressure or demand across the health system. See **Figure 4** below for total pay related expenditure from 2014 to 2017.

Figure 4: Total pay related spend 2014 to 2017



Source: *HSE Employment Reports*

As previously discussed pay related spend can be broken into three components; basic pay, overtime and agency. The largest component of pay spend by a substantive margin is basic pay, while agency pay and overtime are much smaller components. In order to identify the key drivers of overall pay spend historical trends in each component are studied. See **Table 6** below for a breakdown of overall spend by each component from 2014 to 2017.

Table 6: Breakdown of Pay Expenditure Components 2014 - 2017

	2014 €m	2015 €m	2016 €m	2017 €m	Cumulative Growth
Basic	5,533	5,667	5,862	6,149	
Annual Change (€m)		***134***	***195***	***286***	***616***
Annual Change (%)		***2%***	***3%***	***5%***	***11%***
Overtime	209	221	235	256	
Annual Change (€m)		***11***	***14***	***21***	***47***
Annual Change (%)		***5%***	***7%***	***9%***	***21%***
Agency	343	332	345	367	
Annual Change (€m)		***-11***	***12***	***22***	***24***
Annual Change (%)		***-3%***	***4%***	***6%***	***7%***
Total Pay Expenditure	**6,085**	**6,220**	**6,442**	**6,772**	**687**

Source: *HSE Employment Reports*

From 2014 to 2017, pay expenditure experienced cumulative growth of €687m, this growth can be decomposed as follows:

- €616m or 90% relates to expenditure on basic pay
- €47m or 7% relates to overtime pay
- €24m or 3.5% relates to agency pay

The relationship between the different components of pay spend is also of interest, it is expected that when additional WTE staff are recruited then there is less of a need or reliance on agency staff as position and pressures are filled with full time staff. Therefore, it should be the case that as staff numbers and the corresponding basic pay expenditure elements increase then agency pay should begin to fall off or remain flat. This does not appear to have been the case, while agency spend reduced in 2015 following the recruitment of a significant number of WTE staff in 2015 around 6,093 (see Table 2 above), beyond this agency pay increased by an annual average of €17m in 2016 and 2017.

Key Expenditure Drivers

Agency Spend

Expanding on this, it is important to look at agency expenditure in isolation as agency spend and assumptions around agency spend have been a key driver of the overall pay bill. Table 7 below sets out agency expenditure from 2014 to 2016 subdivided by acute and non-acute spend. From the graph it is clear that the HSE has to some extent, reduced the reliance on agency staff in the acute setting. However, this phenomenon has coincided with an increase in the agency bill in the non-acute sector. The reduction in reliance on agency staff in the acute sector since 2014 may be due to the significant increase in WTE staff in the acute settings over the same period, see Table 4 above. While there has been a slight reduction in agency spend in the acute sector the increase in staff in the sector has been substantial at 7%.

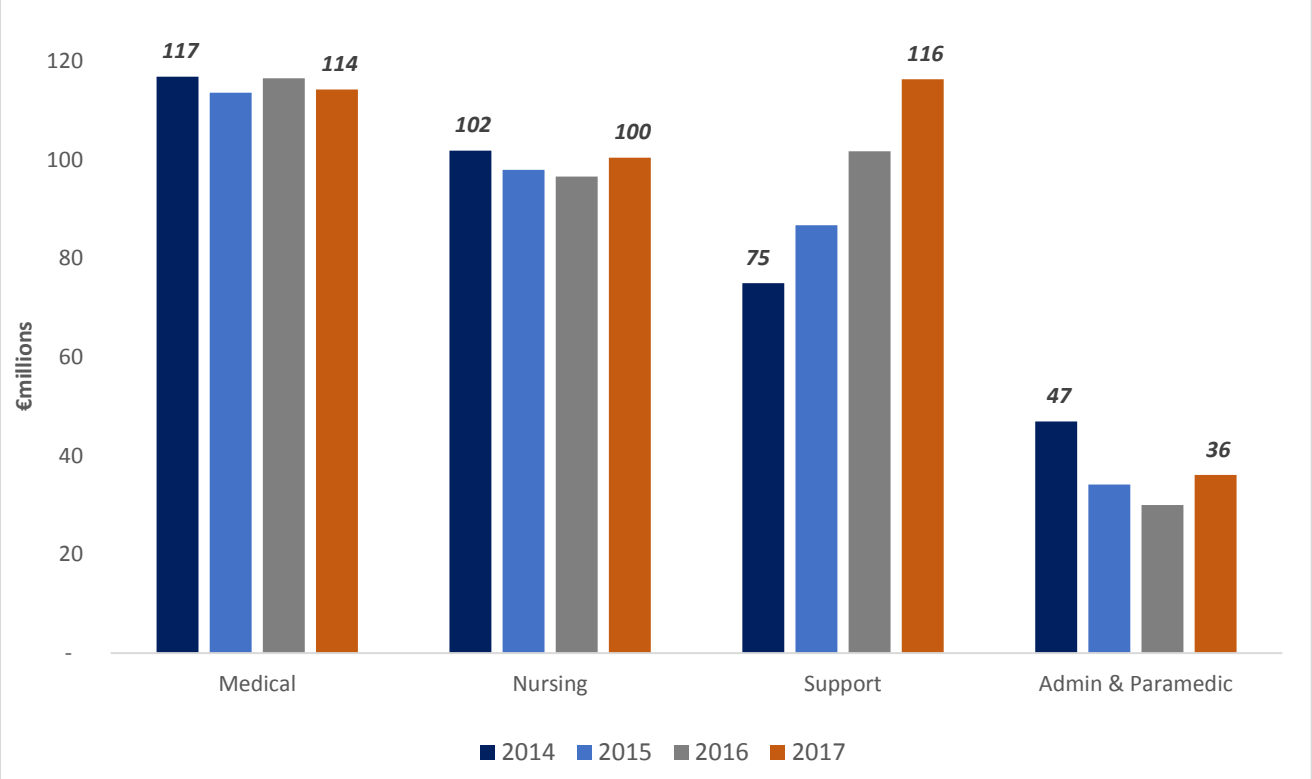
Table 7: Agency expenditure by sector, 2014 – 2017 (€ Millions)

	2014		2015		2016		2017	
	€m	% of Total	€m	% of Total	€m	% of Total	€m	% of Total
Total	**341**	100%	**332**	100%	**345**	100%	**367**	100%
of which;								
Acute	231	68%	208	62%	207	60%	202	55%
Primary Care	17	5%	18	5%	16	5%	20	5%
Mental Health	27	8%	34	10%	43	13%	53	14%
Disability	27	8%	37	11%	40	11%	43	12%
Older Persons	33	10%	32	10%	33	10%	42	11%
Other	6	2%	4	1%	6	2%	8	2%

Source: HSE Performance Reports

In addition to this, **Figure 5** below outlines agency expenditure from 2014 to 2017 across the main staffing categories.

Figure 5: Agency expenditure by staff type, 2014 – 2017 (€m)



Source: HSE Performance Reports

From 2014 to 2017, agency expenditure increased by €26m or 8%. The most significant increase in agency spend across staff categories was for Support Staff. Agency pay for this group increased substantially from around €75m to €116m over the period 2014 to 2017. The remaining staff categories have reduced agency spend or remained relatively static.

Review of Agency Spend Assumptions

As discussed previously there is an understanding that increasing the number of full time staff will correspond to a reduction in the need for agency and in turn reduce agency expenditure. Given this, the HSE and Department of Health make assumptions around annual agency expenditure and staff numbers. These assumptions are set out in the annual *HSE Pay and Number Strategy*. The HSE produce pay profiles that are predicated on reducing the reliance on agency staff to fund increases in the number of staff directly employed by the HSE. In recent years, the HSE have failed to reduce this agency cost, outlining the difficulty the organisation has had in meeting this strategic goal. See Table 8 below for the variance between actual agency expenditure and the assumption or expected spend on agency from 2014 to 2017.

Table 8: Difference between actual agency spend and expected agency spend from 2015 -2017

	2015 €m	2016 €m	2017 €m
Actual Agency Expenditure	332	345	367
Pay & Numbers Strategy Assumption	178	293	313
Variance (€m)	***154***	***52***	***54***
Variance (%)	***87%***	***18%***	***17%***

Source: *HSE Pay and Numbers Strategy 2015 – 2017, HSE Employment Reports 2015 – 2017*

The quantum of the variance between actual and expected spend illustrated in Table 8 are vast. Each year actual agency spend was much greater than expected with actual spend ranging from €52m to €154m above the expected/profiled agency spend. In 2015, actual agency spend was €154m or 87% greater than the level profiled. From the results shown in Table 8, it appears the assumptions underpinning agency pay profiles are not realistic or achievable. Going forward, it is imperative that the HSE set feasible and realistic agency cost profiles that incrementally reduce this element of the pay bill in the future.

Summary of Key Findings:

- **From 2014 to 2017, total pay related spend increased significantly from around €6.1bn to €6.7bn.** This is an increase of €687m or 11% over a four year period.

- **The growth in spend is primarily related to basic pay which is driven by the significant increases in staff numbers.** From 2014 to 2017, pay expenditure experienced cumulative growth of €687m, around 90% or €616m relates to expenditure on basic pay.

- HSE estimations around agency expenditure have consistently been out of line with actual expenditure. **From 2015 to 2017, actual agency spend was much greater than expected with actual spend ranging from €52m to €154m above the expected/profiled agency spend.** Therefore, it appears the assumptions underpinning agency pay profiles are not realistic or achievable.

International Evidence

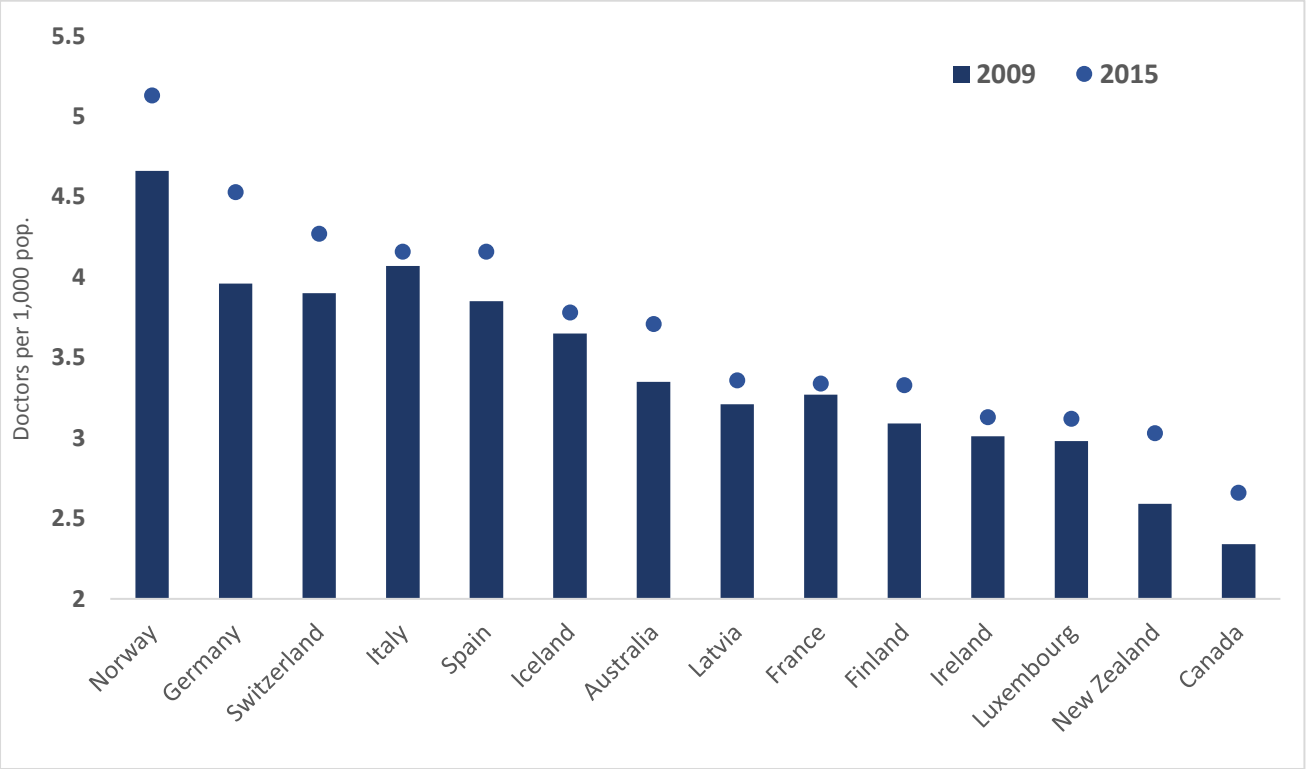
Health and social work activities constituted on average around 10% of total employment across OECD countries in 2015. The percentage of workers employed in health and social work has steadily risen across much of the OECD between 2000 and 2015. According to the OECD, some of the greatest increases have taken place in Luxembourg, the Netherlands and Ireland.

The following section illustrates Ireland international position across a number of measures, such as doctors per capita, nurses per capita and the ratio of doctors to nurses. The section also focuses on changes in these positions in Ireland between 2009 and 2015.

Doctors per capita

Compared to other OECD countries Ireland has a relatively low number of doctors per 1,000 population. It can be seen that Ireland's international position did not change over the period 2009 to 2015 despite a number of policy changes in the area of recruitment. In 2015, the number of doctors per 1,000 population in Ireland has now moved past 2009 levels.

Figure 6: Doctors per 1,000 population across selected countries, 2009 compared to 2015

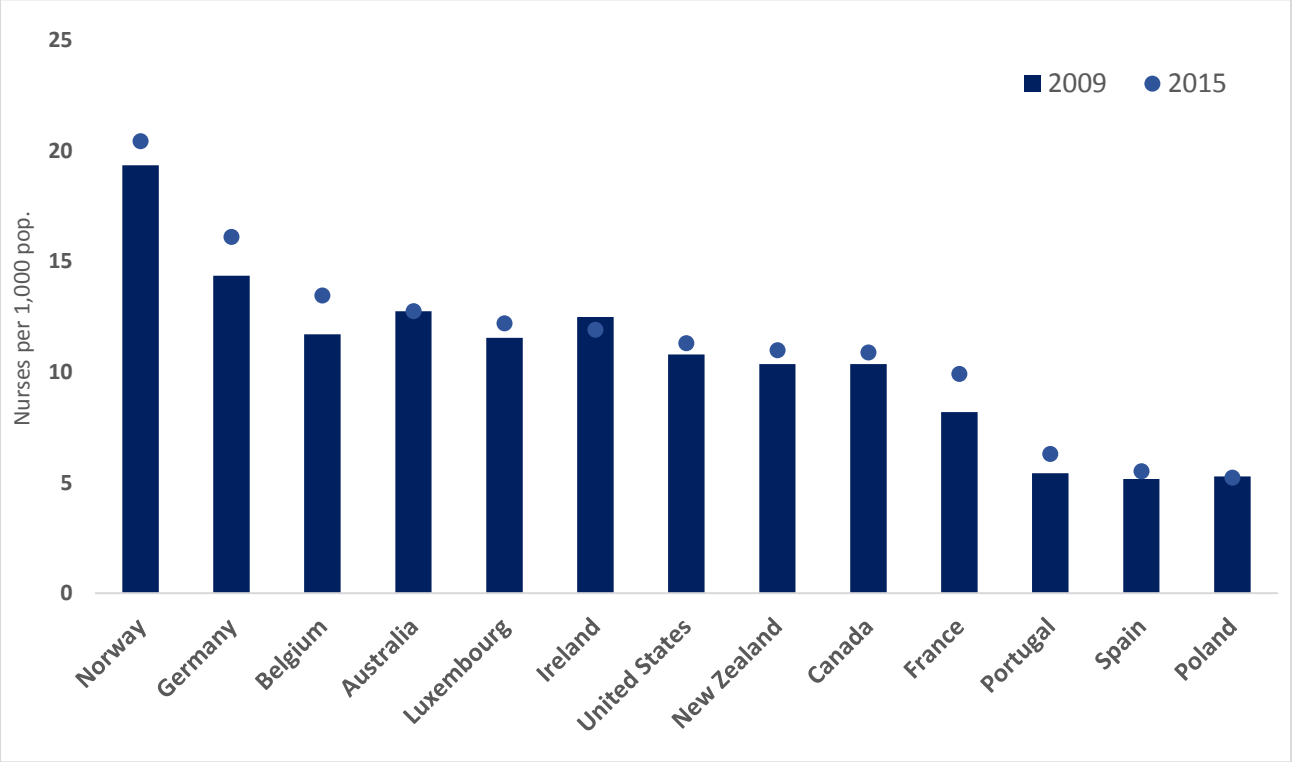


Source: OECD Health Database *Country selection based on availability of data

Nurses per capita

Contrary to findings on doctors per capita, Ireland has a considerable number of nurses per capita compared to other OECD countries. Ireland is in the higher quadrant of OECD countries when comparing the number of nurses per 1,000 population. When looking at the change in the same metric over time it can be seen that the number of nurses per 1,000 population in 2015 is almost back at the same level experienced in 2009. Given that recent increases in staff numbers have been beyond growth in demographics, it is expected that this rate will now have moved beyond 2009 levels.

Figure 7: Nurses per 1,000 population across selected countries, 2009 compared to 2015

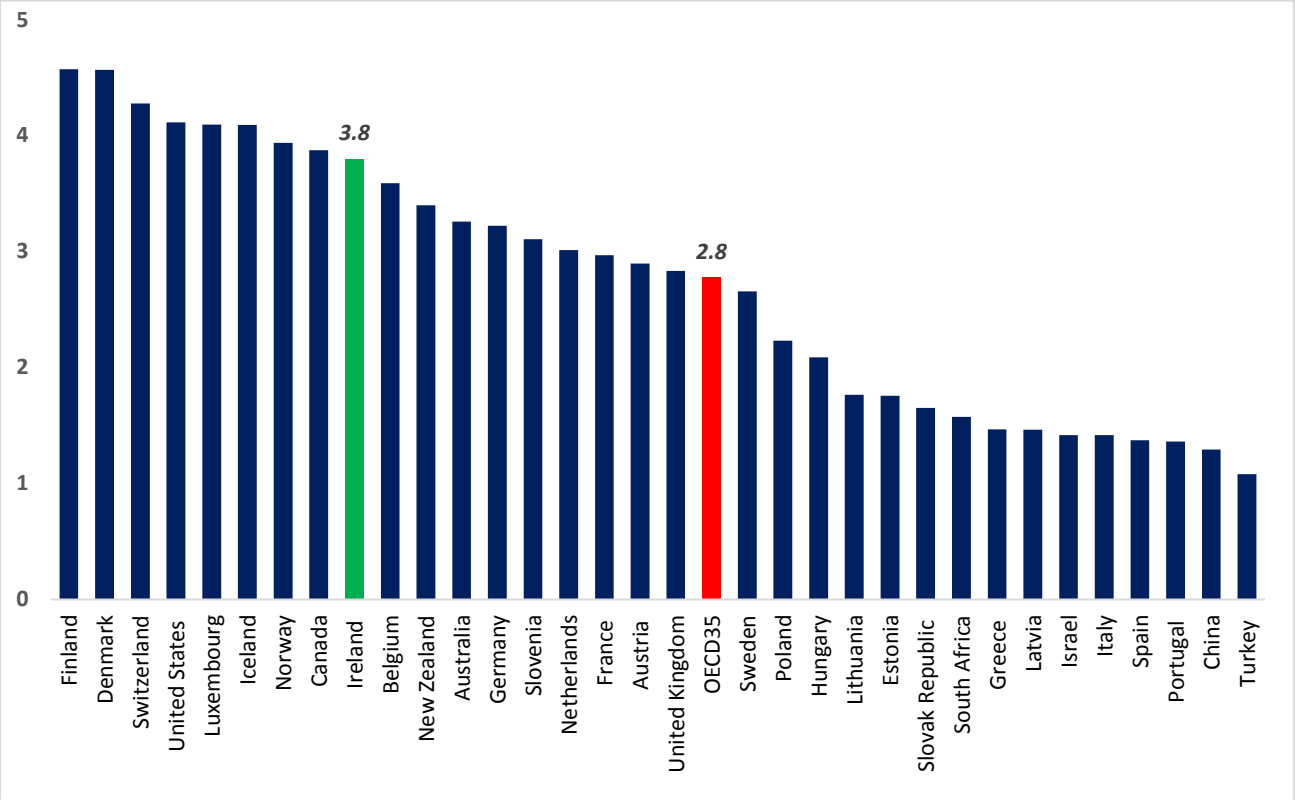


Source: OECD Health Database *Country selection based on availability of data [professionally active nurses]

Ratio of nurses to doctors

Figure 8 illustrates the ratio of nurses to doctors in Ireland compared to other OECD countries. From this graph it is clear that the ratio of nurses to doctors in Ireland is high compared to other countries. Ireland is in the top quadrant and is well above the OECD average. The average ratio of nurses to doctors across the OECD is 2.8 whereas the ratio in Ireland is considerable higher at 3.8.

Figure 8: Ratio of Nurses to Doctors, 2015 (or nearest year)



Source: OECD Health Database *Selected countries excluded for presentation purposes, OECD average based on all 35 OECD countries

Summary of Key Findings:

- In 2009 and 2015, Ireland had a low number of doctors per capita and a high number of nurses compared to other OECD countries. This resulted in **Ireland having a significantly high ratio of nurses to doctors at 3.8 in 2015, well above the OECD average.**

- In 2015, the **number of doctors per 1,000 population practising in Ireland moved beyond levels experienced in 2009. The number of nurses per 1,000 population in 2015 was 11.9 while 2009 levels were 12.3.** The number of nurses is almost back at 2009 levels and given the considerable increase in recruitment beyond the growth in demographics since 2015 (see Table 2 above), it is expected that these metrics should now be beyond 2009 levels.

Pay Expenditure Pressures in 2018 and 2019

Going forward there will be a number of pay pressures that will impact the HSE pay bill in the future, these broadly relate to pay rates (price) and staff numbers (quantity). This section sets out the short term expenditure pressure due to increases in pay rates and increased HSE staff numbers to date. It should be noted that the figures provided below are estimates and the actual health pay allocation will be agreed through the budgetary process in consultation with the Department of Health and HSE.

A. Pay Rates

Cost of Pay Deals beyond 2017

In 2017, an agreement was reached on a deal to replace the Lansdowne Road Agreement, this is known as the Public Sector Service Agreement (2017). The work of the independent Public Service Pay Commission (PSPC) formed the basis for this agreement. In addition, the cost of existing pay deals will also have implications.

Looking forward, there are three different pay agreement that require funding over the next three years.

- *Lansdowne Road Agreement:* This piece of legislation set out that the rate at which ones income was subject to the pension levy. This threshold was increased from €17,500 to €26,083 in January 2016 and to €28,750 in January 2017. Further to this, also set out in the agreement was a pay rise of €1,000 for all staff earning under €65,000 from the 1st April 2017.
- *FEMPI Act 2013:* This legislation reduced the pay on all public servants earning over €65,000. These measures would be reinstated to staff between 2017 and 2019 dependent of varying remuneration rates.
- *Public Sector Stability Agreement*: New pay agreement out to 2020 awarding percentage based pay increase in 2018, 2019 and 2020. The agreement also includes alterations on the rate at which the pension levy is applied to staff earnings and adjusts the percentage rate payable by single scheme employees. While these pension levy measures will have implications for the Exchequer, this will impact on the cost of HSE pensions and have not been included in this analysis.

The table below sets out the costs of these existing deals from 2018 – 2020.

Table 9: Cost of Deals based on end 2017 numbers[2]

	Lansdowne Road Agreement	FEMPI ACT (2013)	Public Sector Stability Agreement	Total
	€m	*€m*	*€m*	*€m*
2018	34	38	89	**161**
2019	-	17	78	**95**
2020	-	5	97	**102**
Total	**34**	**60**	**264**	**358**

[2] Based on employment levels remaining constant at end 2017 levels.

In calculating these estimates it should be noted that the HSE does not have data readily available that fully breaks down staff numbers by different income cohorts. However, the 2015 HSE Annual Report and Financial Statements does include this information for employees on the statutory side only (roughly accounting for two-thirds of HSE employees) at the end of 2015. This information was extrapolated to get a breakdown of all HSE staff at the end of 2017 and the estimates provided above are based on these extrapolated income bands.

B. Pay Numbers

In total an additional 3,710 WTEs were recruited in 2017. This was a substantial increase in recruitment and these trends have continued in 2018. As at April 2018, the HSE had recruited an additional 1,482, this is an increase in WTEs of 1.3% since the beginning of 2018. This also translates into average monthly recruitment rate in 2018 is now 371 WTEs.

Table 10: Year-on-year changes in WTE

	2017	Recruitment 2016 - 2017			2018 (YTD April)	Recruitment 2017 – 2018YTD	
	WTE	*WTE*	*%*		*WTE*	*WTE*	*%*
Annual WTEs	110,795	**3,710**	**3.5%**		112,277	**1,482**	**1.3%**

Given the recruitment to date as set out in table 10 above, the following section estimates the cost of HSE recruitment to date (April 2018) and also estimates the potential cost of two possible scenarios. See the following for an overview of assumptions and costs for these scenarios.

Cost of additional staff hired in 2017 and recruitment to April 2018

In the final quarter of 2017, the HSE recruited an additional 1,457 staff. This level is around half of their annual recruitment over just a three month period. This recruitment does not have a substantial impact on expenditure in that year but rather has a significant impact in the following year. The expenditure pressure from the additional hires is essentially carried over to 2018. **The carryover impact of the 2017 recruitment and the YTD 2018 recruitment equates to €172m in 2018 and an additional €11m in 2019.**

Scenario One – assumes 150 WTEs recruited per month from May 2018 to end 2019

Budget 2018 allows for an additional 1,800 staff to be hired, this equates to around 150 WTEs per month. However, the HSE has already recruited an additional 1,482 WTEs from January to April 2018. **If it is assumed that the HSE begins to recruit 150 per month for the remainder of 2018 and 2019, the cost of this recruitment would be €198m in 2018 and €108m in 2019.**

Scenario Two – assumes current trend continue and 371 WTEs recruited per month in 2018 & 2019

From January to April 2018, the HSE have recruited on average 371 WTEs per month. **If this recruitment rate continues for the remainder of 2018 and 2019, it is expected that this would add €235m to the pay bill in 2018 and €250m in 2019.** This would result in an increase in direct pay spend of €485m by end 2019. Going forward, this monthly recruitment level does not appear sustainable when combined with the cost of pay deals and other health service pressures such as pharmaceuticals.

Table 11 below sets out the additional annual WTEs recruited under each scenario and the associated additional annual cost of each of these scenarios in 2018 and 2019.

Table 11: Scenario Analysis of Potential Pay Pressures for 2018 and 2019*[3]

	2018		2019			Cumulative Cost
	WTE	*€m*	*WTE*	*€m*		*€m*
Carryover impact of recruitment in 2017 & 2018 YTD April	1,482	**€172m**	0	**€11m**		**€183m**
1. Scenario One - 150 per month	2,682	**€198m**	1,800	**€108m**		**€306m**
2. Scenario Two - 371 per month	4,450	**€235m**	4,452	**€250m**		**€485m**

*Scenario analysis only includes Basic Pay. Overtime and Agency are estimated to add another €30m to the bill per annum.

Summary of Key Findings:

- Going forward pay pressures can be broken down into two major components; pay rates and staff numbers. Pay rate pressures are the result of a number of central pay agreements and are not discretionary as these must be funded by the HSE. In contrast, the number of staff recruited can be managed and controlled based on requirements and the funding level available.

- **The impact of actual recruitment in 2017 and up to April 2018 will add an additional €183 million to the pay bill by the end 2019,** this is before any additional health staff are hired beyond April 2018.

- The 2018 Health Budget allocated an additional €494m for current spend. **If recruitment continues at between 150 WTEs to 371 WTEs per month, it is estimated that this will cost an additional €359m to €396m this year (cost of pay rates & numbers).** The significant expenditure impact this year is primarily driven by recruitment in the last quarter of 2017 and first 4 months of 2018. Over this 7 month period an additional 2,939 WTEs.

[3] WTEs set out in Table 11 illustrate the number of additional staff employed in that associated year for which the costs relate. Given that staff are recruited at different points in the year, annual costs include the impact of recruitment in the previous year as well as the additional WTEs set out in the table. The annual average cost of an employee is set at €56,000 this is in line with HSE data.

- **This would mean that 73% to 80% of the total current Health Budget would be spent on pay.** This is beyond the pay bill Budget and would only leave €98m to €135m of the additional Budget (current expenditure) available to fund all other cost pressures in 2018. See table below for further detail.

	Scenario One – 150 WTEs per month	**Scenario Two – 371 WTEs per month**
	€m	***€m***
Additional cost of increased staff numbers	198	235
Additional cost of increased pay rates	161	161
Total additional cost of pay	**359**	**396**
Additional 2018 Health Budget for Current Expenditure	***494***	***494***
% of 2018 Health Budget spent on pay	***73%***	***80%***

Conclusion

This paper has built on prior publications produced by this Department which outline the various factors influencing the HSE pay bill and international evidence on Ireland's position internationally in terms of staffing.

Going forward, the high level of recruitment in the final months of 2017 and beginning of 2018 has implications on the pay bill and will put significant pressure on the HSE to manage pay within the agreed 2018 overall health Budget. The analysis highlights the two pressures on the pay bill in the future these include, pay rate pressures arising out of agreed pay deals and increases in recruitment levels. The analysis highlights how increases in staff levels in 2018 coupled with the cost of the pay deals will significantly add to the pay bill going forward.

The role of health workforce planning becomes important in formulating Pay and Numbers strategies in line with annual Budget allocations. In addition to analysing headline figures, it is important that the HSE undertake more analysis to consider the appropriate staff mix in the health system. In the short term, it is imperative that the workforce team in the HSE formulate annual Pay and Numbers strategies which deliver services and are in line with the overall Budget Allocation.

In the longer term, there are a number of emerging factors that will impact on the HSE pay bill in the future, some of which include funding pressures derived from various pay agreements. This will require a longer term and strategic approach to workforce planning within the HSE. This approach should set out the structure and skills mix of staff currently in the health system to identify a baseline position. This position can then be used to derive an appropriate and sustainable level of staffing, to estimate future requirements and ensure that the health service is best equipped to offer high quality care and improved outcomes for patients.

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Appendix A

Year on year changes in staffing levels

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
2016 *('000)*	104	105	105	105	106	106	106	106	106	106	107	107	**106**
2017 *('000)*	107	108	108	109	109	109	109	109	109	110	110	111	**109**
Annual Change *('000)*	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**4**	**3**	**4**	**4**	**4**	**3**
Annual Change *(%)*	**3.0%**	**2.8%**	**2.9%**	**3.0%**	**2.8%**	**3.0%**	**3.1%**	**3.3%**	**3.3%**	**3.3%**	**3.4%**	**3.5%**	**3%**

Quality assurance process

To ensure accuracy and methodological rigour, the author engaged in the following quality assurance process.

- ✓ **Internal/Departmental**
  - ✓ Line management
  - ✓ Spending Review Steering group
  - ✓ Peer review (IGEES network)

- ✓ **External**
  - ✓ Other Government Department