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Spending Review 2019

Emergency Departments: Trends 2014-2017

JESSICA LAWLESS

HEALTH VOTE

DEPARTMENT OF PUBLIC EXPENDITURE AND REFORM

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Executive Summary

- Between 2014 and 2017 Emergency Department (ED) presentations increased by over 100,000 or 8%. ED presentations can be broken down into new and return presentations. Over the period new presentations increased by 8% while return presentations increased by 16%.
- The increase in return presentations seems concerning however this category is subsequently split into scheduled and unscheduled return visits. Data is not available to determine whether the increase is being driven by an increase in scheduled returns or unscheduled returns therefore it is not possible to determine if this outcome indicates inadequate symptom control or misdiagnosis.
- There is limited data available to determine what is driving the increase in new ED presentations. Demographic changes over time can explain some portion of the increase (the Irish population grew by 4% over the period in question) but further analysis should be undertaken to understand how the 16% increase in primary care investment since 2014 has impacted on presentations at the ED. Furthermore additional data should be collated to understand the complexity of the presentation in order to determine if the episode could have been more appropriately treated outside of the Acute setting.
- In terms of performance, ED KPIs between 2014 and 2017 have been worsening with patient experience times increasing and the proportion of patients leaving the ED before completion of treatment increasing.
- The paper also looks at a number of recent policy measures which could reasonably be expected to have either direct or indirect impacts on ED presentations. These include:
 - *Initiative Funding* – €265m has been provided to hospitals since 2014 by way of initiative funding to target overcrowding in hospitals and pressures on ED and waiting list numbers. Despite this there appears to have been limited or temporary impacts.
 - *Local Injury Units* - The numbers attending LIUs has been increasing since 2014 and this paper notes some positive correlation in areas where an LIU can reduce the reliance on the local ED. However, given the limited data available it is not possible to extend the analysis to the national level or draw any concrete conclusions about the impact.
 - *Introduction of free GP care for under-6s* – the paper draws from ESRI analysis regarding the impact of this. The ESRI finds that this initiative did not result in a reduction in ED presentations for the under 6 cohort.
- A key finding from the paper is the existence of gaps in the data available for ED analysis and further areas for analysis:
 - Data regarding the complexity of the ED presentation in order to determine if the Acute setting is the most appropriate or if the episode could be better treated in the primary/ community setting.
 - Return data should be split into scheduled and unscheduled episodes.
 - Expenditure and staff data specific to EDs is not available. This lack of high-level supply side data from one of the most challenging sectors in the Acutes is concerning.
 - Taken together additional demand and supply side data could allow for a more comprehensive review of (a) the ED performance in recent years and (b) an extension of the analysis to assess the appropriateness of ED presentations and how primary care investment has impacted on the demand for Emergency care in recent years.

1. Introduction

Emergency Departments (EDs) are an important component of the larger health care system. They deliver care to those medical, surgical or psychiatric conditions that require urgent attention in order to save a life or prevent permanent impairment. Emergency care is typically provided in response to serious accidental injuries or the sudden onset of an acute medical condition which requires a patient to be admitted to hospital. However, other less serious conditions are also treated at the ED with patients subsequently being discharged without needing to be admitted¹.

There are currently 29 EDs in Ireland. Some EDs only treat adult patients while others are specialist paediatric centres. Many EDs deliver care to both adult and paediatric patients on the same site. In addition to EDs, there are currently 11 Local Injury Units (LIUs) which opened between 2014 and 2015. LIUs treat broken bones, dislocations, sprains, strains, wounds, scalds and minor burns that are unlikely to need admission to hospital.

In 2017, there was a total of 1.3m presentations to the ED with a further 89,300 presentations at an LIU. This is an 8% increase over 2014 and reflects an average of over 3,800 presentations per day. This increase in demand can adversely impact patient outcomes, increase health care costs and place strain on healthcare professionals' workloads². Taking account of the growing numbers attending EDs and LIUs in recent years, it is important to understand the scale of the challenge being observed and the possible options to alleviate this pressure.

In this regard, the objective of this paper is to:

- (1) Analyse the trends and performances of Emergency Departments between 2014 and 2017 with regard to:
 - I. Additional numbers of new and return presentations
 - II. Demographic context
 - III. KPIs such as waiting times and patients who leave the ED before completion of treatment
- (2) Examine the policy tools used to address the ED pressure and their impacts, if any, i.e.:
 - I. Initiative funding
 - II. Local Injury Units
 - III. Introduction of free GP care for under 6's

¹ Comptroller and Auditor General, Special Report (2009). *Emergency Departments*. Available from http://www.audgen.gov.ie/documents/vfmreports/70_Emergency_Departments.pdf.

² Berchet C. (2015). *Emergency care services: Trends, drivers and interventions to manage the demand*. OECD.

2. Emergency Departments

Key Points

- There are 50 hospitals in Ireland with 29 ED units and 10 Local Injury Units (LIUs)
- In 2017 new and return ED presentations accounted for 86% of total ED presentations with LIUs representing an additional 6%. A further 8% of presentations were attributable to a number of other categories including Emergency presentations direct to ward, OBGYN presentations at maternity hospitals and attendances at paediatric assessment units.
- Given that 3 categories account for 92% of presentations, this paper focusses on new, return and LIU presentations.
- Between 2014 and 2017:
 - new presentations increased by 8%
 - return presentations increased by 16%
 - LIU numbers increased by 16% (LIU data only available from 2015).
- There is limited data available to determine what is driving the increase in ED presentations. Demographic changes over time can explain some portion of the increase (the Irish population grew by 4% over the period in question) but further analysis should be undertaken to understand how the 16% increase in primary care investment since 2014 has impacted on presentations at the ED. Furthermore additional data should be collated to understand the complexity of the presentation in order to determine if the episode could have been more appropriately treated outside of the Acute setting.
- In terms of performance ED KPIs between 2014 and 2017 show that:
 - Proportion of patients admitted/discharged within 6 hours fell by 1.3 p.p.
 - Proportion of patients admitted/discharged within 9 hours fell by 0.4 p.p.
 - Proportion of patients who left before completing treatment increased by 1.2 p.p.
- Trolley numbers have grown by an average of 1% per month

2.1 Overview

There are 50 hospitals in Ireland with 29 ED units. This section looks at the trends observed in EDs since 2014 and takes account of:

- Number of people presenting at the ED between 2014 and 2017
- Breakdown of these presentations by “new” or “return” presentations
- The demographic drivers by region
- KPI's:
 - Waiting times
 - Numbers leaving before completion of treatment

- Trolley numbers - trolley numbers are not classified as an ED metric in the monthly management data reports. However, according to the HSE website the trolley count “enables daily monitoring of ED performance and helps trigger the hospitals’ response during busy periods”³.

Trend data has been provided by the Department of Health and the HSE Business Intelligence Unit (BIU) while performance metrics have been taken from the monthly HSE Management Data Reports available on the HSE website.

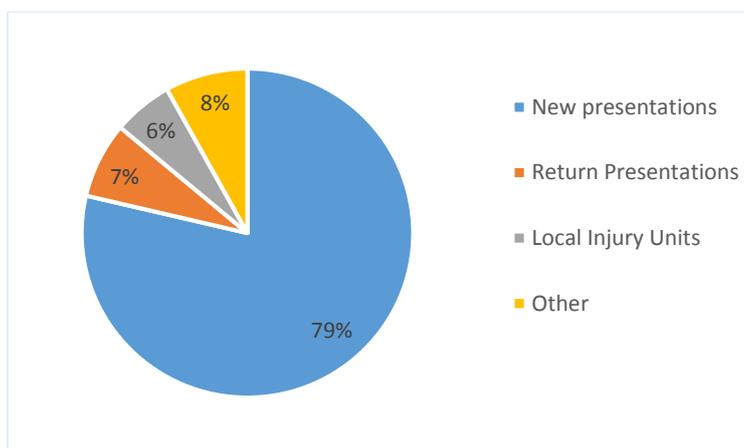
The HSE data for ED presentations is broken down into 7 categories, these are:

1. New attendances
2. Return attendances
3. Local Injury Unit presentations
4. Obstetric/Gynae Emergency presentations at Maternity Hospitals
5. Emergency presentations direct to ward
6. Attendances at Paediatric Assessment Unit
7. Attendances at Surgical Assessment Unit.

Categories 1 - 3 account for 92% of all presentations in 2017 therefore this paper will focus its analysis on these particular categories.

2.2 Emergency Department Activity, 2014-2017

Figure 1: Breakdown of Emergency Presentations 2017



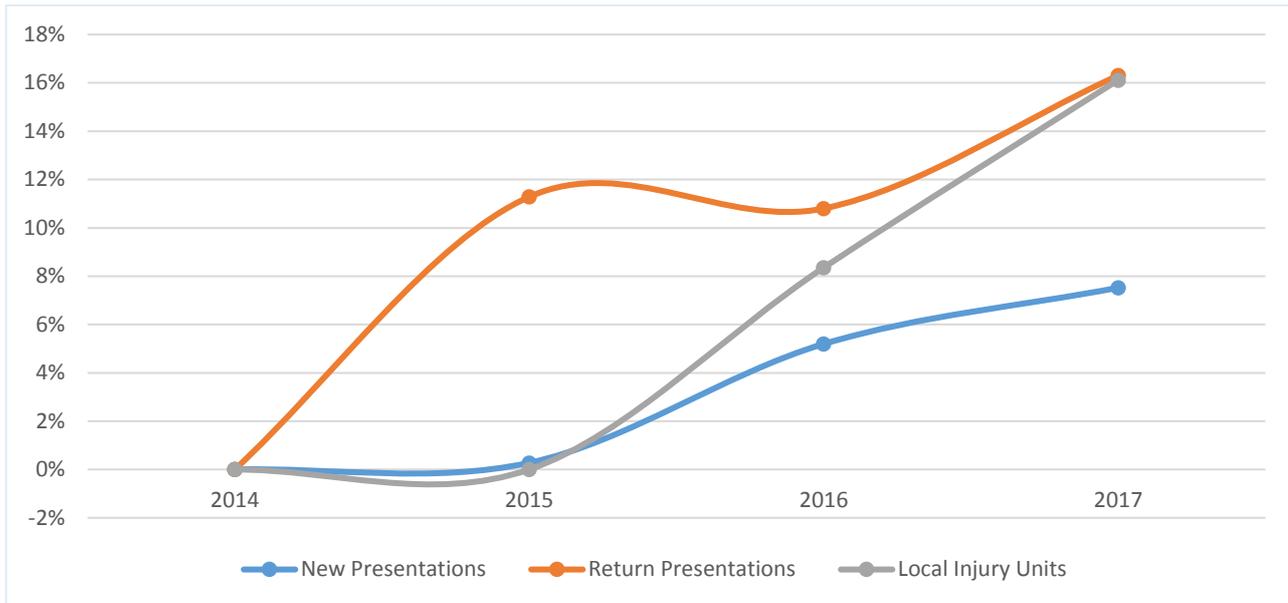
Source: HSE BIU data, 2017

Figure 1 demonstrates the breakdown of the three key categories of ED presentations in 2017. 79% of all presentations were classified as new with a further 7% return and 6% Local Injury Unit. The remaining 8% of “other” presentations are split between categories 4-7 set out above.

Figure 2 below demonstrates the trend between 2014 and 2017 for the three categories.

³ <https://www.hse.ie/eng/services/campaigns/trolleygar.html>

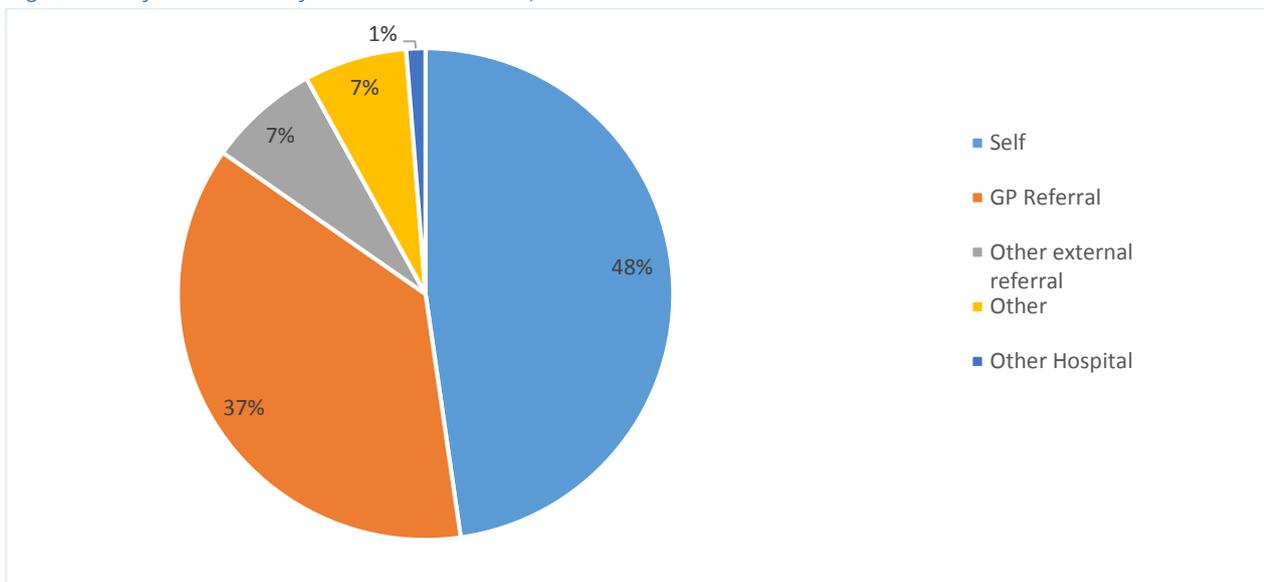
Figure 2: % growth in ED presentations, 2014-2017



Source: HSE BIU data

Data for 2017 also breaks down the referral source for ED presentations. As shown in figure 3 below self-referral makes up the largest proportion of referrals at 48% with a further 37% being referred by a GP.

Figure 3: Referral Source for ED Presentation, 2017



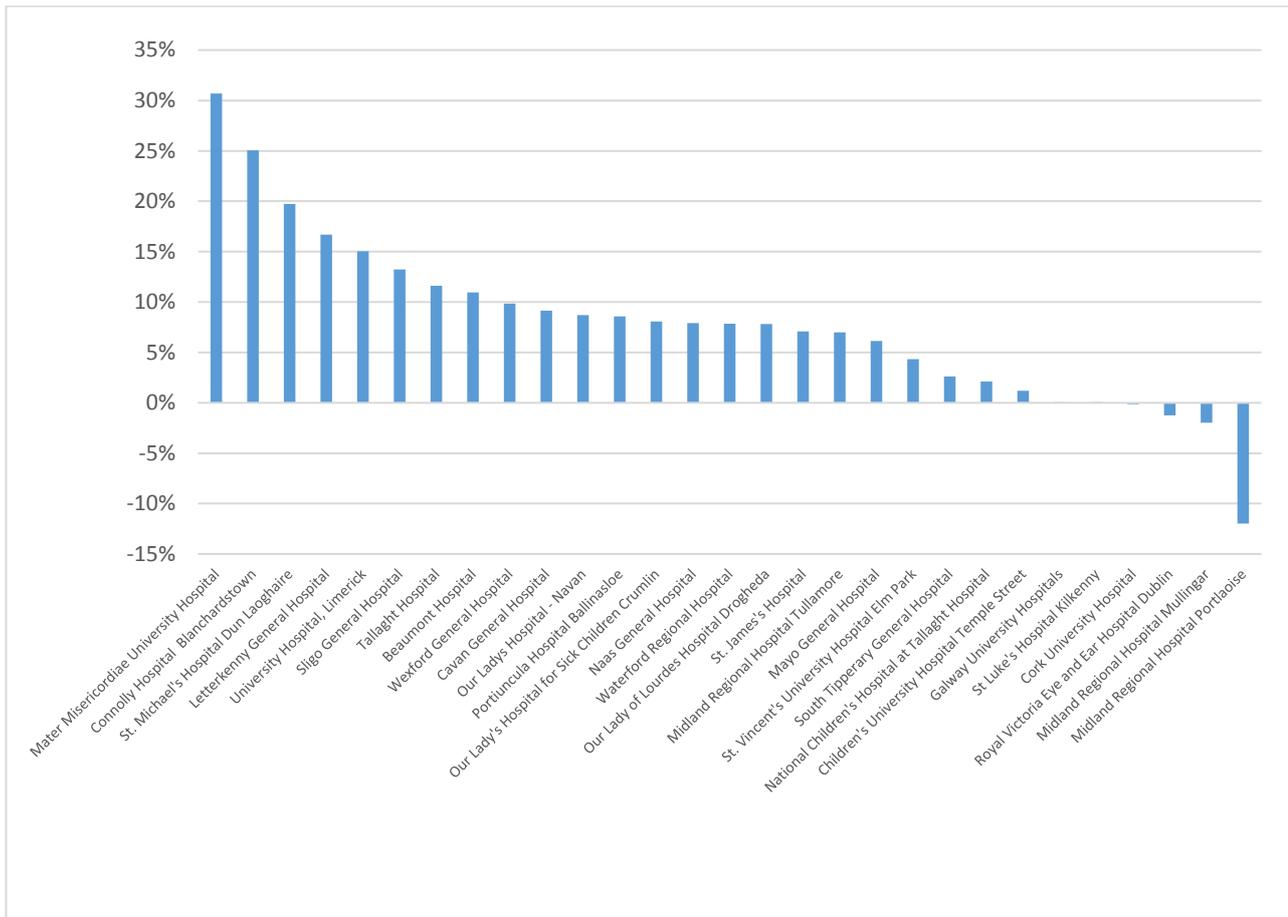
Source: HSE BIU data, 2017

Referral source data is available for 2014 to 2018 however the proportions remain relatively static over the years. While the referral from GP makes up a very significant portion of patients attending the ED it would be interesting to see what proportion of total presentations to the GP are subsequently referred to the ED. This observation is made in light of the findings of a recent ESRI report which is set out in more detail in section 3.4 of this paper.

2.2.1 New Presentations, 2014-2017

Since 2014 new presentations have increased by 84,000 or 7.5%. There is significant variation across hospitals with regard to this growth. Growth in new presentations ranges from negative growth of -12% in MRH Portlaoise to positive growth of 31% at the Mater Hospital Dublin. While 9 hospitals experienced growth of over 10% over the three year period, 7 EDs saw new presentations increase by between 0-5% with a further 3 EDs showing negative growth. This is demonstrated in the graph below:

Figure 4: New Emergency Department Presentations, 2014-2017



Source: HSE BIU data

There is limited data available to determine what is driving the increase in new presentations in Ireland.

A 2015 OECD paper looked at the international experience of EDs across 21 different countries. It lists a range of factors that drive the demand for ED services from convenience (i.e. the 24 hour availability) and demographics/ population aging to the lack of access to primary health care and a shortage of out-of-hours services⁴.

Section 2.4 of this paper looks at the relationship between demographic growth since 2014 and ED presentations. While changes in demographic trends can account for some of the increase it cannot explain

⁴ Berchet C. (2015). *Emergency care services: Trends, drivers and interventions to manage the demand*. OECD.

a large part of it. It therefore raises an interesting question for further analysis in the Irish context regarding how primary care investment in recent years has impacted on the numbers presenting at the ED. Current spend on primary care services⁵ was over €1 billion in 2017 – this is an increase of 34% (c. €260m) between 2014 and 2017. While €140m of this increase is attributable to the absorption of most of the remaining Multi Care Group budget by core primary care services in 2014, there has still been robust growth in spending in recent years with over €120m (16%) in extra resources committed since 2014⁶. In addition to this capital spending on primary care has been increasing although the largest proportion of the capital budget is still directed towards Acute infrastructure projects⁷.

While demographics and the availability of primary care services may impact on the number of presentations at the ED, to fully understand the driver of ED presentations it would also be useful to see the nature of the presentation i.e. the complexity. This would enable a better understanding of whether or not the ED was the most appropriate place to present or could the condition have been treated in an alternative setting i.e. in the primary or community care sector.

2.2.2 Return Presentations

While new presentations constitute 79% of total ED presentations, the proportion of patients returning to the ED after an initial visit is increasing at more than twice the rate that new presentations are increasing. Between 2014 and 2017 return presentations increased by 16,000 or 16%. Return presentations record the total number of scheduled and unscheduled return attendances at the ED and comprise 4 different categories⁸:

1. Scheduled returns are planned follow-up attendances at the same department, and for the same incident as the first attendance⁹.
2. Unscheduled returns are unplanned attendances at the same department and for the same incident within 24 hours of the first attendance.
3. Unscheduled seven-day returns are unplanned attendances at the same department and for the same incident within seven days of the first attendance.

⁵ Primary Care services cover many of the health or social care services that are found in the community, outside of the hospital setting. This includes GPs, Public Health Nurses and a range of other services provided through the Local Health Office (e.g. physiotherapy, occupational therapy, home-help).

⁶ Campbell T. 2016. *Staff Paper 2016, Primary Care*. Available at: <https://igees.gov.ie/wp-content/uploads/2017/09/Staff-Paper-2016-Primary-Care.pdf>

⁷ Jenkinson, F., O'Callaghan D., Kane, F., Reidy, P., Prior, S. 2017. *Strategic Public Infrastructure: Capacity and Demand Analysis*.

⁸ HSE, Acute Hospitals 2018, KPI Metadata 2018

⁹ A scheduled return is a patient for whom a subsequent ED visit is arranged but who remains under the care of the ED consultant. This may include patients attending review clinics run by ED consultants. The review clinic caters for a patient population who, after their ED attendance and same day discharge, need a relatively urgent review in a place with facilities that are not available in primary care e.g. specialist advice, same day diagnostic imaging (followed by immediate senior decision making on results) and a number of other "healthcare safety net" functions.

4. Unscheduled 28-day returns are unplanned attendances at the same department and for the same incident within 28 days of the first attendance.

Some return visits cannot be prevented, and are in fact scheduled, others are preventable. In these instances it can be due to inadequate symptom control, misdiagnosis, inappropriate management or failure in the follow up plan. Return visits can lead to increased ED crowding and healthcare costs (Calder L, Pozgay A, Riff S, et al., 2015). Therefore it is important to understand the factors associated with return ED visits especially if growing at the rate shown in the available data. However, the data is not available to present the split of return presentations between scheduled and unscheduled care. Therefore return presentations can only be shown at the aggregate level.

Table 1 below shows the proportion of ED presentations (new and return) attributable to return patients.

Table 1: % Return ED Visits, 2014-2017

	2014	2015	2016	2017	2014-2017
Total ED presentations	1,218,132	1,232,255	1,302,995	1,318,368	100,126
Return	97,924	108,975	124,583	113,890	15,966
% return	8%	9%	10%	9%	16%

Source: HSE BIU data

The table above shows that the proportion of return presentations has ranged from 8-10% over the three year period. However, while new ED presentations have grown at a rate of c. 2% p.a. return presentations have been growing at c. 4% p.a.

The NHS states that good practice is for unplanned re-attendance rates at the ED to be less than 5%¹⁰. In the absence of the breakdown of the return data it is not possible to determine whether the rate of returns to Irish EDs is within this acceptable rate.

2.2.3 Local Injury Units

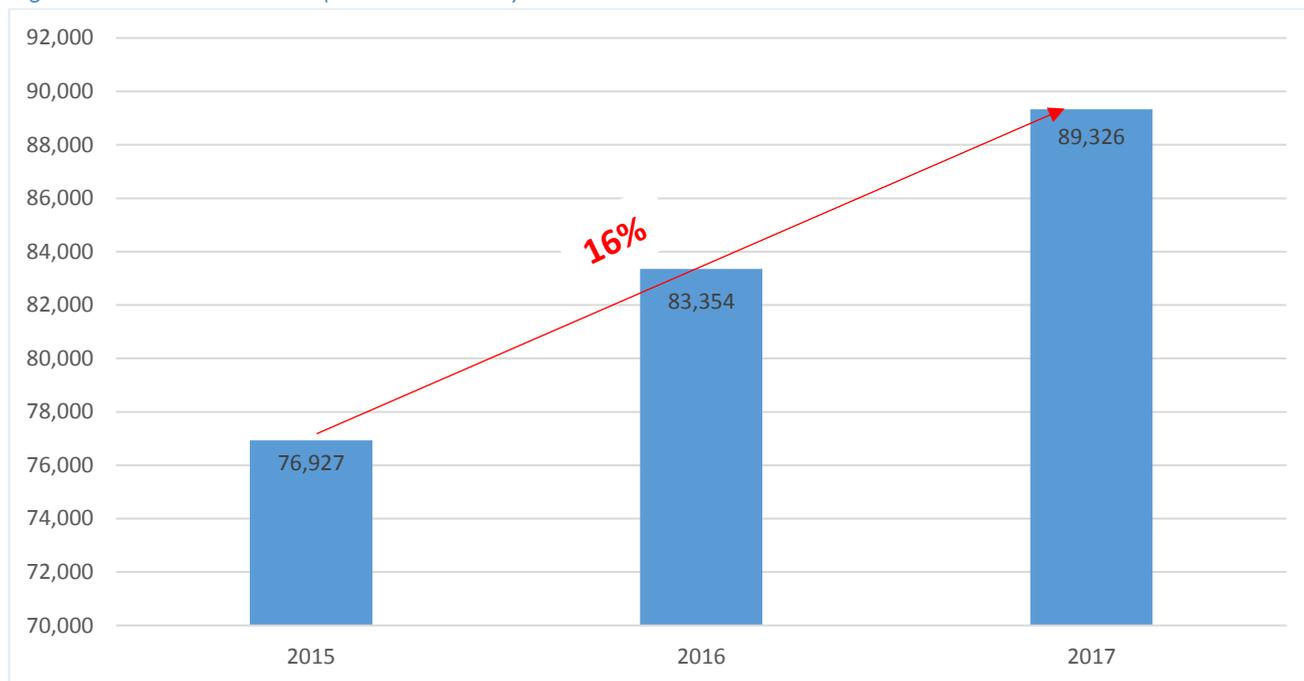
There are 11 LIUs across the country. In 2017 LIU's had 89,000 admissions or 6% of all emergency presentations. Data for Local Injury Units (LIU) is only available from 2015 onwards. Since then LIU presentations have increased by 12,400 or 16%.

Local Injury Units (LIUs) are locally based services to treat minor injuries unlikely to need admission to hospital and therefore helping patients to avoid a visit to the Emergency Department. LIUs treat broken bones, dislocations, sprains, wounds, scalds, and minor burns that are unlikely to need admission to hospital.

¹⁰ NHS Patient Survey Programme. 2016 Emergency Department Survey Statistical Release. Available at: https://www.cqc.org.uk/sites/default/files/20171017_ED16_statistical_release.pdf

LIU staff perform x-rays, reduce joint dislocations, apply plaster casts, and treat wounds by stitches or other means. Each LIU is linked to a Hub ED in an acute hospital, to which the patient will be referred directly in the same way as if they had attended the Hub ED. As with EDs, there is a cost of €100 for anyone who does not have a medical card or a GP referral. None of the LIUs treat children under 5. Eight LIUs treat children from five years and up wards with the remaining three treating children from 10, 14 and 16 years. All LIUs have restricted opening hours (e.g. 8am-8pm). Figure 5 below shows the trend in LIU attendances since 2015.

Figure 5: LIU attendances (new and return)



Source: HSE BIU data

Section 3 of this paper looks at LIUs in more detail.

2.3 Demographics

This section sets out growth in the regional populations compared with growth in the corresponding ED presentations over the period. Over the period 2014 to 2017, the Irish population increased by 4%. The CSO provides a breakdown of population growth by eight Regional Authorities. These regions are set out below:

Dublin: Dublin City, Dun Laoighaire-Rathdown, Fingal, South Dublin

Border: Cavan, Donegal, Leitrim, Monaghan, Sligo

Midland: Laois, Longford, Offaly, Westmeath

Mid-East: Kildare, Meath, Wicklow, Louth

Mid-West: Clare, Limerick, Tipperary

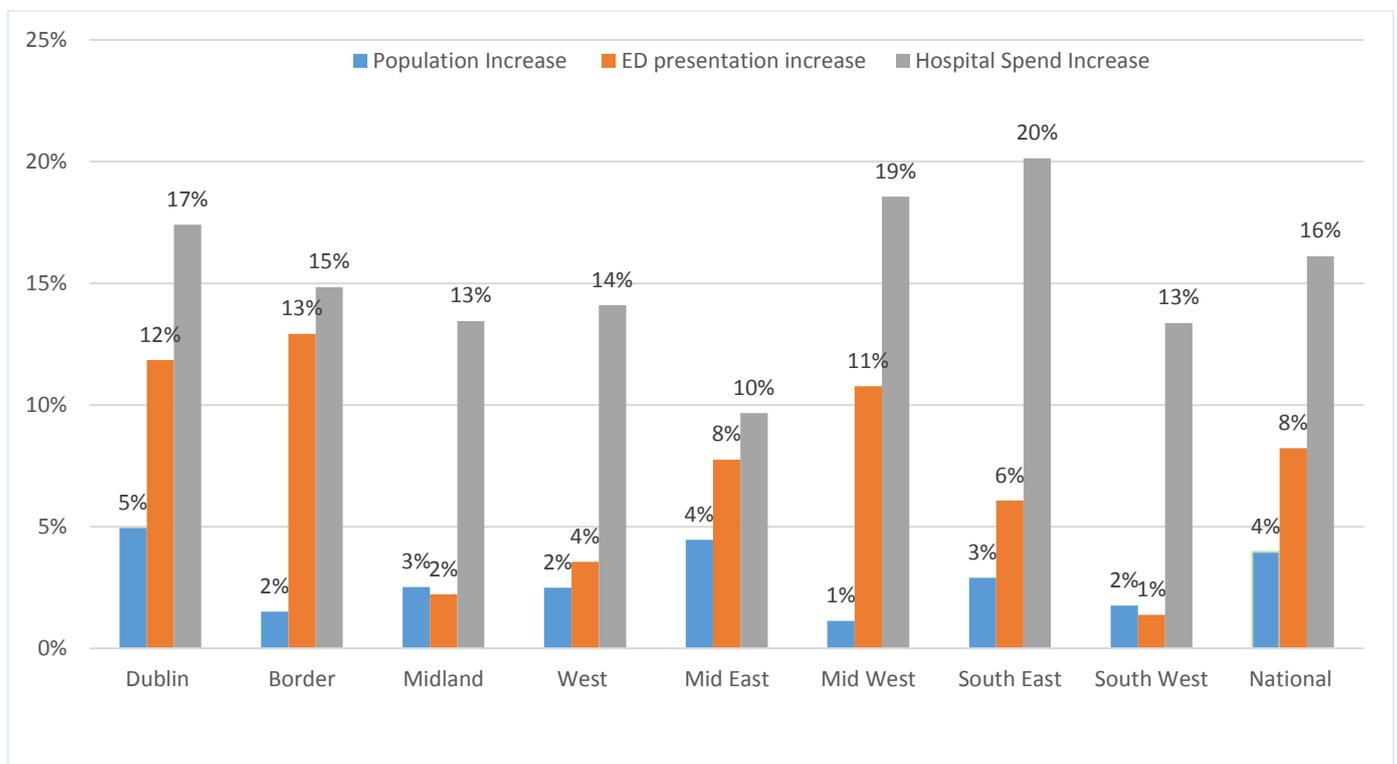
West: Galway City, Galway County, Mayo, Roscommon

South West: Cork City, Cork County, Kerry

South-East: Carlow, Kilkenny, Waterford City, Waterford County, Wexford

For the purpose of this exercise CSO regions have been used and ED units have been aligned with these regions. Figure 6 below sets out the changing population across the regions for the period 2014 to 2017.

Figure 6: % Growth in Population and ED presentations, 2014 – 2017



Source: CSO, HSE BIU data

The graph clearly shows that growth in ED presentations far exceeds growth in the general population of the region. This is most notable in the Mid-West, Border and Dublin regions. ED activity is demand led and therefore beyond the control of any individual hospital. The observed trend shows that while demographic growth can explain some part of the increase in demand for ED care, it is not the key driver.

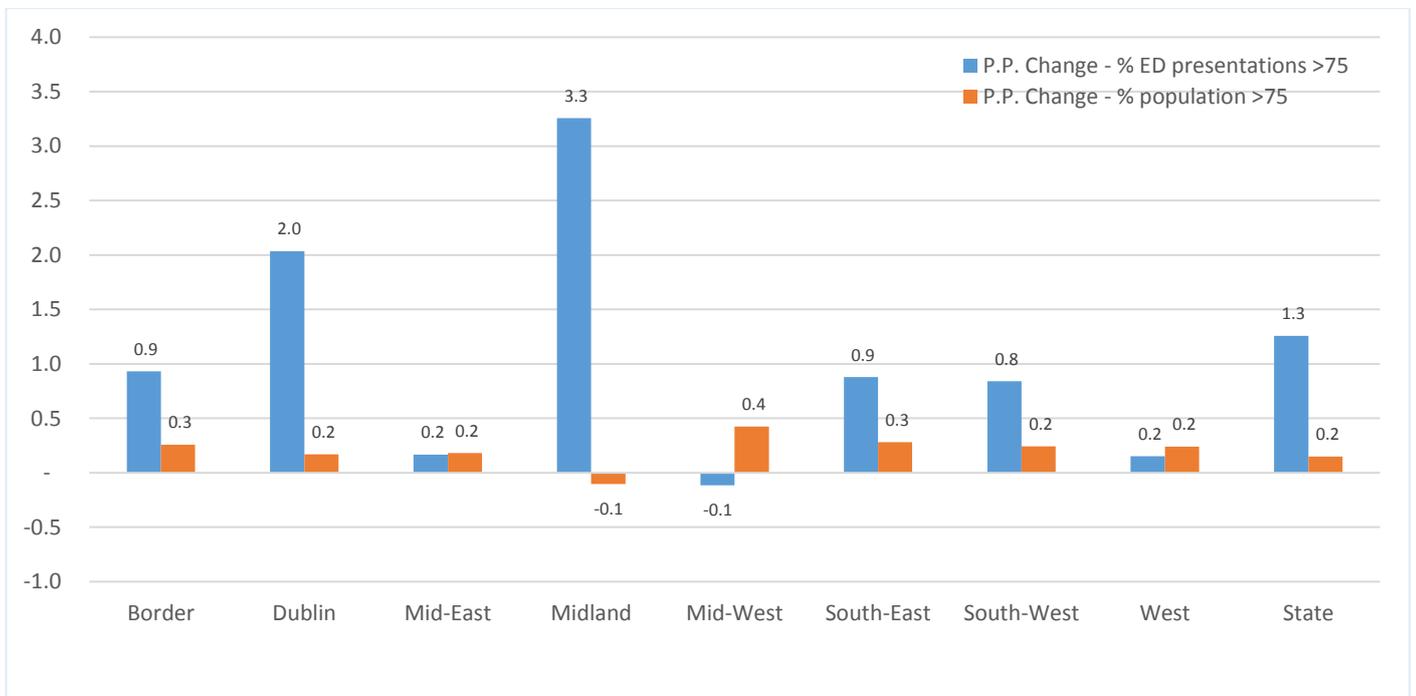
The graph also includes hospital spending to demonstrate why there is a particular interest in looking at the challenge facing EDs despite increased investment in the overall Acute system since 2014. As shown, hospital spending in these regions grew by significantly more than demographic trends and by the rate of growth in ED presentation numbers over the period.

2.3.1 Over-75s Cohort

One of the most cited cost drivers of ED presentations is age - specifically the very young or the very old (aged over 75). He et al (2011) carried out a review of the literature on ED drivers and concluded that in general, older people were more likely to use EDs frequently and for urgent medical conditions while younger people were more likely to use EDs for non-urgent medical conditions. Given this finding, it is useful to consider the age restrictions in place across LIUs. If younger people are more likely to use the ED for more non-urgent medical conditions this suggests that their treatment would be better suited to a primary care setting or LIU facility.

Between 2015 and 2017¹¹ the Irish population aged over 75 increased by 16,000 or 6%. However, when we look at the overall proportion of the Irish population aged over 75 during the period, the increase was just 0.15 percentage points i.e. the proportion of the population aged over 75 increased from 5.48% to 5.63%. Over the same period the proportion of all ED presentations aged over 75 grew by 1.3 percentage points from 10% to over 11%. Figure 7 below shows the percentage point change in total population aged over 75 and the percentage point change in the proportion of ED presentations aged over 75 for the period 2015 to 2017, broken down by region. It is clear in all but two regions that something other than an aging population is responsible for the increasing numbers presenting at EDs.

Figure 7: Percentage Point Change in Regional Population vs. ED presentations aged over 75



Source: CSO, HSE BIU data

¹¹ HSE data for over 75 presentations at ED broken down by hospital provided for years 2015-2018. 2014 data not available.

2.4 Performance Metrics

The HSE's monthly Performance Profile Reports set out a range of performance metrics for EDs as set out below. These reports are available from the HSE website.

(1) % discharged/admitted within 6 hours

Figure 8 shows that since 2014 the proportion of patients that have been discharged/admitted within 6 hours remained relatively flat between 2014 and 2016 but since then has fallen by 1.3 p.p from 67.6% in 2014 to 66.3% in 2017. The graph also highlights that the original target of 95% was revised down to 75% in 2016. Even against the reduced target this metric appears to significantly underperform.

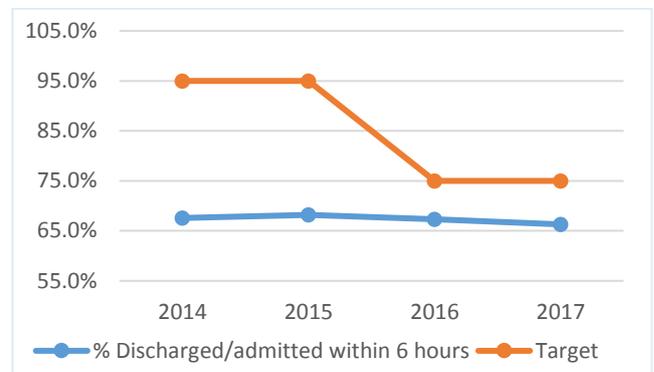
(2) % discharged/ admitted within 9 hours

Like (1) above this KPI measures the proportion of patients admitted or discharged within 9 hours. The target is for **all** patients presenting to the ED where a decision to discharge or admit is made and recorded within 9 hours. However, as shown in figure 9 this metric significantly underperforms. The actual proportion seen to within the timeframe has fallen by 0.4 p.p since 2014, i.e. from 81.3% to 80.9% in 2017.

(3) % ED patients who leave before treatment completed

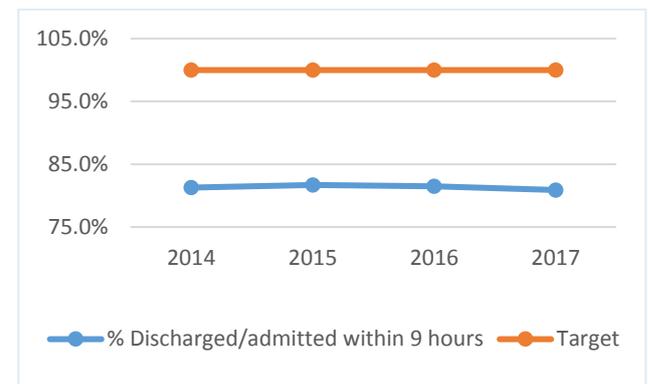
This KPI shows the proportion of ED patients leaving the hospital before they have been formally discharged following the completion of treatment. Worryingly, the proportion has been increasing since 2015. As shown in figure 5 the proportion of people leaving before the completion of treatment has been over target since 2016. By end 2017 the percentage of people leaving the ED without being formally discharged was 5.6%.

Figure 8: % discharged/admitted within 6 hours



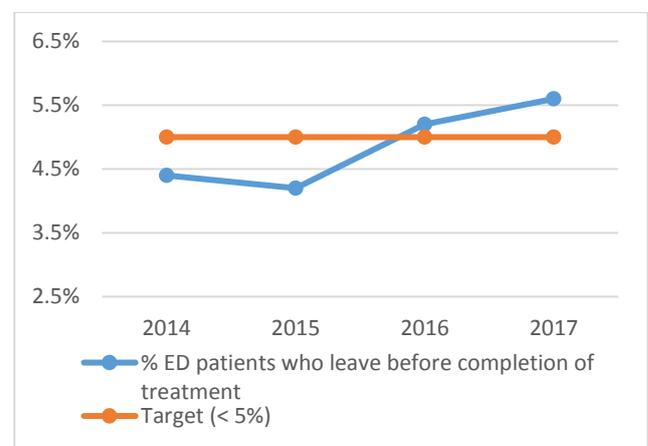
Source: HSE Management Data Reports

Figure 9: % discharged/admitted within 9 hours



Source: HSE Management Data Reports

Figure 10: % who leave before completion of treatment



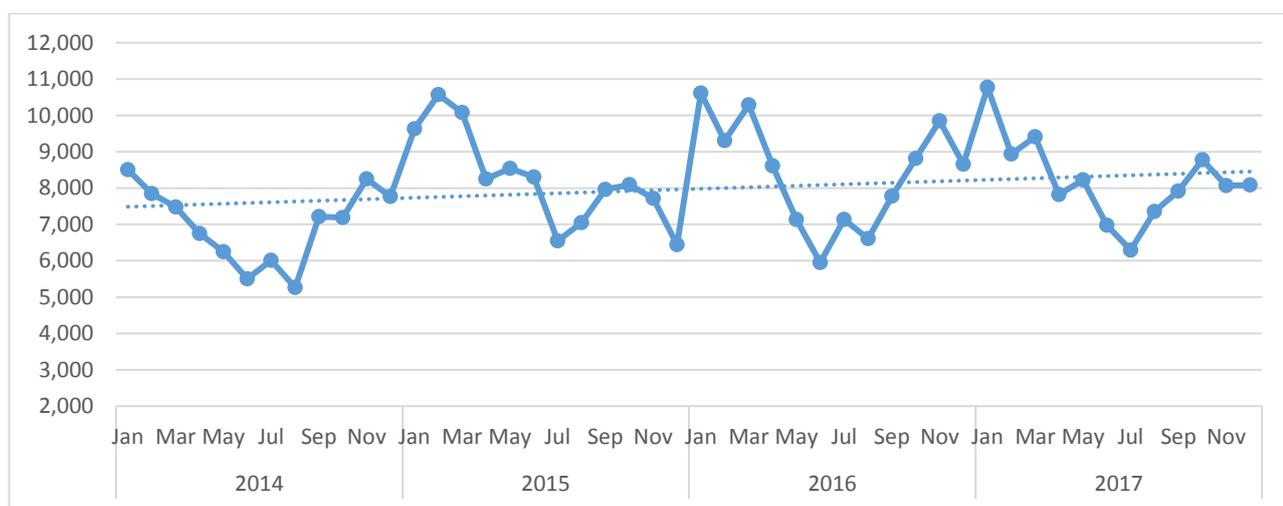
Source: HSE Management Data Reports

2.5 Trolley Numbers

Although trolley numbers do not constitute an ED metric, and are not reported as such in the monthly Management Data Reports in the same way as the metrics outlined in section 2.4, according to the HSE website the TrolleyGAR system which counts the number of patients awaiting admission to an inpatient hospital bed “enables daily monitoring of ED performance and helps trigger the hospitals’ response during busy periods”¹².

Based on the TrolleyGAR data, Figure 11 below sets out the trend in ED trolley numbers between 2014 and 2017.

Figure 11: ED Trolley Numbers, 2014-2017

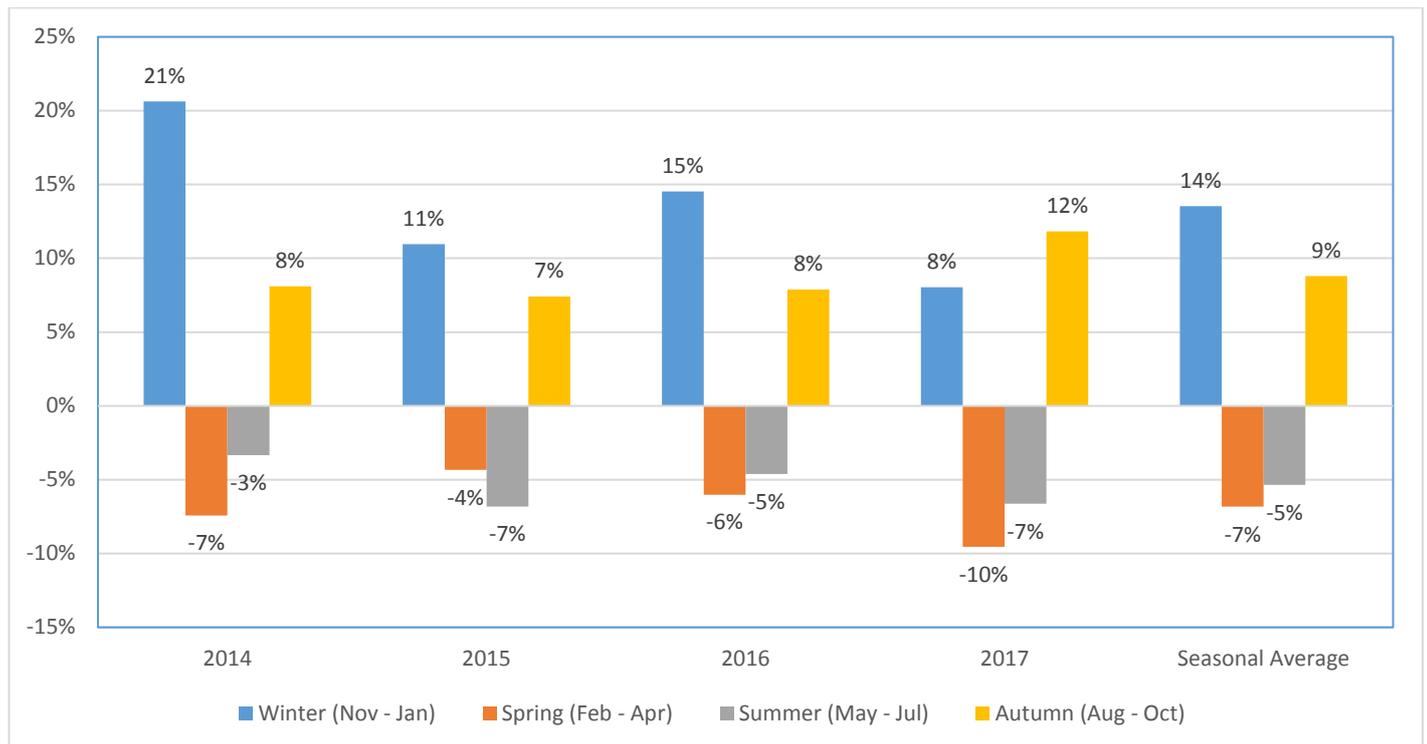


Source: HSE SDU TrolleyGAR

The graph demonstrates a seasonal trend with typical spikes occurring around the winter months, particularly January. Over the four years under review, the average monthly growth rate is 2%. However, given the seasonal nature of this metric it is useful to break the analysis down by season. The graph below shows the average seasonal growth rates over the period. While highly volatile in their range, the pattern emerges clearly that there is seasonal spikes in Autumn and Winter with falls in Spring and Summer. To note, winter incorporates the November and December months from the previous year. So for 2014, winter comprises November and December 2013.

¹² <https://www.hse.ie/eng/services/campaigns/trolleygar.html>

Figure 12: Average Seasonal Growth trends, 2014-2017



Source: HSE SDU TrolleyGAR

The graph shows that there was a particularly bad spike in winter 2013/14 where the average monthly growth rate for the season was 21%. However since then the winter growth rate has ranged from 8% to 11%. Likewise Autumn growth rates have been relatively stable at 7-8% between 2014 and 2016 with a spike of 12% in 2017.

2 Targeted Policy Measures

Key Points

- Between 2014 and 2017 hospital spend increased by €680m or 17%.
- Data is not available to show how much of this spend is directed towards the ED. Staff numbers are also presented at the hospital level (broken down by job type i.e. nursing, consultant, administration, etc...) therefore it is not possible to measure the change in resources over time that have been made available to the ED specifically.
- However, since 2014 a number of targeted initiatives have been introduced which could reasonably be expected to relieve pressure on the Acute sector. These include:
 - Initiative Funding – funding to address overcrowding in hospitals
 - The introduction of Local Injury Units (LIUs)
 - The introduction of free GP care for under-6s and over-70s
- Initiative funding was provided to reduce overcrowding in hospitals. Between 2014 and 2017 €265m was provided. This funding was not entirely once off in nature with €225m (85%) being built into the base budget for subsequent years.
- The initiative funding took the form of increased Fair Deal provision, additional community beds, and additional homecare packages. Additional funding was also provided to the NTPF to address the growth in waiting list numbers.
- LIUs were first introduced in 2014 and there are 11 units across the country. LIUs treat minor injuries therefore preventing unnecessary presentations at the ED.
- Free GP care for under-6's was introduced in Budget 2015 and came into effect in July 2015. Increasing access to a primary care service in this way could reasonably be expected to reduce the dependence on ED utilisation. However, a recent study by the ESRI found that this targeted policy initiative did not reduce the reliance on ED utilisation for under-6's.

3.1 Overview

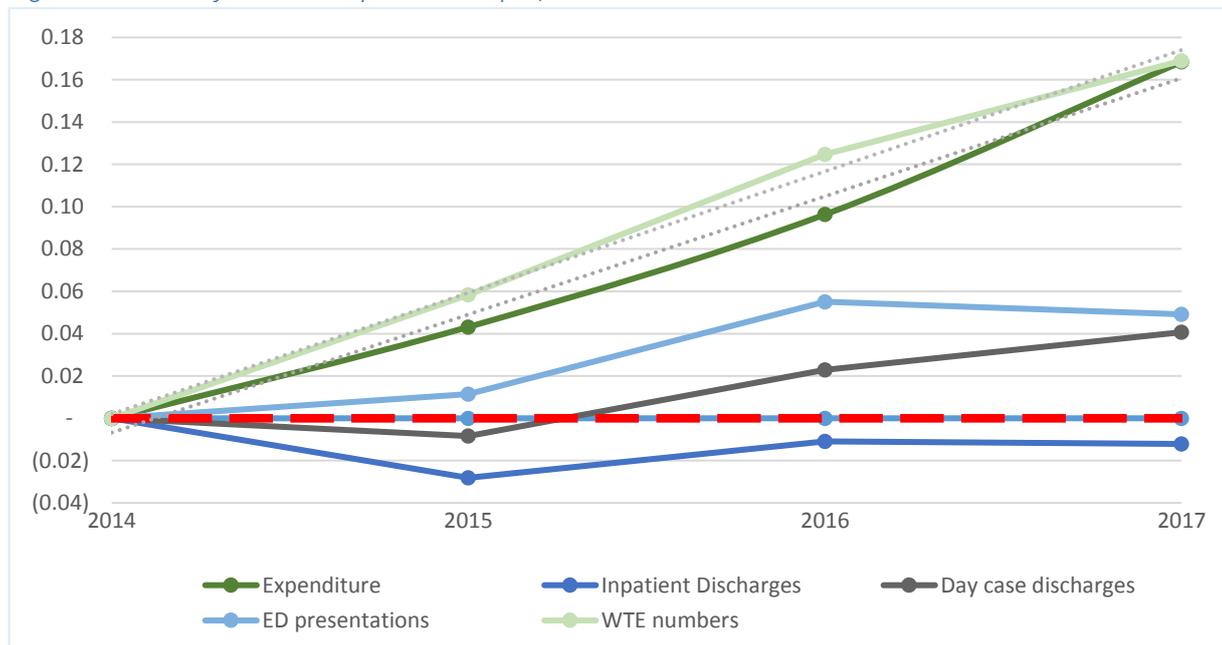
Set against the backdrop of the investment in the Acute sector since 2014, in terms of both spend and staff resources, the data presented in section 2 is concerning. The 2018 Spend Review Paper, *“An Analysis of Hospital Inputs and Outputs 2014-2017”* identified a clear disconnect between hospital spend and staff numbers and output levels.

Hospital spending increased by €680m or 17% between 2014 and 2017¹³ with staff numbers also increasing by 17% during this time. However output levels for the same period (as measured by inpatient and day case

¹³ Lawless, J. 2018. “Analysis of Hospital Inputs and Outputs 2014-2017”. Available at: file:///C:/Users/lawlessj/Downloads/25.-Hospital-Inputs-and-Outputs.pdf

discharges, emergency department presentations and waiting list numbers) increased marginally or declined. This is summarised in the graph below:

Figure 13: Rate of Growth – Spend V. Output, 2014-2017



Source: Analysis of Hospital Inputs and Outputs 2014-2017

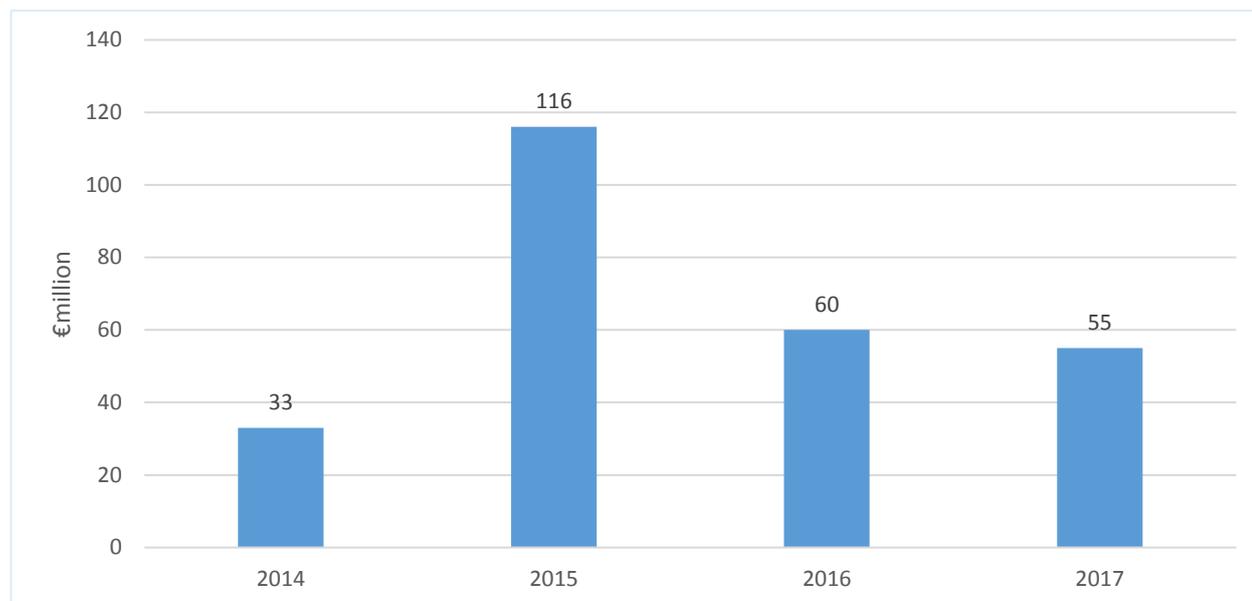
While it is not possible to identify exactly what spend is attributable to EDs, there are a number of recently introduced policy initiatives which would be expected to have direct or indirect impact on the ED. There are three key policy initiatives considered in this section:

- (1) Initiative Funding
- (2) The introduction of Local Injury Units (LIUs)
- (3) The introduction of free GP care for under-6s

2.5 Initiative Funding

Since 2014 a number of measures have been introduced to tackle waiting list numbers and address the additional demands arising throughout the winter months. The graph below demonstrates the additional funding provided to the Acute sector since 2014 with the specific aim of reducing hospital overcrowding. This investment has taken the form of increased numbers of transitional and community care beds, increased levels of homecare provision, expanded numbers of nursing homes places, and a concerted effort to reduce waiting times for elective surgery. Such indirect measures could reasonably be expected to have an impact on the numbers presenting at the ED.

Figure 14: Initiative Funding, 2014-2017



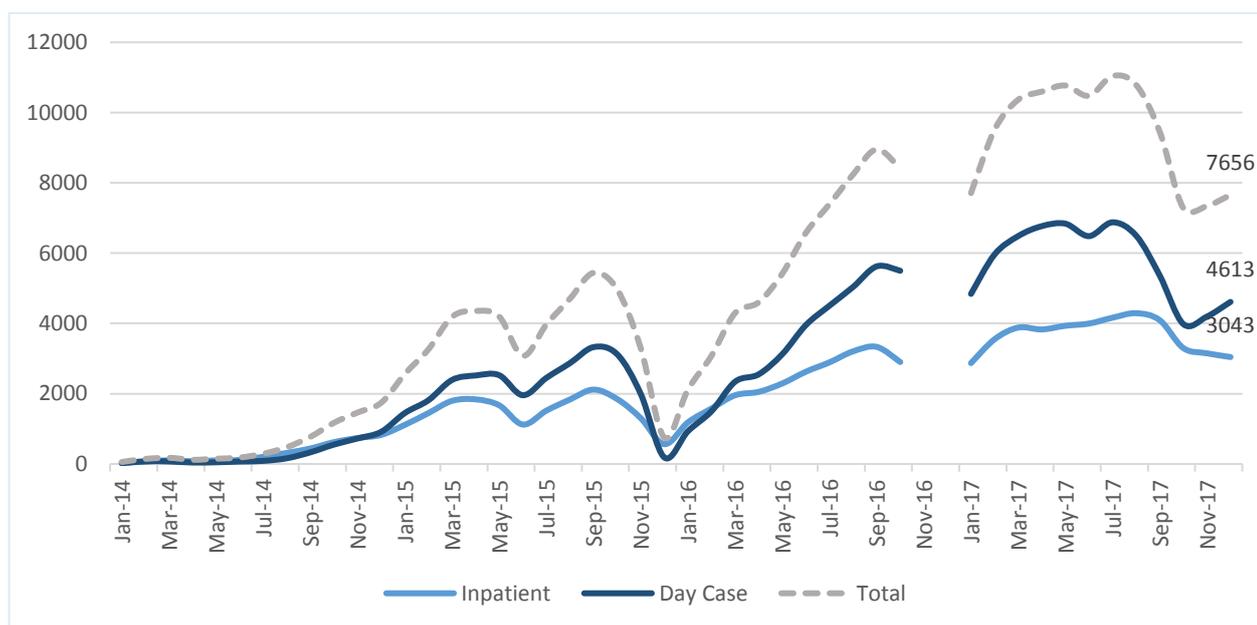
From 2014 – 2017, a total of €265 million has been committed to reducing hospital overcrowding. All but one of these initiatives (€40m once-off funding in 2017) have been absorbed into the system and increased base funding by €225 million. A summary of the initiatives are set out below:

- ❖ In 2014, €33m was provided to address emergency department overcrowding, delayed discharges and waiting lists.
- ❖ In 2015, a total of €116m was invested. While €38m specifically targeted waiting lists and Winter Initiative funding the remaining €78m looked at increasing access to beds through Fair Deal and additional community beds. Funding also allowed for increased home care provision. All of these initiatives, while not directly correlated to ED performance, could be reasonably expected to impact on presentations at the ED.
- ❖ In 2016, €60m was provided. Of this €40m was specifically for the Winter Initiative with €9m directly assigned to Acutes. Again these measures focussed on increasing access to home care provision and reducing waiting lists with other initiatives rolled out which could reasonably be expected to prevent the need for Acute hospital services.
- ❖ In 2017, a further €55m was provided. Of this, €40m was provided through the Winter Access plan and was once-off in nature (i.e. not built into the Budget base for the subsequent year).

In terms of the impact of these initiatives, while not all of these measures are specifically targeted to the ED it would be expected that any initiative designed to increase access, particularly in the primary care or community care setting, would have knock on implications for the numbers arriving at the ED. Furthermore, given that all but one of these investments were subsequently built into the Budget base for future years, it is not unreasonable to expect that the impact should be long-lasting rather than temporary in nature.

However, as shown in section 2 ED presentations have been increasing and at a faster rate than demographic trends can account for. Performance metrics are below target. With regard to waiting list numbers between 2014 and 2017, numbers waiting on an inpatient procedure increased by 46% while those waiting on a day case procedure increased by 59%. The proportion of those waiting over 15 months increased by 10 percentage points for day cases and 14 percentage points for inpatient procedures over the same period. In addition, it can be clearly seen that while winter initiative funding has led to an initial decrease in waiting list numbers, in the medium term there is a return to the initial levels or sometimes even beyond. This is demonstrated in the graph below (Lawless, 2018).

Figure 15: Trend in 'Long' waiting lists for Elective Care, 2014-2017



Source: Source: National Waiting List Data, NTPF

This raises questions regarding the appropriateness of short-term initiative funding initiatives which have limited impacts on outcomes and does not address the underlying issues.

Given the size of the investment made and the pressure that continues to face the ED, a review of the initiative funding provided to date to relieve overcrowding in hospitals would be an interesting area for further analysis.

In addition to these specific funding initiatives, since 2014 spend on primary care in Ireland has increased by 16% to over €1 billion in 2017 (this excludes capital expenditure). Between 2010 and 2011 a study was carried out in England which examined whether more accessible GP services in England had fewer ED visits per patient. The study concluded that GP practices which provided more timely access to primary care had

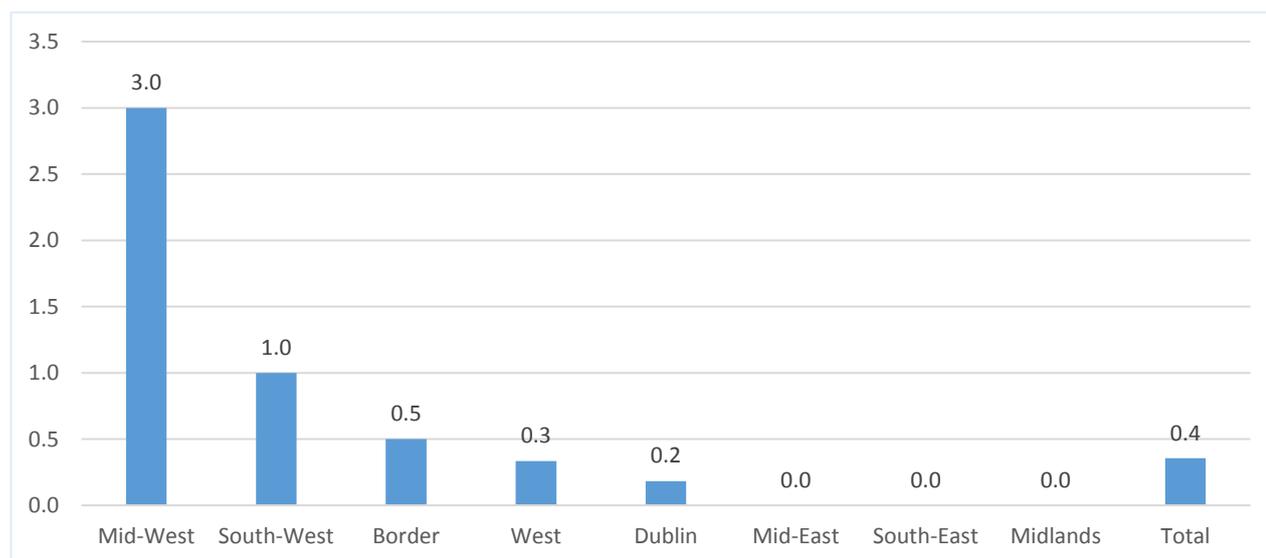
fewer self-referred discharged ED visits per registered patient¹⁴. While it is beyond the scope of this paper, there would appear to be merit in carrying out further analysis to determine how the recent investment in Primary Care has impacted on the level of ED presentations and whether or not the services provided can support a reduced reliance on the Acute sector more generally.

2.6 Local Injury Units (LIUs)

Local Injury Units (LIUs) are locally based services to treat minor injuries unlikely to need admission to hospital and therefore helping patients to avoid a visit to the Emergency Department. LIUs treat broken bones, dislocations, sprains, wounds, scalds, and minor burns that are unlikely to need admission to hospital. LIU staff perform x-rays, reduce joint dislocations, apply plaster casts, and treat wounds by stitches or other means. Each LIU is linked to a Hub ED in an acute hospital, to which the patient will be referred directly in the same way as if they had attended the Hub ED. As with EDs, there is a cost of €100 for anyone who does not have a medical card or a GP referral. None of the LIUs treat children under 5 and 8 treat from age 5 years and upwards (the others treat from 10, 14 or 16 years). All LIUs have restricted opening hours (e.g. 8am-8pm).

There are 11 LIUs across the country. Most of the LIUs are linked with hospitals that would previously have had casualty departments. The LIU effectively replaced these departments. The LIUs are not spread evenly across the country. The graph below shows the ratio of LIUs to EDs by CSO region.

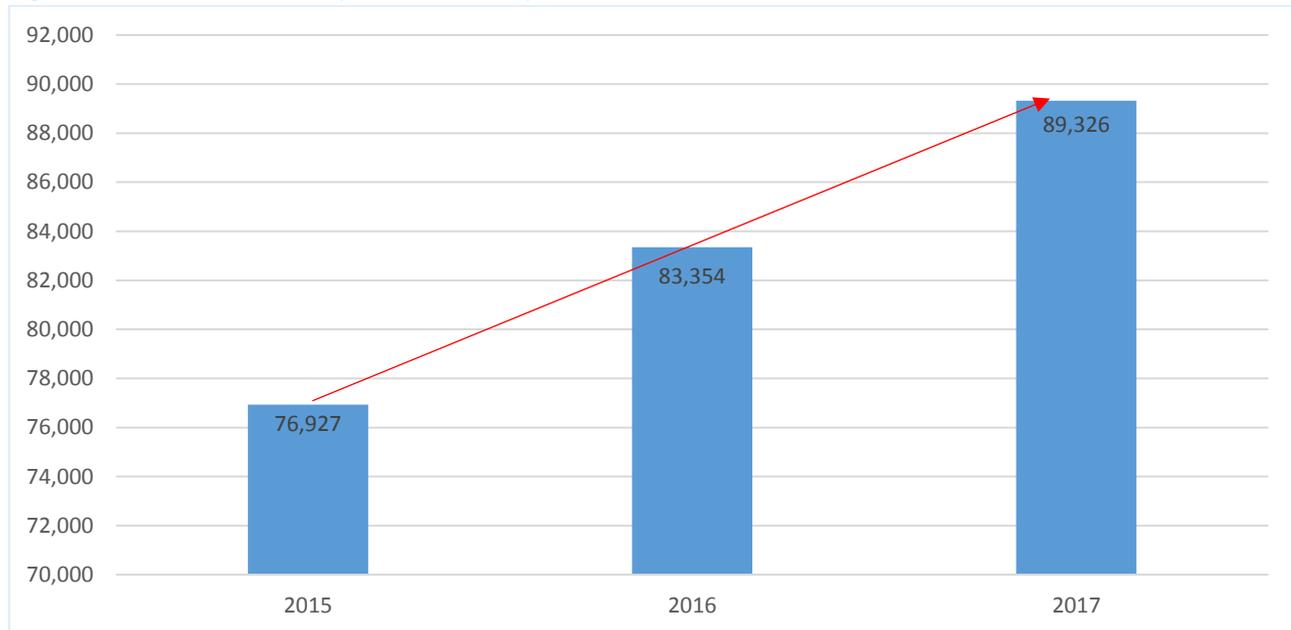
Figure 16: Ratio of LIUs to EDs



¹⁴ Cowling, T. E., Cecil, E. V., Soljak, M. A., Lee, J. T., Millett, C., Majeed, A., ... Harris, M. J. (2013). *Access to primary care and visits to emergency departments in England: a cross-sectional, population-based study*. PLoS one, 8(6), e66699. doi:10.1371/journal.pone.0066699

In 2017 LIU's had 89,000 admissions or 6% of all emergency presentations. Figure 17 below shows the trend in LIU attendances since 2014.

Figure 17: LIU attendances (new and return)



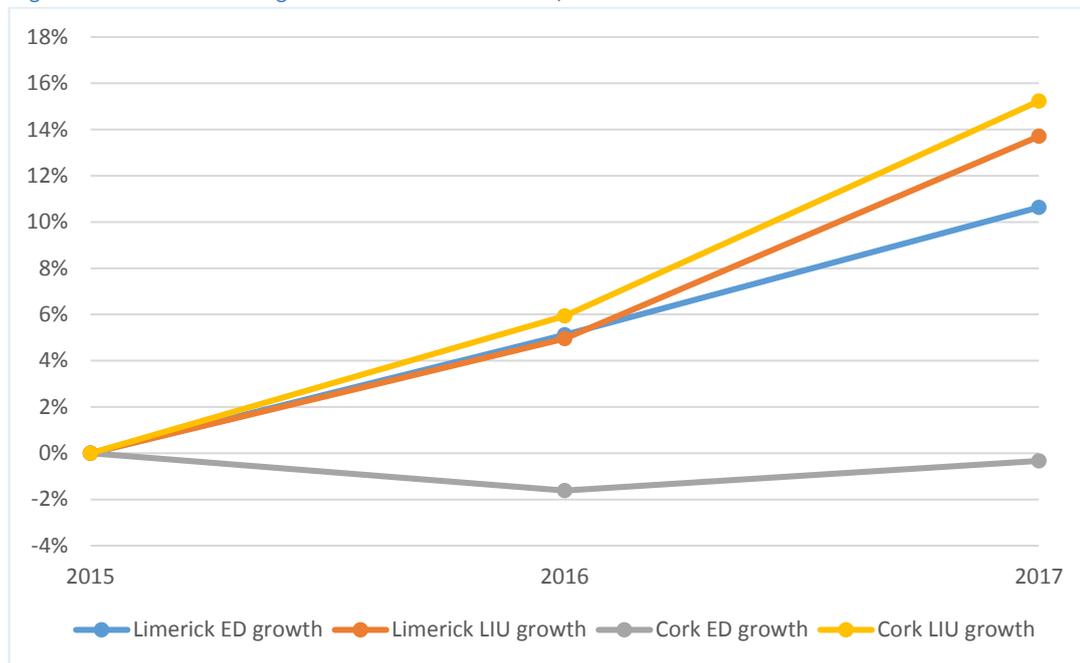
Source: HSE BIU Data

At a high level, this paper has attempted to demonstrate the impact of LIU's on ED attendance. Two examples are chosen, Limerick and Cork.

As stated above, each LIU has a hub ED, with the median distance from LIU to Hub being 38km. Limerick University Hospital is the nearest Hub ED for three LIUs: Ennis (42km to hub), Nenagh (45km) and St. John's, Limerick (5km). All three LIUs were previously emergency departments.

Figure 18 shows the growth rate of presentations at the Cork and Limerick LIUs against the growth rate in presentations at the Cork and Limerick EDs since 2015.

Figure 18: LIU and ED growth rates since 2015, Cork and Limerick



The ED presentations in UH Limerick has not decreased since data on LIUs was first collected in 2015. However, since 2015 LIU presentations in Limerick have grown at the same rate or faster than ED presentations. This is despite the LIUs having reduced opening hours in comparison to the ED; Ennis and Nenagh open 8am-8pm for seven days a week, with St John's operating 8m-6pm, Monday-Friday. As well as this, the LIUs only accept patients aged five years and up.

The result for Cork is much more striking. There are three LIUs in the South / Southwest Hospital Group. Cork University Hospital is the nearest Hub ED for the Mallow (35km to Hub) and Bantry (80km) Injury Units, while the Mercy Hospital is the Hub for the Mercy Injury Unit (1km). Mallow and Bantry were previously EDs. Taken together, figure 18 shows that, as with Limerick, the LIU presentations in Cork are growing at a much faster rate than the Hub ED. As with Limerick, this is despite the reduced opening hours at the EDs (last admissions are 7pm for Mallow and Bantry and the Mercy Injury Unit closes at 6pm). Also as seen in Limerick, Mallow and Bantry only take admissions of children aged five years and up, while the Mercy Injury Unit only takes admissions from aged ten and up.

The data available to date seems to broadly indicate that the existence of LIUs can reduce reliance on hub EDs. This is despite reduced opening hours and limits on ages accepted for admission. The finding points to an area for further analysis in the future. However, data is limited and ideally LIU data would be broken down by new and return presentations. Furthermore, it would again be useful to know what proportion of ED attendances could be more appropriately treated in the LIU. In addition, it would be useful to understand what proportion of the unscheduled return presentations to the ED originally presented in the LIU. With this

level of data a greater analysis of the role LIUs can play in reducing the pressure on the ED could be undertaken. The result also points to a broader area for analysis, i.e. looking at what impact targeted primary care investments can have on reducing the pressure on EDs. Section 3.4 below looks at one particular primary care initiative introduced in Budget 2015 and its impact on ED presentations.

3.4 Introduction of free GP care for under-6's and Over-75s

Budget 2015 introduced the roll-out of a universal GP Services in respect of children aged under six years and persons aged over 70. The majority of individuals in Ireland pay substantial out of pocket (OOP) payments for primary care services including GP visits and these payments are highest paid in the EU¹⁵. With better access to GP care it could reasonably be expected that ED visits would be reduced – mainly due to the fact that some of the services provided at the ED can also be provided by a GP. This would be expected to be especially true for those without a medical card who would normally pay €100 per ED visit.

Since 2013 the UK has provided 7-day access to GPs to improve primary care access to patients. In 2016 a study conducted by Dolton and Pathania¹⁶ found that this initiative reduced A&E attendances by 9.9%. The largest impact on ED units was observed at weekends with attendances down 17.9%.

In Ireland, the ESRI recently published the results of their analysis considering the spillover effects of the introduction of universal free GP care for under-6s on hospital care, in particular on ED services. Between December 2014 and December 2016 the number of children in that age bracket eligible for free GP care doubled to 248,000.

The ESRI studied how ED visits changed for the group targeted by the free GP care policy (0-5 years) compared to another group (7-15 years) who were not directly affected by the policy change. The ESRI looked to establish whether the target group had a greater reduction in ED visits and a greater increase in GP referral rates than the non-target group.

The study found that the expansion of free GP care to the 0-5 age group did not impact on visits to EDs. In the period following the policy's introduction ED visit rates increased for all ages and the visit rate for under 6s did not reduce relative to the older child group. However, the study's other main finding was that there was a small increase in GP referrals to EDs. While the non-target group saw no change over the period, there was an increase of 2 percentage points in the rate of GP referrals to EDs. This was consistent across different hospitals and largely consigned to the 3-5 years group.

¹⁵ Walsh, B., Nolan, A., Brick, A., Keegan, C. 2019. "Did the expansion of free GP care impact demand for Emergency Department attendances? A difference-in-differences analysis", *Social Science and Medicine*, Available at: <https://doi.org/10.1016/j.socscimed.2018.12.029>

¹⁶ Dolton P, Pathania V. 2016. *Can increased primary care access reduce demand for emergency care? Evidence from England's 7-day GP opening*. *J Health Econ.* 49:193–208. [10.1016/j.jhealeco.2016.05.002](https://doi.org/10.1016/j.jhealeco.2016.05.002)

The ESRI noted that this increase in GP referrals may reflect other issues within the system. From a demand (patient) side this could include reducing the cost of ED care through the provision of a GP referral letter (€100 v €0). Supply (GP) side issues could include increased demand for GP care without an increase in supply, increased GP referral to ED as the capitation system means they receive no marginal income per case treated, and also risk aversion with new and young patients increasing the probability of referring to the ED.

Although it must be noted that the primary aim of this initiative was not to reduce pressure on EDs or even the numbers presenting at the EDs, it is reasonable to expect that by increasing access to the primary care network at no charge this would subsequently lead to a decrease in the numbers presenting at the ED. The ESRI finding therefore raises significant issues regarding the aim of moving towards free universal care. Furthermore, it highlights the need for a clearer understanding of the nature of the ED presentations broken down by all age cohorts.

5. Conclusion

EDs are an important component of the larger health care system. They deliver care to those medical, surgical or psychiatric conditions that require urgent attention in order to save a life or prevent permanent impairment. This paper has highlighted the trend in terms of numbers presenting at the ED since 2014, the performance of the ED against targets set and the measures introduced in recent years that could reasonably be expected to alleviate some of the pressures and/or improve the performance of EDs either directly or indirectly.

Over the period 2014-2017, new presentations to the ED increased by 8% while return presentations increased by 16%. Based on the available data, it is not clear what is driving this trend. With regard to new presentations while demographics can go some way towards explaining the increase in numbers, it cannot account for it all. The paper suggests that in order to better understand this particular trend it would be useful to have additional data on the nature of the cases presenting at the ED i.e. was the ED attendance necessary or could it have been treated more appropriately outside the Acute setting? This is a crucial missing element of the overall data available. In addition, further analysis should be undertaken with a view to understanding how investment in primary care since 2014 has impacted on the numbers presenting at the ED. By end 2017, spend on primary care was over €1 billion (excluding capital expenditure). This is an increase of 16% since 2014. With better access to primary care services it could be expected that the pressure on Acutes would be reduced. With regard to return presentations, the rate of growth appears high over the three year period. However, again there is a problem of data gaps here. Return presentations are not broken down between scheduled and unscheduled returns. In the absence of this it is not possible to determine whether this level of growth is acceptable or indicative of inadequate symptom control or misdiagnosis. The UK NHS states that good practice is for unscheduled returns to account for less than 5% of all return presentations.

With regard to ED KPIs, the data shows that performance is below target and has been worsening over the years. Waiting times in the ED are increasing as are the proportion of patients leaving the ED before being admitted or completing treatment. Trolley numbers have been growing at an average monthly rate of 1% over the period. These worsening performance KPIs are despite targeted initiative funding measures to tackle overcrowding in hospitals and reduce waiting list numbers, and the introduction of free GP care for over-6s and under-70s which could reasonably have been expected to reduce the need for ED visits for these cohorts. Furthermore, while we know from the 2018 Spend Review paper that Acute spending and staff resources increased by €680m (17%) over the period in question, we do not know how much of this investment has been specifically directed towards the ED. Most notably the data is not available to analyse the staff breakdown available to the ED and the patient/staff ratios. Without this, it is difficult to reflect what is impacting on the performance of EDs.

The paper looks at the development of LIUs and the subsequent slow-down in the growth of local ED presentations at Cork and Limerick. This is despite the fact that LIU opening hours are limited and in some cases limit treatment to children aged over 5. The paper notes from previous analysis that younger people are more likely to use EDs for non-urgent medical conditions. Given this finding, it is useful to consider the age restrictions in place across LIUs. If younger people are more likely to use the ED for more non-urgent medical conditions this suggests that their treatment would be better suited to a primary care setting or LIU facility. Overall, however, the LIU finding is positive. It suggests that when appropriate care is available to patients outside the Acute setting, it can reduce the pressure facing hospitals. It points to a number of areas for future analysis including one specific to the impact of the LIUs at the national level. Again, when taken in the context of the broader question around the drivers of ED presentations and performance, this data also suggests further analysis is merited in the area of primary care spending and services and how this investment has or can impact on the reliance on the Acute sector.

While the evidence around the impact of LIUs on ED presentations is positive, overall the paper finds that ED numbers are increasing and that return presentations are increasing twice as fast as new presentations. Performance is below the targeted levels set and has been worsening in recent years. Targeted measures to ease the pressures on EDs and waiting list numbers appear to have had limited impact with trolley numbers and waiting list numbers continuing to grow. The paper identifies a number of areas for further consideration with regard to the key drivers of ED growth and raises concerns around the data gaps presented in terms of Emergency Departments.

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



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

**Tithe an Rialtas. Sráid Mhuirfean Uacht,
Baile Átha Cliath 2, D02 R583, Éire**
Government Buildings, Upper Merrion Street,
Dublin 2, D02 R583, Ireland

T:+353 1 676 7571
@IRLDeptPer
www.per.gov.ie