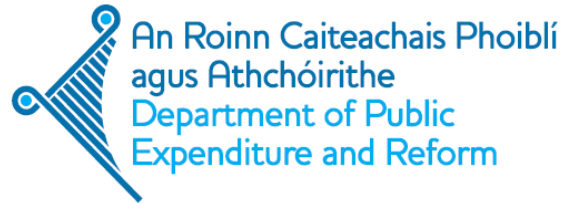




Irish Government Economic & Evaluation Service



Budget 2018

Primary Care Reimbursement Service Trend Analysis

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Summary

The Primary Care Reimbursement Service (PCRS) has a funding level of €2.5billion. This primarily covers:

- GP contractor fees
- Pharmacy payments
- Drugs/medicine costs

Over the period 2013 to 2017, PCRS expenditure is expected to grow by €108m or 5%. However, this increase masks considerable variation in annual expenditure over the period.

PCRS expenditure has undergone significant change over the past number of years; coverage on most schemes has expanded while unit costs for pharmaceuticals and professional fees have reduced. The main schemes under the PCRS include; General Medical Services (GMS) which covers medical cards and GP visit cards, Hi-Tech Drugs Scheme, Long-Term Illness (LTI) and Drug Payment Scheme (DPS).

For the General Medical Services (GMS) Scheme, medical card numbers peaked in 2013 and since then have been on a downward trajectory. It is expected that medical card numbers will continue to fall over the next number of years.

Expenditure on Long-Term Illness (LTI) Scheme in 2017 is estimated to be €96m or 83% greater than 2011. In recent years, demand on LTI has increased significantly while spend only increased marginally.

Expenditure on Drug Payment Scheme (DPS) reduced by €238m or 78% over the period 2011 to 2016. The scheme is expected to remain relatively static in the future as further price reductions on pharmaceuticals offset increases in volume in terms of total items dispensed.

In recent years, the primary driver of overall PCRS expenditure has been high-tech drugs. **Over the period 2011 to 2016, expenditure on High-tech drugs increased by €250m or 76%.** The majority of new drugs in the 2017 pipeline will be added to the High-tech drug scheme. Of the total medicines in the 2017 pipeline, if reimbursed around 60% will be added to the High-tech scheme.

Introduction

The Primary Care Reimbursement Service (PCRS) comprised €2.5 billion or 18% of HSE expenditure in 2017. PCRS supports the delivery of primary healthcare by providing reimbursement services to primary care contractors for the provision of health services to members of the public. PCRS expenditure is primarily focused around pharmaceuticals and contractor fees, such as payments to pharmacies and GPs. This is separate to expenditure on Primary Care which primarily covers direct employment of primary care professionals by the HSE, like public health nurses and occupational therapists. Current Government policy is focused on promoting and carrying out care in the primary setting.

The objectives of this paper are to:

- Examine trends and key cost drivers on the four main PCRS schemes by reviewing the following:
 - **Historic trends** in terms of expenditure and recipient numbers
 - **Price and Volume** components with regard to the cost per pharmaceutical item and the number of items dispensed
- Put forward key considerations for the future outlook of each of the areas under review.
- Given the scale and scope of the GMS scheme, a more detailed analysis of the key drivers has been undertaken, specifically around medical card numbers. The analysis focuses on the expenditure component taking account of fluctuations in card numbers over the years. The future trajectory of medical card numbers is then estimated taking account of demographic and cyclical changes.

Overview

Over the period 2013 to 2017(f), PCRS expenditure has grown by €108m or 5%. However, this masks the considerable variation in expenditure, with annual increases in 2015 and 2016 combined with significant reductions in other years, as evidenced in **Table 1**.

Table 1: PCRS Expenditure, 2008-2017(f)

	2013	2014	2015	2016	2017 (f)	Change 2013 -2017 (f)	
PCRS (€m)	2,396	2,285	2,394	2,513	2,504	108	5%
Annual change (€m)		-111	109	119	- 9		
Annual change (%)		-5%	5%	5%	0%		


Source: HSE Data Management Reports 2008-2014

PCRS expenditure has undergone significant change over the past number of years; coverage has expanded while unit costs for both pharmaceuticals and professional fees have been reduced. Unit cost reductions were achieved through:

1. Reductions in GP, Dentist, pharmacy and wholesaler fees through various FEMPI measures
2. Pricing agreements with pharmaceutical industry
3. Introduction of structural changes to the pharmaceutical market in the form of internal reference pricing and increased generic substitution.
4. A shift in policy toward a greater emphasis on primary care resulting in the introduction of universal GP services for under 6's and over 70's

Given these underlying dynamics PCRS expenditure has undergone significant change over the past number of years; coverage and volume has expanded considerably while unit costs for both pharmaceuticals and professional fees have been reducing.

The key pressures on spend are summarised in the graphic below.

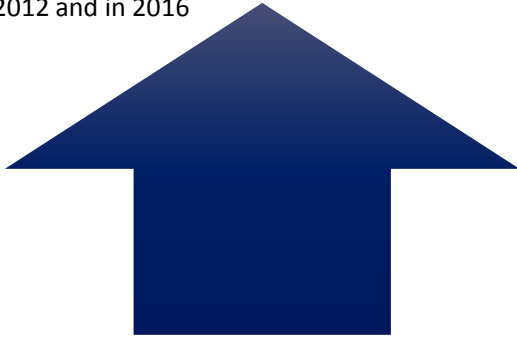


Upward pressure on spend caused by:

- From 2010-2013, medical card numbers increased. The largest increase took place between 2010 and 2012
- Introduction of free GP services for under 6s and over 70s in 2015
- Increased capitation fees due to rollout of free GP care to specific cohorts

Downward pressure on spend caused by:

- Reduction in wholesale mark-up - 10% to 8% in 2011
- Cyclical movements in medical cards - a reduction of over 80,000 in 2014 and 100,000 in 2015/2016
- Introduction of internal reference pricing under new legislation in 2013 (Health Act 2013)
- Agreements with Pharmaceutical Industry in 2012 and in 2016

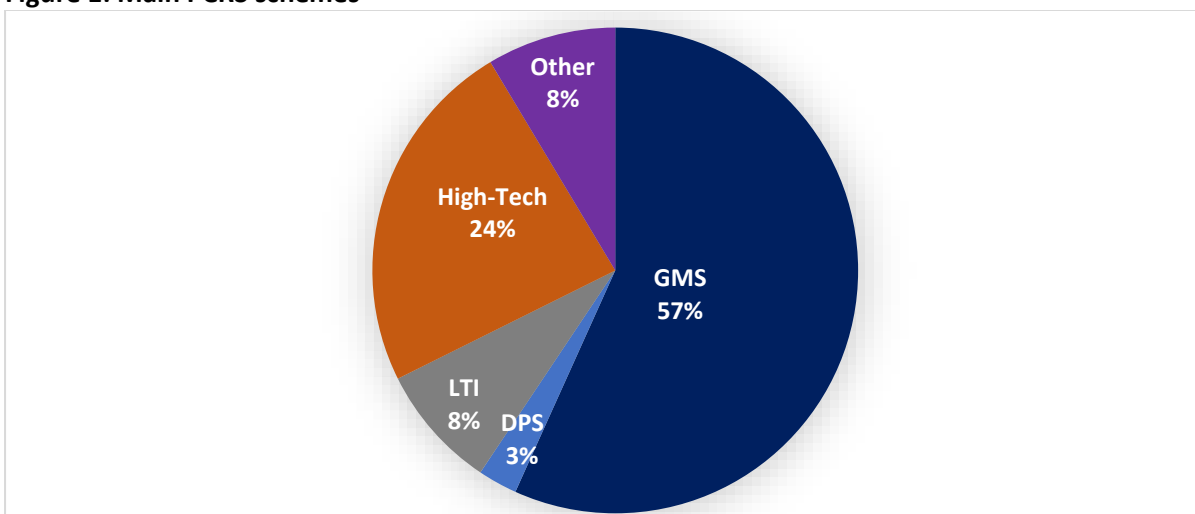


The main schemes under the PCRS umbrella are illustrated in Figure 1 below these include:

- General Medical Services (GMS) Scheme
- Hi-Tech Drugs Scheme
- Long-Term Illness (LTI) Scheme
- Drug Payment Scheme (DPS)

Other items of expenditure covered by PCRS include Dental Treatment Services Scheme, some oncology and hospital drugs, Methadone Treatment Service, payments to European Economic Area for Irish citizens, Community Ophthalmic Scheme and immunisation for certain GMS eligible persons.

Figure 1: Main PCRS schemes



Source: HSE Data Management Reports

One of the key components of overall PCRS expenditure are pharmaceuticals and pharmacy payments across the various schemes with these comprising approximately 65% of expenditure¹. Of the four main schemes set out in **Figure 1**, GMS is the only one to include spend on elements other than pharmaceuticals and pharmacy fees as GMS expenditure also includes fees paid to GPs.

The key driver of overall drug spend continues to be Hi - Tech drugs. The IPHA Agreement² has assisted in securing a reduction in spend on GMS, DPS and LTI as collectively drug expenditure on these schemes reduced in 2016. This reduction is significant given that the number of items dispensed under these schemes increased by 1.6m (2%) over the period (see **Appendix 1**). The reduction in spend on these schemes helped to offset and reduce the total growth in spend on Hi-tech drugs.

The following sections set out key trends across the four main PCRS schemes setting out historic trends, movements in value and volume components, and future outlook.

General Medical Services (GMS) Scheme

I. Historic Trends

The GMS Scheme provides people with medical cards and GP visit cards. Eligibility for cards is primarily based on an assessment of means, however some cards are also provided on discretionary grounds. Of the four main PCRS schemes, GMS is the only one which is means tested. Medical cardholders receive free access to GP services and pharmaceuticals while GP visit cardholders only receive free access to GP services. At the end of 2016, there were 2.1m GMS cards in circulation, 78% of these were medical cards (MC) while the remaining 22% were GP visit cards (GPVC).

The three main categories of GMS expenditure are GP fees and allowances, pharmacy fees and the ingredient cost of drugs. MCs cover the cost of GP services and pharmaceuticals while GPVCs only include the cost of GP fees and allowances. Therefore, GPVCs have a much lower cost than MCs.

One of the main drivers of expenditure is the volume of cards in the system. Over the period 2011-2016, total GMS expenditure fell by €165m or 11%. This overall decrease can be broken down as follows:

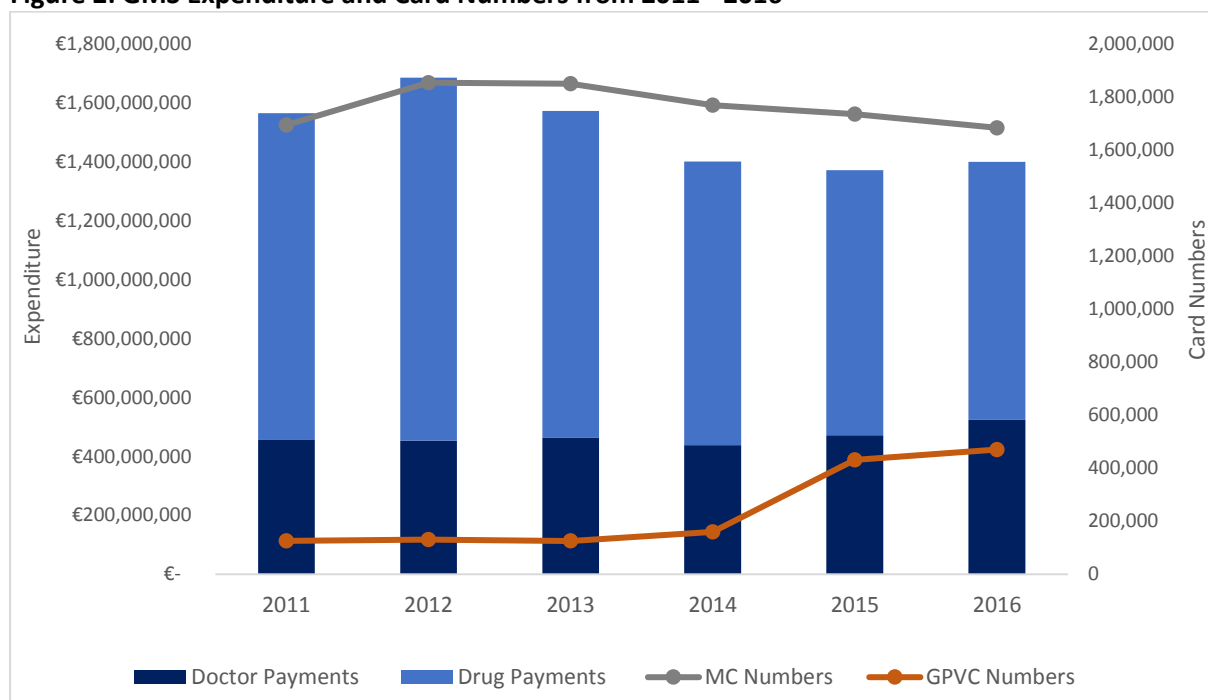
- A reduction of €232m or 21% on pharmaceuticals and pharmacy payments
- An increase of €67m or 15% on GP fees and allowances

¹ Pharmaceutical ingredient costs compose approx. 43% of total PCRS expenditure.

² Irish Pharmaceutical Healthcare Association

Figure 2 below shows annual expenditure and card numbers from 2011 – 2016.

Figure 2: GMS Expenditure and Card Numbers from 2011 - 2016



Source: HSE Correspondence

As shown in Figure 2, the number of GPVCs increased significantly in 2015 due to the introduction of free GP services for under 6s and over 70s. As GPVC numbers increased, spend on GP fees and allowances also increased however not to the same extent. This is due to the fall off in MCs over the same period.

From 2011 to 2012, the annual percentage change in GMS expenditure and the number of MCs in the system were similar however following 2013 GMS expenditure fell by far more than the fall off in MCs.

Discretionary GMS Cards

The number of discretionary GMS cards has been increasing over the last number of years. Since 2014, the increase in discretionary MCs has been considerable with cards increasing by an annual average of 33%. Similarly, discretionary GPVCs have been increasing since 2013 by an annual average of 31%. See Table 2 below for annual number of discretionary cards from 2009 to 2016.

Table 2: Annual Number of Discretionary Medical and GP Visit Cards 2009 - 2016

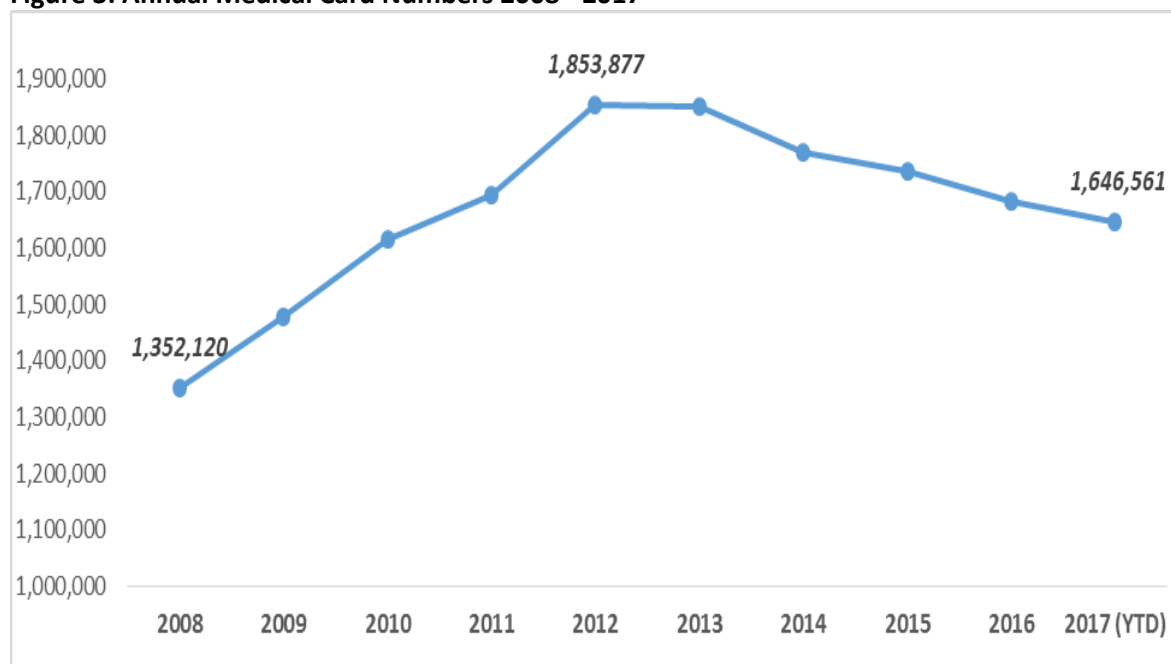
	2009	2010	2011	2012	2013	2014	2015	2016	Change 2009 - 2016	
No. of MCs	79,625	80,524	74,281	63,126	50,294	74,674	99,396	116,362	36,737	46%
Change (%)		1%	-8%	-15%	-20%	48%	33%	17%		
No. of GPVCs	17,221	17,501	16,251	15,833	25,793	33,672	41,266	45,260	28,039	163%
Change (%)		2%	-7%	-3%	63%	31%	23%	10%		

Source: Administrative Data

II. Forecast of Medical Cards

Medical card numbers peaked between 2012 and 2013 and since then have been on a downward trajectory. In 2015, medical card numbers fell by around 34,000. In 2016, the annual reduction in medical cards was forecast to be 38,000, however numbers fell further than expected, reducing by 46,000 and surpassing expectations. This downward trend is expected to remain in 2017 with numbers forecast to fall by a further 75,000. See Figure 3 below for annual medical card numbers from 2008 – 2017 (forecast).

Figure 3: Annual Medical Card Numbers 2008 - 2017



Source: PCRS Administrative Data

Movements in medical card numbers are underpinned by three key components: (i) demographics; (ii) the economic climate; and (iii) policy decisions.

(i) Demographics

Table 3 below illustrates the age distribution of the medical card population for 2008, 2013 and 2016. The years chosen capture key movements in medical card coverage, taking account of the distribution of cards prior to rapid increases (2008), at peak numbers (2013) and as cards have declined to current levels in 2016 and 2017.

From 2008 to 2013, the most significant change in distribution was the increase in the proportion of 16-54 year olds and the reduction in over 70s. From 2013 to 2016, the distribution of cards across the population has remained relatively static. The age cohorts from 45-69 years experienced slight increases while the percentage of cards held by over 70's did not change.

Table 3: Percentage of medical cards held by age category, 2008, 2013 and 2016

	2008	2013	2016	May YTD 2017
Under 5 Years	7%	7%	6%	5%
5-11 Years	10%	11%	11%	11%
12-15 Years	5%	6%	6%	6%
16-24 Years	8%	10%	10%	9%
25-34 Years	10%	12%	10%	9%
35-44 Years	10%	12%	12%	12%
45-54 Years	9%	10%	11%	11%
55-64 Years	10%	9%	10%	10%
65-69 Years	5%	5%	6%	6%
70-74 Years	9%	6%	6%	7%
75 Years and Over	17%	13%	13%	14%

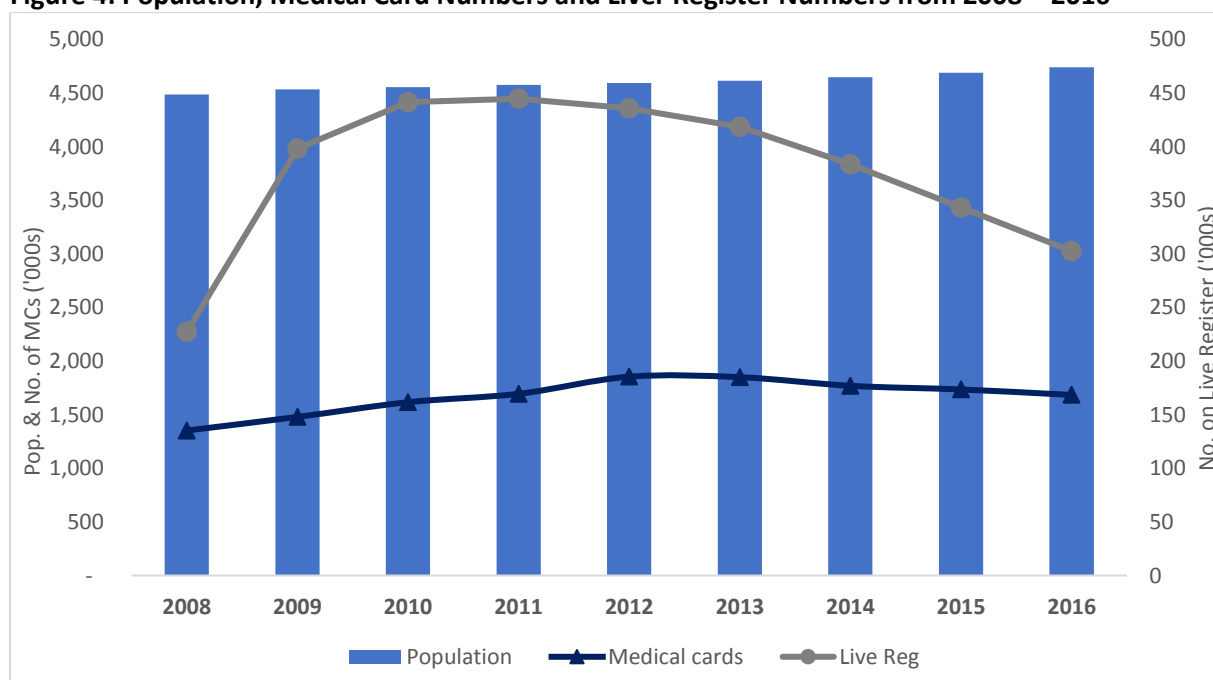
Source: PCRS Administrative Data

(ii) Cyclical Relationship

Medical and GPVC numbers increased sharply between 2008 and 2012 reflecting the onset of the economic downturn. The cyclical nature of card numbers is due to the automatic eligibility entitlement for those persons whose sole income is derived from social welfare. Over the period 2008-2014, the number of medical cards increased by 416,580 or 31%. Medical card numbers peaked in mid-2013 and since then have been on a downward trajectory, this is in line with improvements in the economic climate.

Figure 4 illustrates a number of moving parts from 2008 to 2016, these include the population numbers, the number of medical cards in circulation and the number of persons on the Live Register.

Figure 4: Population, Medical Card Numbers and Live Register Numbers from 2008 – 2016



Source: CSO Statbank, HSE Administrative Data

From 2008 to 2016, the Irish population increased by around 254,500 people or 6%. Numbers signing on the Live Register increased significantly between 2008 and 2010, peaking in 2011. Since 2011 numbers have levelled off and started to fall. The number of MCs in the system has followed a similar trend to the Live Register despite demonstrating a lag of around two years. MCs peaked in mid-2013 in comparison to the Live Register peak in 2011.

III. Cost of a Card

MCs cover both GP fees and pharmaceutical costs, approximately three-quarters of the cost of a MC relates to pharmacy payments. The cost differential between MCs and GPVCs is considerable. For the MC population, the average cost per eligible person fell by €71 or 9% over the period 2013 to 2017. This can be broken down further into:

- €15 or 7% increase in the average GP payment,
- €7 or 5% reduction in the average pharmacy fee payment, and
- €79 or 17% reduction in the average drugs/medicines payment

Table 4: Change in average payment per eligible person on GMS scheme, 2013-2017

	2013	2014	2015	2016	2017 (estimate)		Change 2013 - 2017	
GP Fees	225	218	228	236	240		15	7%
Pharmacy Fees	131	111	116	115	124		-7	-5%
Drugs/Medicines	469	428	404	409	390		-79	-17%
	825	757	748	760	754		-71	-9%

Source: HSE Correspondence

The reductions in the cost of a medical card are due to a combination of the following:

- Reduced drugs and medicine costs achieved through the introduction of reference pricing for off-patent drugs and industry pricing agreements for both on and off patent drugs.
- Reductions imposed on pharmacy and GP fees
- Changes to the demographic profile of medical cardholders. This relates to a greater portion of working-age individuals with associated lower average cost.

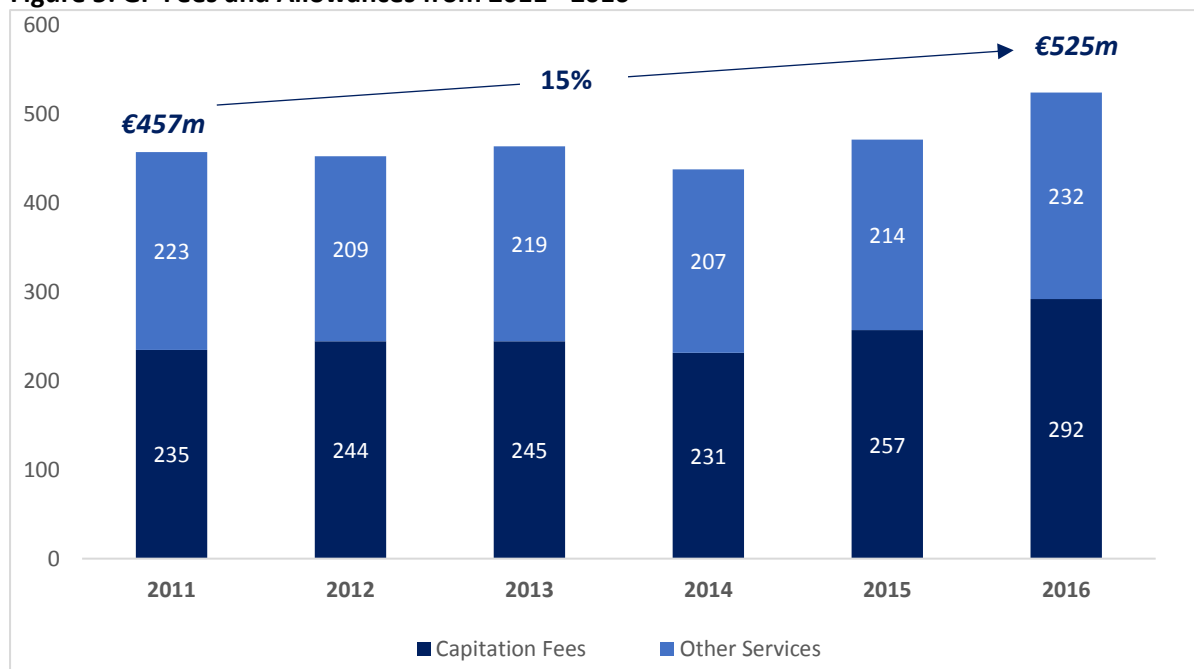
The average cost of a medical card has reduced considerably over the last number of years, and this is expected to fall further as a result of savings from the new agreement with pharmaceutical industry in 2017 and 2018.

GP Fees

The main component of GP fees expenditure are capitation payments, in 2016 around 56% or €292m of total GP Fees expenditure was capitation payments. These are annual payments made to GPs for

each patient on their GMS list regardless of the number of visits the patient makes to the GP. The level of the capitation fee made to the GP is based on a number of different patient characteristics, such as age, gender and whether they are residing in the community or in residential care.

Figure 5: GP Fees and Allowances from 2011 - 2016



Source: PCRS Data

Pharmacy Fees and Medicines

A number of factors contribute to changes in pharmacy fees and medicines expenditure under GMS.

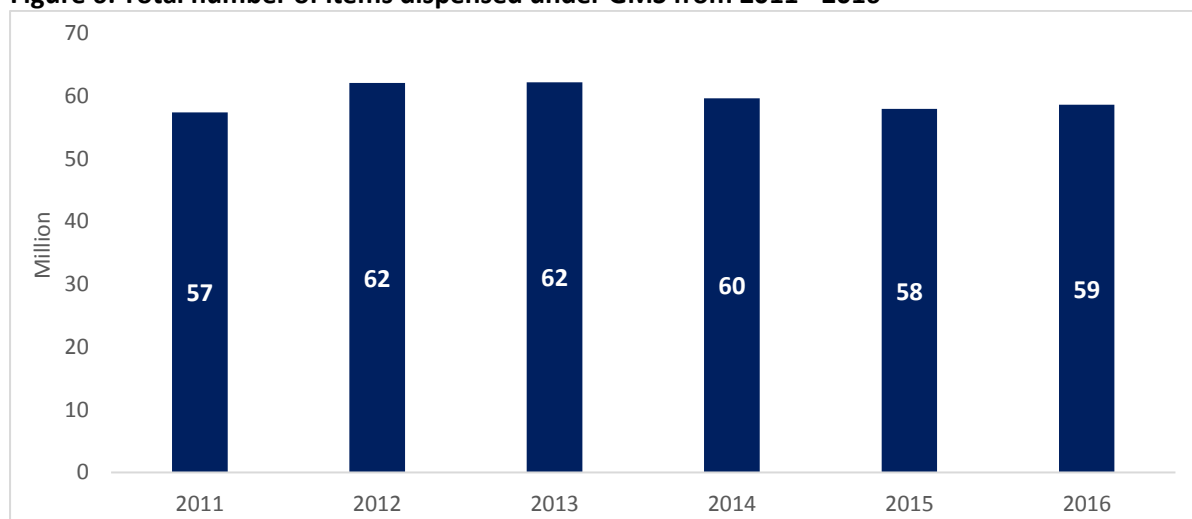
Broadly expenditure is driven by price and volume, these include the following metrics:

- Price → cost per item dispensed, type of items dispensed i.e. generic or on-patent
- Volume → number of medical cards in circulation, total items dispensed

As highlighted in **Table 4** above the pharmacy fees and drugs/medicines elements of the average cost of a medical card have been reducing since 2013. This falloff reflects reductions in the price paid for pharmaceuticals due to a number of policy decisions such as the introduction of internal reference pricing and industry agreements.

In terms of volume, from 2011 to 2016, the total number of items dispensed under GMS has followed a similar trajectory to medical card numbers. While broadly the trends have been the same the annual movements in total items dispensed have been much smaller. **Figure 7** below illustrates the total number items dispensed annually under GMS.

Figure 6: Total number of items dispensed under GMS from 2011 - 2016



Source: Administrative Data

Total items dispensed under GMS reached a peak of 62 million in 2013. Since 2013, total items dispensed have been reducing by an annual average of 2% despite a slight uptick in 2016.

Key Findings on GMS:

- MCs reached a peak in 2013 and since then have been on a downward trajectory. GPVC have increased considerably from 2015 onwards due to the introduction of free GP care for under 6s and over 70s.

Number of Medical Cards in Circulation

- Despite MCs falling significantly since 2013, numbers would still need to fall by a further 18% or around 300,000 to reach the lows experienced in 2008.
- When taking account of demographics and historical movements in cards it is expected that card numbers will continue to fall over the next number of years and will reach the equivalent of the 2008 low in 2020. This point is set out as around 0.3 medical cards per head of population.

Unit Cost of a Medical and GP Visit Card

- The GP fees element of GMS has increased from 2013 to 2017 while pharmaceutical costs and pharmacy fees have reduced over the period.
- The 15% increase in GP fees expenditure from 2011 to 2016 was driven by an increase in capitation fees due to the new GP contract negotiated in 2015.
- Both the price and volume of pharmaceuticals under GMS have been reducing since 2013. This is in line with cyclical movements in medical card numbers and changes to pharmaceutical policy

Long Term Illness Scheme

Historic Trends

The Long-Term Illness (LTI) Scheme provides drugs for no charge to people suffering from certain conditions, these include medicines, medical appliances and surgical appliances for the treatment of that condition. The list of illnesses covered by the scheme is set out at **Appendix [2]**. The scheme is administered by the Health Service Executive (HSE), under [Section 59 of the Health Act 1970³](#). In contrast to the General Medical Services (GMS) Scheme, the LTI scheme does not depend on your income or other circumstances.

A person may be eligible for both a medical or GP visit card and an LTI book. This LTI book lists the drugs and medicines for the treatment of your condition, which will be provided free of charge through your pharmacist. Drugs and medicines administered under the LTI scheme are not subject to the prescription charge. Other drugs and medicines not related to the specified condition must be paid for outside the scheme.

Expenditure on LTI has increased significantly since 2013 and this increase in spend is expected to continue in 2017. Based on the 2017 forecast, LTI spend in 2017 is estimated to be €96m or 83% greater than 2011 expenditure.

Table 5: LTI Expenditure 2011 - 2017 (f)

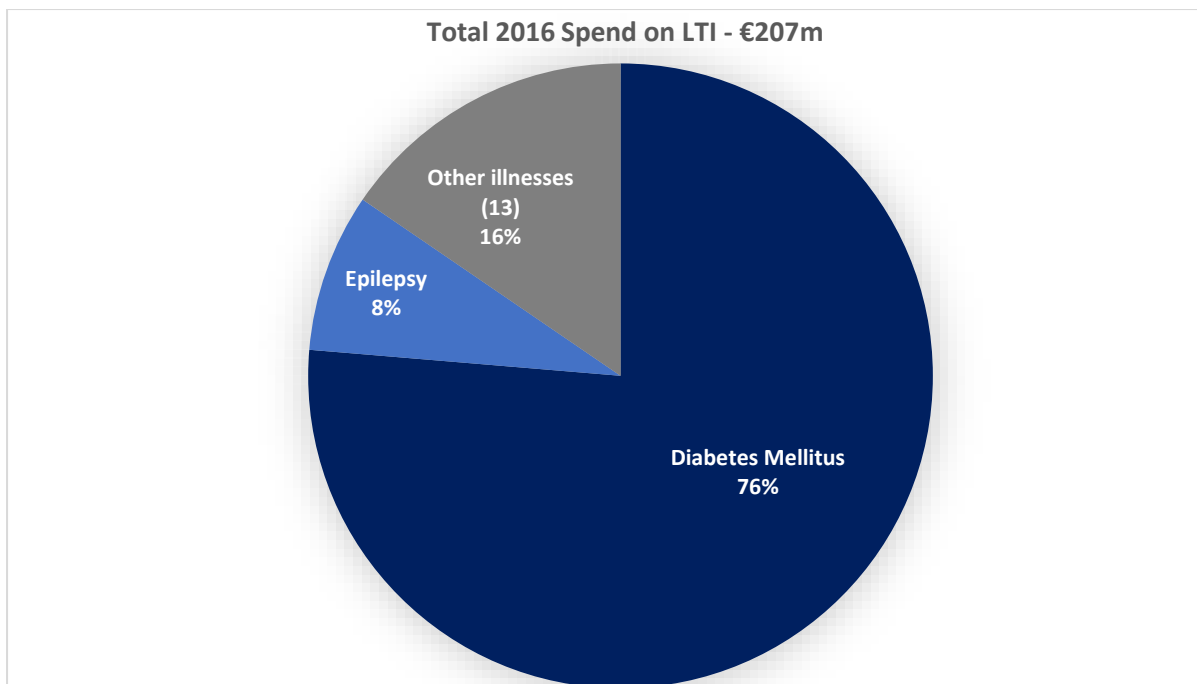
	2011	2012	2013	2014	2015	2016	2017 (f)	Growth 2011 - 2017(f)	
LTI (€m)	116	117	106	130	182	204	212	96	83%
Annual Change (€m)		1	-11	24	52	22	8		
Annual Change (%)		1%	-9%	23%	40%	12%	4%		

Source: Administrative Data

At year-end 2016, expenditure on LTI was €22m or 12% higher than spend over the same period in 2015. This was primarily driven by growth in volume due to an increase in the number of claimants and the number of items per claimant. The average number of claimants increased by 14% from 2015 to 2016, reaching the highest levels ever at 129,000 in December 2016.

The central component of spend on LTI is for items for the illness “Diabetes Mellitus”. This illness Diabetes Mellitus alone accounts for €158m or 76% of the total spend of €207m in 2016.

³http://www.citizensinformation.ie/en/health/health_related_benefits_and_entitlements/long_term_illness_scheme.html



Source: Administrative Data

Diabetes Mellitus is not only the largest component of spend but it is also responsible for a significant proportion of the growth year on year. From 2015 to 2016, Diabetes Mellitus accounted for 75% of the €22m increase in overall spend on the scheme.

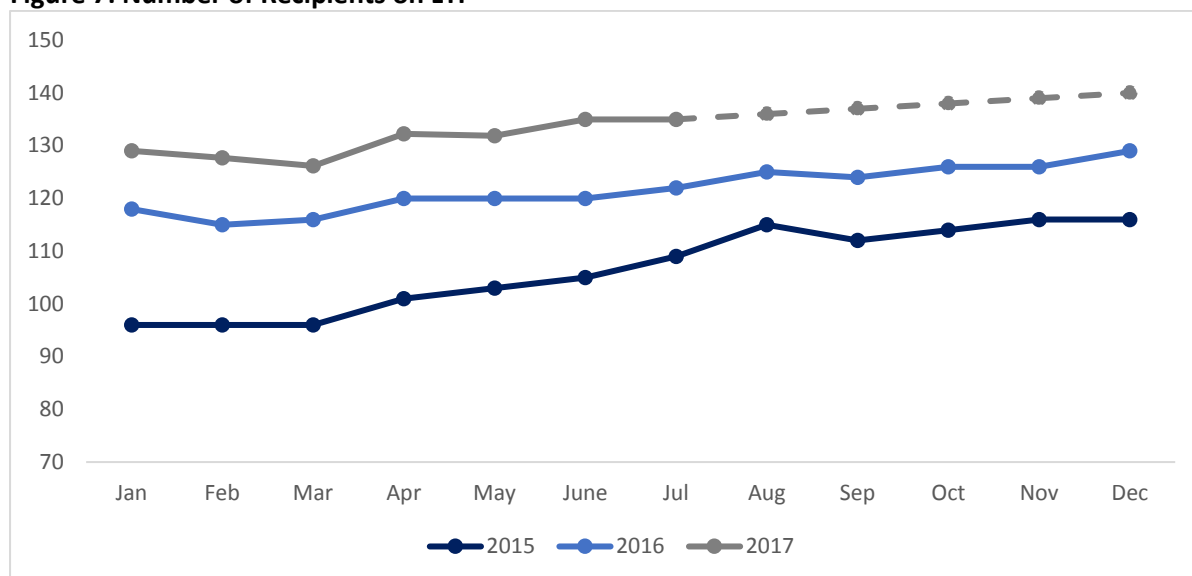
While demand on LTI has continued to increase over the last number of years, the increase in spend in 2016 reduced slightly this is primarily due to the IPHA agreement which came into effect from August 1. This policy development has assisted in managing some of the pressure however given that volume continues to increase, further reform should be undertaken to contain expenditure on LTI.

Price and Volume

See **Figure 8** below for the monthly number of LTI claimants from 2015 to 2017 (YTD). The number of recipients on LTI in the first 6 months of 2017 is an average of 31% higher than the number of recipients over the same period in 2015. This increased demand for the scheme can be attributable to the following factors:

- Movement of persons from using GMS scheme to LTI scheme primarily due to avoidance of prescription charges or loss of a MC
- Increased prevalence of illnesses covered by the LTI scheme

Figure 7: Number of Recipients on LTI



Source: Administrative Data

Future Outlook

This upward trend in the number of claimants on LTI is expected to continue for the remainder of 2017 and into 2018. This increase in volume is expected to correspond to an increase in expenditure however given recent reductions in pharmaceutical prices, some of the pressure on expenditure will be offset.

Key Findings on LTI:

- Expenditure on LTI in 2017 is estimated to be **€96m or 83% greater than 2011 expenditure**. The increase in expenditure on LTI is **driven by the considerable increase in volume both the number of recipients and the number of items dispensed under the scheme**.
- In recent years, **demand on LTI has increased significantly while spend only increased marginally** by around €30m from 2015 to 2017. This is primarily due to a reduction in the price of drugs as a result of the new IPHA agreement which came into effect from 1 August 2016.
- This policy development has assisted in managing some of the pressure from increased volume however given that volume is expected to continue to increase, **further reform should be undertaken to contain volume and overall expenditure on LTI**.
- Given that diabetes is the predominant driver of expenditure on LTI and accounts for the majority of growth in spend, it may be more cost effective to deal with diabetes separately.

Drug Payment Scheme (DPS)

Historic Trends

Under DPS, an individual or family contribute €144 each month for approved prescribed drugs, medicines and certain appliances for use by that individual or their family. DPS cover the remaining cost above the €144 a month. The scheme is primarily aimed at those who do not have a medical card or LTI book and would have to pay the full cost of their medication.

Total expenditure on DPS has been on a downward trajectory since 2008, falling by €238m or 78% over the period 2008 to 2016. This fall in expenditure as supported by a number of dynamics such as changes to the DPS threshold, the introduction of internal reference pricing, 2012 and 2016 IPHA Agreements and changes in overall volume. The maximum monthly threshold for DPS increased incrementally from €90 in 2009 to €144 in 2013 and has remained at €144. See **Table 6** below for the key trends experienced on DPS from 2008 – 2016.

Table 6: Key DPS Trends 2008 - 2016

	2008	2009	2010	2011	2012	2013	2014	2015	2016	Change '08 – '16	
Outturn (€m)	304	268	176	145	129	87	67	67	66	-238	-78%
Cost per Item	35.4	34.2	30.0	27.3	27.0	24.6	21.8	21.5	21.35	-14	-40%
Items per Claimant	3.8	4.1	4.6	5.0	5.1	5.3	5.7	5.8	5.8	2.1	55%
Avg. No of Claimants	300,631	271,849	200,527	165,242	150,725	119,203	100,433	102,392	106,196	-194,435	-65%

Source: Administrative data

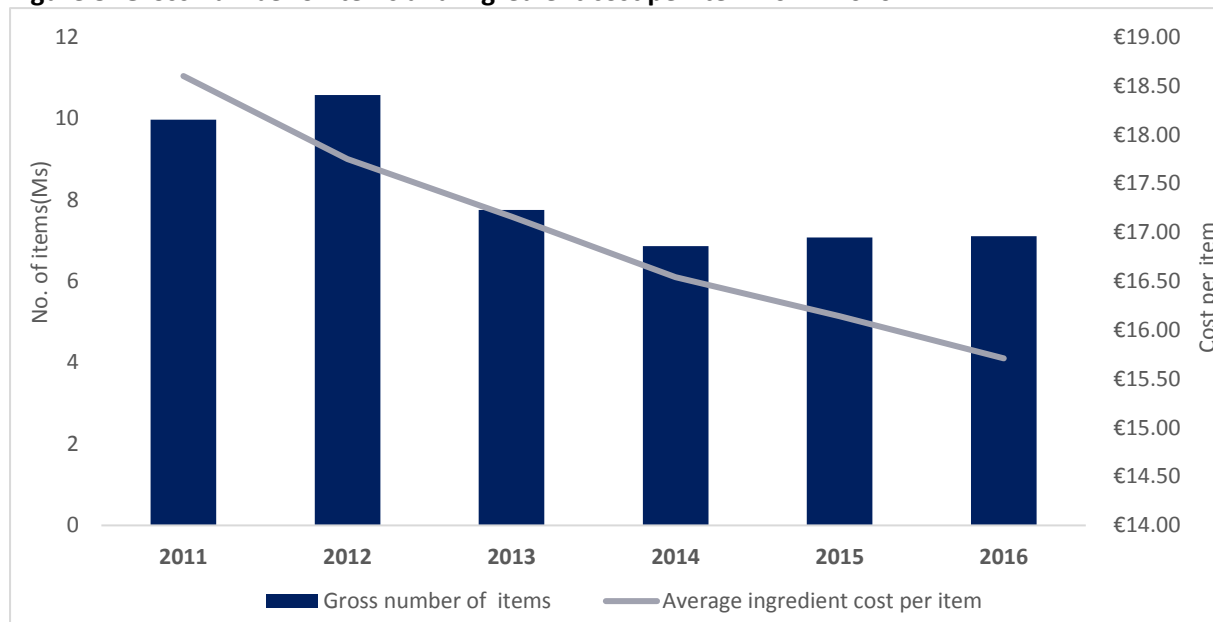
Price and Volume

The average number of patients prescribed to under DPS has reduced 195,435 or 65% from 2008 to 2016. Numbers fell significantly from 2008 to 2014 and since then have been increasing slightly. Generally, trends in DPS spend are linked to movements in MC numbers as those patients who no longer are eligible for a MC but spend over €144 per month on pharmaceuticals can now claim under DPS. The movements in DPS patients are consistent with this trend as MC numbers fell from 2013 onwards the number of DPS patients increased. While the number of patients in the scheme has fallen from 2008 to 2016, the number of items per claimant has increased considerably, increasing by 2.1 items or 55% over the period 2008 to 2016.

There are a number of moving parts which contribute to overall expenditure on DPS, these include the number of claimants, the number of items and the cost per item. Over the period 2011 to 2016 the total number of items dispensed under DPS fluctuated, increasing from 2011 to 2012 and falling until 2014. From 2014 to 2016, the total number of items began to increase again. While the total number of items has increased since 2014, overall expenditure decreased. This was primarily due to a

falloff in the ingredient cost per item dispensed under the scheme. The ingredient cost per item fell by €3 or 16% since 2011. Figure 9 below illustrates the gross number of items dispensed under DPS and the corresponding ingredient cost from 2011 to 2016.

Figure 8: Gross number of items and ingredient cost per Item 2011 -2016



Source: Administrative data

Future Outlook

Given the current DPS threshold and the current arrangement of PCRS Schemes, DPS expenditure is likely to remain relatively static at 2017 levels. The incremental increases in the number of items per person will be offset by reductions in the cost per item through additional savings from the IPHA Agreement.

Key Findings on DPS:

- Expenditure on DPS reduced by **€238m or 78% over the period 2011 to 2016**. The significant fall in expenditure was driven by a combination of the following:
 - **Budget measures** – reduction in dispensing fees, reductions in the monthly threshold
 - Considerable **falloff in the number of recipients** around 194,435
 - **Reductions in drug prices** through internal reference pricing and industry agreements
- While overall DPS expenditure fell due to the measures outlined above, the total number of items dispensed under the scheme increased from 2014 to 2016.
- The scheme is expected to remain relatively static in the future as further price reductions through measures of the IPHA agreement offset increases in volume in terms of total items dispensed.

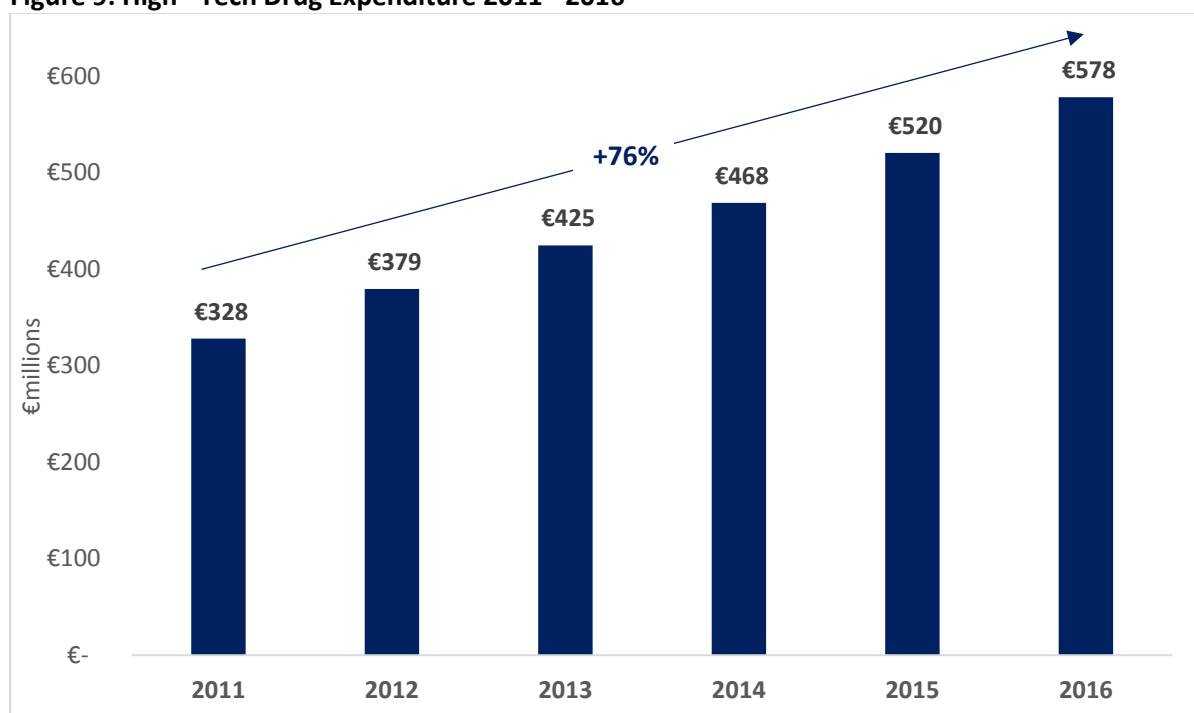
High – Tech Drug Arrangement

Historic Trends

Expenditure on the High-Tech Scheme in 2016 totalled €578m. The scheme accounted for 30% of the state’s total drugs bill in 2016. The scheme is dominated by on-patent drugs which tend to be highly expensive innovative drugs.

Generally, High-tech drugs are only prescribed or initiated in hospitals these include items such as anti-rejection drugs for transplant patients or medicines used in conjunction with chemotherapy. The primary rationale for the scheme was to supply certain drugs in a community setting which had previously only been available in hospitals. High-tech medicines are purchased directly from wholesalers/suppliers by the HSE and supplied through community pharmacies for which pharmacists are paid a patient care fee. High-tech drugs are available to all persons regardless of their eligibility for GMS or other community schemes. See **Figure 10** for spend on High-tech drugs from 2011 – 2016.

Figure 9: High - Tech Drug Expenditure 2011 - 2016



Source: Administrative Data.

Over the period 2011 – 2016, expenditure on High-tech drugs increased by €250m or 76%. This level of growth is considerable given that High-tech drugs added an additional €50m on average to overall health expenditure each year from 2011 – 2016.

Price and Volume

There are two key drivers of spend on High-tech drugs, these include growth in the stock of existing medicines in the system and the cost of new medicines. Understanding the multi-annual cost implication of introducing a new drug to the reimbursement list is crucial to identifying underlying growth in pharmaceutical expenditure. Once a drug is introduced in the health system the budget impact grows considerably from the year one cost, this is primarily due to a volume effect as utilisation increases.

One of the key drivers of PCRS spend continues to be High-tech drugs and more specifically new High-tech drugs introduced since 2015. Total spend on High-Tech drugs is estimated to increase by €95m or 18% from 2015 to 2018. This increase is primarily due to new drugs introduced since 2015. See **Table 7** below for breakdown of total spend by the year the drugs were introduced in the system.

Table 7: Growth in High -Tech Spend by Year Drug was Introduced [New Drugs]

	2015	2016	2017 (f)	2018 (f)	Growth	
	€m	€m	€m	€m	€m	%
High -Tech Spend	541	597	611	636	95	18%
Year drug entered list:						
2017	-	-	18	24	6	33%
2016	-	11	23	28	17	155%
2015	15	30	37	37	22	147%
Pre- 2015	526	556	533	547	21	4%

Source: Administrative Data.

The significant historic growth in spend on High-tech has masked reduction and reduced pressures across other PCRS schemes. The large levels of growth on the scheme have seen it grow from a relative small scheme to the second largest scheme under PCRS and a key contributor to annual expenditure pressures in the area.

Future Outlook

Both the pipeline and baseline of innovative drugs is a key driver of the rapid growth in forecast spend. The 2017 pipeline includes around 63 new medicines, these are split across a number of PCRS schemes. However, the majority of the new drugs introduced will be added to the High-tech scheme. Of the total medicines in the 2017 pipeline, around 60% will be reimbursed under the High-tech scheme.

The high price of these drugs is a considerable barrier to access. Given the budgetary constraints within which countries operate, the high price sought for these drugs is one of the key challenges in providing access to medicines in the future. This challenge is further exemplified by the scale of new drugs in the pipeline, due to continued advancements in technology. It is imperative that

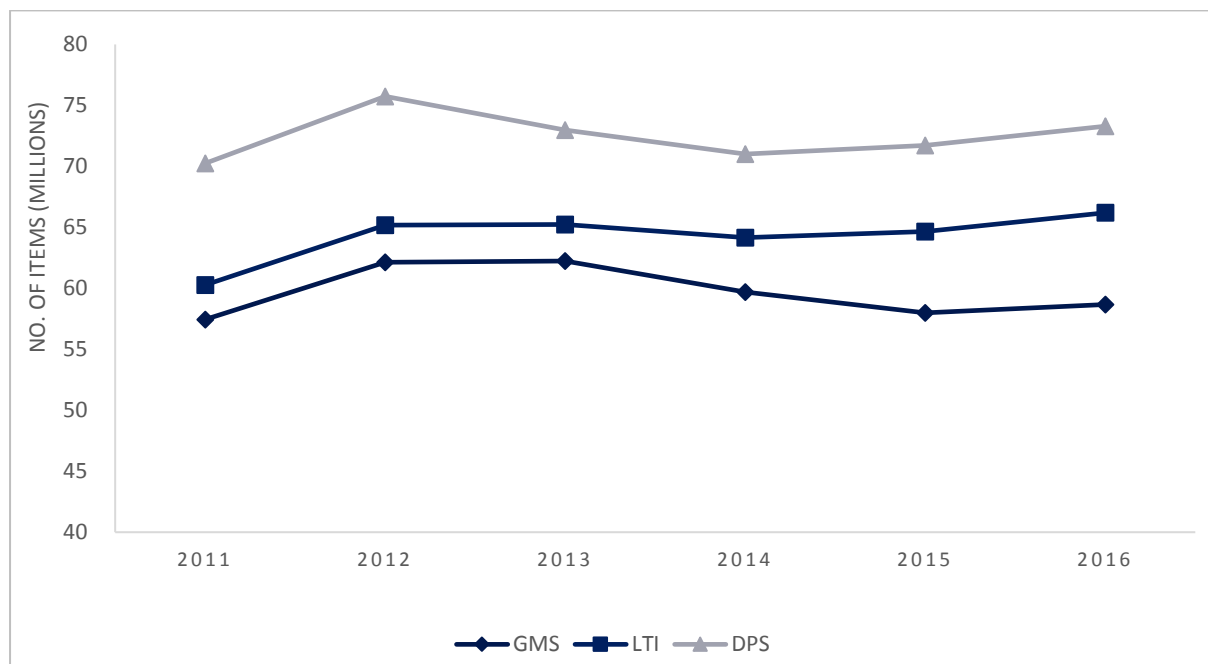
pharmaceutical expenditure is managed effectively in order to provide some scope for the introduction of new medicines in the future.

Key Findings on High-Tech:

- In recent years, the one of the primary drivers of overall PCRS expenditure has been the High-tech drugs scheme. **Over the period 2011 – 2016, expenditure on High-tech drugs increased by €250m or 76%.**
- There are two key drivers of High-tech drug spend, these include growth in the stock of existing medicines in the system and the cost of new medicines. The multi-annual cost implication of introducing a new drug to the reimbursement list is crucial to identifying underlying growth in pharmaceutical expenditure.
- Once a drug is introduced in the health system the budget impact grows considerably from the year one cost, this is primarily due to a volume effect as utilisation increases. For example, **drugs introduced in 2015 at a cost of €15m are expected to reach an annual cost of €37m in 2018, this is an increase of €22m or 147%.**
- The majority of the new drugs in the 2017 pipeline will be added to the High-tech scheme. **Of the total medicines in the 2017 pipeline, around 60% will be reimbursed under the High-tech scheme.**
- The high price of these new drugs is a considerable barrier to access. Given the budgetary constraints within which countries operate, the high price sought for these drugs is one of the key challenges in providing access to new medicines in the future.

Appendix

[1] Number of Items Dispensed across GMS, LTI and DPS from 2011 - 2016



Source: PCRS Data

[2] Illnesses covered under the Long Term Illness Scheme

Illnesses covered under Long Term Illness Scheme	
Mental handicap	Cystic fibrosis
Mental illness (for people under 16 only)	Multiple sclerosis
Diabetes insipidus	Spina bifida
Diabetes mellitus	Muscular dystrophies
Haemophilia	Hydrocephalus
Cerebral palsy	Parkinsonism
Phenylketonuria	Acute leukaemia
Epilepsy	Conditions arising from use of Thalidomide