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Variations in the Average Cost of GMS Medicines in Ireland

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Abstract

The GMS scheme has undergone substantial growth in the past 10 years with costs more than doubling and the number of persons covered increasing by nearly 60%. Nationally the average cost of medicines per person covered by the GMS scheme is estimated at €651 in 2012. This was €763 in 2010 and ranged from €626 (18% below average) in the North Western region to €842 (9% above average) in the Southern region.

Costs increase with age, apart from for the very young. In 2010, the average cost of medicines for persons over 75 was nearly 4 times those aged 35 to 44 (€1,791 versus €470). Between 2009 and 2010 these costs fell by 10%, with significant regional differences. Removing the impact of demographics widens the regional variances (now 16% below to 15% above average) implying that the structure of the regional population is not a key cause of regional cost variations.

Keywords: Ireland, GMS medicine costs, regional variations, demographics

Introduction

In 2013 the gross current voted estimate for the Health Service Executive (HSE) is €13.4bn. The reduction required by the HSE in 2013 is €721m which means that the total reduction to the HSE budgets since 2008 is €3.3bn or 22% (1). The 2013 gross provision for Community Drug (Demand-led) Schemes is €2.562bn, a total cost reduction of €383m (15%) on the previous year (1). The General Medical Services (GMS) or medical card scheme is the most costly scheme and presently covers 1.85m or 40% of the Irish population, providing free access to GPs and medicines and dispensing over 61m items in 2012 (1).

Methods

This paper examines recent trends in the GMS scheme using the Primary Care Reimbursement Services (PCRS) statistical analysis of claims and payments and HSE performance monitoring and supplementary reports (2,3). The cost of medicines prescribed under the GMS scheme, the number of persons covered, the average cost per person covered, number of items prescribed per person and the average cost per item prescribed are examined over a 10 year period to end 2012.

The average cost per person of GMS medicines is examined for each of the 8 health regions and by the 22 age/sex cohorts for 2010, the most recent year for which this regional data is available. The decrease in costs between 2009 and 2010 are analysed and the proportion attributable to changes in the number of items and the cost per item identified.

A demographic adjustment removing the impact of regional differences in age and sex is made by applying the same national demographic weights to each region's age-gender specific cohort costs using recent census data (4).

The average cost per person of GMS medicines in each region, c_r, can be defined as the weighted sum of the average cost of each of its n age-gender cohorts, c_{ir}, where the weights, w_{ir}, are the percentage of that region's GMS population in each age-gender cohort: that is,

$$c_r = \sum_{i=1}^{n=22} w_{ir} c_{ir}$$

The demographically adjusted cost per person of GMS medicines in each region, c_{ra}, can be defined as the weighted sum of the average regional cost of each of its n age-gender cohorts, c_{ir}, where the weights w_{ia} are the national percentage of the GMS population in each age-cohort: that is,

$$c_{ra} = \sum_{i=1}^{n=22} w_{ia} c_{ia}$$

The resulting cost estimates are the costs each region would have if they had identical demographics and hence a greater proportion of older persons in a region can not be claimed as the reason for higher costs.

Results

Growth in the GMS scheme

The GMS scheme has undergone substantial growth in the past 10 years with costs increasing by 117% from just over €550m in 2002 to an estimated €1.2bn in 2012. The number of persons covered increased by 59% over the same period to 1.85m by end 2012. The average cost of medicines per person covered peaked in 2009 at €852 before falling back to approximately €650 in 2012. In 2012 the average number of items prescribed per person is 33 items at an average cost close to €20 per item. Expenditure trends peeked in 2009 and have fallen back since despite a subsequent 25% increase in the number of persons covered.

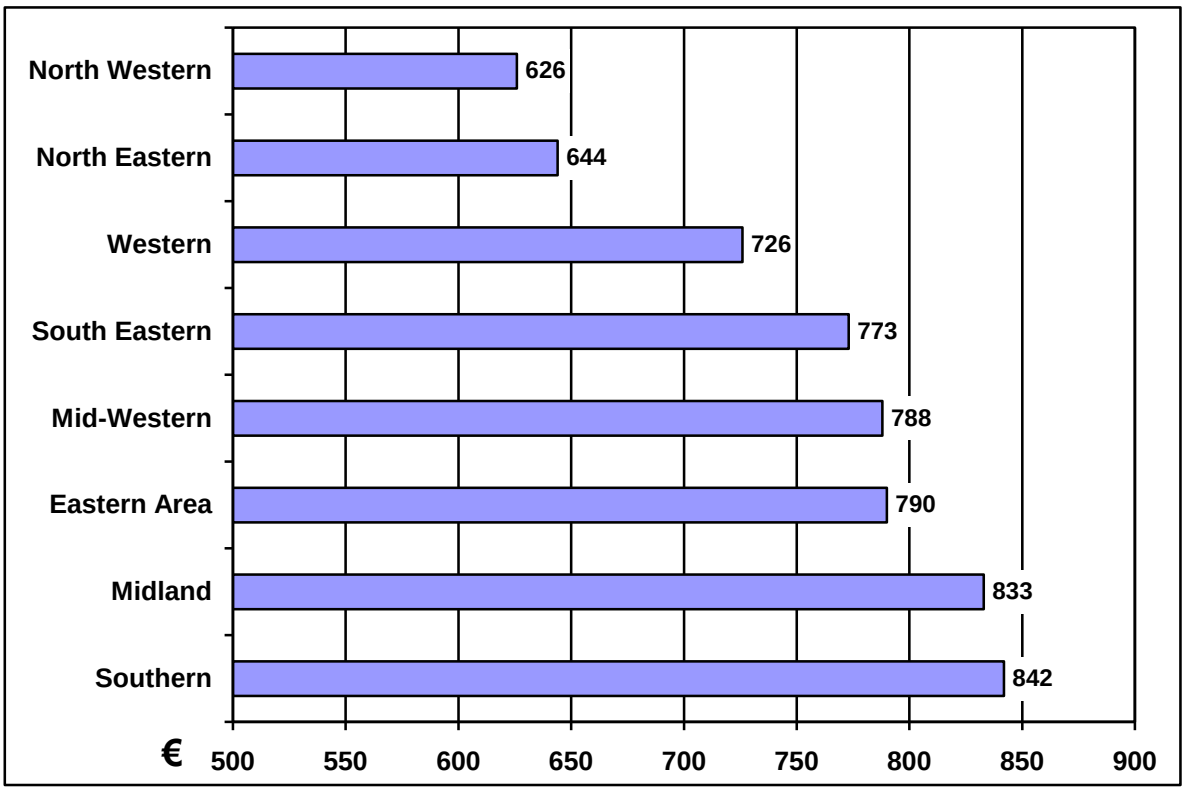
Table 1: Growth in the GMS scheme, 2002 – 2012

Year	Cost of Medicines (m)	Persons Covered (000s)	Cost per Person	Items per Person	Cost per Item
2002	€551	1,169	€471	25	€18.24
2003	€651	1,158	€562	28	€19.74
2004	€763	1,149	€664	30	€21.35
2005	€831	1,156	€719	32	€21.81
2006	€940	1,227	€770	33	€22.80
2007	€1,048	1,276	€822	35	€23.27
2008	€1,145	1,352	€847	36	€23.43
2009	€1,260	1,479	€852	34	€24.56
2010	€1,233	1,616	€763	34	€22.47
2011*	€1,195 pro.	1,694	€705	34	€20.61
2012*	€1,195 est.	1,854	€651	33	€19.40
10 year % incr.	**117%**	**59%**	**38%**	**32%**	**6%**

Average cost per person

The national average cost of medicines per person covered by the GMS scheme in 2010 was €763. This varied regionally from €626 (18% below average) in the North Western region to €842 (10% above average) in the Southern region. Regional average cost per person for GMS medicines in 2010 is displayed in figure 1:

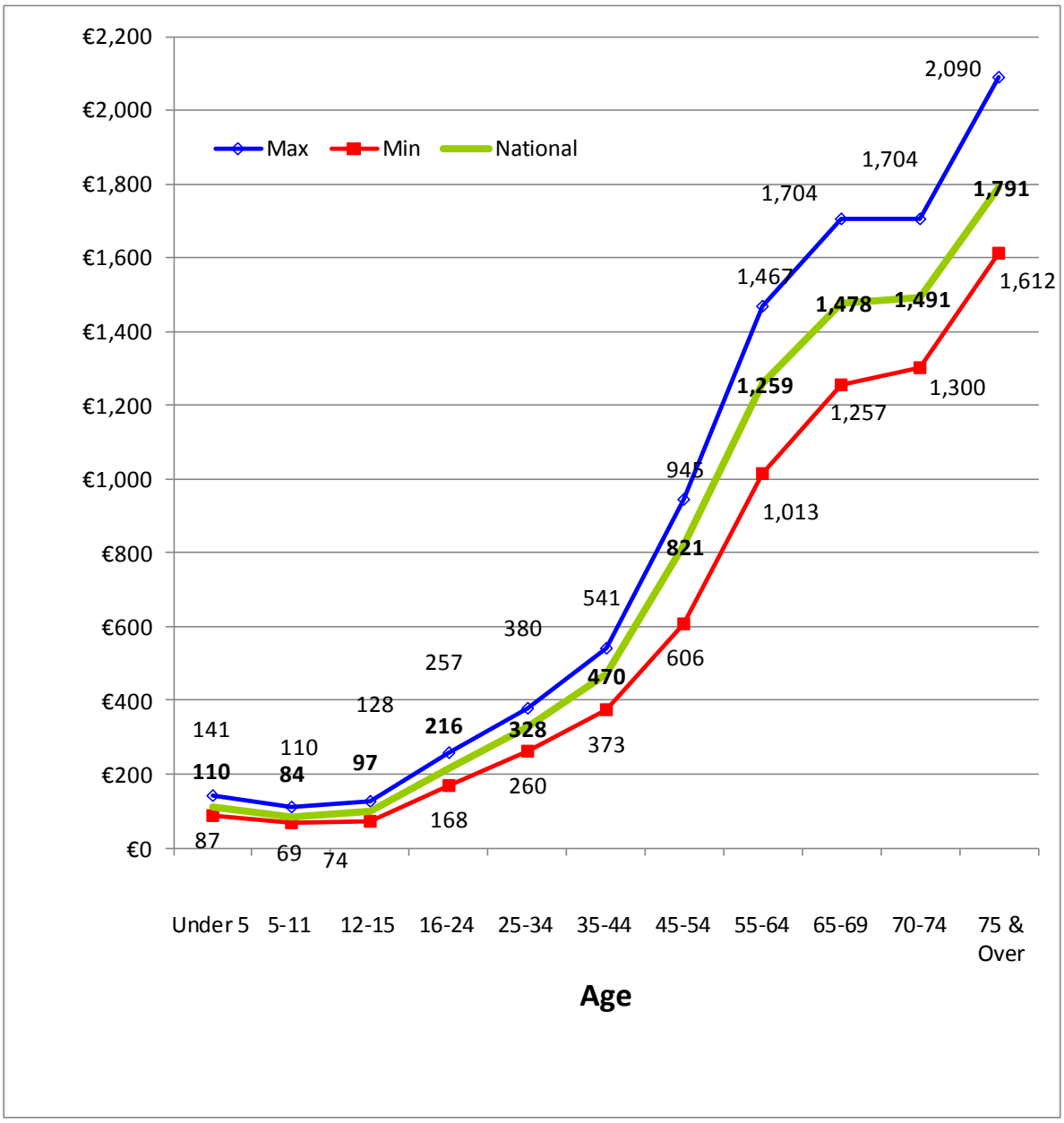
Figure 1: Average cost of GMS medicines per person, 2010



Average cost per person by age cohort

The cost of GMS medicine increases with age, apart from for the very young. In 2010, the average cost of medicines for persons over 75 years of age was nearly 4 times that of the persons aged 35 to 44 years (€1,791 versus €470). Figure 2 shows the national average cost for each of the 11 age cohorts including the lowest and highest regional costs.

Figure 2: Average cost of medicines per person by age cohort, 2010



Reductions in the average cost per person

Between 2009 and 2010 the national average cost per person under the GMS scheme fell by 10%. The adjustment differed across the regions from an 8% reduction in the Western and North Western regions to a 14% reduction in the North Eastern region. The most significant component driving this decrease was a fall in the average cost per item of 9% with only minor regional variances as the wholesale price of drugs and dispensing fees are set nationally. The number of items prescribed fell by 2% with the North Eastern region displaying a 6% decrease.

Demographically adjusted average cost per person

Table 2 presents the 2010 regional average costs of GMS medicines per person covered (as per figure 1) and the demographically adjusted average costs. The adjusted cost estimates are the costs each region would have if they had identical demographics and hence a greater proportion of older persons in a region can not be claimed as the reason for higher regional costs.

Table 2: Average and demographically adjusted cost of medicines per person, 2010

Region	**Average Cost €**		**Demographically Adjusted Average Cost €**	
	Cost	% from average	Cost	% from average
Average	**763**	**n/a**	**763**	**n/a**
Midland	833	9%	874	15%
Southern	842	10%	801	5%
South Eastern	773	1%	782	2%
Eastern Areas	790	4%	779	2%
Mid Western	788	3%	777	2%
Western	726	-5%	719	-6%
North Eastern	644	-16%	708	-8%
North Western	626	-18%	643	-16%

The national average cost for GMS medicines is €763 per person in 2010. Initially, the average cost in the Midlands is €833 (9% higher than average), however, the Midlands has a lower than average proportion of older persons and when the national average demography is applied to this region the average cost increases to €874 (15% higher than average). This implies that demography in the Midlands does not account for its high GMS costs, but restrains it. Average costs per person in the North Western region are €626 (18% lower than average). If the North Western region had the same demography as the national average its costs would increase to €643 (16% lower than average). Hence demography in the North Western region only accounts for 2% of the 18% cost differential. Interestingly, adjusting for demographics increases the range of costs which previously ranged from -18% to 10% but now range from -16% to 15%. The Midland, Southern, South Eastern, Eastern Area and Mid-Western regions all have above average demographically adjusted costs while the Western, North Eastern, and North Western display below average costs.

Discussion

The Irish health services have undergone unprecedented financial restraint which is set to continue into 2013. Additional cost reductions on the community schemes beyond those specified in the government estimates are being implemented by the HSE in order to allocate additional resources to frontline services (1). Various approaches have been taken to reduce the overall drugs bill. The recent drugs deal with IPHA (Irish Pharmaceutical Healthcare Association) focusing on the reduction in the cost of patent and off-patent drugs and securing the provision of new and innovate drugs is estimated to generate savings of up to €116m in 2013 alone (5). A national task force on prescribing and dispensing has been established which is anticipated to deliver significant cost savings through the achievement of more cost conscious prescribing (5). The Health (Pricing and Supply of Medicines) Bill 2012 provides for the introduction of generic substitution and reference pricing aimed at promoting price competition and delivering lower medicine prices for both the State and the individual (6).

A recent report by the European Observatory on Health Systems and the World Health Organisation Regional Office for Europe reviewed the main Irish health system policy options available to the Irish Government in responding to the effects of the financial crisis (7). It assesses the response to recent budget cuts and explores future options drawn from experiences in European and OECD countries facing similar challenges. The report highlights, given that Ireland has the third highest per capita pharmaceutical expenditure across all OECD countries except Canada and the USA, that there is considerable scope to reduce costs. Increasing prescribing by international non-proprietary name, promoting generic substitution and implementing reference pricing are all highlighted as ways to further improve health service efficiency. Additional savings may also be achieved from more careful and cost conscious prescribing, but this requires investment in training, decision support and other behavior change interventions. More attention should be given to increasing prescribing support to encourage the use, where appropriate, of the lowest cost drugs for effective treatment of diseases. This may be particularly important given that demographic change will increase the number of people with chronic diseases and the associated need for drugs. Careful prescribing will limit the pressure on costs from this source.

Prescribing of medicines is one of the most common interactions between clinicians and individual patients. Prescription costs under the Community Drugs Schemes increase strongly

with age reaching a peak among the older age cohorts. This is hardly surprising when, figures from the Irish longitudinal study on ageing (TILDA) show that 20% of people aged over 50 are taking five or more medications, while nearly 50% of those over 75 years are taking five or more medications (8).

In theory, regions with lower than average costs should have the least scope for cost reductions. However, the North Eastern region had the second lowest average cost, however it managed the greatest cost reduction (14%) between 2009 and 2010, 4% greater than the national average. In short, there does not appear to be a systematic link between a region's absolute cost and subsequent cost reductions.

The average differential between the lowest and highest cost regions continuingly exceeds 25% nationally and for each age cohort, even when adjusted for demographic variances. If the lowest cost profiles were applied nationally the potential for savings could exceed €220m in 2012, or if all regions with above average costs were reduced to the national average annual savings in the region of €33m could result.

While the impact of age and sex has been removed from this analysis it is still possible that cost variances occur due to the underlying health of the population independent of age or sex. Much of the variances in expenditure on community drugs may result from the increased prevalence of chronic health conditions among older age groups such as cardiovascular disease, respiratory and thyroid conditions (9). Recent work by the Central Statistics Office and Health Intelligence Ireland illustrate the increased interest in the area of regional inequalities in health status which may assist in understanding the underlying health of the population and hence regional GMS cost variances (10).

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