GP prescription costs – changes over time

Lesley Curtis and Jennifer Beecham

Introduction

The very first volume of the *Unit Costs of Community Care* reported a unit cost for General Practitioners (GP) working in primary care. At 1992 prices, the cost per surgery visit (9.3 minutes) was £7.30. As data sources improved, better estimates have been developed, and by 1997 the prescription costs per GP consultation could be included (£18 at 1996-1997 prices) based on the Net Ingredient Cost (NIC) of medicines and the average number of prescriptions per GP consultation. Since then, GP prescription cost data have been reported each year in our volumes of the *Unit Costs of Health and Social Care*.

This look back at the data reported in the *Unit Costs of Health & Social Care* past volumes was prompted by a report from the King's Fund on the *Rising Cost of Medicines to the NHS*, which draws from the NHS Digital Prescription Cost Analysis data presenting the costs of medicines prior to any discounts from the sector (Ewbank et al., 2018). The authors note that NHS spend on medicines has increased from £13.0 billion in 2010/2011, to £17.4 billion in 2016/2017 with a growth of some 12 per cent in hospital medicines, but a much smaller rate of growth in primary care prescribing (0.6%, p7). In turn this has led to a reduction in the proportion of medicines spend attributable to primary care from 67 per cent in 2010/2011, to 52.4 per cent in 2016/2017 (calculated from p7). The authors note that expenditure on medicines is influenced by three factors: volume of products, the price of products, and the combination of products (p9). Changes in the first two of these, volume dispensed and average NIC, are particularly relevant to our GP unit costs as they are used to calculate the prescription costs per consultation.

In this short article we pull together information from NHS Digital Prescription Cost Analysis[1] to illustrate these data for the whole of England and then identify the trends as they relate to GP consultations using data from previous *Unit Costs of Health & Social Care* volumes. We have not applied inflation indices to the data; all costs are presented at prices for the year cited.

How the Net Ingredient Cost for medicines prescribed in primary care has changed in England

The Prescription Cost Analysis data provide a breakdown by clinical area for all prescriptions issued in primary care, with GP prescriptions accounting for around 98 per cent of the total number of prescriptions items dispensed. We looked at data between 2007 and 2017 and there was a marked reduction in the total average NIC across all medicines; from £10.50 in 2007 to £8.30 in 2017. This data also provided the total NIC for each clinical area, as well as the average NIC per item in each clinical area and total items dispensed. It should be noted that medicines are categorised using British National Formulary (BNF) classifications and are therefore sometimes not categorised by the condition they are used to treat.

Following the Ewbank et al. (2018) analysis, Table 1 presents the NIC and number of prescriptions for 2007, 2012 and 2017 for three of the four clinical areas which dominate in terms of the volume of items dispensed (63% in 2017) and total cost (69.6%).

a) The cardiovascular system, total NIC = £1.2 billion in 2017.

This category includes medicines used to manage high cholesterol and blood pressure. Dominating this group in terms of items prescribed are lipid-regulating drugs (which include statins) with 72,612,423 items prescribed in 2017, an increase of 53 per cent since 2007. The NIC for this group of drugs has reduced from £12.52 to £2.97 in the same period. The next largest group, with 71,531,003 items prescribed, are drugs for hypertension and heart failure which also show a large reduction in average cost; from £9.52 to £2.28.

b) The respiratory system, total NIC = £1.1 billion in 2017.

Although not having the highest average cost of all 23 clinical groups, the respiratory sector has the highest average NIC of these three clinical groups; £16.20 in 2007 with a small reduction to £15.20 in 2017. Data for antifibrotics, prescribed for people with pulmonary fibrosis, were not available in 2007, but show a high average NIC for 2017 (£1,297 per item). This

[1] https://digital.nhs.uk/data-and-information/publications/statistical/prescription-cost-analysis

has contributed to keeping the average NIC high even though there have been reductions in the cost of other drugs in this clinical area, such as mucolytics (which can help manage chronic asthma or bronchitis) where the average NIC has decreased from £29.25 to £11.45 in ten years.

c) The central nervous system, total NIC = £1.8 billion in 2017.

Central nervous system (CNS) medications are used to treat the effects of a wide variety of conditions including dementia and Parkinson's disease, depression, obesity as well as analgesics for pain. CNS medications are the second most widely prescribed drugs and the number of items dispensed has grown quicker over the ten year period than the other two groups. However, there has also been a 30 per cent decrease in the average NIC over the same period. Notably the average NIC for drugs used for dementia patients has decreased from £77.75 in 2007 to £7.40 in 2017 and the NIC for antidepressants has dropped from £8.76 to £3.48 in the same period. These two conditions accounted for 34 per cent of the total CNS prescriptions dispensed.

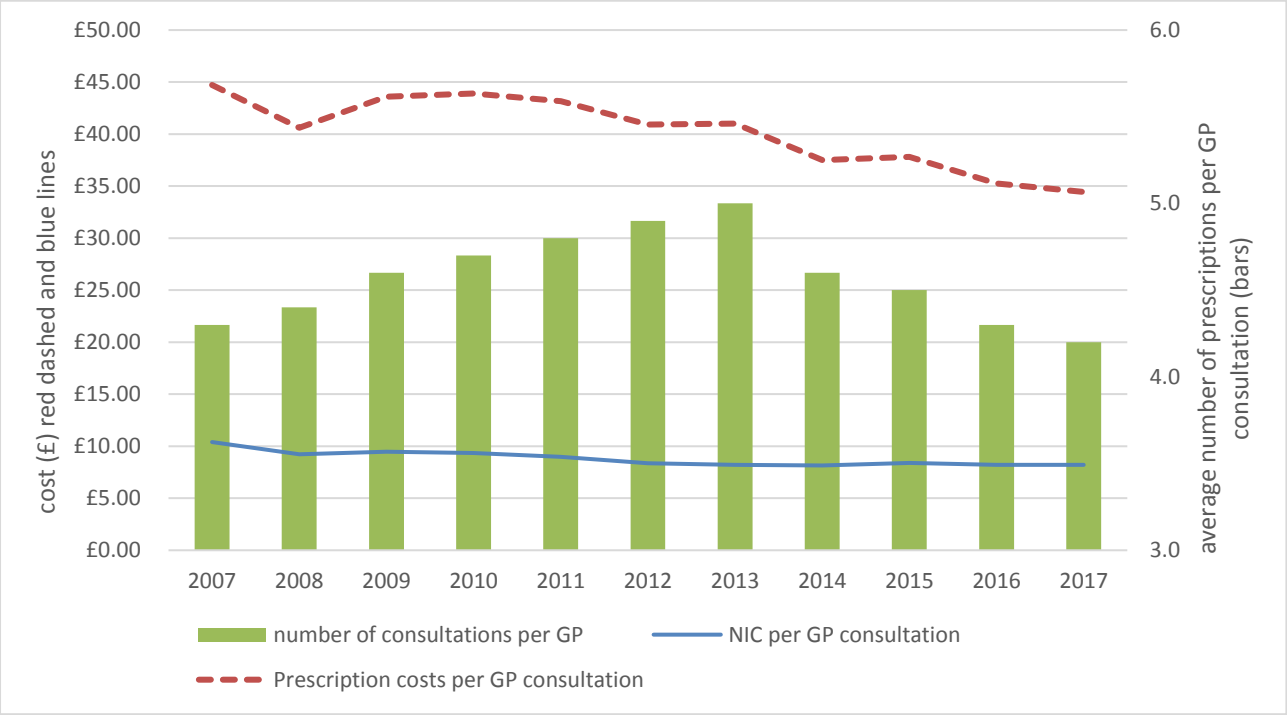
Table 1 Changes in the NIC per item and number of items prescribed

	Cardiovascular system		Respiratory system		Central nervous system	
	NIC per item	Items dispensed	NIC per item	Items dispensed	NIC per item	Items dispensed
2007	£7.20	250.9 m	£16.50	53.6 m	£12.60	138.0 m
2012	£3.80	300.6 m	£16.90	64.4 m	£9.90	180.1 m
2017	£3.70	321.4m	£15.20	72.1 m	£8.70	208.5 m

How the GP prescription costs have changed in England

Figure 1 collates data from the GP unit cost schema presented in the volumes of the *Unit Costs of Health and Social Care* between 2007 and 2017. These data focus on GP prescriptions (rather than all primary care) and show the trend over time for the average NIC (all medicines), the GP prescription costs and the average number of prescriptions per GP consultation (the bars in the chart). Over this period, the total number of prescription items has risen by 37 per cent from 796 million in 2007 to 1,064 million in 2017.

Figure 1 NIC per GP prescription over time, prescription cost per GP consultation and average number of prescriptions per GP consultation



Until 2017, routine data on the number and cost of GP prescriptions was available from the Prescribing team at NHS Digital/Health and Social Care Information Centre and used to calculate the NIC per GP prescription. As no annual activity data (consultations per GP) has been routinely reported data for the *Unit Costs of Health and*

Social Care volumes, data has been drawn from Hippisley-Cox et al. (2007) and Hobbs et al. (2016). For this article further work has been carried out to estimate the annual increases in consultation numbers and a news item issued in 2018 by the Royal College of General Practitioners has been taken into account.[2]

The chart shows that in ten years, the NIC per GP consultation has reduced by 21 per cent, from £10.40 in 2007 to £8.10 per item in 2017. A similar reduction (23%) in prescription costs per GP consultation is evident with costs decreasing from £44.70 in 2007 to £34.40 in 2017. Although the price drop of the Net Ingredient Cost is the main contributing factor in the change in prescription costs per GP consultation, it is evident from the chart that since 2013, GPs are writing fewer prescriptions per consultation with rates in 2016 having returned to those seen in 2007; 4.2 prescriptions per consultation. It also indicates that there has been a higher rate of growth in the number of consultations than prescriptions (40% compared with 37%).

Discussion

Thus changes in both NIC and number of items have relevance for our unit cost calculations. In 2007/2008, the cost of a surgery consultation with a GP was £27[3] and the prescription cost per consultation was £45. In 2017/2018, the cost of a surgery consultation has increased to £28[3] whereas because of the decrease of the NIC, from £10.40 in 2007 to £8.20 in 2017, prescription costs per GP consultation have decreased to £33.30.

Thomas (2018) summarises the evidence on developing and manufacturing new drugs and suggests this is likely to remain an expensive and resource-intensive process. Patents on new medicines, protecting the drugs from being copied, usually last around 20 years but once expired can lead to competition as other forms of the same drug enter the market and thus to reductions in the NIC for that drug, particularly for those dispensed in high volumes.[4] The National Audit Office (2018) found that in 2016/2017, 28 per cent of total NHS spend on medicines was on generic medicines and more than 80 per cent of these generic medicines were prescribed in primary care.

The cardiovascular clinical group is the best example of how the NIC has constrained overall spending. Table 1 shows it has the highest number of medicines prescribed, but the NIC is low at £3.20. Significantly Atorvastatin, a member of the medication class known as statins, was approved in 1996, but the patent expired in 2012 and in that year, the overall NIC for cardiovascular medicines fell from £3.81 to £3.19.[5] By contrast, Haines (2013) suggests that generic prescribing 'may result in people with asthma receiving inappropriate medications.' If generic prescribing has not been implemented, this may help explain why the average NIC for drugs prescribed in the respiratory category remains relatively high; £15.20 in 2017 compared to £16.50 in 2007.

Ewbank et al. (2018) outline other reasons why the Net Ingredient Cost of medicines has fallen and identifies policies aimed at controlling spending on medicines (p19-36). For example, there are strict regulatory processes in place, and the budget-impact test and the Health Service Medical Supplies (Costs) Act 2017 give the government new powers to intervene in drug pricing.[6]

It is worth noting, however, that since 2016/2017, the prices of certain generic medicines have increased unexpectedly (Audit Commission, 2018), possibly due to a shortage of medicines. The Department of Health and Social Care suggest the suspension of some manufacturer's licenses and the fall in the value of sterling as possible causes.[7]

[2] See a news item issued by the RCGP Press office which says that GPs have an average of 41.5 patients a day. **(**41.5 consultations per day x 220 working days per year x the number of FTE GP registrars and retainers; 27,773, gives a total of 253,567,490 GP consultations per annum). http://www.rcgp.org.uk/about-us/news/2018/january/workload-in-general-practice-a-real-concern,-says-rcgp.aspx.

[3] Excluding direct care and qualification costs, see schema 10.3b and 10.3c

[4] See John Appleby's blog for a discussion of NHS cost savings from generic prescribing: https://www.kingsfund.org.uk/blog/2015/07/how-much-has-generic-prescribing-and-dispensing-saved-nhs.

[5] http://www.pmlive.com/pharma_news/lipitor_patent_loss_atorvastatin_uk_378045

[6] See also http://apps.who.int/medicinedocs/documents/s19583en/s19583en.pdf and https://psnc.org.uk/contract-it/pharmacy-regulation/6.; https://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/nice-technology-appraisal-guidance/budget-impact-test; http://www.legislation.gov.uk/ukpga/2017/23/contents/enacted;

[7] http://www.nationalhealthexecutive.com/Robot-News/dh-cant-fully-explain-why-nhs-spent-7-times-more-money-on-generic-meds-last-year

Conclusion

This article has shown how the average NIC has fallen over time using national-level data for certain clinical categories of medicine. It is rare to find the costs of anything reducing overtime, let alone items in health and social care where the costs of pay and goods and services purchased by the NHS have risen by more than 25 per cent in the last ten years (see inflation indices in chapter 5 of this volume). This reduction sits within the context of an overall rise in spend on medicines, particularly in the hospital sector, driven by increased volumes of medicines prescribed and development of new medicines.

These data set the context for the overview we present each year in the *Unit Costs of Health and Social Care* on GP prescription costs – derived from information on NIC and the number of prescriptions written per GP consultation. In light of new policies being implemented in General Practice (NHS England, 2016a; 2016b; Department of Health and Social Care, 2018) which will affect how consultations and medicines are delivered, it will be interesting to monitor whether the prescription costs per consultation reported in this publication continue to reduce beyond 2017 and 2018.

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