

General Practice Prescribing Trends  
in England and Wales  
2014 Annual Review

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## Report authors:

Ellen Murphy, Head of Insight, Cogora  
Victoria Spain, Insight Analyst, Cogora

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First published 2015 by Cogora.  
140 London Wall, London EC2Y 5DN, UK.

**Cogora**  
**T** +44 (0)20 7214 0500  
**F** +44 (0)20 7214 0501  
**E** enquiries@kogora.com  
**W** kogora.com

# About Cogora

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For more information about this report or, more broadly, about Cogora, please contact:

**Alex Beaumont**  
Managing Director  
Cogora

**E** alexbeaumont@cogora.com  
**T** +44 (0)20 7214 0500

# Executive summary

The total cost to the National Health Service (NHS) of prescriptions issued by healthcare professionals working in general practices in England and Wales rose from £8.91 billion in 2013 to £9.16 billion in 2014. Comparison between NHS regions showed that the North of England incurred the largest proportion of the total cost, and Wales observed the highest cost per registered patient.

The highest number of prescriptions issued for pharmaceutical brands were for Ventolin® (8.8 million), Adcal D3® (7.1 million) and Clenil Modulite® (5.0 million). In terms of cost to the NHS, the top brands were Seretide® (£178 million), Symbicort® (£89 million) and NovoRapid® (£75 million). However, in line with prescribing guidelines, the vast majority (82%) of prescriptions issued in English and Welsh general practices named an 'active ingredient' rather than a pharmaceutical brand.

The sections of the British National Formulary (BNF) that incurred the highest cost to the NHS were: diabetes drugs, respiratory corticosteroids, analgesics, antiepileptics and oral nutrition products. However, this is likely to change in coming years with Lantus®, one of the top-performing diabetes brands in 2014, going off-patent in 2015. Similarly, one generic version of Seretide®, which was one of the top-performing corticosteroids in 2014, was launched in Europe in 2014, with a second generic version likely to be released in the next few years. Finally, the DuoResp Spiromax® alternative to the high-performing respiratory corticosteroid Symbicort® received European marketing authorisation in April 2014.

2014 trends to note within therapy areas include a 10% increase in the total number of prescriptions issued for strong opioids, which are associated with an increased risk of addiction. And while the level of generic prescribing was lower for certain antiepileptics (51%) compared with other therapy areas (82%), charities are currently advocating even greater branded prescribing of antiepileptics due to the uncertainty associated with ensuring clinical equivalence for certain types of antiepileptics if supplied by different manufacturers. There was also a 12% increase in the total cost of prescriptions for nutritional supplements and paediatric milk intolerance in 2014 compared to 2013, which may reflect the publication of new UK guidance highlighting the importance of early recognition when managing cow's milk allergy.

# Methodology

## Source

The Health and Social Care Information Centre (HSCIC) and NHS Wales record and publish data on prescribing activity in all general practices in England and Wales respectively. Cogora used proprietary, in-house software to analyse these data to identify trends in prescription volume, as well as the total net ingredient cost (NIC) of general practice prescriptions, written between 1 January 2013 and 31 December 2014.

## Definitions

NIC is the basic price of a drug, excluding discounts, dispensing costs or fees. As such, the NIC associated with prescriptions provides an estimate of the cost of prescriptions issued by healthcare professionals to the NHS.

Cogora estimated the volume and cost of pharmaceuticals prescribed in English and Welsh general practices by the number of prescriptions issued and the associated total NIC.

The volume was calculated by measuring the number of prescriptions issued for a specific drug, or type of drug, within a defined time period. It is noted that the number of prescriptions for a specific medicine, rather than the pack size being prescribed, was measured. As such, a prescription for a medicine was only counted once regardless of the quantity of medicine contained within the prescribed pack.

Two NIC measurements are presented in the report: total NIC and NIC per registered patient. The total NIC refers to the total cost (NIC) associated with all prescriptions for a specific drug, or type of drug, within a defined time period. NIC per registered patient is the total NIC divided by the total number of registered patients in all regions included in the analysis.

To compare prescribing activity across therapy areas, Cogora segmented prescription volume and NIC data according to the BNF section individual prescriptions fell into, as well as by the chemical name of prescribed pharmaceuticals.

## Analysis

Prescription volume and NIC per registered patient was calculated by combining raw prescribing activity data with patient registration data published by the HSCIC<sup>1</sup> and provided by the NHS Wales Informatics Service<sup>2</sup>. The patient registration data showed the total number of patients registered in general practices in England on 31 December 2014 and in Wales on 15 December 2014.

When calculating prescription volumes and NIC per registered patient for England, Cogora used data showing the number of registered patients in a clinical commissioning group (CCG) rather than in individual general practices. This is because the HSCIC suppresses data for general practices with fewer than 100 patients in order to prevent possible identification of individual patients, thereby making CCG level data on the number of registered patients more accurate than practice level data.

Cogora segmented prescribing activity data from individual general practices into CCGs using the CCG grouping previously published by the HSCIC<sup>3</sup>. CCGs were then grouped into English regions based on the geographic split previously used by NHS England<sup>4</sup>: 'North of England', 'Midlands and East of England', 'South of England', London and Wales. When segmenting English data according to geography, Cogora excluded prescription data that the HSCIC had attributed to a local authority or regional cluster. These prescription data only accounted for 0.4% of total NIC in 2014. Welsh prescribing activity data were segmented by local health board.

Cogora identified the top-performing branded pharmaceuticals in the calendar year 2014 by identifying the branded pharmaceuticals that had the highest total NIC in 2014, the highest total number of prescriptions in 2014, the greatest numerical increase in total NIC when comparing the calendar years 2013 and 2014 and, finally, the highest percentage increase in total NIC when comparing the calendar years 2013 and 2014. When calculating the two latter categories, Cogora only included branded pharmaceuticals that were prescribed between 1 January 2013 and 31 December 2014 (thereby excluding pharmaceuticals launched after 1 January 2013) and that were associated with a total NIC of £1 million or higher in 2014.

# Introduction

Visits to primary care are estimated to account for 90% of all patient contact with the NHS<sup>5</sup>. Data on general practice prescriptions therefore provide valuable information on NHS spending across different diseases or time periods.

During the calendar year 2014, the total NIC associated with prescriptions written in English and Welsh general practices amounted to £9.16 billion, compared to £8.91 billion in 2013. This represented an increase in total NIC of 2.9%. Meanwhile, the total number of prescriptions issued in the same general practices increased by 3.4% when comparing the calendar years 2013 and 2014.

In this report, Cogora provides an overview of prescribing behaviour in general practices across England and Wales in 2014 with specific focus on the five therapy areas associated with the highest total NIC in 2014.

## Regional variance in spending on prescribed medicines

Comparison between regions showed that the North of England incurred the highest total NIC in 2014 (£2.8 billion). This amounted to almost one-third (30%) of the total NIC in England and Wales during that year. This regional distribution of total NIC aligned reasonably well with patient registration data, suggesting that the same region housed just over one-quarter (27%) of all registered patients in 2014 (Figure 1A). Conversely, the lowest total NIC (£1.0 billion in 2014, 11% of total NIC) was observed in London, which patient registration data indicate housed 15% of all registered patients during this time period.

Interesting regional disparities were also observed when calculating the NIC per registered patient, a measure which, unlike total NIC, is not affected by differences in the size of a region's patient pool. The highest NIC per registered patient was observed in Wales, where a NIC of £183.24 per registered patient was measured, compared to London, which was at the bottom of the ranking, with a NIC of only £111.19 per registered patient (Figure 1B).

Regional differences in NIC per registered patient may be attributed, in part, to different levels of generic prescribing. However, the small difference in the percentage of general practice prescriptions written for an active ingredient rather than a branded product in 2014 (80% in Wales versus 83% in London; Figure 1B) suggests that other factors also contributed. These may include socio-economic differences between regions, with 2012 data from the Office for National Statistics (ONS) indicating that London residents have both a lower median age (34.0 years in London versus 39.7 in UK<sup>6</sup>) and a higher gross disposable household income (£21,446 gross disposable household income per person in London versus £16,791 in UK in 2012<sup>7</sup>) compared to the rest of the UK.

Figure 1A. Regional distribution of total NIC and total number of registered patients

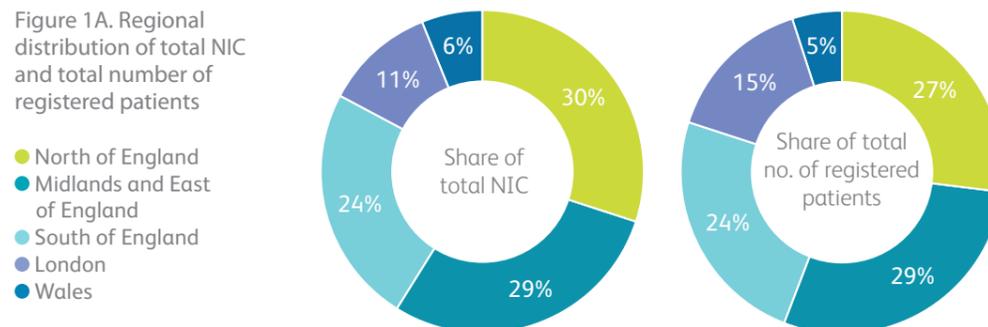
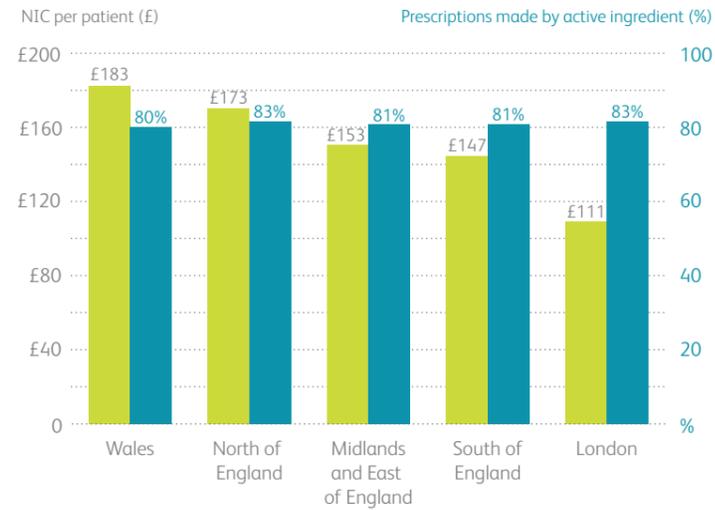


Figure 1B. NIC per registered patient and percentage of prescriptions made by active ingredient

● NIC per registered patient  
● Percentage of prescriptions made by active ingredient



**Generic prescribing**

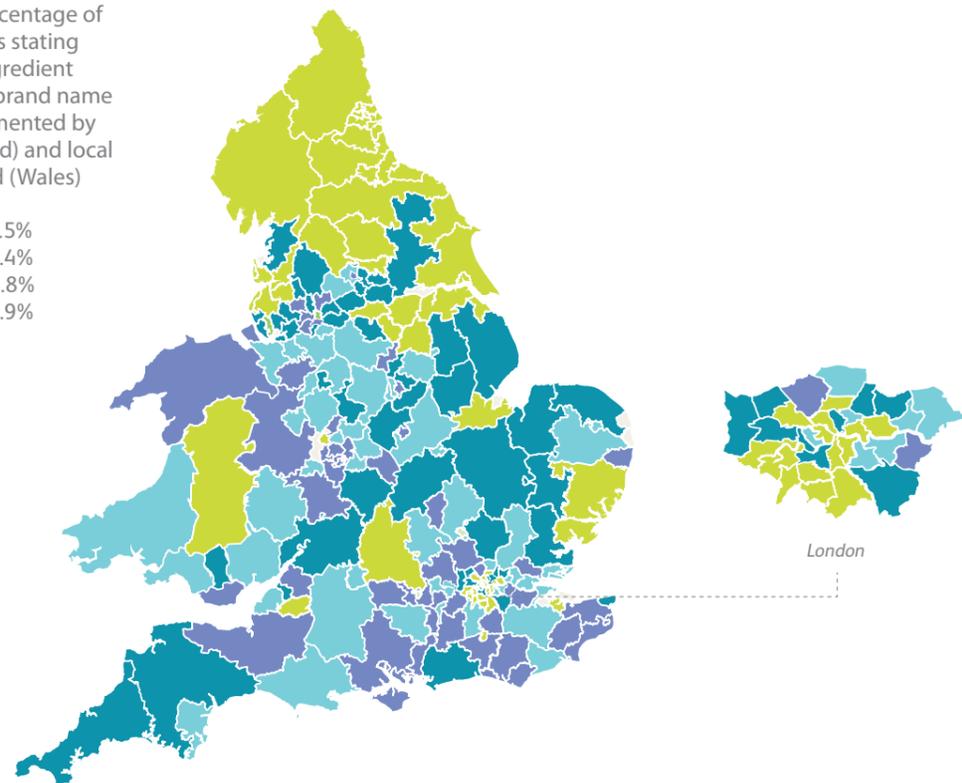
The NHS generally encourages prescribing medicines by active ingredient rather than brand name as it helps reduce cost and delays in supplying medicines to patients, the only exceptions being instances where branded and generic medicines are not clinically interchangeable or where their administration devices have different instructions<sup>8</sup>.

In line with this NHS recommendation, an active ingredient rather than a brand name was specified in 82% of prescriptions issued in English and Welsh general practices in 2014. Such generic prescriptions accounted for more than half (61%) of the total NIC associated with general practice prescriptions in the same year. Similar levels of prescribing by active ingredient were observed in 2013 (82% of prescriptions and 61% of total NIC), which suggests continuity in general practice prescribing behaviour.

However, the exact percentage of prescriptions stating an active ingredient rather than brand name varied widely between CCGs and local health boards, ranging from 74.7% (South Reading CCG) to 87.5% (North Tyneside CCG) across England and Wales (Figure 2).

Figure 2. Percentage of prescriptions stating an active ingredient rather than brand name in 2014 segmented by CCG (England) and local health board (Wales)

● 83.5% – 87.5%  
● 81.9% – 83.4%  
● 80.0% – 81.8%  
● 74.7% – 79.9%



**Key therapy areas**

The five sections of the BNF that claimed the highest total NIC in 2014 were, in descending order: diabetes, respiratory corticosteroids, analgesics, antiepileptics and oral nutrition (Table 1). The importance of these BNF sections for the NHS budget is demonstrated by the finding that, together, they accounted for approximately one-third of the total NIC associated with general practice prescriptions in both 2014 (34%) and 2013 (33%). Specifically, the total NIC for drugs falling in these five therapy areas accounted for more than £3 billion, corresponding to 176 million prescriptions written in 2014.

Table 1. Therapy areas with the largest total NIC in 2014

Rank	Therapy area	Total NIC
1	Diabetes	£901,649,036
2	Respiratory corticosteroids	£754,353,117
3	Analgesics	£586,252,963
4	Antiepileptics	£498,552,273
5	Oral nutrition	£380,416,247

Overall, the total NIC associated with general practice prescriptions for these five BNF sections increased by 6% when comparing 2014 to 2013, while the total number of prescriptions issued increased by 4% over the same period. This increase in total NIC ranged from 3% to 11% with the greatest increase in total NIC observed for antiepileptics (Figure 3). Nonetheless, the total NIC increase for all top five therapy areas much exceeded UK inflation (measured by the Consumer Price Index) in the year to December 2014 (0.5%)<sup>9</sup>, demonstrating a real increase in the cost of these prescriptions to the NHS.

Figure 3. Change in number of prescriptions and associated total NIC between 2013 and 2014

● Total NIC  
● No. of prescriptions

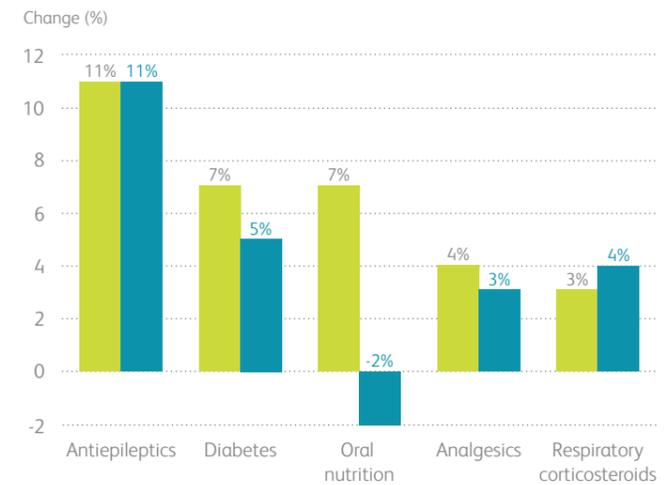


Table 2. Top 10 branded pharmaceuticals with the largest share of total NIC in 2014

No.	Top product	Total NIC 2014	Product details
1	Seretide®	£178,365,965	Respiratory corticosteroid
2	Symbicort®	£88,669,889	Respiratory corticosteroid
3	NovoRapid®	£75,090,808	Diabetes drug
4	Lantus®	£72,716,990	Diabetes drug
5	NovoMix®	£56,588,865	Diabetes drug
6	Clenil Modulite®	£51,373,577	Respiratory corticosteroid
7	Aviva® reagent strips	£42,239,521	Diabetes drug
8	Levemir®	£42,121,838	Diabetes drug
9	Fostair®	£31,505,407	Respiratory corticosteroid
10	Zoladex®	£29,086,863	Sex hormone product used in reproductive systems diseases and cancer treatment

#### Top performing brands in 2014

Of all prescriptions for branded products, the highest total NIC in 2014 was observed for the long-acting  $\beta$ 2-agonist and inhaled corticosteroid Seretide® (£178 million), one of only six licensed inhaled corticosteroid & long-acting  $\beta$ 2-agonists in the UK<sup>10</sup>. Further analysis demonstrated that four of the ten branded products with the highest total NIC associated with their total prescriptions in 2014 were respiratory corticosteroids (Seretide®, Symbicort®, Clenil Modulite® and Fostair®) while five were used in diabetes treatment (NovoRapid®, Lantus®, NovoMix®, Aviva® reagent strips and Levemir®) and one was a sex hormone product used in reproductive systems diseases and cancer treatment (Zoladex®) (Table 2). These data thus further demonstrate the high budget impact of respiratory and diabetes medications on the NHS.

Table 3. Top 10 branded pharmaceuticals with the largest share of total number of prescriptions in 2014

Top products	Top product	No. of prescriptions 2014	Product details
1	Ventolin®	8,838,946	Bronchodilator
2	Adcal D3®	7,094,638	Vitamin
3	Clenil Modulite®	4,980,274	Respiratory corticosteroid
4	Seretide®	3,595,135	Respiratory corticosteroid
5	Gaviscon®	3,152,625	Dyspepsia and gastro-oesophageal reflux disease
6	Laxido®	2,736,632	Laxative
7	Calcichew D3®	2,444,447	Vitamin
8	Zapain®	2,199,030	Analgesic
9	Movicol®	1,903,838	Laxative
10	Symbicort®	1,828,793	Respiratory corticosteroid

A somewhat more varied picture was seen when identifying the branded products for which the highest number of prescriptions were issued in 2014 (Table 3). While several products indicated for respiratory disease ranked in the top 10 prescribed branded pharmaceuticals (Clenil Modulite®, Seretide® and Symbicort®), this list also included vitamins (Adcal D3® and Calcichew D3®), Gaviscon® which is used for dyspepsia and gastro-oesophageal reflux disease, laxatives (Laxido® and Movicol®) and an analgesic (Zapain®). The top prescribed branded product in 2014 was the bronchodilator Ventolin®. First launched in 1969<sup>11</sup>, Ventolin® is one of the longest serving bronchodilators on the market and therefore associated with brand recognition and a greater amount of real world data than many other, more recently launched, products. In 2014, 8,838,946 prescriptions were issued for Ventolin®.

It is noted that the patent for the high performing diabetes product Lantus® expired in February 2015 and one generic version of the high performing respiratory corticosteroid Seretide® has already launched in Europe, while a second generic version of Seretide® recently finished its phase III trial<sup>12,13</sup>. The top performing branded pharmaceuticals, as indicated by total NIC or total number of prescriptions, are therefore expected to change considerably in the coming years.

Further analysis identified the respiratory corticosteroid Fostair® as the branded product with the greatest numerical increase in total NIC (Table 4). Available as a licenced treatment for asthma since 2007, Fostair® increased its market in April 2014 when it was granted a licence indication to also treat COPD<sup>14</sup> and prescribing data showed it to have gained over £10.5 million prescriptions in 2014 compared with 2013.

Overall, branded pharmaceuticals for respiratory disease ranked highly and accounted for three (Fostair®, Symbicort® and Flutiform®) of the top ten pharmaceuticals with greatest numerical increase in total NIC in 2014. The list also included diabetes reagent strip brands (Contour Next®, Mobile® and FlucoRx®), the laxative Laxido®, the analgesic Longtec®, the combined hepatitis A/ typhoid vaccine ViATIM® and the ulcerative colitis and Crohn's ileo-colitis treatment Octasa®<sup>15</sup> (Table 4).

Meanwhile the greatest percentage increase in total NIC was observed for the vitamin Accrete D3®, which experienced a 549% increase between 2013 and 2014 (Table 5). This could be related to an NHS campaign to raise awareness of Vitamin D deficiency among British healthcare professionals<sup>16</sup>. Other branded products included in the list of top percentage increases in total NIC were the vitamin Desunin®, the analgesic Longtec®, bronchodilators (Eklira® and Seebri®), the respiratory corticosteroid Flutiform®, the contraceptive Cerelle®, products used in diabetes treatment (Forxiga® and GlucoLab® reagent strips) and the vaccine ViATIM®.

Table 4. Branded pharmaceuticals with the largest numerical increase in total NIC when comparing 2013 and 2014

Product	Increase in NIC 2013/2014	Total NIC 2014	Product details
Fostair®	£10,533,005	£31,505,407	Respiratory corticosteroid
Symbicort®	£6,799,649	£88,669,889	Respiratory corticosteroid
Contour Next® reagent strips	£5,859,698	£12,211,042	Diabetes drug
Flutiform®	£5,777,925	£8,462,015	Respiratory corticosteroid
Mobile® reagent strips	£4,670,298	£17,124,125	Diabetes drug
Laxido®	£3,917,189	£18,034,210	Laxative
Longtec®	£3,576,401	£4,990,385	Analgesic
ViATIM®	£3,565,197	£5,519,898	Vaccine
GlucoRx® reagent strips	£3,514,954	£8,509,695	Diabetes drug
Octasa®	£2,820,775	£5,831,510	Chronic bowel disorders

Table 5. Branded pharmaceuticals with the largest percentage increase in total NIC when comparing 2013 and 2014

Product	% change in NIC	Total NIC 2014	Product details
Accrete D3® Forxiga®	549%	£1,059,642	Vitamin
Forxiga®	546%	£1,003,768	Diabetes drug
Longtec®	253%	£4,990,385	Analgesic
Desunin®	249%	£1,159,164	Vitamin
Flutiform®	215%	£8,462,015	Respiratory corticosteroid
Eklira®	211%	£2,932,586	Bronchodilator
ViATIM®	182%	£5,519,898	Vaccine
Cerelle®	170%	£3,501,828	Contraceptive
Seebri®	161%	£4,377,079	Bronchodilator
GlucoLab® reagent strips	149%	£1,662,549	Diabetes

<sup>10</sup>Only branded products that had a total NIC of >£1 million in 2014 and were prescribed from 1 January 2013 to 31 December 2014 were included

# Diabetes

Diabetes mellitus is a chronic metabolic disorder characterised by high levels of blood glucose caused by defects in insulin secretion and/or action. In the absence of a curative treatment, clinical guidelines in the UK currently recommend both pharmacological and behavioural interventions, including dietary advice, to manage the disease<sup>17,18</sup>. Pharmacological interventions predominantly consist of pharmacotherapies, such as insulin, to control blood glucose levels. However, current guidelines also recommend that healthcare professionals screen for and, when needed, prescribe pharmacotherapies to manage associated medical conditions. These associated conditions include increased blood pressure, dangerous blood lipid levels, increased risk of cardiovascular events, kidney damage and eye or nerve damage<sup>17,18</sup>. As a result, the overall need for pharmacological treatment is high in diabetic patients.

In addition to requiring ongoing daily medication, diabetes poses a large economic burden on the NHS due to its high prevalence. This is demonstrated by data from the HSCIC, which (based on data from clinical registers) estimated that 4% of patients over 17 years of age in England had a diagnosis of diabetes between 2013-2014<sup>19</sup>.

## Prescription trends

### Macro trends

The total NIC associated with English and Welsh general practice prescriptions for diabetes drugs amounted to £902 million in the calendar year 2014. Interestingly, the number of prescriptions, and associated total NIC, for diabetes drugs in English and Welsh general practices increased by 5% and 7%, respectively, between 2013 and 2014 (Figure 3). This might have been driven by an increased diabetes prevalence, with previous publications suggesting an increase in the incidence of type 2 diabetes in the UK between 1991 and 2010<sup>20</sup> and prospective models suggesting that the prevalence of diabetes in England will continue increasing until 2030<sup>21</sup>.

Nonetheless, even though the increase in total NIC for diabetes drugs between 2013 and 2014 exceeded UK inflation for 2014 (0.5%)<sup>9</sup>, it is important to note the long-term cost-savings that can be achieved by good management of diabetes early on in the disease when discussing spend on diabetes products. As noted by nurse consultant in diabetes Debbie Hicks (Enfield CCG), the cost of prescribing diabetes drugs to ensure effective management early in the disease is, to some extent, off-set by the reduced risk of costly long-term complications. Hence, high up-front spending on diabetes drugs can be financially beneficial for the NHS in the long-term.

Segmenting the data by geographical region showed that the largest proportion of total NIC in 2014 was associated with prescriptions issued in the Midlands and East of England, which accounted for approximately one-third (30%) of the total NIC associated with prescriptions for diabetes drugs issued in English and Welsh general practices. Conversely, the lowest total NIC was observed in Wales (6% of total NIC) (Figure 4A).

However, this ranking changed when calculating NIC per registered patient. Using this analysis Wales, which had the lowest total NIC, was at the top of the list with a NIC of £17.76 per registered patient (Figure 4B). Meanwhile, London was at the bottom of the ranking with a NIC of only £13.24 per registered patient. These regional differences in NIC per registered patient associated with prescriptions for diabetes drugs are somewhat in line with prevalence data from the HSCIC showing lower prevalence of diabetes (<4%) in London CCGs and higher prevalence (≥8%) across the North, Midlands and two CCGs in northwest London<sup>19</sup>. Another reason for the lower NIC per registered patient in London versus other regions is likely to be the higher level of generic prescribing observed in London

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Within diabetes care the amount spent on medications is by far smaller than that which is spent on treating long-term complications. It is important to treat diabetes effectively, including prescribing medications, in the early years to reduce the risk of long-term complications and consequently reduce the cost of treating those complications for the NHS.”

**Debbie Hicks, nurse consultant in diabetes (Enfield CCG)**

practices. In 2014, three-quarters (75%) of all prescriptions issued for diabetes drugs by London-based general practices stated the active ingredient rather than brand name, compared to between 68% and 71% in other regions (Figure 4B).

Figure 4A. Regional distribution of total NIC for diabetes drugs

● North of England  
● Midlands and East of England  
● South of England  
● London  
● Wales

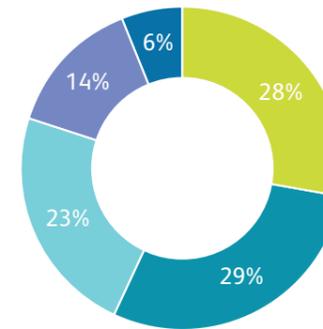
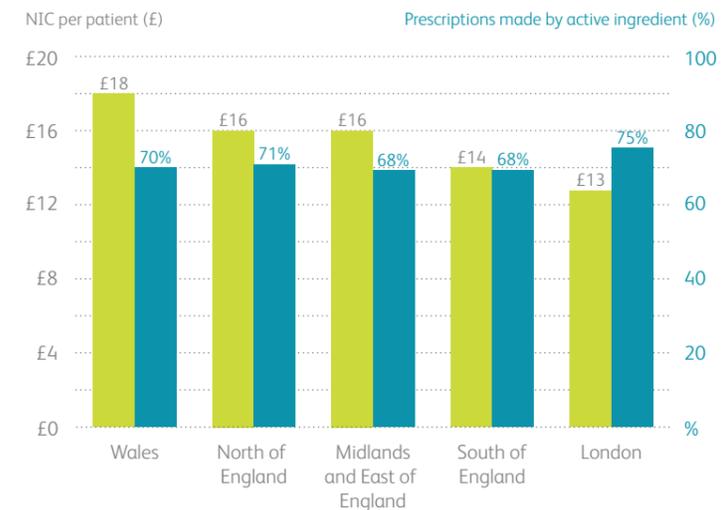


Figure 4B. NIC per registered patient and percentage of prescriptions made by active ingredient

● NIC per registered patient  
● Percentage of prescriptions made by active ingredient



Segmenting the data by CCG or local health board indicated regional differences in diabetes prescribing activity. The CCG with the highest total NIC was Birmingham CrossCity CCG (>£14 million) while the lowest total NIC was observed in Corby CCG (£916,000). Conversely, the highest and lowest NIC per registered patient were observed in Lincolnshire East CCG (£22.52 per registered patient) and Richmond CCG (£8.10 per registered patient).

### Brand trends

A separate analysis, focussing on the prescriptions and associated total NIC for branded diabetes drugs was conducted. The highest total NIC for a branded diabetes drug in 2014 was for NovoNordisk's insulin NovoRapid<sup>®</sup> (Figure 5A), which was also at the top of the league when ranking branded products according to the total number of prescriptions issued for them over the same year (Figure 5B). Interestingly, the second highest total NIC, and third highest number of prescriptions was for Sanofi-Aventis' long-acting insulin Lantus<sup>®</sup>. With Lantus<sup>®</sup> due to go off-patent in 2015, there is reason to suspect a highly dynamic diabetes market in 2015/2016.

### Recent and upcoming patent expiries

Humalog <sup>®</sup>	2014	Eli Lilly
Lantus <sup>®</sup>	2015	Sanofi-Aventis

Figure 5A. Branded diabetes drugs with the highest total NIC

● 2014  
● 2013

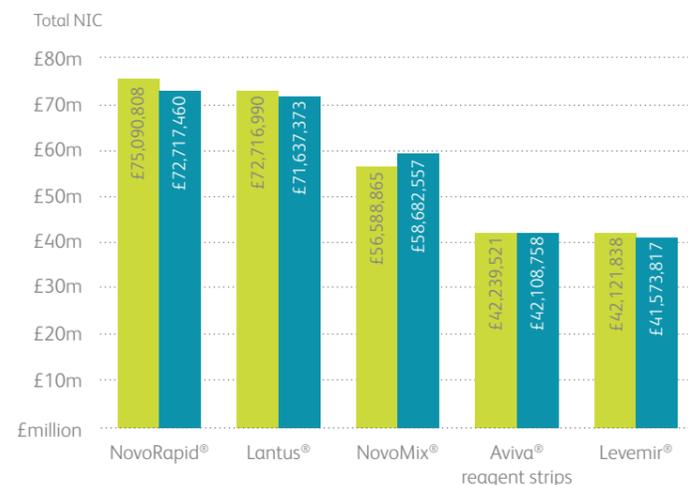
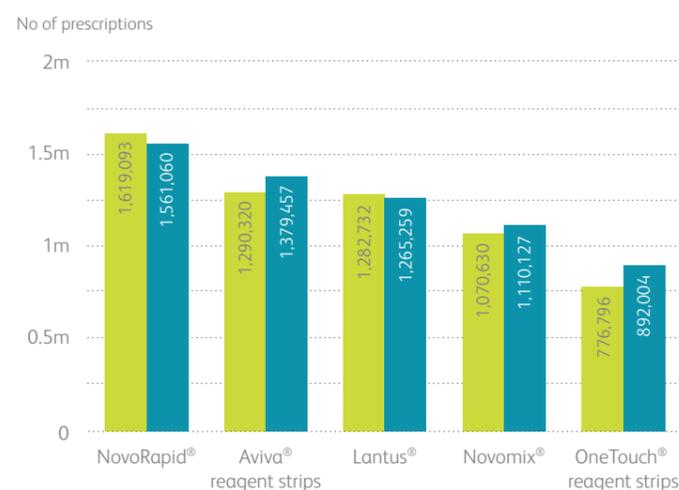


Figure 5B. Most prescribed branded diabetes drugs

● 2014  
● 2013



# Respiratory corticosteroids

Respiratory diseases are common in the UK. In 2010, the lifetime prevalence of clinically diagnosed asthma in England was estimated at 16% in men and 17% in women while the same estimates for chronic obstructive pulmonary disease (COPD), chronic bronchitis or emphysema were 4% in men and 5% in women<sup>22</sup>. Corticosteroids are indicated for respiratory disease, as well as other inflammatory conditions such as ear, eye, throat, skin and gastrointestinal disorders<sup>23</sup>. When treating respiratory disease, corticosteroids are predominantly used to either offer symptomatic relief or prevent exacerbations in asthma and COPD<sup>24,25</sup>. In asthma, corticosteroids and combination inhalers are recommended as an add-on therapy for managing symptoms as well as being the first-choice preventer drug<sup>24</sup>. Similarly, they are recommended in COPD to reduce the frequency of exacerbations<sup>25</sup>.

In line with clinical guidelines, surveying of patients has shown that corticosteroids are used in a high proportion of both asthma and COPD patients. Approximately three-quarters (75% of males and 76% of females) of asthmatic patients in England reported using an inhaler on a daily basis in 2010, and just under one-half of asthma patients (40% of men and 41% of women) reported this to be a steroid inhaler. Of asthma patients using a daily inhaler a further 2% of male and 5% of female patients reported taking daily steroid tablets<sup>22</sup>. Similarly, a high proportion of English COPD patients (approximately 47% of males and 43% of females) reported using daily inhalers in 2010. Of these patients, 29% of men and 26% of women reported having used a corticosteroid inhaler on a daily basis, 36% of men and 34% women reported having used corticosteroid inhalers at least once in the last 12 months, and 4% of men and 5% of women reported having used steroid tablets on a daily basis<sup>22</sup>.

## Prescription trends

### Macro trends

In 2014, more than 21 million prescriptions for respiratory corticosteroid products were issued in English and Welsh general practices, which amounted to a total NIC of over £754 million. This represented a 4% increase in the number of prescriptions issued compared to 2013 (Figure 3). It is, however, uncertain to what extent this reflects an increased clinical need versus a change in prescribing behaviour. As noted by Dr Kevin Gruffydd-Jones, Royal College of General Practitioner (RCGP) respiratory clinical lead: "COPD inhaled corticosteroids in combination with long-acting  $\beta$ -agonists can reduce exacerbations and hospital admissions, but there is evidence of over-prescribing of inhaled corticosteroids according to NICE guidelines."

Interestingly, the total NIC associated with prescriptions for respiratory corticosteroids rose by 3% when comparing 2013 and 2014. As UK inflation in the year to December 2014 was 0.5%<sup>9</sup>, these figures indicate an increase in the real cost of prescriptions for respiratory corticosteroids to the NHS in 2014.

Of the prescriptions for corticosteroid products issued in 2014, only 37% were issued for generic products, which accounted for just under one-half (48%) of the total NIC associated with prescriptions for respiratory corticosteroids in the same year. While the level of generic prescribing was consistent with that observed in 2013 (38% of prescriptions accounting for 49% of total NIC), it was far lower than the national average when taking all therapy areas into consideration (82% of prescriptions made for generic products in both 2014 and 2013). This may reflect the importance of patients' familiarity with an inhaler for ensuring proper use of the device, something that guidelines for NHS professionals recognise as a reason for considering brand name rather than generic prescribing<sup>8</sup>. This interpretation was supported by Dr Gruffydd-Jones who stated that "prescribers are strongly advised to prescribe

“

There has been an explosion of new inhaled respiratory products in the market. The role of inhaled corticosteroids as the cornerstone of asthma management is firmly established, but, in the absence of updated NICE guidelines, the positioning of these new products remains a matter of debate in COPD.”

**Dr Kevin Gruffydd-Jones, RCGP respiratory clinical lead**

inhaled corticosteroids by brand name due to varying clinical effect of different brands at apparently identical generic inhaled corticosteroid dose.”

Regionally, the greatest proportion of the total NIC associated with respiratory corticosteroids in 2014 was observed in the North of England (32% of total NIC) while the lowest proportion was observed in Wales (7% of total NIC) (Figure 6A). Conversely, when calculating NIC per registered patient, Wales was found to have the highest relative NIC (£17.87 per registered patient) while London had the lowest (£7.84 per registered patient) (Figure 6B). Interestingly, these differences are unlikely to be driven by differences in generic prescribing, which was only marginally higher in London than in Wales (40% versus 38%). Instead, they may represent a greater number of patients requiring corticosteroids in Wales than in London. This interpretation is supported by the higher number of prescriptions per registered patient recorded in Wales compared with London (0.53 versus 0.21).

Figure 6A. Regional distribution of total NIC for respiratory corticosteroids

- North of England
- Midlands and East of England
- South of England
- London
- Wales

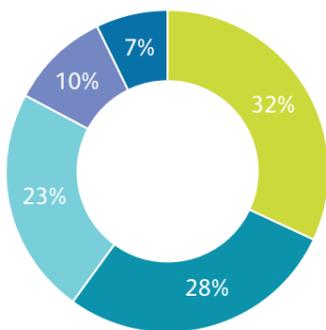
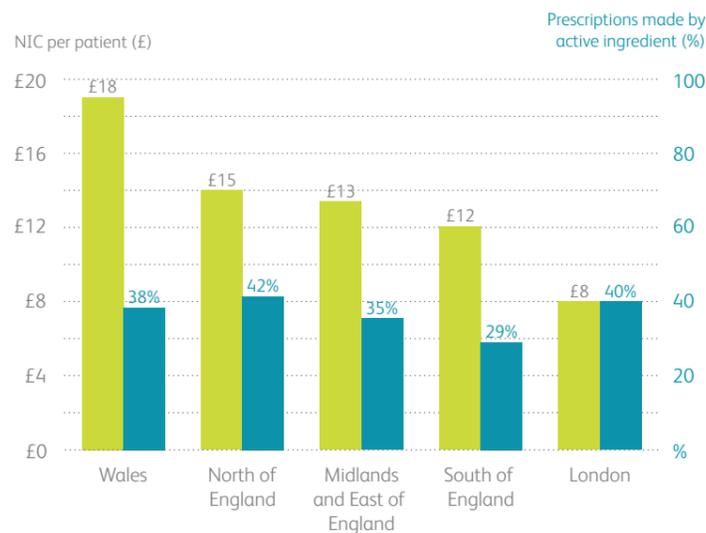


Figure 6B. NIC per registered patient and percentage of prescriptions made by active ingredient

- NIC per registered patient
- Percentage of prescriptions made by active ingredient



**Brand trends**

A separate analysis, focussing on the number of prescriptions, and associated total NIC, for branded respiratory corticosteroids was conducted. This analysis revealed that three of the top five products in both rankings were combined corticosteroid/ $\beta$ 2-agonist preparations (Seretide<sup>®</sup>, Symbicort<sup>®</sup> and Fostair<sup>®</sup>), while the remaining two products contained the corticosteroid beclometasone (Clenil Modulite<sup>®</sup> and Qvar<sup>®</sup>) (Figure 7A-B).

When ranking products by total NIC, Seretide<sup>®</sup> was the top-performing respiratory corticosteroid. Conversely, the highest number of prescriptions was issued for Clenil Modulite<sup>®</sup>. However, with one generic form of Seretide<sup>®</sup> already launched in Europe and a second one recently finishing its phase III trial<sup>12,13</sup>, and the DuoResp Spiromax<sup>®</sup> alternative to Symbicort<sup>®</sup> granted European marketing authorisation in April 2014<sup>26</sup>, these rankings may change considerably over 2015/2016. Several new respiratory corticosteroids receiving market authorisation in 2014 and the absence of recently updated NICE prescribing guidance are likely to contribute further to a highly dynamic respiratory market.

Figure 7A. Branded respiratory corticosteroids with the highest total NIC

- 2014
- 2013

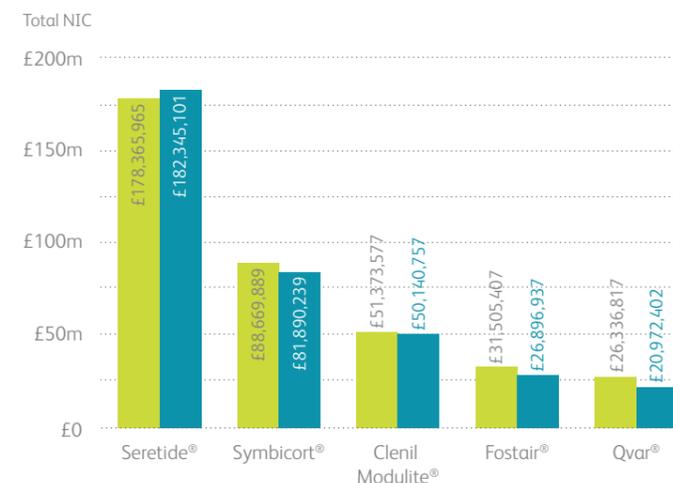
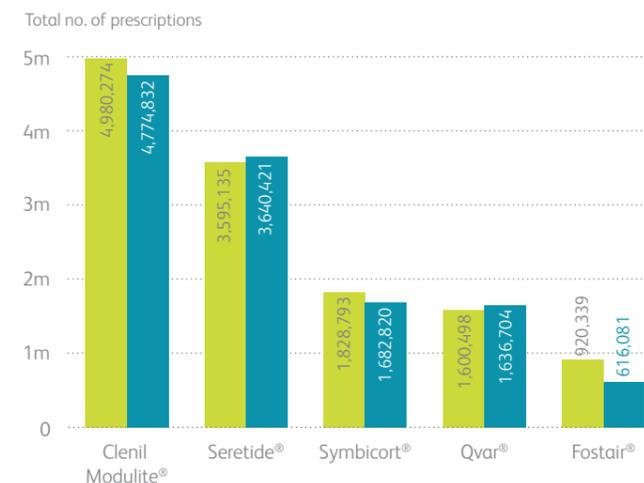


Figure 7B. Most prescribed branded respiratory corticosteroids

- 2014
- 2013



**Recent product launches and patent expiries:**

Product	Active ingredients	Date of event (body)	Manufacturer
Patent rejection			
Symbicort <sup>®27</sup>	Budesonide and formoterol	Sept 2014 (patent rejected, UK)	Astra Zeneca
EMA or MHRA market authorisation			
Relvar Ellipta <sup>®28</sup>	Fluticasone and vilanterol	November 2013 (EMA)	GSK
Fostair NEXThaler <sup>®29</sup>	Beclometasone and formoterol	January 2014 (MHRA)	Chiesi
DuoResp <sup>®26</sup>	Formoterol and budesonide	April 2014 (EMA)	Teva

# Analgesics

The analgesics section in the BNF includes antimigraine drugs, opioid analgesics, non-opioid analgesics and compound analgesics preparations and analgesics for neuropathic pain<sup>30</sup>.

Clinical guidelines for the pharmacological management of migraine currently recommend both acute treatments (typically a combination therapy with either an oral triptan and a non-steroidal anti-inflammatory drug (NSAID) or an oral triptan and paracetamol) and prophylactic treatment (typically topiramate or propranolol)<sup>31</sup>. Meanwhile, for neuropathic pain, healthcare professionals are recommended to offer patients amitriptyline, duloxetine, gabapentin or pregabalin as a first-line treatment<sup>32</sup>.

Conversely, there is a shortage of NICE guidelines for the management of many other forms of pain for which opioid or non-opioid analgesics included in the BNF analgesics section are prescribed. Instead, while originally developed for cancer, several CCGs refer to the World Health Organisation's (WHO) pain relief ladder, or a modification of this, when deciding which analgesic to prescribe<sup>33-35</sup>. In line with the original WHO ladder, NICE advises that treatment should start with a non-opioid product, and only progress to opioids should the pain persist or increase<sup>36</sup>. Based on current evidence, it has been recommended that the initial choice of non-opioid product (for mild to moderate pain) should be paracetamol, followed by ibuprofen if the response is inadequate and then moving to a combination of ibuprofen and paracetamol, a combination of paracetamol and a NSAID and finally a weak opioid<sup>36</sup>. Strong opioids (buprenorphine, fentanyl, morphine and oxycodone<sup>37</sup>) should be considered in patients who have reached the third level of the WHO pain ladder<sup>37</sup>, i.e. when the pain is persisting or increasing despite treatment with opioids for mild to moderate pain<sup>33</sup>.

## Prescription trends

### Macro trends

In 2014, nearly 74 million prescriptions for analgesics were made in English and Welsh general practices, amounting to a total NIC of £586 million. This represented an increase in both the number of prescriptions issued and associated total NIC (+3% and +4%, respectively; Figure 3). The vast majority (89%) of analgesics prescriptions in 2014 were written for an active ingredient rather than a branded product. These generic prescriptions corresponded to 79% of the total NIC associated with analgesics prescriptions in the same year. A similar trend was observed in 2013, when 90% of prescriptions, and 80% of the associated total NIC, were issued by active ingredient.

Regionally, the largest proportion of total NIC in 2014 was observed in the North of England (33% of total NIC) while the lowest was observed in London (8% of total NIC) (Figure 8A). Conversely, when showing NIC per registered patient, Wales was found to have the highest relative NIC. Notably, at £17.12 per registered patient, the NIC per registered patient in Wales was over three times as high as that in London (£4.91 per registered patient) where the lowest NIC per registered patient was observed (Figure 8B). This regional difference in NIC per registered patient may be related to levels of generic prescribing. In London, generic analgesics were prescribed in 96% of cases, compared with 82% in Wales.

“

Given the risk of addiction and, indeed, overdose, the rise in the number of prescriptions for opioid painkillers is of concern. While pain needs to be appropriately managed by use of such medications, it is essential that patients are made aware of the risks of dependency and care is taken by doctors to avoid overprescription.”

**Nick Barton, chief executive of Action on Addiction**

Figure 8A. Regional distribution of total NIC for analgesics

● North of England  
● Midlands and East of England  
● South of England  
● London  
● Wales

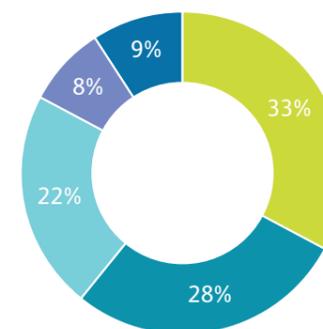
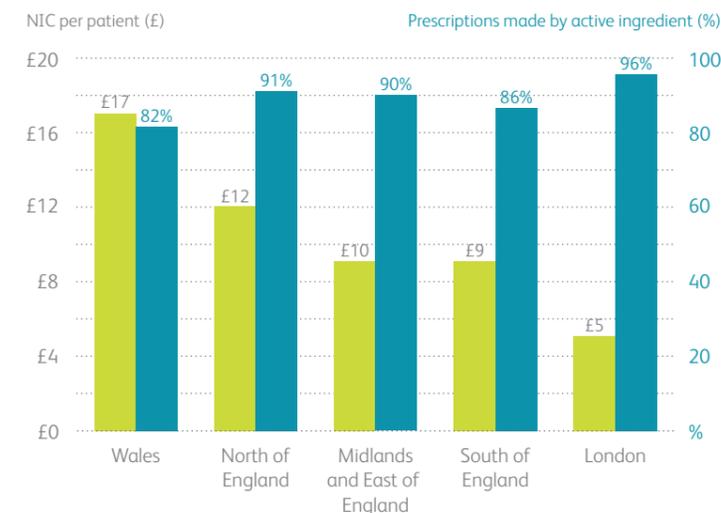


Figure 8B. NIC per registered patient and percentage of prescriptions made by active ingredient

● NIC per registered patient  
● Percentage of prescriptions made by active ingredient



Of the four sub-categories included in the BNF analgesia category, the highest total NIC in 2014 was associated with prescriptions for opioid analgesics (55% of total NIC), followed by non-opioid analgesics and compound analgesics (35% of total NIC), anti-migraine drugs (7% of total NIC) and, lastly, products for neuropathic pain (3% of total NIC) (Figure 9A).

Focussing the analysis exclusively on opioid analgesics demonstrated that over one-half (61%) of all opioid prescriptions in 2014 were issued for weak opioids while the remainder were issued for strong opioids (Figure 9B). Conversely, due to differences in the cost of individual products, a different trend was observed when analysing the total NIC associated with opioid prescriptions. Specifically, prescriptions for weak opioids accounted for only one-quarter (26%) of total NIC, while the majority of total NIC was attributed to prescriptions for strong opioids prescribed for moderate to severe pain (Figure 9C).

Interestingly, a comparison between 2013 and 2014 data showed a 5% increase in the number of prescriptions issued for opioid analgesics between the two years. While the increase in total NIC was similar for both types of opioids (+5%) the increase in number of prescriptions was far higher for strong (+10%) than weak (+2%) opioid analgesics. While the current data are insufficient to determine the cause for the increased prescribing of strong opioids this trend may be of concern considering the risk of addiction associated with use of strong opioids.

Figure 9A. Percentage of analgesics attributed to each treatment type

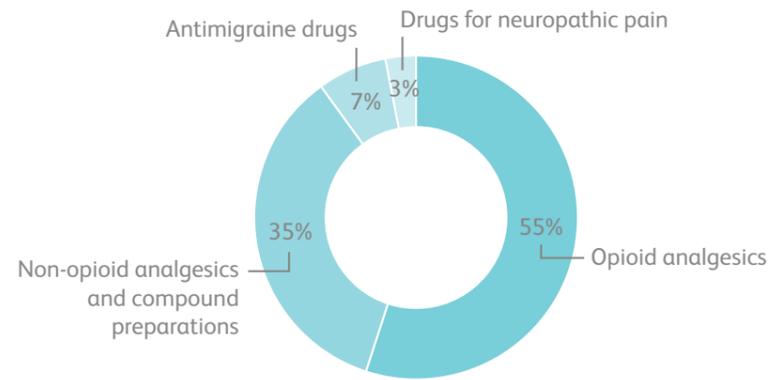


Figure 9B. Percentage of prescriptions for opioid analgesics attributed to each opioid

● Strong opioids  
● Weak opioids

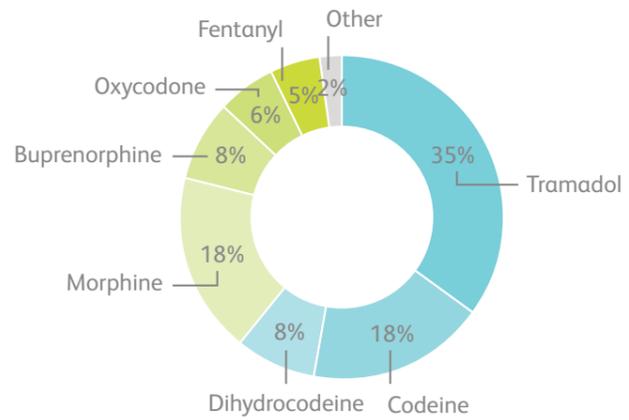
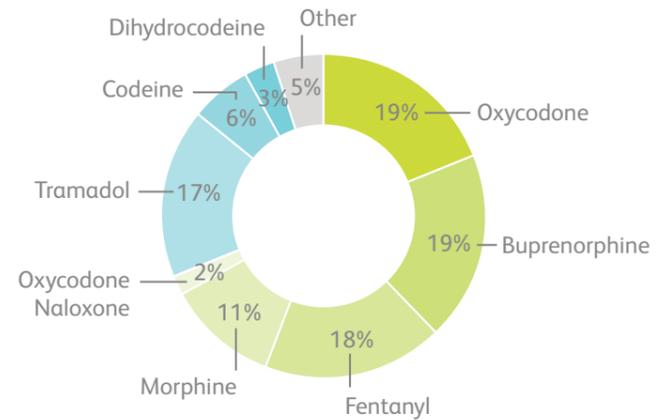


Figure 9C. Percentage of total NIC for opioid analgesic prescriptions attributed to each opioid

● Strong opioids  
● Weak opioids



'Other' opioid drugs include those that account for less than 2% of the total NIC (B) or number of prescriptions (C). Drugs in the 'other' categories include diamorphine, tapentadol, dipipanone, pethidine, meptazinol, methadone, hydromorphone, pentazocine, dextromoramide, papaveretum, and opium (B and C) and oxycodone/naloxone (B only)

**Brand trends**

A separate analysis, focussing on the prescriptions, and associated total NIC, for branded analgesics was conducted. Interestingly, the branded analgesics with the highest spending as well as the highest number of prescriptions were all opioid analgesics (Figure 10A-B).

In 2014, the highest total NIC associated with analgesics prescriptions was for BuTrans® (buprenaline), which was also the fifth most prescribed analgesic. Conversely, Zapain® which was the most prescribed branded analgesic with a growth from 1.6 million prescriptions in 2013 to 2.2 million in 2014, did not feature in the top brands when ranking products by the total NIC associated their prescriptions.

Figure 10A. Branded analgesics with the highest total NIC

● 2014  
● 2013

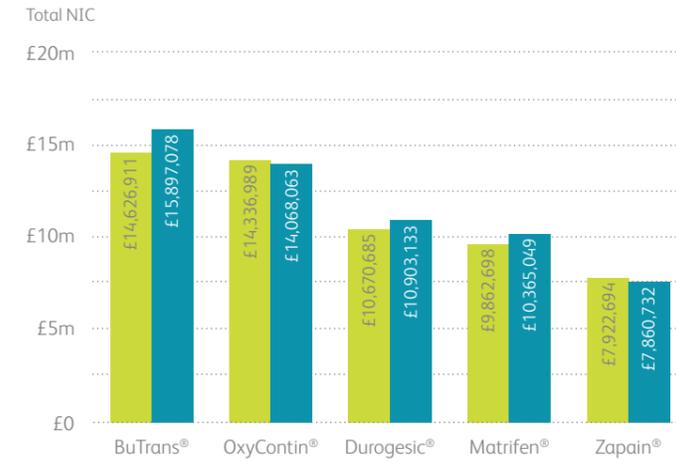
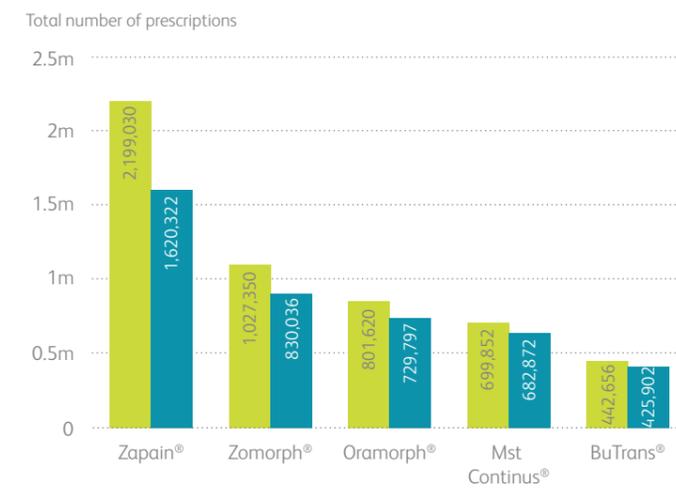


Figure 10B. Most prescribed branded analgesics

● 2014  
● 2013



# Antiepileptics

Epilepsy is a neurological disorder in which patients experience recurring seizures. It has been estimated that the prevalence of epilepsy in the UK is 5-10 cases per 1,000, while UK incidence is believed to be 50 per 100,000 per year<sup>38</sup>.

While not curative, it has been estimated that available pharmacological treatments can satisfactorily control seizures in up to two-thirds of patients with active epilepsy (defined as 'a patient who has had at least one epileptic seizure in the previous five years, regardless of anti-epileptic treatment'<sup>39</sup>)<sup>38</sup>. However, as noted by Professor Ley Sander, medical director at Epilepsy Society, it can take a long time to achieve satisfactory seizure control in some patients.

## Prescription trends

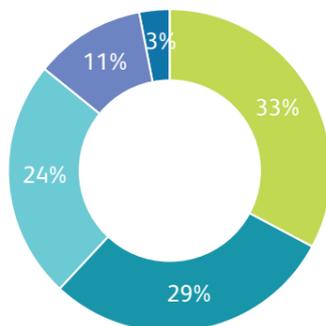
### Macro trends

In 2014, the total NIC associated with prescriptions for antiepileptic drugs prescribed in English and Welsh general practices amounted to £498 million. Segmenting the data by region showed that the highest total NIC as well as the highest NIC per registered patient was observed in the North of England (33% of total NIC and £10.25 per registered patient) while Wales ranked at the bottom of both scales (3% of total NIC and £4.98 per registered patient; Figure 11A-B). Surprisingly, considering their low NIC per registered patient, Wales had lower levels of generic prescribing than other regions (73% of all prescriptions). Instead, the highest level of generic prescribing was observed in London (87% of all prescriptions) (Figure 11B).

Comparing 2013 and 2014 data demonstrated an 11% increase in both the prescriptions for, and total NIC associated with, antiepileptic drugs (Figure 3). This strong increase in both prescriptions and total NIC may indicate improved provision of antiepileptic drugs, as suggested by research conducted by the Royal College of Paediatrics and Child Health. A UK-wide audit conducted by this organisation between February and May 2011 found considerable regional variation in the extent to which the provided care succeeded in meeting NICE and SIGN standards, with approximately one-third of units having inadequate first clinical assessments<sup>40</sup>. However, a follow-up audit conducted by the same group between March 2013 and June 2014 demonstrated improvements in the care provided relative to the initial audit<sup>41</sup>. The increase in the number in prescriptions of antiepileptic drugs may thus reflect a positive trend of improved epilepsy care in England and Wales. In addition to improving patient wellbeing, an improved quality of epilepsy care is also likely to have an indirect positive impact on NHS spending. As noted by Professor Sander "lack of seizure control is associated with increased healthcare costs, such as increased likelihood of presenting at A&E or being admitted to hospital as an unplanned admission". Hence, good disease management and seizure control are likely to help contain overall costs.

Figure 11A. Regional distribution of total NIC for antiepileptics

● North of England  
● Midlands and East of England  
● South of England  
● London  
● Wales



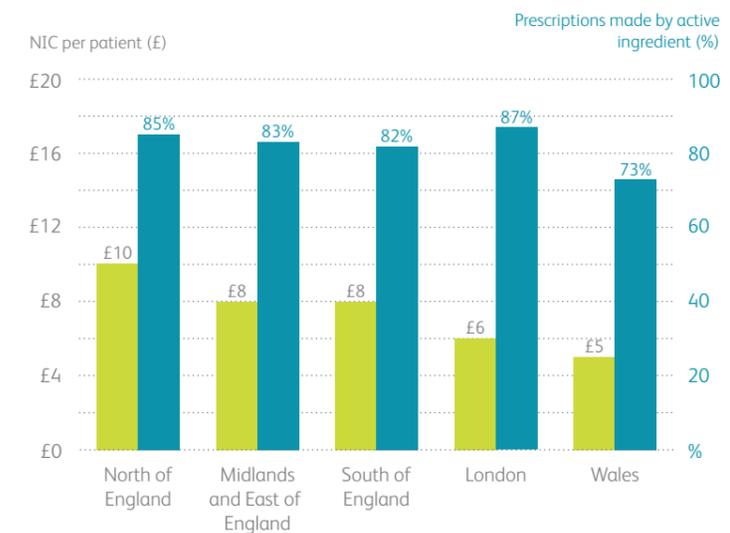
“

Following a challenge by epilepsy charities, the MHRA agreed to monitor use of the guidance and undertake a review after 12 months. During this time Epilepsy Society has urged people with epilepsy to report, under the yellow card scheme, any adverse reactions, such as a breakthrough seizure, experienced as a result of switching.”

**Professor Ley Sander,**  
**Epilepsy Society**

Figure 11B. NIC per registered patient and percentage of prescriptions made by active ingredient

● NIC per registered patient  
● Percentage of prescriptions made by active ingredient



Overall, 83% of prescriptions from English and Welsh general practices were written for an active ingredient rather than a branded product in 2014, accounting for 85% of total NIC. These figures were similar in 2013 (82% of prescriptions and 84% of total NIC). However, the level of generic prescribing differed widely between types of antiepileptics. This is likely to be due to antiepileptic prescribing guidance from the MHRA.

Due to concerns that demonstrating bioequivalence may not be sufficient to exclude a clinically important non-equivalence for certain antiepileptics and that the consequences of therapeutic failure occurring as a consequence of such non-equivalence can be very severe in epilepsy, the MHRA has suggested that efforts be made to maintain continuity of supply from the same manufacturer for patients on certain antiepileptics. To aid prescribers, antiepileptic drugs have therefore been divided into three main categories (Table 6). The MHRA recommends that patients who are treated with drugs in category 1 be maintained on the same manufacturer's product. The decision to switch between category 2 drugs is left to clinical judgement and consultation with the patient and/or carer, while drugs within category 3 can be prescribed generically and without specifying a specific manufacturer's product<sup>42</sup>. This guidance was based on the recommendations of an expert group set up by the Commission of Human Medicines (CHM) that reviewed published studies on the potential harm arising from generic substitution of antiepileptics. However, due to ethical restrictions, the majority of the reviewed studies were observational and therefore had lower validity than, for example, a randomised controlled trial<sup>42</sup>.

Medical charities have suggested that the guidance has not recognised the full consequences of switching patients that are falling into categories 2 and 3. As noted by Professor Ley Sander from Epilepsy Society: "When developing the guidance, the MHRA didn't take into account the non-pharmacological impacts of switching between different versions of anti-epileptic drugs, such as psychological impacts of having different medicine, anxiety, confusion, memory difficulties and implications for medicine adherence."

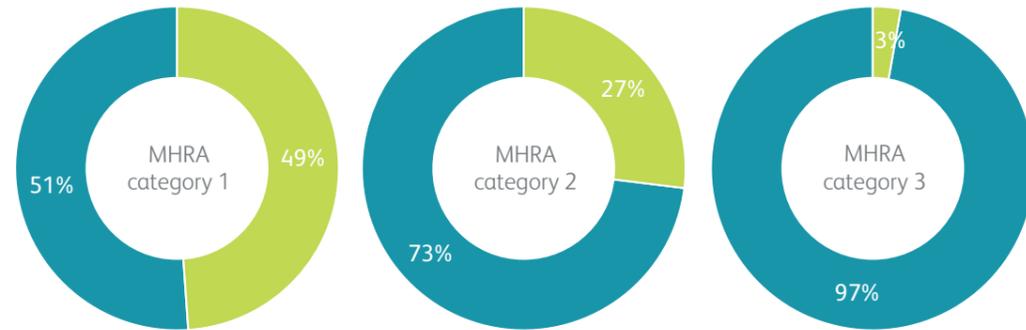
Table 6. MHRA antiepileptic treatment categories<sup>42</sup>

Category 1	Category 2	Category 3
Carbamazepine	Eslicarbazepine	Ethosuximide
Phenobarbital	Clobazam	Gabapentin
Phenytoin	Clonazepam	Lacosamide
Primidone	Lamotrigine	Levetiracetam
	Oxcarbazepine	Pregabalin
	Perampanel	Tiagabine
	Retigabine	Vigabatrin
	Rufinamide	
	Topiramate	
	Sodium valproate	
	Zonisamide	

Re-analysing the generic prescribing data according to the MHRA drug categorisation confirmed that branded prescribing was more common for drugs falling into the MHRA category 1 (49% of prescriptions issued for branded products) than MHRA categories 2 (27% of prescriptions issued for branded products) and 3 (3% of prescriptions issued for branded products) (Figure 12). This prescribing behaviour appears to be in line with current MHRA guidance. However, switching to generic products may sometimes occur unintentionally. As explained by Professor Sander: "GPs' prescribing habits may inadvertently contribute to switching. For example GPs may not be aware when a patent ends. If the generic name has habitually been used during the patent period and continues to be used, the possibility of switching at point of dispensing occurs without intention."

Figure 12. Percentage of antiepileptic prescriptions issued for branded products versus active ingredient

● Branded  
● Active ingredient



**Brand trends**

A separate analysis, focussing on the prescriptions for, and total NIC associated with, branded antiepileptics was conducted. The same branded products featured in the top five of both rankings, albeit with a slight difference in ranking order. Notably, the top-performing branded products did not only come from the MHRA category 1 (Tegretol®, carbamazepine) but also MHRA categories 2 (Epilim®, sodium valproate; Lamictal®, lamotrigine; Topamax®, topiramate) and 3 (Keppra®, levetiracetam), where MHRA guidance allows for greater flexibility with regard to switching patients to products supplied by different manufacturers or issuing prescriptions by active ingredient rather than branded product<sup>42</sup>.

The top-performing branded product, both in terms of total NIC and number of prescriptions, was Epilim®, with 1,602,367 prescriptions accounting for a total NIC over £24 million (Figure 13A-B).

Interestingly, when discussing branded prescribing, it is again noted that charities have challenged the MHRA guidance regarding switching of patients on antiepileptics in the MHRA categories 2 and 3. As a result, the level of adverse events arising following such switching is currently being monitored, and depending on the final data, it is possible that MHRA prescribing guidance and/or healthcare professionals' prescribing behaviour may change in the future to further favour branded prescribing.

Figure 13A. Branded antiepileptics with the highest total NIC

● 2014  
● 2013

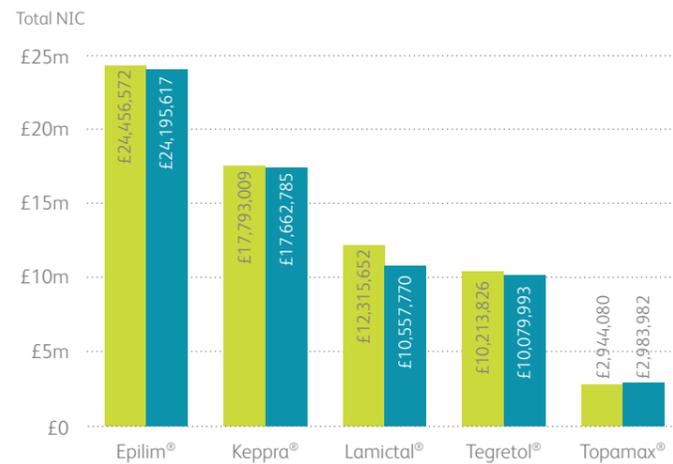
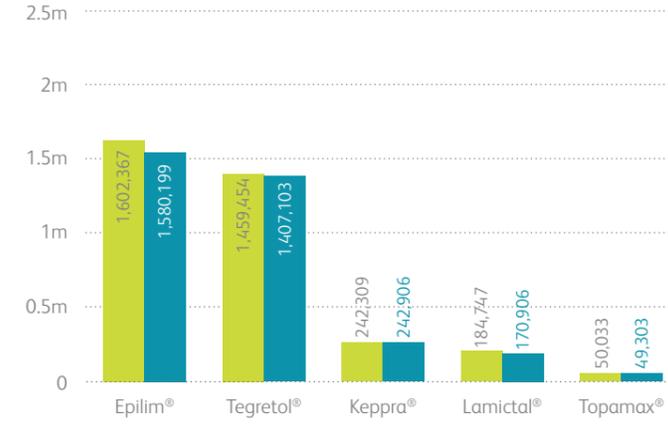


Figure 13B. Most prescribed branded antiepileptics

● 2014  
● 2013



# Oral nutrition

The current section describes data for products falling into the BNF 'Oral nutrition' section, a category incorporating both foods for special diets and enteral nutrition products. Foods for special diets include products developed for patients who cannot tolerate or metabolise certain constituents, while enteral nutrition products are predominantly intended for severely ill patients at risk of malnutrition<sup>43,44</sup>.

The demand for special diets in the UK is difficult to estimate as there is a shortage of high quality prevalence studies<sup>45</sup>. However, a recent systematic review based on 50 studies (42 of which were included in the accompanying meta-analysis) has estimated that the self-reported life-time allergy to common foods (cow's milk, egg, wheat, soy, peanut, tree nuts, fish, and shellfish) in Europe range from 0.1% to 6.0%<sup>46</sup>, suggesting a large number of people in the UK require special diets.

More data are available on the prevalence of malnutrition for which enteral nutrition products are prescribed. Data collected in 2013 suggest that approximately 2% of men and women aged 16 years and above in England were malnourished, as defined by having a body mass index (BMI) under 18.5<sup>47</sup>. Additional data relating to malnutrition show that 14,810 admissions in which malnutrition was a primary or secondary diagnosis were made in England between 2013 and 2014<sup>48</sup>, demonstrating the severity of the condition and the burden it places on the health services.

There are currently no national guidelines for prescribing specialist foods for people with food intolerances, which has sometimes led to regional variations in patient access to such products. This is demonstrated in the case of gluten-free foods. While the NHS historically offered coeliac patients a set number of gluten-free foods on prescription, increasing restrictions due to budgetary pressures led 20 primary care trusts (now CCGs) to restrict prescriptions for gluten-free foods between July 2011 and January 2013<sup>49</sup>.

Conversely, current clinical guidance states that oral, enteral or parenteral nutrition support should be considered in people who are either malnourished or at risk of malnourishment<sup>50</sup>. Thanks to reductions in GP visits, outpatient attendances, hospital admissions and length of inpatient stay, it has been estimated that offering nutrition support to such people can lead to an estimated annual net saving of £28,000 in a CCG with an adult population of 134,000<sup>51</sup>.

## Prescription trends

### Macro trends

In 2014, the total NIC associated with prescriptions for oral nutrition products issued in English and Welsh general practices amounted to £380 million. Interestingly, while the number of oral nutrition prescriptions decreased by 2% compared with 2013, the total NIC associated with these prescriptions increased by 7% (Figure 3). With the increase in total NIC associated with prescriptions for oral nutrition products being above UK inflation for 2014 (0.5%)<sup>9</sup>, the data thus suggest that, despite a reduction in the total number of prescriptions for nutrition products, there was an increase in the real cost of oral nutrition prescriptions to the NHS.

Further data analysis demonstrated that more than one-half of the total NIC was observed in the North of England (30% of total NIC) and in the Midlands and East of England (30% of total NIC) while the lowest total NIC was observed in Wales (6% of total NIC) (Figure 14A). Conversely, when calculating NIC per registered patient, Wales was shown to have the highest relative NIC (£7.67 per registered patient) while the lowest relative NIC was observed in London (£5.28 per registered patient) (Figure 14B).

“

[Total NIC associated with] Neocate LCP has come down which is likely to be a reflection of more appropriate prescription of amino acid based formulas as suggested by the cow's milk allergy guidelines below.”<sup>52,53</sup>

**Dr Carina Venter, senior lecturer at the University of Portsmouth and Specialist Allergy Dietitian in Isle of Wight**

Figure 14A. Regional distribution of total NIC for oral nutrition products

● North of England  
● Midlands and East of England  
● South of England  
● London  
● Wales

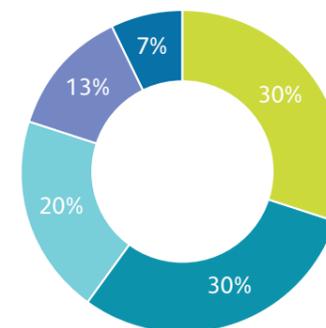


Figure 14B. NIC per registered patient



## Product category trends

The majority of 2014 prescriptions and associated total NIC was attributed to prescriptions for enteral products (64% of prescriptions and 69% of total NIC). However, comparing 2013 and 2014 data showed that the largest percentage increase in total NIC was observed for the 'other food for special diet preparations' category, which includes nutritional supplements and formulae for paediatric milk intolerance (12% increase in total NIC). This may be due to recent publications relating to prescribing of such products. As noted by Dr Carina Venter, senior lecturer at the University of Portsmouth and Specialist Allergy Dietitian in Isle of Wight: "A number of UK guidances have appeared over the past few years, urging the importance of early recognition and management of cow's milk allergy."

Meanwhile, the 'food for specific food intolerances' category, which includes gluten/wheat-free products, low-protein products, and products that are both gluten/wheat free and low-protein, was the only category to show stagnation or actual decrease in total NIC (-0.1% in total NIC versus a 0.2% change in number of prescriptions) between 2013 and 2014 (Figure 15A-B).

Figure 15A. Total NIC

● 2014  
● 2013

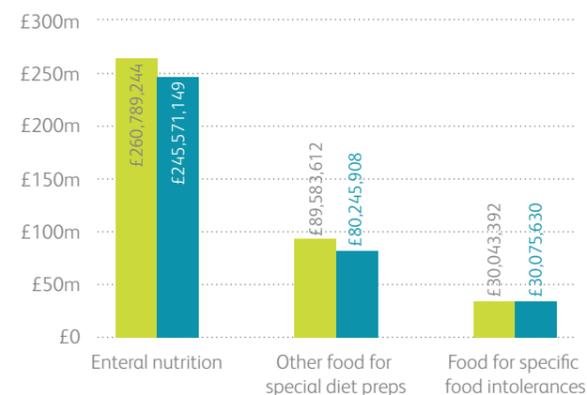
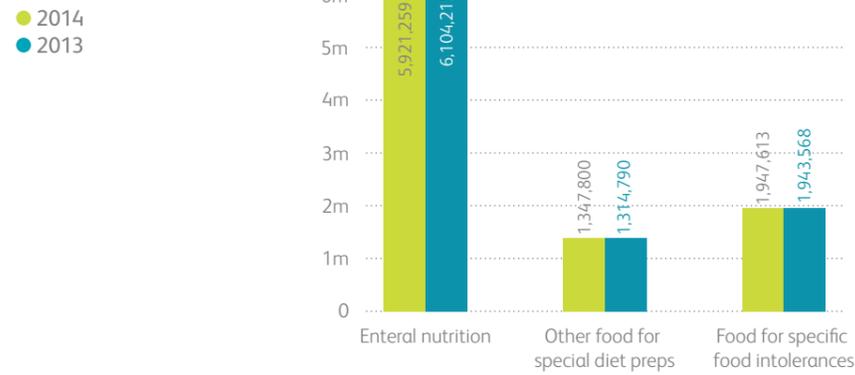


Figure 15B. Total number of prescriptions



The 'other food for special diet preps' category includes nutritional supplements and paediatric milk intolerance. 'Food for specific food intolerances' includes gluten-free, wheat-free and low-protein food products

### Brand trends

A separate analysis, focussing on the prescriptions for, and total NIC associated with, branded oral nutrition products was conducted.

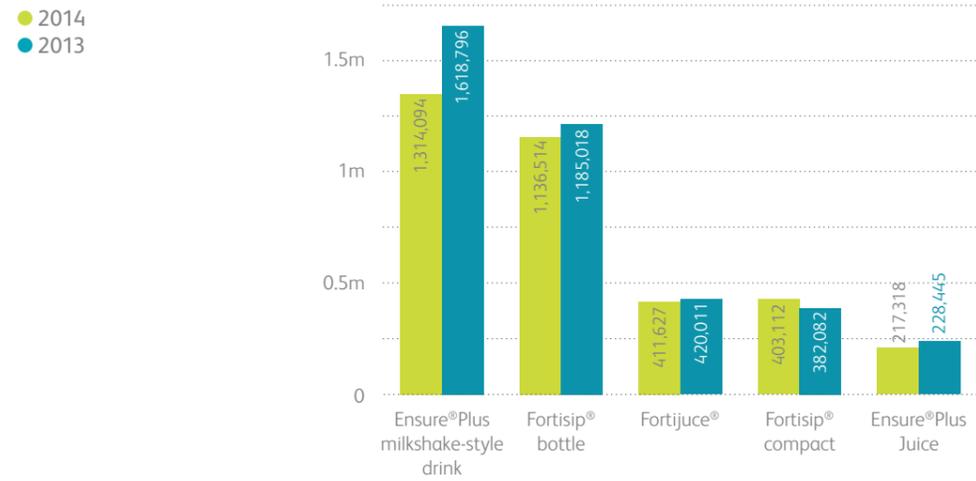
The branded oral nutrition products with the highest total NIC associated with their prescriptions in 2014 were predominantly energy supplement drinks (Figure 16A), which are prescribed for patients suffering from, or who are risk of, malnutrition. The exception was Neocate<sup>®</sup> LCP, which had the third-highest total NIC. Neocate<sup>®</sup> LCP is indicated for infants aged 0-12 months with a cow's milk allergy, multiple food protein intolerance or other indications where an amino acid-based formula is recommended. However, despite its high ranking, Neocate<sup>®</sup> LCP experienced a decrease in total NIC when comparing its performance in 2013 and 2014 (Figure 16B). Overall, Nutricia dominated the market, with its Fortisip<sup>®</sup> and Fortijuice<sup>®</sup> products taking both the first, fourth and fifth place when ranking products by total NIC.

Energy supplement drinks also ranked highly when ranking the branded oral nutrition products according to the total number of prescriptions issued in 2014. The most prescribed product was Ensure<sup>®</sup> Plus milkshake-style drink. However, although 1.3 million prescriptions were issued for the product in 2014, this actually represented a 23% decrease relative to 2013.

Figure 16A. Branded oral nutrition products with the highest NIC



Figure 16B. Most prescribed oral nutrition products

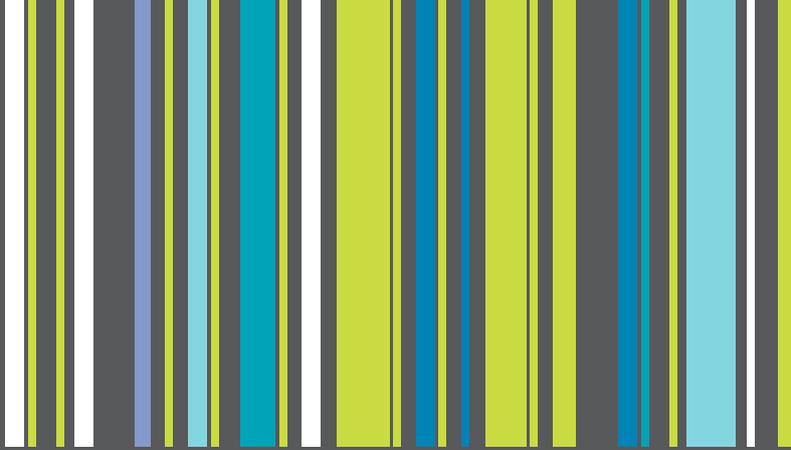


### Abbreviations

A&E	Accident and emergency
BMI	Body mass index
BNF	British National Formulary
CCG	Clinical commissioning group
CHM	Commission of Human Medicines
COPD	Chronic obstructive pulmonary disease
EMA	European Medicines Agency
GP	General practitioner
GSK	GlaxoSmithKline
HSCIC	Health and Social Care Information Centre
ILAE	International League Against Epilepsy
MHRA	Medicine and Healthcare Products Regulatory Agency
NHS	National Health Service
NIC	Net ingredient cost
NICE	National Institute for Care and Clinical Excellence
NSAID	Non-steroidal anti-inflammatory drugs
RCGP	Royal College of General Practitioners
ONS	Office for National Statistics
SIGN	Scottish Intercollegiate Guidelines Network
WHO	World Health Organization

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**Cogora**  
T +44 (0)20 7214 0500  
F +44 (0)20 7214 0501  
E [enquiries@cogora.com](mailto:enquiries@cogora.com)  
W [cogora.com](http://cogora.com)

