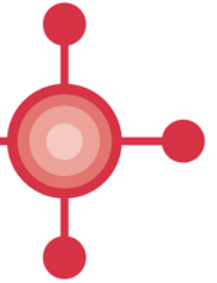


All Wales Medicines Strategy Group

Grŵp Strategaeth Meddyginiaethau Cymru Gyfan



Monitoring Usage in Wales of Medicines Appraised by NICE and AWMSG

November 2016

This report has been prepared by the Welsh Analytical Prescribing Support Unit (WAPSU), part of the All Wales Therapeutics and Toxicology Centre (AWTTC), and has subsequently been endorsed by the All Wales Medicines Strategy Group (AWMSG).

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EXECUTIVE SUMMARY

- Up to 31 March 2016, the National Institute for Health and Care Excellence (**NICE**) undertook 433 appraisals, of which 323 are currently active*.
- Between 1 April 2003 and 31 March 2016, the All Wales Medicines Strategy Group (**AWMSG**) undertook 286 appraisals: 240 resulted in a positive recommendation for a specific indication and 46 resulted in a negative recommendation for a specific indication. During the same period, AWMSG issued 258 Statements of Advice; 178 are currently active*.
- As of March 2016, 280 medicines had received a **positive recommendation** for use in Wales by AWMSG and/or NICE for one or more indications, costing NHS Wales £247 million for the financial year 2015–2016. This report will focus on the 158 medicines that have received a positive recommendation in the three years to March 2016.
- Of the medicines with a positive recommendation from AWMSG and/or NICE within the last 3 years, 11 have not been captured as having been prescribed within NHS Wales during this time.
- As of March 2016, 71 medicines had received a **negative recommendation** from AWMSG and/or NICE. Spend on the selected 22 medicines with a negative recommendation was £2.76 million for the financial year 2015–2016: an increase of 1.28% compared to 2014–2015.
- As in previous years, two medicines make up the majority of spend on medicines with a negative recommendation: bevacizumab (43%) and dasatinib (26%).
- Spend on 22 medicines with a **Statement of Advice** was £1,138,425 for the financial year 2015–2016.
- For the three years to March 2016, type 2 diabetes mellitus, respiratory disease – particularly chronic obstructive pulmonary disease (COPD), and hepatitis C were some of the most common indications for medicines receiving a positive recommendation. Further analysis has been undertaken on these areas.
- **Type 2 diabetes mellitus** was the most frequent indication for medicines appraised by AWMSG and/or NICE in the three years to March 2016. Excluding insulin glargine and insulin degludec with liraglutide, spending on these appraised medicines increased by 65% from 2014–2015 to £8,049,035 in 2015–2016.
- Eight new **respiratory inhalers** have received positive recommendations from AWMSG and/or NICE, in the last three years for use in COPD and asthma. The spend on these inhalers in 2015–2016 was approximately £8.9 million.
- Four **hepatitis C** medicines received a positive recommendation for use within 2015–2016, two of which accounted for a spend of over £1 million each; ledipasvir/sofosbuvir (£3,582,536) and daclatasvir (£1,131,793).

* Technology appraisals and statements of advice will be inactive if they have been superseded by newer guidance and/or further appraisals.

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1.0 INTRODUCTION

Medicines are funded by NHS Wales following advice from two sources: AWMSG and NICE. Recommendations should be implemented within three months of the issuance of NICE advice or the ratification by Welsh Government of the AWMSG recommendation.

AWMSG has a remit to appraise newly licensed medicines, including licence extensions and new formulations of existing medicines. NICE advice supersedes AWMSG advice; therefore AWMSG does not usually appraise medicines when NICE advice is expected within 12 months. If the holder of the marketing authorisation does not submit an application for appraisal (non-submission), AWMSG will issue a Statement of Advice, confirming that a medicine cannot be endorsed for use within NHS Wales.

This report monitors usage of medicines appraised between 1 April 2003 and 31 March 2016, and also usage of medicines for which an AWMSG Statement of Advice has been issued.

Detailed analysis has also been undertaken on three specific areas due to current therapeutic interest: hepatitis C medicines, inhalers for respiratory disease, and medicines used in type 2 diabetes mellitus.

The data on medicines usage are retrieved from two systems:

- The Comparative Analysis System for Prescribing Audit (CASPA) (NHS Wales Shared Services Partnership [NWSSP]). This software provides a record of all WP10 prescriptions (issued by GPs in Wales for patients receiving NHS treatment) and WP10HP prescriptions (issued by hospital clinicians in NHS Wales) forwarded to Prescribing Services, NWSSP, for processing and payment following dispensing.
- The Medusa data warehouse, which holds information on medicines issued by all hospitals in Wales.

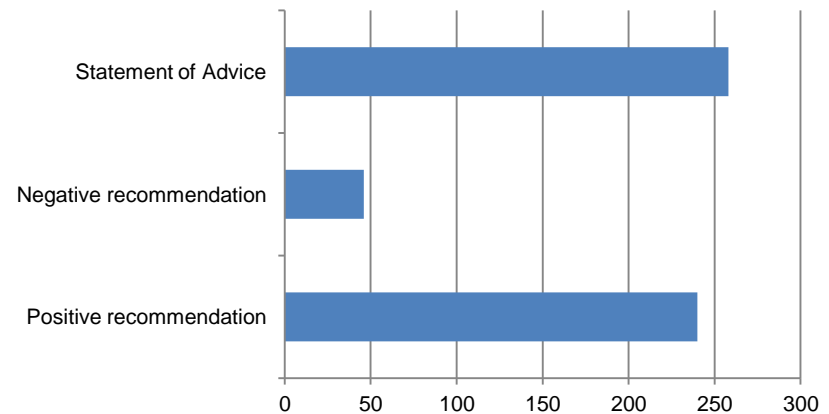
There are a number of cautions when interpreting the data. These are explained in Appendix 1.

2.0 APPRAISALS OVERVIEW

This report classifies a medicine according to its appraisal status (i.e. positive recommendation, negative recommendation, or Statement of Advice) on 31 March 2016.

Between April 2003 and March 2016, AWMSG undertook 286 appraisals. Figure 1 shows a breakdown of advice issued by AWMSG during this time.

Figure 1. Advice issued by AWMSG from April 2003 to March 2016



Thirty-nine appraisals undertaken by AWMSG have subsequently been superseded by NICE Technology Appraisals (TAs) and 178 Statements of Advice are currently active*.

Up to March 2016, NICE had undertaken 433 TAs, including reviews and terminated appraisals, of which 323 are currently active*; however, some of those appraisals cover medical technologies and procedures rather than medicines. A medicine may be included in more than one NICE TA (similar to the AWMSG appraisal process) and some TAs cover more than one medicine.

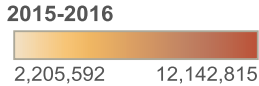
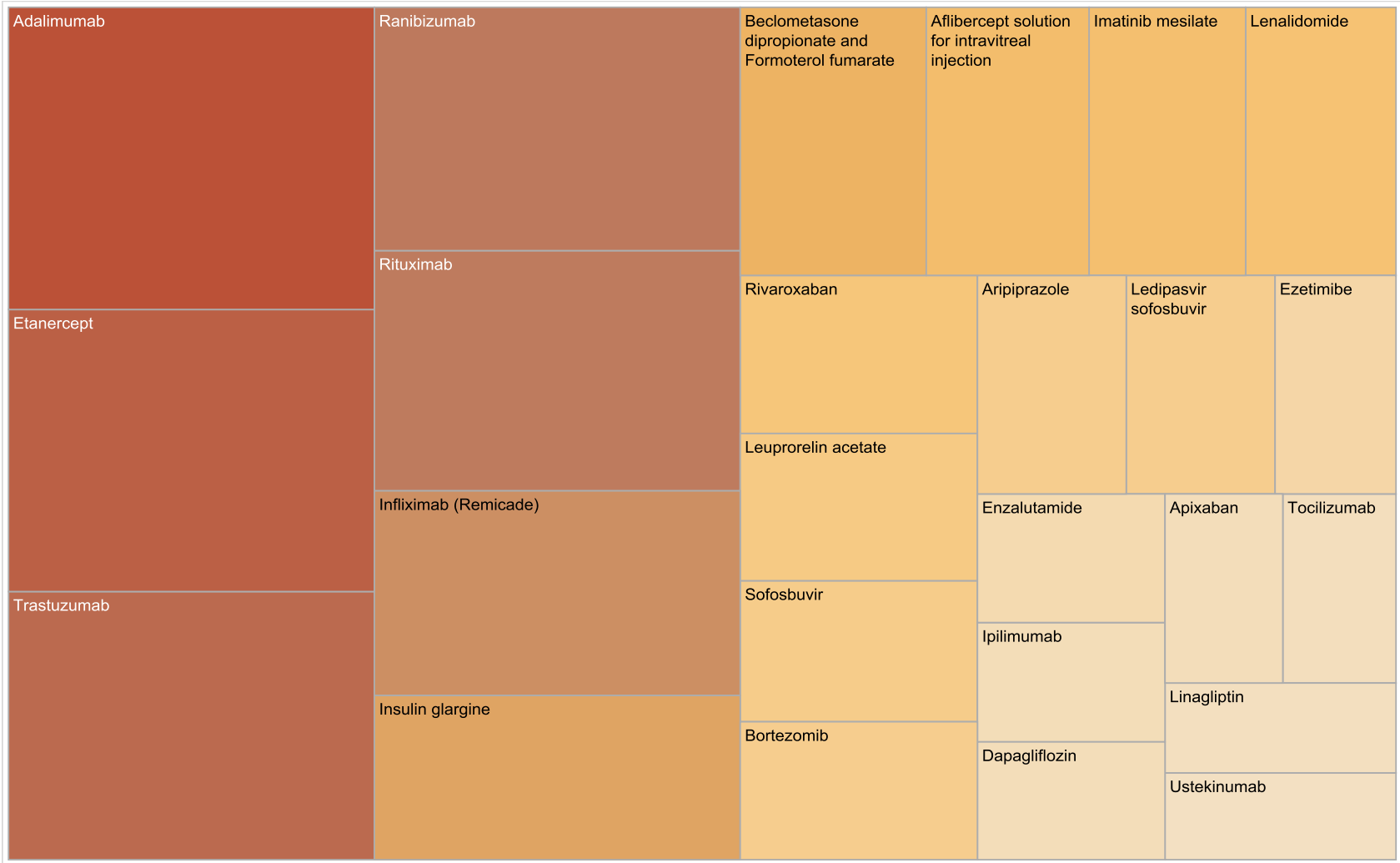
* Technology appraisals and statements of advice will be inactive if they have been superseded by newer guidance and/or further appraisals.

3.0 MEDICINES WITH AN AWMSG/NICE POSITIVE RECOMMENDATION

As of March 2016, 280 medicines had received a positive recommendation for use in NHS Wales from AWMSG and/or NICE for one or more indication(s). Spend for the financial year 2015–2016 on these medicines by NHS Wales was £247 million. Many of the medicines that received a positive recommendation several years ago are now in established use. Therefore this report focuses on those medicines that received a positive recommendation in the three years to March 2016.

- There are 158 medicines that have received one or more positive recommendation(s) in the three years to March 2016.
- A list of the medicines with a positive recommendation that have been used within NHS Wales in the last three years, including the date of the most recent positive recommendation and the annual spend for the last three financial years, can be found in Appendix 2.
- There are 11 medicines with a positive recommendation within the last three years that have not been captured as having been prescribed by NHS Wales during this time: atazanavir/cobicistat, bedaquiline, ceftaroline fosamil, elosulfase alfa, epoetin theta, epoetin zeta, panobinostat, radium-223 dichloride, riociguat, tedizolid phosphate and tegafur/gimeracil/oteracil.
- Four of the six medicines with the highest spend for the financial year 2015–2016 are cytokine inhibitors: adalimumab (£12,142,815), etanercept (£11,357,276), rituximab (£9,638,685) and infliximab (Remicade®) (£8,201,042). The other two medicines with the highest spend are the antineoplastic medicine, trastuzumab (£10,773,766), and ranibizumab intravitreal injection (£9,818,940). Figure 2 provides a pictorial representation of spend on the highest-cost positive recommendation medicines.
- There are 27 medicines that have received a positive recommendation in the last three years with new spend in 2015–2016.
- The infliximab biosimilar Inflectra® had a spend of £873,182. The use of biosimilars is a current secondary care National Prescribing Indicator.
- In addition to infliximab biosimilar Inflectra®, the additional five of the top six medicines with the highest new spend are:
 - daclatasvir (£1,131,793) and the combination product ombitasvir/paritaprevir/ritonavir (£883,508) both for the treatment of hepatitis C, which received their positive NICE recommendations in November 2015. Hepatitis C medicines are discussed in section 7.0;
 - pomalidomide (£472,926) for the treatment of relapsed and refractory multiple myeloma, which received a positive AWMSG recommendation in August 2015;
 - dolutegravir/abacavir/lamivudine (£86,586) for the treatment of Human Immunodeficiency Virus (HIV), which received its positive recommendation from AWMSG in May 2015;
 - idelalisib (£86,133) for use in patients with chronic lymphocytic leukaemia, which received its positive recommendation from NICE in October 2015.
- The following medicines have shown some of the biggest increases in spend over the last two years (2015–2016 spend in brackets): adalimumab (£12,142,815), beclometasone/formoterol (£5,648,443), aflibercept intravitreal solution (£4,775,711), rivaroxaban (£4,124,329), sofosbuvir (£3,690,213), ledipasvir/sofosbuvir (£3,582,536), enzalutamide (£2,676,844), apixaban (£2,424,490) and dapagliflozin (£2,409,960).

Figure 2. Treemap showing medicines with an AWMSG and/or NICE positive recommendation and highest spend in 2015–2016

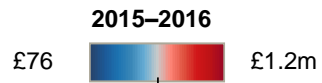


4.0 MEDICINES WITH AN AWMSG/NICE NEGATIVE RECOMMENDATION

As of March 2016, 71 medicines had received a negative recommendation from AWMSG and/or NICE for one or more indication(s). Excluding those medicines with a positive recommendation for an alternative indication and those medicines with established use for another indication, further analysis was undertaken on 41 medicines.

- Fifteen of the medicines with an AWMSG/NICE negative recommendation do not appear to have been used by NHS Wales during the three years to March 2016.
- Of the medicines previously reported to have been used within NHS Wales, but not used within 2014–2015 crizotinib and liposomal cytarabine have also not been used within 2015–2016.
- Ruxolitinib and ofatumumab are two medicines with a previous negative recommendation which have been subject to re-appraisal by NICE in 2015–2016 and now have a positive recommendation for their use.
- Spend on the 22 remaining medicines with a negative recommendation for 2015–2016 was £2.76 million, an increase of 1.28% compared to spend on the same medicines in 2014–2015. Figure 3 provides a pictorial representation of spend on medicines with a negative recommendation.
- As in previous years, two medicines make up the majority of spend on medicines with a negative recommendation: bevacizumab (43%) and dasatinib (26%).
- Bevacizumab has been the subject of eight NICE TAs, all of which do not recommend the use of the medicine for the indications appraised. Despite that, spend on bevacizumab (£1,198,861) for 2015–2016 has increased by 6% compared to the previous year, and 30% compared to 2013–2014.
- Dasatinib has been subject to three AWMSG appraisals; two of the appraisals did not recommend dasatinib for use and a previous positive recommendation appraisal was superseded by a NICE TA, again not recommending dasatinib. Spend on dasatinib (£721,123) for 2015–2016 has increased by 7% compared to the previous year, and 15% compared to 2013–2014.
- Fulvestrant (£242,397) and insulin degludec (£194,237) make up approximately 9% and 7% of spend on medicines with a negative recommendation in 2015–2016 respectively. Insulin degludec has a 32% increase in spend since 2014–2015, and is currently undergoing a new AWMSG appraisal.
- Medicines having received a negative recommendation within the last three years, and also showing an increase in spend compared to 2014–2015 are as follows (2015–2016 spend in brackets): cabazitaxel (£57,658) and olanzapine depot injection (£38,309). Conversely, nine medicines had a decrease in spending for 2015–2016 compared to 2014–2015. Micafungin (£8,972) had the greatest decrease of 92%. Aflibercept infusion concentrate (£19,513) decreased by 47%.
- In June 2015, NICE issued a “Do not do” recommendation for cilostazol, pentoxifylline and inositol nicotinate in people with peripheral arterial disease. This recommendation was in keeping with the earlier NICE TA (223). In 2015–2016 cilostazol (£30,032), pentoxifylline (£50,726) and inositol nicotinate (£3,946) showed a 40%, 10% and 79% spending decrease respectively compared to 2014–2015.
- A breakdown of spend on negative recommendation medicines in 2015–2016 can be found in Appendix 3.

Figure 3. A pictorial representation of the spending on medicines with an AWMSG and/or NICE negative recommendation in 2015–2016



5.0 MEDICINES WITH AN AWMSG STATEMENT OF ADVICE

As of March 2016, there were 178 active* Statements of Advice, issued by AWMSG, confirming that the use of a medicine for one or more specific indications could not be endorsed due to company non-submission for appraisal. Excluding medicines with a positive or negative recommendation for an alternative indication and medicines with established use for alternative indications, further analysis was undertaken on 127 medicines.

- There are 88 medicines with one or more Statement(s) of Advice that have not been prescribed within NHS Wales during 2015–2016.
- Of the remaining medicines with a Statement of Advice, 22 had a spend of greater than £1,000. The total spend for these 22 medicines was £1,138,425 for 2015–2016.
- Within these selected medicines, the highest 2015–2016 spends among those with a Statement of Advice were for ibrutinib (£217,953), rabbit anti-human thymocyte immunoglobulin (£172,424), colesevelam (£163,041), vildagliptin/metformin combination tablets (£86,126) and sodium oxybate (£78,552). Other than ibrutinib, these were the medicines with the highest spend among those with a Statement of Advice in 2014–2015. The spend on rabbit anti-human thymocyte immunoglobulin, sodium oxybate and vildagliptin/metformin have all shown reductions in 2015–2016 compared to the previous year. However, colesevelam has shown a 21% increase in spend from 2014–2015.
- Ibrutinib spend (£217,953) has increased by 174% compared to 2014–2015 and is spread across five health boards; this figure includes homecare provision. To March 2016, ibrutinib had received one Statement of Advice stating that it could not

be endorsed for the treatment of adult patients with Waldenstrom's macroglobulinemia. However, in June 2016 a further Statement of Advice was issued for the indication of relapsed or refractory mantle cell lymphoma. A third Statement of Advice was issued on the same date for the indication of chronic lymphocytic leukaemia (CLL). A NICE TA for CLL is currently in progress with a predicted publication date of early 2017.

- The majority of rabbit anti-human thymocyte immunoglobulin spend (98%) was in Cardiff and Vale University Health Board.
- Sodium oxybate is being used in secondary care within Betsi Cadwaladr University Health Board and Aneurin Bevan University Health Board, and in primary care within Cardiff and Vale University Health Board.
- Use of colesevelam and vildagliptin/metformin combination tablets appears to be spread throughout NHS Wales, predominantly in primary care.
- Other medicines with a Statement of Advice and significant spending include cefuroxime sodium intracameral injection (£60,557), use of which has increased by 119% since 2014–2015. This is being used within three health boards. Bimatoprost/timolol eye drops presented as single use containers have seen a continued increase in spend from 2014–2015. Spend in 2015–2016 (£57,046) showed a 61% increase from 2014–2015.
- A breakdown of spend for 2015–2016 by health board for primary care, secondary care and WP10HP on the 22 medicines with an AWMSG Statement of Advice and spend of more than £1,000 for the year, can be found in Appendix 4.

* Technology appraisals and statements of advice will be inactive if they have been superseded by newer guidance and/or further appraisals.

6.0 APPRAISAL INDICATIONS

Over the three years to March 2016 there have been medicines appraised for a wide range of indications. Positive appraisal recommendations have been made for medicines for over 80 indications and some indications have multiple positive appraisals associated with them.

The most commonly appraised medicine indications with a positive recommendation from AWMSG/NICE over the period of April 2013 to March 2016 are shown in Table 1.

Table 1. The most common indications for medicines with a positive AWMSG/NICE recommendation April 2013–March 2016

Indication	Number of appraisals with a positive recommendation
Type 2 diabetes mellitus	11
HIV	10
COPD	8*
Hepatitis C	7
Multiple sclerosis	4

*Two of the appraised inhalers were also given a positive recommendation for use in asthma.

Some of these indications and the associated recommended medicines are discussed in further detail within the following sections of the report. It is important to note that current prescribing data cannot distinguish between the indications for which the medicine has been prescribed. However, given that a large number of these medicines were licensed for singular indications at the time of appraisal it may be reasonable to assume that the majority of these are being used for the indication appraised.

7.0 HEPATITIS C MEDICINES

NICE made positive recommendations for the use of several new medicines for hepatitis C during 2015–2016. These included ledipasvir/sofosbuvir (TA363), daclatasvir (TA364), and ombitasvir/paritaprevir/ritonavir with or without dasabuvir (TA365). This was in addition to the positive recommendation appraisal by NICE in February 2015 for sofosbuvir (TA330).

- The 2015–2016 spend on hepatitis C medicines appraised within the three years to March 2016 has increased greatly, reflecting the increased availability of pharmacological options for the management of this disease.
- Three hepatitis C medicines were new spends in 2015–2016: daclatasvir, ombitasvir/paritaprevir/ritonavir, and dasabuvir.

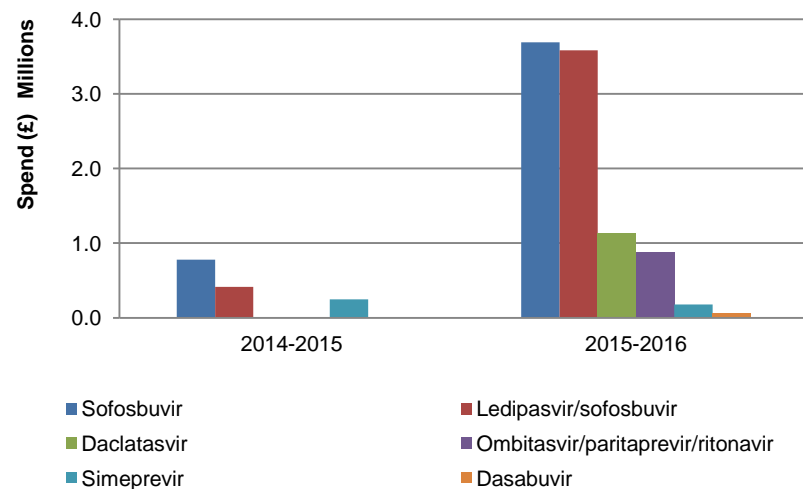
Table 2. 2015–2016 spend on hepatitis C medicines with a positive recommendation in three years to March 2016

Medicine	Date of last appraisal	Spend 2015–2016
Daclatasvir	Nov 2015	£1,131,793
Dasabuvir	Nov 2015	£61,973
Ledipasvir/sofosbuvir	Nov 2015	£3,582,536
Ombitasvir/paritaprevir/ritonavir	Nov 2015	£883,508
Simeprevir	Feb 2015	£178,931
Sofosbuvir	Feb 2015	£3,690,213

- Sofosbuvir and ledipasvir/sofosbuvir had spend increases between 2014–2015 and 2015–2016 of 374% and 763% respectively. Conversely there was a reduction in spend for simeprevir of 28%.

- Spend on newly appraised hepatitis C medicines for 2015–2016 was approximately £9.5 million. Figure 4 illustrates the change in spending on these medicines between 2014–2015 and 2015–2016.

Figure 4. Spend on hepatitis C appraised medicines for 2014–2015 and 2015–2016

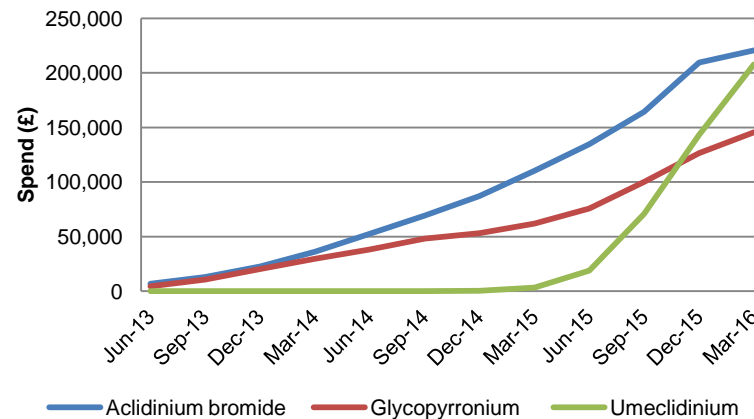


8.0 INHALERS FOR RESPIRATORY DISEASE

NICE guidance on the use of inhaled therapies in chronic obstructive pulmonary disease (COPD) recommends a stepwise approach to management, including the use of short- and long-acting beta₂ agonists, long-acting antimuscarinic antagonist (LAMA) bronchodilators and inhaled corticosteroids, dependent on symptoms and number of exacerbations¹.

- Over the three years to March 2016 there have been eight inhalers appraised for use in COPD.
- Three new LAMAs have received positive recommendations from AWMSG: aclidinium bromide, glycopyrronium and umeclidinium.
- Figure 5 shows their trend in spend within NHS Wales for the three years to March 2016.

Figure 5. Trend in the spend on the newer LAMA medicines 2013–2016

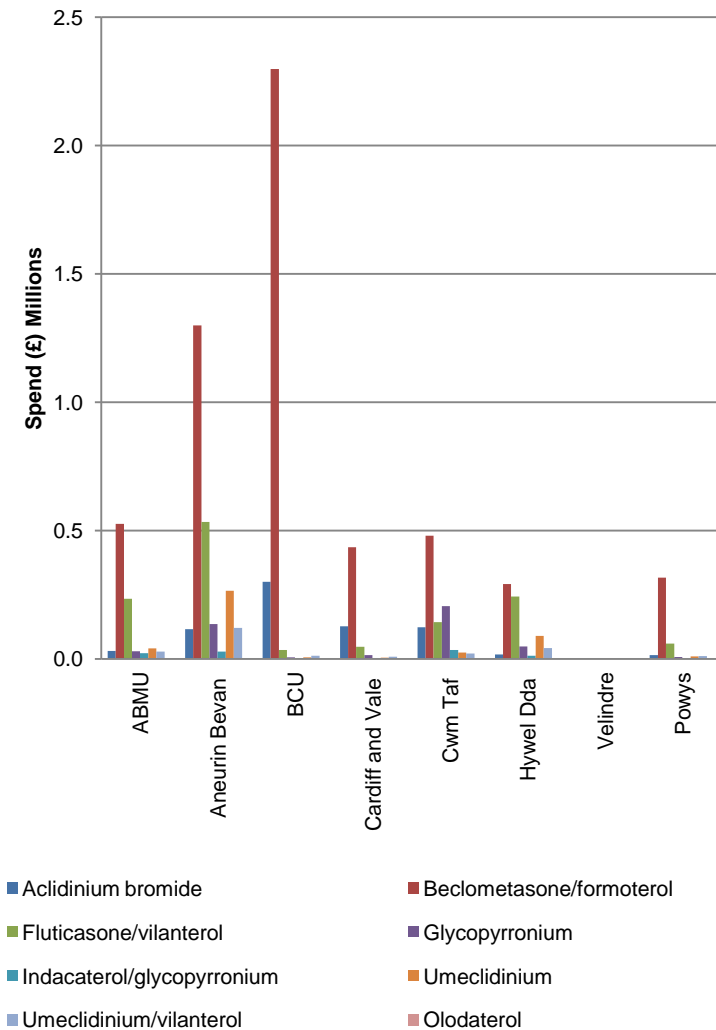


- Two new combination inhalers have also received a positive recommendation from AWMSG: umeclidinium/vilanterol and indacaterol/glycopyrronium. Spend on these two products for 2015–2016 was £243,391 and £103,074 respectively.
- Combination inhalers containing a long-acting beta₂ agonist and a corticosteroid are established treatment in both COPD and asthma. Fluticasone furoate/vilanterol received a positive recommendation from AWMSG in August 2014, and beclometasone dipropionate/formoterol fumarate received a positive recommendation in June 2015, both for use in asthma and COPD. The spend in 2015–2016 on these two inhaler combinations were approximately £1.3 million and £5.65 million respectively.
- Olodaterol is a long-acting beta-adrenoceptor agonist given a positive recommendation for use in January 2015 with a spend in 2015–2016 of £500.
- Table 3 provides a breakdown of spending on these eight inhalers in primary and secondary care for 2015–2016.

Table 3. Breakdown of 2015–2016 spend in primary and secondary care on the eight inhalers with a positive recommendation

Health Board	Spend		Overall total	Primary care spend per 1,000 population
	Primary Care	Secondary care/ WP10HP		
ABMU	£895,218	£17,069	£912,287	£1,631
Aneurin Bevan	£2,308,992	£189,645	£2,498,637	£3,862
BCU	£2,560,094	£98,426	£2,658,520	£3,626
Cardiff and Vale	£634,144	£7,310	£641,454	£1,236
Cwm Taf	£983,867	£49,775	£1,033,642	£3,231
Hywel Dda	£703,068	£41,068	£744,136	£1,798
Powys	£415,645	£3,929	£419,574	£3,006

Figure 6. Health board 2015–2016 spend on the eight inhalers with a positive recommendation



9.0 MEDICINES USED FOR TYPE 2 DIABETES MELLITUS

Of all the indications for medicines with an AWMSG/NICE positive recommendation in the three years to March 2016, type 2 diabetes mellitus was the indication with the most appraisals associated with it, with eleven medicines given a positive recommendation during this period. As the use of long-acting insulins is currently a secondary care National Prescribing Indicator, the two insulins given a positive recommendation, insulin glargine and insulin degludec with liraglutide, are not considered any further in this section.

- The type 2 diabetes mellitus medicines appraised within the three years to March 2016, and their spend within 2015–2016, are detailed within Table 4.

Table 4. 2015–2016 primary and secondary care spend in Wales on type 2 diabetes mellitus medicines with a positive recommendation

Medicine	Date of last appraisal	2015–2016 spend
Alogliptin	Oct 2014	£549,981
Alogliptin and metformin	Oct 2014	£9,122
Canagliflozin	Jun 2014	£495,039
Dapagliflozin	Jun 2013	£2,409,960
Empagliflozin	Mar 2015	£102,344
Linagliptin	May 2015	£2,284,183
Linagliptin and metformin	Aug 2014	£72,222
Lixisenatide	Dec 2013	£404,230
Saxagliptin	Dec 2013	£1,721,954

- The spend across Wales on these medicines has increased considerably within the three years to March 2016. Total spend on these nine medicines in 2013–2014 was £2,460,780, in 2014–2015 was £4,864,687 and in 2015–2016 was £8,049,035.

- Figure 7 shows the NHS Wales spend for each of the type 2 diabetes mellitus medicines with a positive recommendation within the three years to March 2016.

Figure 7. Spend on type 2 diabetes mellitus appraised medicines in the years 2013–2014, 2014–2015 and 2015–2016

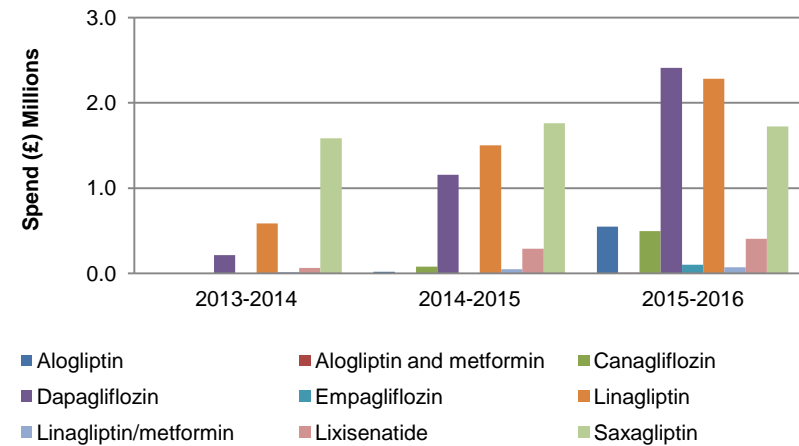


Table 5. Primary care spending per 1,000 population for 2015–2016

Health board	Total spend in primary care	Primary care spend per 1,000 population
ABMU	£1,536,305	£2,799
Aneurin Bevan	£1,549,196	£2,591
BCU	£1,101,522	£1,560
Cardiff and Vale	£1,472,939	£2,871
Cwm Taf	£656,533	£2,057
Hywel Dda	£1,194,698	£3,055
Powys	£286,437	£2,072
National	£7,797,630	£2,428

REFERENCES

- 1 National Institute for Health and Care Excellence. Clinical Guideline 101. Chronic obstructive pulmonary disease: Management of chronic obstructive pulmonary disease in adults in primary and secondary care (partial update). 2010. Available at: <https://www.nice.org.uk/guidance/cg101>. Accessed Oct 2016.

APPENDIX 1. CAUTION IN THE INTERPRETATION OF MONITORING DATA

Due to the limitations of both systems used to collect medicines usage data, it is not currently possible to link the prescribing of a specific medicine to a specific indication. As many of the medicines monitored have more than one indication, this is a major problem when trying to monitor appraisal recommendations and non-submissions.

- The Medusa data warehouse is reliant on data input by individual hospital pharmacy departments. If the data on a medicine are input under an alternative name to the usual generic or brand name, it may not be identified at extraction.
- The report includes medicines supplied by homecare, recorded through the hospital system; medicines supplied through other homecare providers are not included in this report.
- Medicines supplied through hospitals in England or on FP10HP (issued by hospital clinicians in NHS England) to patients resident in Wales, which do not get issued via Medusa or recorded through CASPA, are not included in this report.
- Combining data obtained from two different software systems provides challenges, particularly as CASPA and Medusa report data via different measurement criteria. Hence, in order to amalgamate data, total cost of medicine usage is reported. Where primary care data are monitored, the number of items (prescriptions) may also be used.
- Many of the medicines being monitored are linked to more than one NICE or AWMSG appraisal. Several medicines therefore have a positive recommendation for one indication and a negative recommendation or Statement of Advice for another indication. Where possible, medicines have been classed as recommended, not recommended and AWMSG Statement of Advice, and reported accordingly.
- Some of the medicines being monitored have multiple indications, some of which, due to the remit of NICE and AWMSG, may not have met the criteria for appraisal. This means that these medicines may be in use for indications other than those appraised. These medicines have been included in the relevant sections of the report, but have been highlighted and excluded from the more detailed analysis.
- AWMSG has appraised several new liquid preparations that have been licensed for use. Many of these preparations may have been available as liquid specials prior to the introduction of the licensed product. Liquid specials formulated in different strengths to the licensed product can be excluded from the analysis; however, it is not always possible on CASPA or Medusa to determine whether a product is a special or a licensed product where the strengths are the same.
- Generic prescribing is encouraged in primary care and nearly all medicines are recorded generically on the Medusa system. Therefore, where an appraisal and indication relates to a particular brand, it is not always possible to accurately determine usage against a particular appraisal.
- It is important to be aware that population size and demographics, as well as individual medical and surgical specialties, will influence prescribing; this should be taken into consideration when reading this report.
- The figures included in this report should not be compared to previous reports monitoring usage in Wales of medicines appraised by NICE/AWMSG as there may be variations due to in year cost reconciliations within Medusa.

APPENDIX 2. USAGE OF MEDICINES THAT HAVE RECEIVED A POSITIVE RECOMMENDATION FROM AWMSG/NICE IN THREE YEARS TO MARCH 2016

Medicine	Date of latest AWMSG/NICE recommendation	2013–2014 spend (£)	2014–2015 spend (£)	2015–2016 spend (£)	Total (£)
5-aminolaevulinic acid	02/12/2013	5,034	21,217	12,034	38,285
Abatacept	26/01/2016	507,729	755,102	1,444,928	2,707,759
Abiraterone	24/09/2014	2,201,392	2,121,178	1,687,003	6,009,573
Acridinium bromide	29/07/2013	78,886	319,594	729,264	1,127,744
Adalimumab	26/01/2016	7,893,431	10,488,479	12,142,815	30,524,725
Afatinib	23/04/2014	0	27,363	130,482	157,845
Aflibercept (intravitreal)	22/07/2015	166,165	2,848,036	4,775,711	7,789,912
Alemtuzumab	28/05/2014	45,683	465,838	1,280,416	1,791,937
Alogliptin	30/10/2014	27	19,292	549,981	569,300
Alogliptin/metformin	30/10/2014	80	1,037	9,122	10,239
Apixaban	04/06/2015	100,257	696,633	2,424,490	3,221,380
Aripiprazole	24/07/2013	4,919,622	5,496,957	3,583,626	14,000,205
Aripiprazole monohydrate	13/08/2014	1,722	132,431	451,688	585,841
Atazanavir/cobicistat	06/01/2016	0	0	0	0
Atomoxetine hydrochloride	26/02/2014	645,000	680,999	733,906	2,059,905
Avanafil	15/07/2015	0	448	3,194	3,642
Axitinib	25/02/2015	29,262	215,856	766,915	1,012,033
Azithromycin	13/08/2014	301	0	0	301
Aztreonam lysine	22/05/2013	86,807	265,680	295,850	648,337
Beclometasone/Formoterol	26/06/2015	1,980,830	3,102,672	5,648,443	10,731,945
Bedaquiline	15/05/2015	0	0	0	0
Bortezomib	16/12/2015	2,348,710	2,793,230	3,591,008	8,732,948
Botulinum toxin type A	06/12/2013	932,778	953,570	1,090,900	2,977,248
Brentuximab vedotin	26/06/2015	428,724	420,027	486,642	1,335,393
Brimonidine	27/08/2015	0	9,703	8,793	18,496
C1-esterase inhibitor	29/07/2013	19,604	20,423	35,229	75,256
Cabozantinib	28/01/2015	0	5,760	81,984	87,744
Canagliflozin	25/06/2014	0	78,963	495,039	574,002
Ceftaroline fosamil	29/07/2013	0	0	0	0
Certolizumab pegol	26/01/2016	1,056,413	1,486,843	1,927,998	4,471,254
Cetuximab	30/12/2015	778,792	487,970	452,571	1,719,333
Ciclosporin single use eye drops	01/12/2015	0	0	10,605	10,605
Dabigatran	17/12/2014	616,050	978,813	1,157,441	2,752,304
Dabrafenib	22/10/2014	0	201,666	1,053,650	1,255,316
Daclatasvir	25/11/2015	0	0	1,131,793	1,131,793
Dapagliflozin	26/06/2013	213,450	1,157,770	2,409,960	3,786,729
Darbepoetin alfa	26/11/2014	892,385	900,837	774,327	2,567,549
Darunavir	15/07/2015	739,280	968,845	948,061	2,656,186
Darunavir and Cobicistat	27/08/2015	0	0	5,947	5,947
Dasabuvir	25/11/2015	0	0	61,973	61,973
Defibrotide	15/05/2015	143,565	8,444	65,313	217,322
Delta-9-tetrahydrocannabinol/ Cannabidiol	13/08/2014	60,625	61,125	100,450	222,200
Denosumab	09/12/2015	552,442	728,658	881,488	2,162,588
Dexamethasone intravitreal implant	22/07/2015	426,996	609,696	621,180	1,657,872
Dimethyl fumarate	27/08/2014	207,799	351,656	1,395,716	1,955,171
Dolutegravir	19/09/2014	0	162,136	419,887	582,023
Dolutegravir/abacavir/ lamivudine	15/05/2015	0	0	86,586	86,586
Eculizumab	28/01/2015	15,314	34,679	737,672	787,665
Edoxaban	23/09/2015	0	0	1,731	1,731
Efavirenz	06/01/2016	32,149	27,566	32,342	92,057

Monitoring Usage in Wales of Medicines Appraised by NICE and AWMSG

Medicine	Date of latest AWMSG/NICE recommendation	2013–2014 spend (£)	2014–2015 spend (£)	2015–2016 spend (£)	Total (£)
Elosulfase alfa	16/12/2015	0	0	0	0
Eltrombopag	24/07/2013	128,331	205,421	274,095	607,847
Elvitegravir/cobicistat/ emtricitabine/tenofovir	02/12/2013	3,468	82,163	129,089	214,720
Empagliflozin	25/03/2015	0	3,616	102,344	105,960
Emtricitabine/rilpivirine/ tenofovir disoproxil	24/07/2014	300,482	546,426	648,271	1,495,179
Entecavir	15/05/2015	59,884	108,929	136,949	305,762
Enzalutamide	01/01/2016	35,441	918,315	2,676,844	3,630,600
Epoetin alfa	26/11/2014	1,047,309	1,173,926	1,253,673	3,474,908
Epoetin beta	26/11/2014	66,532	55,554	33,432	155,518
Epoetin theta	26/11/2014	0	0	0	0
Epoetin zeta	26/11/2014	0	0	0	0
Erlotinib	16/12/2015	574,894	521,894	438,911	1,535,699
Etanercept	26/01/2016	8,554,333	10,781,712	11,357,276	30,693,321
Etravirine	06/12/2013	80,828	69,707	63,314	213,849
Everolimus	22/07/2015	73,564	99,943	285,707	459,214
Ezetimibe	24/02/2016	3,282,540	3,079,761	2,922,312	9,284,613
Fluocinolone acetonide	27/11/2013	0	10,200	27,880	38,080
Fluticasone furoate/vilanterol	13/08/2014	1,978	184,846	1,295,263	1,482,087
Follitropin alfa	28/01/2015	32,917	24,409	14,584	71,910
Fosfomycin	17/11/2015	1,375	781	10,342	12,498
Glycopyrronium inhalation powder	22/05/2013	65,312	206,548	447,833	719,693
Golimumab	26/01/2016	447,755	975,244	1,319,575	2,742,574
Idelalisib	28/10/2015	0	0	86,133	86,133
Imatinib mesilate	26/11/2014	4,244,665	4,288,765	4,638,066	13,171,496
Indacaterol/glycopyrronium	07/05/2014	0	899	103,074	103,973
Infliximab (Inflectra)	10/03/2015	0	0	873,182	873,182
Infliximab (Remicade)	26/01/2016	8,271,512	8,869,908	8,201,042	25,342,462
Ingenol mebutate	29/07/2013	23,043	45,202	49,471	117,716
Insulin degludec and liraglutide	17/11/2015	0	318	59,726	60,044
Insulin glargine	09/12/2015	6,450,808	6,601,011	6,638,886	19,690,705
Ipilimumab	23/07/2014	1,443,168	3,015,327	2,475,926	6,934,421
Ivacaftor	30/12/2015	1,139,580	2,199,600	2,024,100	5,363,280
Ivermectin	24/03/2016	0	0	1,049	1,049
Lapatinib	14/08/2013	117,144	88,230	79,713	285,087
Ledipasvir/sofosbuvir	25/11/2015	0	414,796	3,582,536	3,997,332
Lenalidomide	24/09/2014	3,504,038	4,733,476	4,409,437	12,646,951
Leuprorelin acetate	09/01/2015	3,393,855	3,611,659	3,848,541	10,854,055
Levonorgestrel 13.5mg IUD	15/07/2015	0	4,963	15,174	20,137
Linacotide	26/02/2014	5,529	29,674	83,885	119,088
Linagliptin	22/05/2013	584,104	1,501,797	2,284,183	4,370,084
Linagliptin/metformin	13/08/2014	13,795	49,481	72,222	135,498
Lipegfilgrastim	13/08/2014	0	0	31,237	31,237
Lisdexamfetamine dimesylate	09/10/2015	43,085	160,338	268,648	472,071
Lixisenatide	06/12/2013	64,810	290,202	404,230	759,242
Lubiprostone	23/07/2014	0	12,979	16,110	29,089
Lurasidone	10/03/2015	0	0	18,940	18,940
Macitentan	06/01/2016	0	2,767	0	2,767
Magnesium aspartate dihydrate	27/08/2015	0	0	16,509	16,509
Midodrine hydrochloride	17/11/2015	0	0	898	898
Mirabegron	01/06/2013	127,771	579,490	1,114,368	1,821,629
Nalmefene	26/11/2014	906	14,465	22,828	38,199
Naloxegol oxalate	22/07/2015	0	0	132	132
Nepafenac	14/08/2013	2,844	7,848	14,169	24,861

All Wales Medicines Strategy Group

Medicine	Date of latest AWMMSG/NICE recommendation	2013–2014 spend (£)	2014–2015 spend (£)	2015–2016 spend (£)	Total (£)
Nintedanib	27/01/2016	0	0	70,609	70,609
Nivolumab	18/02/2016	0	0	64,784	64,784
Obinutuzumab	02/06/2015	0	0	25,933	25,933
Ocriplasmin	23/10/2013	21,000	18,000	24,000	63,000
Ofatumumab	02/06/2015	7,980	8,664	23,409	40,053
Olaparib	27/01/2016	0	0	9,625	9,625
Olodaterol hydrochloride	09/01/2015	0	0	500	500
Omalizumab	08/06/2015	1,113,066	1,314,055	1,099,633	3,526,754
Ombitasvir/paritaprevir/ritonavir	25/11/2015	0	0	883,508	883,508
Oseltamivir phosphate	24/03/2016	14,068	47,609	32,693	94,370
Paclitaxel albumin-bound nanoparticles	28/10/2015	150,469	213,782	428,933	793,184
Panobinostat	27/01/2016	0	0	0	0
Pazopanib	02/12/2013	1,372,507	1,698,179	1,441,456	4,512,142
Peginterferon alfa	27/11/2013	844,987	522,023	287,854	1,654,864
Peginterferon beta-1a	15/07/2015	0	0	55,488	55,488
Pembrolizumab	01/11/2015	0	53	304,923	304,976
Perampanel	29/07/2013	101,080	259,119	368,330	728,529
Pirfenidone	24/04/2013	32,376	404,170	693,396	1,129,942
Pixantrone	26/02/2014	0	90,392	53,565	143,957
Pomalidomide	27/08/2015	0	0	472,926	472,926
Ponatinib	09/01/2015	11,110	65,355	54,250	130,715
Prasugrel	23/07/2014	338,203	363,698	390,597	1,092,498
Radium-223 dichloride	27/01/2016	0	0	0	0
Raltegravir	09/12/2015	220,275	265,773	279,134	765,182
Ranibizumab	27/11/2013	11,070,502	10,373,209	9,818,940	31,262,651
Regorafenib	15/07/2015	0	0	55,416	55,416
Ribavirin	27/11/2013	229,825	171,422	262,987	664,234
Rifaximin	25/03/2015	202,237	305,517	515,285	1,023,039
Riociguat	09/10/2015	0	0	0	0
Rituximab	09/01/2015	8,895,255	9,085,827	9,638,685	27,619,767
Rivaroxaban	25/03/2015	678,197	1,920,863	4,124,329	6,723,389
Ruxolitinib	23/03/2016	274,860	249,588	310,391	834,839
Saxagliptin	06/12/2013	1,584,514	1,762,529	1,721,954	5,068,997
Secukinumab	22/07/2015	0	0	65,661	65,661
Simeprevir	25/02/2015	0	248,618	178,931	427,549
Sodium phenylbutyrate	06/12/2013	59,581	51,837	62,967	174,385
Sofosbuvir	25/02/2015	0	778,086	3,690,213	4,468,299
Sucroferric oxyhydroxide	09/12/2015	0	0	430	430
Tacrolimus modified release	27/08/2015	72,698	94,474	110,493	277,665
Tegafur/gimeracil/oteracil	02/12/2013	0	0	0	0
Tedizolid phosphate	09/12/2015	0	0	0	0
Tenofovir disoproxil	07/05/2014	334,194	367,755	436,396	1,138,345
Teriflunomide	22/01/2014	0	7,863	77,062	84,925
Tinzaparin sodium	09/12/2015	190,043	283,607	255,555	729,205
Tocilizumab	26/01/2016	1,424,627	1,758,446	2,350,545	5,533,618
Tolvaptan	28/10/2015	11,949	42,866	40,626	95,441
Trastuzumab	16/12/2015	10,776,117	10,645,397	10,773,766	32,195,280
Travoprost	17/11/2015	239,947	246,802	246,309	733,058
Ulipristal acetate	14/08/2013	24,530	79,549	144,981	249,060
Umeclidinium	09/01/2015	0	4,124	440,579	444,703
Umeclidinium/vilanterol	10/03/2015	0	5,441	243,391	248,832
Ustekinumab	24/03/2016	1,234,525	1,601,018	2,205,592	5,041,135
Vedolizumab	26/08/2015	0	10,068	280,764	290,832
Velaglucerase alpha	24/07/2014	0	0	13,894	13,894
Vortioxetine	25/11/2015	0	0	62	62

APPENDIX 3. USAGE OF MEDICINES THAT HAVE RECEIVED A NEGATIVE RECOMMENDATION FROM AWMSG/NICE

Primary care spend for the financial year 2015–2016 on medicines with a negative recommendation from AWMSG/NICE

Medicine	ABMU		Aneurin Bevan		BCU		Cardiff and Vale		Cwm Taf		Hywel Dda		Powys		Total
	Spend (£)	Spend (£) per 100,000 population	Spend (£)	Spend (£) per 100,000 population	Spend (£)	Spend (£) per 100,000 population	Spend (£)	Spend (£) per 100,000 population	Spend (£)	Spend (£) per 100,000 population	Spend (£)	Spend (£) per 100,000 population	Spend (£)	Spend (£) per 100,000 population	Spend (£)
Aliskiren	6,365	1,160	10,494	1,755	5,340	756	9,998	1,949	5,637	1,851	8,531	2,181	1,934	1,399	48,299
Apremilast	7,415	1,351	0	0	0	0	0	0	0	0	0	0	0	0	7,415
Bromfenac	0	0	17	3	731	104	102	20	77	25	9	2	9	7	945
Cilostazol	2,887	526	2,966	496	7,375	1,044	488	95	2,335	767	11,732	3,000	1,197	866	28,980
Fampridine	0	0	0	0	0	0	0	0	0	0	0	0	4,344	3,142	4,344
Fulvestrant	0	0	0	0	0	0	0	0	0	0	0	0	1,045	756	1,045
Inositol nicotinate	516	94	438	73	586	83	559	109	524	172	330	84	932	674	3,885
Insulin degludec	46,498	8,472	21,182	3,543	9,446	1,338	43,502	8,480	4,838	1,589	37,555	9,603	5,558	4,020	168,579
Paricalcitol	0	0	0	0	0	0	0	0	0	0	69	18	0	0	69
Pentoxifylline	5,334	972	7,795	1,304	10,932	1,548	3,209	626	7,328	2,406	10,042	2,568	757	548	45,397
Racecadotril granules for suspension	0	0	76	13	0	0	0	0	0	0	0	0	0	0	76
Total	69,015	12,575	42,968	7,186	34,410	4,873	57,858	11,278	20,739	6,810	68,268	17,457	15,776	11,410	309,034

Secondary care and WP10HP spend (£) for the financial year 2015–2016 on medicines with a negative recommendation from AWMSG/NICE

Medicine	ABMU		Aneurin Bevan		BCU		Cardiff and Vale		Cwm Taf		Hywel Dda		Powys	Velindre	Total
	Secondary care (£)	WP10 HP (£)	Secondary care (£)	WP10 HP (£)	Secondary care (£)	WP10 HP (£)	Secondary care (£)	WP10 HP (£)	Secondary care (£)	WP10 HP (£)	Secondary care (£)	WP10 HP (£)	WP10 HP (£)	Secondary care (£)	Spend (£)
Aflibercept concentrate for infusion	0	0	0	0	6,386	0	0	0	2,838	0	3,903	0	0	6,386	19,513
Aliskiren	0	24	0	0	0	0	142	0	0	29	106	0	0	0	301
Bevacizumab	584,583		28,347		69,110		49,165		31,791	0	207,545	0	0	228,320	1,198,861
Bosutinib	0	0	0	0	5,155	0	24,744	0	0	0	0	0	0	0	29,899
Bromfenac	0	0	0	0	0	1097	0	0	0	119	0	9	0	0	1,225
Cabazitaxel	0	0	0	0	0	0	0	0	0	0	0	0	0	57,658	57,658
Cilostazol	337	0	0	25	36	0	101	0	74	0	479	0	0	0	1,052
Dasatinib	58,917	111,708	0	185,868	150,222	82,664	41,983	66,214	0	0	23,547	0	0	0	721,123
Dexrazoxane	8,100	0	0	0	0	0	0	0	0	0	0	0	0	0	8,100
Eribulin	0	0	2,946	0	0	0	0	0	0	0	0	0	0	8,693	11,639
Fulvestrant	52,659	0	2,508	0	94,661	0	0	0	0	0	65,195	0	0	26,329	241,352
Inositol nicotinate	0	0	0	0	0	0	0	0	61	0	0	0	0	0	61
Insulin degludec	15,155	0	0	864	1,382	0	2,989	0	2,523	0	2,659	0	86	0	25,658
Micafungin	1,647	0	7,325	0	0	0	0	0	0	0	0	0	0	0	8,972
Olanzapine depot injection	3,569	0	6,946	0	2,515	0	17,647	0	0	0	7,632	0	0	0	38,309
Panitumumab	0	0	0	0	13	0	0	0	0	0	0	0	0	10,924	10,937
Paricalcitol	0	0	0	0	4,824	0	0	0	0	0	0	0	0	0	4,824
Pentoxifylline	1,428	875	66	296	675	18	719	66	367	522	279	18	0	0	5,329
Sorafenib	25,036	0	0	0	0	0	25,036	0	0	0	6,853	0	0	10,730	67,655
Total	751,430	112,607	48,138	187,053	334,978	83,779	162,527	66,280	37,655	670	318,196	27	86	349,040	2,452,467

APPENDIX 4. USAGE OF MEDICINES THAT HAVE RECEIVED A STATEMENT OF ADVICE FROM AWMSG

Primary care, secondary care and WP10HP spend (£) for the financial year 2015–2016 on medicines with an AWMSG Statement of Advice

Medicine	ABMU		Aneurin Bevan		BCU		Cardiff and Vale		Cwm Taf		Hywel Dda		Powys		Velindre
	Primary Care (£)	Secondary Care/WP10 HP (£)	Primary Care (£)	Secondary Care/WP10 HP (£)	Primary Care (£)	Secondary Care/WP10HP P (£)	Primary Care (£)	Secondary Care/WP10 HP (£)	Primary Care (£)	Secondary Care/WP10HP (£)	Primary Care (£)	Secondary Care/WP10HP (£)	Primary Care (£)	Secondary Care/WP10HP (£)	Secondary Care/WP10 HP (£)
Bimatoprost/timolol single use eye drops	28,312	320	3,953	958	12,702	447	4,415	57	128	280	4,508	282	666	18	0
Bosentan tablets	0	18,123	0	0	0	0	0	0	0	21,898	1,510	6,343	0	0	0
Busulfan injection	0	0	0	0	0	0	0	23,127	0	0	0	0	0	0	0
Cefuroxime sodium intracameral injection	0	33,604	0	12,834	0	0	0	0	0	14,119	0	0	0	0	0
Colesevelam tablets	23,051	1,662	11,948	1,014	16,065	4,297	44,505	7,035	4,933	521	31,780	5,044	11,186	0	0
Dapoxetine tablets	424	280	1,218	0	1,102	168	1,572	16	1,123	61	500	0	79	0	0
Hydrocortisone modified release tablets	8,562	4,032	11,401	0	0	0	17,950	0	0	0	3,909	0	2,037	0	0
Hydroxycarbamide tablets	0	4,400	3,337	973	0	249	5,600	0	467	0	2,040	0	0	0	0
Ibrutinib capsules	0	0	0	66,226	0	58,867	0	20,235	0	556	0	72,066	0	0	3
Idebenone tablets	0	707	0	0	0	0	0	17,374	0	0	0	0	0	0	0
Methylnatrexone bromide injection	0	76	21	306	0	0	189	486	0	63	0	1,043	0	0	0
Mitotane tablets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,876
Paliperidone prolonged release tablets	2,627	0	0	0	1,362	273	1,167	0	0	219	17	47	0	146	0
Progesterone vaginal capsules	791	0	1,407	168	126	0	2,747	0	1,282	378	441	42	579	0	0
Rabbit anti-human thymocyte immunoglobulin	0	3,810	0	0	0	0	0	168,614	0	0	0	0	0	0	0
Sevelamer carbonate powder	1,052	1,620	1,921	234	167	401	0	3,496	0	0	245	0	0	0	0
Sodium oxybate oral solution	0	0	0	25,200	0	41,472	11,880	0	0	0	0	0	0	0	0
Tapentadol film coated tablets/oral solutions	7,864	34	5,344	410	4,146	30	937	0	2,444	119	10,204	134	566	0	0
Tocofersolan oral solution	0	0	1,964	10,613	4,165	0	1,632	0	0	0	55	0	0	0	0
Trametinib film coated tablets	0	11,674	0	0	0	0	0	0	0	0	0	0	0	0	0
Vildagliptin/metformin tablets	13,803	0	22,902	38	1,993	0	23,207	195	2,739	0	20,829	0	420	0	0
Vismodegib capsules	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52,794
Total	86,486	80,342	65,416	118,974	41,828	106,204	115,801	240,635	13,116	38,214	76,038	85,001	15,533	164	54,673
Spend per 100,000 population	15,758		10,941		5,924		22,573		4,307		19,444		11,234		

Other medicines with Statements of Advice issued have not been included if their spend for 2015–2016 was below £1,000 to ease presentation in the above table.