All Wales Therapeutics and Toxicology Centre
Canolfan Therapiwteg a Thocsicoleg Cymru Gyfan

National Prescribing Indicators 2016–2017

Analysis of Prescribing Data to March 2017

All Wales Therapeutics and Toxicology Centre

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

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EXECUTIVE SUMMARY

The All Wales Medicines Strategy Group (AWMSG) has endorsed the National Prescribing Indicators (NPIs) as a means of promoting safe and cost-effective prescribing since 2003. NPIs have historically focused on primary care prescribing; however, in 2015 a set of secondary care NPIs were developed by the All Wales Prescribing Advisory Group (AWPAG) and launched by AWMSG for use in 2016–2017. This report contains data relating to the primary and secondary care NPIs for the final quarter of 2016–2017.

Background information supporting the choice of NPIs is detailed in the documents National Prescribing Indicators 2016–2017 and Secondary Care National Prescribing Indicators 2016–2017, available from the AWMSG website.

PRIMARY CARE

- For 2016–2017, there are 13 primary care NPIs focusing on seven areas of prescribing and the reporting of adverse events (Yellow Cards)[*]. Two of the indicators, lipid-regulating drugs and gabapentin and pregabalin, are new for 2016–2017.
- A threshold level of prescribing/reporting is set for 12 of the 13 NPIs[*].

  Of the 12 NPIs with a threshold, there was an overall improvement (in line with the aim of each indicator) across Wales in 10 NPIs, compared to the equivalent quarter of the previous year (quarter ending March 2016). The NPIs that did not show an improvement were proton pump inhibitors (0.18% increase) and gabapentin and pregabalin (12.6% increase).
- At a national level, the NPIs associated with the largest improvements in prescribing compared to the equivalent quarter of the previous year were co-amoxiclav (items per 1,000 patients) (10.6% reduction), cephalosporins (items per 1,000 patients) (10.3% reduction), total antibacterial items (ADQs per 1,000 STAR-PUs) (7.00% reduction) and NSAIDs (ADQs per 1,000 STAR-PUs) (6.84% reduction).
- The number of Yellow Cards submitted by GPs increased by 92%, compared to the equivalent quarter of the previous year. In addition, the number of Yellow Cards submitted by health boards increased by 50% for the same period.
- In line with the aim of the NPI, hypnotic and anxiolytic prescribing decreased across all of the health boards compared to the equivalent quarter of the previous year. The largest decrease of 12.8% was seen in Cardiff and Vale UHB.
- Prescribing of tramadol decreased in all of the health boards compared to the equivalent quarter of the previous year (in line with the aim of the NPI). The largest decrease of 7.33% was seen in Cwm Taf UHB.

[*] For full details, including unit of measure and target for each NPI please see Appendix 1. For primary care NPI prescribing data for GP clusters please see Appendix 2.

SECONDARY CARE

- For 2016–2017, there are three secondary care NPIs focusing on three areas of prescribing:
  - Insulin prescribing
  - Prescribing of biosimilars
  - Antibiotic surgical prophylaxis*
- Baseline data for quarter ending March 2016 are also provided to enable comparison with the previous year.
- For two of the NPIs (insulin prescribing and biosimilars), primary care data are also provided to facilitate a more comprehensive analysis.
- Prescribing of long-acting insulin analogues decreased in secondary care compared to the equivalent quarter of the previous year (in line with the aim of the NPI); there was also a decrease in primary care usage. The largest decrease of 18.8% was seen in Cwm Taf UHB.
- In line with the aim of the NPI, proportion of filgrastim, infliximab and insulin glargine biosimilar prescribing increased when compared to the equivalent quarter of the previous year.
- Data for duration of colorectal surgical antibiotic prophylaxis indicate that there has been a 5% decrease in the percentage of patients in Wales receiving prophylaxis for greater than 24 hours (in line with the aim of the indicator) between quarter ending March 2017 and the previous quarter ending December 2016.

The 2017–2018 NPI report for quarter ending June 2017 will be available on 23 October 2017.

* For full details, including unit of measure and threshold for each NPI please see Appendix 1.

CONTENTS

PRACTICES ACHIEVING INDICATOR THRESHOLDS

The tables below show the extent to which practices in each health board met the indicator thresholds:

- The figure in the cell is the number of practices in each health board meeting the indicator threshold.
- The percentage figure and cell colour represent the proportion of practices in each health board meeting the indicator threshold.

Practices achieving the indicator threshold – Quarter ending March 2017

Indicator Description	ABMU	Aneurin Bevan	BCU	Cardiff and Vale	Cwm Taf	Hywel Dda	Powys
Proton pump inhibitor DDDs per 1,000 PUs	22 30%	21 26%	28 25%	37 56%	11 26%	27 50%	4 24%
Lipid-regulating BNF 2.12 subset as % of total lipid-regulating items	23 32%	10 13%	34 31%	18 27%	7 16%	22 41%	8 47%
Low strength ICS items as % of all ICS	14 19%	24 30%	79 72%	50 76%	13 30%	10 19%	10 59%
Hypnotic and anxiolytic ADQs per 1,000 STAR-PUs	22 30%	31 39%	31 28%	38 58%	13 30%	9 17%	8 47%
Tramadol DDDs per 1,000 patients	16 22%	27 34%	35 32%	29 44%	7 16%	16 30%	14 82%
Gabapentin and pregabalin DDDs per 1,000 patients	6 8%	4 5%	20 18%	32 48%	2 5%	11 20%	5 29%
Co-amoxiclav items per 1,000 patients	14 19%	19 24%	42 38%	34 52%	10 23%	4 7%	8 47%
Co-amoxiclav items as % of antibacterial items	11 15%	19 24%	43 39%	24 36%	11 26%	3 6%	2 12%
Cephalosporin items per 1,000 patients	25 34%	33 41%	15 14%	48 73%	6 14%	13 24%	8 47%
Cephalosporin items as % of antibacterial items	28 38%	38 48%	15 14%	46 70%	5 12%	15 28%	9 53%
Fluoroquinolone items per 1,000 patients	12 16%	37 46%	20 18%	27 41%	14 33%	7 13%	6 35%
Fluoroquinolone items as % of antibacterial items	11 15%	37 46%	24 22%	23 35%	16 37%	9 17%	4 24%
NSAID ADQs per 1,000 STAR-PUs	24 33%	31 39%	52 47%	34 52%	14 33%	17 31%	6 35%
Ibuprofen and naproxen items as % of NSAID items	10 14%	30 38%	40 36%	30 45%	29 67%	15 28%	5 29%

Practices achieving the indicator threshold – Full year 2016–2017

Yellow Card reporting	33 45%	41 50%	28 25%	32 49%	4 10%	11 20%	5 29%

PRIMARY CARE

1.0 PROTON PUMP INHIBITORS

Purpose: To encourage appropriate use of proton pump inhibitors (PPIs).

Unit of measure: PPI DDDs per 1,000 PUs.

Aim: To reduce prescribing

In the quarter to March 2017, PPI prescribing (DDDs per 1,000 PUs) in Wales was 14% higher than that seen in England.

- For the quarter ending March 2017, PPI usage ranged from 6,519 to 7,386 DDDs per 1,000 PUs across the health boards.
- The health board with the lowest prescribing was Cardiff and Vale UHB whilst the highest prescribing was seen in Betsi Cadwaladr UHB.
- Three out of the seven health boards demonstrated a reduction in prescribing, compared to the equivalent quarter of the previous year. Betsi Cadwaladr UHB demonstrated the largest decrease in prescribing.
- Cwm Taf UHB demonstrated the greatest increase in prescribing.

Table 1. PPI DDDs per 1,000 PUs

	2015–2016 Qtr 4	2016–2017 Qtr 4	% Change
Betsi Cadwaladr	7,595	7,386	-2.75%
Cardiff and Vale	6,591	6,519	-1.10%
Aneurin Bevan	7,349	7,309	-0.55%
Powys	6,928	7,001	1.05%
ABMU	6,811	6,957	2.14%
Hywel Dda	6,467	6,639	2.66%
Cwm Taf	6,778	7,081	4.46%
Wales	**7,015**	**7,027**	**0.18%**

Figure 1. Trend in PPI prescribing DDDs per 1,000 PUs

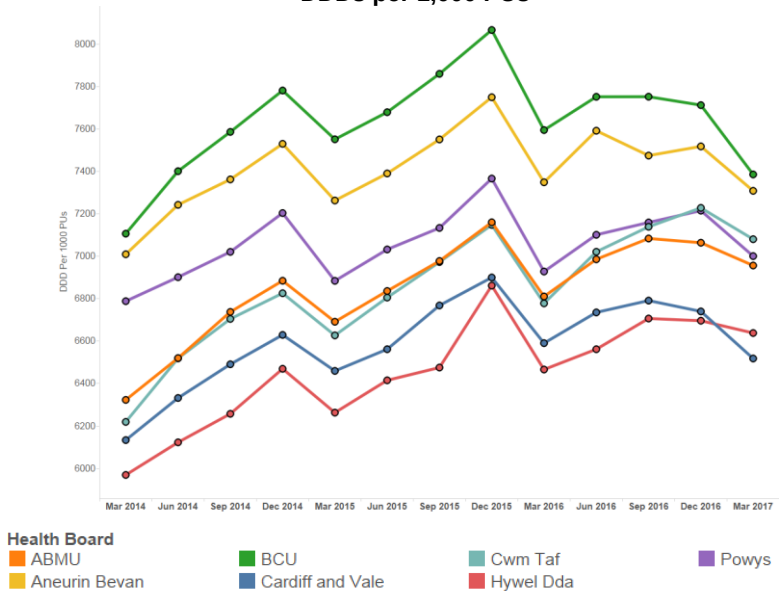
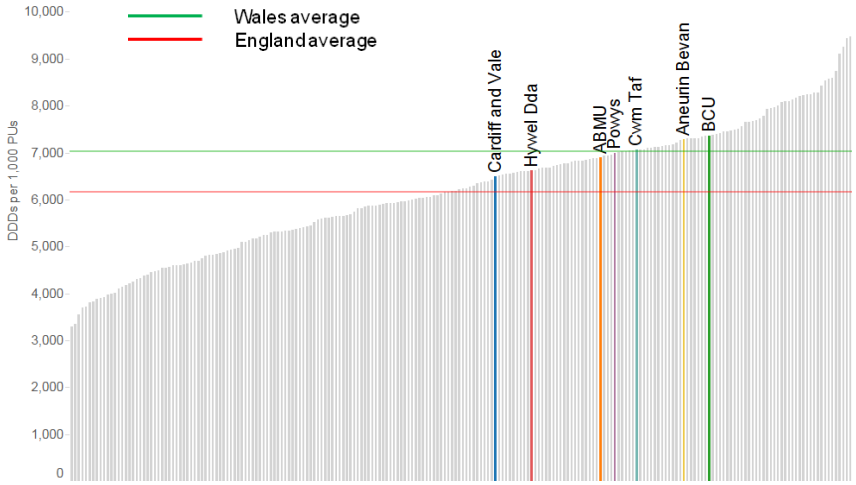


Figure 2. PPI prescribing in Welsh health boards and English CCGs – Quarter ending March 2017



2.0 LIPID-REGULATING DRUGS

Purpose: To encourage prescribers to review prescribing of certain lipid-regulating medicines – bile acid sequestrants, fibrates, nicotinic acid and omega-3 fatty acid compounds – to ensure it is in line with NICE guidance.

Unit of measure: Number of prescription items of bile acid sequestrants, fibrates, nicotinic acid and omega-3 fatty acid compounds as a percentage of the total number of lipid-regulating items.

Aim: To reduce prescribing

- For the quarter ending March 2017, the percentage of bile acid sequestrants, fibrates, nicotinic acid and omega-3 fatty acid compounds prescribed ranged from 1.74% to 3.22% across the health boards.
- The health board with the lowest percentage was Powys Teaching HB, whilst the highest percentage was seen in Cwm Taf UHB.
- The proportion of bile acid sequestrant, fibrate, nicotinic acid and omega-3 fatty acid compound prescribing decreased compared to the equivalent quarter of the previous year in all seven health boards.
- The largest decrease was seen in Powys Teaching HB and the smallest decrease was seen in Cwm Taf UHB.

Table 2. Items of bile acid sequestrants, fibrates, nicotinic acid and omega-3 fatty acid compounds as a percentage of total lipid-regulating items

	2015–2016 Qtr 4	2016–2017 Qtr 4	% Change
Powys	2.06	1.74	-15.7%
Cardiff and Vale	2.65	2.29	-13.5%
Aneurin Bevan	2.96	2.72	-8.07%
Hywel Dda	2.16	2.01	-6.97%
ABMU	2.48	2.36	-4.98%
Betsi Cadwaladr	2.39	2.33	-2.69%
Cwm Taf	3.29	3.22	-2.21%
Wales	**2.62**	**2.45**	**-6.45%**

Figure 3. Trend in prescribing of bile acid sequestrants, fibrates, nicotinic acid and omega-3 fatty acid compounds as a percentage of total lipid-regulating items

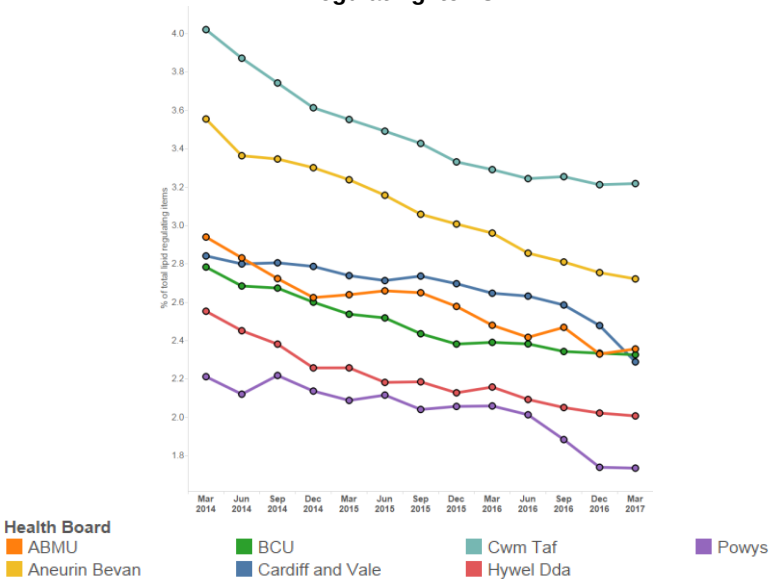
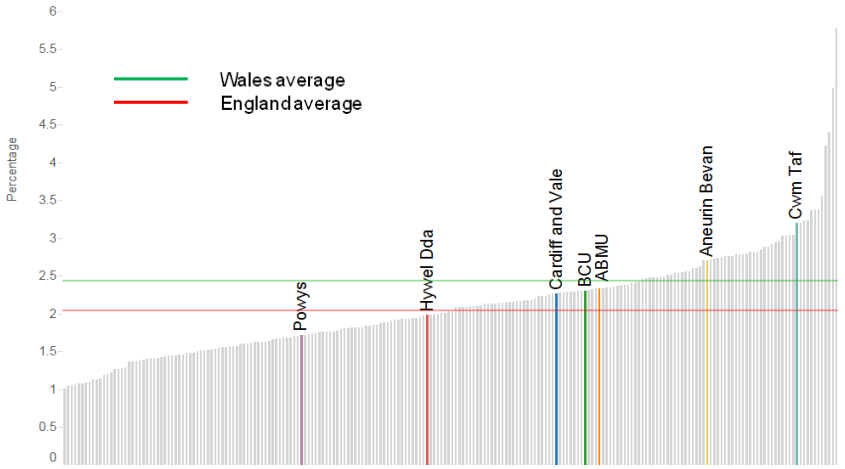


Figure 4. Bile acid sequestrants, fibrates, nicotinic acid and omega-3 fatty acid compounds as a percentage of total lipid-regulating items in Welsh health boards and English CCGs – Quarter ending March 2017



3.0 INHALED CORTICOSTEROIDS

Purpose: To encourage the routine review of inhaled corticosteroids (ICS) in people with asthma, particularly those on high strengths, encouraging step down of the strength when clinically appropriate.

Unit of measure: Low strength ICS items as a percentage of all ICS prescribing.

Aim: To increase prescribing

- For the quarter ending March 2017, the proportion of low-strength ICS prescribing ranged from 52.3% to 65.6% across the health boards.
- The health board with the highest percentage was Cardiff and Vale UHB, whilst the lowest percentage was seen in Abertawe Bro Morgannwg UHB.
- The proportion of low-strength ICS prescribing increased across all health boards compared to the equivalent quarter of the previous year.
- The greatest increase was seen in Cwm Taf UHB, and the smallest increase was seen in Hywel Dda UHB.

Table 3. Low-strength ICS prescribing as a percentage of all ICS prescribing

	2015–2016 Qtr 4	2016–2017 Qtr 4	% Change
Cwm Taf	53.8	56.4	4.81%
Powys	61.3	64.0	4.36%
Betsi Cadwaladr	63.0	64.9	2.97%
Cardiff and Vale	63.8	65.6	2.75%
Aneurin Bevan	54.7	56.1	2.56%
ABMU	51.1	52.3	2.44%
Hywel Dda	52.6	53.7	2.06%
Wales	**57.0**	**58.7**	**3.01%**

Figure 5. Trend in low-strength ICS prescribing as a percentage of all ICS prescribing

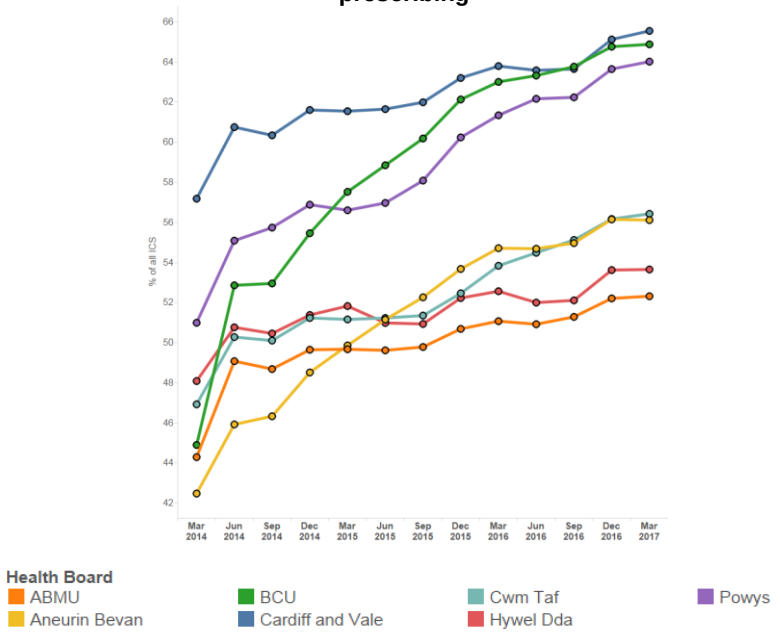
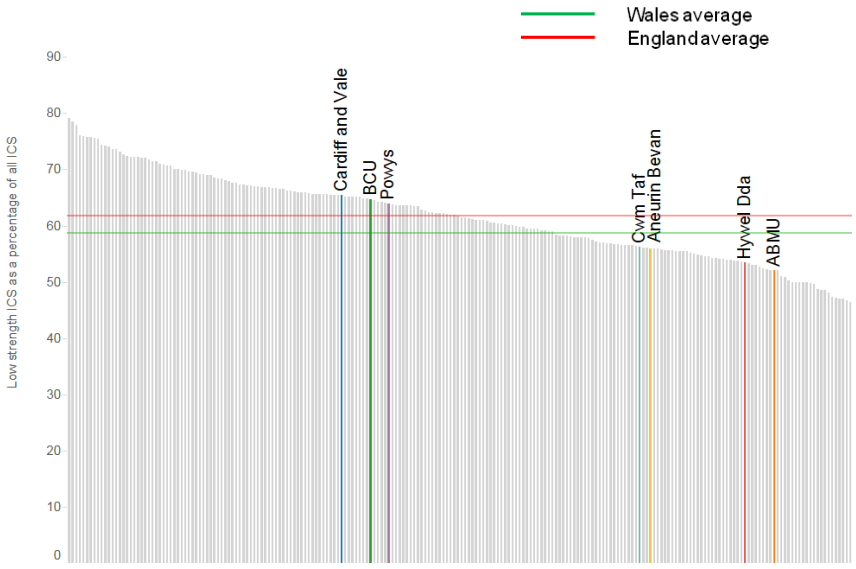


Figure 6. Low-strength ICS prescribing in Welsh health boards and English CCGs – Quarter ending March 2017



4.0 HYPNOTICS AND ANXIOLYTICS

Purpose: To encourage a reduction in the inappropriate prescribing of hypnotics and anxiolytics.

Unit of measure: Hypnotic and anxiolytic ADQs per 1,000 STAR-PUs.

Aim: To reduce prescribing

- For the quarter ending March 2017, hypnotic and anxiolytic prescribing ranged from 2,249 to 3,695 ADQs per 1,000 STAR-PUs across the health boards.
- The health board with the lowest prescribing was Powys Teaching HB, whilst the highest prescribing was seen in Cwm Taf UHB.
- Hypnotic and anxiolytic prescribing decreased compared to the equivalent quarter of the previous year in all of the health boards.
- The largest decrease was seen in Cardiff and Vale UHB, and the smallest decrease was seen in Powys Teaching HB.

Table 4. Hypnotic and anxiolytic ADQs per 1,000 STAR-PUs

	2015–2016 Qtr 4	2016–2017 Qtr 4	% Change
Cardiff and Vale	2,601	2,269	-12.8%
Betsi Cadwaladr	3,610	3,348	-7.28%
Aneurin Bevan	3,400	3,183	-6.40%
Hywel Dda	3,591	3,390	-5.59%
Cwm Taf	3,909	3,695	-5.47%
ABMU	3,414	3,255	-4.67%
Powys	2,312	2,249	-2.74%
Wales	**3,359**	**3,315**	**-6.66%**

Figure 7. Trend in hypnotic and anxiolytic prescribing ADQs per 1,000 STAR-PUs

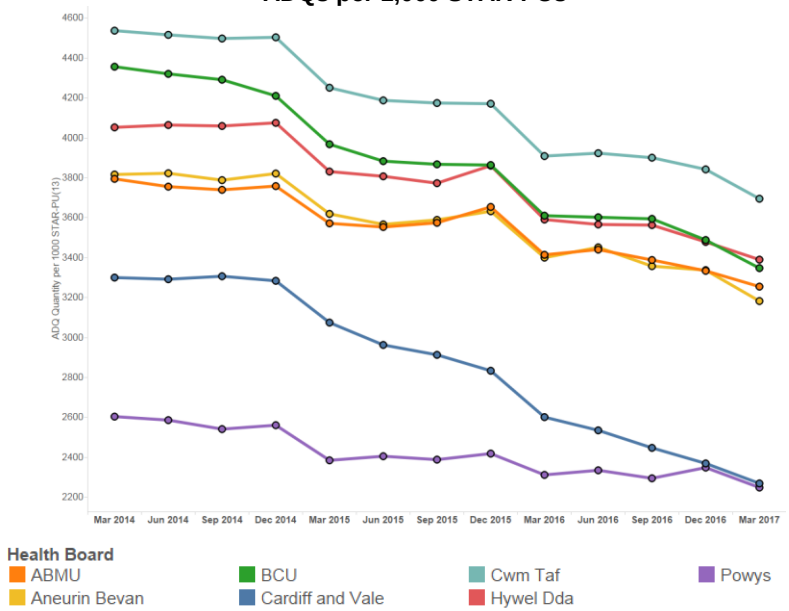
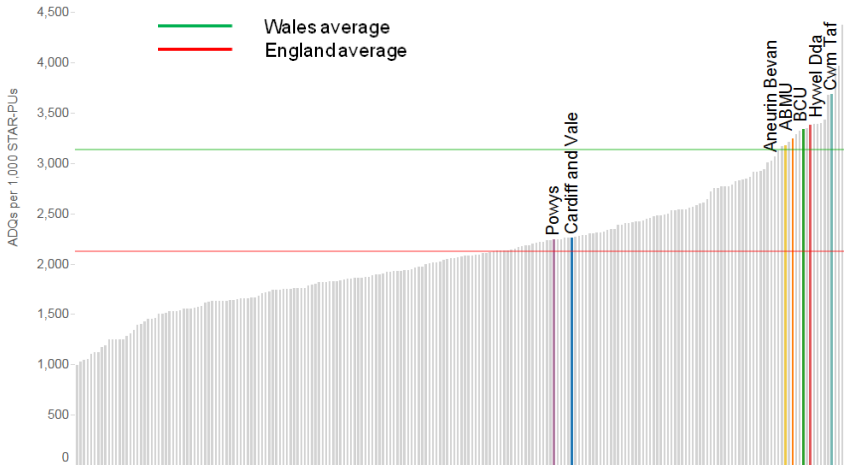


Figure 8. Hypnotic and anxiolytic prescribing in Welsh health boards and English CCGs – Quarter ending March 2017



5.0 ANALGESICS

5.1 Tramadol

Purpose: To encourage the appropriate use and review of tramadol, minimising the potential for diversion and misuse.

Unit of measure: Tramadol DDDs per 1,000 patients.

Aim: To reduce prescribing

From March 2016 to March 2017, prescribing of tramadol decreased across Wales, in line with the aim of this indicator.

- For the quarter ending March 2017, tramadol prescribing ranged from 410 to 715 DDDs per 1,000 patients across the health boards.
- The health board with the lowest prescribing was Powys Teaching HB, whilst the highest prescribing was seen in Cwm Taf UHB.
- Tramadol prescribing decreased compared to the equivalent quarter of the previous year in all of the health boards.
- The largest decrease was seen in Cwm Taf UHB and the smallest decrease was seen in Cardiff and Vale UHB.

Table 5. Tramadol DDDs per 1,000 patients

	2015–2016 Qtr 4	2016–2017 Qtr 4	% Change
Cwm Taf	772	715	-7.33%
Aneurin Bevan	657	610	-7.18%
Powys	437	410	-6.34%
Hywel Dda	698	662	-5.22%
ABMU	720	685	-4.84%
Betsi Cadwaladr	664	635	-4.50%
Cardiff and Vale	591	580	-1.90%
Wales	**665**	**631**	**-5.16%**

Figure 9. Trend in tramadol prescribing DDDs per 1,000 patients

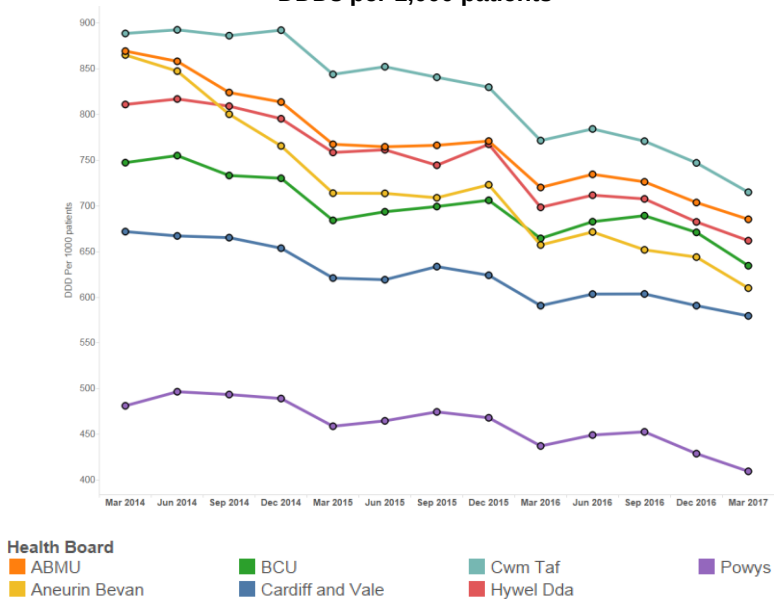
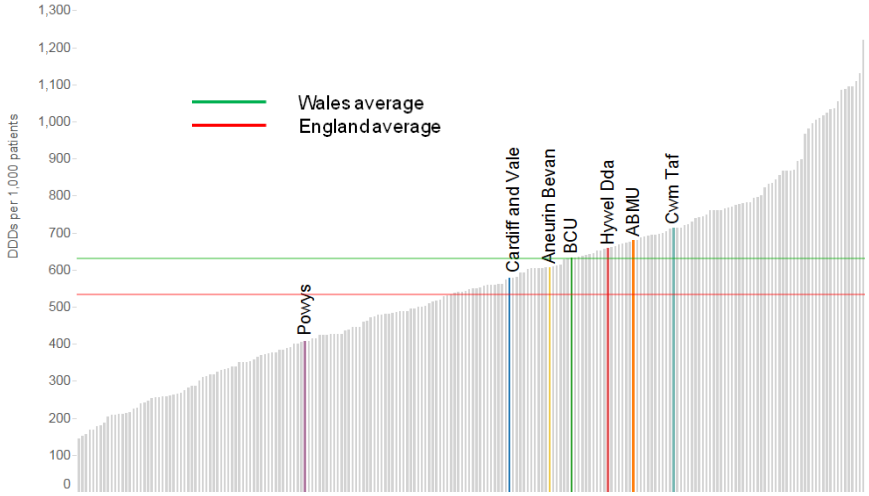


Figure 10. Tramadol prescribing in Welsh health boards and English CCGs – Quarter ending March 2017



5.2 Gabapentin and pregabalin

Purpose: To encourage the appropriate use and review of gabapentin and pregabalin, minimising the potential for diversion and misuse.

Unit of measure: Gabapentin and pregabalin DDDs per 1,000 patients.

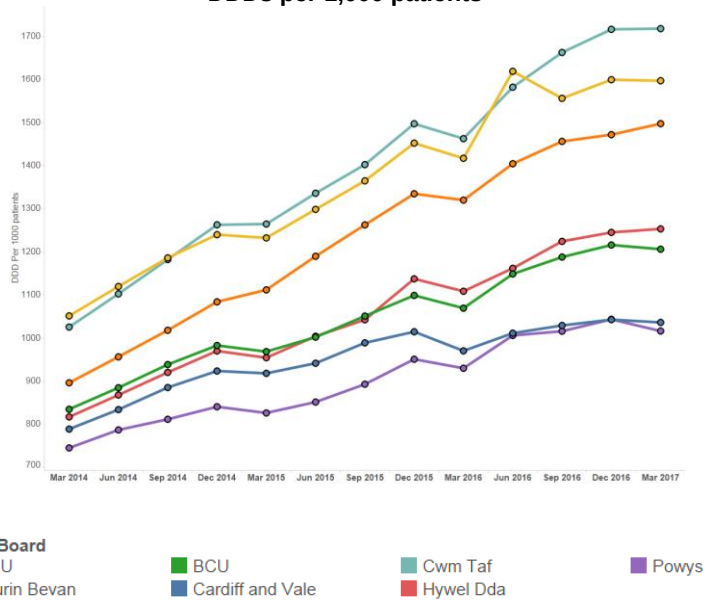
Aim: To reduce prescribing

- For the quarter ending March 2017, gabapentin and pregabalin prescribing ranged from 1,016 to 1,718 DDDs per 1,000 patients across the health boards.
- The health board with the lowest prescribing was Powys HB, whilst the highest prescribing was seen in Cwm Taf UHB.
- Gabapentin and pregabalin prescribing increased compared to the equivalent quarter of the previous year in all of the health boards.
- The smallest increase was seen in Cardiff and Vale UHB and the largest increase was seen in Cwm Taf UHB.

Table 6. Gabapentin and pregabalin DDDs per 1,000 patients

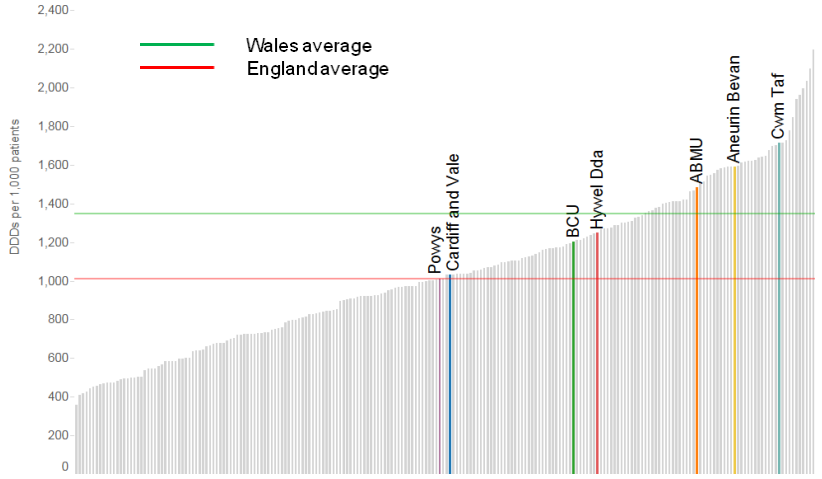
	2015–2016 Qtr 4	2016–2017 Qtr 4	% Change
Cardiff and Vale	970	1,036	6.81%
Powys	929	1,016	9.29%
Aneurin Bevan	1,417	1,597	12.7%
Betsi Cadwaladr	1,069	1,206	12.8%
Hywel Dda	1,108	1,253	13.1%
ABMU	1,320	1,497	13.4%
Cwm Taf	1,462	1,718	17.5%
Wales	**1,197**	**1,348**	**12.6%**

Figure 11. Trend in gabapentin and pregabalin prescribing DDDs per 1,000 patients



Note: DDDs per 1,000 patients for Aneurin Bevan UHB Qtr 1 2016–2017 should be 1,530 rather than 1,619 as reported.

Figure 12. Gabapentin and pregabalin prescribing in Welsh health boards and English CCGs – Quarter ending March 2017



6.0 ANTIBIOTICS

Purpose: To encourage the appropriate prescribing of antibiotics.

6.1 Total antibacterial items

Unit of measure: Total antibacterial items per 1,000 STAR-PUs.

Aim: To reduce prescribing

No target is set for this indicator due to seasonal variations in prescribing, although a reduction in prescribing year on year is encouraged, with measurement based on data for quarter ending December.

- For the quarter ending March 2017, the total number of antibacterial items per 1,000 STAR-PUs ranged from 284 to 372 across the health boards.
- The health board with the lowest prescribing was Powys Teaching HB, whilst the highest prescribing was seen in Cwm Taf UHB.
- Abertawe Bro Morgannwg UHB demonstrated the greatest reduction in prescribing compared to the equivalent quarter of the previous year.
- Cwm Taf UHB demonstrated the smallest reduction in prescribing, compared to the equivalent quarter of the previous year.

Table 7. Total antibacterial items per 1,000 STAR-PUs

	2015–2016 Qtr 4	2016–2017 Qtr 4	% Change
ABMU	393	350	-10.7%
Aneurin Bevan	369	339	-8.11%
Hywel Dda	372	345	-7.07%
Betsi Cadwaladr	359	335	-6.70%
Cardiff and Vale	331	311	-5.98%
Powys	291	284	-2.20%
Cwm Taf	378	372	-1.59%
Wales	**363**	**337**	**-7.00%**

Figure 13. Trend in antibacterial prescribing items per 1,000 STAR-PUs

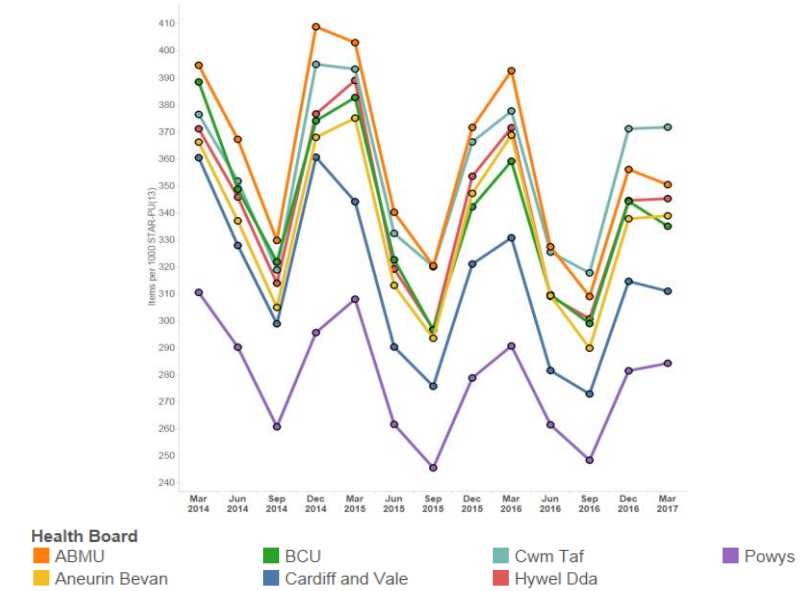
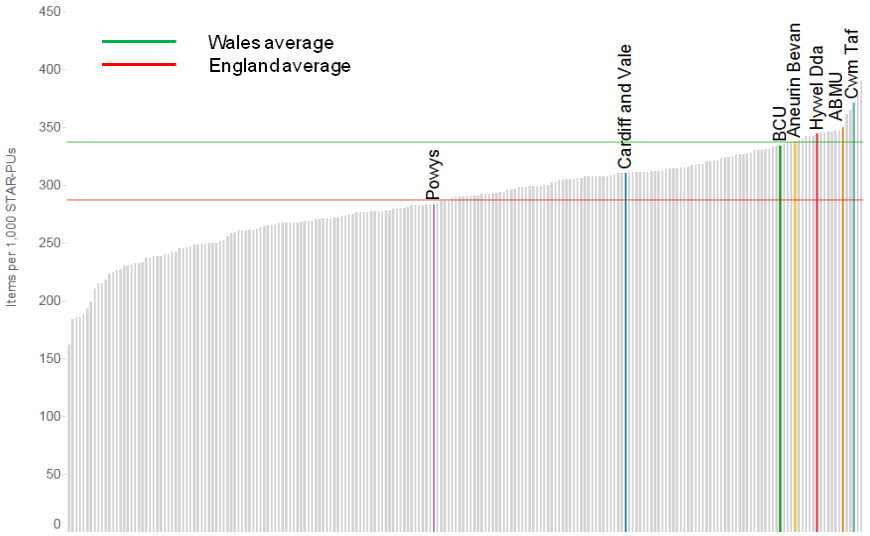


Figure 14. Antibacterial prescribing in Welsh health boards and English CCGs – Quarter ending March 2017



6.2 Co-amoxiclav, cephalosporins and fluoroquinolones

Unit of measure: Each of these antibacterial indicators is monitored using two measures:

1. Items as a percentage of total antibacterial items
2. Items per 1,000 patients

Aim: To reduce prescribing

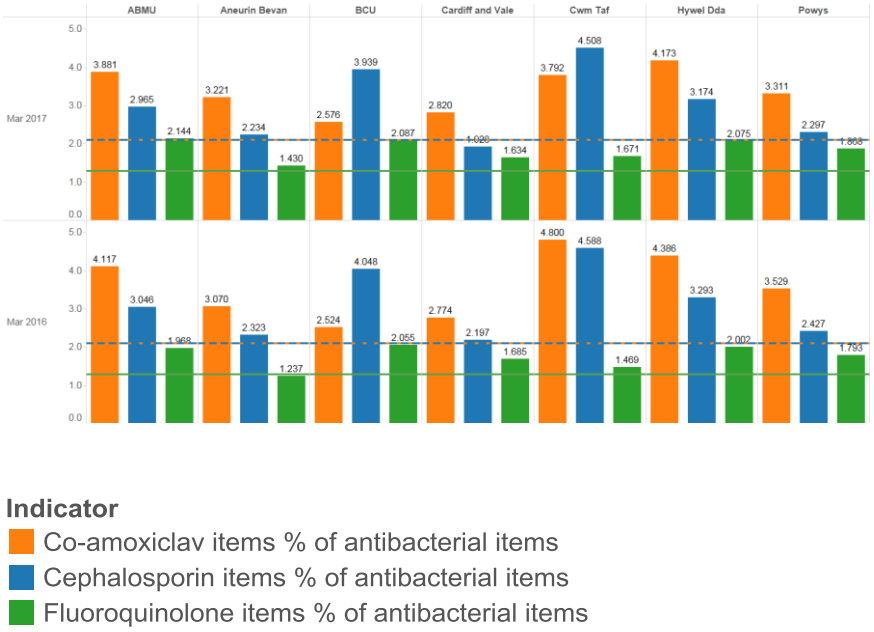
Prescribing of co-amoxiclav, cephalosporins and fluoroquinolones are monitored, as these antibacterials are associated with an increased risk of *Clostridium difficile* infection.

6.2.1 Co-amoxiclav, cephalosporins and fluoroquinolones as a percentage of total antibacterial items

From March 2016 to March 2017, the number of items of co-amoxiclav and cephalosporins as a percentage of all antibacterial prescribing decreased across Wales, in line with the aim of this indicator. During the same period, the number of items of fluoroquinolones as a percentage of all antibacterial prescribing increased across Wales.

- The proportion of co-amoxiclav prescribing decreased, compared to the equivalent quarter of the previous year, in four out of the seven health boards. The largest decrease was seen in Cwm Taf UHB (21.0%), and the greatest increase was seen in Aneurin Bevan UHB (4.91%).
- The proportion of cephalosporin prescribing decreased, compared to the equivalent quarter of the previous year, in all seven health boards. The largest decrease was seen in Cardiff and Vale UHB (12.2%), and the smallest decrease was seen in Cwm Taf UHB (1.74%).
- The proportion of fluoroquinolone prescribing decreased, compared to the equivalent quarter of the previous year, in one out of the seven health boards. Cardiff and Vale UHB demonstrated a decrease of 3.03%. The largest increase was seen in Aneurin Bevan UHB (15.6%).

Figure 15. Co-amoxiclav, cephalosporins and fluoroquinolones as a percentage of total antibacterial prescribing



6.2.2 Co-amoxiclav items per 1,000 patients

From March 2016 to March 2017 prescribing of co-amoxiclav items per 1,000 patients decreased across Wales by 10.6%, in line with the aim of this indicator.

- For the quarter ending March 2017, co-amoxiclav prescribing ranged from 4.76 to 8.49 items per 1,000 patients across the health boards.
- The health board with the lowest prescribing was Cardiff and Vale UHB, whilst the highest prescribing was seen in Hywel Dda UHB.
- Co-amoxiclav prescribing decreased compared to the equivalent quarter of the previous year in all of the seven health boards.
- The largest decrease was seen in Cwm Taf UHB, and the smallest decrease was seen in Aneurin Bevan UHB.

Table 8. Co-amoxiclav items per 1,000 patients

	2015–2016 Qtr 4	2016–2017 Qtr 4	% Change
Cwm Taf	10.2	7.93	-22.2%
ABMU	9.20	7.73	-16.0%
Hywel Dda	9.57	8.49	-11.3%
Powys	6.16	5.67	-7.93%
Cardiff and Vale	4.99	4.76	-4.73%
Betsi Cadwaladr	5.27	5.03	-4.63%
Aneurin Bevan	6.42	6.19	-3.47%
Wales	**7.14**	**6.39**	**-10.6%**

Figure 16. Trend in co-amoxiclav prescribing items per 1,000 patients

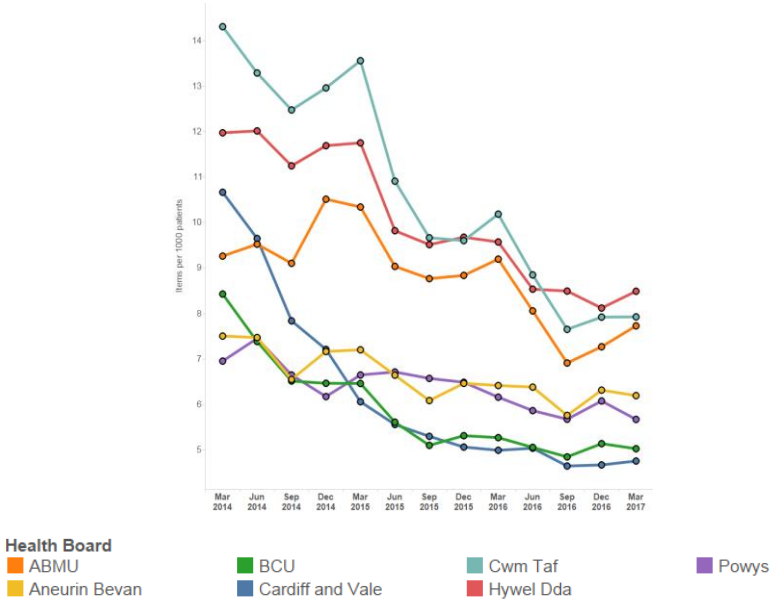
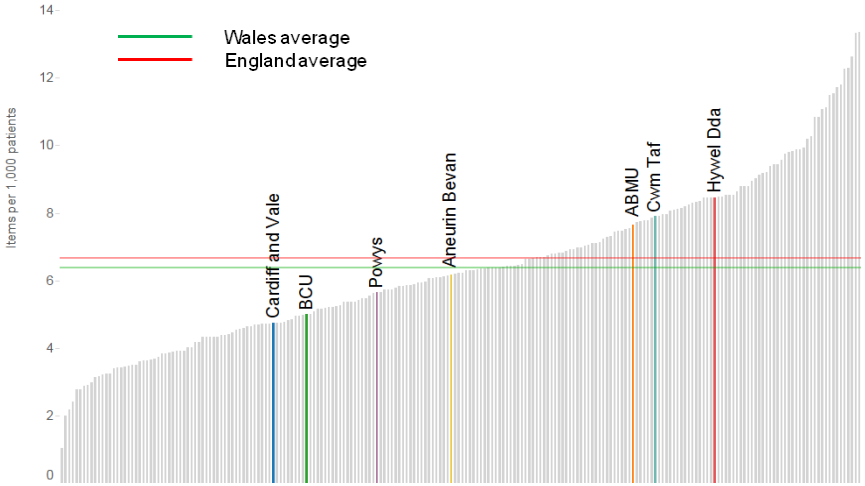


Figure 17. Co-amoxiclav prescribing in Welsh health boards and English CCGs – Quarter ending March 2017



6.2.3 Cephalosporin items per 1,000 patients

From March 2016 to March 2017 prescribing of cephalosporin items per 1,000 patients decreased across Wales by 10.3%, in line with the aim of this indicator.

- For the quarter ending March 2017, cephalosporin prescribing ranged from 3.25 to 9.42 items per 1,000 patients across the health boards.
- The health board with the lowest prescribing was Cardiff and Vale UHB, whilst the highest prescribing was seen in Cwm Taf UHB.
- Cephalosporin prescribing decreased compared to the equivalent quarter of the previous year in all of the seven health boards.
- The largest decrease was seen in Cardiff and Vale UHB, and the smallest decrease was seen in Cwm Taf UHB.

Table 9. Cephalosporins items per 1,000 patients

	2015–2016 Qtr 4	2016–2017 Qtr 4	% Change
Cardiff and Vale	3.95	3.25	-17.7%
ABMU	6.80	5.90	-13.2%
Aneurin Bevan	4.86	4.30	-11.5%
Hywel Dda	7.19	6.46	-10.2%
Betsi Cadwaladr	8.45	7.69	-9.04%
Powys	4.24	3.94	-7.13%
Cwm Taf	9.74	9.42	-3.22%
Wales	**6.56**	**5.88**	**-10.3%**

Figure 18. Trend in cephalosporin prescribing items per 1,000 patients

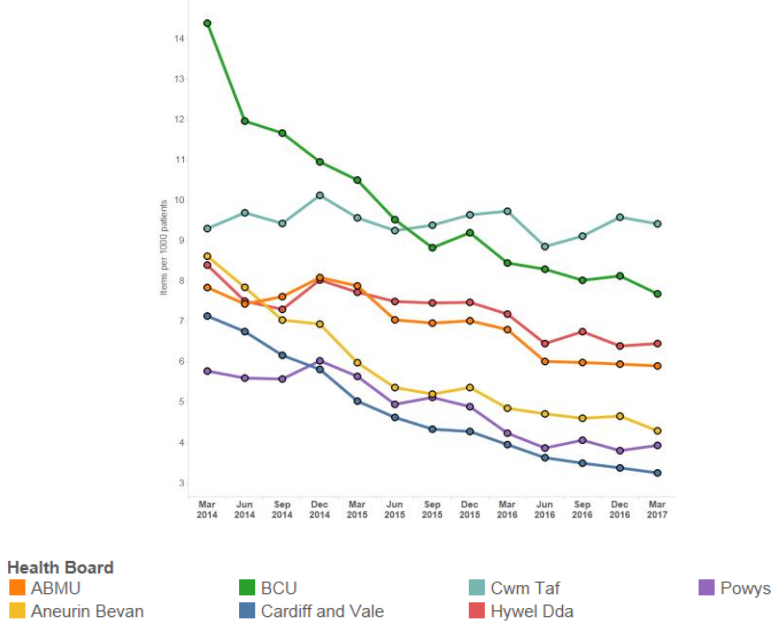
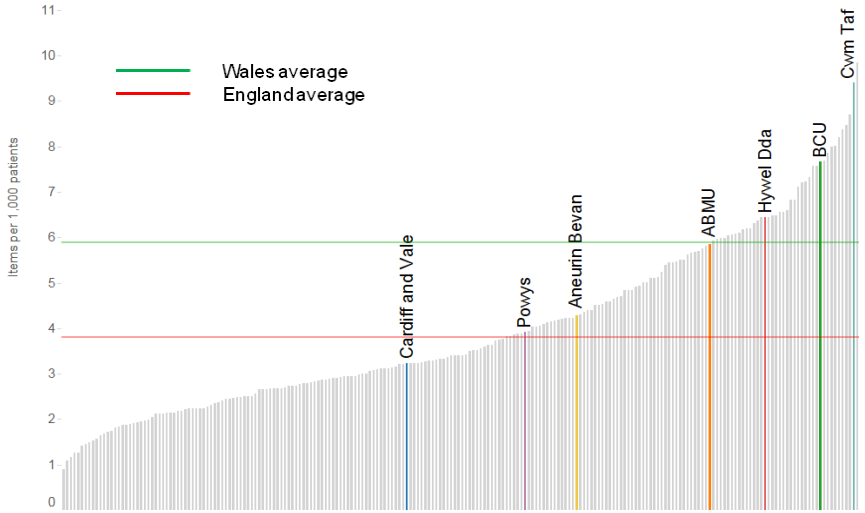


Figure 19. Cephalosporin prescribing in Welsh health boards and English CCGs – Quarter ending March 2017



6.2.4 Fluoroquinolone items per 1,000 patients

From March 2016 to March 2017, the prescribing of fluoroquinolone items decreased across Wales by 1.79%, in line with the aim of this indicator.

- For the quarter ending March 2017, fluoroquinolone prescribing ranged from 2.75 to 4.27 items per 1,000 patients across the health boards.
- The health board with the lowest prescribing was Aneurin Bevan UHB, whilst the highest prescribing was seen in Abertawe Bro Morgannwg UHB.
- Cardiff and Vale UHB demonstrated the greatest reduction in prescribing compared to the equivalent quarter of the previous year.
- Cwm Taf UHB demonstrated the largest increase in prescribing compared to the equivalent quarter of the previous year.

Table 10. Fluoroquinolone items per 1,000 patients

	2015–2016 Qtr 4	2016–2017 Qtr 4	% Change
Cardiff and Vale	3.03	2.76	-9.14%
Betsi Cadwaladr	4.29	4.07	-5.10%
Hywel Dda	4.37	4.22	-3.41%
ABMU	4.40	4.27	-2.87%
Powys	3.13	3.20	2.20%
Aneurin Bevan	2.59	2.75	6.35%
Cwm Taf	3.12	3.49	12.0%
Wales	**3.64**	**3.57**	**-1.79%**

Figure 20. Trend in fluoroquinolone prescribing items per 1,000 patients

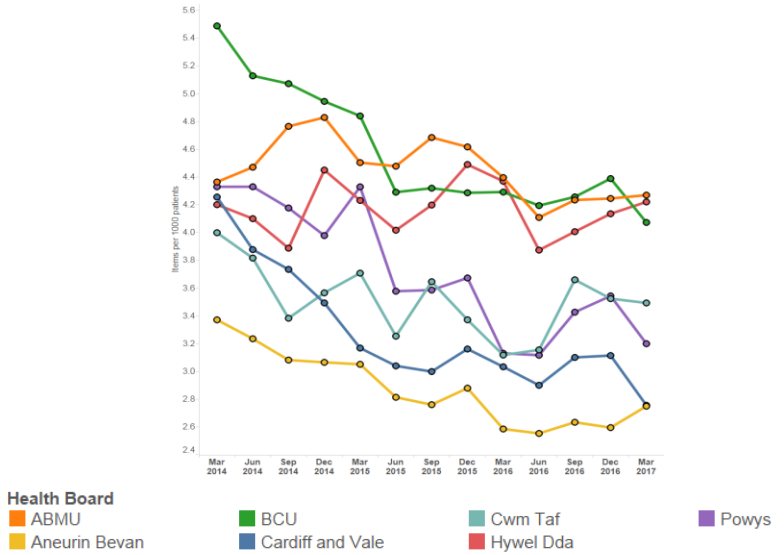
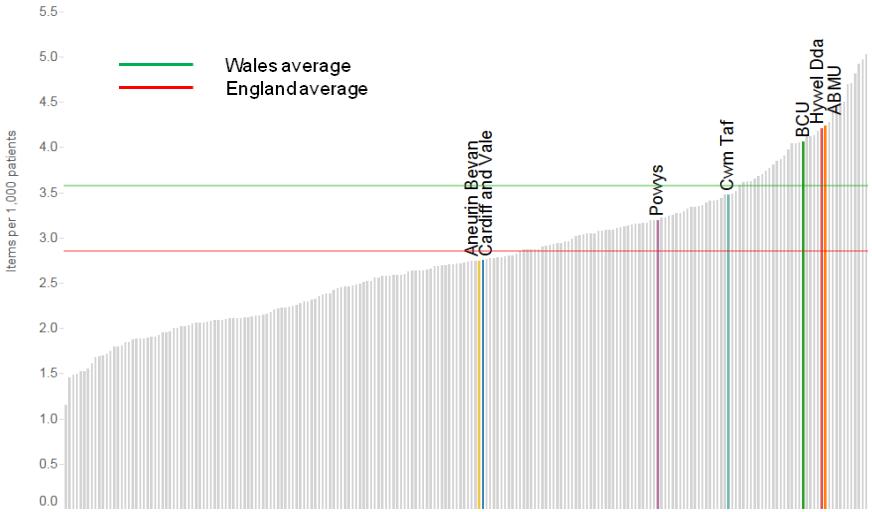


Figure 21. Fluoroquinolone prescribing in Welsh health boards and English CCGs – Quarter ending March 2017



7.0 NON-STEROIDAL ANTI-INFLAMMATORY DRUGS

Purpose: Ensure that the risks associated with non-steroidal anti-inflammatory drugs (NSAIDs) are minimised by appropriate choice and use.

7.1 All NSAIDs

Unit of measure: NSAID ADQs per 1,000 STAR-PUs.

Aim: To reduce prescribing

- For the quarter ending March 2017, total NSAID prescribing ranged from 1,387 to 1,728 ADQs per 1,000 STAR-PUs across the health boards.
- The health board with the lowest prescribing was Cardiff and Vale UHB, whilst the highest prescribing was seen in Cwm Taf UHB.
- Total NSAID prescribing decreased compared to the equivalent quarter of the previous year in all of the health boards.
- The largest decrease was seen in Cardiff and Vale UHB, and the smallest decrease was seen in Cwm Taf UHB.

Table 11. NSAID ADQs per 1,000 STAR-PUs

	2015–2016 Qtr 4	2016–2017 Qtr 4	% Change
Cardiff and Vale	1,569	1,387	-11.6%
Powys	1,562	1,414	-9.47%
ABMU	1,742	1,614	-7.31%
Betsi Cadwaladr	1,640	1,524	-7.02%
Aneurin Bevan	1,648	1,543	-6.35%
Hywel Dda	1,665	1,589	-4.58%
Cwm Taf	1,758	1,728	-1.69%
Wales	**1,659**	**1,546**	**-6.84%**

Figure 22. Trend in NSAID prescribing ADQs per 1,000 STAR-PUs

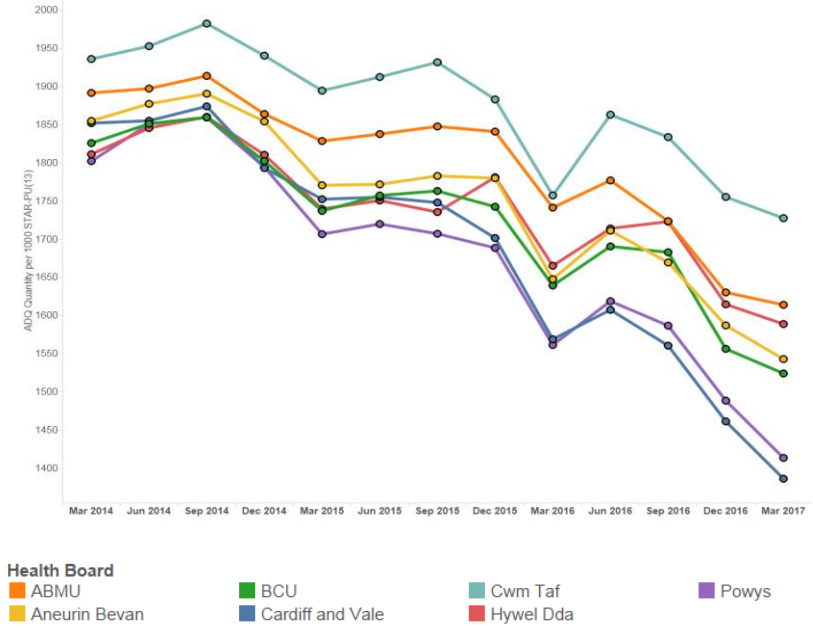
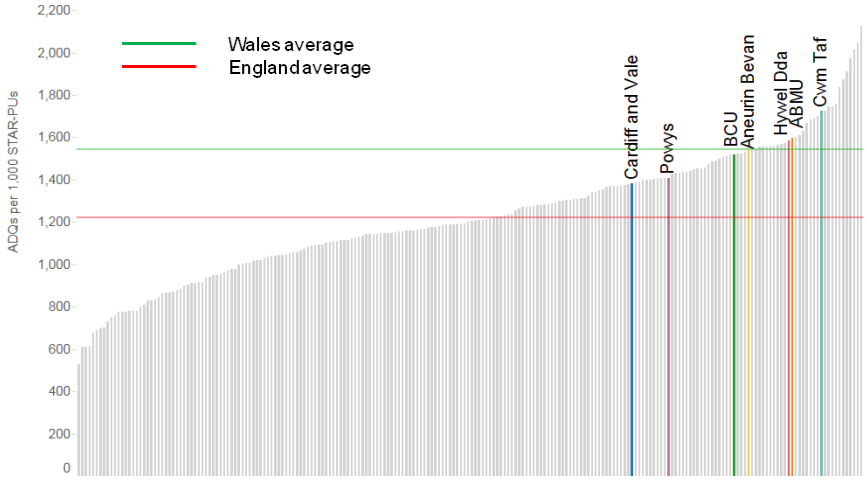


Figure 23. NSAID prescribing in Welsh health boards and English CCGs – Quarter ending March 2017



7.2 Ibuprofen and naproxen

Unit of measure: Ibuprofen and naproxen items as a percentage of NSAID prescribing.

Aim: To increase prescribing

- For the quarter ending March 2017, the proportion of ibuprofen and naproxen prescribing ranged from 79.2% to 85.2% across the health boards.
- The health board with the highest prescribing was Cwm Taf UHB, whilst the lowest prescribing was seen in Abertawe Bro Morgannwg UHB.
- The proportion of ibuprofen and naproxen prescribing increased compared to the equivalent quarter of the previous year in six out of the seven health boards.
- The largest increase was seen in Aneurin Bevan UHB, whilst Powys Teaching HB demonstrated a reduction in the proportion of ibuprofen and naproxen prescribing.

Table 12. Ibuprofen and naproxen as a percentage of NSAID prescribing

	2015–2016 Qtr 4	2016–2017 Qtr 4	% Change
Aneurin Bevan	82.2	83.3	1.33%
Betsi Cadwaladr	81.7	82.0	0.41%
Hywel Dda	82.0	82.2	0.16%
ABMU	79.1	79.2	0.13%
Cwm Taf	85.1	85.2	0.06%
Cardiff and Vale	84.1	84.1	0.04%
Powys	83.3	83.2	-0.11%
Wales	**82.1**	**82.4**	**0.41%**

Figure 24. Trend in ibuprofen and naproxen prescribing as a percentage of NSAID prescribing

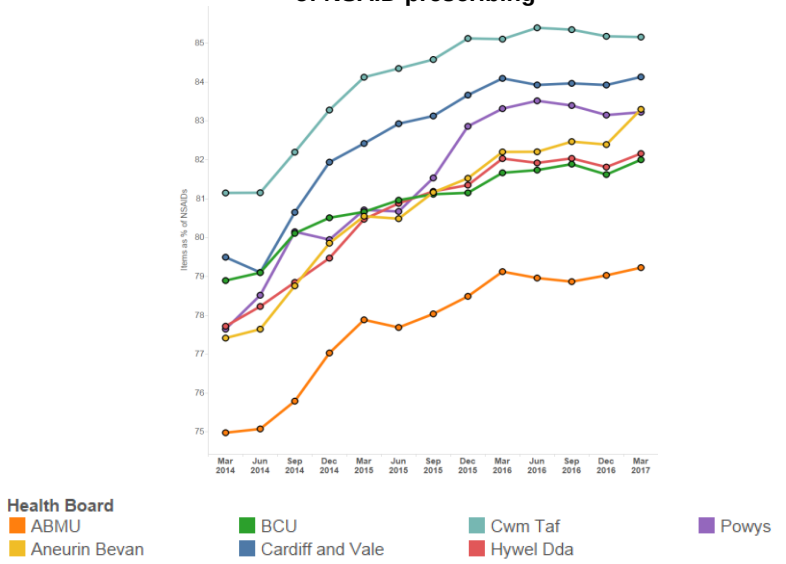
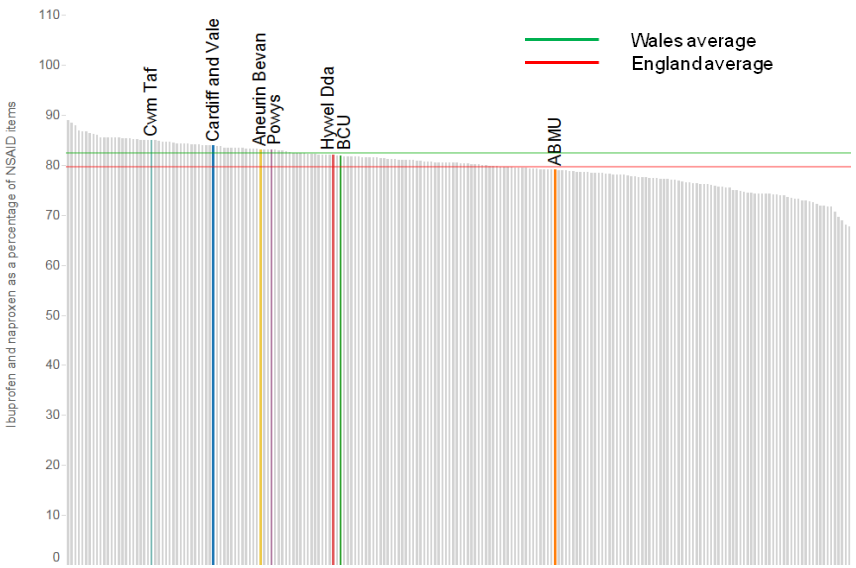


Figure 25. Ibuprofen and naproxen as a percentage of all NSAIDs in Welsh health boards and English CCGs



8.0 YELLOW CARDS

Purpose: To encourage an increase in the number of Yellow Cards submitted by GP practices in Wales.

Unit of measure: Number of Yellow Cards submitted, per practice and per health board.

Target: GPs to submit one Yellow Card per 2,000 practice population.
Health boards to submit Yellow Cards in excess of one per 2,000 health board population

Aim: To increase reporting

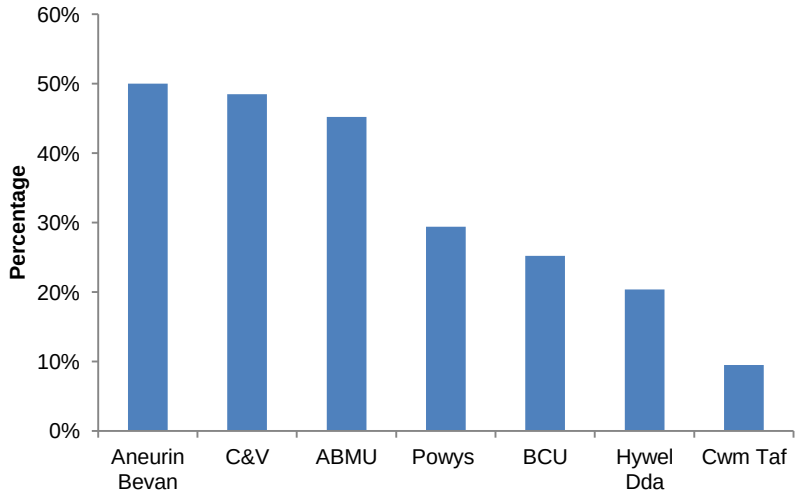
The number of Yellow Cards submitted by GPs in Wales increased by 92% compared with the equivalent quarter of the previous year.

The largest increase in GP Yellow Card reporting was seen in Aneurin Bevan UHB. The smallest increase was seen in Betsi Cadwaladr UHB.

Table 13. Number of Yellow Cards submitted by GPs

	2015–2016 Qtr 4	2016–2017 Qtr 4	% Change
Aneurin Bevan	**9**	164	1,722%
Powys	3	15	400%
Hywel Dda	16	38	138%
Cwm Taf	14	24	71%
Cardiff and Vale	109	169	55%
ABMU	87	119	37%
Betsi Cadwaladr	84	90	7%
Wales	**322**	**619**	**92%**

Figure 26. Percentage of GP practices meeting the target of one Yellow Card per 2,000 practice population 2016–2017



The number of Yellow Cards submitted by health boards in Wales increased by 50% compared to the equivalent quarter of the previous year.

Table 14. Number of Yellow Cards submitted by health boards

	2015–2016 Qtr 4	2016–2017 Qtr 4	% Change
Aneurin Bevan	31	198	539%
Powys	14	28	100%
Cardiff and Vale	152	209	38%
Hywel Dda	65	87	34%
Cwm Taf	35	46	31%
ABMU	126	157	25%
Betsi Cadwaladr	162	150	-7%
Wales	**585**	**875**	**50%**

SECONDARY CARE

1.0 INSULIN

Purpose: Ensure long-acting analogue insulin prescribing in type 2 diabetes mellitus is in line with NICE guidance to maximise cost-effective prescribing within Wales.

Unit of measure: Items/number of long-acting insulin analogues expressed as a percentage of total insulin prescribed within primary and secondary care

Aim: To reduce prescribing.

This report considers data sets from both secondary and primary care, as prescribing will usually be continued in the primary care setting following secondary care initiation.

Secondary care prescribing

- Across Wales there was an overall decrease of 7.22% in long-acting insulin analogues as a percentage of total long- and intermediate-acting insulin.
- Long-acting insulin analogues as a percentage of total long- and intermediate-acting insulin ranged from 52.0% to 100%.
- The lowest prescribing was seen in Cwm Taf UHB (52.0%), whilst the highest prescribing was seen in Velindre NHS Trust (100%). However, prescribing in Velindre is very low. The next highest prescribing was seen in Abertawe Bro Morgannwg UHB (84.7%).
- The proportion of long-acting insulin analogue prescribing decreased in four out of the seven health boards/trusts, compared to the equivalent quarter of the previous year.
- The health board/trust with the highest prescribing percentage decrease was Cwm Taf UHB with a decrease of 18.8% from the equivalent quarter of the previous year 18.8%.
- Hywel Dda UHB showed the greatest percentage increase at 4.01%.

Table 15. Long-acting insulin analogues as a percentage of total long- and intermediate-acting insulin prescribing in secondary care

	2015–2016 Qtr 4 (%)	2016–2017 Qtr 4 (%)	% Change
Cwm Taf	64.0	52.0	-18.8
BCU	83.8	72.6	-13.3
Cardiff and Vale	86.1	75.6	-12.2
Aneurin Bevan	67.4	66.9	-0.67
ABMU	81.5	84.7	3.93
Hywel Dda	80.8	84.0	4.01
Velindre	0	100	N/A
Wales	**78.9**	**73.2**	**-7.22**

Primary care prescribing

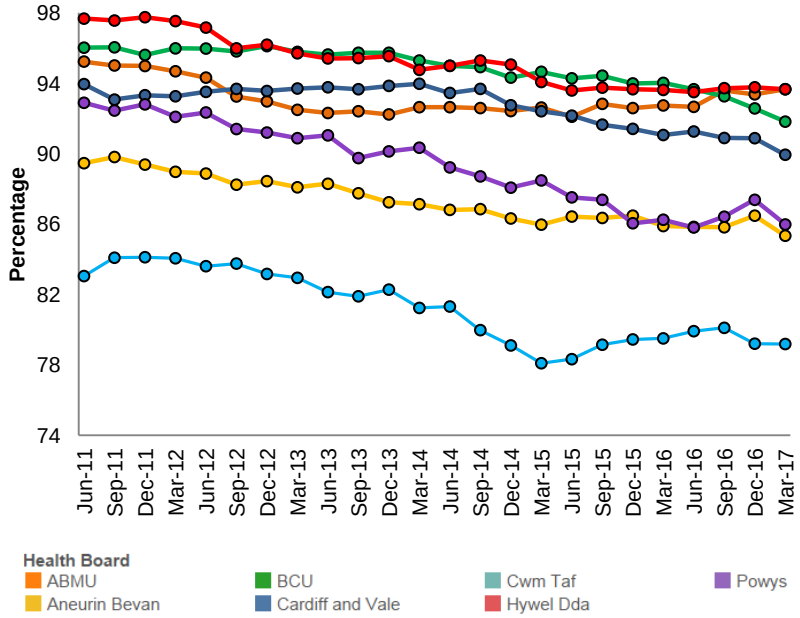
From March 2016 to March 2017, the prescribing of long-acting insulin analogues in primary care as a proportion of total long- and intermediate-acting insulin prescribing decreased across Wales by approximately 0.67%, in line with the aim of the secondary care indicator.

- For the quarter ending March 2017, long-acting insulin analogue prescribing ranged from 79.2% to 93.7% across the health boards.
- The health board with the lowest prescribing was Cwm Taf UHB, whilst the highest prescribing was seen jointly in Abertawe Bro Morgannwg UHB and Hywel Dda UHB.
- Across the seven health boards in Wales prescribing decreased compared to the equivalent quarter of the previous year in five health boards, and increased in two health boards.
- The largest decrease was seen in Betsi Cadwaladr UHB (2.34%) and the largest increase was seen in Abertawe Bro Morgannwg UHB (1.08%).

Table 16. Long-acting insulin analogues as a percentage of total long- and intermediate-acting insulin prescribing in primary care

	2015–2016 Qtr 4 (%)	2016–2017 Qtr 4 (%)	% Change
BCU	94.0	91.8	-2.34
Cardiff and Vale	91.1	89.9	-1.32
Aneurin Bevan	85.9	85.3	-0.70
Cwm Taf	79.5	79.2	-0.38
Powys	86.2	86.0	-0.23
Hywel Dda	93.6	93.7	0.11
ABMU	92.7	93.7	1.08
Wales	**89.8**	**89.2**	**-0.67**

Figure 27. Trend in long-acting analogue prescribing as a percentage of total long- and intermediate-acting insulin prescribed in primary care



2.0 BIOSIMILARS

Purpose: Ensure prescribing of biosimilar medicines is in line with AWMSG guidance to support cost-effective prescribing within Wales.

Unit of measure: Quantity of biosimilar medicines prescribed as a percentage of total 'reference' product plus biosimilar.

Aim: To increase appropriate prescribing in line with guidance and increase commercial competition.

Biological medicines are those that are made or derived from a biological source and, as such, are complex, with inherent variability in their structure. A biosimilar medicine is a biological medicine that is developed to be highly similar and clinically equivalent to an existing biological medicine (i.e. 'reference' medicine or 'originator' medicine). Continuing development of biosimilar medicines offers an increased choice for patients and clinicians.

There is an increasing range of biosimilar products becoming available and therefore new products will be monitored and reported on in this section of the NPI report as they begin to be used within NHS Wales.

Data reporting
MHRA guidelines state that biological medicines, including biosimilar medicines, must be prescribed by brand name to prevent automatic substitution taking place without clinician and patient involvement, and to support ongoing pharmacovigilance of the individual products. However, filgrastim, infliximab and insulin glargine all show some generic prescribing. For infliximab the cost per item for these generic items is identical to that of the reference product; these generic items have therefore been included in figures for total quantity of the reference product. For filgrastim the cost per item falls between reference and biosimilar, so these generic items have been presented separately.

2.1 Filgrastim

There was an increase in the use of filgrastim biosimilars (Nivestim®, Zarzio® and Ratiograstim®) as a percentage of all filgrastim from 98.1% to 98.6% within NHS Wales from quarter ending March 2016 to quarter ending March 2017.

Table 17. Quantity of filgrastim generic, reference (Neupogen®) and biosimilar (Nivestim®, Zarzio®, Ratiograstim®) prescribed – Quarter ending March 2017

Filgrastim (generic)	2015–2016 Qtr 4	2016–2017 Qtr 4	% Change
Primary care	28	42	50.0%
Secondary care	32	29	-9.38%
Total	60	71	18.3%
Reference (Neupogen®)	**2015–2016 Qtr 4**	**2016–2017 Qtr 4**	**% Change**
Primary care	0	0	0%
Secondary care	63	12	-81.0%
Total	63	12	-81.0%
Biosimilar (Nivestim®, Zarzio®, Ratiograstim®)^	**2015–2016 Qtr 4**	**2016–2017 Qtr 4**	**% Change**
Primary care	23	110	378%
Secondary care	6,274	5,815	-7.32%
Total	6,297	5,925	-5.91%

Table 18. Filgrastim biosimilars as a percentage of reference, generic and biosimilar prescribed – Quarter ending March 2017

	2015–2016 Qtr 4	2016–2017 Qtr 4	% Change
Primary care	45.1%	72.4%	60.5%
Secondary care	98.5%	99.3%	0.81%
Total	98.1%	98.6%	0.51%

2.1.1 Secondary care

Prescribing of filgrastim biosimilars increased as a percentage of all filgrastim from 98.5% to 99.3% in secondary care from quarter ending March 2016 to quarter ending March 2017.

Figure 28. Proportion of filgrastim prescribing as generic, reference (Neupogen®) and biosimilar (Nivestim®, Ratiograstim® and Zarzio®) in secondary care – Quarter ending March 2017

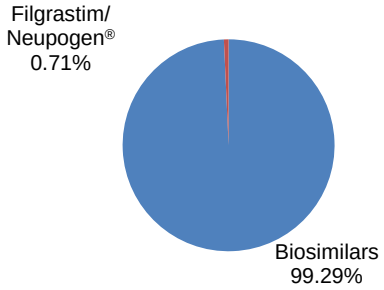
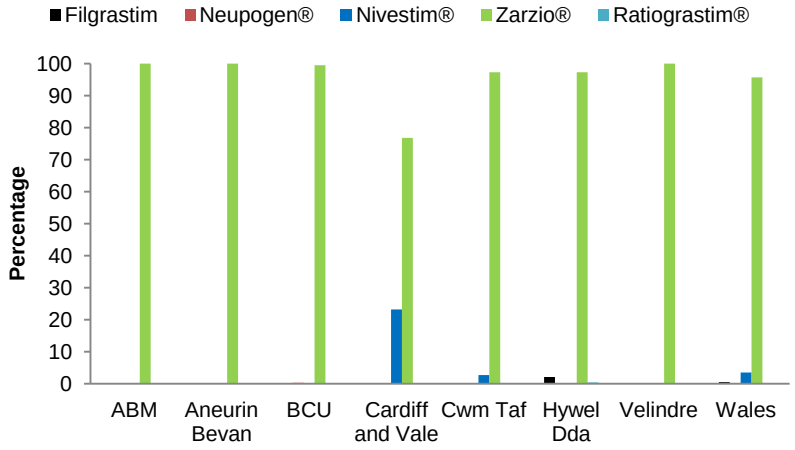


Figure 29. Health board filgrastim generic, reference (Neupogen®) and biosimilar (Nivestim®, Ratiograstim® and Zarzio®) as a percentage of total filgrastim prescribed in secondary care – Quarter ending March 2017



2.1.2 Primary care

Prescribing of filgrastim biosimilar Zarzio® increased as a percentage of all filgrastim from 45.1% to 72.4% in primary care from quarter ending March 2016 to quarter ending March 2017.

2.2 Infliximab

There was an increase in the use of the infliximab biosimilar (Inflectra®) as a percentage of all infliximab from 26.2% to 56.5% within NHS Wales from quarter ending March 2016 to quarter ending March 2017. The biosimilar infliximab usage is illustrated in Figures 30 and 31.

Table 19. Quantity of infliximab reference (Remicade®) and biosimilar (Inflectra®) prescribed in NHS Wales

Reference (Remicade®)ǂ	2015–2016 Qtr 4	2016–2017 Qtr 4	% Change
Total	3,572*	2,600	-27.2%
Biosimilar (Inflectra®)	**2015–2016 Qtr 4**	**2016–2017 Qtr 4**	**% Change**
Total	1,271*	3,378*	166%

ǂThese data include supplies recorded through homecare.
*Due to quantity discrepancy in the data set, this number has been estimated.

Table 20. Infliximab biosimilars as a percentage of reference and biosimilar prescribed – Quarter ending March 2017

	2015–2016 Qtr 4	2016–2017 Qtr 4	% Change
Total	26.2%	56.5%	116%

Figure 30. Infliximab reference (Remicade®) and biosimilar (Inflectra®) percentage change

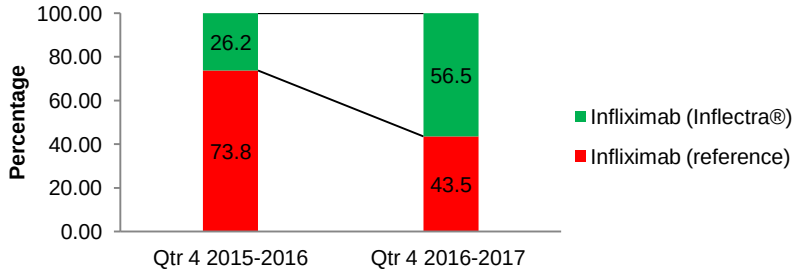
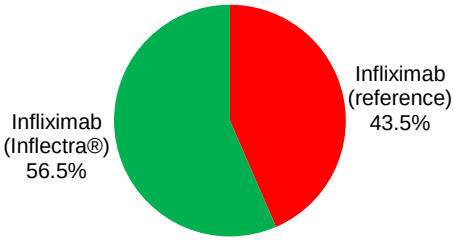


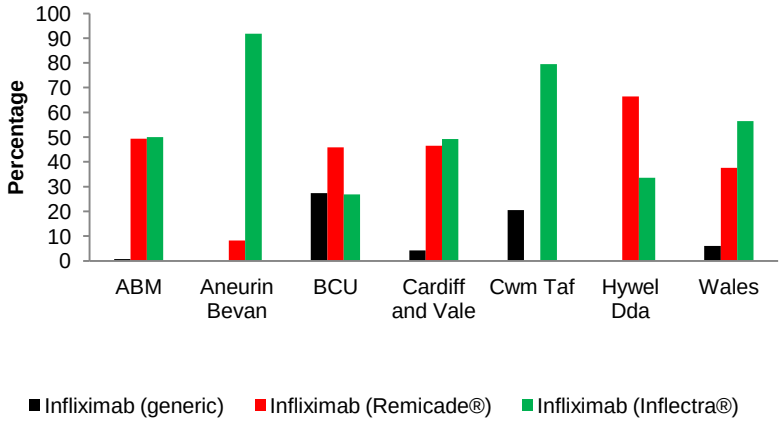
Figure 31. Proportion of infliximab prescribing as reference (Remicade®) and biosimilar (Inflectra®) – Quarter ending March 2017



2.2.1 Secondary care

Five health boards show generic infliximab prescribing in secondary care. As previously mentioned, in order to adhere to MHRA guidelines infliximab supplies should be recorded as the brand name supplied: Remicade® or Inflectra®.

Figure 32. Infliximab generic, reference (Remicade®) and biosimilar (Inflectra®) as a proportion of total infliximab prescribed in secondary care – Quarter ending March 2017



2.3 Insulin glargine

Within NHS Wales there was an increase in the use of insulin glargine biosimilar (Abasaglar®) from 0.23% to 2.49%.

Table 21. Quantity of insulin glargine reference (Lantus® and Toujeo®) and biosimilar (Abasaglar®) prescribed – Quarter ending March 2017

Reference (Lantus® and Toujeo®)	2015–2016 Qtr 4	2016–2017 Qtr 4	% Change
Primary care	30,144	30,167	-0.08%
Secondary care	1,886	1,638	-13.1%
Total	32,030	31,805	-0.70%
Biosimilar (Abasaglar®)	**2015–2016 Qtr 4**	**2016–2017 Qtr 4**	**% Change**
Primary care	75	792	956%
Secondary care	0	20	N/A
Total	75	812	983%

Table 22. Insulin glargine biosimilar (Abasaglar®) as a percentage of reference (Lantus® and Toujeo®) and biosimilar prescribed – Quarter ending March 2017

	2015–2016 Qtr 4	2016–2017 Qtr 4	% Change
Primary care	0.25%	2.56%	924%
Secondary care	0%	1.21%	N/A
Total	0.23%	2.49%	983%

3.0 ANTIBIOTICS

Purpose: To encourage the appropriate prescribing of antibiotics. The development of NPIs for antibiotic prescribing supports one of the key elements of the Welsh Antimicrobial Resistance Programme: to inform, support and promote the prudent use of antimicrobials

Unit of measure: Proportion of elective colorectal patients receiving surgical prophylaxis for more than 24 hours.

Aim: To reduce prescribing.

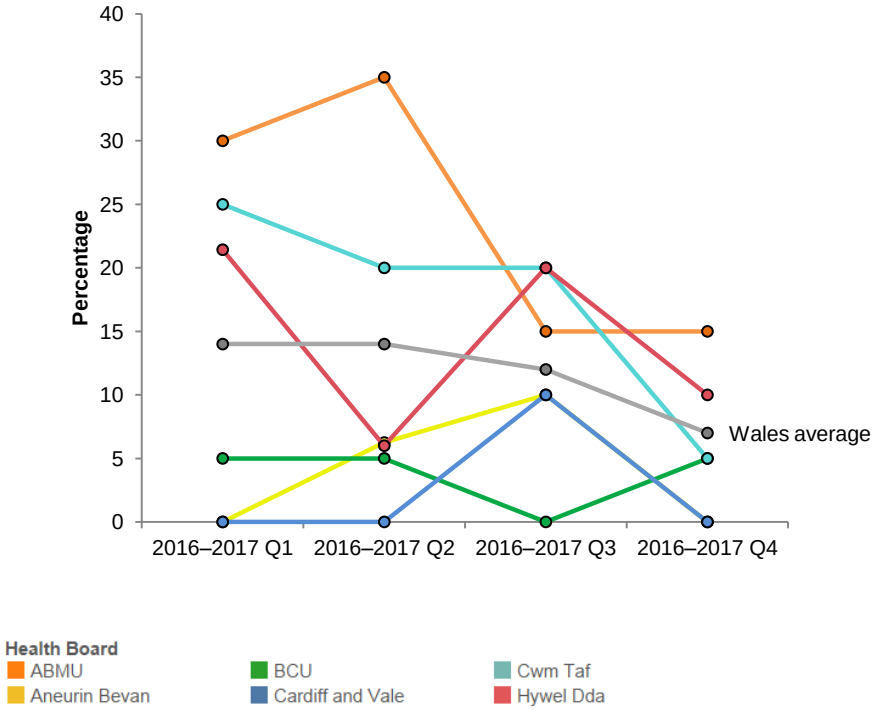
Due to surgical prophylaxis numbers being small and prone to misinterpretation at hospital level, the data are presented at health board level. Hospital level data are available if required.

- There is a 5% decrease in the Welsh average when comparing data for quarter ending March 2017 with the previous quarter. During this period, four health boards (Aneurin Bevan, Cardiff and Vale, Cwm Taf and Hywel Dda UHBs) have shown a reduction in the percentage of patients receiving prophylaxis for > 24 hours, and one health board (Betsi Cadwaladr UHB) has shown an increase.
- There was no change in the percentage of patients receiving prophylaxis for > 24 hours in ABM UHB.
- In Aneurin Bevan and Cardiff and Vale UHBs all patients were receiving prophylaxis for < 24 hours in quarter ending March 2017.
- Four of the six health boards are below the Welsh average for the percentage of patients receiving prophylaxis > 24 hours for the quarter ending March 2017, an increase from three of six in the previous quarter.

Table 23. Percentage of patients receiving colorectal surgical prophylaxis for > 24 hours

	2016–2017 Qtr 1	2016–2017 Qtr 2	2016–2017 Qtr 3	2016–2017 Qtr 4
ABMU	30%	35%	15%	15%
Aneurin Bevan	0%	6%	10%	0%
BCU	5%	5%	0%	5%
Cardiff and Vale	0%	0%	10%	0%
Cwm Taf	25%	20%	20%	5%
Hywel Dda	21%	6%	20%	10%
Powys	N/A	N/A	N/A	N/A
Wales	14%	14%	12%	7%

Figure 33. Percentage of patients whose duration of colorectal surgical prophylaxis is > 24 hours



CAUTION WITH INTERPRETING NPI MONITORING DATA

Calculations for the percentage difference reported in the data tables are based on raw data, and values may therefore vary slightly from those calculated from the data tables, where figures have been rounded up or down.

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.

Medusa records the issue of medicines within the secondary care setting in Wales. Where supplies are issued to named patients, it can be assumed that the difference between number of medicines issued and number administered to patients is not significant. However, when the supplies are issued to wards or clinics, these items are often held as stock and therefore may be administered to patients at a considerably later point in time. However, within this report they are only considered for analysis within the time period they were issued.

The report includes medicines supplied by homecare and recorded through the hospital system; medicines supplied through other homecare providers are not included in this report. Therefore some medicines use data may currently be incomplete. This issue is being worked on within NHS Wales as a priority.

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 for all indicators and, where relevant, other measures such as total quantity, items and number are also reported.

GLOSSARY

ADQ – The average daily quantity (ADQ) is a measure of prescribing volume based upon prescribing behaviour in England. It represents the assumed average maintenance dose per day for a medicine used for its main indication in adults. The ADQ is not a recommended dose but an analytical unit to compare prescribing activity.

DDD – The defined daily dose (DDD), developed by the World Health Organization, is a unit of measurement whereby each medicine is assigned a value within its recognised dosage range. The value is the assumed average maintenance dose per day for a medicine when used for its main indication in adults. A medicine can have different DDDs depending on the route of administration.

PU – Prescribing units (PUs) were adopted to take account of the greater need of elderly patients for medication in reporting prescribing performance at both the practice and primary care organisational level.

PRESCRIBING – Although the term ‘prescribing’ is used in this report, the data presented within the primary care section of the report represent prescriptions that have been dispensed and forwarded for pricing. It is assumed that the difference between the number of prescriptions issued and those dispensed is not significant, and that dispensing provides an accurate representation of prescribing.

STAR-PU – Specific therapeutic group age-sex related prescribing units (STAR-PUs) are designed to measure prescribing weighted for age and sex of patients. There are differences in the age and sex of patients for whom medicines in specific therapeutic groups are usually prescribed. To make such comparisons, STAR-PUs have been developed based on costs of prescribing of items within therapeutic groups.

APPENDIX 1. AWMSG NATIONAL PRESCRIBING INDICATORS 2016–2017

Primary care indicator	Unit of measure	Target for 2016–2017	Threshold
Proton pump inhibitors	PPI DDDs per 1,000 PUs	Maintain performance levels within the lower quartile, or show a reduction towards the quartile below	6,438
Lipid-regulating drugs	Items of bile acid sequestrants, fibrates, nicotinic acid and omega-3 fatty acid compounds (BNF 2.12 sub-set) as a percentage of total lipid-regulating items	Maintain performance levels within the lower quartile, or show a reduction towards the quartile below	1.6%
Inhaled corticosteroids	Low strength ICS items as a percentage of all ICS prescribing	Maintain performance levels within the upper quartile, or show an increase towards the quartile above	65%
Hypnotics and anxiolytics	Hypnotic and anxiolytic ADQs per 1,000 STAR-PUs	Maintain performance levels within the lower quartile, or show a reduction towards the quartile below	2,432
Analgesics	Tramadol DDDs per 1,000 patients	Maintain performance levels within the lower quartile, or show a reduction towards the quartile below	455
	Gabapentin and pregabalin DDDs per 1,000 patients	Maintain performance levels within the lower quartile, or show a reduction towards the quartile below	879
Antibiotics	Total antibacterial items per 1,000 STAR-PUs	No performance target set; aim for reduction in prescribing year on year, measuring quarter to December only	N/A
	Co-amoxiclav items per 1,000 patients Co-amoxiclav items as a percentage of total antibacterial items	Maintain performance levels within the lower quartile, or show a reduction towards the quartile below	3.8 2.1%
	Cephalosporin items per 1,000 patients Cephalosporin items as a percentage of total antibacterial items	Maintain performance levels within the lower quartile, or show a reduction towards the quartile below	3.6 2.1%
	Fluoroquinolone items per 1,000 patients Fluoroquinolone items as a percentage of total antibacterial items	Maintain performance levels within the lower quartile, or show a reduction towards the quartile below	2.3 1.3%
Non-steroidal anti-inflammatory drugs (NSAIDs)	NSAID ADQs per 1,000 STAR-PUs	Maintain performance levels within the lower quartile, or show a reduction towards the quartile below	1,330
	Ibuprofen and naproxen items as a percentage of NSAID prescribing	Maintain performance levels within the upper quartile, or show an increase towards the quartile above	86%
Yellow Cards	Number of Yellow Cards submitted per practice and per health board	Target for GP practice – GPs to submit one Yellow Card per 2,000 practice population. Target for each health board – submit Yellow Cards in excess of one per 2,000 health board population	

Secondary care indicator	Unit of measure
Insulin prescribing	Items/number of long-acting insulin analogues expressed as a percentage of total insulin prescribed within primary and secondary care.
Prescribing of biosimilars	Quantity of biosimilar medicines prescribed as a percentage of total ‘reference’ product plus biosimilar.
Antibiotic surgical prophylaxis	Proportion of elective colorectal patients receiving surgical prophylaxis for more than 24 hours.

ADQ = average daily quantity; DDD = defined daily dose; PU = prescribing unit; STAR-PU = specific therapeutic group age-sex related prescribing unit

APPENDIX 2. PRIMARY CARE NPI PRESCRIBING BY GP CLUSTER

Figure 1. PPI prescribing – Quarter ending March 2016 versus quarter ending March 2017

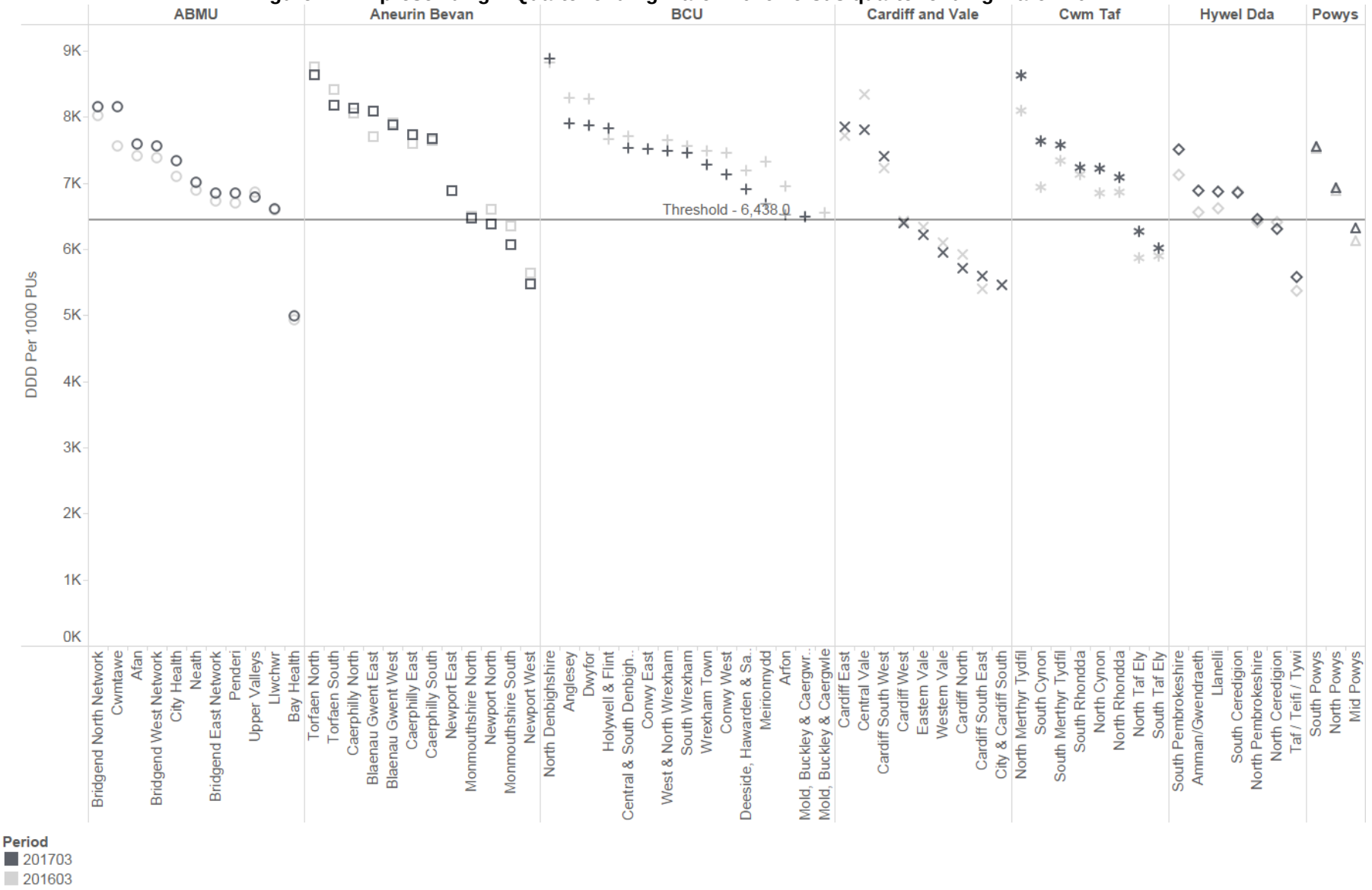


Figure 2. Bile acid sequestrants, fibrates, nicotinic acid and omega-3 fatty acid compounds as a percentage of the total number of lipid-regulating items – Quarter ending March 2016 versus quarter ending March 2017

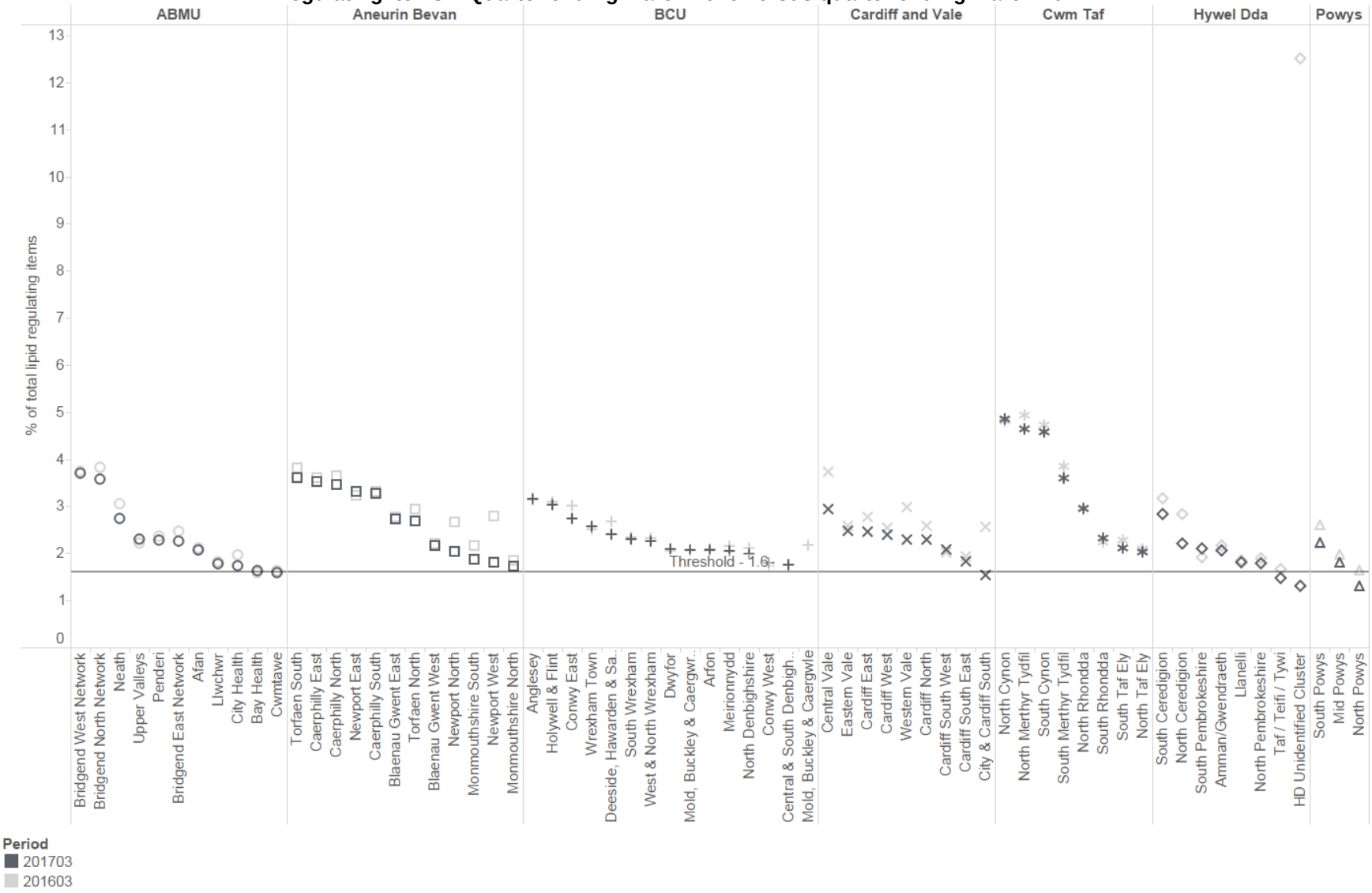


Figure 3. Low dose ICS prescribing as a percentage of all ICS prescribing – Quarter ending March 2016 versus quarter ending March 2017

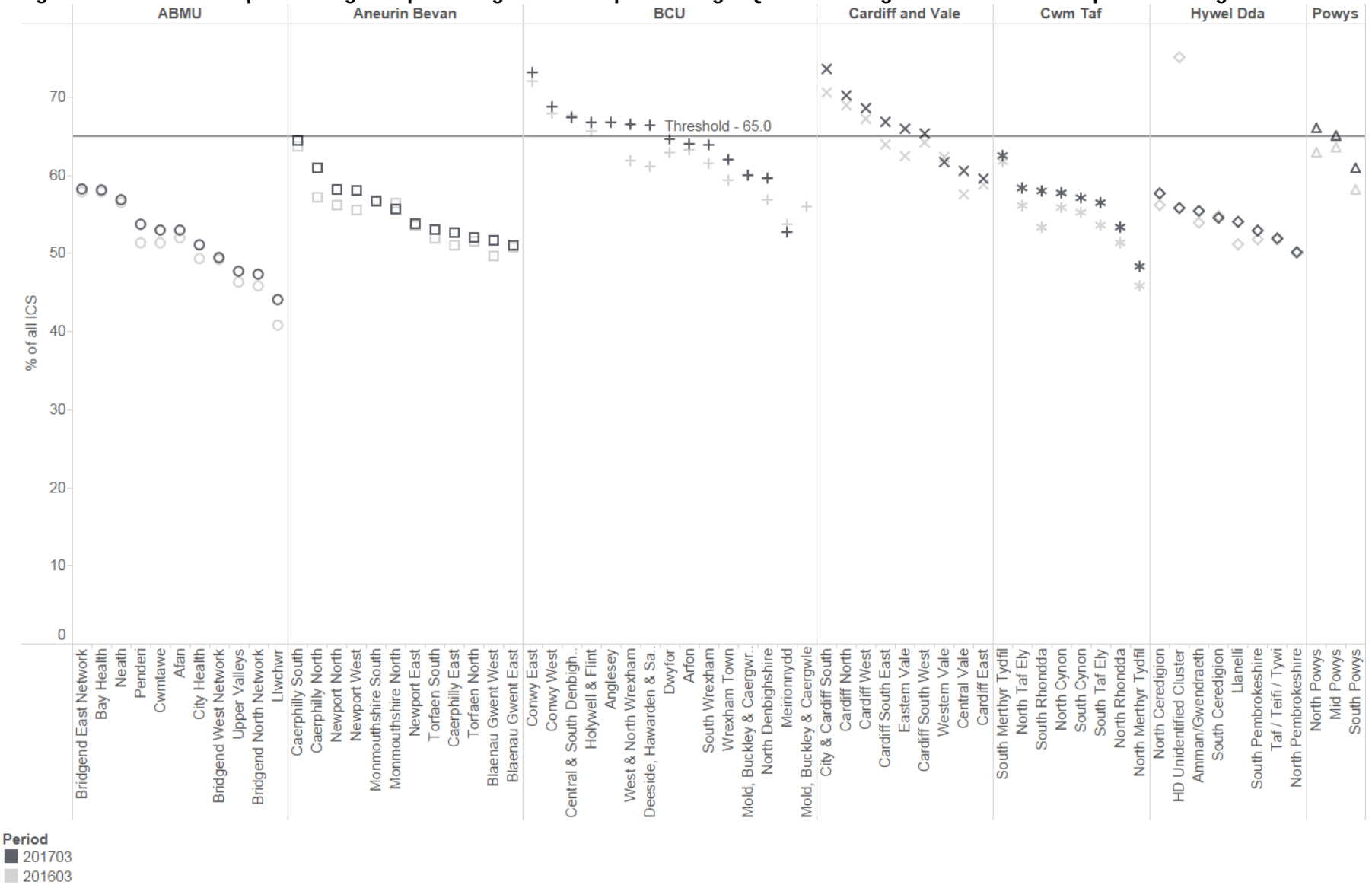


Figure 4. Hypnotic and anxiolytic prescribing – Quarter ending March 2016 versus quarter ending March 2017

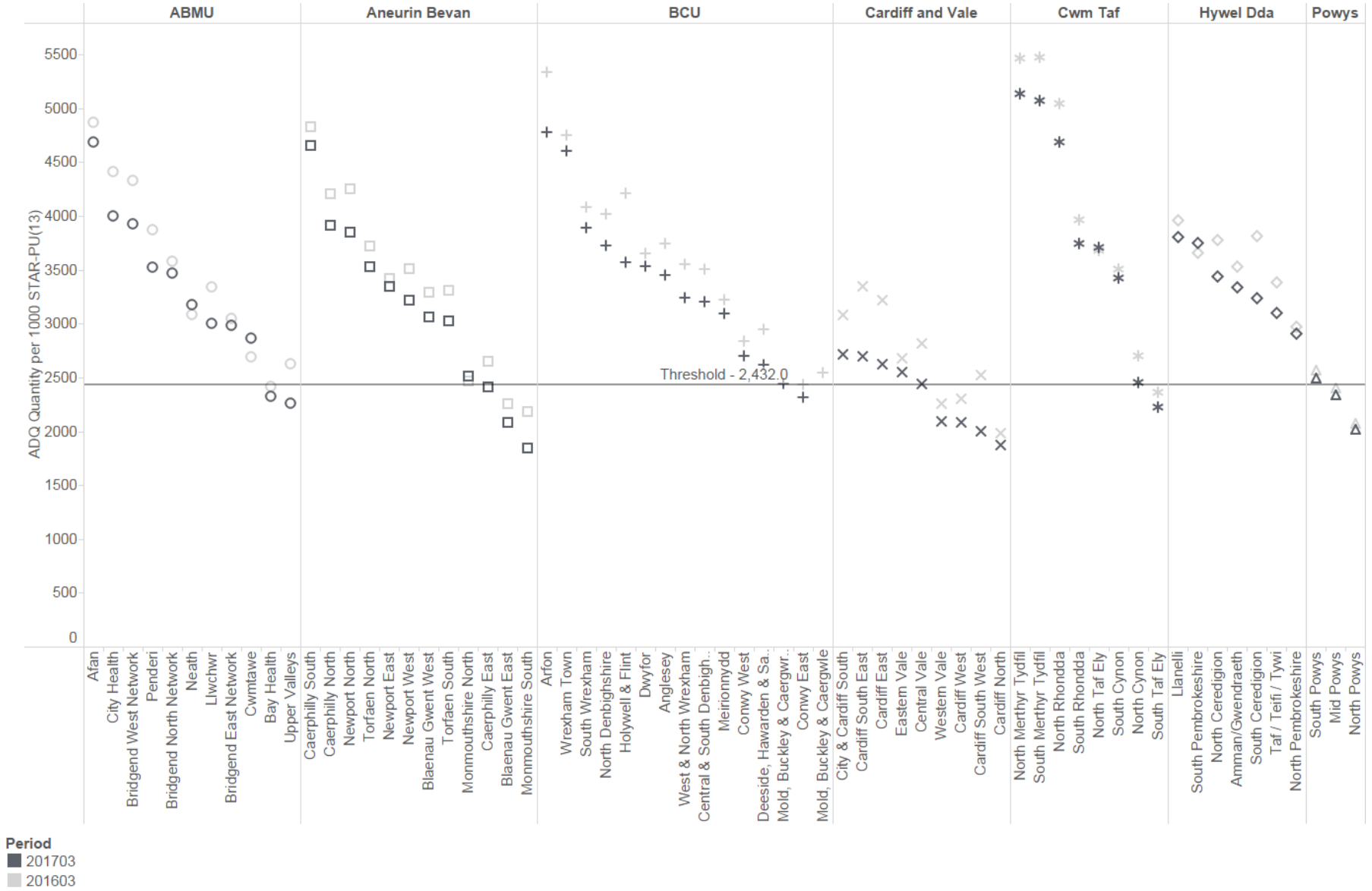


Figure 5. Tramadol prescribing – Quarter ending March 2016 versus quarter ending March 2017

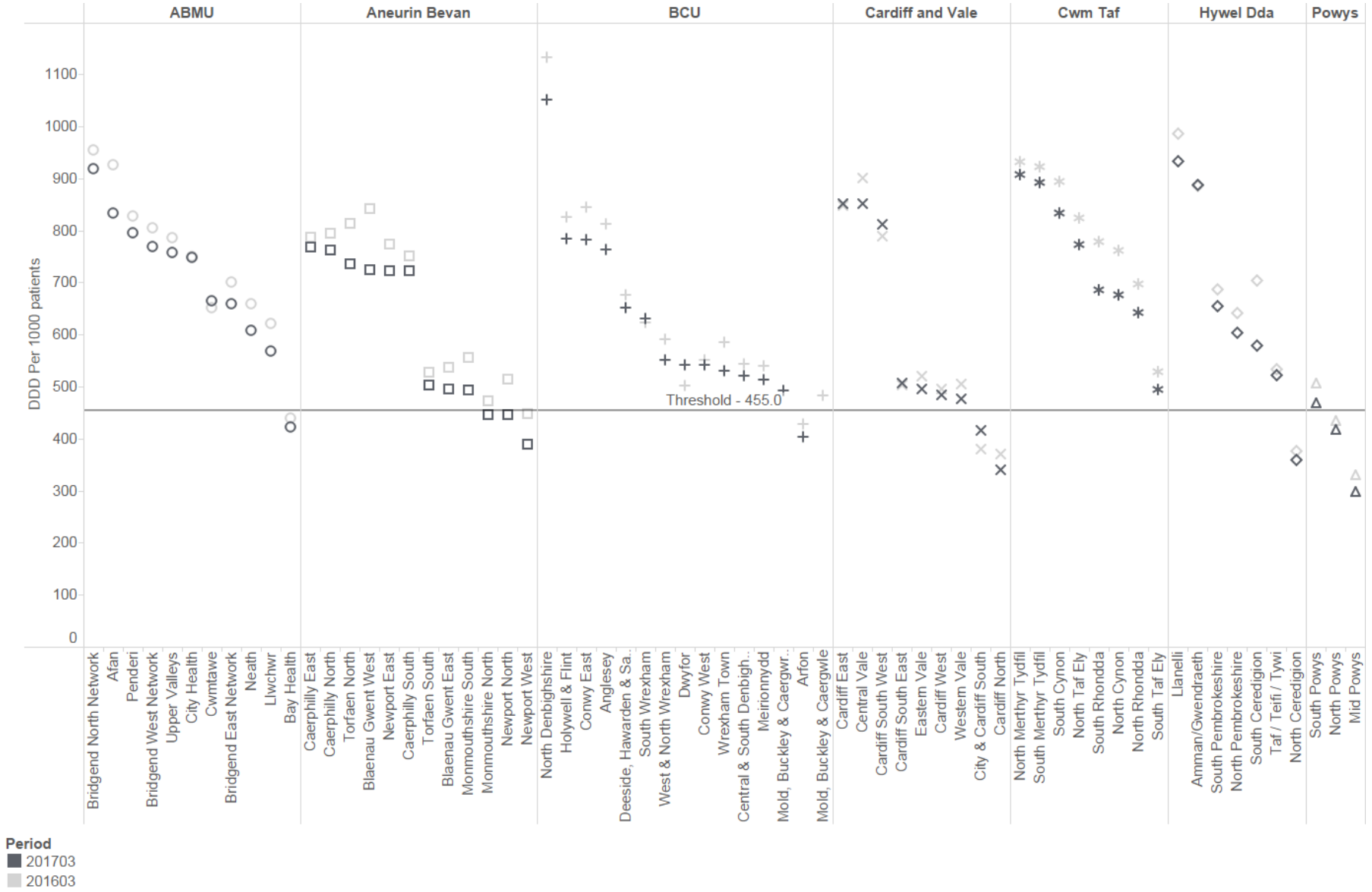


Figure 6. Gabapentin and pregabalin prescribing – Quarter ending March 2016 versus quarter ending March 2017

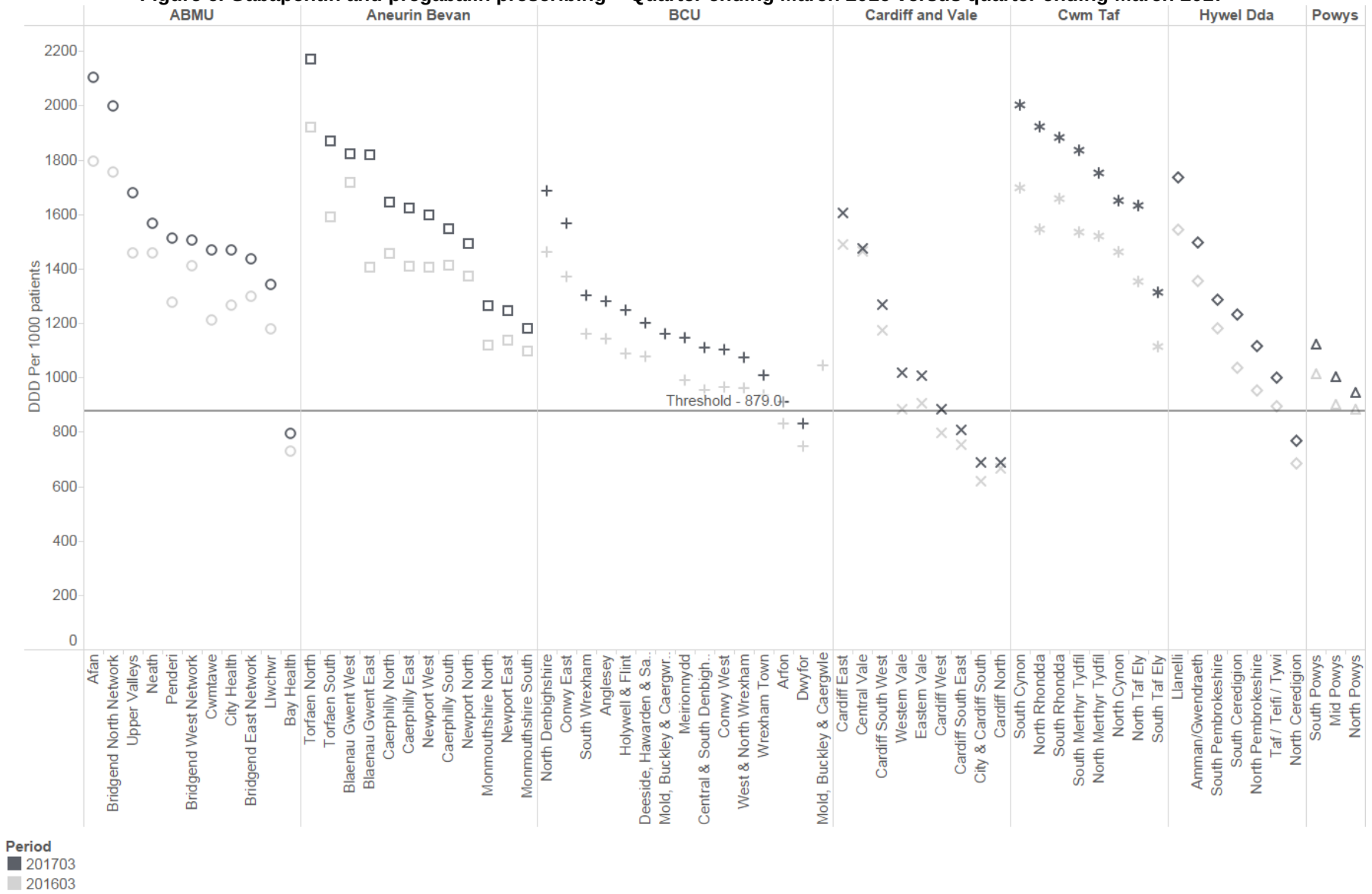


Figure 7. Antibiotic prescribing – Quarter ending March 2016 versus quarter ending March 2017

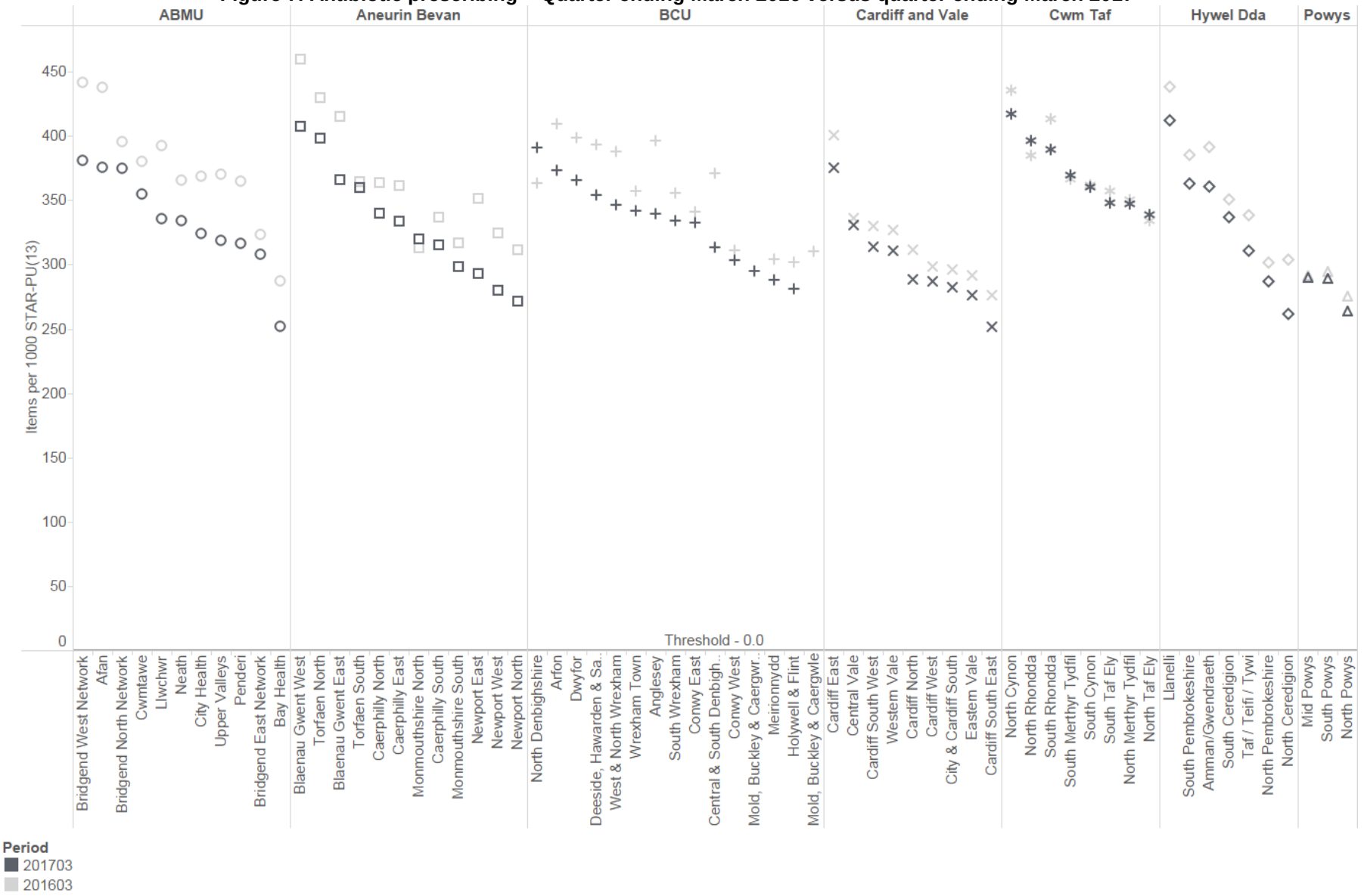


Figure 8. Co-amoxiclav prescribing – Quarter ending March 2016 versus quarter ending March 2017

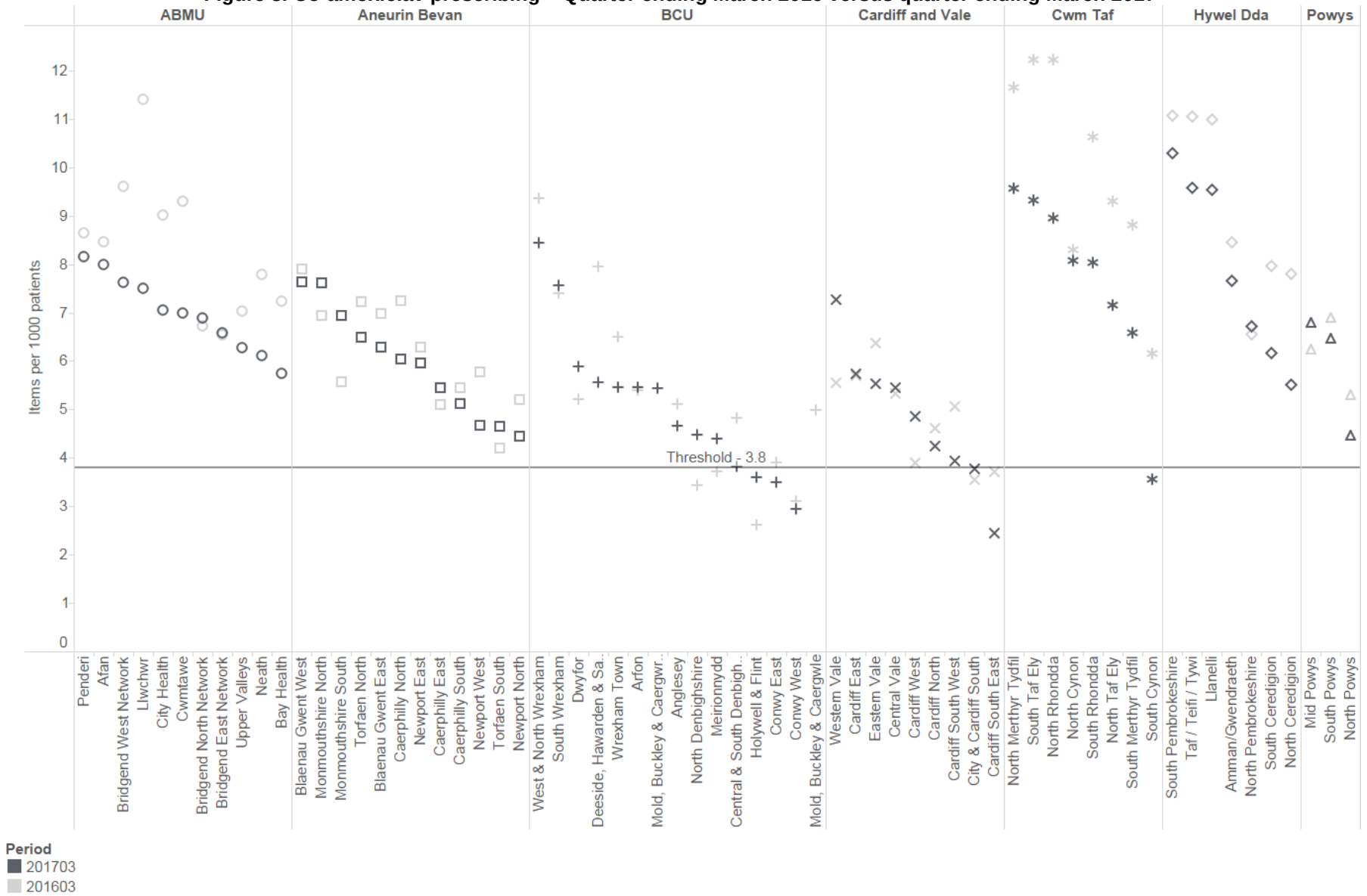


Figure 9. Co-amoxiclav as a percentage of total antibacterial items – Quarter ending March 2016 versus quarter ending March 2017

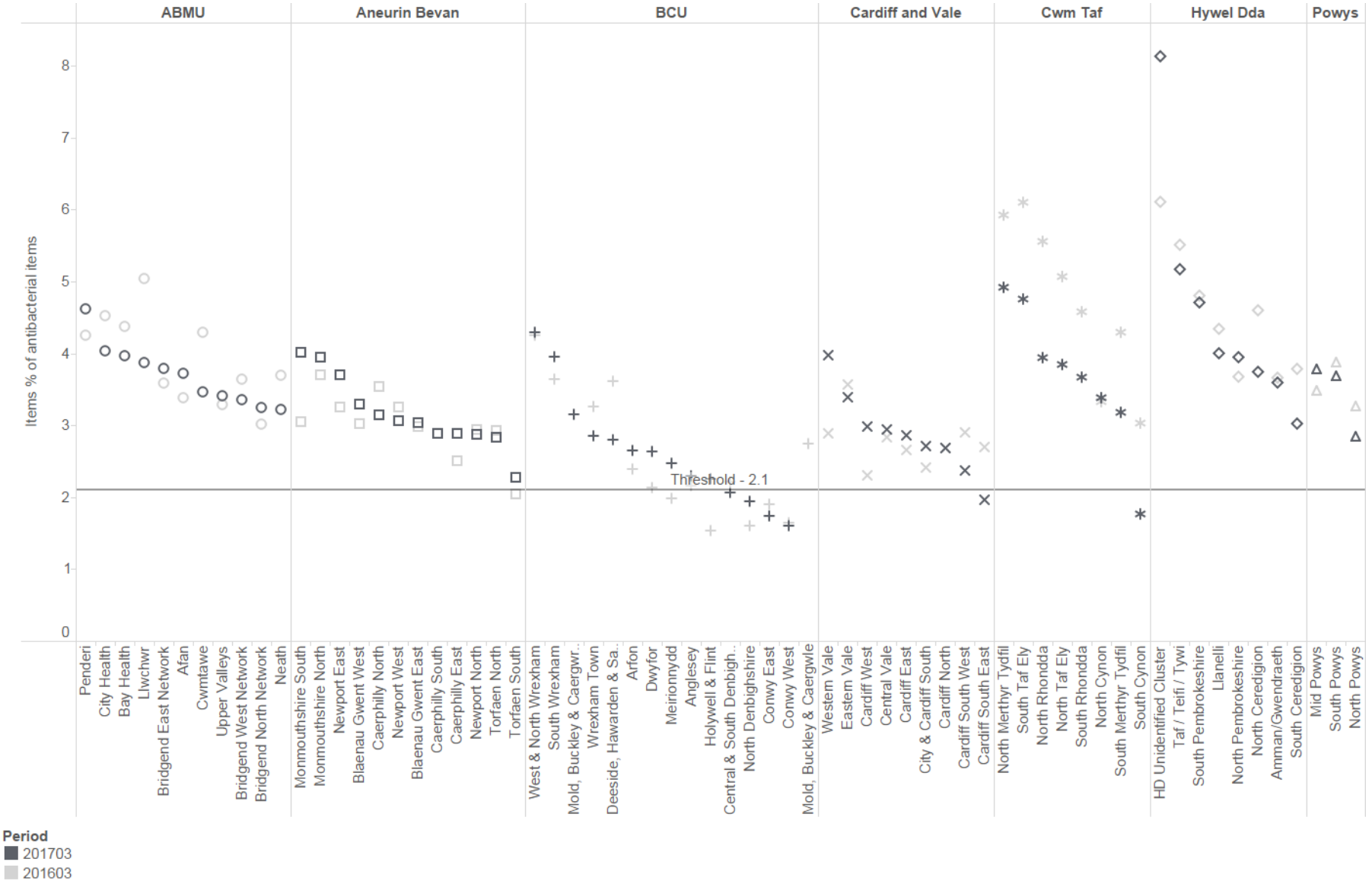


Figure 10. Cephalosporin prescribing – Quarter ending March 2016 versus quarter ending March 2017

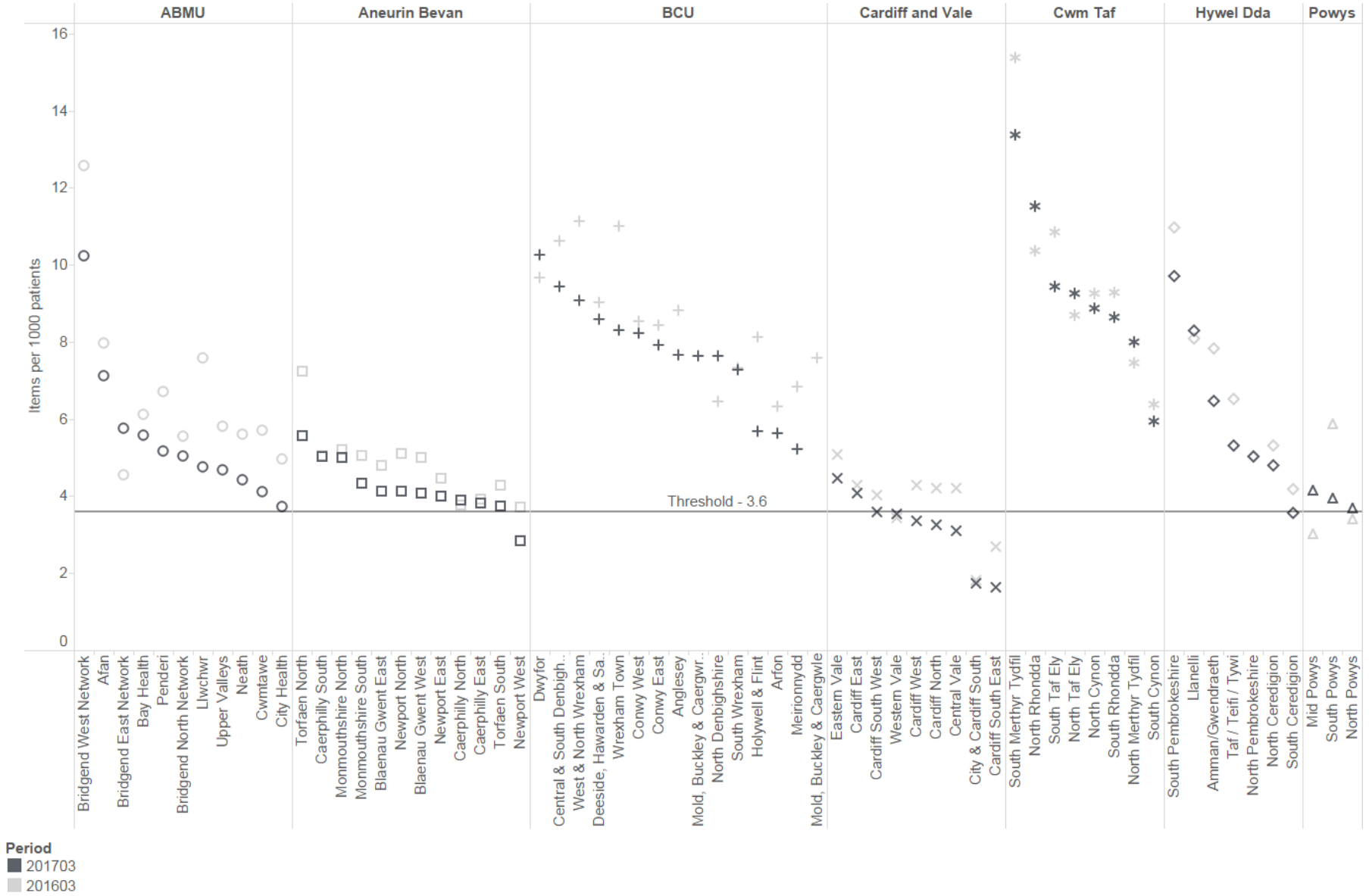


Figure 11. Cephalosporins as a percentage of total antibacterial items – Quarter ending March 2016 versus quarter ending March 2017

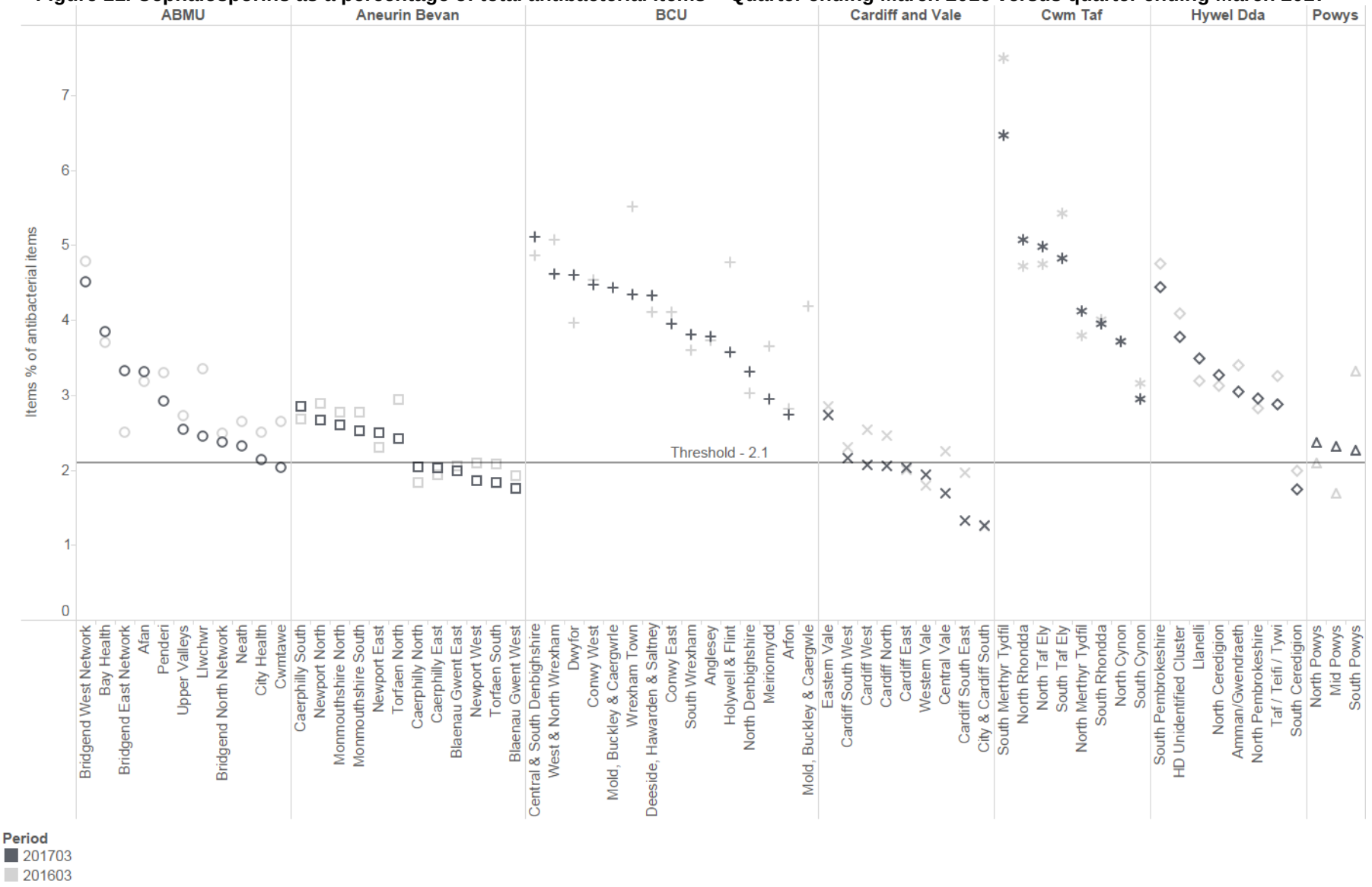


Figure 12. Fluoroquinolone prescribing – Quarter ending March 2016 versus quarter ending March 2017

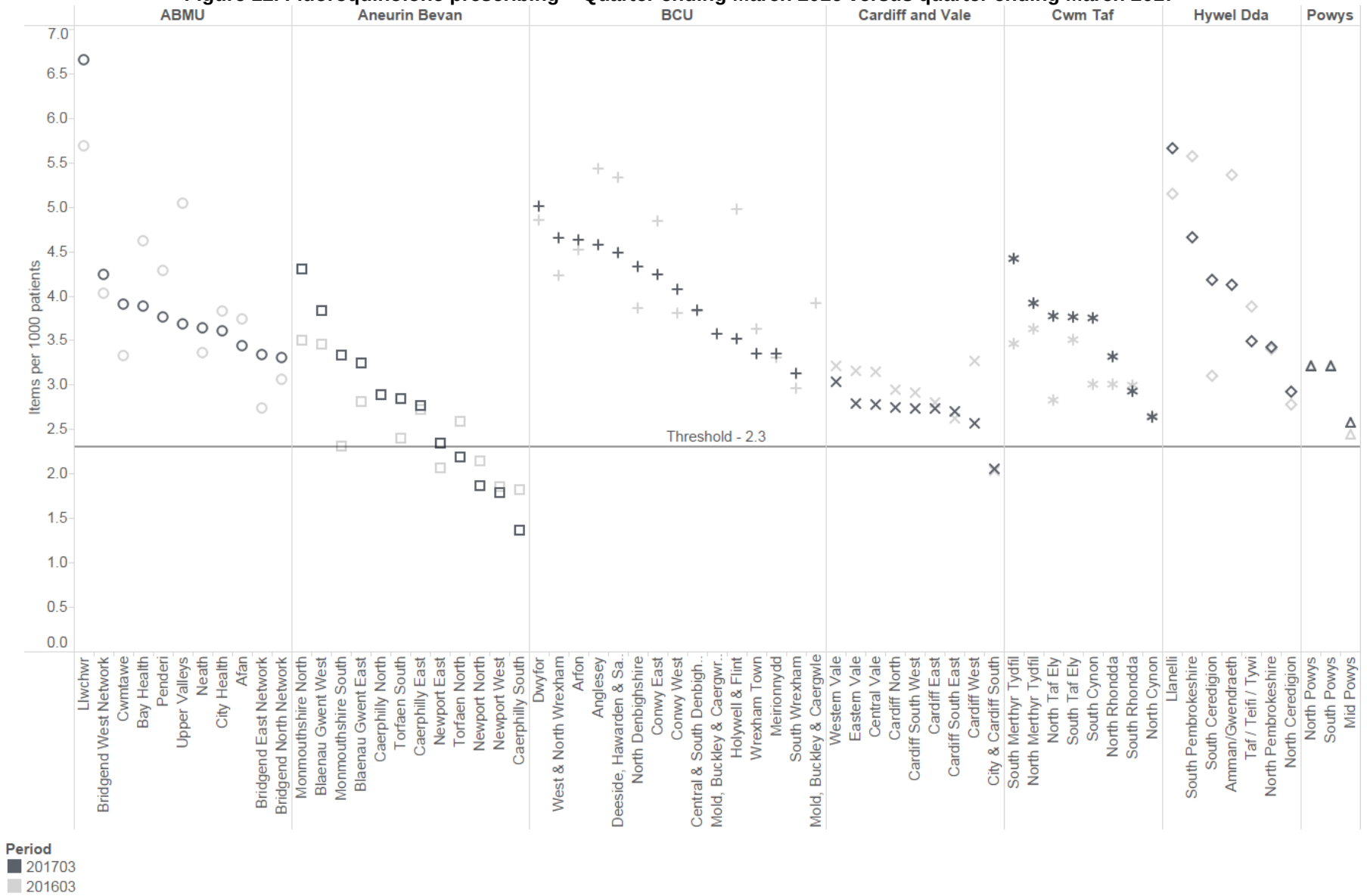


Figure 13. Fluoroquinolones as a percentage of total antibacterial items – Quarter ending March 2016 versus quarter ending March 2017

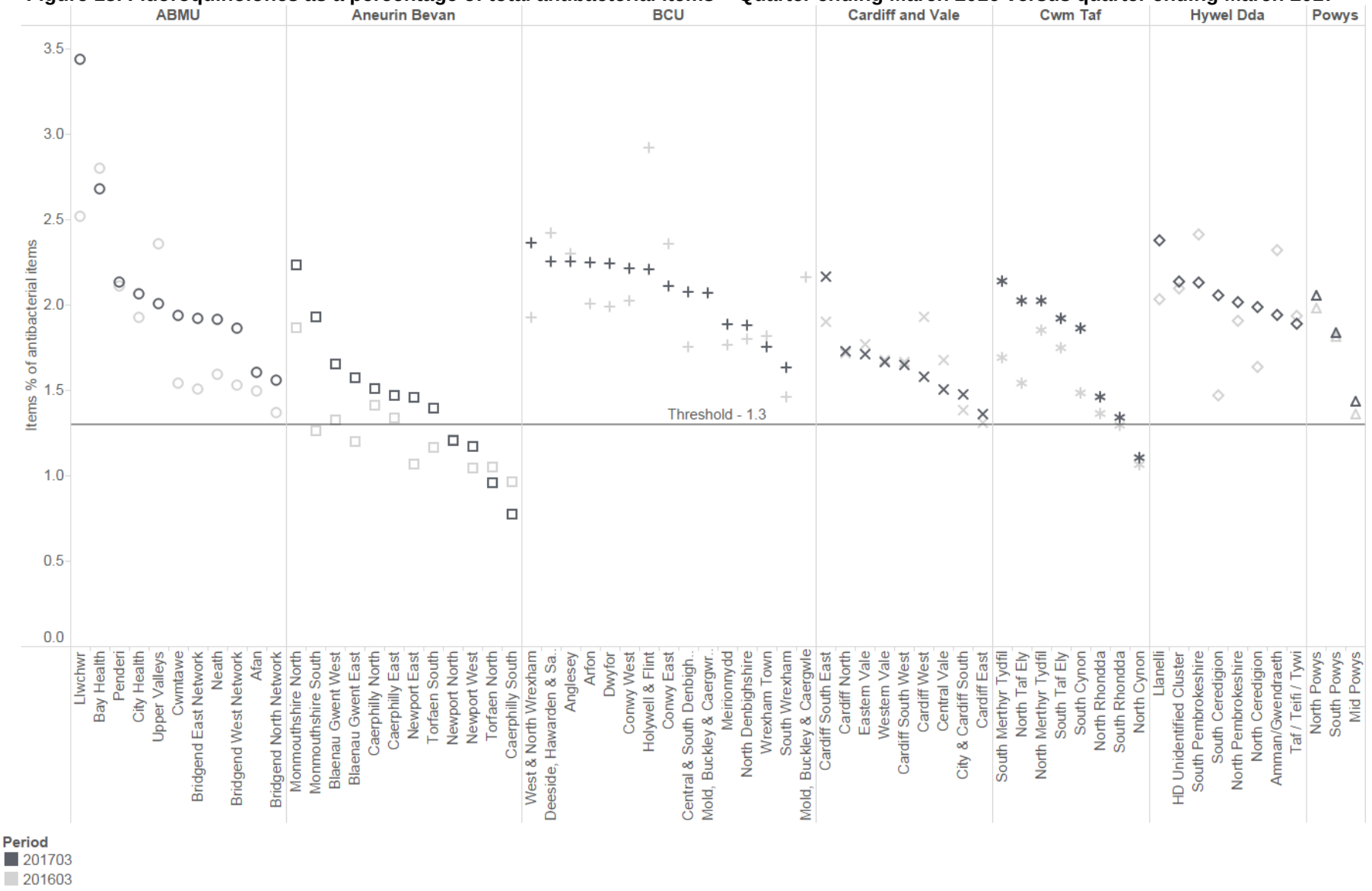


Figure 14. NSAID prescribing – Quarter ending March 2016 versus quarter ending March 2017

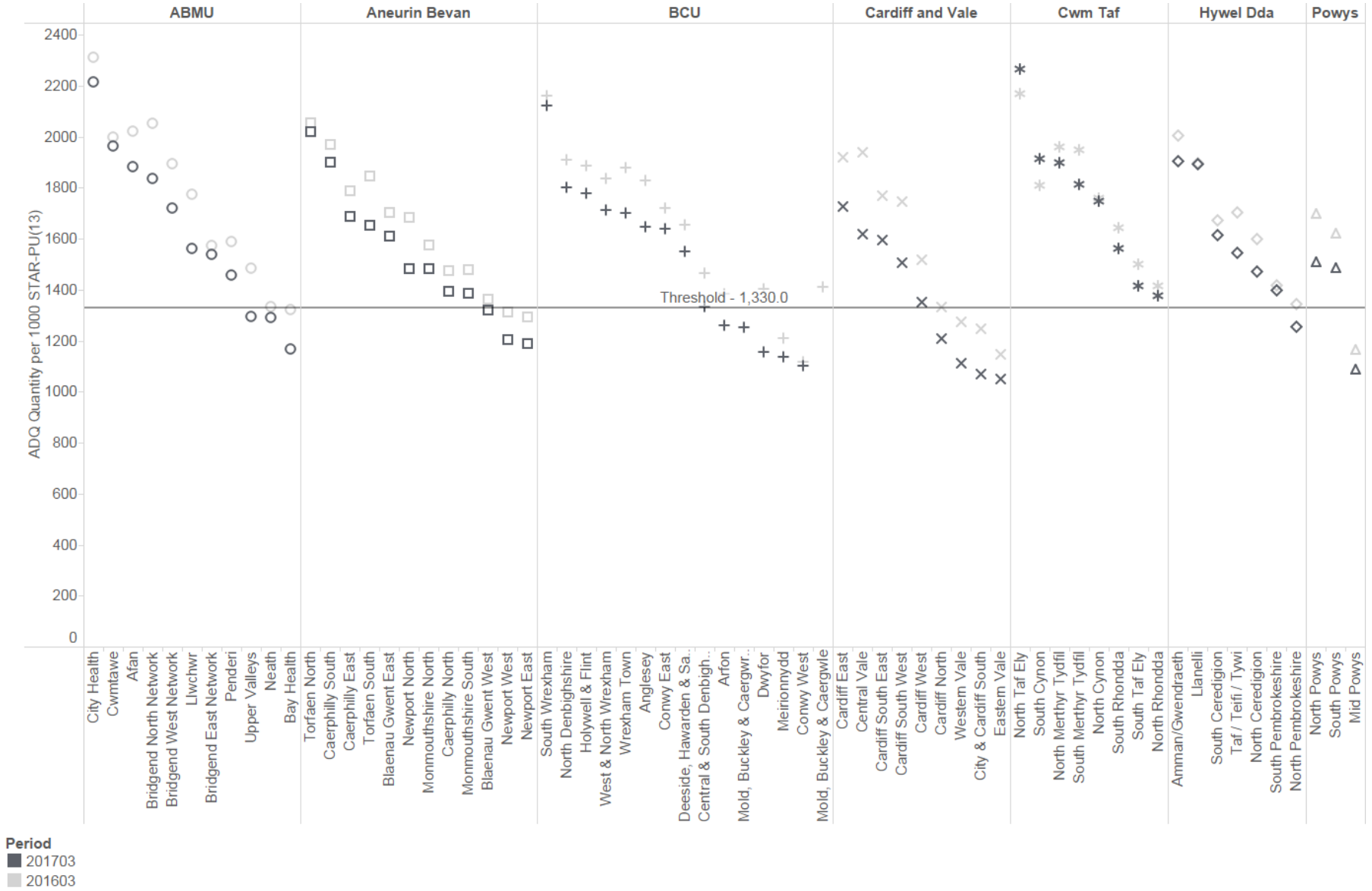
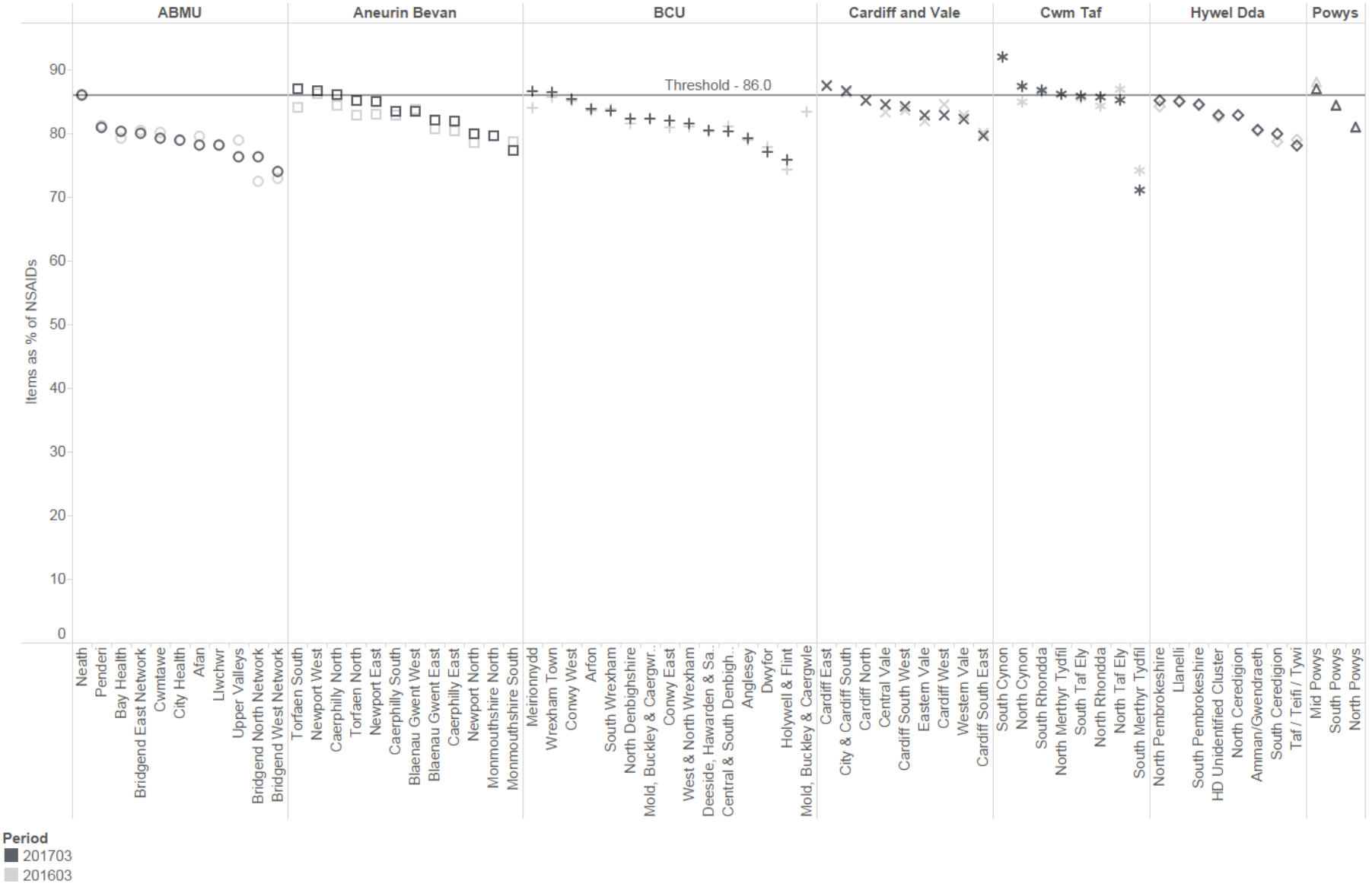


Figure 15. Ibuprofen and naproxen as a percentage of NSAID items – Quarter ending March 2016 versus quarter ending March 2017



APPENDIX 3. POSITION OF WELSH HEALTH BOARDS AGAINST CCGS IN ENGLAND AND NE ENGLAND

Figure 1. PPI DDDs per 1,000 PUs
Quarter ending March 2017

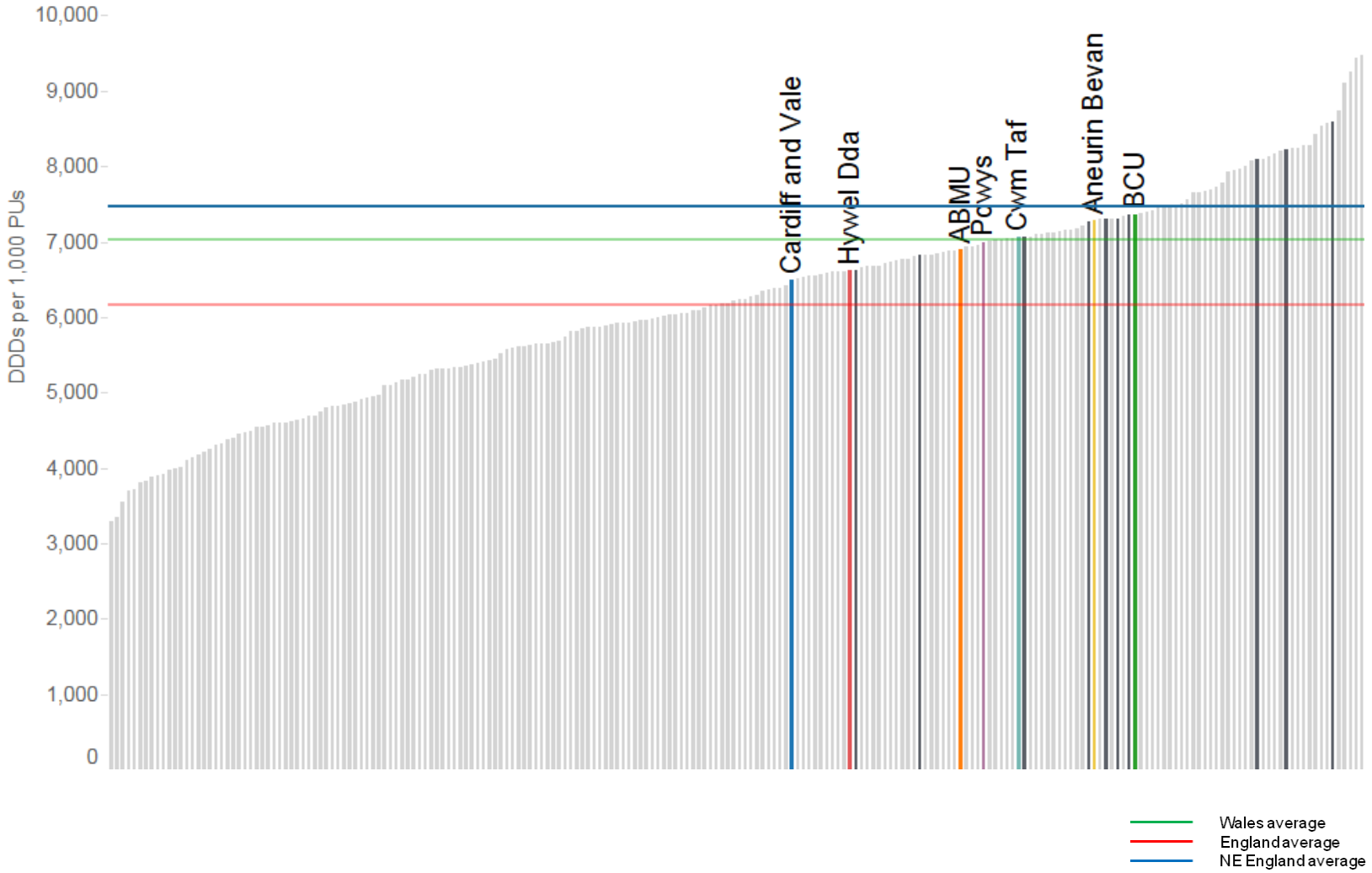


Figure 2. Items of bile acid sequestrants, fibrates, nicotinic acid and omega-3 fatty acid compounds as a percentage of total lipid-regulating items – Quarter ending March 2017

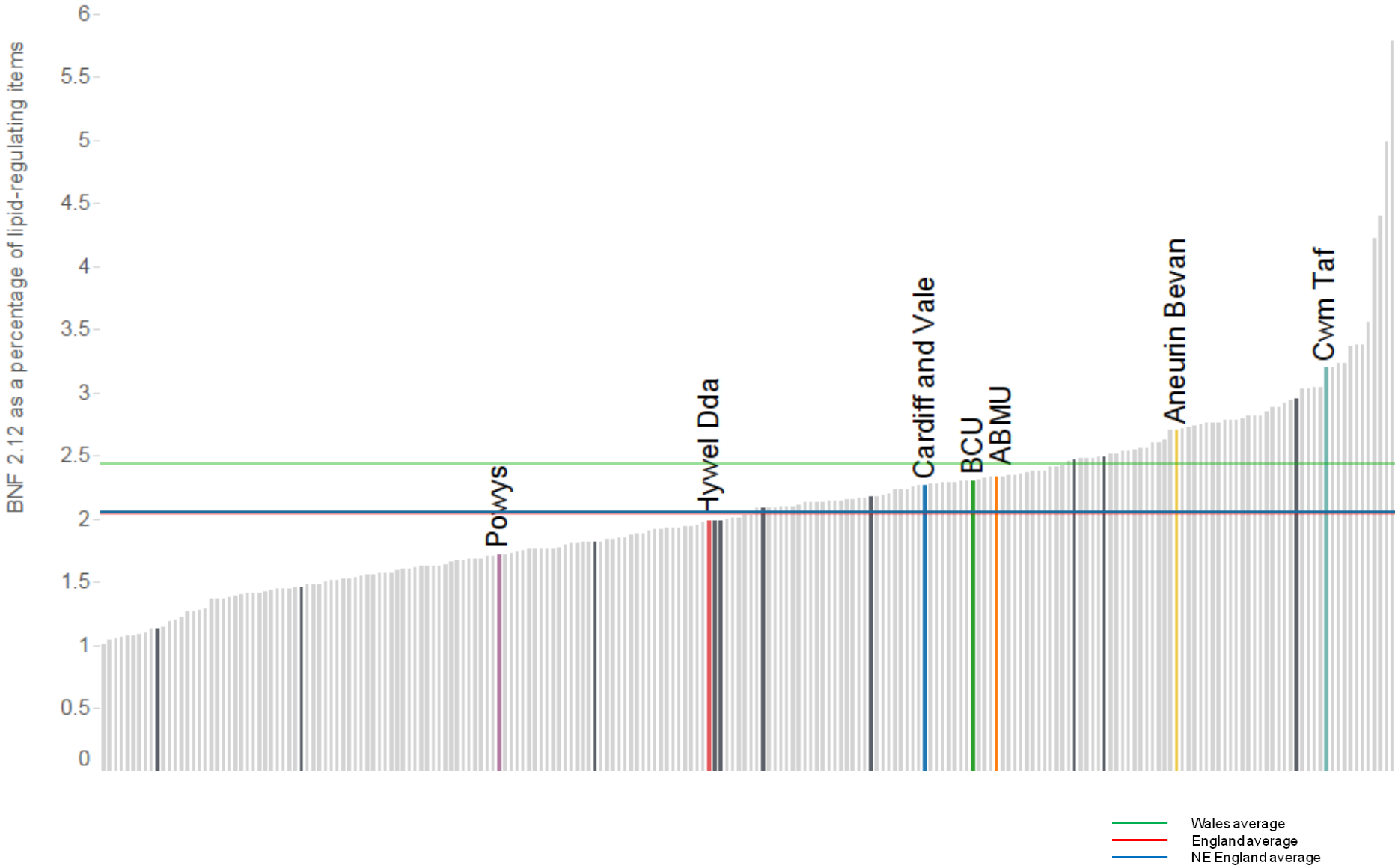


Figure 3. Low strength ICS items as a percentage of all ICS prescribing
Quarter ending March 2017

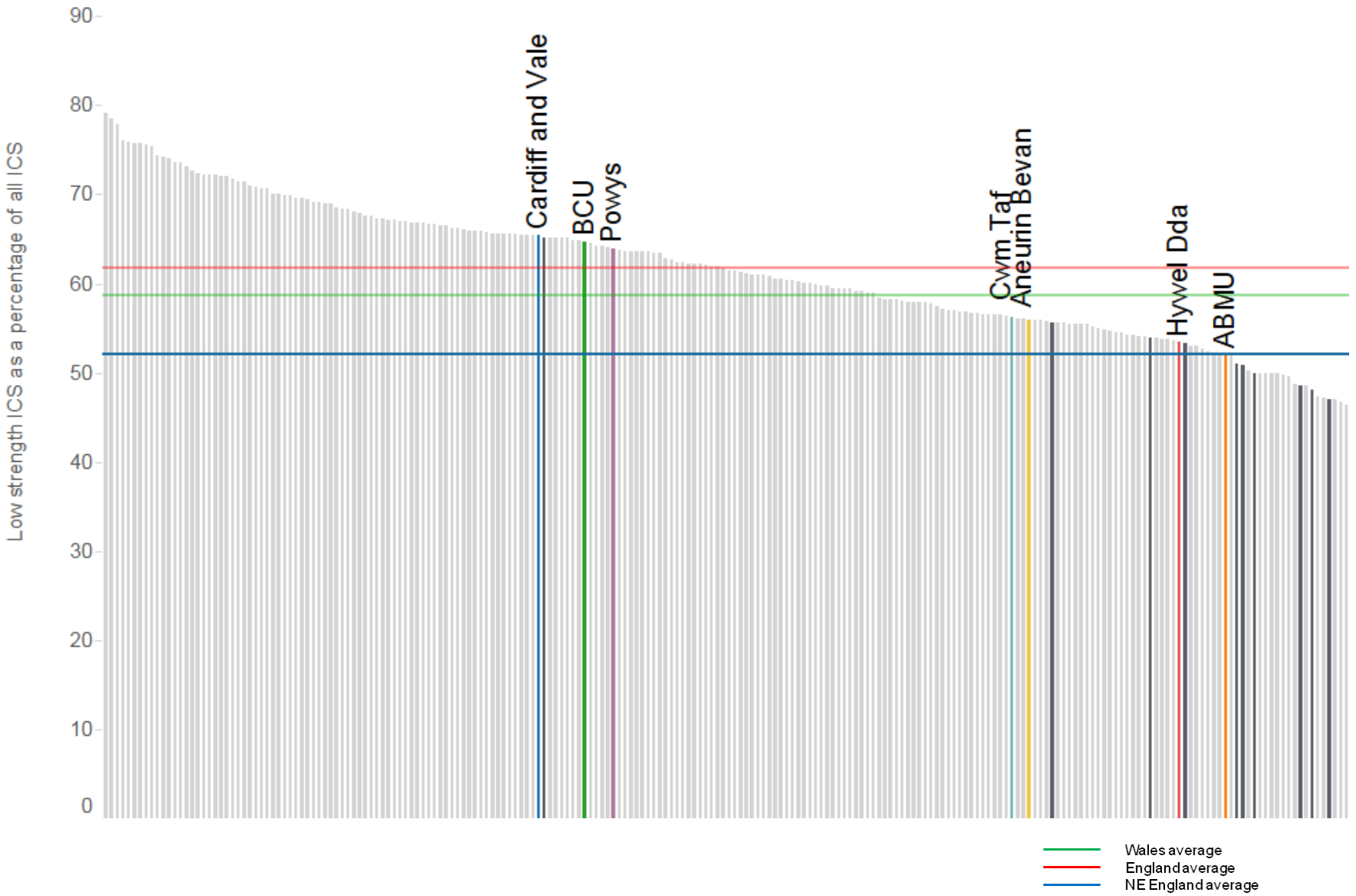


Figure 4. Hypnotic and anxiolytic ADQs per 1,000 STAR-PUs
Quarter ending March 2017

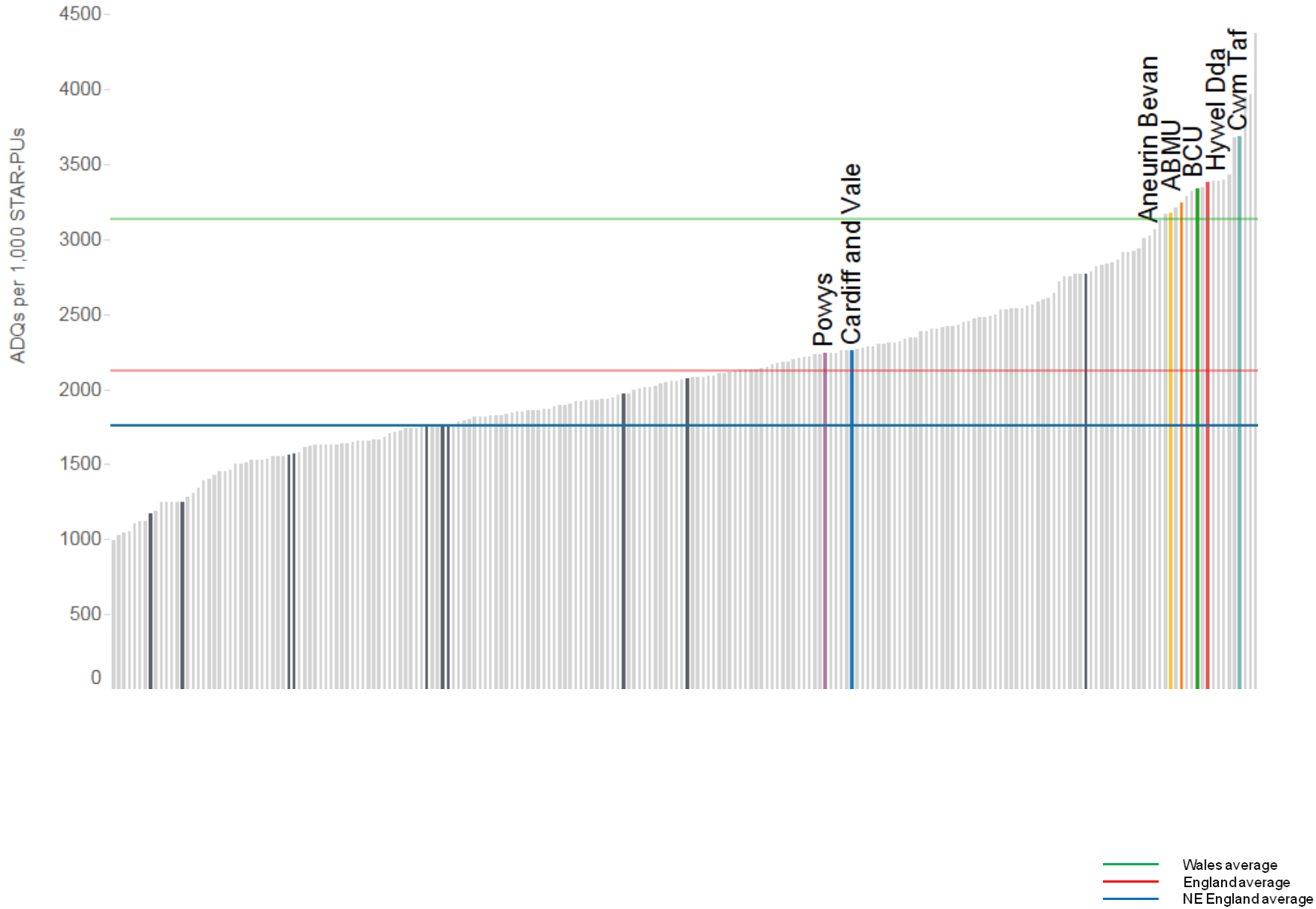


Figure 5. Tramadol DDDs per 1,000 patients
Quarter ending March 2017

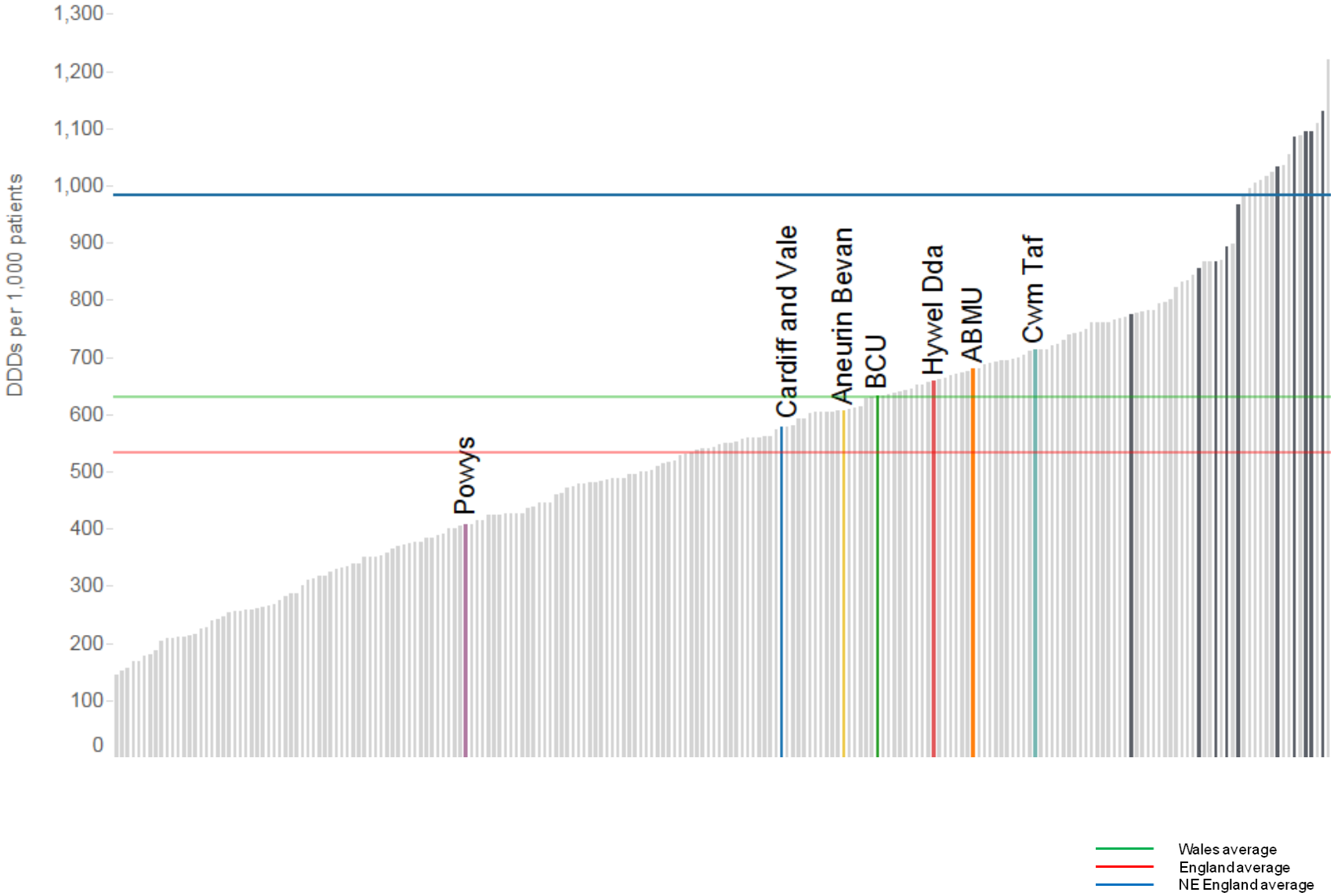


Figure 6. Gabapentin and pregabalin DDDs per 1,000 patients
Quarter ending March 2017

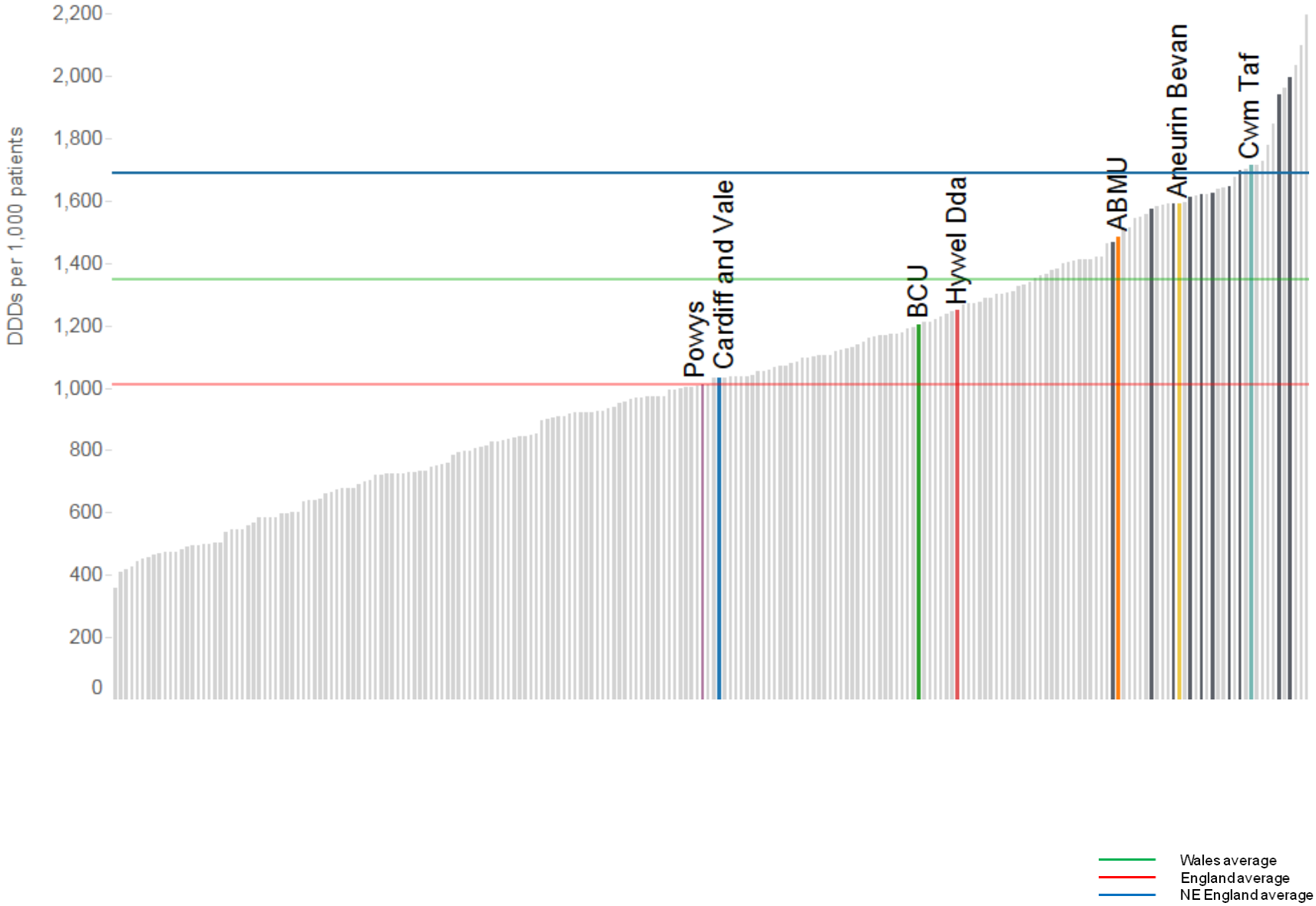


Figure 7. Total antibacterial items per 1,000 STAR-PUs
Quarter ending March 2017

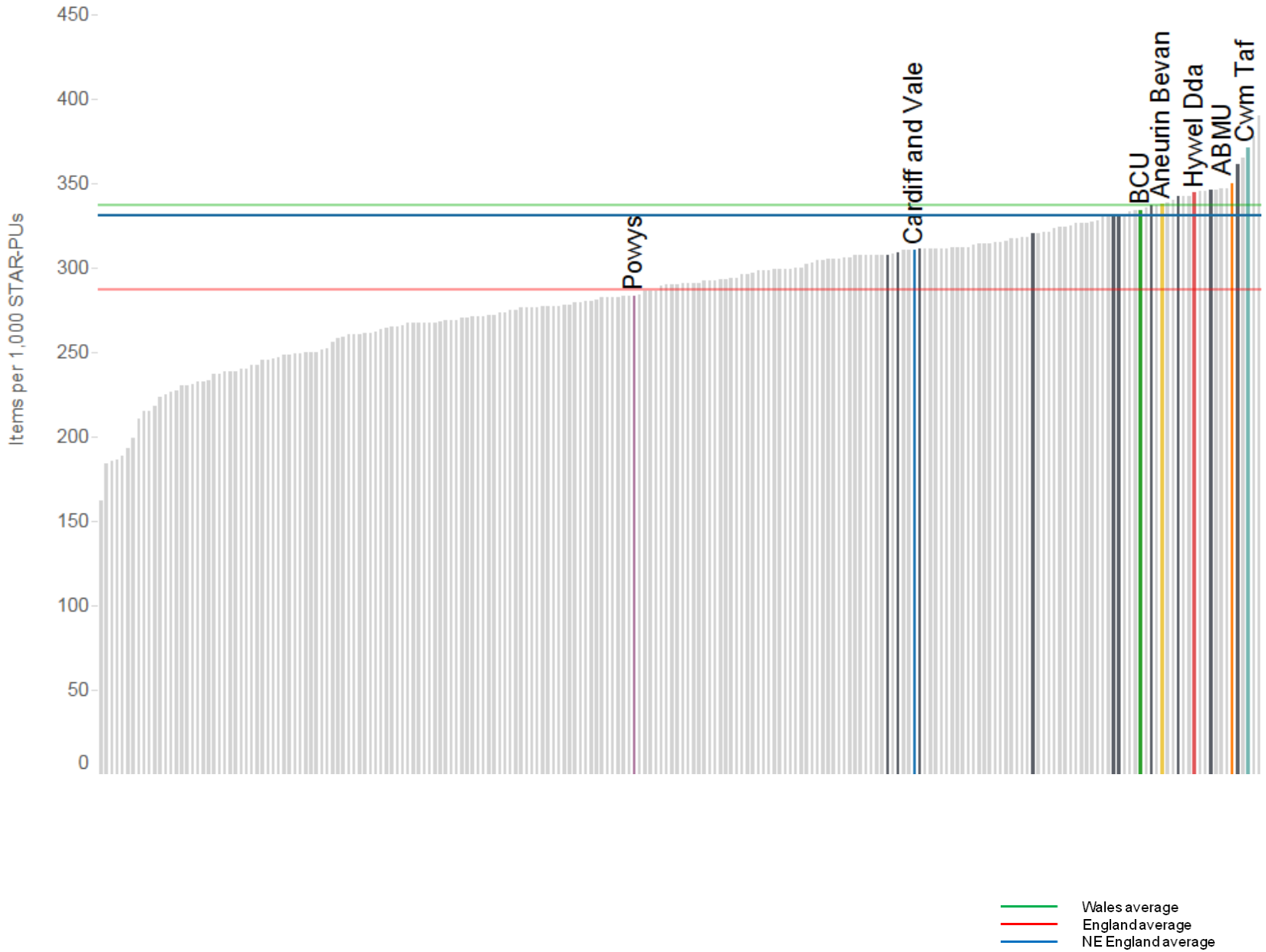


Figure 8. Co-amoxiclav items per 1,000 patients
Quarter ending March 2017

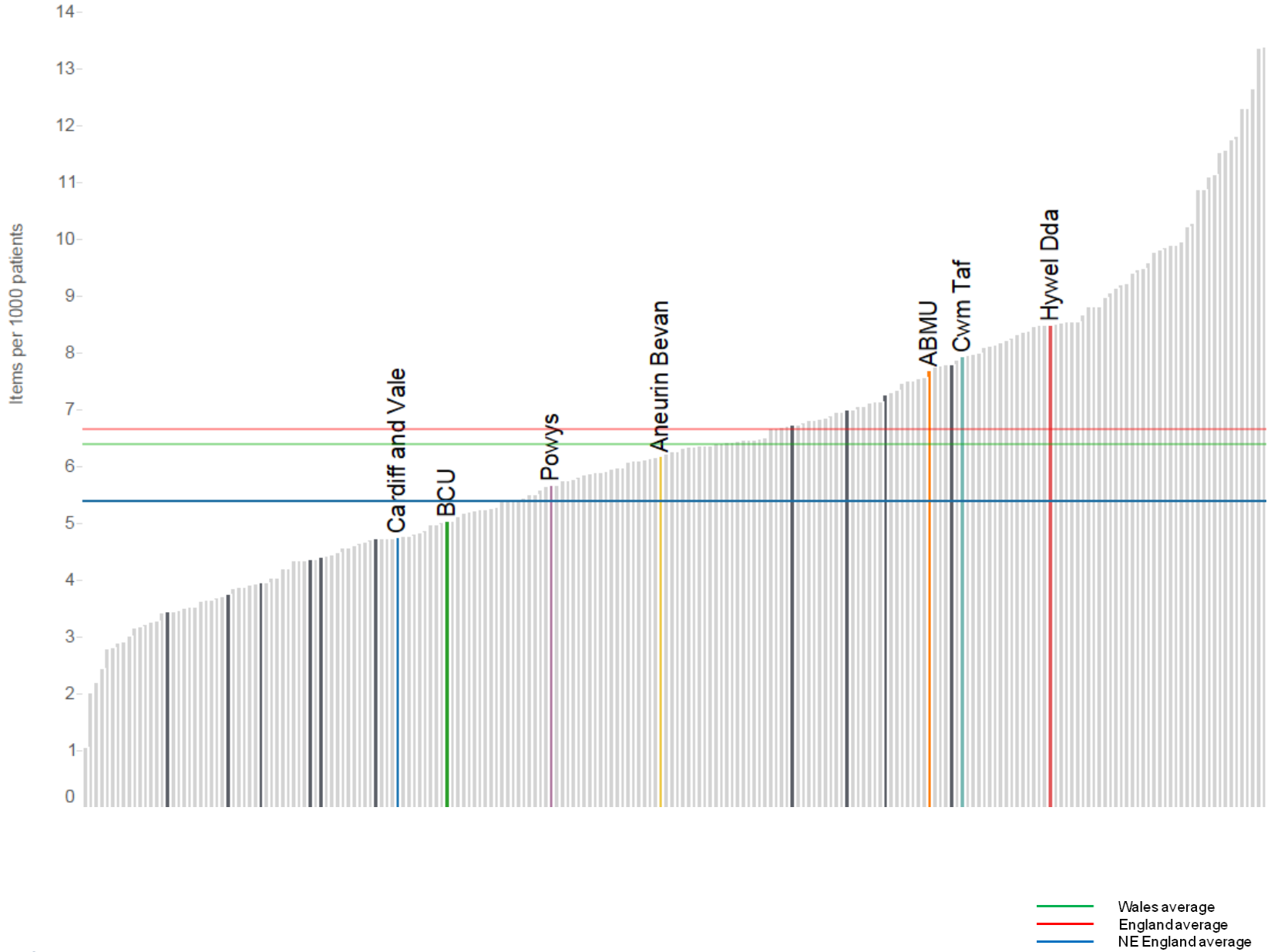


Figure 9. Cephalosporin items per 1,000 patients
Quarter ending March 2017

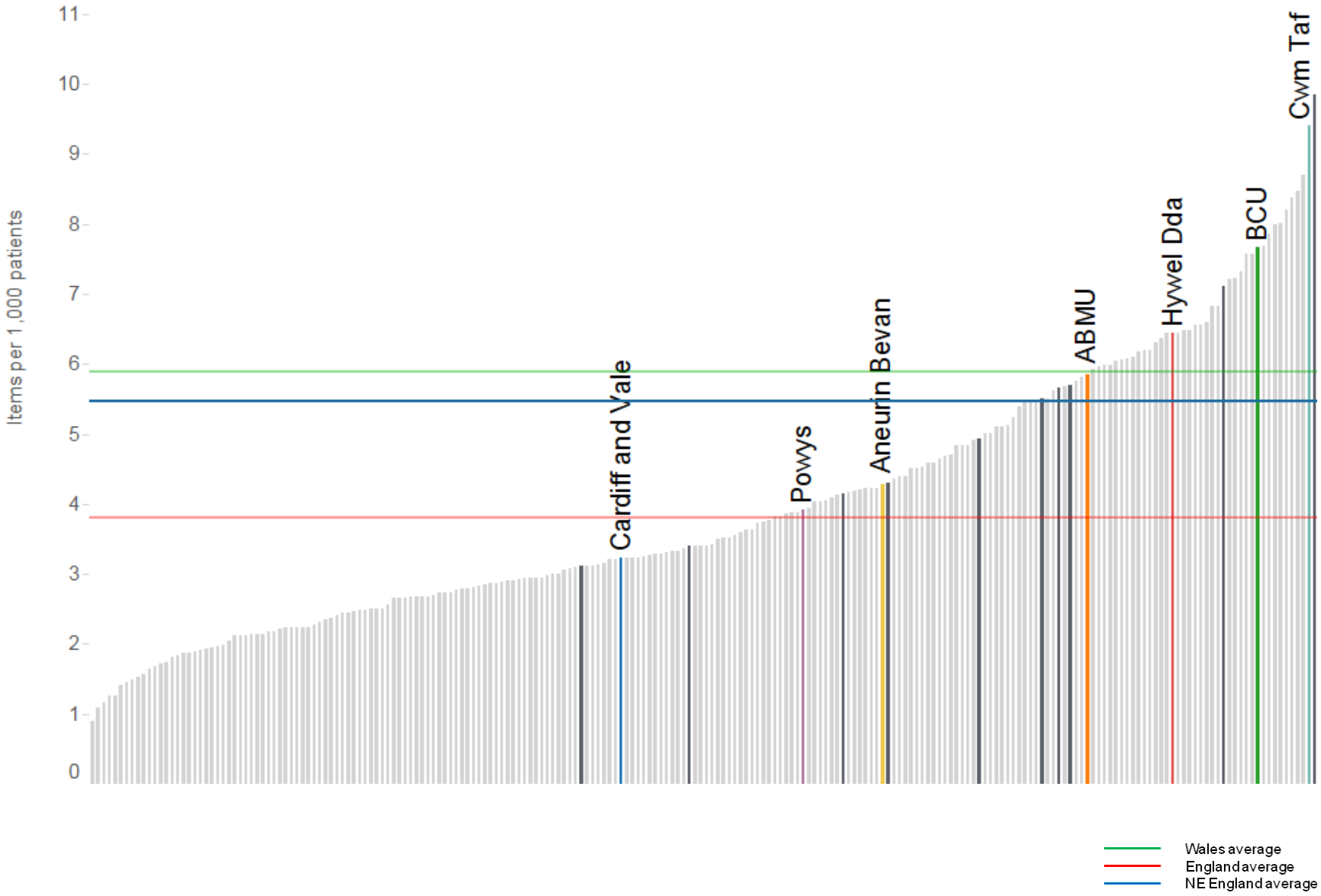


Figure 10. Fluoroquinolone items per 1,000 patients
Quarter ending March 2017

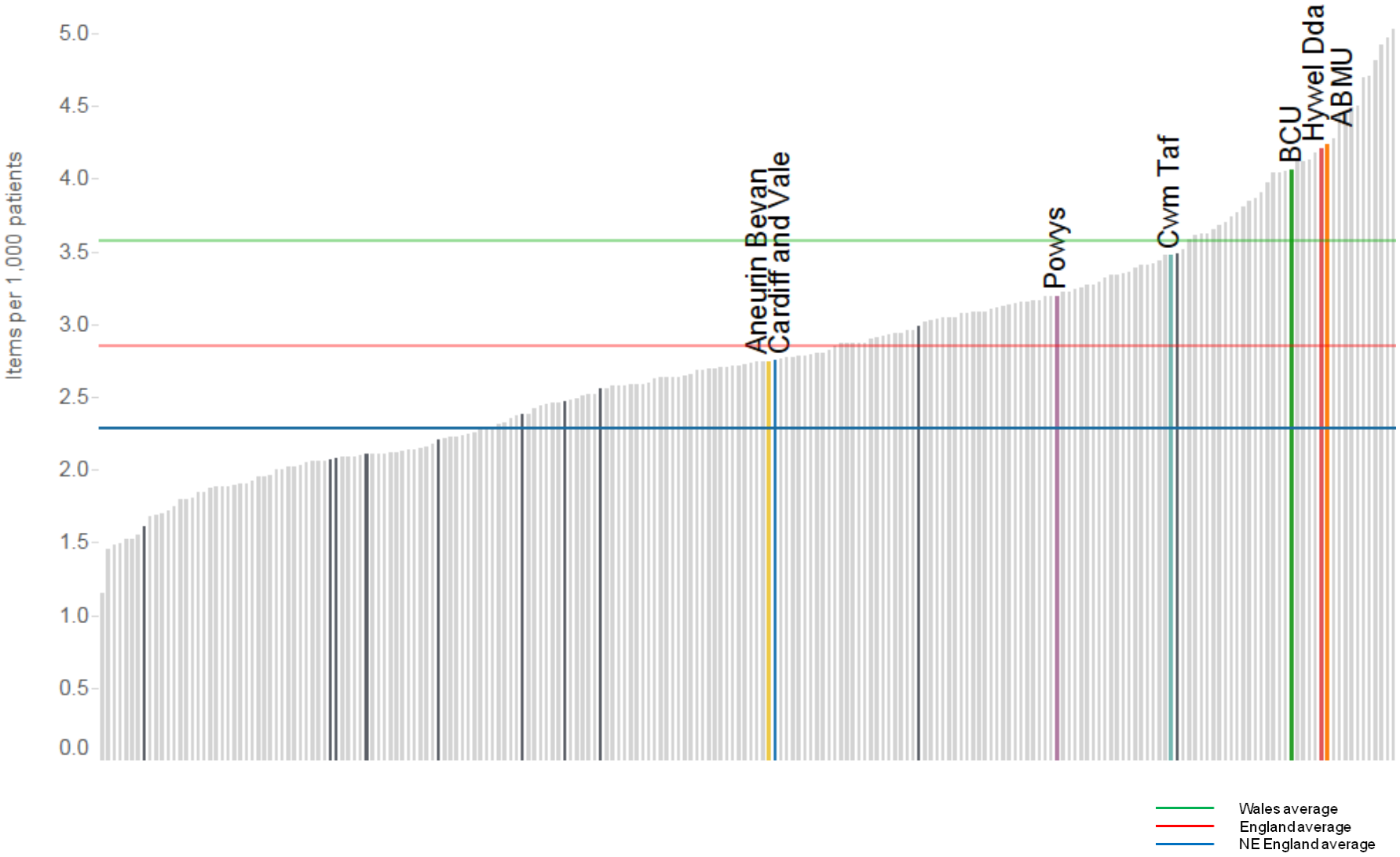


Figure 11. NSAID ADQs per 1,000 STAR-PUs
Quarter ending March 2017

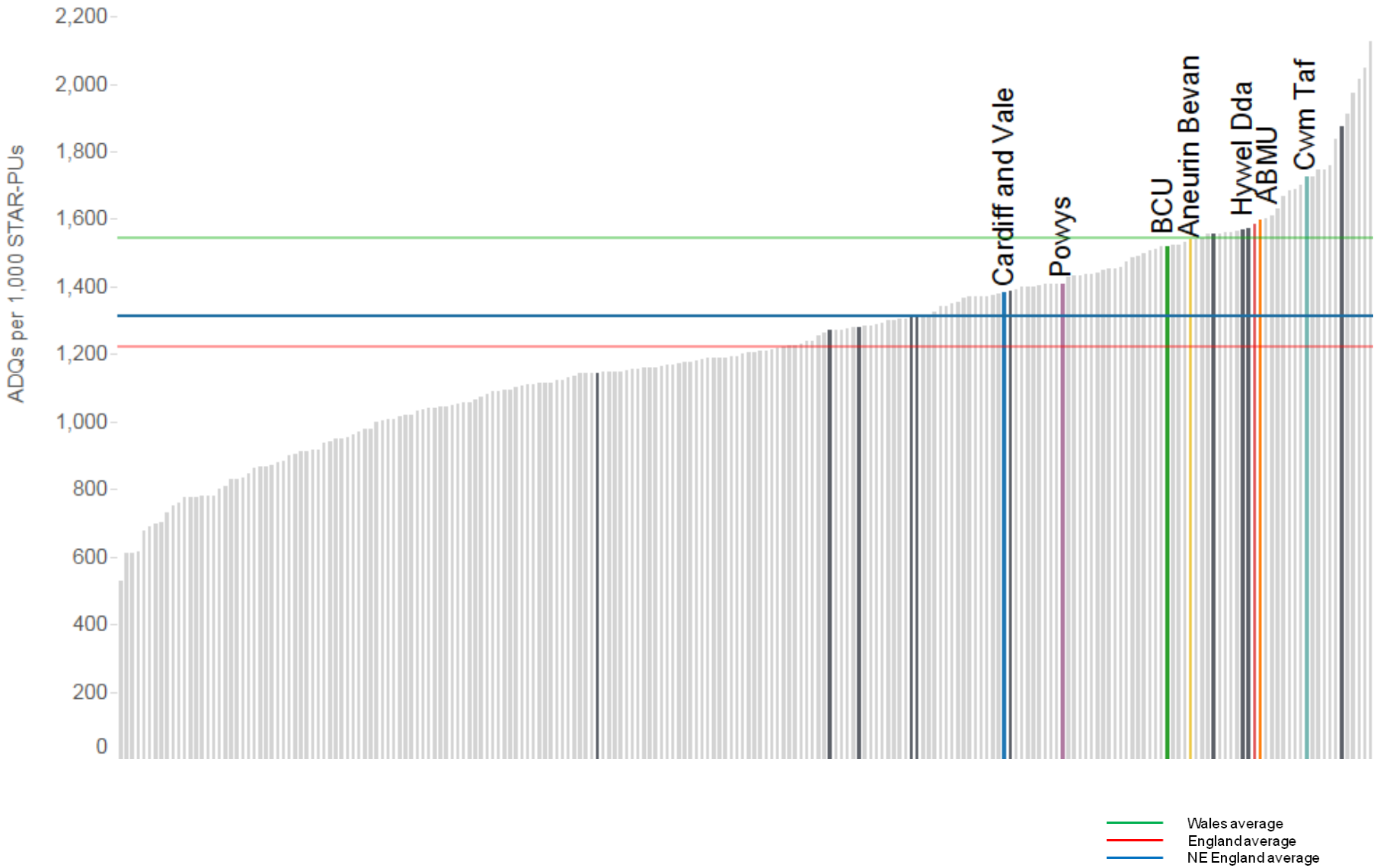


Figure 12. Ibuprofen and naproxen items as a percentage of NSAID prescribing
Quarter ending March 2017