



AWTTC

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

National Prescribing Indicators 2017–2018

Analysis of Prescribing Data to September 2017





All Wales Therapeutics and Toxicology Centre

Canolfan Therapiwteg a
Thocsicoleg Cymru Gyfan

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

Please direct any queries to AWTTC:

All Wales Therapeutics and Toxicology Centre (AWTTC)
University Hospital Llandough
Penlan Road
Llandough
Vale of Glamorgan
CF64 2XX

awttc@wales.nhs.uk
029 2071 6900

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.

Background information supporting the choice of NPIs is detailed in the document National Prescribing Indicators 2017–2018.

This report contains data relating to the primary and secondary care NPIs for the second quarter of 2017–2018. Unit of measure and threshold for each NPI is also included in Appendix 1 and primary care NPI prescribing data for GP clusters is presented in Appendix 2.

PRIMARY CARE

For 2017–2018, there are 14 primary care NPIs focusing on seven areas of prescribing and the reporting of adverse events (Yellow Cards). Four of the indicators – high strength inhaled corticosteroids (ICS), opioid patches, anticholinergic burden, and non-steroidal anti-inflammatory drugs (NSAIDs) and chronic kidney disease (CKD) – are new for 2017–2018. A threshold level of prescribing/reporting is set for 11 of the 14 NPIs based upon quarter three data for 2016–2017. The threshold for the NSAIDs and CKD NPI has been based upon quarter one data for 2017–2018, due to the unavailability of historical data.

- Of the 12 NPIs with a threshold, there was an overall improvement (in line with the aim of each indicator) across Wales in 11 NPIs, compared with the equivalent quarter of the previous year (quarter ending September 2016), or quarter one 2017–2018 for NSAIDs and CKD. The NPI that did not show an improvement was gabapentin and pregabalin, where prescribing increased in all health boards (8.11% national increase).
- At a national level, the NPIs associated with the largest improvements were:
 - Yellow Card reporting by GPs increased by 61% compared with the equivalent quarter of the previous year, and Yellow Card reporting for all health board reporters increased by 42%.
 - Number of patients on the CKD register (CKD stage 3–5) who have received a repeat prescription for an NSAID within the last 3 months, as a percentage of all patients on the CKD register (32.5% reduction, September quarter 2017 compared with June quarter 2017)
 - Number of patients not on the CKD register but have an eGFR of < 59 ml/min, and have received a repeat prescription for an NSAID within the last 3 months, as a percentage of all patients who are not on the CKD register but have an eGFR of < 59 ml/min (28.7% reduction, September quarter 2017 compared with June quarter 2017).
 - NSAIDs ADQs per 1,000 STAR-PUs (11.2% reduction, September quarter 2017 compared with the equivalent quarter of the previous year)
 - Cephalosporin items per 1,000 patients (8.77% reduction, September quarter 2017 compared with the equivalent quarter of the previous year)

- Hypnotics and anxiolytics ADQs per 1,000 STAR-PUs (8.52% reduction, September quarter 2017 compared with the equivalent quarter of the previous year)
 - Tramadol DDDs per 1,000 patients (8.15% reduction, September quarter 2017 compared with the equivalent quarter of the previous year).
- In line with the aim of the indicator, high strength ICS prescribing decreased in all of the health boards compared with the equivalent quarter of the previous year. The largest decrease was seen in Aneurin Bevan UHB (12.1% reduction).
- Prescribing of tramadol decreased in all of the health boards compared with the equivalent quarter of the previous year (in line with the aim of the NPI). The largest decrease of 10.2% was seen in Abertawe Bro Morgannwg UHB.

SECONDARY CARE

For 2017–2018, there are three secondary care NPIs focusing on three areas of prescribing:

- Insulin prescribing
- Prescribing of biosimilars
- Antibiotic surgical prophylaxis

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 with the equivalent quarter of the previous year, in line with the aim of the NPI; there was also a decrease in primary care usage.
- Prescribing of biosimilar infliximab, etanercept, rituximab and insulin glargine all increased when compared with the equivalent quarter of the previous year, in line with the aim of the NPI.
- Data for duration of colorectal surgical antibiotic prophylaxis indicate that there has been no change in the percentage of patients in Wales receiving prophylaxis for greater than 24 hours compared with the equivalent quarter of the previous year.

The 2017–2018 NPI report for quarter ending December 2017 will be available on 16th April 2018.

CONTENTS

| | |
|----------------------------------------------------------------------|----|
| PRACTICES ACHIEVING INDICATOR THRESHOLDS FOR PRIMARY CARE NPIS | 5 |
| PRIMARY CARE | 6 |
| 1.0 PROTON PUMP INHIBITORS | 6 |
| 2.0 INHALED CORTICOSTEROIDS | 7 |
| 3.0 HYPNOTICS AND ANXIOLYTICS | 8 |
| 4.0 ANALGESICS | 9 |
| 4.1 Tramadol | 9 |
| 4.2 Opioid patches | 10 |
| 4.3 Gabapentin and pregabalin | 11 |
| 5.0 ANTIBIOTICS | 12 |
| 5.1 Total antibacterial items | 12 |
| 5.2 Co-amoxiclav, cephalosporins and fluoroquinolones | 13 |
| 6.0 ANTICHOLINERGIC BURDEN | 17 |
| 7.0 NON-STEROIDAL ANTI-INFLAMMATORY DRUGS | 18 |
| 7.1 All NSAIDs | 18 |
| 7.2 NSAIDs and CKD | 19 |
| 8.0 YELLOW CARDS | 21 |

| | |
|-------------------------------------------------------------------|----|
| SECONDARY CARE..... | 22 |
| 1.0 INSULIN | 22 |
| 2.0 BIOSIMILARS..... | 24 |
| 2.1 Filgrastim..... | 25 |
| 2.2 Infliximab | 26 |
| 2.3 Etanercept..... | 27 |
| 2.4 Rituximab | 28 |
| 2.5 Insulin glargine | 29 |
| 3.0 ANTIBIOTICS | 31 |
| CAUTION WITH INTERPRETING NPI MONITORING DATA | 32 |
| GLOSSARY | 33 |
| APPENDIX 1. AWMSG NATIONAL PRESCRIBING INDICATORS 2017–2018 | 34 |
| APPENDIX 2. PRIMARY CARE NPI PRESCRIBING BY GP CLUSTER..... | 36 |

PRACTICES ACHIEVING INDICATOR THRESHOLDS FOR PRIMARY CARE NPIS

The table below shows 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 September 2017

| Indicator Description | Abertawe Bro Morgannwg | Aneurin Bevan | Betsi Cadwaladr | Cardiff and Vale | Cwm Taf | Hywel Dda | Powys |
|-----------------------------------------------------|------------------------|---------------|-----------------|------------------|-----------|-----------|-----------|
| Proton pump inhibitor DDDs per 1,000 PUs | 25 34% | 17 21% | 30 28% | 36 55% | 11 26% | 24 44% | 4 24% |
| High-strength ICS items as a % of all ICS | 8 11% | 31 39% | 33 30% | 37 56% | 4 9% | 14 26% | 5 29% |
| Hypnotic and anxiolytic ADQs per 1,000 STAR-PUs | 20 27% | 25 31% | 28 26% | 37 56% | 10 23% | 8 15% | 9 53% |
| Tramadol DDDs per 1,000 patients | 16 22% | 23 29% | 29 27% | 29 44% | 6 14% | 18 33% | 11 65% |
| Opioid patch items as a % of all opioid prescribing | 50 68% | 16 20% | 32 29% | 21 32% | 3 7% | 6 11% | 2 12% |
| Gabapentin and pregabalin DDDs per 1,000 patients | 10 14% | 5 6% | 19 17% | 33 50% | 3 7% | 15 28% | 5 29% |
| Co-amoxiclav items per 1,000 patients | 16 22% | 23 29% | 45 41% | 30 45% | 4 9% | 5 9% | 7 41% |
| Co-amoxiclav items as a % of antibacterial items | 8 11% | 15 19% | 36 33% | 20 30% | 4 9% | 2 4% | 3 18% |
| Cephalosporin items per 1,000 patients | 19 26% | 30 38% | 16 15% | 42 64% | 7 16% | 9 17% | 8 47% |
| Cephalosporin items as a % of antibacterial items | 17 23% | 32 40% | 11 10% | 35 53% | 5 12% | 8 15% | 7 41% |
| Fluoroquinolone items per 1,000 patients | 12 16% | 35 44% | 30 28% | 27 41% | 11 26% | 12 22% | 6 35% |
| Fluoroquinolone items as a % of antibacterial items | 10 14% | 26 33% | 20 18% | 14 21% | 15 35% | 8 15% | 5 29% |
| NSAID ADQs per 1,000 STAR-PUs | 22 30% | 25 31% | 37 34% | 35 53% | 9 21% | 12 22% | 6 35% |



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

Although PPIs are generally well tolerated, there is emerging evidence that serious adverse effects may be linked with long-term PPI use. These include fractures of the hip, wrist and spine, *Clostridium difficile* infection, and hypomagnesaemia. Prescribers are therefore encouraged to review and reduce where possible.

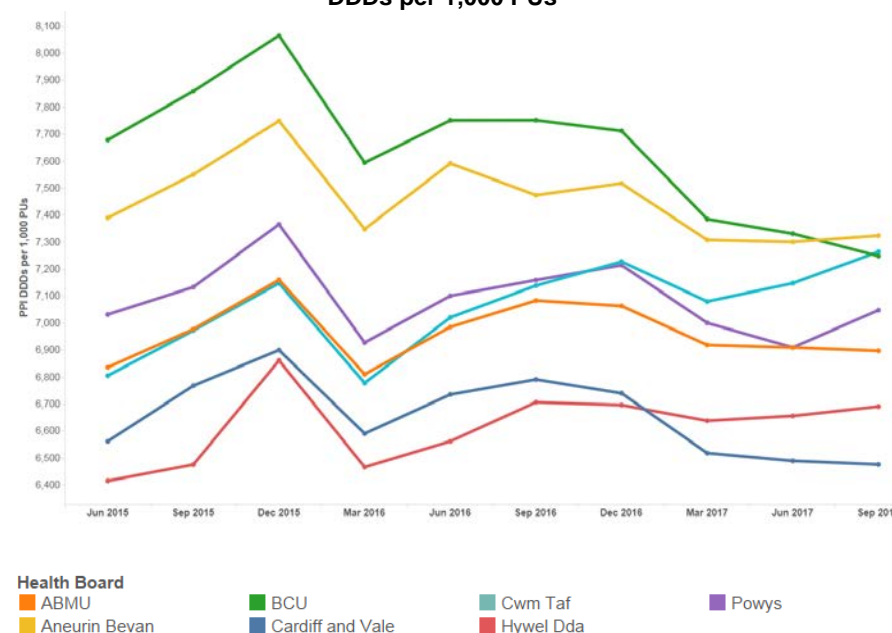
In the quarter to September 2017, PPI prescribing (DDDs per 1,000 PUs) in Wales was 12% higher than that seen in England.

- For the quarter ending September 2017, PPI usage ranged from 6,477 to 7,325 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 Aneurin Bevan UHB.
- Six out of the seven health boards demonstrated a reduction in DDDs per 1,000 PUs, compared with the equivalent quarter of the previous year. Betsi Cadwaladr UHB demonstrated the largest percentage decrease.
- Cwm Taf UHB demonstrated an increase in prescribing.

Table 1. PPI DDDs per 1,000 PUs

| | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|------------------|-----------------|-----------------|----------|
| Betsi Cadwaladr | 7,752 | 7,249 | -6.49% |
| Cardiff and Vale | 6,792 | 6,477 | -4.64% |
| ABMU | 7,084 | 6,898 | -2.63% |
| Aneurin Bevan | 7,475 | 7,325 | -2.01% |
| Powys | 7,160 | 7,048 | -1.55% |
| Hywel Dda | 6,707 | 6,691 | -0.24% |
| Cwm Taf | 7,139 | 7,265 | 1.76% |
| Wales | 7,226 | 7,010 | -2.99% |

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



2.0 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: High-strength ICS items as a percentage of all ICS prescribing.

Aim: To reduce prescribing

This indicator is new for 2017–2018 and replaces the low-strength ICS indicator.

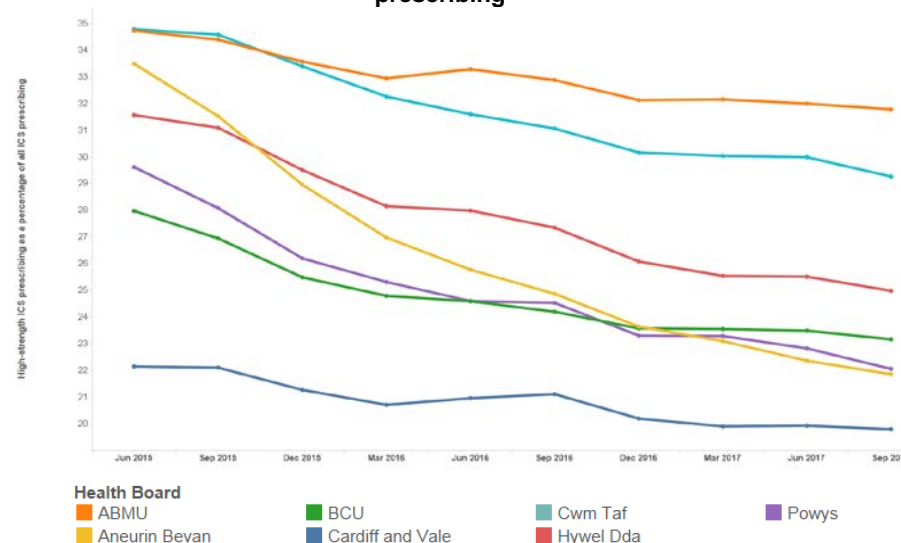
Potentially serious systemic side effects, such as adrenal suppression, growth failure, decrease in bone mineral density, cataracts and glaucoma, may be associated with ICS, particularly at high doses.

- For the quarter ending September 2017, the proportion of high-strength ICS prescribing ranged from 19.8% to 31.8% across the health boards.
- The health board with the lowest percentage was Cardiff and Vale UHB, whilst the highest percentage was seen in Abertawe Bro Morgannwg UHB.
- The proportion of high-strength ICS prescribing decreased across all health boards compared with the equivalent quarter of the previous year.
- The greatest percentage decrease was seen in Aneurin Bevan UHB, and the smallest percentage decrease was seen in Abertawe Bro Morgannwg UHB.

Table 2. High-strength ICS prescribing as a percentage of all ICS prescribing

| | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|------------------|-----------------|-----------------|----------|
| Aneurin Bevan | 24.9 | 21.9 | -12.1% |
| Powys | 24.5 | 22.1 | -10.1% |
| Hywel Dda | 27.4 | 25.0 | -8.64% |
| Cardiff and Vale | 21.1 | 19.8 | -6.23% |
| Cwm Taf | 31.1 | 29.3 | -5.78% |
| Betsi Cadwaladr | 24.2 | 23.2 | -4.27% |
| ABMU | 32.9 | 31.8 | -3.33% |
| Wales | 26.7 | 24.9 | -6.71% |

Figure 2. Trend in high-strength ICS prescribing as a percentage of all ICS prescribing



3.0 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

There has been ongoing concern with regard to the high level of anxiolytic and hypnotic prescribing within NHS Wales. Some prescribing may be inappropriate and contribute to the problem of physical and psychological dependence, and/or may be responsible for masking underlying depression.

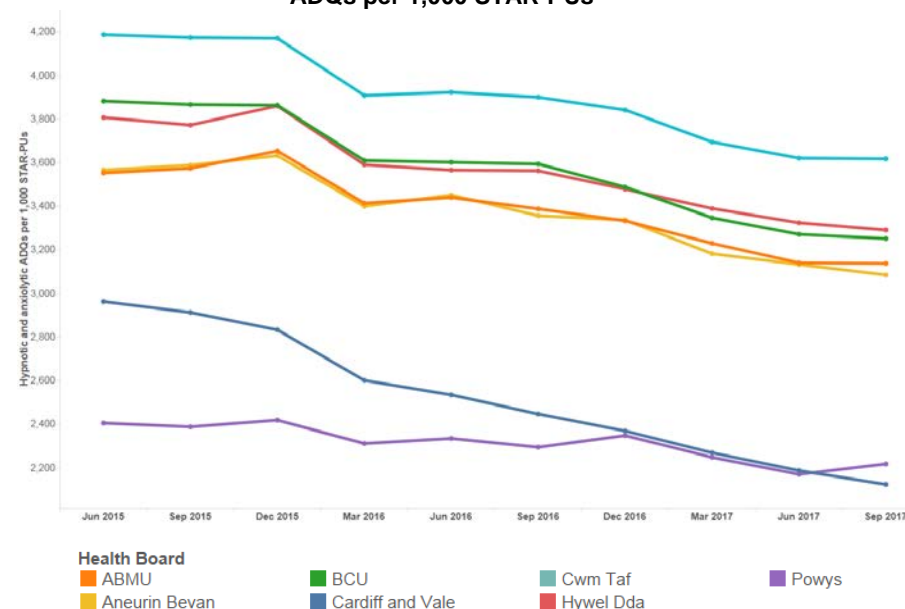
The prescribing of hypnotics and anxiolytics continues to decrease across Wales, in line with the aim of this indicator. However, for the quarter ending September 2017, prescribing in Wales (ADQs per 1,000 STAR-PUs) was almost 49% higher than that seen in England.

- For the quarter ending September 2017, hypnotic and anxiolytic prescribing ranged from 2,124 to 3,618 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.
- Hypnotic and anxiolytic prescribing decreased compared with the equivalent quarter of the previous year in all of the health boards.
- The largest percentage decrease was seen in Cardiff and Vale UHB, and the smallest percentage decrease was seen in Powys Teaching HB.

Table 3. Hypnotic and anxiolytic ADQs per 1,000 STAR-PUs

| | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|------------------|-----------------|-----------------|----------|
| Cardiff and Vale | 2,447 | 2,124 | -13.2% |
| Betsi Cadwaladr | 3,594 | 3,252 | -9.53% |
| Aneurin Bevan | 3,357 | 3,086 | -8.09% |
| Hywel Dda | 3,563 | 3,291 | -7.63% |
| ABMU | 3,388 | 3,138 | -7.39% |
| Cwm Taf | 3,901 | 3,618 | -7.25% |
| Powys | 2,295 | 2,218 | -3.35% |
| Wales | 3,316 | 3,034 | -8.52% |

Figure 3. Trend in hypnotic and anxiolytic prescribing ADQs per 1,000 STAR-PUs



4.0 ANALGESICS

There are three NPIs monitoring the usage of medicines used for the treatment of pain for 2017–2018:

1. Tramadol
2. Opioid patches
3. Gabapentin and pregabalin

4.1 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

Whilst there is a recognised place in pain management for tramadol, there are concerns regarding the risks associated with misuse and diversion. This NPI promotes a prudent approach to prescribing tramadol, taking into account the risks and benefits, and encouraging timely review.

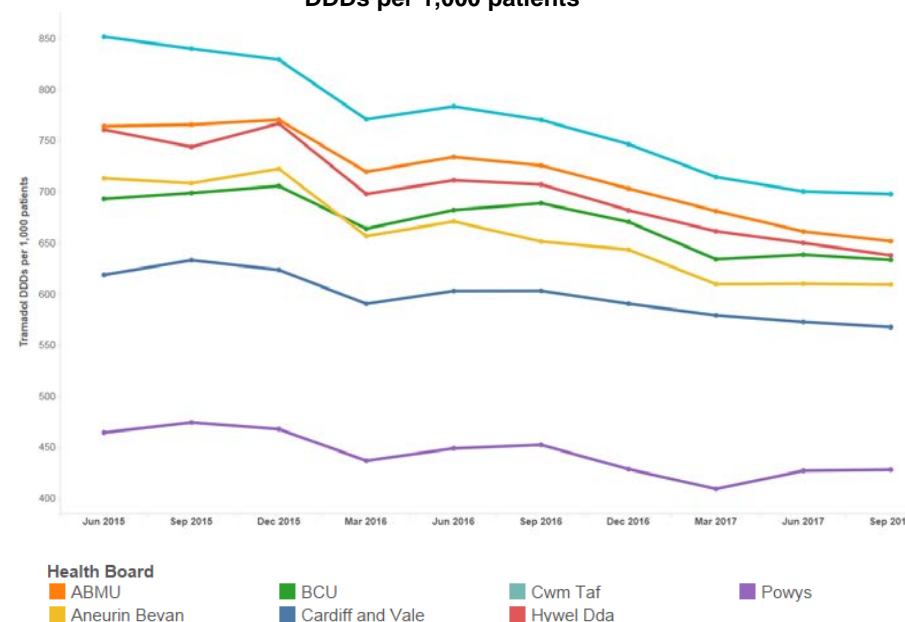
Across Wales, prescribing of tramadol was lower in the quarter ending September 2017, than in the equivalent quarter of the previous year. This is in line with the aim of the indicator.

- For the quarter ending September 2017, tramadol prescribing ranged from 428 to 698 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 with the equivalent quarter of the previous year in all of the health boards.
- The largest percentage decrease was seen in Abertawe Bro Morgannwg UHB and the smallest percentage decrease was seen in Powys Teaching HB.

Table 4. Tramadol DDDs per 1,000 patients

| | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|------------------|-----------------|-----------------|----------|
| ABMU | 726 | 652 | -10.2% |
| Hywel Dda | 708 | 638 | -9.79% |
| Cwm Taf | 771 | 698 | -9.40% |
| Betsi Cadwaladr | 689 | 634 | -8.04% |
| Aneurin Bevan | 652 | 610 | -6.49% |
| Cardiff and Vale | 604 | 568 | -5.91% |
| Powys | 453 | 428 | -5.39% |
| Wales | 675 | 620 | -8.15% |

Figure 4. Trend in tramadol prescribing DDDs per 1,000 patients



4.2 Opioid patches

Purpose: To encourage the appropriate use and review of opioid patches.

Unit of measure: Opioid patch items as a percentage of all opioid prescribing.

Aim: To reduce prescribing

Opioid patches are recommended as a treatment option only where analgesic requirements are stable and where oral opioids are unsuitable. A number of safety concerns around the use of opioid patches have been highlighted, with anecdotal evidence suggesting that patches are not always prescribed appropriately.

This is a new indicator for 2017–2018, the aim of which is to highlight that prescribers should make evidence-based, informed decisions based on the individual needs of the patient. Prescribers should ensure that when an opioid patch is indicated, the patch with the lowest acquisition cost is initiated.

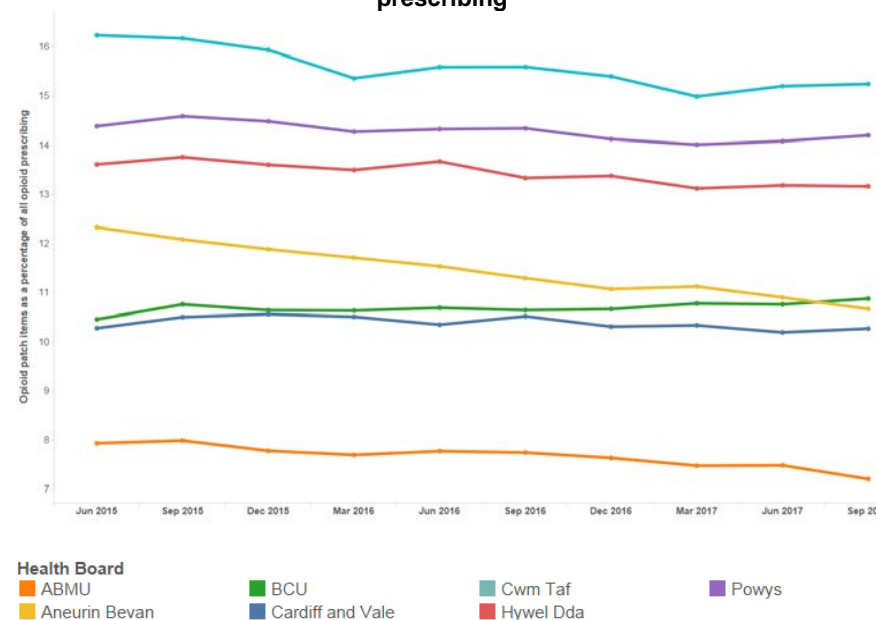
Across Wales, use of opioid patches as a percentage of all opioid prescribing was lower in the quarter ending September 2017 than in the equivalent quarter of the previous year. This is in line with the aim of the indicator.

- For the quarter ending September 2017, the proportion of opioid patch prescribing ranged from 7.21% to 15.3%.
- The health board with the lowest proportion was ABMU UHB, whilst the highest proportion was seen in Cwm Taf UHB.
- The proportion of opioid patches prescribed decreased compared with the equivalent quarter of the previous year in six out of the seven health boards. The largest percentage decrease was seen in Abertawe Bro Morgannwg UHB.
- Betsi Cadwaladr demonstrated an increase in prescribing.

Table 5. Opioid patch items as a percentage of all opioid prescribing

| | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|------------------|-----------------|-----------------|----------|
| ABMU | 7.75 | 7.21 | -6.96% |
| Aneurin Bevan | 11.3 | 10.7 | -5.56% |
| Cardiff and Vale | 10.5 | 10.3 | -2.37% |
| Cwm Taf | 15.6 | 15.3 | -2.22% |
| Hywel Dda | 13.3 | 13.2 | -1.29% |
| Powys | 14.3 | 14.2 | -0.98% |
| Betsi Cadwaladr | 10.6 | 10.9 | 2.21% |
| Wales | 11.3 | 11.1 | -2.05% |

Figure 5. Trend in opioid patch items as a percentage of all opioid prescribing



4.3 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

Gabapentin and pregabalin have a well-defined role in the management of a number of conditions including epilepsy and neuropathic pain, and pregabalin also has a role in treatment of generalised anxiety disorder. Both gabapentin and pregabalin have known psychiatric side effects and there is a potential risk of dependence, misuse and diversion. Prescribers should make evidence-based, informed decisions on whether to prescribe, taking into account the risks and benefits of these medicines.

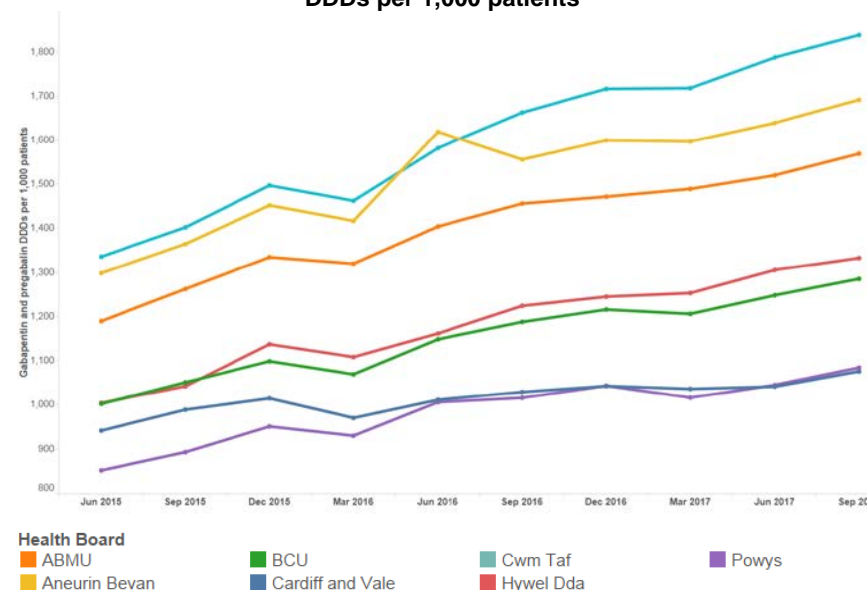
Across Wales, for the quarter ending September 2017, prescribing of gabapentin and pregabalin increased compared with the same quarter of the previous year.

- For the quarter ending September 2017, gabapentin and pregabalin prescribing ranged from 1,075 to 1,838 DDDs 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.
- Gabapentin and pregabalin prescribing increased compared with the equivalent quarter of the previous year in all of the health boards.
- The smallest percentage increase was seen in Cardiff and Vale UHB and the largest percentage increase was seen in Cwm Taf UHB.

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

| | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|------------------|-----------------|-----------------|----------|
| Cardiff and Vale | 1,029 | 1,075 | 4.55% |
| Powys | 1,015 | 1,084 | 6.75% |
| ABMU | 1,456 | 1,569 | 7.76% |
| Betsi Cadwaladr | 1,187 | 1,285 | 8.22% |
| Aneurin Bevan | 1,556 | 1,691 | 8.70% |
| Hywel Dda | 1,224 | 1,332 | 8.87% |
| Cwm Taf | 1,662 | 1,838 | 10.6% |
| Wales | 1,320 | 1,427 | 8.11% |

Figure 6. Trend in gabapentin and pregabalin prescribing DDDs per 1,000 patients



Note: DDDs per 1,000 patients for Aneurin Bevan UHB Q1 2016–2017 should be 1,530 rather than 1,619 as reported.

5.0 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.

There are four primary care antibiotic NPIs for 2017–2018:

1. Total antibacterial items
2. Co-amoxiclav
3. Cephalosporins
4. Fluoroquinolones

5.1 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.

Across Wales, for the quarter ending September 2017, antibacterial prescribing decreased by 2.95%, compared with the equivalent quarter of the previous year.

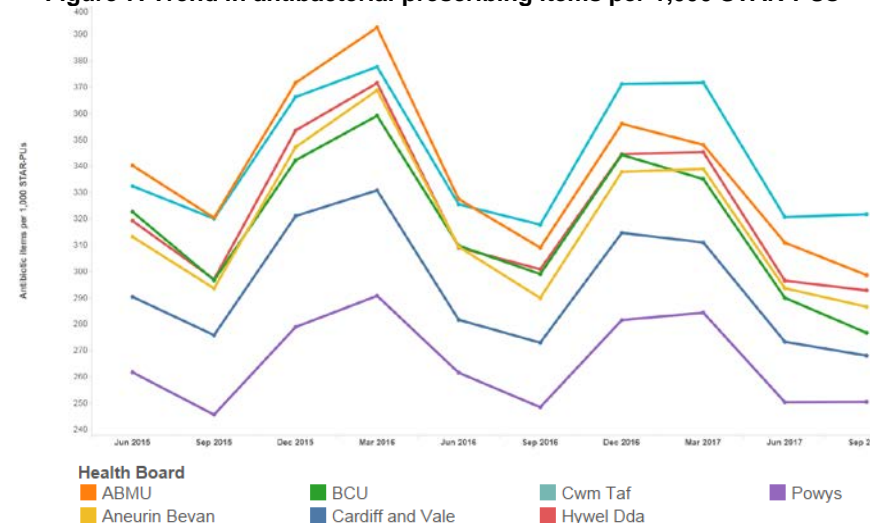
- For the quarter ending September 2017, the total number of antibacterial items per 1,000 STAR-PUs ranged from 251 to 322 across the health boards.
- The health board with the lowest prescribing was Powys Teaching HB, whilst the highest prescribing was seen in Cwm Taf UHB.
- For the quarter ending September 2017, antibacterial prescribing decreased in five of the seven health boards compared with the equivalent quarter of the previous year.

- Betsi Cadwaladr UHB demonstrated the greatest percentage reduction in prescribing compared with the equivalent quarter of the previous year.
- Cwm Taf UHB and Powys Teaching HB demonstrated increases in prescribing, compared with the equivalent quarter of the previous year.

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

| | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|------------------|-----------------|-----------------|----------|
| Betsi Cadwaladr | 299 | 277 | -7.46% |
| ABMU | 309 | 299 | -3.36% |
| Hywel Dda | 301 | 293 | -2.66% |
| Cardiff and Vale | 273 | 268 | -1.81% |
| Aneurin Bevan | 290 | 287 | -1.14% |
| Powys | 248 | 251 | 0.82% |
| Cwm Taf | 318 | 322 | 1.25% |
| Wales | 295 | 286 | -2.95% |

Figure 7. Trend in antibacterial prescribing items per 1,000 STAR-PUs



5.2 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

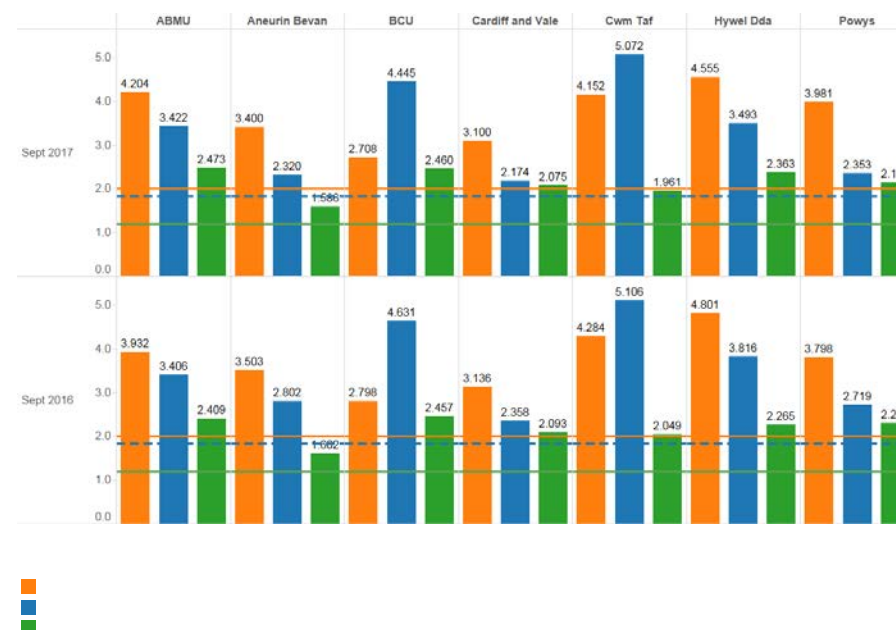
Prescribing of co-amoxiclav, cephalosporins and fluoroquinolones are monitored, as these antibacterials are associated with an increased risk of *Clostridium difficile* infection.

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

Across Wales, for the quarter ending September 2017, the number of items of co-amoxiclav, cephalosporins and fluoroquinolones as a percentage of all antibacterial prescribing was lower than the equivalent quarter of the previous year.

- The proportion of co-amoxiclav prescribing decreased, compared with the equivalent quarter of the previous year, in five out of the seven health boards. The largest percentage decrease was seen in Hywel Dda UHB (5.14%). There were increases of 6.92% and 4.82% in ABMU UHB and Powys Teaching HB respectively.
- The proportion of cephalosporin prescribing decreased, compared with the equivalent quarter of the previous year, in six out of the seven health boards. The largest percentage decrease was seen in Aneurin Bevan UHB (17.2%). Abertawe Bro Morgannwg UHB demonstrated a small increase of 0.47%.
- The proportion of fluoroquinolone prescribing decreased, compared with the equivalent quarter of the previous year, in four out of the seven health boards. The largest percentage decrease was seen in Powys Teaching HB (6.35%). Hywel Dda UHB and Abertawe Bro Morgannwg UHB demonstrated increases of 4.34% and 2.66% respectively.

Figure 8. Co-amoxiclav, cephalosporins and fluoroquinolones as a percentage of total antibacterial prescribing



5.2.2 Co-amoxiclav items per 1,000 patients

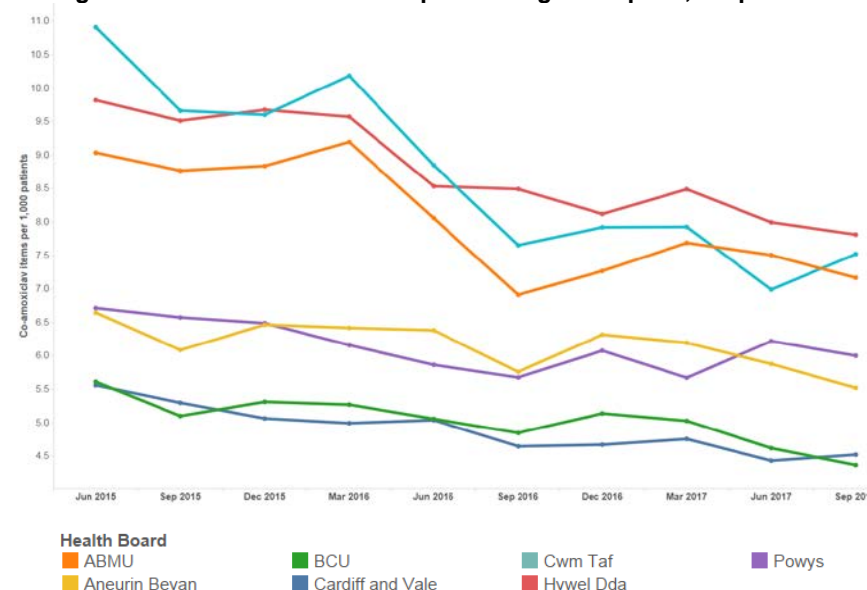
Across Wales, for the quarter ending September 2017, the number of co-amoxiclav items per 1,000 patients decreased by 3.41%, compared with the equivalent quarter of the previous year, in line with the aim of this indicator.

- For the quarter ending September 2017, co-amoxiclav prescribing ranged from 4.37 to 7.81 items per 1,000 patients across the health boards.
- The health board with the lowest prescribing was Betsi Cadwaladr UHB, whilst the highest prescribing was seen in Hywel Dda UHB.
- Co-amoxiclav prescribing decreased compared with the equivalent quarter of the previous year in five out of the seven health boards. The largest percentage decrease was seen in Betsi Cadwaladr UHB.
- Powys Teaching HB and Abertawe Bro Morgannwg UHB demonstrated increases of 5.75% and 3.70% respectively.

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

| | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|-------------------------|-----------------|-----------------|---------------|
| Betsi Cadwaladr | 4.85 | 4.37 | -9.93% |
| Hywel Dda | 8.49 | 7.81 | -8.03% |
| Aneurin Bevan | 5.76 | 5.52 | -4.13% |
| Cardiff and Vale | 4.65 | 4.52 | -2.69% |
| Cwm Taf | 7.65 | 7.52 | -1.73% |
| ABMU | 6.91 | 7.17 | 3.70% |
| Powys | 5.68 | 6.00 | 5.75% |
| Wales | 6.09 | 5.88 | -3.41% |

Figure 9. Trend in co-amoxiclav prescribing items per 1,000 patients



5.2.3 Cephalosporin items per 1,000 patients

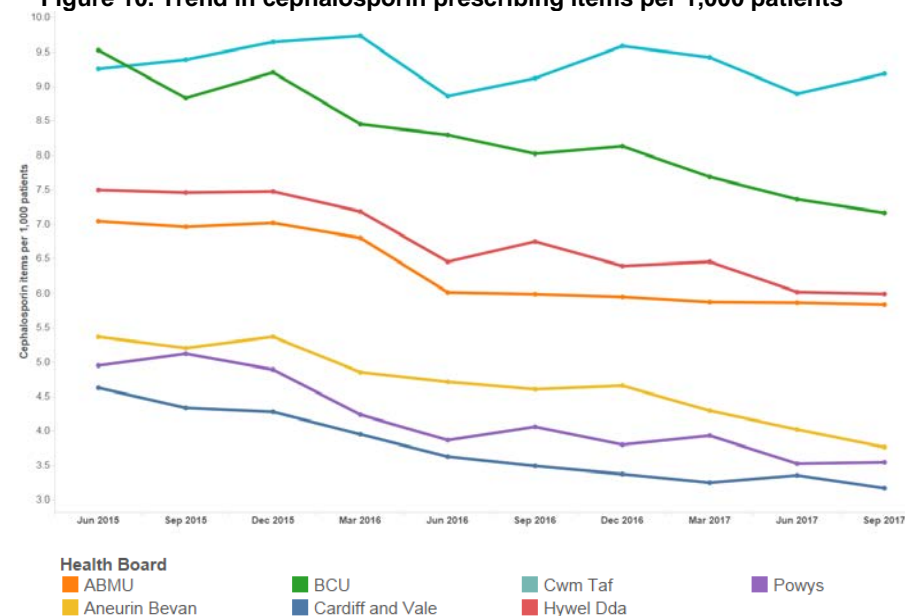
Across Wales, for the quarter ending September 2017, the number of cephalosporin items per 1,000 patients decreased across Wales by 8.77%, compared with the equivalent quarter of the previous year, in line with the aim of this indicator.

- For the quarter ending September 2017, cephalosporin prescribing ranged from 3.17 to 9.19 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 with the equivalent quarter of the previous year in six out of the seven health boards. The largest percentage decrease was seen in Aneurin Bevan UHB.
- Cwm Taf UHB demonstrated a small percentage increase.

Table 9. Cephalosporin items per 1,000 patients

| | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|-------------------------|-----------------|-----------------|---------------|
| Aneurin Bevan | 4.61 | 3.77 | -18.2% |
| Powys | 4.06 | 3.55 | -12.7% |
| Hywel Dda | 6.75 | 5.99 | -11.3% |
| BCU | 8.02 | 7.17 | -10.7% |
| Cardiff and Vale | 3.49 | 3.17 | -9.21% |
| ABMU | 5.99 | 5.84 | -2.55% |
| Cwm Taf | 9.12 | 9.19 | 0.72% |
| Wales | 6.09 | 5.55 | -8.77% |

Figure 10. Trend in cephalosporin prescribing items per 1,000 patients



5.2.4 Fluoroquinolone items per 1,000 patients

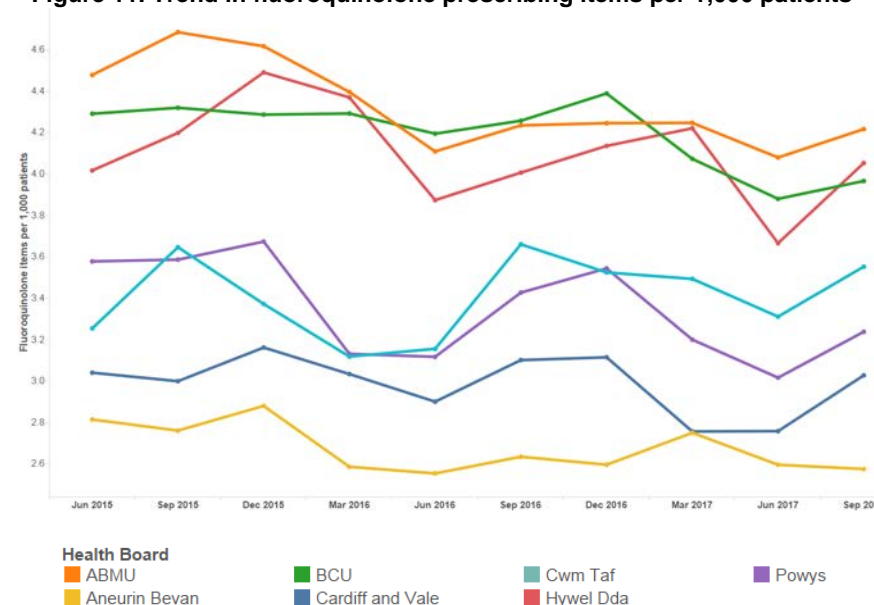
Across Wales, for the quarter ending September 2017, the number of fluoroquinolone items per 1,000 patients decreased by 2.83%, compared with the equivalent quarter of the previous year. This is in line with the aim of the indicator.

- For the quarter ending September 2017, fluoroquinolone prescribing ranged from 2.58 to 4.22 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.
- Fluoroquinolone prescribing decreased compared with the equivalent quarter of the previous year in six out of the seven health boards. Betsi Cadwaladr UHB demonstrated the greatest percentage reduction in prescribing compared with the equivalent quarter of the previous year.
- Hywel Dda UHB demonstrated an increase in prescribing compared with the equivalent quarter of the previous year.

Table 10. Fluoroquinolone items per 1,000 patients

| | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|------------------|--------------------|--------------------|---------------|
| Betsi Cadwaladr | 4.26 | 3.97 | -6.84% |
| Powys | 3.43 | 3.24 | -5.52% |
| Cwm Taf | 3.66 | 3.55 | -2.95% |
| Cardiff and Vale | 3.10 | 3.03 | -2.37% |
| Aneurin Bevan | 2.63 | 2.58 | -2.25% |
| ABMU | 4.23 | 4.22 | -0.43% |
| Hywel Dda | 4.01 | 4.05 | 1.15% |
| Wales | 3.64 | 3.54 | -2.83% |

Figure 11. Trend in fluoroquinolone prescribing items per 1,000 patients



6.0 ANTICHOLINERGIC BURDEN

Purpose: To encourage a review of patients with an Anticholinergic Effect on Cognition (AEC) score of 3 or more, with the aim of reducing anticholinergic use where appropriate.

Unit of measure: Patients aged 75 and over with an AEC score of 3 or more for items on active repeat, as a percentage of all patients aged 75 and over.

Aim: To reduce the prescribing of medicines contributing to the AEC score

An increasing number of studies report that medicines with anticholinergic effects are associated with an increased risk of cognitive impairment, dementia and falls in older people. The cumulative effect of taking one or more medicines with anticholinergic properties is referred to as anticholinergic burden. As risk of adverse clinical outcomes in older people prescribed anticholinergic medication increases with increasing anticholinergic exposure, it is good practice to use medicines with AEC scores of zero.

This is a new indicator for 2017–2018 and aims to encourage timely review to reduce the anticholinergic burden in older people, by avoiding, reducing doses and deprescribing medicines with anticholinergic activity where clinically possible.

Statement from Audit+:

Following deployment of the AEC module in Audit+, it was identified that the data being presented by the Vision Health system and subsequently being used by Audit+ was resulting in acute prescriptions being identified and counted as part of the overall AEC score, which was incorrect.

An update to the Audit+ software across the entire Vision Health estate was subsequently required to remedy the situation. This has now taken place along with an update to the Audit+ AEC module itself. NWIS are now undertaking test activities in a Vision Health pilot site to confirm that the calculation of AEC scores within the Audit+ AEC module are correct. Once this work is complete the updated Audit+ module will be rolled out across all Vision Health and EMIS Web practices to ensure consistency of reporting throughout Wales.

At the latest, data will be available to practices at the end of the third quarter.

7.0 NON-STEROIDAL ANTI-INFLAMMATORY DRUGS

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

There are two NSAID NPIs for 2017–2018.

1. All NSAIDs
2. NSAIDs and chronic kidney disease (CKD)

7.1 All NSAIDs

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

Aim: To reduce prescribing

This indicator aims to encourage a reduction in total NSAID prescribing, which has been consistently higher than that seen in England. NSAIDs are associated with increased risk of serious gastro-intestinal toxicity, cardiovascular adverse events and renal failure, and are contraindicated in many other disease areas.

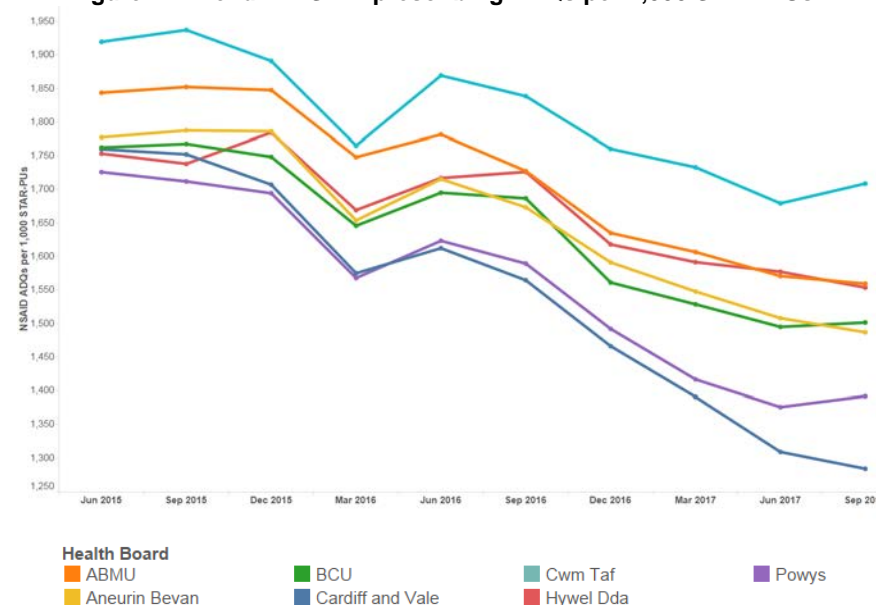
Across Wales, for the quarter ending September 2017, NSAID prescribing decreased, in line with the aim of the indicator, in all seven health boards, compared with the equivalent quarter of the previous year.

- For the quarter ending September 2017, total NSAID prescribing ranged from 1,284 to 1,709 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 with the equivalent quarter of the previous year in all of the health boards.
- The largest percentage decrease was seen in Cardiff and Vale UHB, and the smallest percentage decrease was seen in Cwm Taf UHB.

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

| | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|------------------|-----------------|-----------------|----------|
| Cardiff and Vale | 1,564 | 1,284 | -17.9% |
| Powys | 1,589 | 1,392 | -12.4% |
| Aneurin Bevan | 1,673 | 1,487 | -11.1% |
| BCU | 1,687 | 1,501 | -11.0% |
| Hywel Dda | 1,726 | 1,553 | -10.0% |
| ABMU | 1,727 | 1,559 | -9.73% |
| Cwm Taf | 1,838 | 1,709 | -7.05% |
| Wales | 1,688 | 1,498 | -11.2% |

Figure 12. Trend in NSAID prescribing ADQs per 1,000 STAR-PUs



7.2 NSAIDs and CKD

Units of measure:

- Number of patients on the CKD register (CKD stage 3–5) who have received a repeat prescription for an NSAID within the last 3 months, as a percentage of all patients on the CKD register.
- Number of patients who are not on the CKD register but have an eGFR of < 59 ml/min, and have received a repeat prescription for an NSAID within the last 3 months, as a percentage of all patients who are not on the CKD register but have an eGFR of < 59 ml/min.

Aim: To reduce prescribing

In patients with CKD, the chronic use of NSAIDs may be associated with disease progression. The effects on GFR should be monitored when treating people with CKD with NSAIDs over prolonged periods of time. NSAIDs may precipitate renal failure, and vulnerable patients, such as the elderly, may be at increased risk.

The aim of this NPI is to highlight the requirement for regular review of the ongoing need for an NSAID, and reassessment of the risk versus benefit. As this is a new indicator for 2017–2018, data are presented as a quarter on quarter change.

Table 12. Number of patients on the CKD register (CKD stage 3–5) who have received a repeat prescription for an NSAID within the last 3 months, as a percentage of all patients on the CKD register

| | 2017–2018 Qtr 1 | 2017–2018 Qtr 2 | % Change |
|------------------|-----------------|-----------------|----------|
| Cardiff and Vale | 2.84 | 1.46 | -48.6 |
| Hywel Dda | 3.91 | 2.22 | -43.2 |
| ABMU | 3.44 | 2.04 | -40.7 |
| Cwm Taf | 3.37 | 2.27 | -32.6 |
| Aneurin Bevan | 2.88 | 1.97 | -31.6 |
| Betsi Cadwaladr | 2.30 | 1.97 | -14.3 |
| Powys | 3.24 | 2.81 | -13.3 |
| Wales | 3.02 | 2.04 | -32.5 |

Figure 13. Number of patients on the CKD register (CKD stage 3–5) who have received a repeat prescription for an NSAID within the last 3 months, as a percentage of all patients on the CKD register

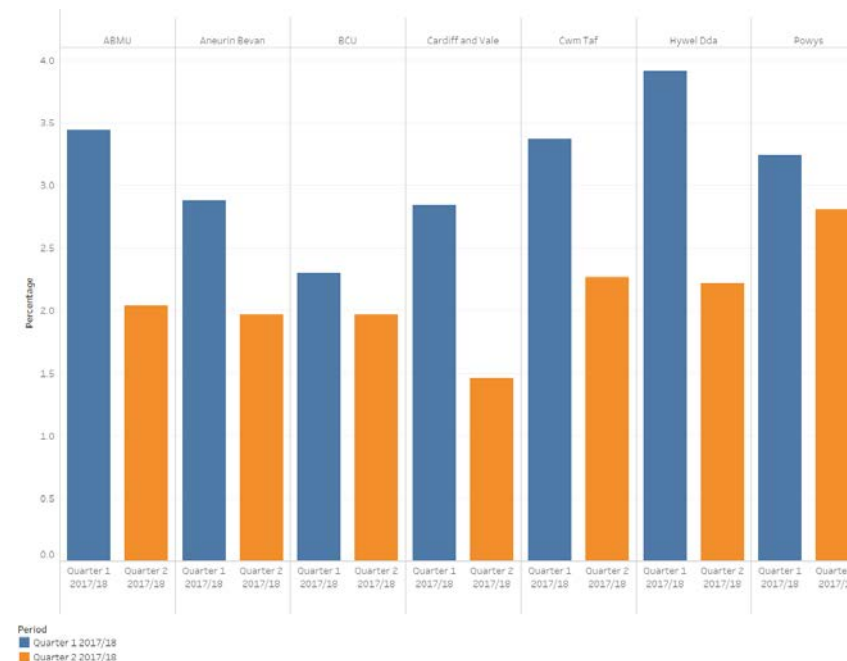
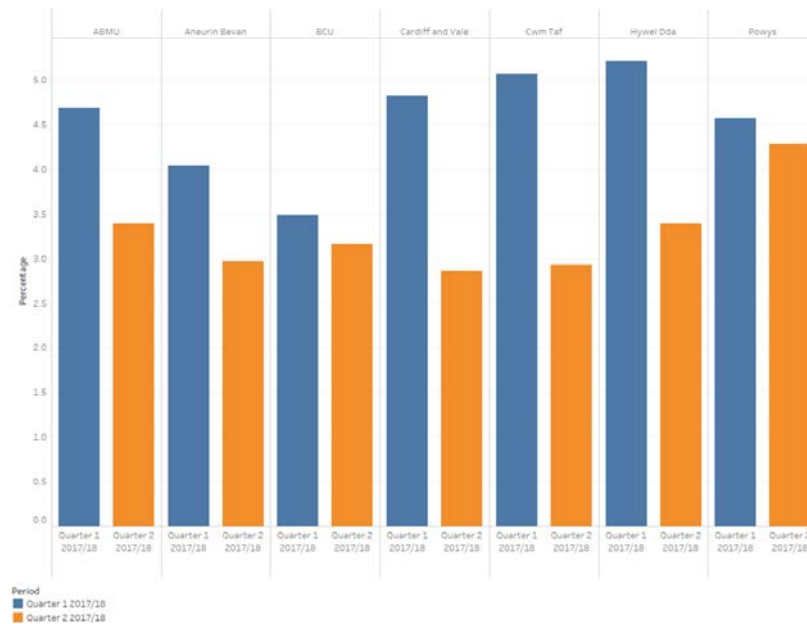


Table 13. Number of patients who are not on the CKD register but have an eGFR of < 59 ml/min, and have received a repeat prescription for an NSAID within the last 3 months, as a percentage of all patients who are not on the CKD register but have an eGFR of < 59 ml/min

| | 2017–2018 Qtr 1 | 2017–2018 Qtr 2 | % Change |
|------------------|-----------------|-----------------|--------------|
| Cwm Taf | 5.06 | 2.93 | -42.1 |
| Cardiff and Vale | 4.82 | 2.86 | -40.7 |
| Hywel Dda | 5.21 | 3.39 | -34.9 |
| ABMU | 4.69 | 3.39 | -27.7 |
| Aneurin Bevan | 4.04 | 2.97 | -26.5 |
| Betsi Cadwaladr | 3.48 | 3.16 | -9.20 |
| Powys | 4.57 | 4.28 | -6.35 |
| Wales | 4.50 | 3.21 | -28.7 |

Figure 14. Number of patients who are not on the CKD register but have an eGFR of < 59 ml/min, and have received a repeat prescription for an NSAID within the last 3 months, as a percentage of all patients who are not on the CKD register but have an eGFR of < 59 ml/min



8.0 YELLOW CARDS

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

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

Aim: To increase reporting

Adverse drug reactions (ADRs) are a significant clinical problem, increasing morbidity and mortality. Approximately 6.5% of hospital admissions in adults and 2.1% in children are attributed to ADRs.

The Yellow Card Scheme is vital in helping the Medicines and Healthcare products Regulatory Agency (MHRA) monitor the safety of medicines and vaccines that are on the market.

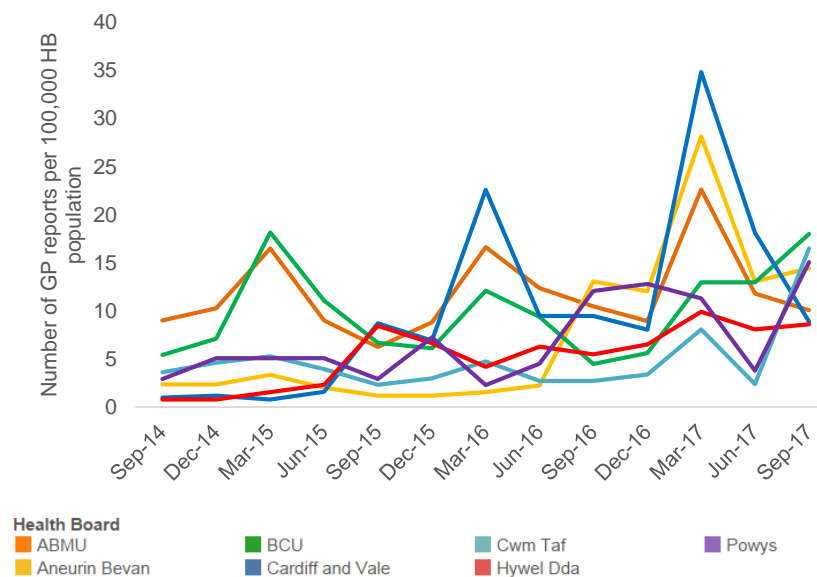
The number of Yellow Cards submitted by GP practices in Wales increased by 61% compared with the equivalent quarter of the previous year.

The largest percentage increase in GP practice Yellow Card reporting was seen in Cwm Taf UHB. The largest percentage decrease was seen in Cardiff and Vale UHB.

Table 14. Number of Yellow Cards submitted by GP practices

| | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|------------------|-----------------|-----------------|-----------|
| Cwm Taf | 8 | 49 | 513 |
| Betsi Cadwaladr | 31 | 125 | 303 |
| Hywel Dda | 21 | 33 | 57 |
| Powys | 16 | 20 | 25 |
| Aneurin Bevan | 76 | 84 | 11 |
| ABMU | 55 | 53 | -4 |
| Cardiff and Vale | 46 | 43 | -7 |
| Wales | 253 | 407 | 61 |

Figure 15. Number of GP practice reports per 100,000 health board population



The number of Yellow Cards submitted by health boards in Wales increased by 42% compared with the equivalent quarter of the previous year.

Table 15. Number of Yellow Cards submitted by health boards

| | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|------------------|-----------------|-----------------|-----------|
| Cwm Taf | 15 | 66 | 340 |
| Betsi Cadwaladr | 75 | 193 | 157 |
| Powys | 19 | 28 | 47 |
| Hywel Dda | 55 | 65 | 18 |
| Cardiff and Vale | 84 | 90 | 7 |
| Aneurin Bevan | 115 | 117 | 2 |
| ABMU | 96 | 94 | -2 |
| Wales | 459 | 653 | 42 |

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

NICE guidance recommends human isophane (neutral protamine Hagedorn [NPH]) insulin as the first choice insulin-based treatment when prescribing insulin in type 2 diabetes mellitus. For most people with type 2 diabetes, long-acting insulin analogues offer no significant benefit over human isophane insulin and are more expensive.

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, secondary care use of long acting insulin as a percentage of all insulin prescribing was lower in the quarter ending September 2017 than in the equivalent quarter of the previous year in line with the aim of the indicator.
- For the quarter ending September 2017, prescribing of long-acting insulin analogues as a percentage of total long- and intermediate-acting insulin ranged from 52.8% to 85.7%.
- The health board/trust with the lowest prescribing percentage was Cwm Taf UHB (52.8%). This was a

decrease of 5.99% from the equivalent quarter of the previous year.

- The highest prescribing was seen in Velindre NHS Trust; however, usage in this trust is very low and so percentage changes are likely to show a greater magnitude of fluctuation between comparative periods. Betsi Cadwaladr UHB had the next highest prescribing at 83.9%, an increase of 5.31% compared with the equivalent quarter of the previous year.
- The health board/trust with the greatest percentage decrease was Cardiff and Vale UHB. There was a reduction from 83.0% to 67.2%.
- The proportion of long-acting insulin analogue prescribing decreased in four of the seven health boards/trusts, compared with the equivalent quarter of the previous year.

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

| | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|------------------|-----------------|-----------------|----------|
| Cardiff and Vale | 83.0 | 67.2 | -19.0 |
| Velindre | 100 | 85.7 | -14.3 |
| Cwm Taf | 56.2 | 52.8 | -5.99 |
| ABMU | 85.8 | 83.6 | -2.53 |
| Hywel Dda | 81.2 | 83.7 | 3.08 |
| Aneurin Bevan | 73.0 | 75.7 | 3.68 |
| Betsi Cadwaladr | 79.7 | 83.9 | 5.31 |
| Wales | 77.7 | 76.0 | -2.22 |

Primary care prescribing

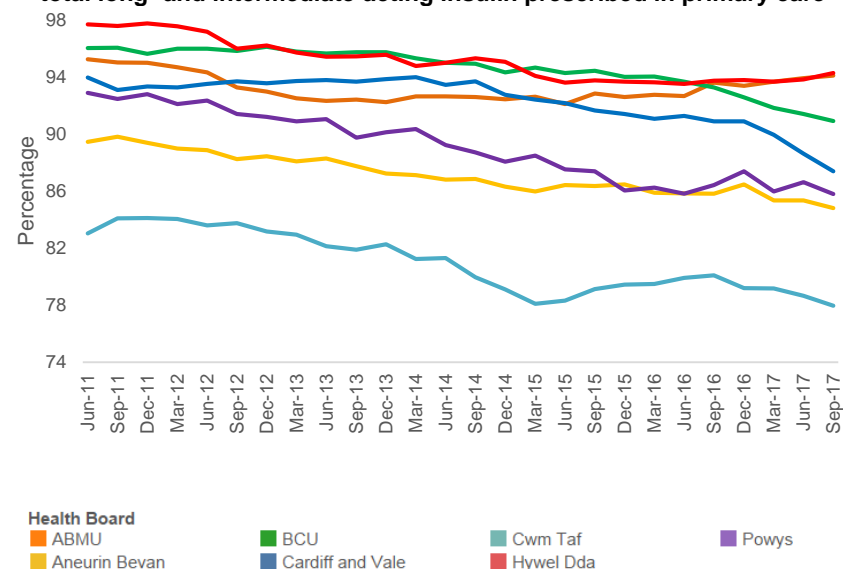
Across Wales, the prescribing of long-acting insulin analogues as a proportion of total long- and intermediate-acting insulin prescribing decreased by approximately 1.45% for the quarter ending in September 2017, compared with the equivalent quarter of the previous year. This is in line with the aim of the indicator.

- For the quarter ending September 2017, long-acting insulin analogue prescribing ranged from 78.0% to 94.3% across the health boards.
- Across the seven health boards in Wales prescribing decreased compared with the equivalent quarter of the previous year in five health boards and increased in two health boards.
- The health board with the lowest prescribing was Cwm Taf UHB, whilst the highest prescribing was seen in Hywel Dda UHB.
- The largest percentage decrease was seen in Cardiff and Vale UHB and the largest increase was seen in Hywel Dda UHB.

Table 17. Long-acting insulin analogues as a percentage of total long- and intermediate-acting insulin prescribing in primary care

| | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|------------------|-----------------|-----------------|----------|
| Cardiff and Vale | 90.9 | 87.4 | -3.85 |
| Cwm Taf | 80.1 | 78.0 | -2.62 |
| Betsi Cadwaladr | 93.3 | 90.9 | -2.57 |
| Aneurin Bevan | 85.8 | 84.8 | -1.17 |
| Powys | 86.4 | 85.8 | -0.69 |
| ABMU | 93.6 | 94.1 | 0.53 |
| Hywel Dda | 93.7 | 94.3 | 0.64 |
| Wales | 89.8 | 88.5 | -1.45 |

Figure 16. 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, Medusa data suggest 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

Across Wales there was a decrease in the use of filgrastim biosimilars (Nivestim®, Zarzio® and Ratiograstim®) as a percentage of all filgrastim for the quarter ending September 2017 compared with the quarter ending September 2016, from 97.7% to 95.4%.

Table 18. Quantity of filgrastim generic, reference (Neupogen®) and biosimilar (Nivestim®, Zarzio®, Ratiograstim®) prescribed

| Filgrastim (generic) | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|------------------------------------------------|-----------------|-----------------|--------------|
| Primary care | 10 | 5 | -50.0 |
| Secondary care | 165 | 250 | 51.5 |
| Total | 175 | 255 | 45.7 |
| Reference (Neupogen®) | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
| Primary care | 0 | 0 | 0 |
| Secondary care | 26 | 140 | 438.5 |
| Total | 26 | 140 | 438.5 |
| Biosimilar (Nivestim®, Zarzio®, Ratiograstim®) | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
| Primary care | 0 | 10 | N/A |
| Secondary care | 8,597 | 8,240 | -4.2 |
| Total | 8,597 | 8,250 | -4.0 |

Table 19. Filgrastim biosimilars as a percentage of reference, generic and biosimilar prescribed

| | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|----------------|-----------------|-----------------|--------------|
| Primary care | 0 | 66.7 | N/A |
| Secondary care | 97.8 | 95.5 | -2.35 |
| Total | 97.7 | 95.4 | -2.35 |

2.1.1 Secondary care

Prescribing of filgrastim biosimilars decreased as a percentage of all filgrastim from 97.8% to 95.5% in secondary care for the quarter ending September 2017 compared with the quarter ending September 2016.

Figure 17. Proportion of filgrastim prescribing as generic, reference (Neupogen®) and biosimilar (Nivestim®, Ratiograstim® and Zarzio®) in secondary care – Quarter ending September 2017

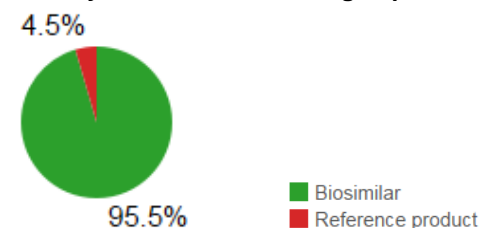
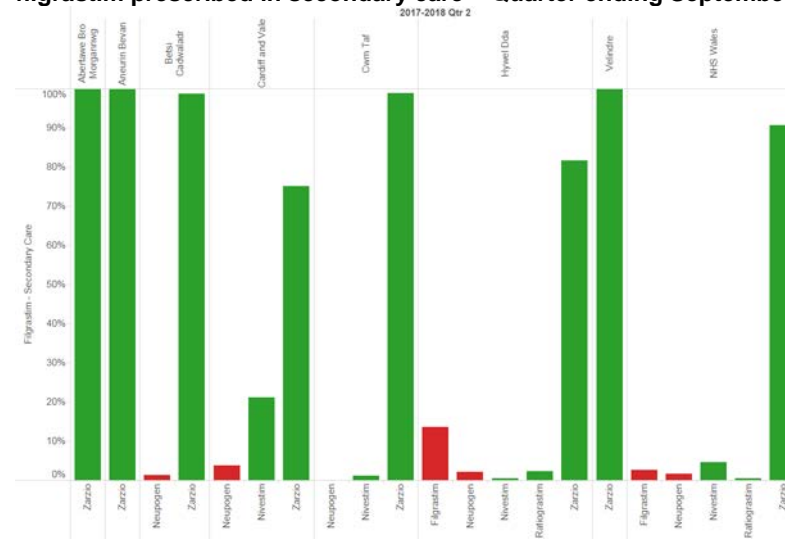


Figure 18. Health board filgrastim generic, reference (Neupogen®) and biosimilar (Nivestim®, Ratiograstim® and Zarzio®) as a percentage of total filgrastim prescribed in secondary care – Quarter ending September 2017



2.1.2 Primary care

Prescribing of filgrastim biosimilar increased as a percentage of all filgrastim from 0% to 66.7% for the quarter ending September 2017 compared with the quarter ending September 2016.

2.2 Infliximab

Within Wales there was an increase in the use of the infliximab biosimilar (Inflectra®) as a percentage of all infliximab for the quarter ending September 2017 compared with the quarter ending September 2016, from 54.1% to 72.3%.

Table 20. Quantity of infliximab reference (Remicade®) and biosimilar (Inflectra®) prescribed in NHS Wales

| Reference (Remicade®)† | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|-------------------------|-----------------|-----------------|----------|
| Total | 2,516 | 1,908 | -24.2 |
| Biosimilar (Inflectra®) | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
| Total | 2,964 | 4,982 | 68.1 |

† These data include supplies recorded through homecare.

Table 21. Infliximab biosimilars as a percentage of reference and biosimilar prescribed

| | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|--------------|-----------------|-----------------|----------|
| Total | 54.1 | 72.3 | 33.6 |

Figure 19. Infliximab reference (Remicade®) and biosimilar (Inflectra®) percentage change

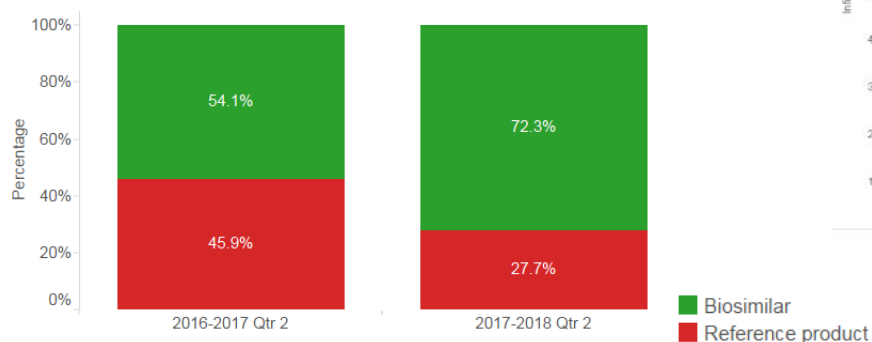
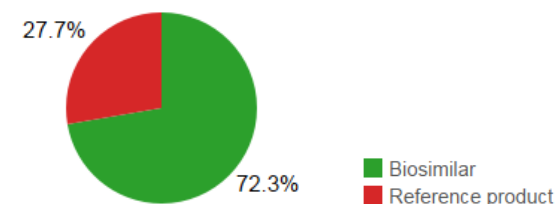
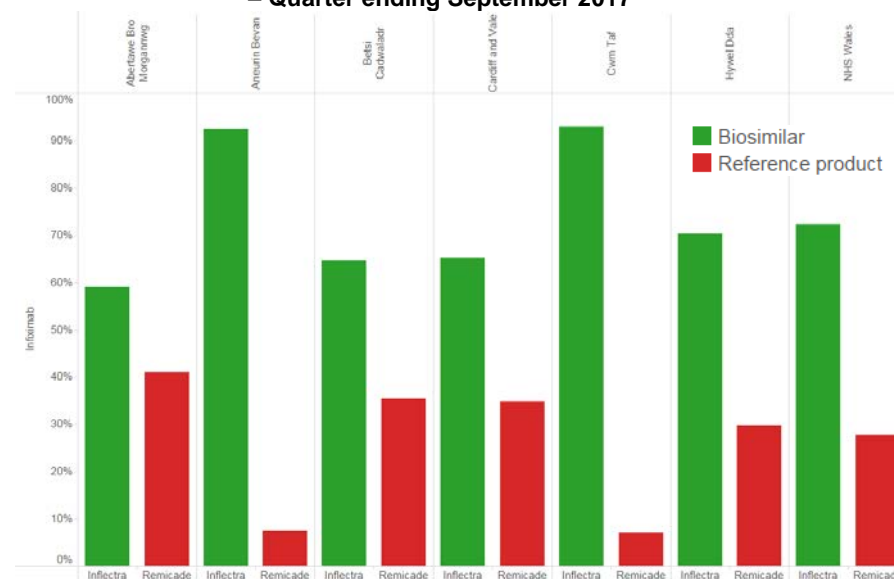


Figure 20. Proportion of infliximab prescribing as reference (Remicade®) and biosimilar (Inflectra®) – Quarter ending September 2017



2.2.1 Secondary care

Figure 21. Infliximab generic, reference (Remicade®) and biosimilar (Inflectra®) as a proportion of total infliximab prescribed in secondary care – Quarter ending September 2017



2.3 Etanercept

Within Wales there was an increase in the use of the etanercept biosimilar (Benepali®) as a percentage of all etanercept for the quarter ending September 2017 compared with the quarter ending September 2016, from 7.5% to 49.5%.

Table 22. Quantity of etanercept reference (Enbrel®) and biosimilar (Benepali®) prescribed in NHS Wales

| Reference (Enbrel®) [†] | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|----------------------------------|-----------------|-----------------|----------|
| Total | 15,253 | 9,384 | -38.5 |
| Biosimilar (Benepali®) | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
| Total | 1,228 | 9,192 | 648.5 |

[†]These data include supplies recorded through homecare.

Table 23. Etanercept biosimilar as a percentage of reference and biosimilar prescribed

| | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|--------------|-----------------|-----------------|----------|
| Total | 7.5 | 49.5 | 560 |

Figure 22. Etanercept reference (Enbrel®) and biosimilar (Benepali®) percentage change

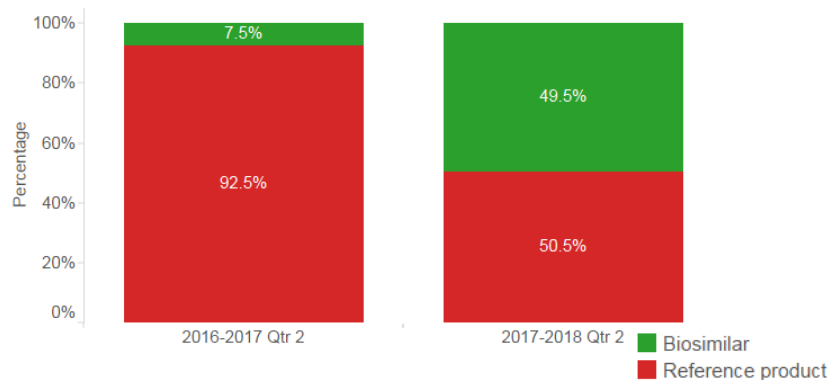
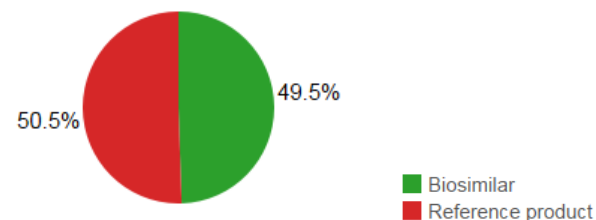


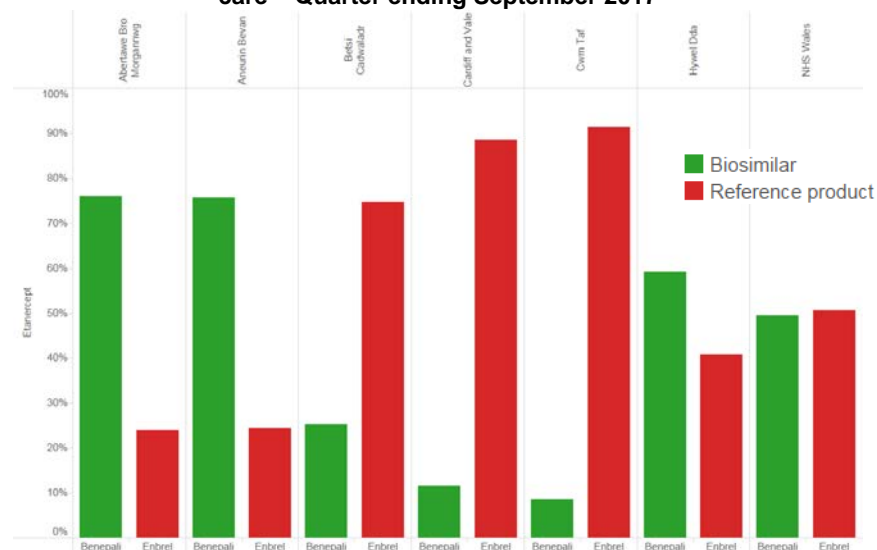
Figure 23. Proportion of etanercept prescribing as reference (Enbrel®) and biosimilar (Benepali®) – Quarter ending September 2017



2.3.1 Secondary care

Six health boards have data for biosimilar etanercept prescribing in secondary care. Three health boards (Abertawe Bro Morgannwg, Aneurin Bevan and Hywel Dda University Health Boards) use the biosimilar for the majority of their supplies.

Figure 24. Etanercept generic, reference (Enbrel®) and biosimilar (Benepali®) as a proportion of total etanercept prescribed in secondary care – Quarter ending September 2017



2.4 Rituximab

Within Wales there was an increase in the use of the rituximab biosimilar (Truxima®) as a percentage of all rituximab from 0.00% to 41.2% for quarter ending September 2017 compared with the quarter ending September 2016.

Table 24. Quantity of rituximab reference (MabThera®) and biosimilar (Truxima®) prescribed in NHS Wales

| Reference (MabThera®)† | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|------------------------|-----------------|-----------------|----------|
| Total | 2,427 | 1,195 | -50.8 |
| Biosimilar (Truxima®) | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
| Total | 0 | 838 | N/A |

†These data include supplies recorded through homecare.

Table 25. Rituximab biosimilar as a percentage of reference and biosimilar prescribed

| | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|--------------|-----------------|-----------------|----------|
| Total | 0 | 41.2 | N/A |

Figure 25. Rituximab reference (MabThera®) and biosimilar (Truxima®) percentage change

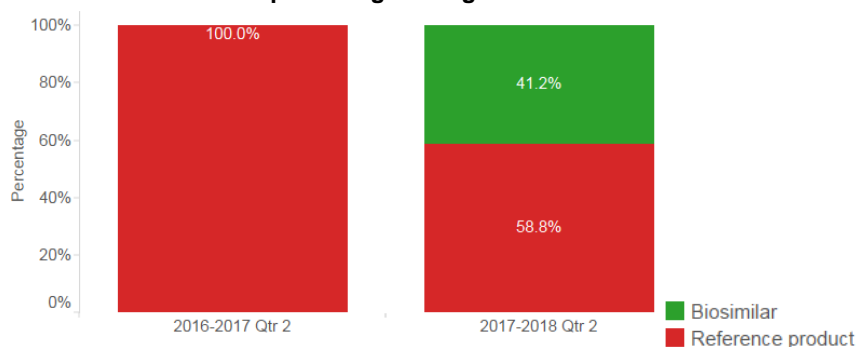
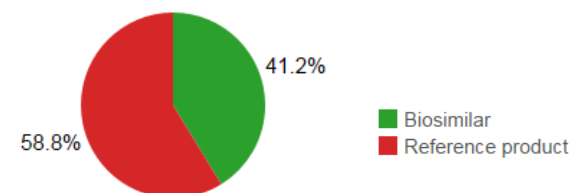


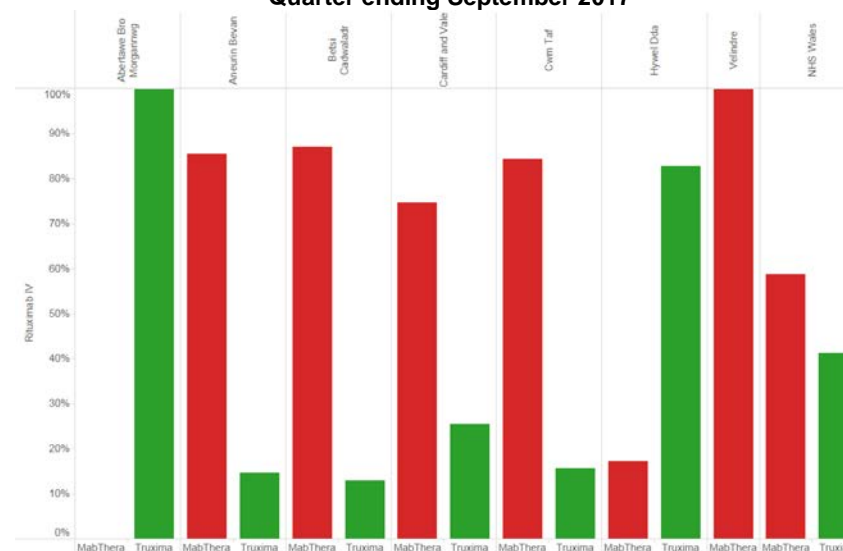
Figure 26. Proportion of rituximab prescribing as reference (MabThera®) and biosimilar (Truxima®) – Quarter ending September 2017



2.4.1 Secondary care

Six health boards show biosimilar rituximab prescribing in secondary care.

Figure 27. Rituximab generic, reference (MabThera®) and biosimilar (Truxima®) as a proportion of total rituximab prescribed in secondary care – Quarter ending September 2017



2.5 Insulin glargine

Within Wales there was an increase in the use of insulin glargine biosimilar (Abasaglar®) for quarter ending September 2017 compared with the quarter ending September 2016, from 1.1% to 3.1%. The biosimilar insulin glargine usage is illustrated in Figures 28–30.

Table 26. Quantity of insulin glargine reference (Lantus® and Toujeo®) and biosimilar (Abasaglar®) prescribed

| Reference (Lantus® and Toujeo®) | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|---------------------------------|-----------------|-----------------|--------------|
| Primary care | 206,310 | 193,154 | -6.4 |
| Secondary care | 4,211 | 3,909 | -7.2 |
| Total | 210,521 | 197,063 | -6.4 |
| Biosimilar (Abasaglar®) | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
| Primary care | 1,949 | 5,872 | 201.3 |
| Secondary care | 402 | 486 | 20.9 |
| Total | 2,351 | 6,358 | 170.4 |

Table 27. Insulin glargine biosimilar (Abasaglar®) as a percentage of reference (Lantus® and Toujeo®) and biosimilar prescribed

| | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|----------------|-----------------|-----------------|--------------|
| Primary care | 0.9 | 3.0 | 233.3 |
| Secondary care | 8.7 | 11.1 | 27.6 |
| Total | 1.1 | 3.1 | 181.8 |

Figure 28. Insulin glargine reference (Lantus® and Toujeo®) and biosimilar (Abasaglar®) percentage change



Figure 29. Insulin glargine reference (Lantus® and Toujeo®) and biosimilar (Abasaglar®) – Quarter ending September 2017

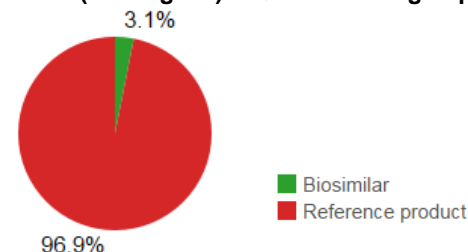
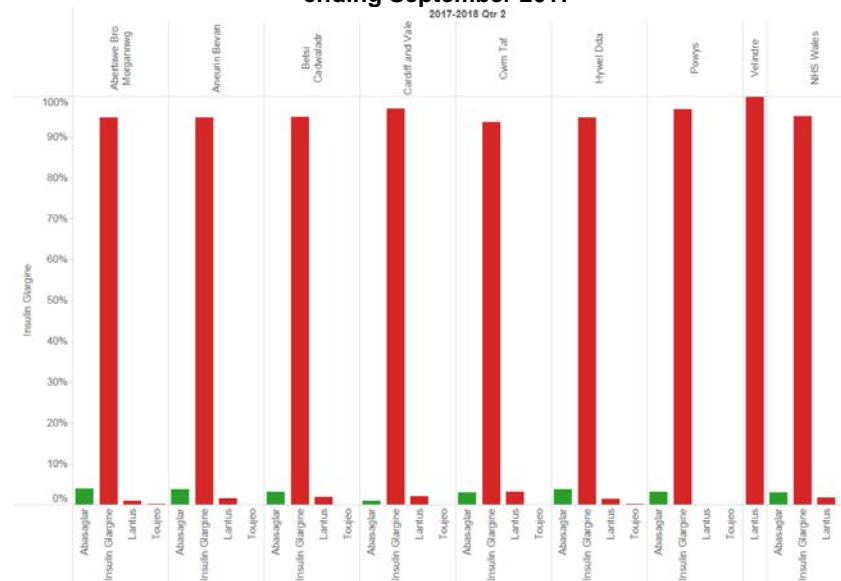


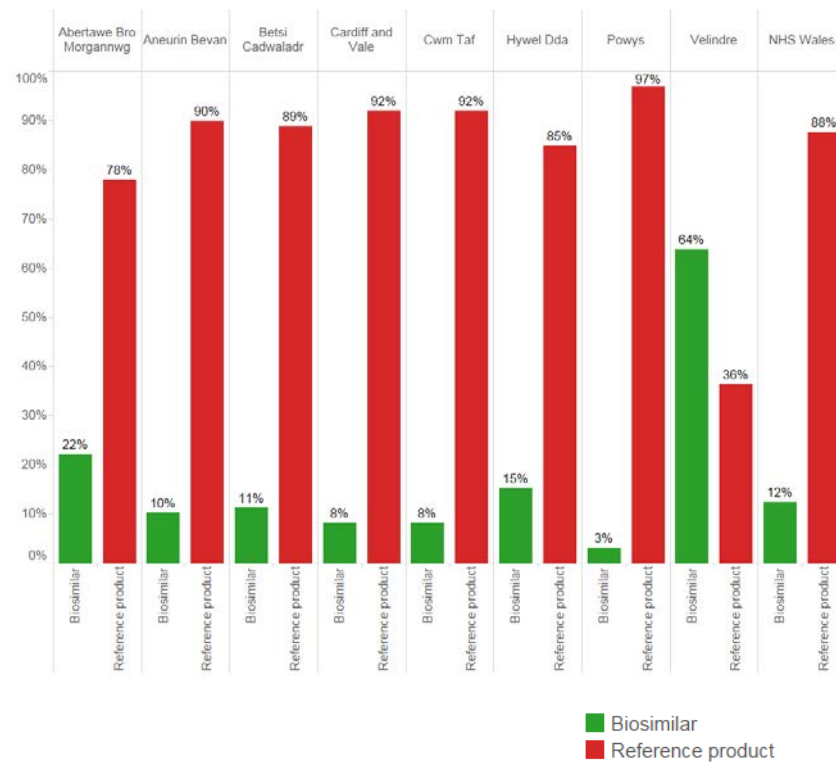
Figure 30. Insulin glargine reference (Lantus® and Toujeo®) and biosimilar (Abasaglar®) as a proportion of total insulin glargine prescribed – Quarter ending September 2017



2.6 Total biosimilar usage

Within Wales there was an increase in the use of the reported biosimilar medicines (filgrastim, infliximab, etanercept, rituximab and insulin glargine) combined as a percentage of reported 'reference' biological medicines plus biosimilars combined, from 6% to 12% for the quarter ending September 2017 compared with the quarter ending September 2016.

Figure 31. Biological reference and biosimilar as a proportion of total reference plus biosimilar prescribed – Quarter ending September 2017



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.

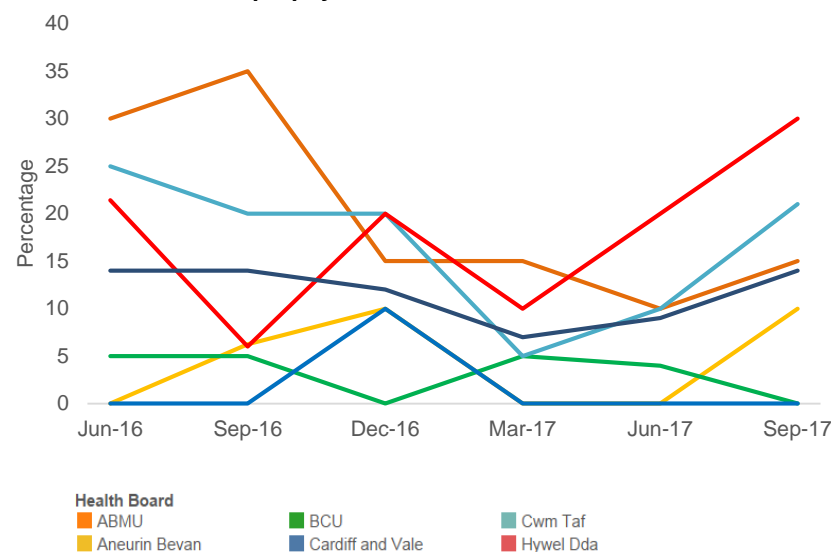
Due to surgical prophylaxis numbers being small and prone to misinterpretation at hospital level, the data are presented at health board level. Hospital level data are available if required.

- There was no change in the percentage of patients receiving colorectal surgical prophylaxis for greater than 24 hours for quarter ending September 2017 compared with the quarter ending September 2016.
- The largest percentage decreases were in Betsi Cadwaladr UHB (100%) and Abertawe Bro Morgannwg UHB (57%).
- There was a small percentage increase in Cwm Taf UHB (5%). There was also a percentage increase in Aneurin Bevan UHB (67%) and Hywel Dda UHB (400%).
- In Cardiff and Vale UHB all patients were receiving prophylaxis for less than 24 hours in the quarters ending September 2017 and September 2016.

Table 28. Percentage of patients receiving colorectal surgical prophylaxis for greater than 24 hours

| | 2016–2017 Qtr 2 | 2017–2018 Qtr 2 | % Change |
|------------------|--------------------|--------------------|----------|
| BCU | 5% | 0% | -100 |
| ABMU | 35% | 15% | -57 |
| Cwm Taf | 20% | 21% | 5 |
| Aneurin Bevan | 6% | 10% | 67 |
| Hywel Dda | 6% | 30% | 400 |
| Cardiff and Vale | 0% | 0% | N/A |
| Powys | N/A | N/A | N/A |
| Wales | 14% | 14% | 0 |

Figure 32. Percentage of patients whose duration of colorectal surgical prophylaxis is > 24 hours



CAUTION WITH INTERPRETING NPI MONITORING DATA

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

Data for the anticholinergic burden and NSAIDs and CKD NPIs have been provided by Audit+, the GP software tool delivered and supported by the NHS Wales Informatics Service (NWIS).

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 DDIs 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. In relation to the secondary care data presented within this report please see information above.

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. AWMMSG NATIONAL PRESCRIBING INDICATORS 2017–2018

| Primary care indicator | Unit of measure | Target for 2017–2018 |
|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Proton pump inhibitors | PPI DDDs per 1,000 PUs | Maintain performance levels within the lower quartile, or show a reduction towards the quartile below |
| Inhaled corticosteroids | High strength ICS items as a percentage of all ICS prescribing | Maintain performance levels within the lower quartile, or show a reduction towards the quartile below |
| 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 |
| Analgesics | Tramadol DDDs per 1,000 patients | Maintain performance levels within the lower quartile, or show a reduction towards the quartile below |
| | Opioid patch items as a percentage of all opioid prescribing | Maintain performance levels within the lower quartile, or show a reduction towards the quartile below |
| | Gabapentin and pregabalin DDDs per 1,000 patients | Maintain performance levels within the lower quartile, or show a reduction towards the quartile below |
| 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 |
| | 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 |
| | 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 |
| | 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 |
| Anticholinergic burden | Patients aged 75 and over with an Anticholinergic Effect on Cognition (AEC) score of 3 or more for items on active repeat, as a percentage of all patients aged 75 and over | Maintain performance levels within the lower quartile, or show a reduction towards the quartile below |
| 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 |
| | Number of patients on the CKD register (CKD stage 3–5) who have received a repeat prescription for an NSAID within the last 3 months, as a percentage of all patients on the CKD register. | Maintain performance levels within the upper quartile, or show an increase towards the quartile above |
| | Number of patients who are not on the CKD register but have an eGFR of < 59 ml/min and have received a repeat prescription for an NSAID within the last 3 months, as a percentage of all patients who are not on the CKD register but have an eGFR of < 59 ml/min | |
| 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 September 2016 versus quarter ending September 2017

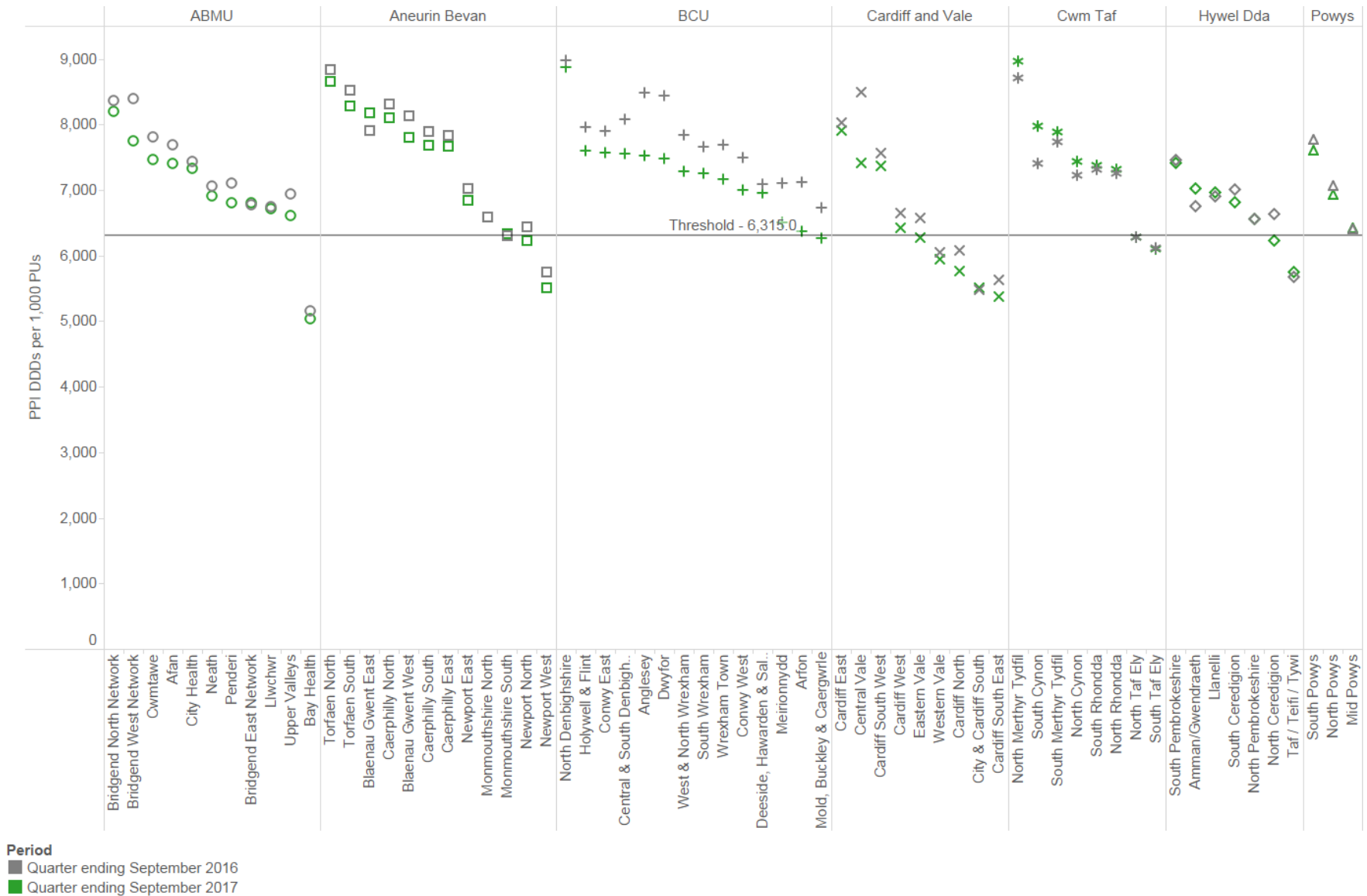


Figure 2. High strength ICS prescribing as a percentage of all ICS prescribing – Quarter ending September 2016 versus quarter ending September 2017

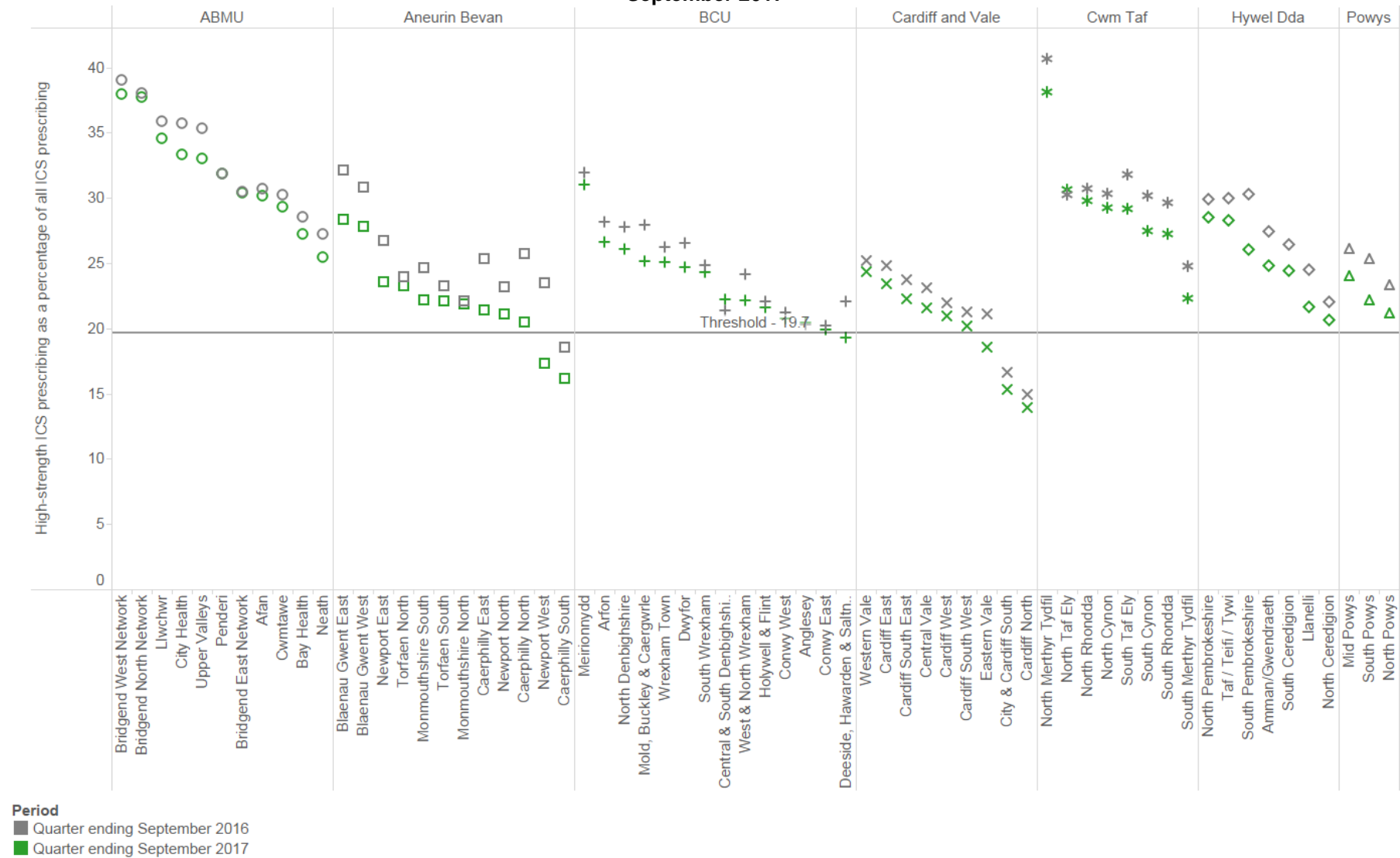


Figure 3. Hypnotic and anxiolytic prescribing – Quarter ending September 2016 versus quarter ending September 2017

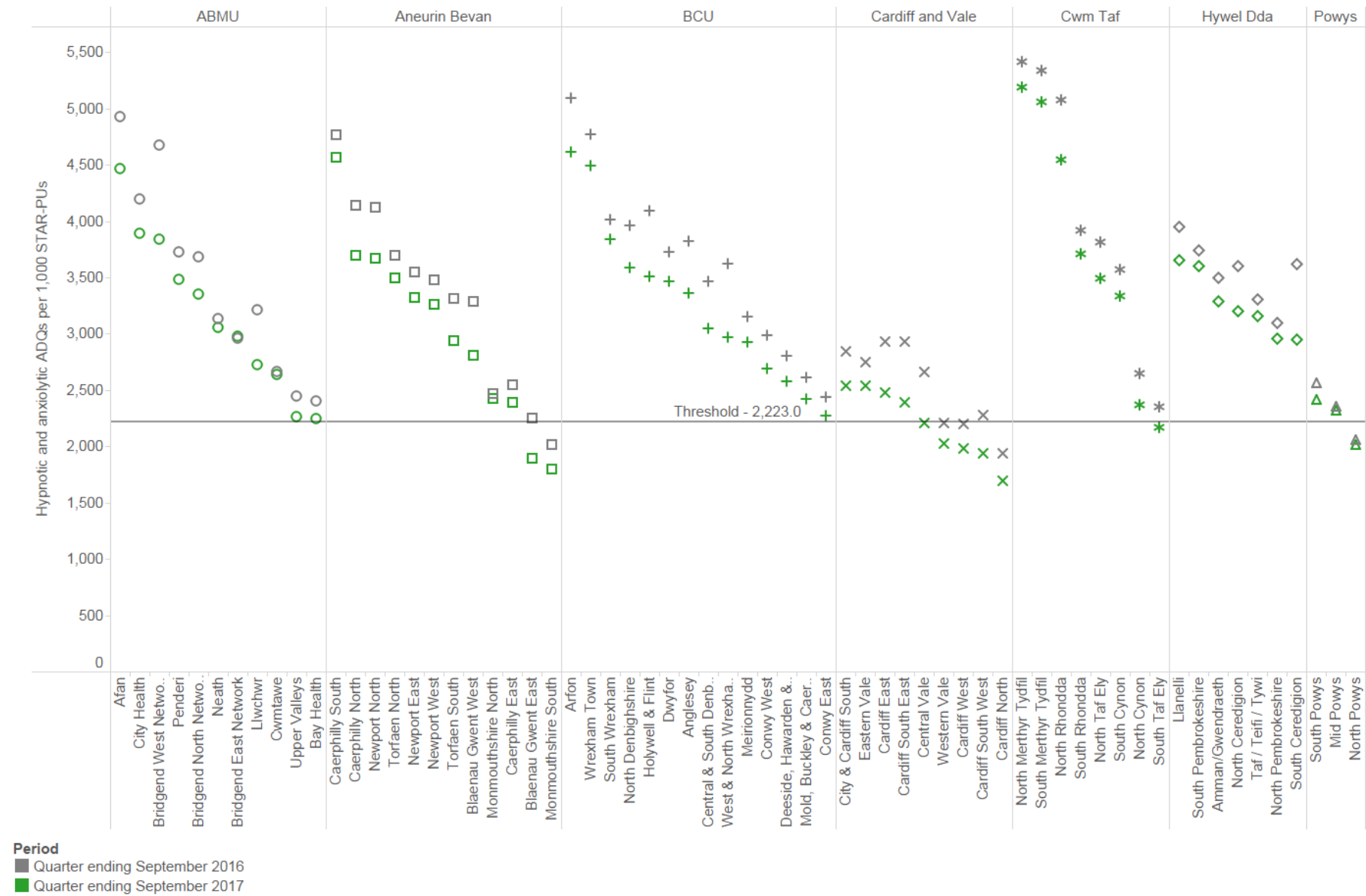


Figure 4. Tramadol prescribing – Quarter ending September 2016 versus quarter ending September 2017

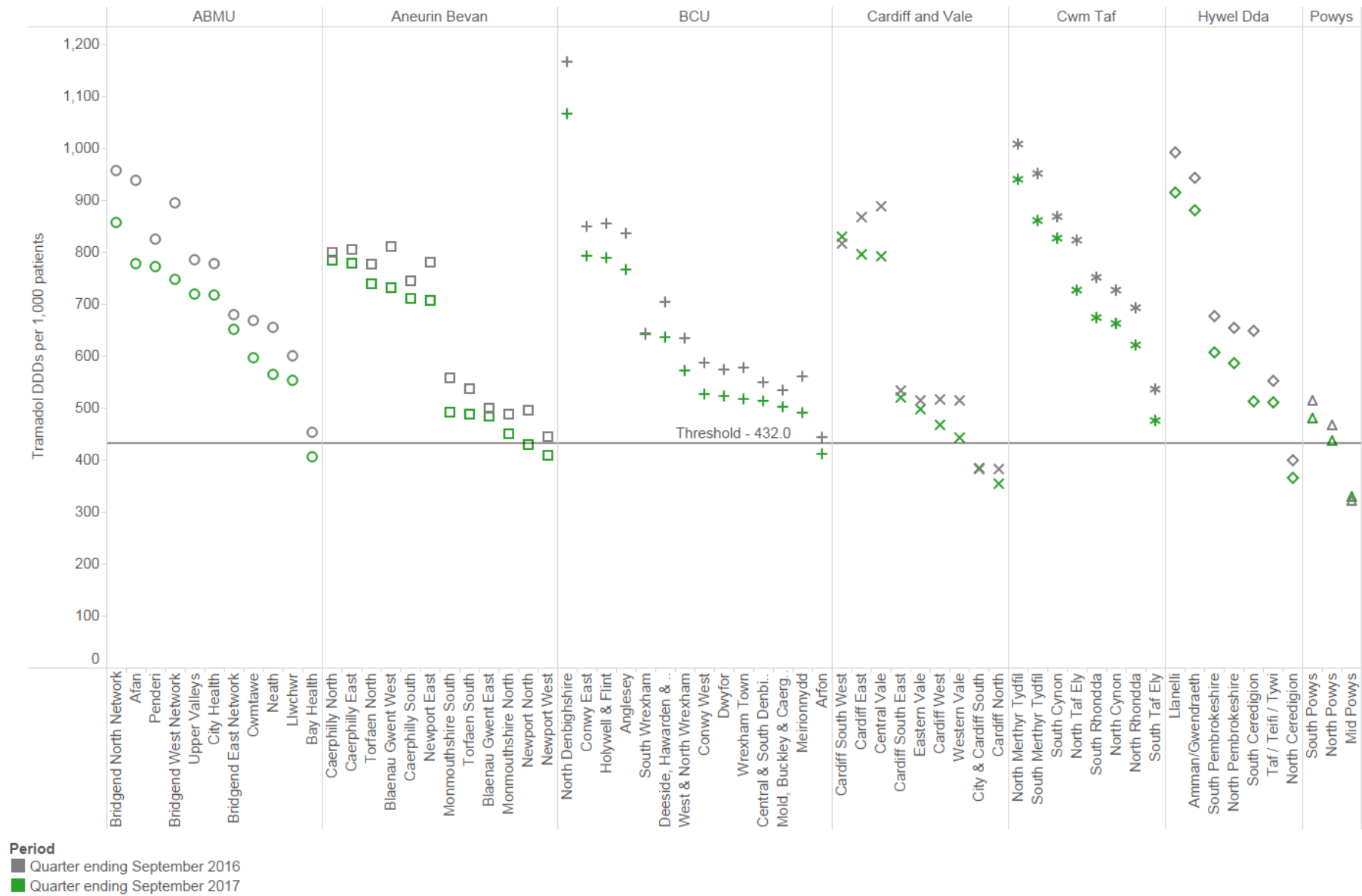


Figure 5. Opioid patch prescribing as a percentage of all opioid prescribing – Quarter ending September 2016 versus quarter ending September 2017

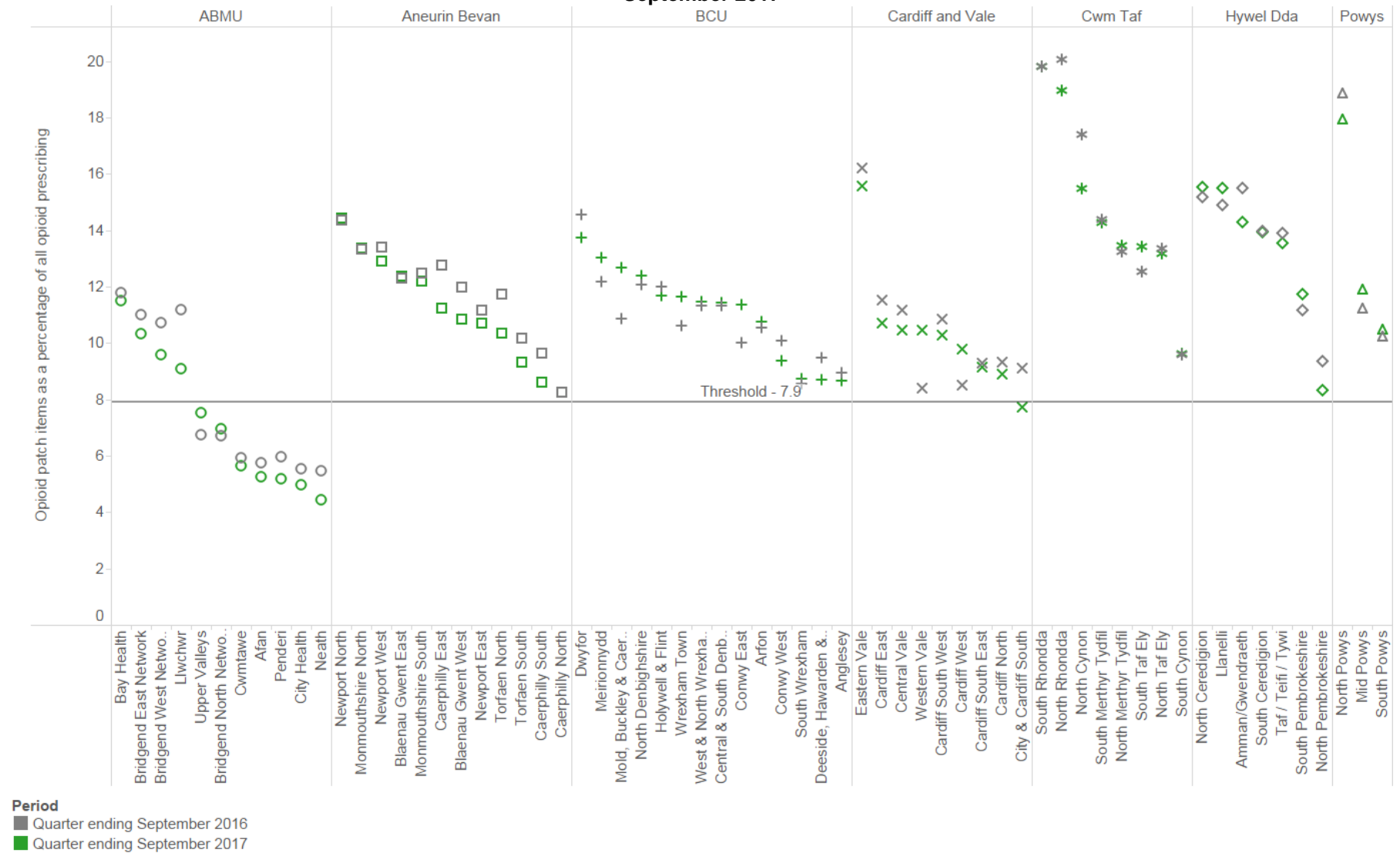


Figure 6. Gabapentin and pregabalin prescribing – Quarter ending September 2016 versus quarter ending September 2017

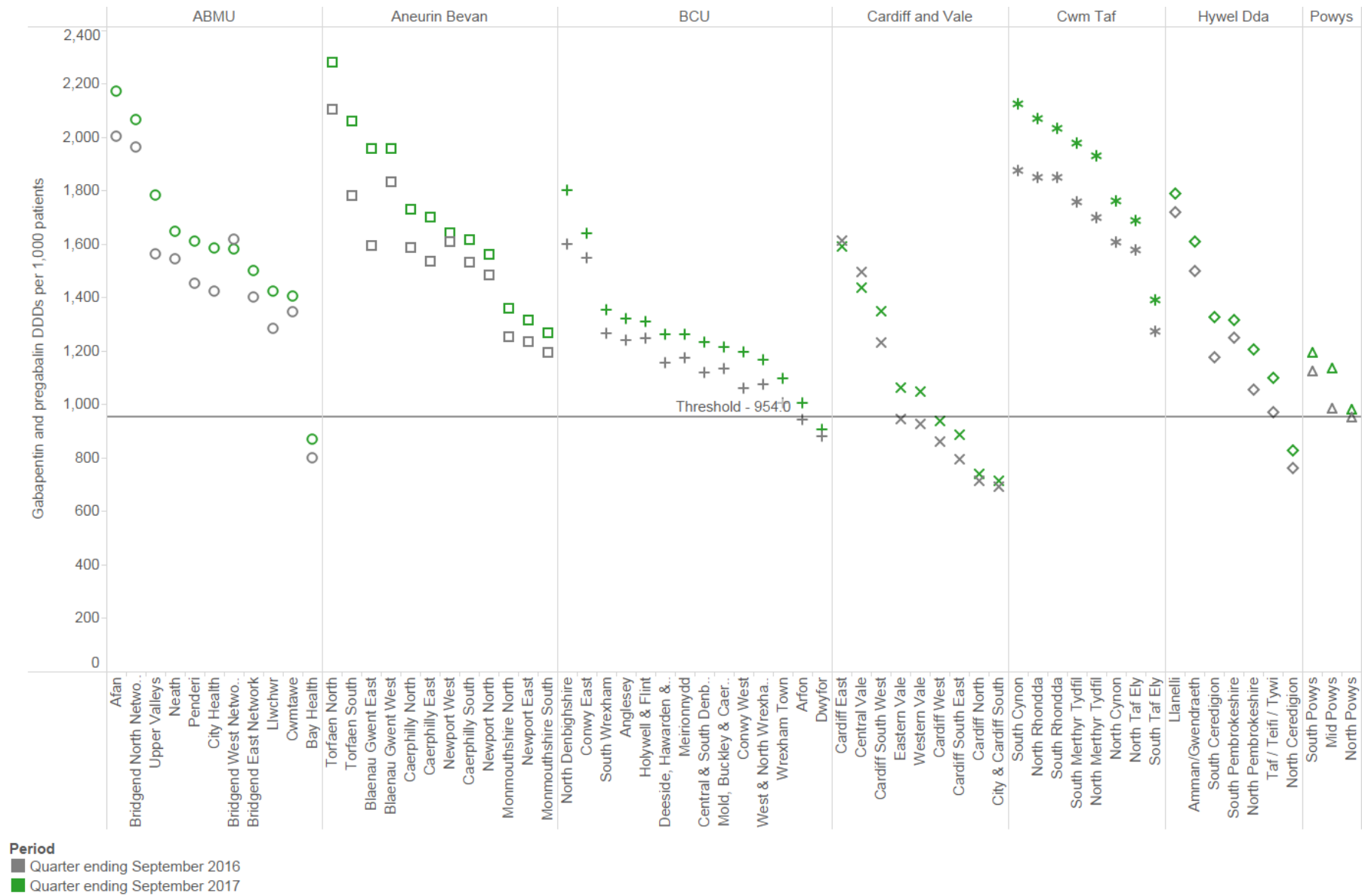


Figure 7. Antibiotic prescribing – Quarter ending September 2016 versus quarter ending September 2017

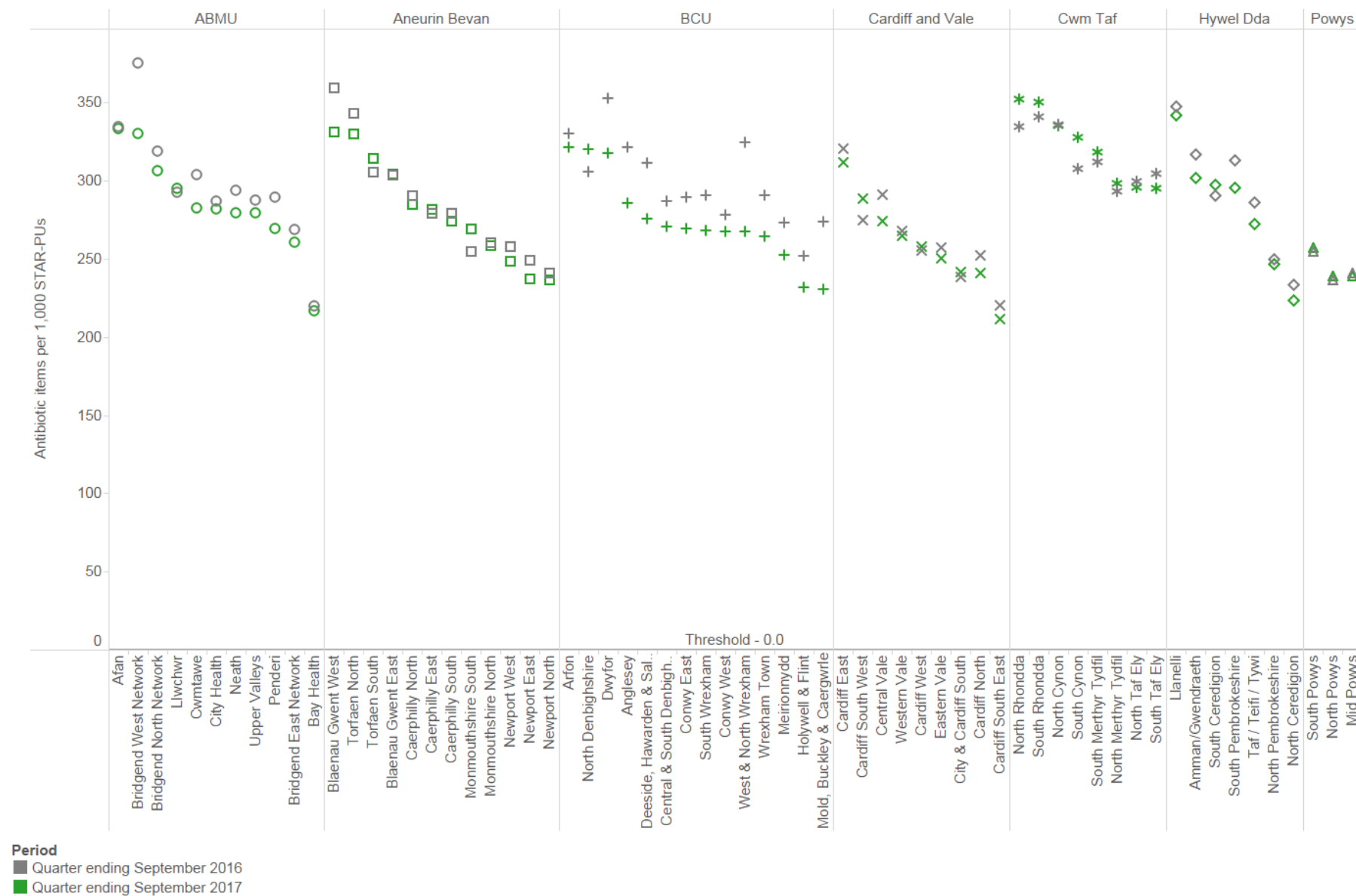


Figure 8. Co-amoxiclav prescribing – Quarter ending September 2016 versus quarter ending September 2017

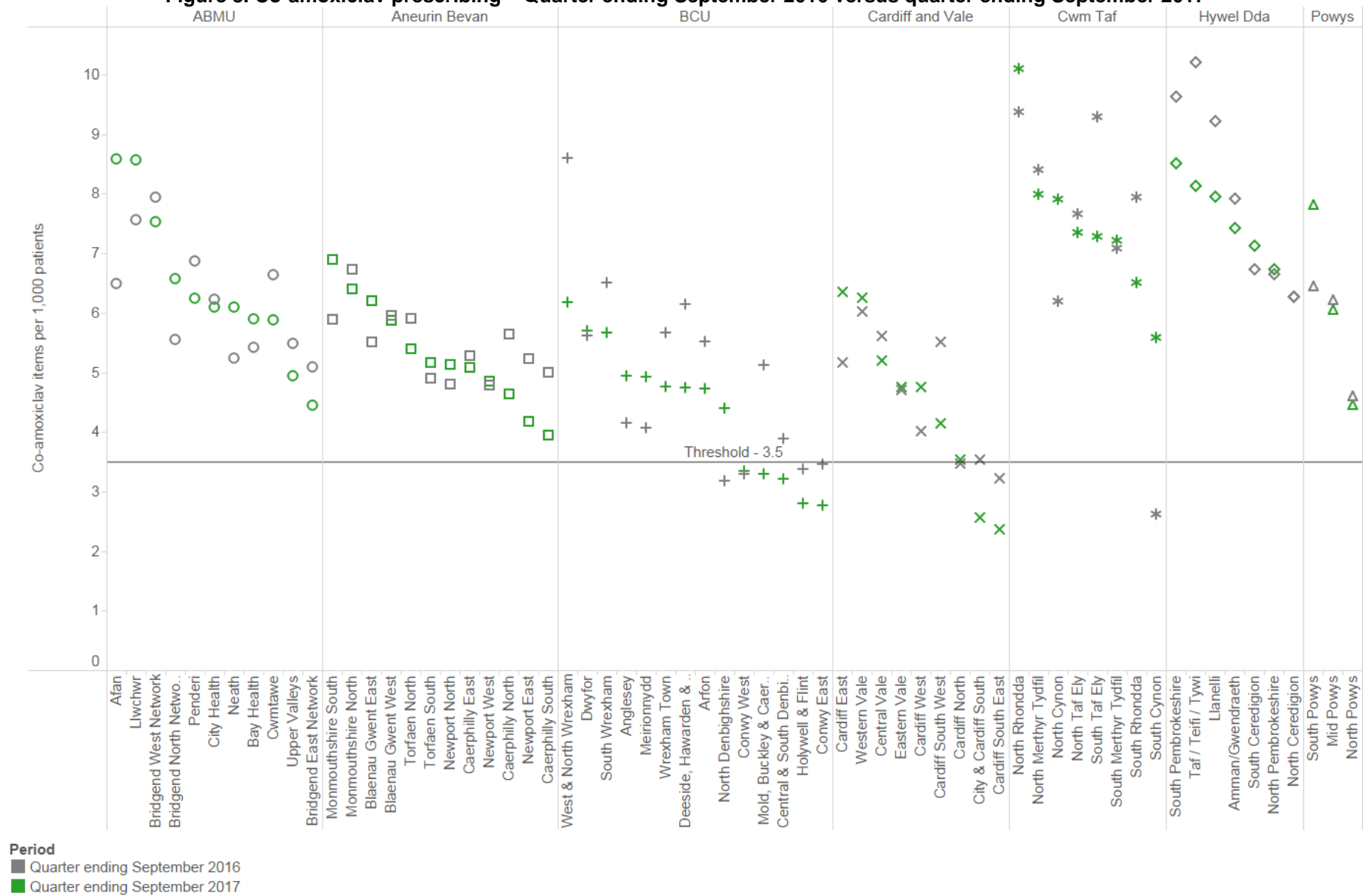


Figure 9. Co-amoxiclav as a percentage of total antibacterial items – Quarter ending September 2016 versus quarter ending September 2017

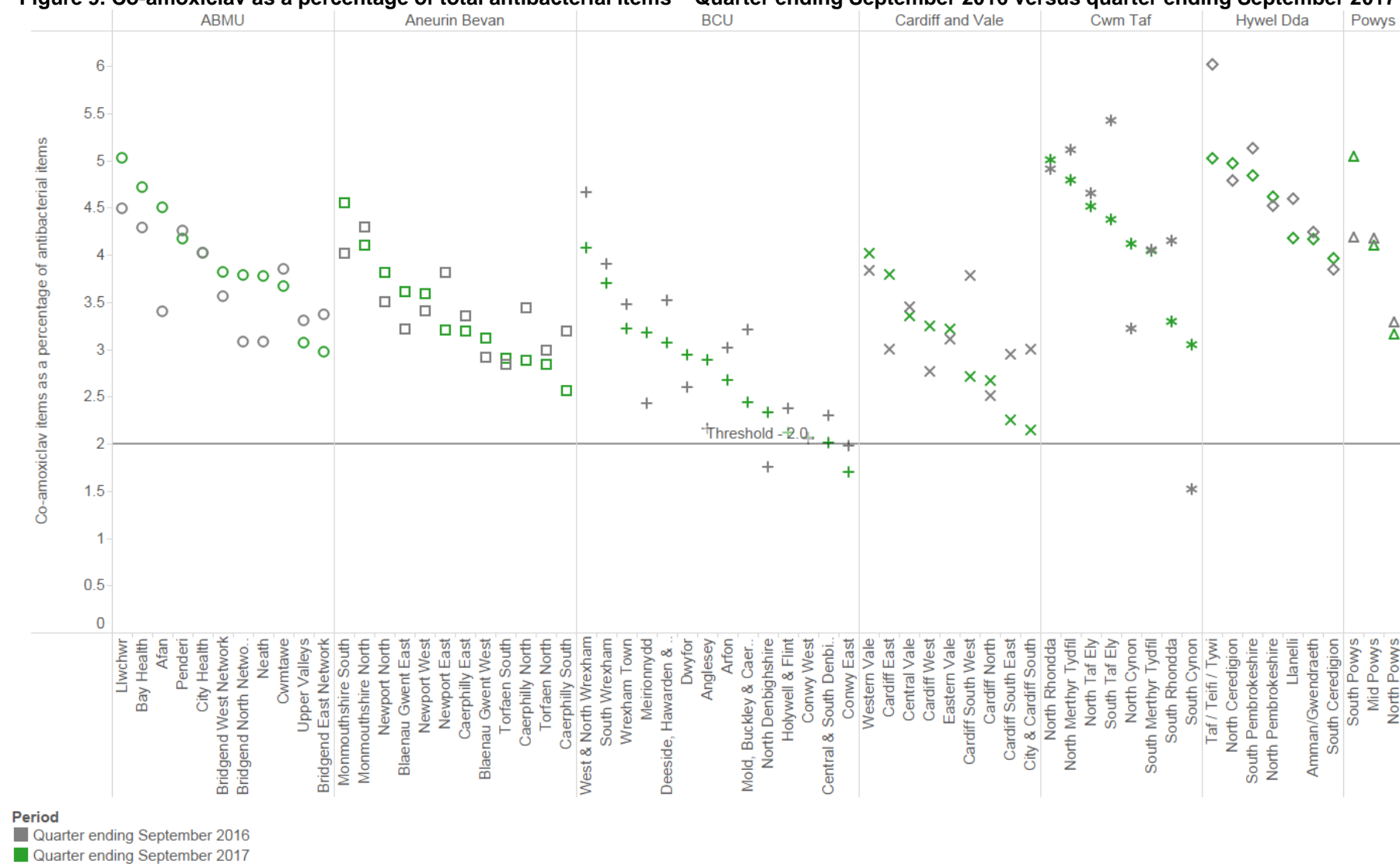


Figure 10. Cephalosporin prescribing – Quarter ending September 2016 versus quarter ending September 2017

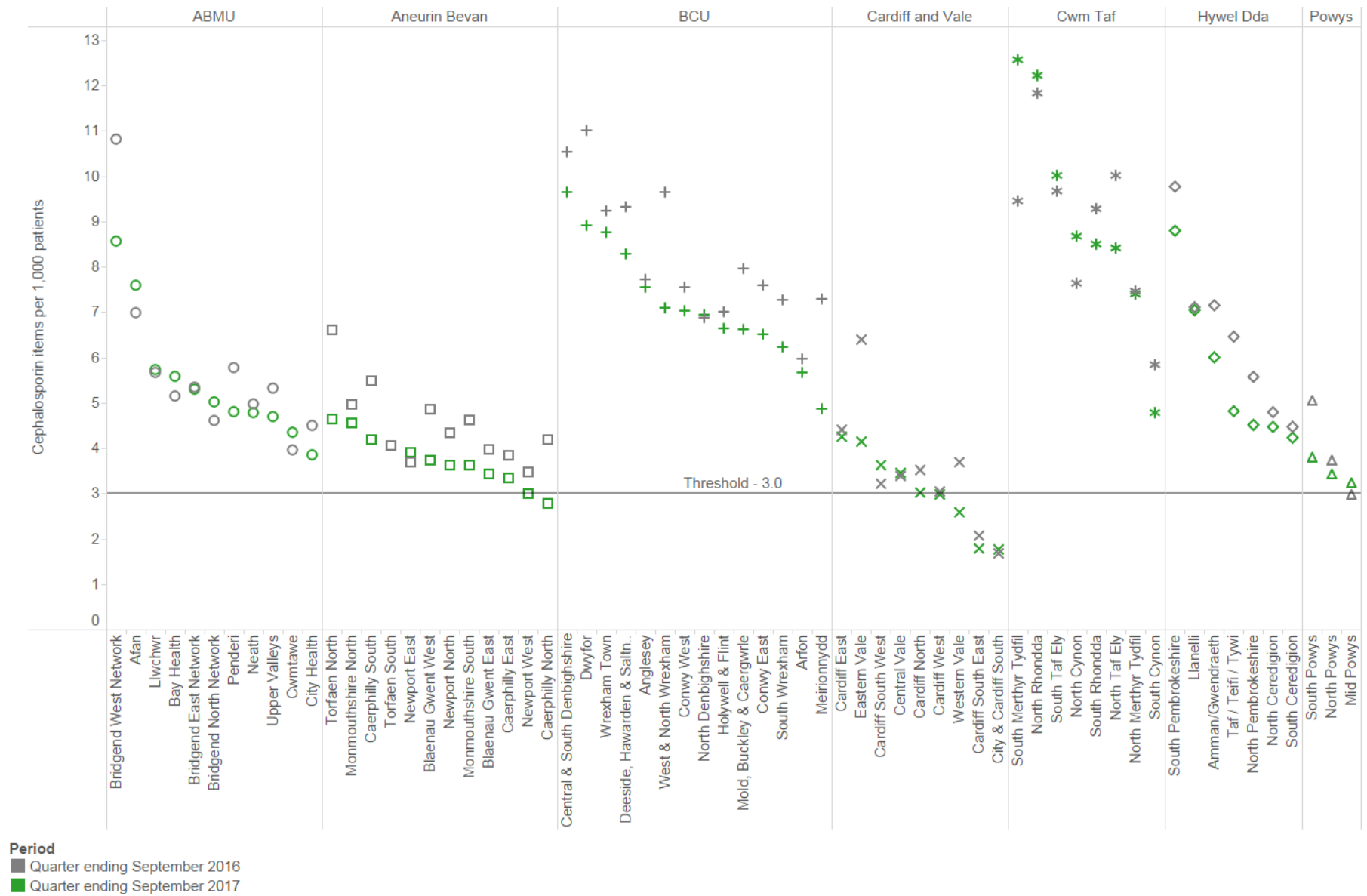


Figure 11. Cephalosporins as a percentage of total antibacterial items – Quarter ending September 2016 versus quarter ending September 2017

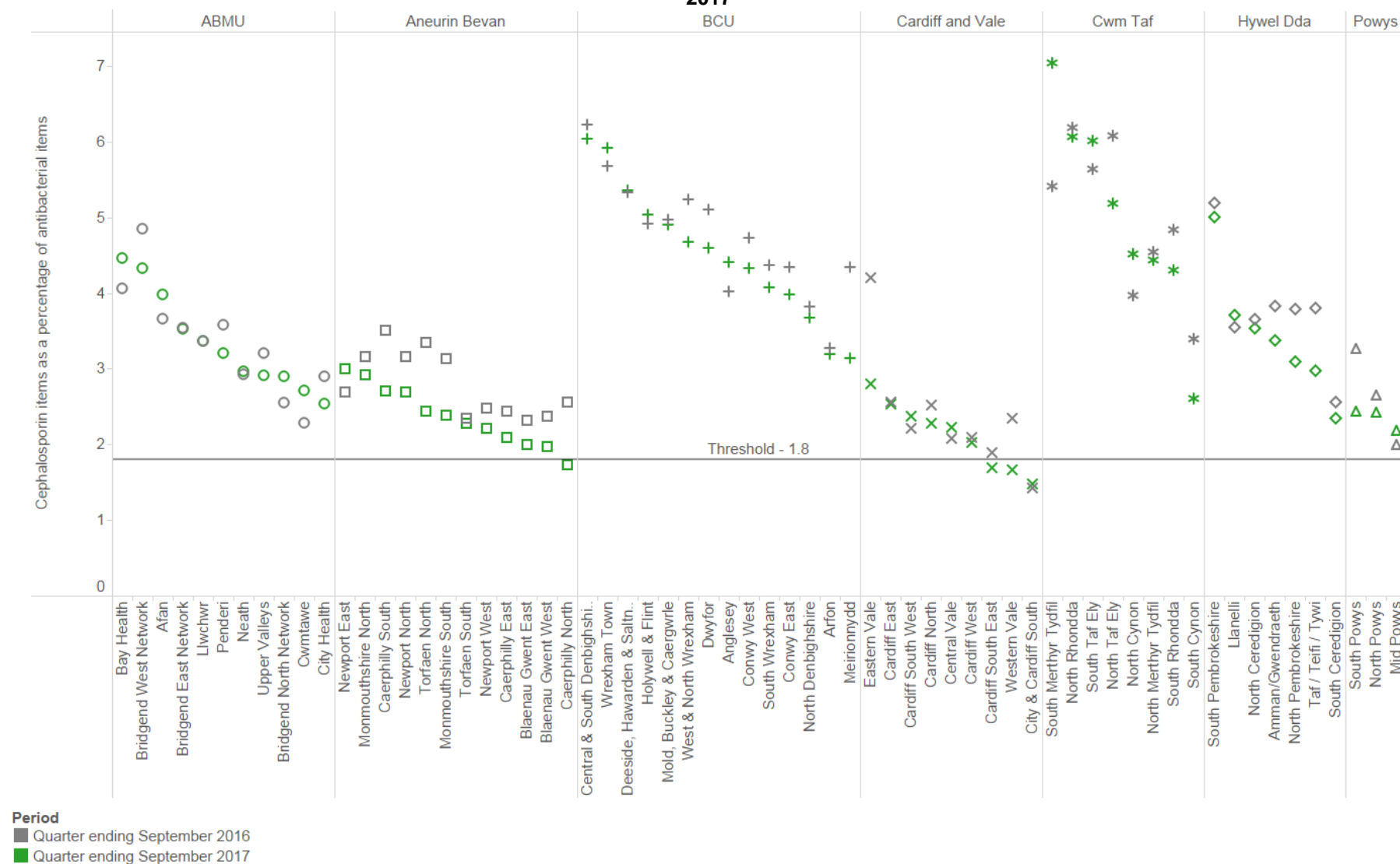


Figure 12. Fluoroquinolone prescribing – Quarter ending September 2016 versus quarter ending September 2017

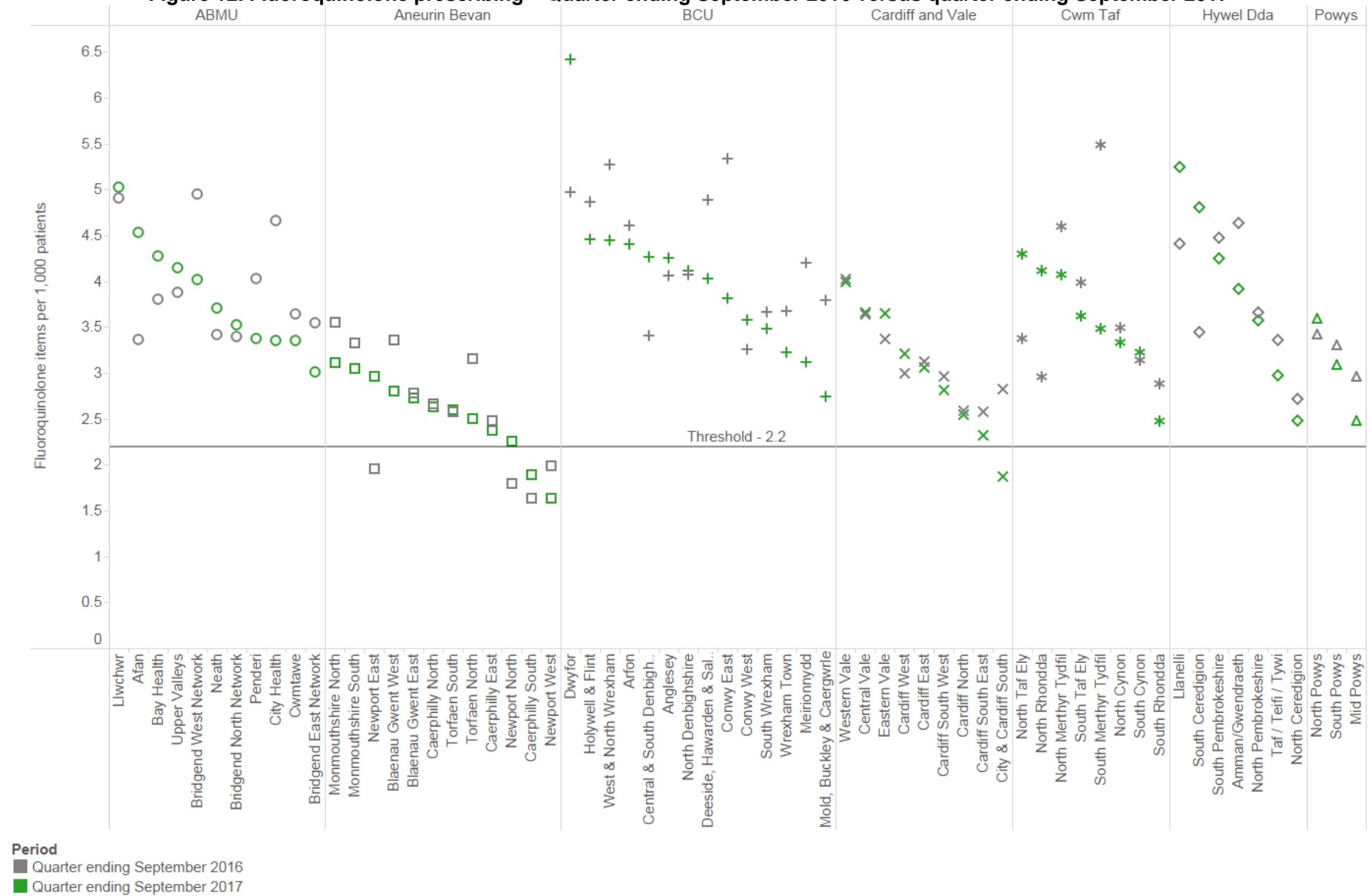


Figure 13. Fluoroquinolones as a percentage of total antibacterial items – Quarter ending September 2016 versus quarter ending September 2017

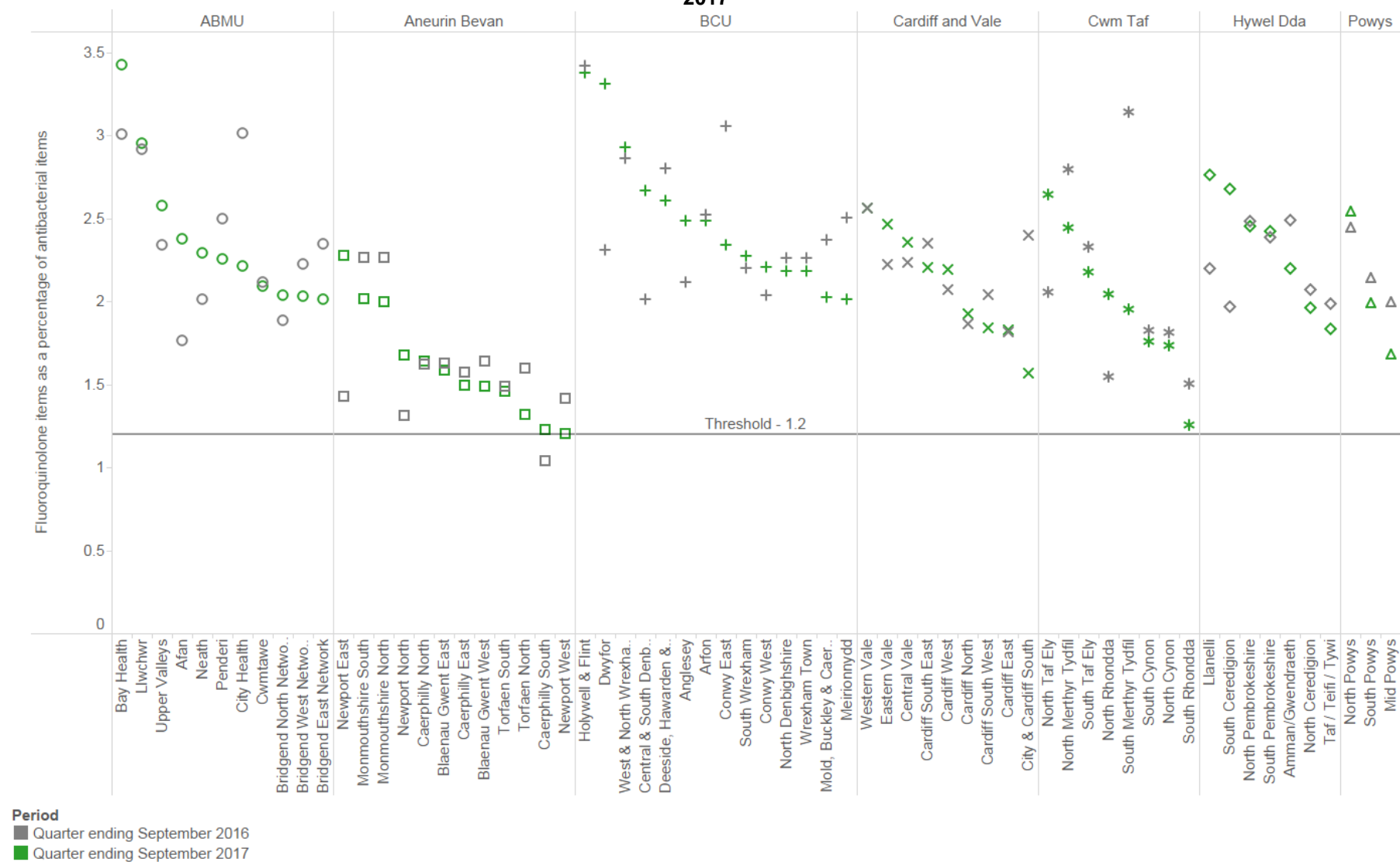


Figure 14. NSAID prescribing – Quarter ending September 2016 versus quarter ending September 2017

