



AWTTC

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

National Prescribing Indicators 2021–2022

Analysis of Prescribing Data to March 2022

27 July 2022: Correction made to 'Health boards/practices achieving the Yellow Card indicator targets' (page 6) to show full year health board achievement of Yellow Card indicator target.

26 August 2022: Data added for 'Best value biological medicines' (pages 27–33) and 'Insulin (secondary care)' (page 35) indicators.



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Data presented within this report are also accessible via the Server for Prescribing Information Reporting and Analysis (SPIRA) at spira.uk/info.

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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. The *National Prescribing Indicators: Supporting Safe and Optimised Prescribing* were refreshed for 2020–2021 with a focus on three priority areas, supported by additional safety and efficiency domains. Due to the workload pressures across NHS Wales during the COVID-19 pandemic, the NPIs for 2020–2021 were then carried forward into 2021–2022.

Background information supporting the choice of NPIs is detailed in the document [National Prescribing Indicators 2020–2021](#). The [National Prescribing Indicators 2021 – 2022 Specifications](#) document has been updated with thresholds and targets for 2021–2022.

This report contains data relating to the NPIs for the fourth quarter of 2021–2022. Unit of measure and targets for each NPI are included in Appendix 1 and primary care NPI prescribing data for GP clusters is presented in Appendix 2.

The potential impact of COVID-19 on prescribing and Yellow Card reporting should be considered when reviewing the data contained within this report.

Priority areas

For 2021–2022 there are three priority areas, covering a total of eight indicators.

Analgesics in primary care

- Opioid burden (ADQs per 1,000 patients) decreased by 1.69% across Wales, compared with the equivalent quarter of the previous year, in line with the aim of the indicator.
- Tramadol (DDD per 1,000 patients) reduced by 6.50% across Wales, compared with the equivalent quarter of the previous year, in line with the aim of the indicator.
- Gabapentin and pregabalin (DDD per 1,000 patients) demonstrated an increase of 0.66% across Wales, compared with the equivalent quarter of the previous year, despite the aim of the indicator being to reduce prescribing.

Anticoagulants in atrial fibrillation (AF)

- Across Wales, for the quarter ending March 2022, 91.1% of patients with AF had a CHA₂DS₂-VASc score of 2 or more and were prescribed an anticoagulant.
- Across Wales, the number of patients diagnosed with AF who are prescribed an anticoagulant and have received an anticoagulant review within the last 12 months (as a percentage of all patients diagnosed with AF who are prescribed an anticoagulant) increased by 34.3% in the month of March 2022, compared with the equivalent month of the previous year, in line with the aim of the indicator.
- Across Wales, the number of patients diagnosed with AF who are prescribed antiplatelet monotherapy (as a percentage of all patients diagnosed with AF) decreased by 16.9% in the month of March 2022, compared with the equivalent month of the previous year, in line with the aim of the indicator.

Antimicrobial stewardship

- Total antibacterial items per 1,000 STAR-PUs decreased across Wales by 15.6% compared with the quarter ending March 2020, in line with the aim of the indicator. All of the seven health boards achieved the target of a 5% reduction against the baseline of quarter 4 2019–2020.
- 4C (co-amoxiclav, cephalosporins, fluoroquinolones and clindamycin) items per 1,000 patients decreased across Wales by 11.9%, compared with the baseline of quarter 4 2019–2020, in line with the aim of the indicator.

Supporting domain – Safety

Prescribing Safety Indicators

- The aim of these indicators is to identify patients at high risk of adverse drug reactions and medicines related harm in primary care. There are no targets associated with these indicators.

Proton pump inhibitors

- Proton pump inhibitors (DDDs per 1,000 PUs) in primary care increased by 2.05% across Wales, compared with the equivalent quarter of the previous year, despite the aim of the indicator being to decrease prescribing.

Hypnotics and anxiolytics

- Prescribing of hypnotics and anxiolytics (ADQs per 1,000 STAR-PUs) in primary care reduced by 7.64% across Wales, compared with the equivalent quarter of the previous year. This is in line with the aim of the indicator.

Yellow Cards

- Annual targets have been set for these indicators, with the aim of increasing the number of Yellow Card reports submitted. Quarter 4 data demonstrates:
 - A 107% increase in reporting by GP practices across Wales, compared with the equivalent quarter of the previous year.
 - A 17% decrease in secondary care reporting across Wales, compared with the equivalent quarter of the previous year.
 - A 47% increase in reporting by health boards / NHS Trusts across Wales, compared with the equivalent quarter of the previous year.
 - A 24% increase in reporting by members of the public across Wales, compared with the equivalent quarter of the previous year.
 - The figures for Yellow Cards submitted by community pharmacy are also included in the report; however, targets have not been set.

Supporting domain – Efficiency

Best value biological medicines

- There was an increase in the overall use of four of the five biosimilar medicines being monitored (adalimumab, etanercept, infliximab and rituximab) compared with the equivalent quarter of the previous year, in line with the aim of the NPI. There was a decrease in the overall use of one of the five biosimilar medicines being monitored (trastuzumab) compared with the equivalent quarter of the previous year, contrary to the aim of the indicator.

Insulin

- Prescribing of long-acting insulin analogues demonstrated an increase of 0.07% in primary care compared with the equivalent quarter of the previous year, contrary to the aim of the indicator.
- Prescribing of long-acting insulin analogues decreased by 3.76% in secondary care compared with the equivalent quarter of the previous year, in line with the aim of the indicator.

Low value for prescribing

- Overall spend on the low value for prescribing UDG (per 1,000 patients) decreased by 6.92% across Wales, compared with the equivalent quarter of the previous year. This is in line with the aim of the indicator.

The 2022–2023 NPI report for quarter ending June 2022 will be available on 21st October 2022.

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Health boards/practices achieving indicator targets/thresholds

The table below shows the extent to which practices in each health board met the target or indicator thresholds:

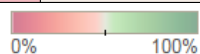
- The figure in the cell is the number of practices in each health board meeting the target or indicator threshold.
- The percentage figure and cell colour represent the proportion of practices in each health board meeting the target or indicator threshold.

The target for antibacterial items per 1,000 STAR-PU is by health board, therefore a tick demonstrates achievement.

Health boards/practices achieving the indicator targets/thresholds – Quarter ending March 2022

Indicator Description	Aneurin Bevan	Betsi Cadwaladr	Cardiff And Vale	Cwm Taf Morgannwg	Hywel Dda	Powys	Swansea Bay
Opioid Burden (UDG) ADQs per 1,000 patients	14 19%	23 24%	45 76%	7 14%	11 23%	8 50%	10 20%
Tramadol DDDs per 1,000 patients	21 29%	18 19%	34 58%	8 16%	13 27%	8 50%	12 24%
Gabapentin and pregabalin DDDs per 1,000 patients	13 18%	23 24%	39 66%	3 6%	14 29%	6 38%	9 18%
Antibacterial items per 1,000 STAR-PU	✓	✓	✓	✓	✓	✓	✓
4C antibacterials items per 1,000 patients	✗	✗	✗	✓	✓	✗	✓
Proton pump inhibitors DDDs per 1,000 PUs	17 24%	16 16%	36 61%	7 14%	11 23%	1 6%	13 27%
Hypnotics and anxiolytics ADQs per 1,000 STAR-PU	24 33%	30 31%	44 75%	12 24%	13 27%	8 50%	15 31%
Long-acting insulin analogues as a percentage of long- and intermediate-acting insulin analogue prescribing	37 51%	11 11%	27 46%	25 51%	4 8%	2 13%	0 0%
Low Value for Prescribing (UDG) spend per 1,000 patients	9 13%	47 48%	20 34%	1 2%	10 21%	8 50%	19 39%

Percentage of practices meeting threshold



Health boards/practices achieving the Yellow Card indicator targets – Full year 2021–2022

The targets for secondary care, health board and members of the public are by health board, therefore a tick demonstrates achievement.

Yellow Card Indicator	Aneurin Bevan	Betsi Cadwaladr	Cardiff And Vale	Cwm Taf Morgannwg	Hywel Dda	Powys	Swansea Bay	Velindre NHS Trust
GP practices	3 4%	38 36%	2 3%	7 13%	40 83%	1 6%	4 8%	—
Health boards	×	✓	×	✓	✓	×	×	—
Health boards: Members of public	×	✓	✓	✓	×	×	×	—
Secondary care	×	×	×	×	×	×	×	×

Percentage of practices meeting threshold



1.0 Priority areas

1.1 Analgesics

There are three NPIs monitoring the usage of medicines used for the treatment of pain for 2021–2022:

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

1.1.1 Opioid burden

Purpose: To encourage the appropriate use and review of opioids in primary care, minimising the potential for dependence, diversion, misuse and adverse drug reactions (ADRs).

Unit of measure: Opioid burden UDG ADQs per 1,000 patients

Aim: To reduce prescribing

There is a lack of consistent good quality evidence to support strong clinical recommendation for the long-term use of opioid for patients with chronic non-cancer pain. Opioid analgesics have well established side effects and repeated administration may cause tolerance and dependence. This NPI promotes a prudent approach to prescribing opioid analgesics, taking into account the indication, risks and benefits, and encouraging timely review of patients prescribed opioids for chronic pain.

- Across Wales, opioid burden decreased by 1.69% in the quarter ending March 2022 compared with the equivalent quarter of the previous year. This is in line with the aim of the indicator.
- For the quarter ending March 2022, opioid burden prescribing ranged from 2,866 to 4,823 ADQs per 1,000 patients across the health boards.
- The health board with the lowest opioid burden was Cardiff and Vale UHB, whilst the highest opioid burden was seen in Cwm Taf Morgannwg UHB.
- The largest percentage reduction was seen in Cardiff and Vale UHB, and the smallest percentage decrease was seen in Aneurin Bevan UHB.

Table 1. Opioid burden UDG ADQs per 1,000 patients

	2020–2021 Qtr 4	2021–2022 Qtr 4	% Change
Cardiff And Vale	2,976	2,866	-3.70%
Cwm Taf Morgannwg	4,995	4,823	-3.45%
Swansea Bay	4,360	4,261	-2.27%
Hywel Dda	4,816	4,733	-1.71%
Powys	4,068	4,040	-0.68%
Betsi Cadwaladr	4,666	4,645	-0.45%
Aneurin Bevan	4,706	4,693	-0.29%
Wales	4,404	4,329	-1.69%

Figure 1. Trend in opioid burden UDG ADQs per 1,000 patients

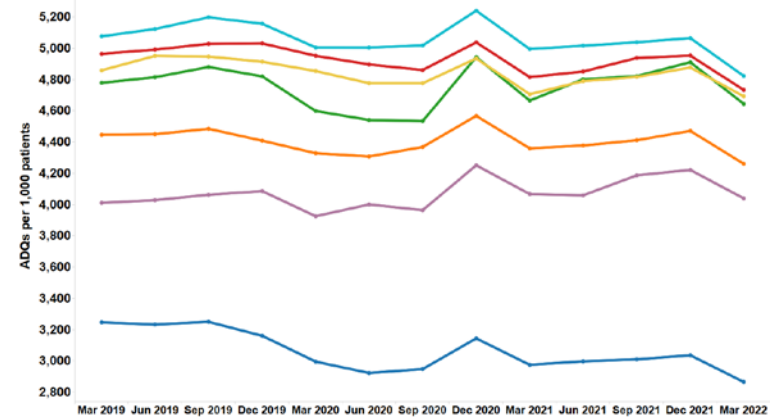
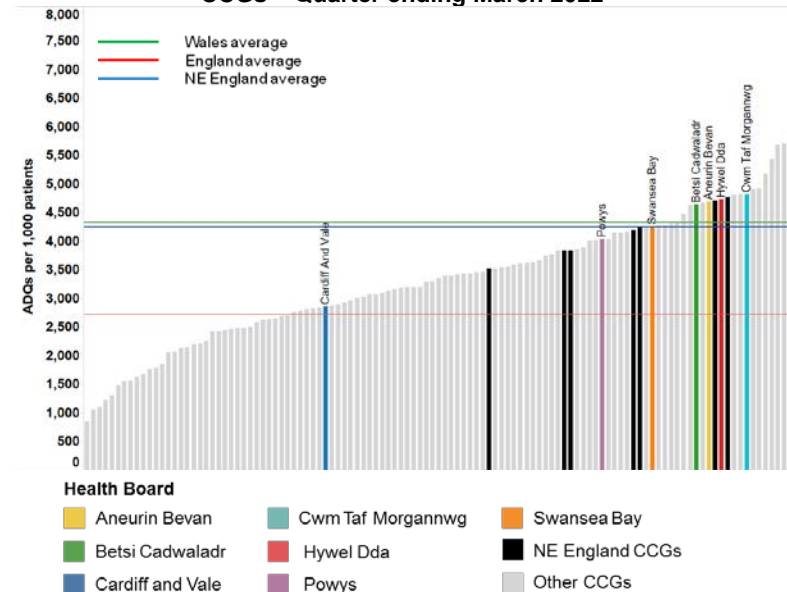


Figure 2. Opioid burden prescribing in Welsh health boards and English CCGs – Quarter ending March 2022



Please note: The NHS Business Services Authority move to a One Drug Database resulted in the removal of the ADQ value for co-codamol 15/500 from January 2020 – September 2020, therefore data during this time period do not include co-codamol 15/500.

1.1.2 Tramadol

Purpose: To encourage the appropriate use and review of tramadol in primary care, minimising the potential dependence, diversion, misuse and ADRs.

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

Aim: To reduce prescribing

While there is a recognised place in pain management for tramadol, there are concerns regarding the risks associated with dependence, diversion, misuse and ADRs. 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 6.50% lower in the quarter ending March 2022 than in the equivalent quarter of the previous year. This is in line with the aim of the indicator.
- For the quarter ending March 2022, tramadol prescribing ranged from 328 to 495 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 Betsi Cadwaladr UHB.
- Tramadol prescribing decreased, compared with the equivalent quarter of the previous year, in all health boards.
- The largest percentage decrease was seen in Cardiff and Vale UHB and the smallest percentage decrease was seen in Betsi Cadwaladr UHB, compared with the equivalent quarter of the previous year.

Table 2. Tramadol DDDs per 1,000 patients

	2020–2021 Qtr 4	2021–2022 Qtr 4	% Change
Cardiff And Vale	366	329	-10.1%
Cwm Taf Morgannwg	543	492	-9.46%
Powys	359	328	-8.57%
Swansea Bay	466	429	-7.92%
Aneurin Bevan	426	401	-6.00%
Hywel Dda	464	439	-5.28%
Betsi Cadwaladr	507	495	-2.31%
Wales	457	428	-6.50%

Figure 3. Trend in tramadol prescribing
DDDs per 1,000 patients

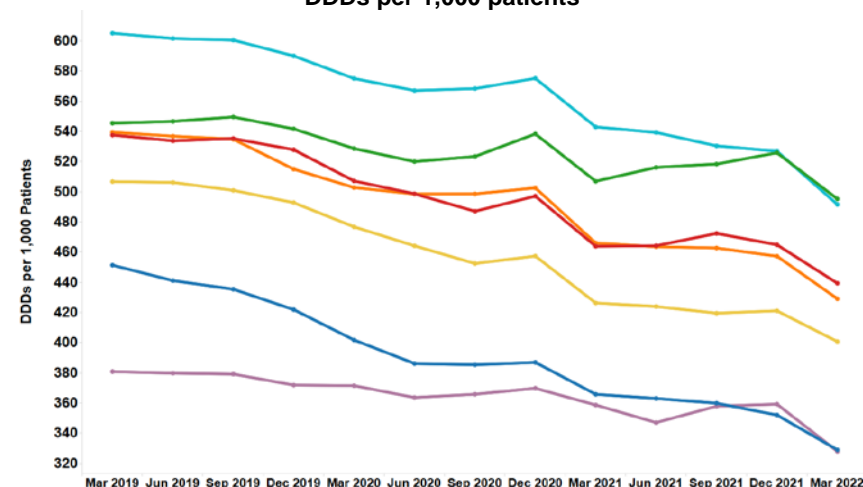
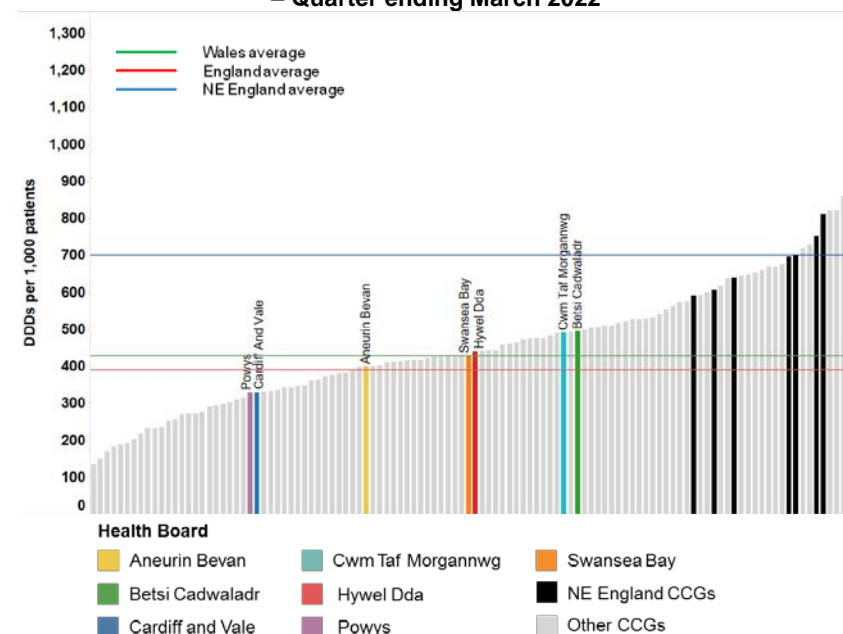


Figure 4. Tramadol prescribing in Welsh health boards and English CCGs
– Quarter ending March 2022



1.1.3 Gabapentin and pregabalin

Purpose: To encourage the appropriate use and review of gabapentin and pregabalin in primary care, minimising the potential for dependence, diversion, misuse and ADRs.

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 the treatment of generalised anxiety disorder. Both gabapentin and pregabalin have known psychiatric side effects and there is a potential risk of dependence, diversion, misuse and ADRs. 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 March 2022, prescribing of gabapentin and pregabalin increased by 0.66% compared with the same quarter of the previous year.
- For the quarter ending March 2022, gabapentin and pregabalin prescribing ranged from 1,123 to 2,019 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 Morgannwg UHB.
- The largest percentage decrease was seen in Swansea Bay UHB and the largest percentage increase was seen in Powys Teaching HB, compared with the equivalent quarter of the previous year.

Table 3. Gabapentin and pregabalin DDDs per 1,000 patients

	2020–2021 Qtr 4	2021–2022 Qtr 4	% Change
Swansea Bay	1,724	1,657	-3.88%
Aneurin Bevan	1,733	1,730	-0.14%
Cwm Taf Morgannwg	2,017	2,019	0.11%
Cardiff And Vale	1,118	1,123	0.46%
Hywel Dda	1,442	1,475	2.25%
Betsi Cadwaladr	1,430	1,485	3.83%
Powys	1,227	1,276	3.96%
Wales	1,550	1,560	0.66%

Figure 5. Trend in gabapentin and pregabalin prescribing DDDs per 1,000 patients

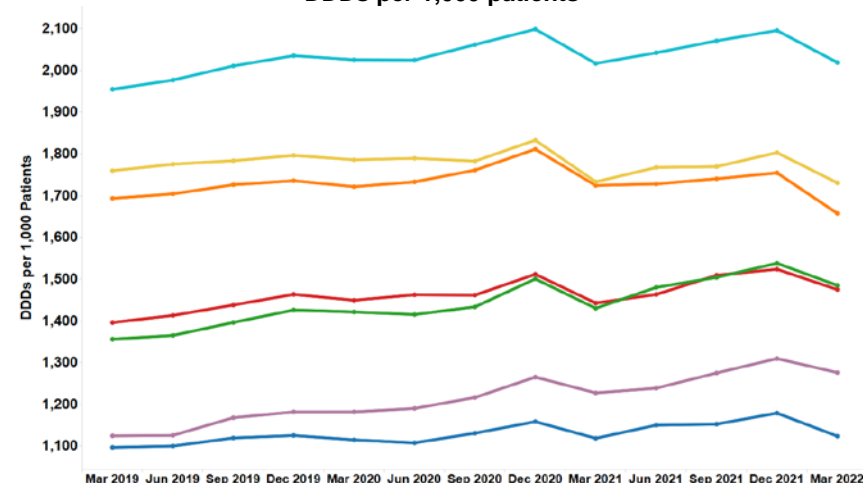
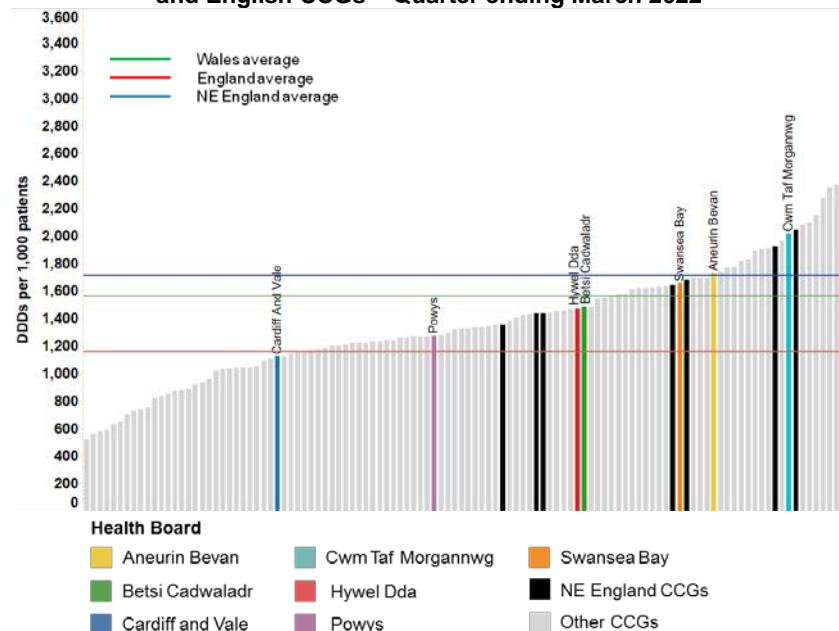


Figure 6. Gabapentin and pregabalin prescribing in Welsh health boards and English CCGs – Quarter ending March 2022



1.2 Anticoagulants in atrial fibrillation

There are three NPIs monitoring anticoagulants in atrial fibrillation (AF) for 2021–2022:

1. Number of patients who have a CHA₂DS₂-VASc score of 2 or more who are currently prescribed an anticoagulant as a percentage of all patients diagnosed with AF.
2. Number of patients who are currently prescribed an anticoagulant and have received an anticoagulant review within the last 12 months, as a percentage of all patients diagnosed with AF who are prescribed an anticoagulant.
3. Number of patients who are prescribed antiplatelet monotherapy, as a percentage of all patients diagnosed with AF.

1.2.1 Anticoagulants in patients with AF

Purpose: To encourage the appropriate use of anticoagulants in patients with atrial fibrillation (AF).

Unit of measure: Number of patients who have a CHA₂DS₂-VASc score of 2 or more who are currently prescribed an anticoagulant as a percentage of all patients diagnosed with AF.

Aim: To increase the number of patients with AF and a CHA₂DS₂-VASc of 2 or more prescribed an anticoagulant.

The CHA₂DS₂-VASc risk stratification score calculates stroke risk of patients with AF. Adults with non-valvular AF and a CHA₂DS₂-VASc score of 2 or above are at a much higher risk of having a stroke than the general population, however anticoagulation therapy can help to prevent strokes by reducing the likelihood of a blood clot forming. AF causes around 20% of strokes, however this can be reduced by about two thirds if people are anticoagulated.

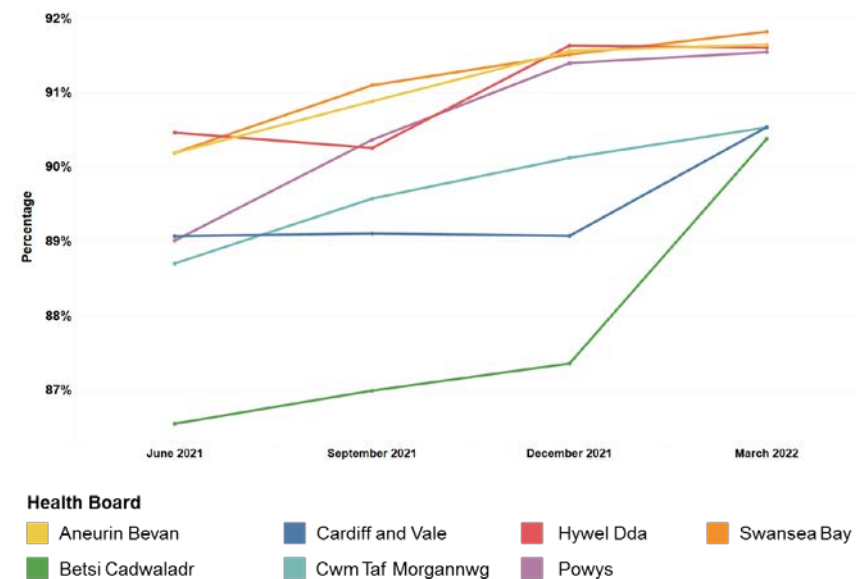
- Across Wales, for the quarter ending March 2022, 91.1% of patients with AF had a CHA₂DS₂-VASc score of 2 or more and were prescribed an anticoagulant.
- For the quarter ending March 2022, the percentage of patients with AF who had a CHA₂DS₂-VASc score of 2 or more and were prescribed an anticoagulant ranged from 90.4% to 91.8% across the health boards.
- The health boards with the highest percentage of patients with AF and a CHA₂DS₂-VASc of 2 or more who were prescribed an anticoagulant was Swansea Bay UHB. The health board with the lowest percentage was Betsi Cadwaladr UHB.

* Data for this indicator are only available from 2021–2022 Quarter 1 onwards.

Table 4. Percentage of patients who have a CHA₂DS₂-VASc score of 2 or more who are currently prescribed an anticoagulant*

	2021–2022 Qtr 4
Swansea Bay	91.8%
Aneurin Bevan	91.6%
Hywel Dda	91.6%
Powys	91.5%
Cardiff and Vale	90.5%
Cwm Taf Morgannwg	90.5%
Betsi Cadwaladr	90.4%
Wales	91.1%

Figure 7. Trend in the percentage of patients who have a CHA₂DS₂-VASc score of 2 or more who are currently prescribed an anticoagulant*



1.2.2 Anticoagulant review

Purpose: To encourage the appropriate review of patients currently prescribed anticoagulants.

Unit of measure: Number of patients who are currently prescribed an anticoagulant and have received an anticoagulant review within the last 12 months, as a percentage of all patients diagnosed with AF who are prescribed an anticoagulant.

Aim: To increase the number of patients with AF who are prescribed an anticoagulant and have received an anticoagulant review within the last 12 months.

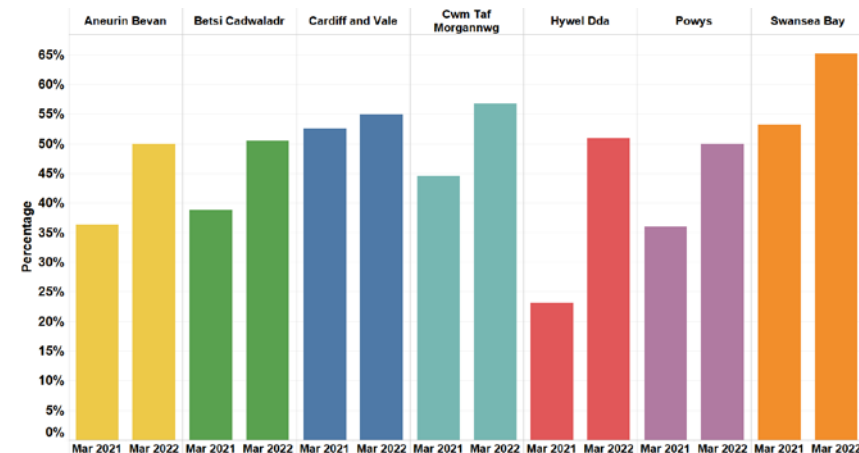
Patients with AF who are prescribed an anticoagulant should have a review of their treatment annually. Anticoagulants are associated with drug-drug and drug-food interactions that may increase the risk of serious bleeding or diminish stroke prevention. A review of treatment will reinforce the importance of adherence and enable patients to be reminded of potential interactions.

- Across Wales, the number of patients who are currently prescribed an anticoagulant and have received an anticoagulant review within the last 12 months (as a percentage of all patients diagnosed with AF who are prescribed an anticoagulant) increased by 34.3% compared with the equivalent month of the previous year. This is in line with the aim of the indicator.
- For the month of March 2022, the percentage of patients who had received an anticoagulant review in the last 12 months ranged from 50.0% to 65.2% across the health boards.
- The health board with the highest percentage of reviews was Swansea Bay UHB. The health boards with the lowest percentage of reviews were Aneurin Bevan UHB and Powys Teaching HB.
- The largest percentage increase was seen in Hywel Dda UHB. The smallest percentage increase was seen in Cardiff and Vale UHB.

Table 5. Percentage of patients who are currently prescribed an anticoagulant and have received an anticoagulant review within the last 12 months

	2020–2021 March 2021	2021–2022 March 2022	% Change
Hywel Dda	23.2%	50.9%	120%
Powys	36.0%	50.0%	39.0%
Aneurin Bevan	36.3%	50.0%	37.6%
Betsi Cadwaladr	38.8%	50.5%	30.3%
Cwm Taf Morgannwg	44.5%	56.7%	27.3%
Swansea Bay	53.1%	65.2%	22.7%
Cardiff and Vale	52.5%	54.9%	4.71%
Wales	40.0%	53.7%	34.3%

Figure 8. Percentage of patients who are currently prescribed an anticoagulant and have received an anticoagulant review within the last 12 months – March 2022 versus March 2021



1.2.3 Patients who are prescribed antiplatelet monotherapy

Purpose: To discourage the inappropriate use of antiplatelet monotherapy in patients with atrial fibrillation (AF).

Units of measure: Number of patients who are prescribed antiplatelet monotherapy, as a percentage of all patients diagnosed with AF.

Aims: To reduce the number of patients with AF prescribed antiplatelet monotherapy.

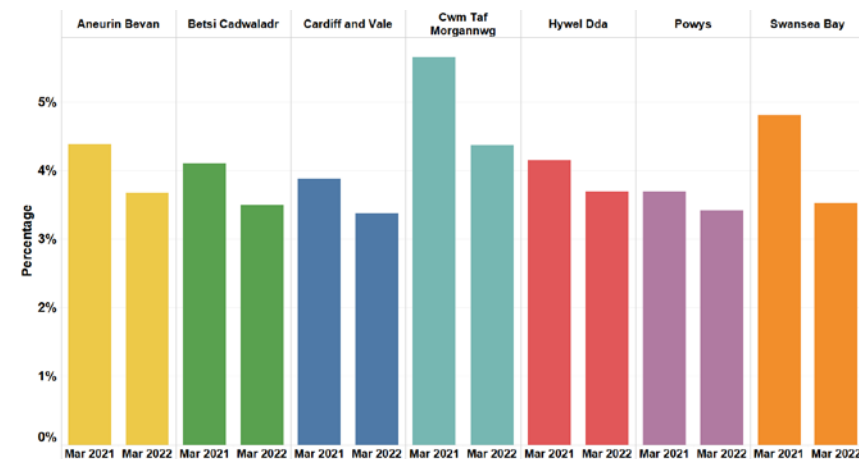
Antiplatelet medication, i.e. aspirin or clopidogrel, is no longer recommended in patients with AF. Quality Statement 2 within the NICE Quality Standard for Atrial fibrillation states that adults with AF should not be prescribed aspirin monotherapy, as the risks of taking aspirin outweigh any benefits. However, prescribers should be aware that adults with AF may need to take aspirin for other indications.

- Across Wales, the number of patients who are prescribed antiplatelet monotherapy (as a percentage of all patients diagnosed with AF) decreased by 16.9% compared with the equivalent month of the previous year. This is in line with the aim of the indicator.
- For the month of March 2022, the percentage of patients receiving antiplatelet monotherapy ranged from 3.38% to 4.37% across the health boards.
- The health board with the lowest percentage of antiplatelet monotherapy was Cardiff and Vale UHB. The health board with the highest percentage of antiplatelet monotherapy was Cwm Taf Morgannwg UHB.
- The largest percentage decrease was seen in Swansea Bay UHB. The smallest percentage decrease was seen in Powys Teaching HB.

Table 6. Percentage of patients who are prescribed antiplatelet monotherapy

	2020–2021 March 2021	2021–2022 March 2022	% Change
Swansea Bay	4.81%	3.53%	-26.6%
Cwm Taf Morgannwg	5.66%	4.37%	-22.8%
Aneurin Bevan	4.39%	3.68%	-16.2%
Betsi Cadwaladr	4.10%	3.50%	-14.6%
Cardiff and Vale	3.88%	3.38%	-12.9%
Hywel Dda	4.15%	3.69%	-11.1%
Powys	3.70%	3.42%	-7.50%
Wales	4.42%	3.67%	-16.9%

Figure 9. Percentage of patients who are prescribed antiplatelet monotherapy – March 2022 versus March 2021



1.3 Antimicrobial stewardship

There are two antimicrobial NPIs for 2021–2022:

1. Total antibacterial items per 1,000 STAR-PUs
2. 4C antimicrobials (co-amoxiclav, cephalosporins, fluoroquinolones and clindamycin) items per 1,000 patients

1.3.1 Total antibacterial items

Purpose: To encourage the appropriate prescribing of all antibiotics in primary care.

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

Aim: To reduce prescribing

- Across Wales, for the quarter ending March 2022, total antibacterial items per 1,000 STAR-PUs decreased by 15.6%, compared with the quarter ending March 2020. This is in line with the aim of the indicator.
- For the quarter ending March 2022, the total number of antibacterial items per 1,000 STAR-PUs ranged from 230 to 295 across the health boards.
- The health board with the lowest prescribing was Powys Teaching HB, whilst the highest prescribing was seen in Cwm Taf Morgannwg UHB.
- For the quarter ending March 2022, all of the seven health boards achieved the target of a 5% reduction against the baseline of quarter 4 2019–2020.
- Hywel Dda UHB demonstrated the greatest percentage decrease in prescribing, compared with the quarter ending March 2020.
- Powys Teaching HB demonstrated the smallest percentage decrease in prescribing, compared with the quarter ending March 2020.

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

	2019–2020 Qtr 4	2021–2022 Qtr 4	% Change
Hywel Dda	310	252	-18.9%
Aneurin Bevan	315	263	-16.5%
Cardiff And Vale	279	234	-16.1%
Cwm Taf Morgannwg	348	295	-15.3%
Betsi Cadwaladr	293	250	-14.7%
Swansea Bay	324	279	-13.8%
Powys	261	230	-11.6%
Wales	307	259	-15.6%

Figure 10. Trend in antibacterial prescribing items per 1,000 STAR-PUs

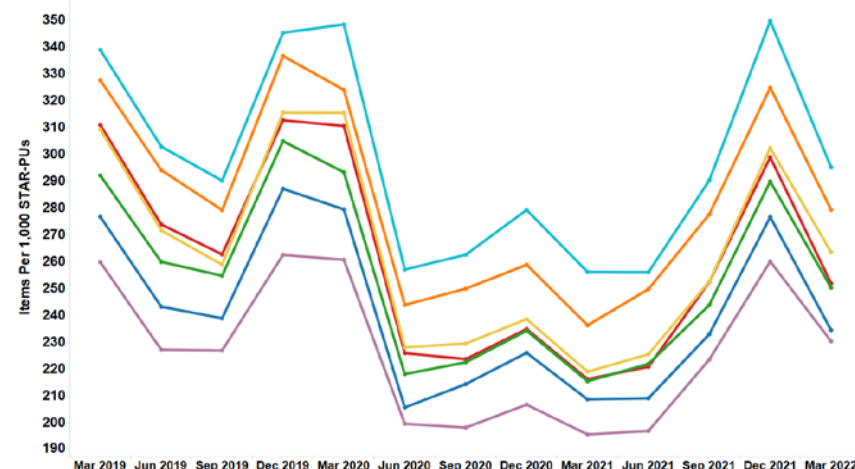
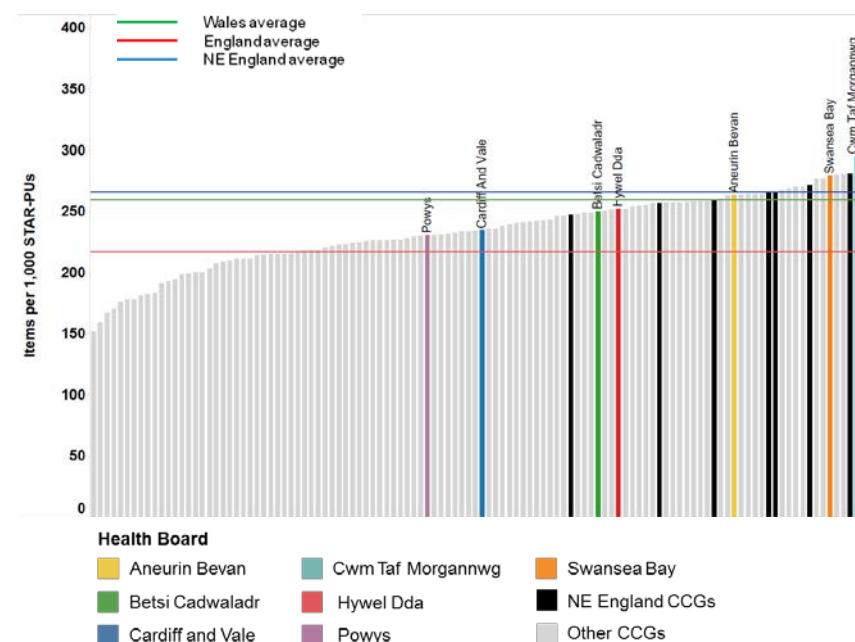


Figure 11. Antibacterial prescribing in Welsh health boards and English CCGs – Quarter ending March 2022



1.3.2 4C antimicrobials

Purpose: To encourage a reduction in variation and reduce overall prescribing of the 4C antimicrobials (co-amoxiclav, cephalosporins, fluoroquinolones and clindamycin) in primary care.

Unit of measure: 4C items per 1,000 patients

Aim: To reduce prescribing

The use of simple generic antibiotics and the avoidance of these broad-spectrum antibiotics preserve them from resistance and reduce the risk of *C. difficile*, MRSA and resistant urinary tract infections.

- Across Wales, for the quarter ending March 2022, the number of 4C antimicrobial items per 1,000 patients decreased by 11.9%, compared with the quarter ending March 2020, in line with the aim of the indicator.
- For the quarter ending March 2022, 4C prescribing ranged from 9.03 to 12.2 items per 1,000 patients across the health boards.
- The health board with the lowest prescribing was Swansea Bay UHB, whilst the highest prescribing was seen in Powys Teaching HB.
- 4C prescribing decreased, compared with the quarter ending March 2020, in four of the seven health boards.
- The largest percentage decrease was seen in Swansea Bay UHB.
- The largest percentage increase was seen in Cardiff and Vale UHB.

Table 8. 4C antimicrobial items per 1,000 patients

	2019–2020 Qtr 4	2021–2022 Qtr 4	% Change
Swansea Bay	12.8	9.03	-29.6%
Cwm Taf Morgannwg	15.2	10.8	-28.8%
Hywel Dda	13.3	11.3	-15.3%
Betsi Cadwaladr	12.7	11.5	-9.66%
Powys	11.8	12.2	2.93%
Aneurin Bevan	10.1	10.5	4.28%
Cardiff And Vale	9.31	9.80	5.24%
Wales	12.1	10.6	-11.9%

Figure 12. Trend in 4C antimicrobial items per 1,000 patients

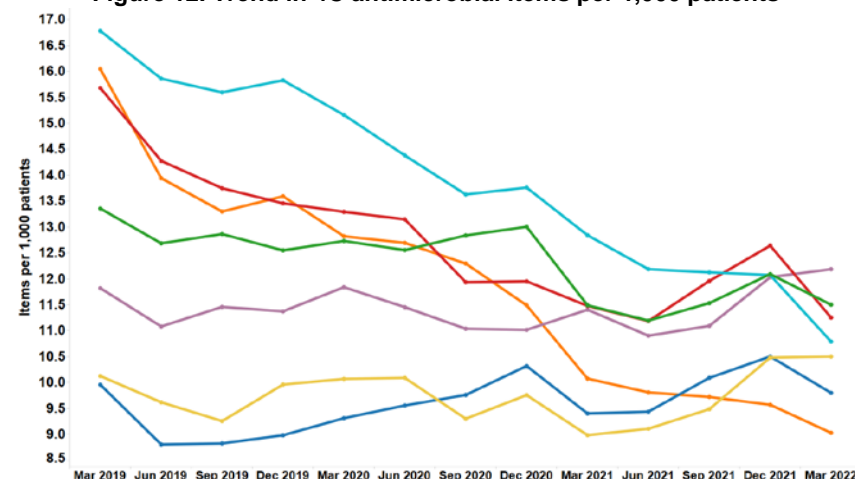
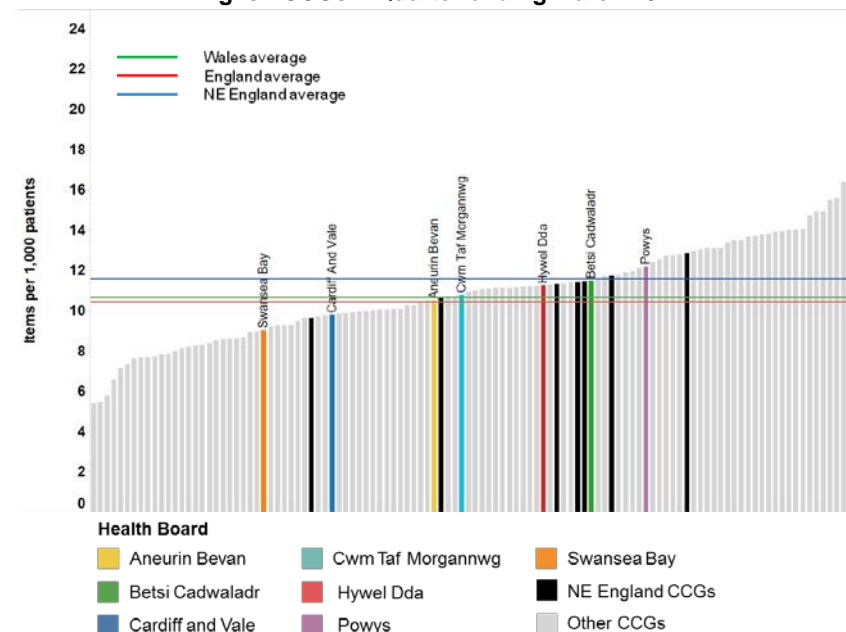


Figure 13. 4C antimicrobial prescribing in Welsh health boards and English CCGs – Quarter ending March 2022



2.0 Supporting domains

2.1 Safety

2.1.1 Prescribing Safety Indicators

Purpose: To identify patients at high risk of adverse drug reactions (ADRs) and medicines-related harm in primary care.

Units of measure:

Prescribing Safety Indicators related to acute kidney injury (AKI)

- 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.
- 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.
- Number of patients with concurrent prescriptions of an NSAID, renin-angiotensin system (RAS) drug and a diuretic.
- Number of patients aged 75 years and over with a current prescription for an ACE Inhibitor or loop diuretic without a check of renal function and electrolytes in the previous 15 months.

Prescribing Safety Indicators related to bleeds

- Number of patients with a peptic ulcer who have been prescribed NSAIDs without a PPI.
- Number of patients with concurrent prescriptions of warfarin and an oral NSAID.
- Number of patients with concurrent prescriptions for a DOAC and an oral NSAID.
- Number of patients aged 65 years or over who are prescribed an NSAID plus aspirin and/or clopidogrel but without gastroprotection (PPI or H₂-receptor antagonist).
- Number of patients with concurrent prescriptions of an oral anticoagulant (warfarin or DOAC) and an SSRI.

Prescribing Safety Indicators related to cognition

- Number of patients aged 65 years or over prescribed an antipsychotic.
- Number of patients aged 75 years and over with an Anticholinergic Effect on Cognition (AEC) score of three or more for items on active repeat.

Prescribing Safety Indicators specific to females

- Number of female patients with a current prescription of oestrogen-only hormone replacement therapy (HRT) without any hysterectomy READ/SNOMED codes.
- Number of female patients with a past medical history of venous or arterial thrombosis who have been prescribed combined hormonal contraceptives.
- Number of female patients aged 14–55 years with a prescription for sodium valproate.
- Number of female patients aged 14–55 years with a prescription for oral retinoids.

Prescribing Safety Indicators related to 'other'

- Number of patients under 16 years with a current prescription of aspirin.
- Number of patients with asthma who have been prescribed a beta-blocker.
- Number of patients with concurrent prescriptions of verapamil and a beta-blocker.

Aim: To review patients identified as being at high risk of ADRs and reduce inappropriate prescribing.

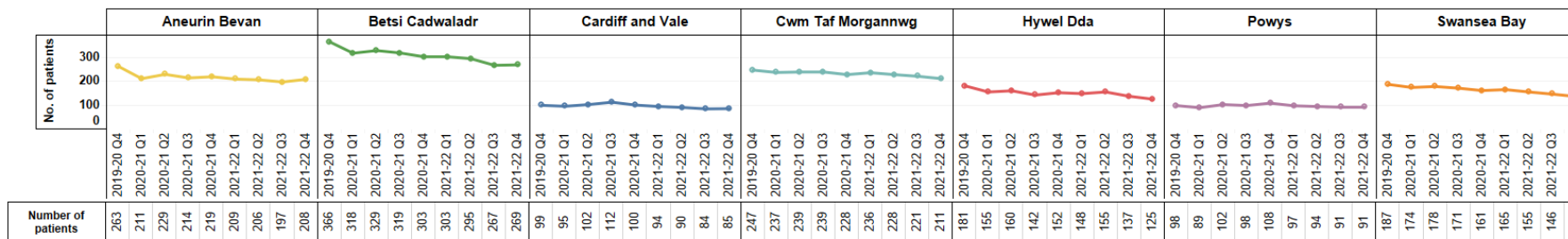
In the UK, it is estimated that around 6.5% of hospital admissions are related to adverse drug reactions (ADRs). ADRs can often be predictable making it possible to identify potential causes and address them before actual patient harm occurs. This NPI provides a process of identifying patients electronically, enabling intervention and helping to avoid patient harm.

No target has been set for this NPI and it is not intended that comparisons are made between health boards. However, data can provide a baseline for future quarters to enable monitoring within health boards.

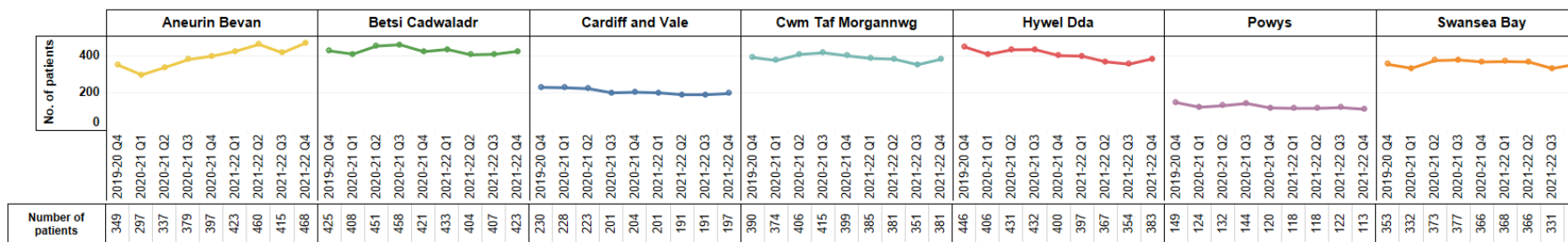
Figure 14. Prescribing Safety Indicators

Prescribing Safety Indicators related to acute kidney injury (AKI)

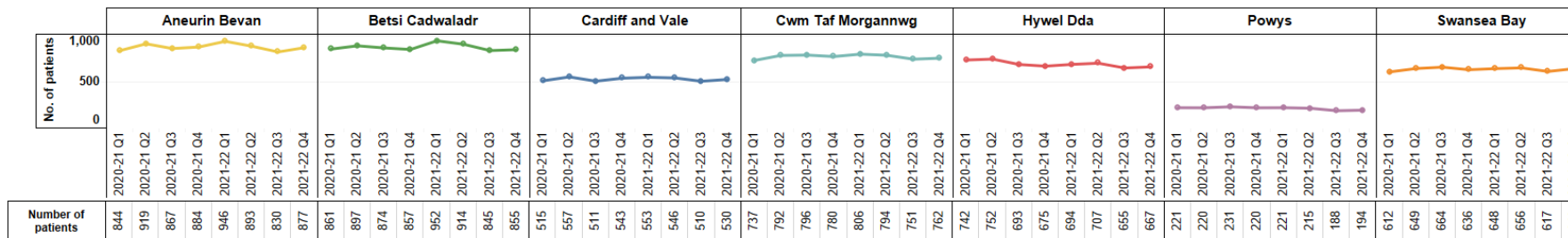
01. Number of patients on the CKD register (CKD stage 3–5) who have received a repeat prescription for an NSAID within the last 3 months.



02. 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.

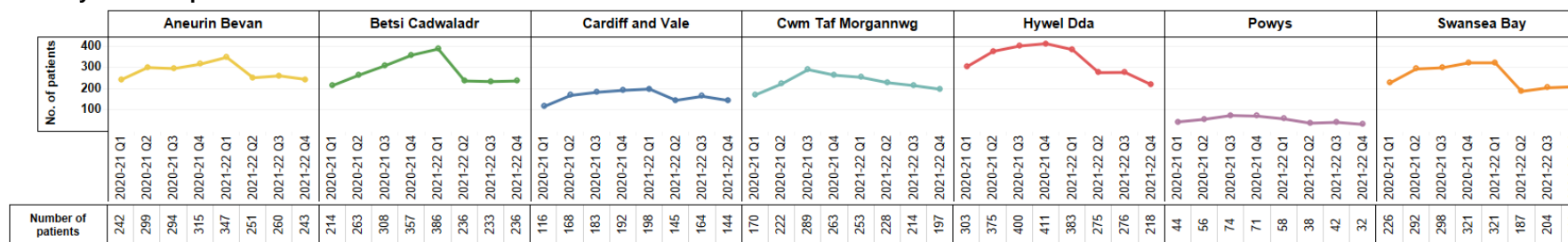


03. Number of patients with concurrent prescriptions of an NSAID, renin-angiotensin system (RAS) drug and a diuretic*.



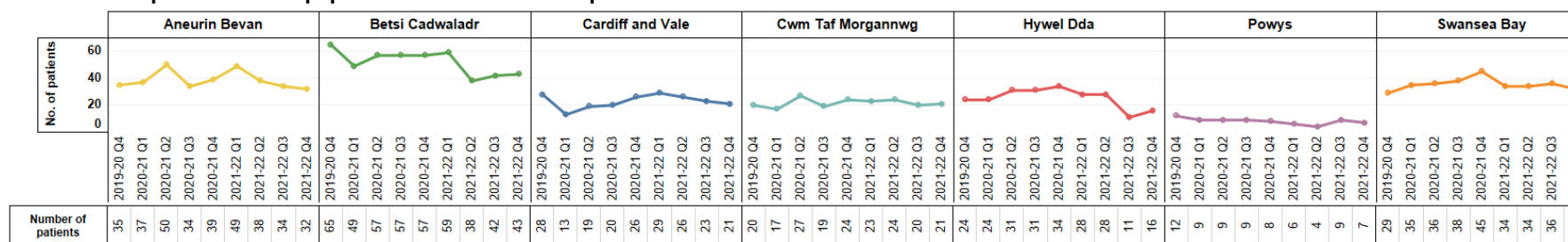
* This Prescribing Safety Indicator was new for 2020–2021. Therefore, there are no data before 2020–2021 Q1.

04. Number of patients aged 75 years and over with a current prescription for an ACE Inhibitor or loop diuretic without a check of renal function and electrolytes in the previous 15 months*.

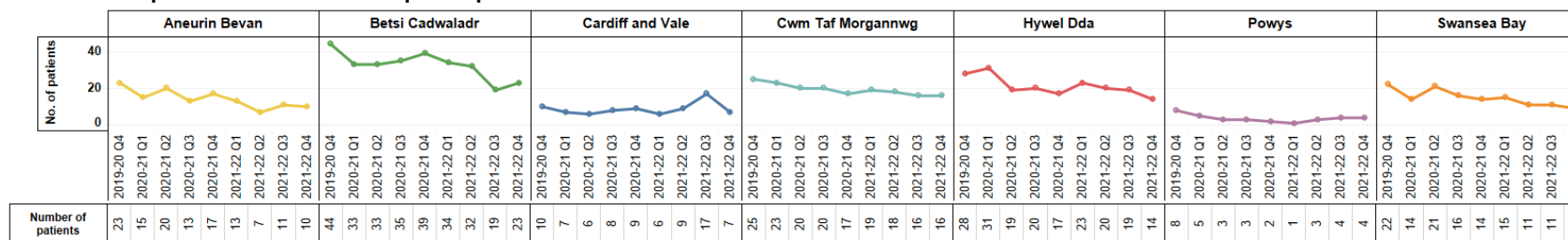


Prescribing Safety Indicators related to bleeds

05. Number of patients with a peptic ulcer who have been prescribed NSAIDs without a PPI.

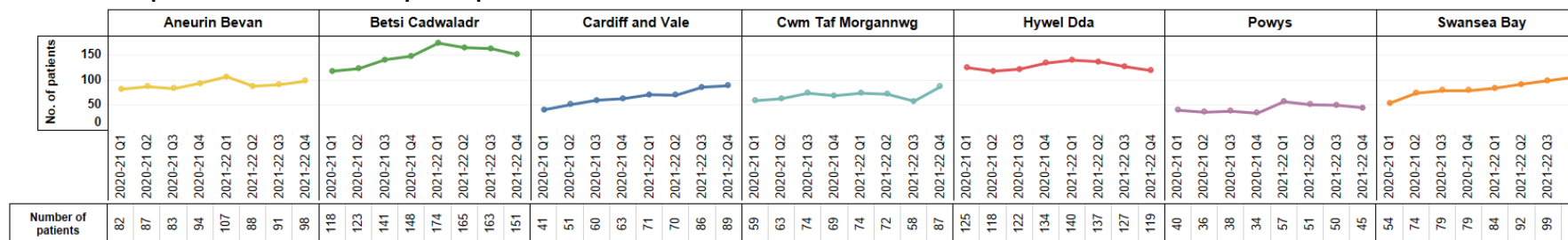


06. Number of patients with concurrent prescriptions of warfarin and an oral NSAID.

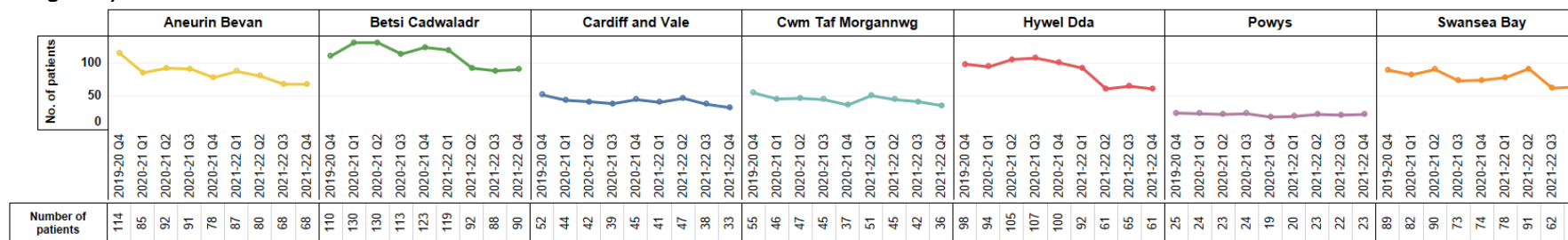


* This Prescribing Safety Indicator was new for 2020–2021. Therefore, there are no data before 2020–2021 Q1.

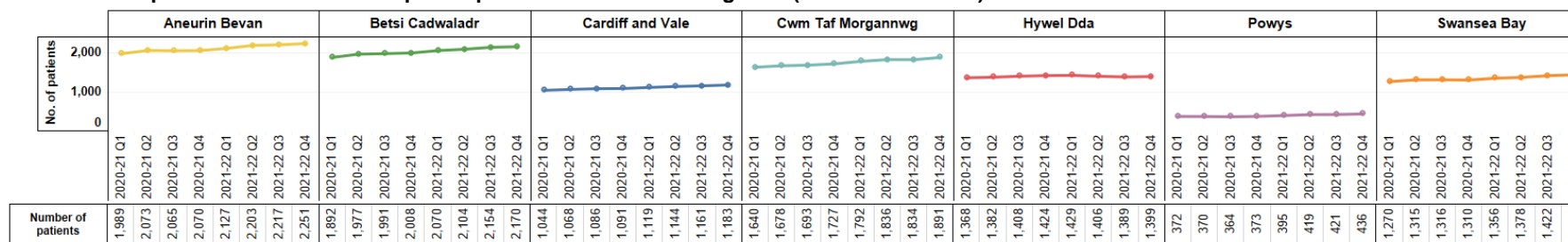
07. Number of patients with concurrent prescriptions for a DOAC and an oral NSAID*



08. Number of patients aged 65 years or over prescribed an NSAID plus aspirin and/or clopidogrel but without gastroprotection (PPI or H₂ receptor antagonist).



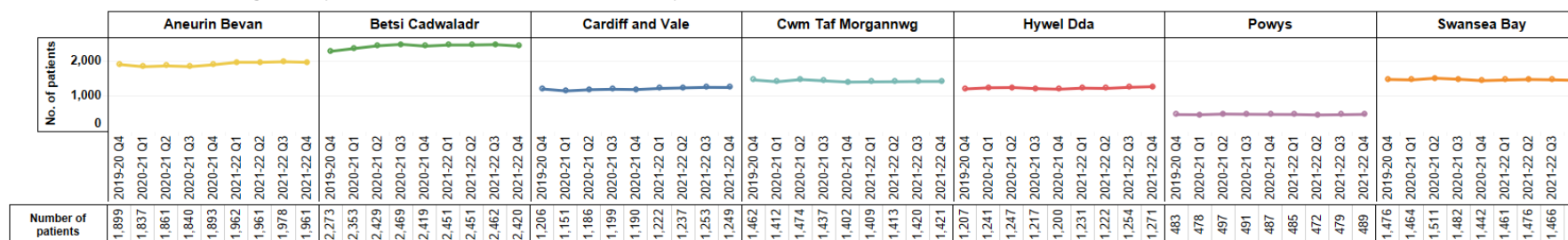
09. Number of patients with concurrent prescriptions of an oral anticoagulant (warfarin or DOAC) and an SSRI.



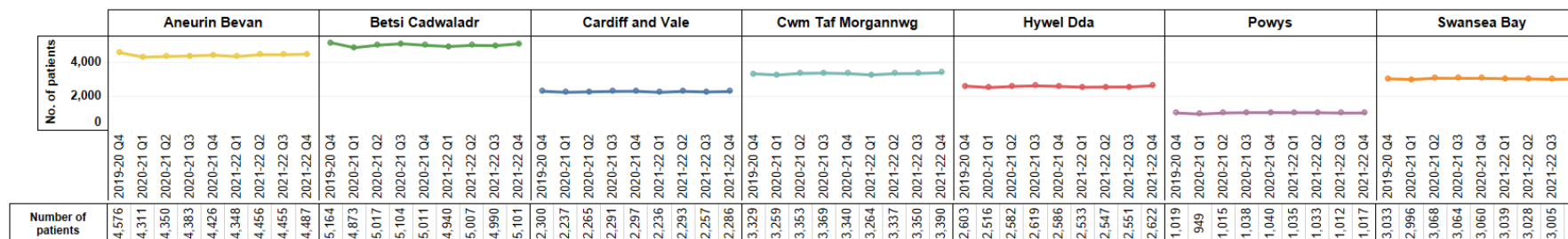
* This Prescribing Safety Indicator was new for 2020–2021. Therefore, there are no data before 2020–2021 Q1.

Prescribing Safety Indicators related to cognition

10. Number of patients aged 65 years or over prescribed an antipsychotic.

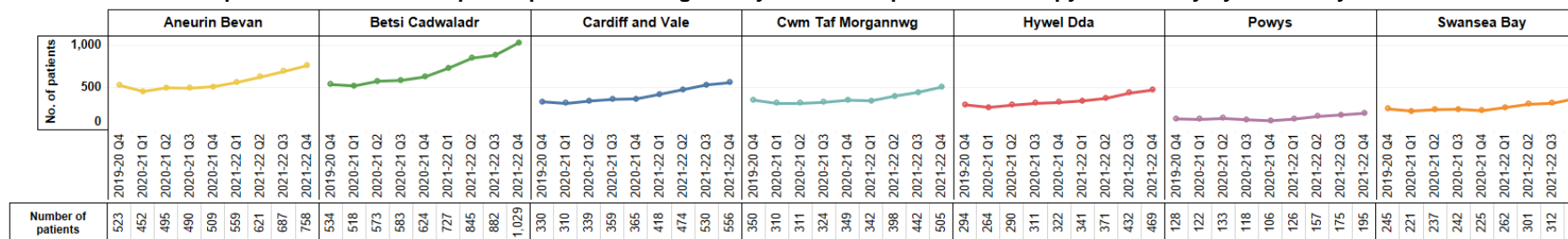


11. Number of patients aged 75 years and over with an Anticholinergic Effect on Cognition (AEC) score of 3 or more for items on active repeat.

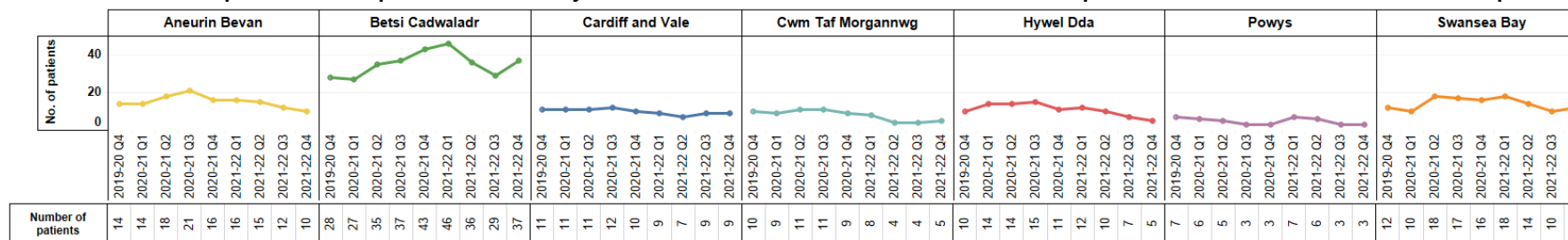


Prescribing Safety Indicators specific to females

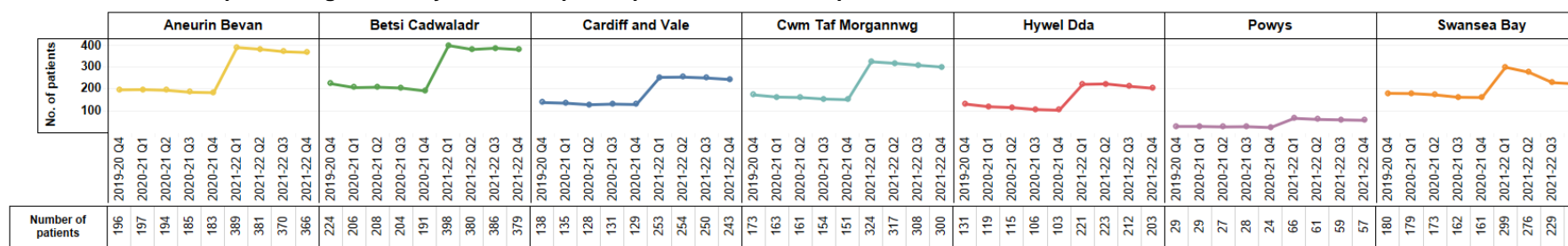
12. Number of female patients with a current prescription of oestrogen-only hormone replacement therapy without any hysterectomy Read/SNOMED codes.



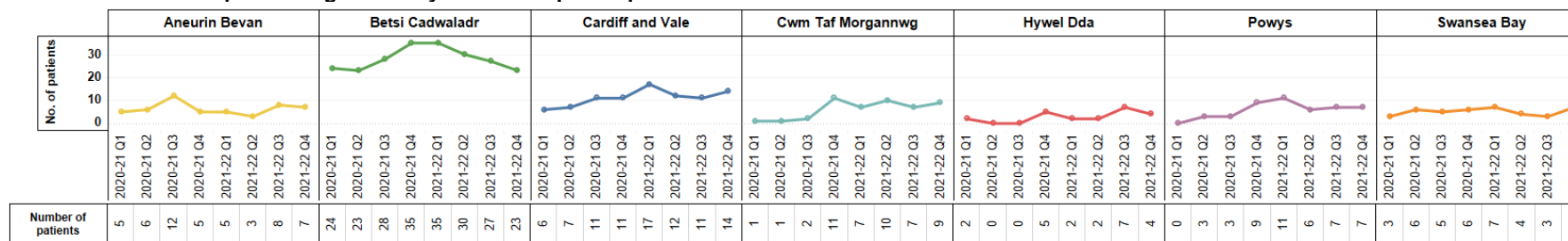
13. Number of female patients with a past medical history of venous or arterial thrombosis who have been prescribed combined hormonal contraceptives.



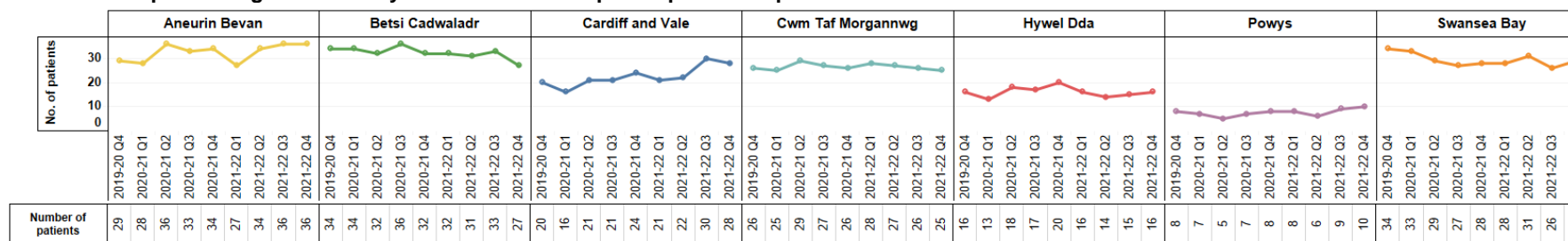
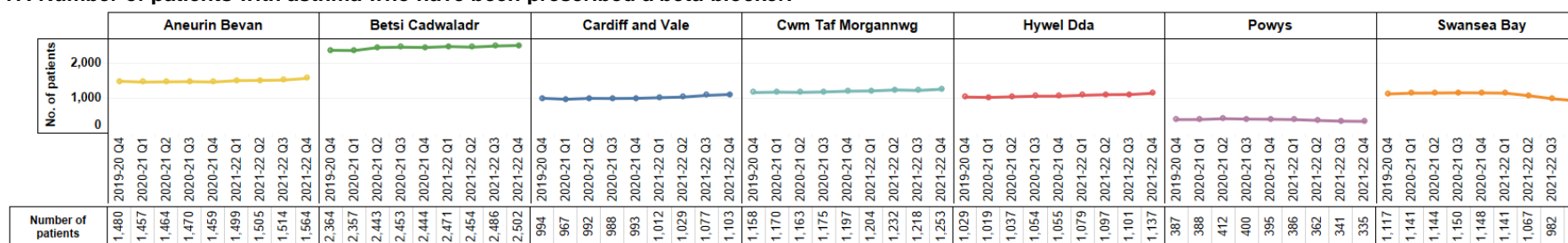
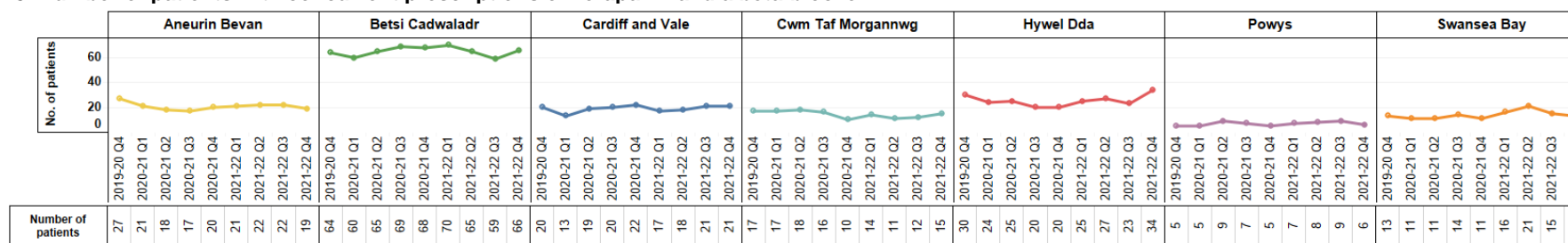
14. Number of female patients aged 14–55 years with a prescription for sodium valproate*.



15. Number of female patients aged 14-55 years with a prescription for oral retinoids*.



* The search for this Prescribing Safety Indicator was amended from Q1 2021–2022 to include female patients aged 14–55 years. Data prior to Q1 2021–2022 includes female patients aged 14–45 years only.

Prescribing Safety Indicators related to ‘other’**16. Number of patients aged under 16 years with a current prescription of aspirin.****17. Number of patients with asthma who have been prescribed a beta-blocker.****18. Number of patients with concurrent prescriptions of verapamil and a beta-blocker.**

Welsh Analytical Prescribing Support Unit

2.1.2 Proton pump inhibitors

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

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

Aim: To reduce prescribing

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

- Across Wales, for the quarter ending March 2022, PPI DDDs per 1,000 PUs increased by 2.05%, compared with the quarter ending March 2021, despite the aim of the indicator being to decrease prescribing.
- For the quarter ending March 2022, PPI usage ranged from 6,404 to 7,926 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 Powys Teaching HB.
- All seven health boards demonstrated an increase in DDDs per 1,000 PUs, compared with the equivalent quarter of the previous year.
- The smallest percentage increase was seen in Cardiff and Vale UHB, and the largest percentage increase was seen in Betsi Cadwaladr UHB.

Please note: Consideration should be given to the impact of disruption to the supply of ranitidine from October 2019, and the subsequent recommendation to switch to patients to omeprazole where ongoing treatment is still required, and the patient cannot be stepped down to an alginate or antacid.

Table 9. PPI DDDs per 1,000 PUs

	2020–2021 Qtr 4	2021–2022 Qtr 4	% Change
Cardiff And Vale	6,377	6,404	0.42%
Swansea Bay	6,898	6,989	1.32%
Powys	7,815	7,926	1.42%
Cwm Taf Morgannwg	7,712	7,876	2.12%
Aneurin Bevan	7,181	7,344	2.27%
Hywel Dda	7,162	7,329	2.32%
Betsi Cadwaladr	7,265	7,496	3.18%
Wales	7,148	7,294	2.05%

Figure 15. Trend in PPI prescribing DDDs per 1,000 PUs

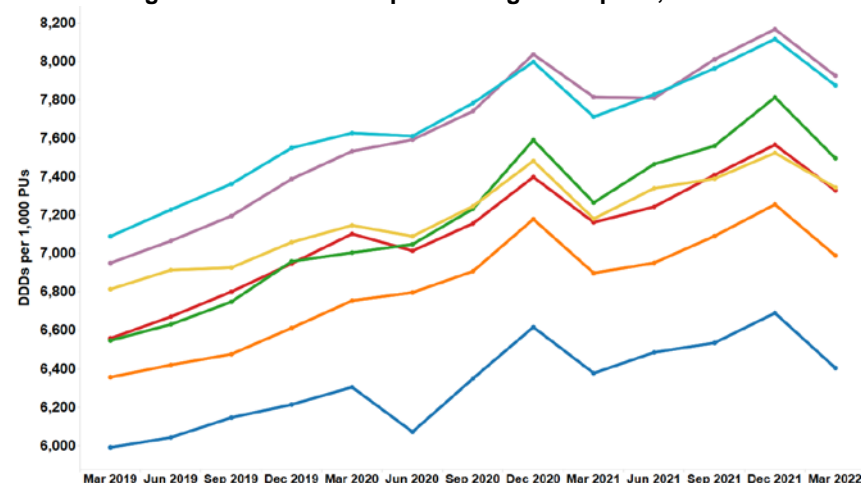
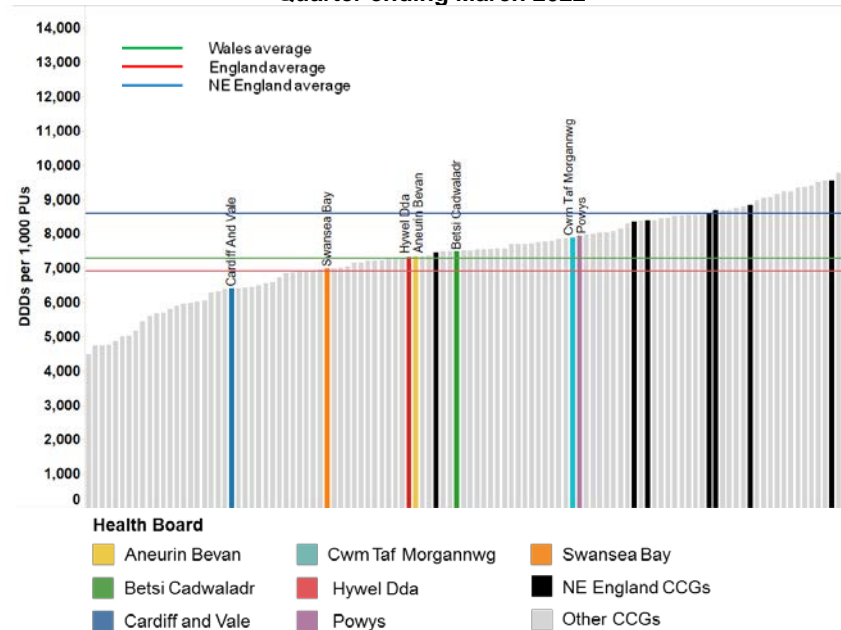


Figure 16. PPI prescribing in Welsh health boards and English CCGs – Quarter ending March 2022



2.1.3 Hypnotics and anxiolytics

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

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

Aim: To reduce prescribing

There has been concern with regard to the high level of hypnotic and anxiolytic prescribing in 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.

- Across Wales, the prescribing of hypnotics and anxiolytics decreased by 7.64% for the quarter ending March 2022 compared with the equivalent quarter of the previous year, in line with the aim of this indicator.
- For the quarter ending March 2022, hypnotic and anxiolytic prescribing ranged from 1,356 to 2,592 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 Morgannwg 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 10. Hypnotic and anxiolytic ADQs per 1,000 STAR-PUs

	2020–2021 Qtr 4	2021–2022 Qtr 4	% Change
Cardiff And Vale	1,505	1,356	-9.90%
Betsi Cadwaladr	2,517	2,310	-8.24%
Swansea Bay	2,558	2,352	-8.06%
Cwm Taf Morgannwg	2,795	2,592	-7.27%
Aneurin Bevan	2,284	2,127	-6.88%
Hywel Dda	2,493	2,330	-6.52%
Powys	1,776	1,674	-5.70%
Wales	2,337	2,159	-7.64%

Figure 17. Trend in hypnotic and anxiolytic prescribing
ADQs per 1,000 STAR-PUs

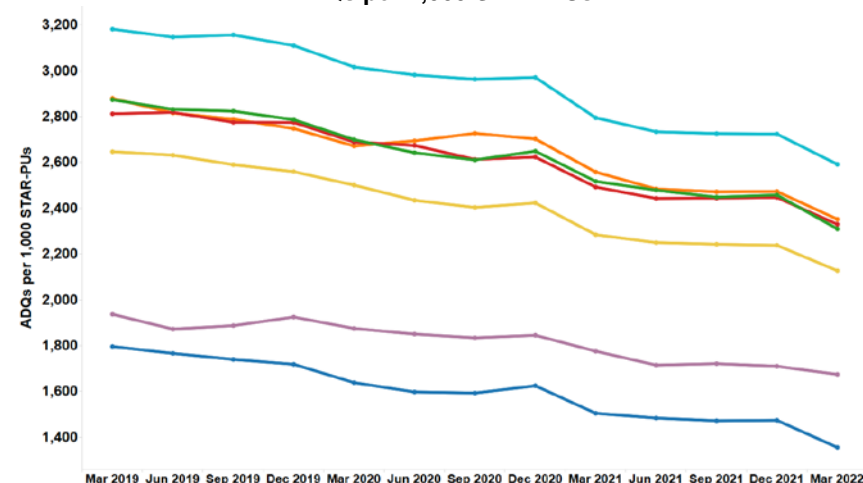
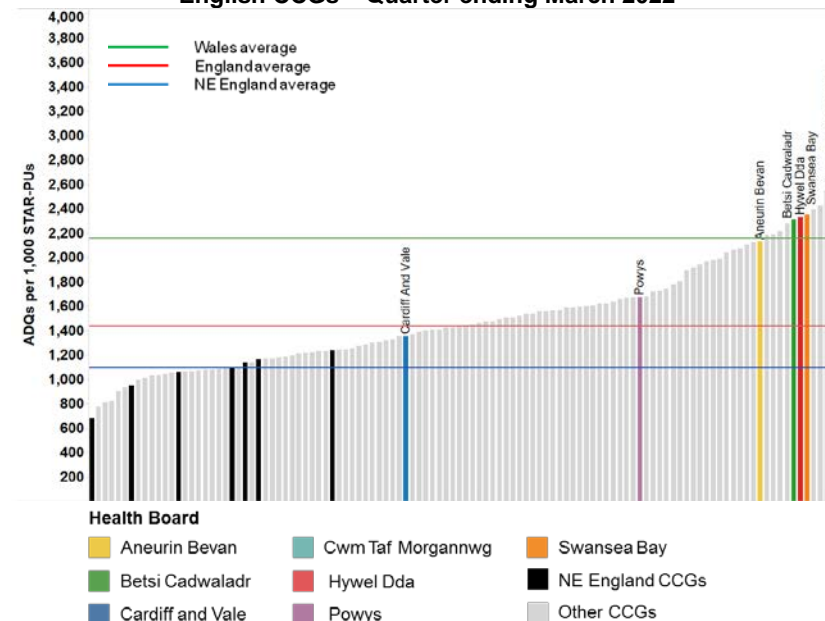


Figure 18. Hypnotic and anxiolytic prescribing in Welsh health boards and English CCGs – Quarter ending March 2022



Welsh Analytical Prescribing Support Unit

2.1.4 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 GP practice, per hospital, per health board and by members of the public.
Number of Yellow Cards submitted by community pharmacies, by health board.

Aim: To increase reporting

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.

Yellow Card reporting supports the identification and collation of ADRs, which might not have been known about before.

A strong safety culture requires good reporting of adverse events and critical incidents from across all professions and healthcare settings, as well as from patients.

Please note: Yellow Card data do not include reports related to COVID-19 vaccines due to utilisation of an alternate reporting system by the MHRA.

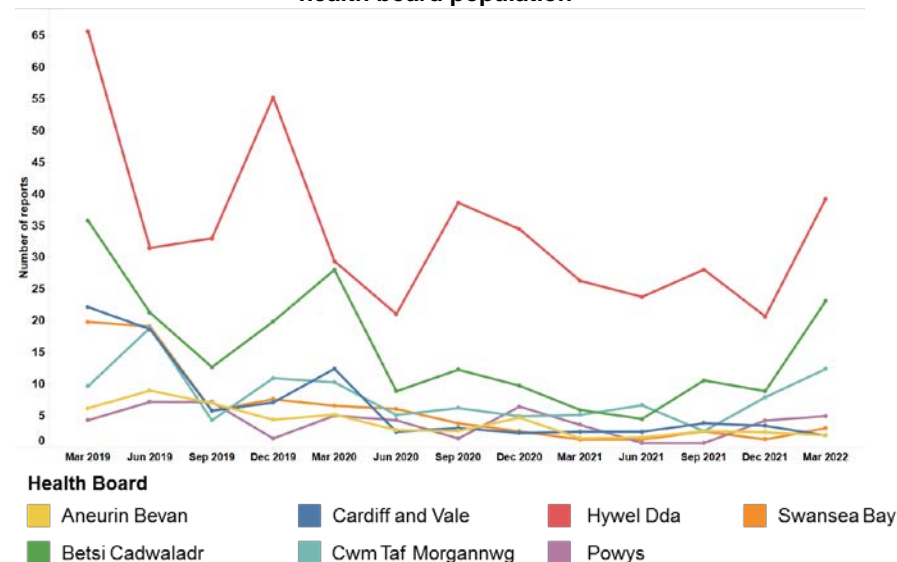
GP practices

- The number of Yellow Cards submitted by GP practices increased by 107% compared with the equivalent quarter of the previous year, in line with the aim of the indicator.
- The largest percentage increase in GP practice reporting was seen in Betsi Cadwaladr UHB. Cardiff and Vale UHB demonstrated a reduction in GP practice reporting.

Table 11. Number of Yellow Cards submitted by GP practices

	2020–2021 Qtr 4	2021–2022 Qtr 4	% Change
Betsi Cadwaladr	42	164	290%
Cwm Taf Morgannwg	24	58	142%
Swansea Bay	5	12	140%
Hywel Dda	104	156	50%
Powys	5	7	40%
Aneurin Bevan	9	12	33%
Cardiff And Vale	13	10	-23%
Wales	202	419	107%

Figure 19. Number of Yellow Cards submitted by GP practices per 100,000 health board population*



* Please note: prior to the quarter ending June 2019, data displayed for Cwm Taf Morgannwg and Swansea Bay UHBs relate to the former health boards of Cwm Taf and Abertawe Bro Morgannwg respectively.

National Prescribing Indicators 2021–2022. Analysis of Prescribing Data to March 2022

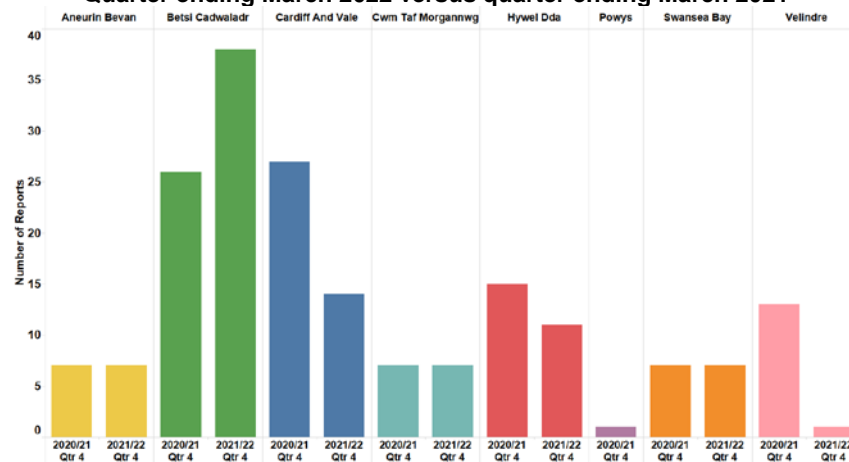
Secondary care

- The number of Yellow Cards submitted by secondary care decreased by 17% compared with the equivalent quarter of the previous year.
- The largest percentage increase in secondary care reporting was seen in Betsi Cadwaladr UHB. The largest percentage decrease was seen in Powys Teaching HB.

Table 12. Number of Yellow Cards submitted by secondary care

	2020–2021 Qtr 4	2021–2022 Qtr 4	% Change
Betsi Cadwaladr	26	38	46%
Cwm Taf Morgannwg	7	7	0%
Swansea Bay	7	7	0%
Aneurin Bevan	7	7	0%
Hywel Dda	15	11	-27%
Cardiff And Vale	27	14	-48%
Velindre	13	1	-92%
Powys	1	0	-100%
Wales	103	85	-17%

Figure 20. Number of Yellow Cards submitted by secondary care – Quarter ending March 2022 versus quarter ending March 2021



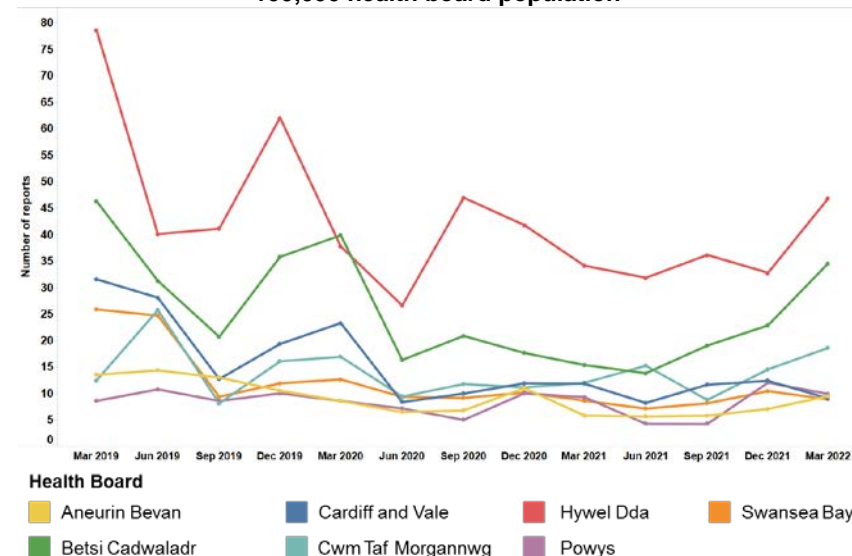
Health boards/NHS Trust

- The number of Yellow Cards submitted by health boards increased by 47% compared with the equivalent quarter of the previous year.
- The largest percentage increase was seen in Betsi Cadwaladr UHB. The largest percentage decrease was seen in Velindre NHS Trust.

Table 13. Number of Yellow Cards submitted by health board/NHS Trust

	2020–2021 Qtr 4	2021–2022 Qtr 4	% Change
Betsi Cadwaladr	109	245	125%
Aneurin Bevan	36	59	64%
Cwm Taf Morgannwg	56	87	55%
Hywel Dda	135	186	38%
Powys	13	14	8%
Swansea Bay	34	35	3%
Cardiff And Vale	62	48	-23%
Velindre	13	1	-92%
Wales	458	675	47%

Figure 21. Number of Yellow Cards submitted by health boards per 100,000 health board population*



* Please note: prior to the quarter ending June 2019, data displayed for Cwm Taf Morgannwg and Swansea Bay UHBs relate to the former health boards of Cwm Taf and Abertawe Bro Morgannwg respectively.

Welsh Analytical Prescribing Support Unit

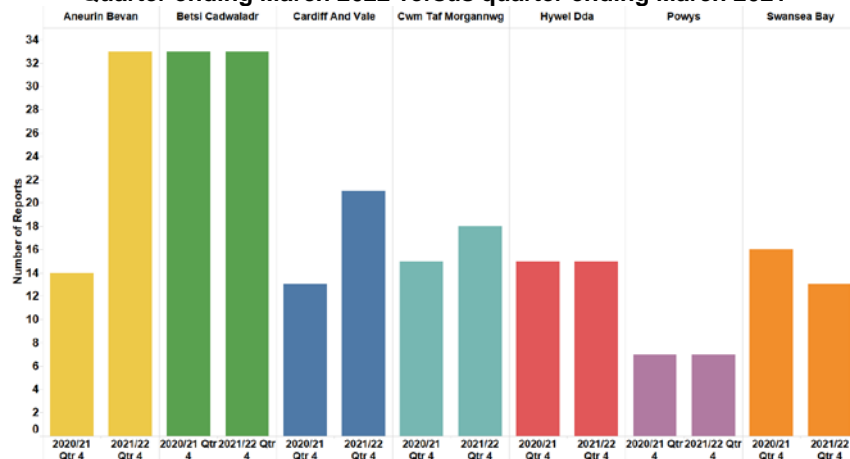
Members of the public

- The number of Yellow Cards submitted by members of the public across Wales increased by 24% compared with the equivalent quarter of the previous year.
- The largest percentage increase in member of the public reporting was seen in Aneurin Bevan UHB. Swansea Bay UHB demonstrated a decrease in reporting.

Table 14. Number of Yellow Cards submitted by members of the public

	2020–2021 Qtr 4	2021–2022 Qtr 4	% Change
Aneurin Bevan	14	33	136%
Cardiff And Vale	13	21	62%
Cwm Taf Morgannwg	15	18	20%
Betsi Cadwaladr	33	33	0%
Powys	7	7	0%
Hywel Dda	15	15	0%
Swansea Bay	16	13	-19%
Wales	113	140	24%

Figure 22. Number of Yellow Cards submitted by members of the public – Quarter ending March 2022 versus quarter ending March 2021



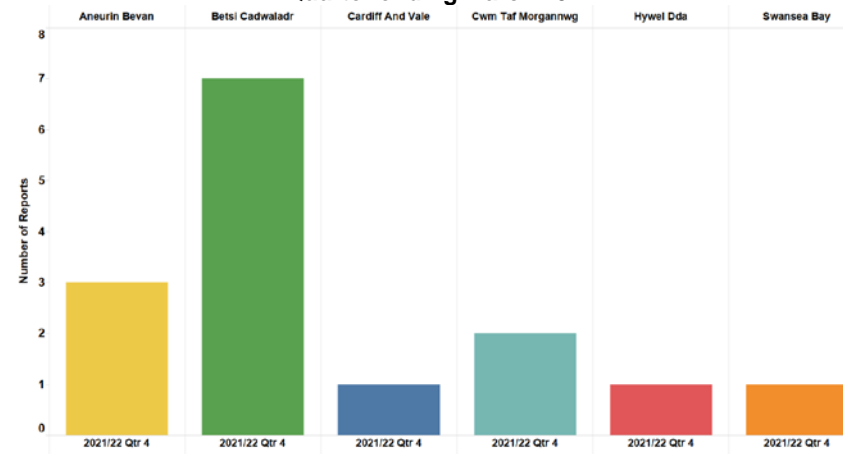
Community pharmacy

- Across Wales, a total of 15 Yellow Card reports were submitted by community pharmacies during the quarter ending March 2022.
- The number of Yellow Card reports submitted by community pharmacies in health boards across Wales ranged from 0 to 7.

Table 15. Number of Yellow Cards submitted by community pharmacies

	2021–2022 Qtr 4
Betsi Cadwaladr	7
Aneurin Bevan	3
Cwm Taf Morgannwg	2
Cardiff And Vale	1
Swansea Bay	1
Hywel Dda	1
Powys	0
Wales	15

Figure 23. Number of Yellow Cards submitted by community pharmacy – Quarter ending March 2022



2.2 Efficiency indicators

2.2.1 Best value biological medicines

Purpose: To ensure prescribing of best value biological medicines supports cost-efficient prescribing in primary and secondary care in Wales.

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

Aim: Increase the appropriate use of cost-efficient biological medicines, including biosimilar medicines.

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.

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.

Please note: Where relevant, data for the primary care usage of the biological medicines have been included within the overall figures.

Welsh Analytical Prescribing Support Unit

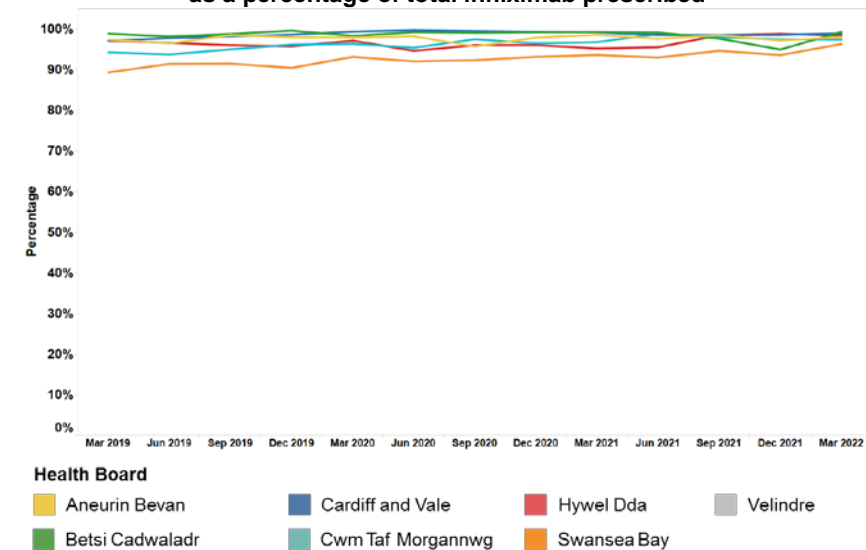
2.2.1.1 Infliximab

- Across Wales, for the quarter ending March 2022, infliximab biosimilar prescribing increased by 0.83%, compared with the equivalent quarter of the previous year. This is in line with the aim of this indicator.
- For the quarter ending March 2022, infliximab biosimilar prescribing ranged from 96.3% to 99.3% across the health boards.
- The health board with the highest percentage was Betsi Cadwaladr UHB whilst the lowest percentage was seen in Swansea Bay UHB.
- Four health boards demonstrated an increase in percentage, compared with the equivalent quarter of the previous year.
- Hywel Dda UHB demonstrated the largest percentage increase.
- Aneurin Bevan UHB demonstrated the largest percentage decrease.

Table 16. Infliximab biosimilars as a percentage of reference and biosimilar prescribed

	2020–2021 Qtr 4	2021–2022 Qtr 4	% Change
Hywel Dda	95.2%	98.4%	3.36%
Swansea Bay	93.6%	96.3%	2.89%
Cwm Taf Morgannwg	96.8%	97.4%	0.63%
Betsi Cadwaladr	99.3%	99.3%	0.03%
Cardiff And Vale	99.2%	99.0%	-0.26%
Aneurin Bevan	98.6%	98.0%	-0.57%
Wales	97.2%	98.0%	0.83%

Figure 24. Trend in infliximab biosimilar (Inflectra®, Remsima®) prescribing as a percentage of total infliximab prescribed



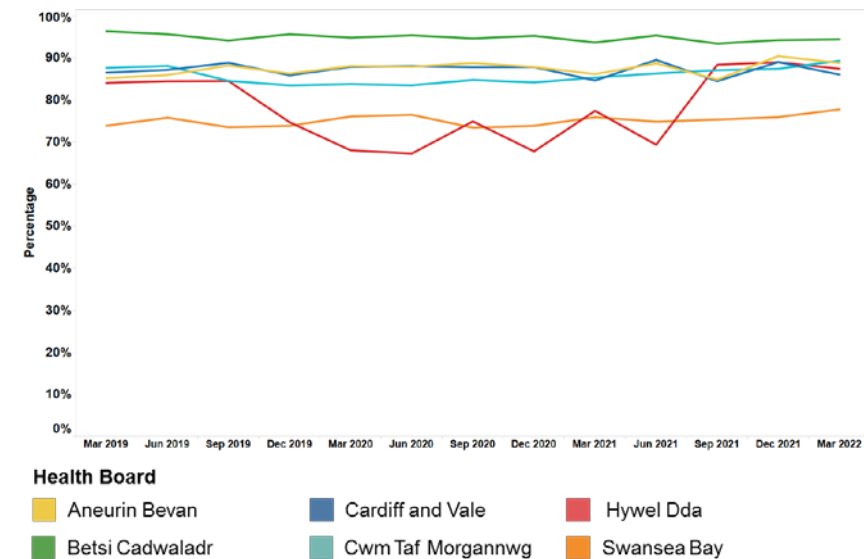
2.2.1.2 Etanercept

- Across Wales, for the quarter ending March 2022, etanercept biosimilar prescribing increased by 4.01%, compared with the equivalent quarter of the previous year. This is in line with the aim of this indicator.
- For the quarter ending March 2022, etanercept biosimilar prescribing ranged from 77.7% to 94.4% across the health boards.
- The health board with the highest percentage was Betsi Cadwaladr UHB whilst the lowest percentage was seen in Swansea Bay UHB.
- All of the health boards demonstrated an increase in percentage, compared with the equivalent quarter of the previous year.
- Hywel Dda UHB demonstrated the largest percentage increase.
- Betsi Cadwaladr UHB demonstrated the smallest percentage increase.

Table 17. Etanercept biosimilars as a percentage of reference and biosimilar prescribed

	2020–2021 Qtr 4	2021–2022 Qtr 4	% Change
Hywel Dda	77.4%	87.4%	12.9%
Cwm Taf Morgannwg	85.3%	89.3%	4.69%
Aneurin Bevan	86.1%	88.8%	3.08%
Swansea Bay	75.9%	77.7%	2.43%
Cardiff And Vale	84.6%	86.0%	1.66%
Betsi Cadwaladr	93.6%	94.4%	0.82%
Wales	82.1%	85.4%	4.01%

Figure 25. Trend in etanercept biosimilar (Benepali®, Erelzi®) prescribing as a percentage of total etanercept prescribed



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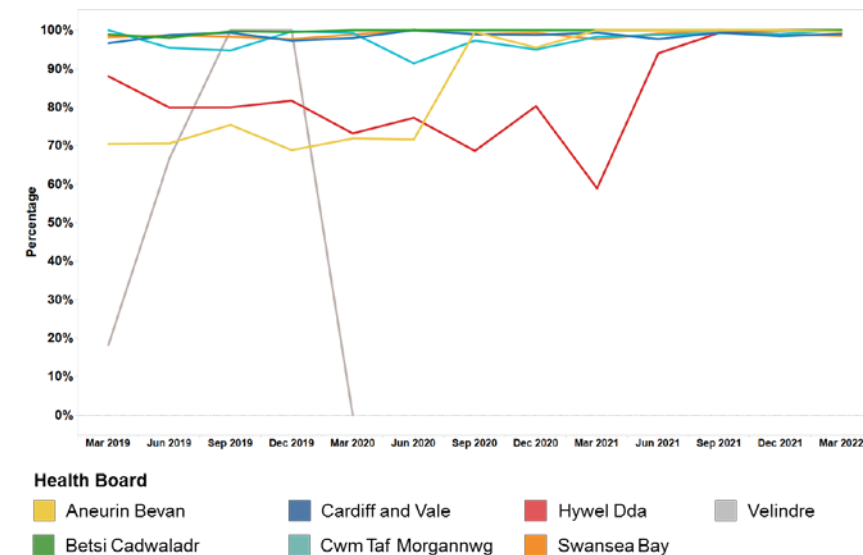
2.2.1.3 Rituximab

- Across Wales, for the quarter ending March 2022, rituximab biosimilar prescribing increased by 2.25%, compared with the equivalent quarter of the previous year. This is in line with the aim of this indicator.
- For the quarter ending March 2022, rituximab biosimilar prescribing ranged from 98.5% to 100% across the health boards.
- The health boards with the highest percentage were Aneurin Bevan UHB, Betsi Cadwaladr UHB, Cwm Taf Morgannwg, Hywel Dda UHB and Velindre NHS Trust, whilst the lowest percentage was seen in Swansea Bay UHB.
- Three health boards demonstrated an increase in percentage, compared with the equivalent quarter of the previous year.
- Hywel Dda UHB demonstrated the largest percentage increase.
- Aneurin Bevan UHB demonstrated the largest percentage decrease.

Table 18. Rituximab biosimilar as a percentage of reference and biosimilar prescribed

	2020–2021 Qtr 4	2021–2022 Qtr 4	% Change
Velindre	N/A	100%	N/A
Hywel Dda	58.9%	100%	69.8%
Cwm Taf Morgannwg	98.3%	100%	1.74%
Swansea Bay	97.6%	98.5%	0.90%
Betsi Cadwaladr	100%	100%	0.00%
Cardiff And Vale	99.4%	99.0%	-0.32%
Aneurin Bevan	100%	100%	-0.41%
Wales	97.5%	99.7%	2.25%

Figure 26. Trend in rituximab biosimilar (Truxima®, Rixathon®) prescribing as a percentage of total rituximab prescribed



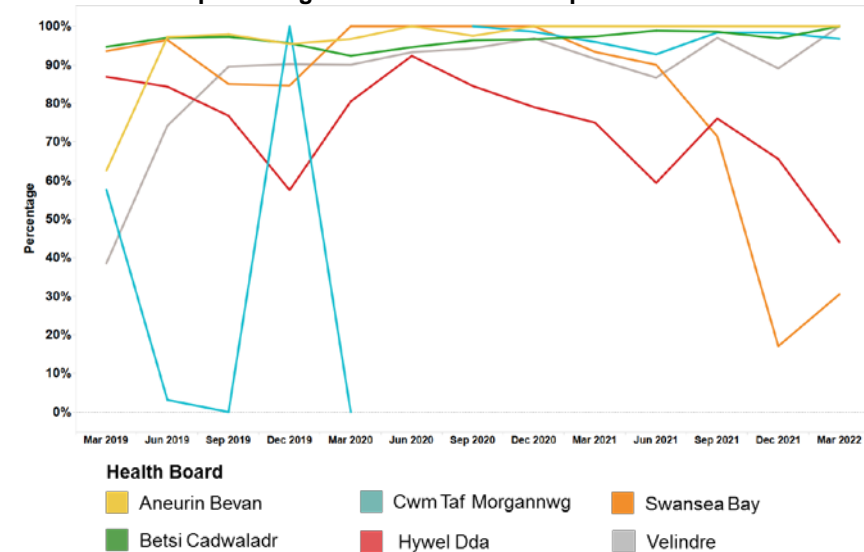
2.2.1.4 Trastuzumab

- Across Wales, trastuzumab biosimilar prescribing decreased by 7.58%, for the quarter ending March 2022 compared with the equivalent quarter of the previous year, despite the aim of the indicator being to increase prescribing.
- For the quarter ending March 2022, trastuzumab biosimilar prescribing ranged from 30.5% to 100% across the health boards.
- The health boards with the highest percentage were Aneurin Bevan UHB, Betsi Cadwaladr UHB and Velindre NHS Trust, whilst the lowest percentage was seen in Swansea Bay UHB.
- Three health boards demonstrated an increase in percentage, compared with the equivalent quarter of the previous year.
- Velindre NHS Trust demonstrated the largest percentage increase.
- Swansea Bay UHB demonstrated the largest percentage decrease.

Table 19. Trastuzumab biosimilar as a percentage of reference and biosimilar prescribed

	2020–2021 Qtr 4	2021–2022 Qtr 4	% Change
Velindre	91.5%	100%	9.26%
Betsi Cadwaladr	97.4%	100%	2.70%
Cwm Taf Morgannwg	95.9%	96.7%	0.84%
Aneurin Bevan	100%	100%	0.00%
Hywel Dda	75.0%	44.0%	-41.3%
Swansea Bay	93.3%	30.5%	-67.3%
Wales	93.7%	86.6%	-7.58%

Figure 27. Trend in trastuzumab biosimilar (Ontruzant®) prescribing as a percentage of total trastuzumab prescribed



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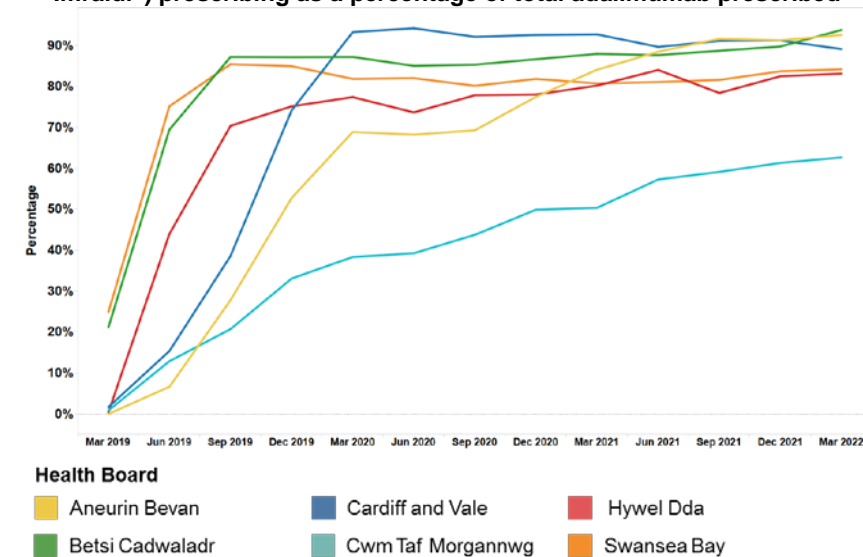
2.2.1.5 Adalimumab

- Across Wales, adalimumab biosimilar prescribing increased by 4.98%, for the quarter ending March 2022 compared with the equivalent quarter of the previous year. This is in line with the aim of this indicator.
- For the quarter ending March 2022, adalimumab biosimilar prescribing ranged from 62.7% to 93.8% across the health boards.
- The health board with the highest percentage was Betsi Cadwaladr UHB whilst the lowest percentage was seen in Cwm Taf Morgannwg UHB.
- Five health boards demonstrated an increase in percentage, compared with the equivalent quarter of the previous year.
- Cwm Taf Morgannwg UHB demonstrated the largest percentage increase.
- Cardiff and Vale UHB demonstrated the largest percentage decrease.

Table 20. Adalimumab biosimilar as a percentage of reference and biosimilar prescribed

	2020–2021 Qtr 4	2021–2022 Qtr 4	% Change
Cwm Taf Morgannwg	50.4%	62.7%	24.5%
Aneurin Bevan	84.1%	92.6%	10.1%
Betsi Cadwaladr	87.9%	93.8%	6.66%
Swansea Bay	80.7%	84.2%	4.30%
Hywel Dda	80.2%	83.1%	3.66%
Cardiff And Vale	92.7%	89.1%	-3.88%
Wales	82.5%	86.6%	4.98%

Figure 28. Trend in adalimumab biosimilar (Amgevita®, Hulio®, Hyrimoz®, Imraldi®) prescribing as a percentage of total adalimumab prescribed



2.2.1.6 Total biosimilar usage

Within Wales there was an increase in the use of the reported biosimilar medicines (infliximab, etanercept, rituximab, trastuzumab, and adalimumab) combined as a percentage of reported 'reference' biological medicines plus biosimilars combined, from 85% to 89% for the quarter ending March 2022 compared with the equivalent quarter of the previous year.

Figure 29. Biological reference and biosimilar as a proportion of total reference plus biosimilar prescribed – Quarter ending March 2022

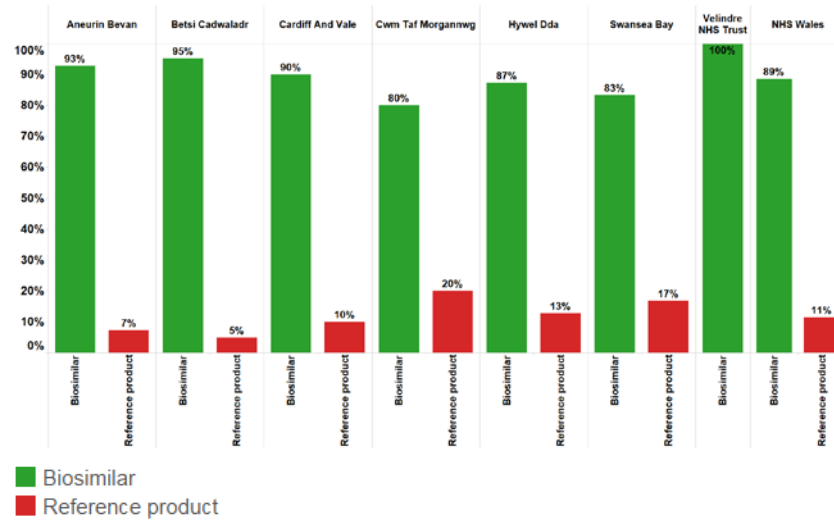
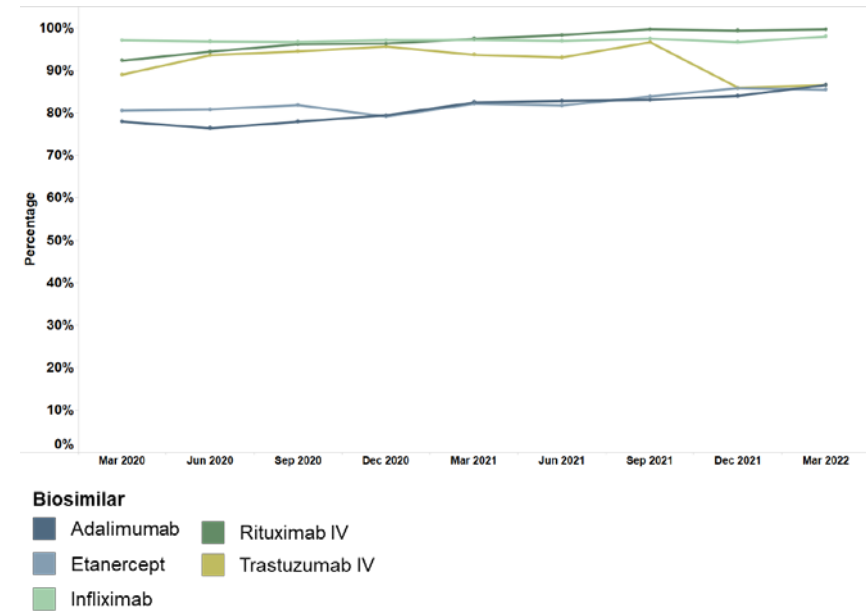


Figure 30. Trend in biosimilar percentage in Wales



2.2.2 Insulin

Purpose: To encourage a reduction in the prescribing of long-acting insulin analogues in primary and secondary care in line with NICE guidance to maximise cost-effectiveness in Wales.

Unit of measure: Items/number of long-acting insulin analogues expressed as a percentage of total long- and intermediate-acting insulin prescribed in 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.

As of Quarter 1 2021-2022, the method of calculating secondary care data for the Insulin NPI has changed. Therefore, any comparison to historic data before that point should be made via SPIRA rather than any previously published quarterly reports.

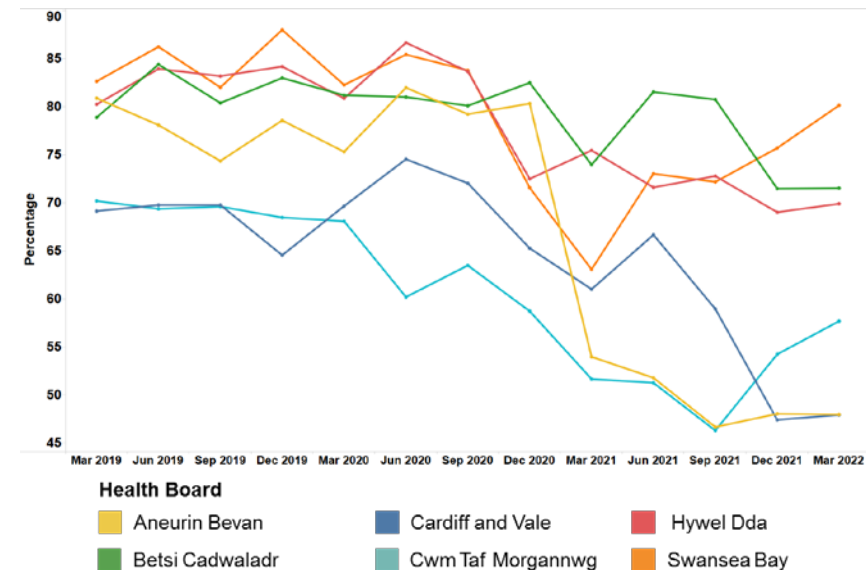
Secondary care prescribing

- Across Wales, secondary care use of long-acting insulin as a percentage of all long- and intermediate-acting insulin prescribing was 3.76% lower in the quarter ending March 2022 than in the equivalent quarter of the previous year. This is in line with the aim of the indicator.
- For the quarter ending March 2022, prescribing of long-acting insulin analogues as a percentage of total long- and intermediate-acting insulin ranged from 47.9% to 80.1%.
- The health board with the lowest prescribing percentage was Cardiff and Vale UHB. The highest prescribing percentage was seen in Swansea Bay UHB.
- The proportion of long-acting insulin analogue prescribing decreased compared with the equivalent quarter of the previous year in four health boards.
- The health board with the greatest percentage decrease was Cardiff and Vale UHB.
- The health board with the greatest percentage increase was Swansea Bay UHB.

Table 21. Long-acting insulin analogues as a percentage of total long- and intermediate-acting insulin prescribing in secondary care

	2020–2021 Qtr 4	2021–2022 Qtr 4	% Change
Cardiff and Vale	61.0	47.9	-21.4%
Aneurin Bevan	54.0	48.0	-11.1%
Hywel Dda	75.4	69.9	-7.36%
Betsi Cadwaladr	73.9	71.5	-3.29%
Cwm Taf Morgannwg	51.6	57.7	11.7%
Swansea Bay	63.0	80.1	27.1%
Wales	61.3	59.0	-3.76%

Figure 31. Trend in long-acting analogue prescribing as a percentage of total long- and intermediate-acting insulin prescribed in secondary care



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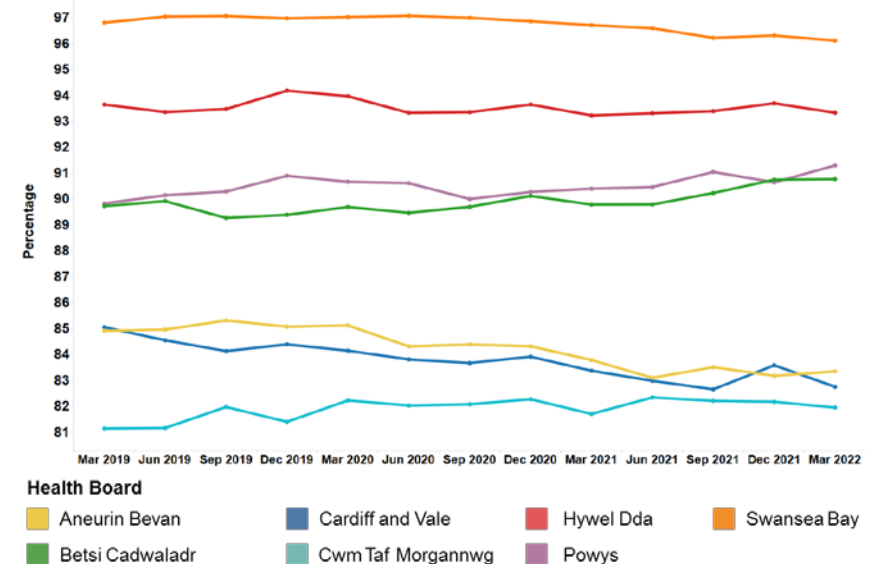
Primary care prescribing

- Across Wales, the prescribing of long-acting insulin analogues as a proportion of total long and intermediate-acting insulin prescribing increased by 0.07% for the quarter ending March 2022, compared with the equivalent quarter of the previous year. This is contrary to the aim of the indicator.
- For the quarter ending March 2022, long-acting insulin analogue prescribing ranged from 81.9% to 96.1% across the health boards.
- The health board with the lowest prescribing was Cwm Taf Morgannwg UHB, whilst the highest prescribing was seen in Swansea Bay UHB.
- Across the seven health boards in Wales, prescribing decreased compared with the equivalent quarter of the previous year in three health boards and increased in four health boards.
- The health board with the greatest percentage decrease was Cardiff and Vale UHB.
- The largest percentage increase was seen Betsi Cadwaladr UHB.

Table 22. Long-acting insulin analogues as a percentage of total long- and intermediate-acting insulin prescribing in primary care

	2020–2021 Qtr 4	2021–2022 Qtr 4	% Change
Cardiff And Vale	83.4	82.8	-0.74%
Swansea Bay	96.7	96.1	-0.62%
Aneurin Bevan	83.8	83.4	-0.52%
Hywel Dda	93.2	93.3	0.11%
Cwm Taf Morgannwg	81.7	81.9	0.30%
Powys	90.4	91.3	0.99%
Betsi Cadwaladr	89.8	90.8	1.10%
Wales	87.7	87.8	0.07%

Figure 32. Trend in long-acting analogue prescribing as a percentage of total long- and intermediate-acting insulin prescribed in primary care



2.2.3 Low value for prescribing

Purpose: To drive a reduction in the prescribing of items considered as not suitable for routine prescribing in Wales.

Unit of measure: Low value for prescribing UDG spend per 1,000 patients.

Aim: To reduce prescribing of items considered as not suitable for prescribing in Wales.

The aim of the *Low Value for Prescribing in NHS Wales* initiative is to minimise the prescribing of items that offer a limited clinical benefit to patients and where more cost-effective treatments may be available.

Five items/item groups were identified for the purposes of the first phase of this initiative:

- co-proxamol
- lidocaine plasters
- tadalafil once-daily preparations
- liothyronine
- doxazosin modified release tablets.

An additional four items/item groups were included in the second phase:

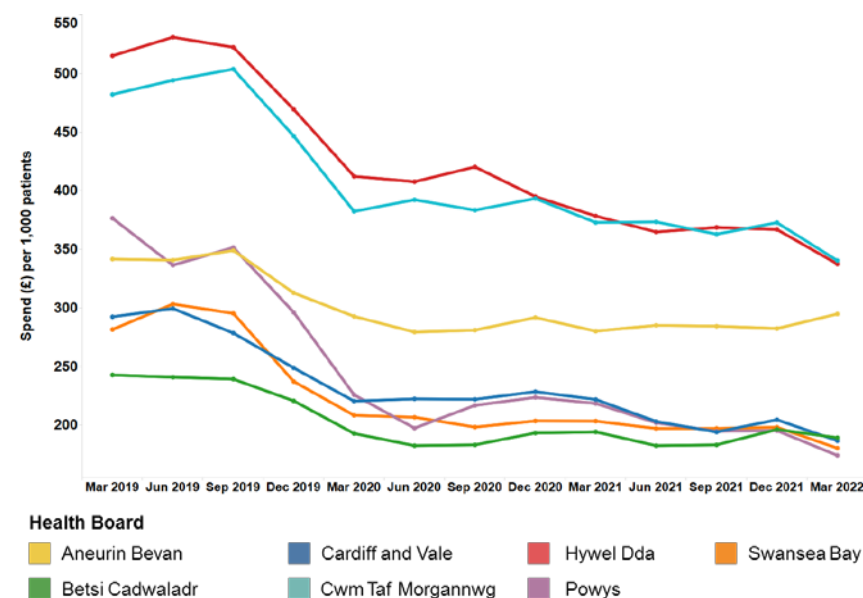
- omega-3 fatty acid compounds
- oxycodone and naloxone combination product
- paracetamol and tramadol combination product
- perindopril arginine.

- Across Wales, low value for prescribing UDG spend per 1,000 patients decreased by 6.92% for the quarter ending March 2022, compared with the equivalent quarter of the previous year. This is in line with the aim of the indicator.
- For the quarter ending March 2022, UDG spend per 1,000 patients ranged from £174 to £340 across the health boards.
- The health board with the lowest UDG spend per 1,000 patients was Powys Teaching HB, whilst the highest spend was seen in Cwm Taf Morgannwg UHB.
- UDG spend per 1,000 patients decreased compared with the equivalent quarter of the previous year in six health boards and increased in one health board.
- The health board with the greatest percentage decrease was Powys Teaching HB.
- The largest percentage increase was seen in Aneurin Bevan UHB.

Table 23. Low value for prescribing UDG spend (£) per 1,000 patients

	2020–2021 Qtr 4	2021–2022 Qtr 4	% Change
Powys	219	174	-20.3%
Cardiff And Vale	222	187	-15.9%
Swansea Bay	203	180	-11.3%
Hywel Dda	378	337	-10.8%
Cwm Taf Morgannwg	373	340	-8.72%
Betsi Cadwaladr	194	189	-2.59%
Aneurin Bevan	280	295	5.23%
Wales	265	247	-6.92%

Figure 33. Trend in low value for prescribing UDG spend per 1,000 patients



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 Prescribing Safety Indicators have been provided by Audit+, the GP software tool delivered and supported by Digital Health and Care Wales (DHCW).

As of Quarter 1 2021–2022, the method of calculating secondary care data for the insulin NPI has changed. Therefore, any comparison to historic data before that point should be made via SPIRA rather than any previously published quarterly reports.

The Medusa data warehouse is reliant on data input by individual hospital pharmacy departments. If the data on a medicine are inputted 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 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.

UDG – A user defined group is a specific basket of items developed to monitor a particular NPI.

Appendix 1. AWMMSG National Prescribing Indicators 2021–2022

Table 1 Priority area NPIs for 2021–2022

National Prescribing Indicator	Applicable to:	Unit of measure	Target for 2021–2022	Data source
Priority areas				
Analgesics	Primary care	Opioid burden user defined group (UDG) ADQs per 1,000 patients	Maintain performance levels within the lower quartile, or show a reduction towards the quartile below.	NWSSP
		Tramadol DDDs per 1,000 patients	Maintain performance levels within the lower quartile, or show a reduction towards the quartile below.	NWSSP
		Gabapentin and pregabalin DDDs per 1,000 patients	Maintain performance levels within the lower quartile, or show a reduction towards the quartile below.	NWSSP
Anticoagulants in atrial fibrillation	Primary care	The number of patients with AF and a CHA ₂ DS ₂ -VAS _C score of 2 or more who are currently prescribed an anticoagulant, as a percentage of all patients with AF.	To increase the number of patients with AF and a CHA ₂ DS ₂ -VAS _C score of 2 or more prescribed an anticoagulant.	DHCW
		The number of patients diagnosed with AF who are prescribed an anticoagulant and have received an anticoagulant review within the last 12 months, as a percentage of all patients diagnosed with AF who are prescribed an anticoagulant.	To increase the number of patients who are prescribed an anticoagulant and have received an anticoagulant review within the last 12 months.	
		The number of patients diagnosed with AF who are prescribed antiplatelet monotherapy, as a percentage of all patients diagnosed with AF.	To reduce the number of patients with AF prescribed antiplatelet monotherapy.	
Antimicrobial stewardship	Primary care	Total antibacterial items per 1,000 STAR-PUs	Health board target: a quarterly reduction of 5% against a baseline of April 2019–March 2020. GP Practice target: Maintain performance levels within the lower quartile, or show a reduction towards the quartile below.	NWSSP
		Number of 4C antimicrobial (co-amoxiclav, cephalosporins, fluoroquinolones and clindamycin) items per 1,000 patients	Health board target: A quarterly reduction of 10% against a baseline of April 2019–March 2020. GP Practice target: Maintain performance levels within the lower quartile, or show a reduction towards the quartile below.	NWSSP

National Prescribing Indicators 2021–2022. Analysis of Prescribing Data to March 2022

National Prescribing Indicator	Applicable to:	Unit of measure	Target for 2021–2022	Data source
Supporting Domain: Safety				
Prescribing Safety Indicators	Primary care	Number of patients identified	No target set	DHCW
Proton pump inhibitors	Primary care	PPI DDDs per 1,000 PUs	Maintain performance levels within the lower quartile, or show a reduction towards the quartile below	NWSSP
Hypnotics and anxiolytics	Primary care	Hypnotic and anxiolytic UDG ADQs per 1,000 STAR-PUs	Maintain performance levels within the lower quartile, or show a reduction towards the quartile below	NWSSP
Yellow Cards	Primary care	Number of Yellow Cards submitted	One Yellow Card per 2,000 GP practice population	MHRA
			One Yellow Card per 2,000 health board population	
	Health board		20% or greater increase from baseline (2020–2021) for Yellow Cards submitted by secondary care	
	Community pharmacy		50% or greater increase from baseline (2020–2021) for Yellow Cards submitted by members of the public	
			No target set. Reported as the number of Yellow Cards submitted by health board	
Supporting Domain: Efficiency				
Best value biological medicines	Primary + secondary care	Quantity of best value biological medicines prescribed as a percentage of total 'biosimilar' plus 'reference' product.	Increase the appropriate use of cost-efficient biological medicines, including biosimilar medicines	NWSSP DHCW
Insulin	Primary + secondary care	Items/number of long-acting insulin analogues as a percentage of total long- and intermediate-acting insulin prescribed	Reduce prescribing of long-acting insulin analogues and achieve prescribing levels below the Welsh average	NWSSP DHCW
Low value for prescribing	Primary care	Low value for prescribing UDG spend per 1,000 patients	Maintain performance levels within the lower quartile or show a reduction towards the quartile below	NWSSP

Appendix 2. Primary care NPI prescribing by GP cluster

Figure 1. Opioid burden prescribing – Quarter ending March 2022 versus quarter ending March 2021

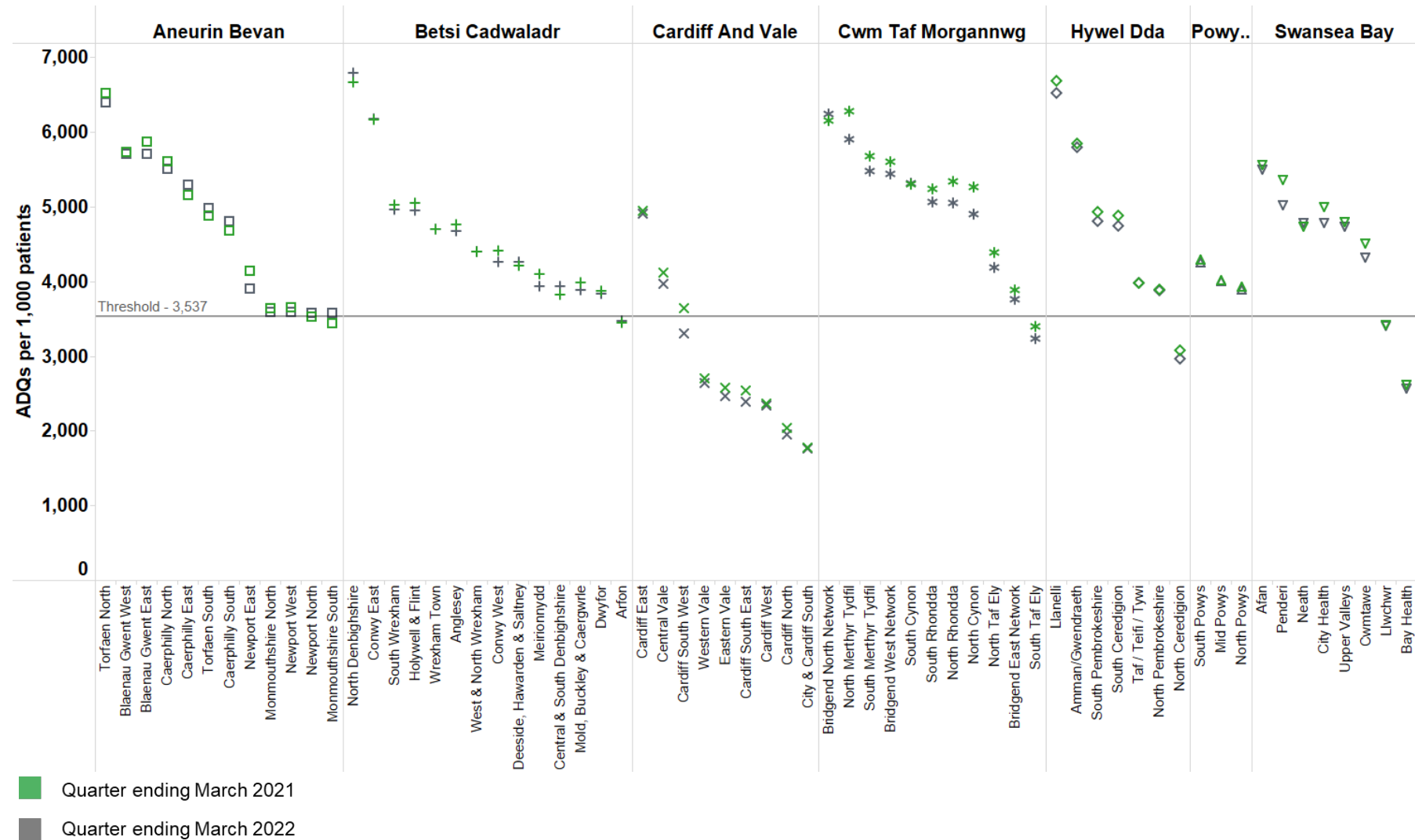


Figure 2. Tramadol prescribing – Quarter ending March 2022 versus quarter ending March 2021

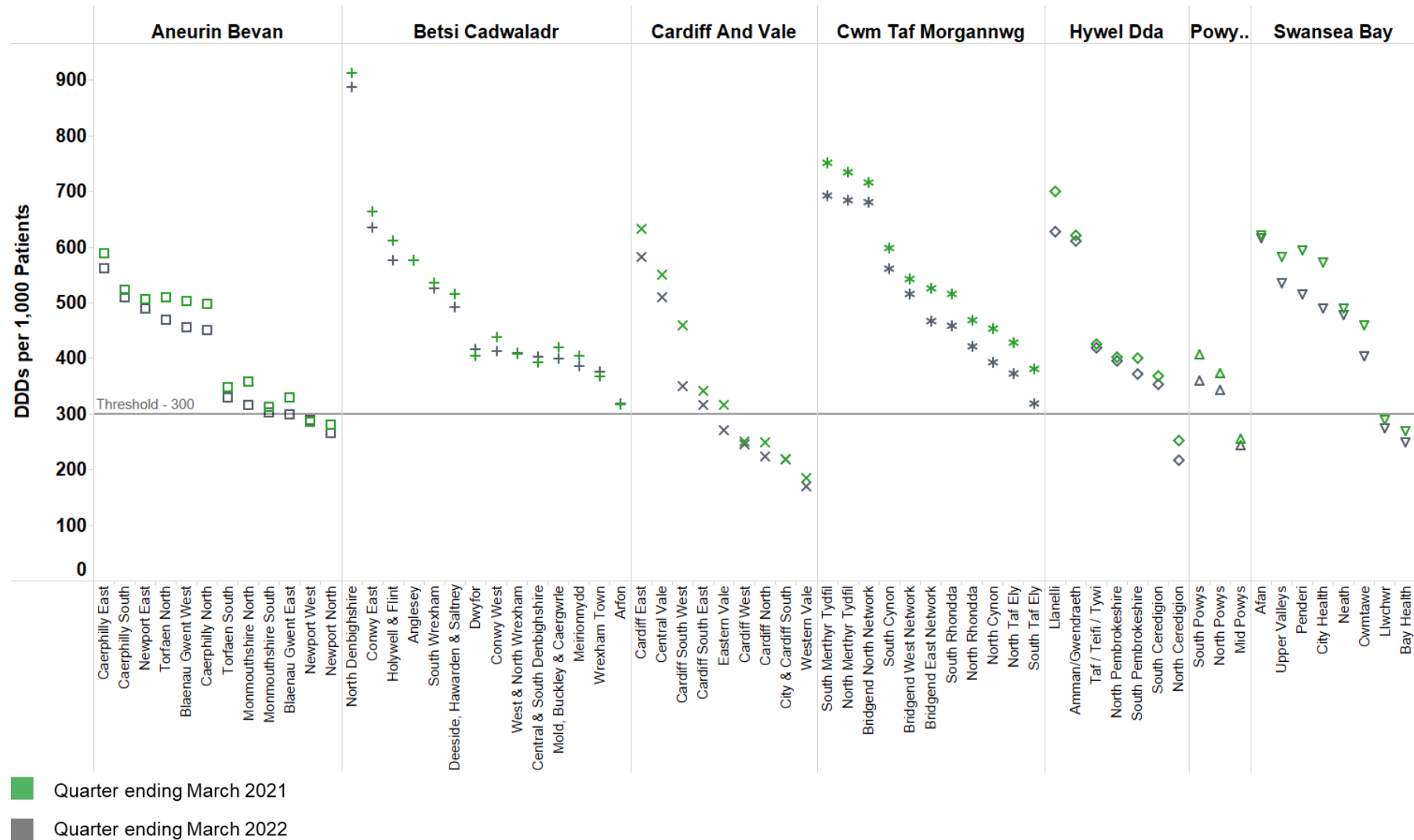


Figure 3. Gabapentin and pregabalin prescribing – Quarter ending March 2022 versus quarter ending March 2021

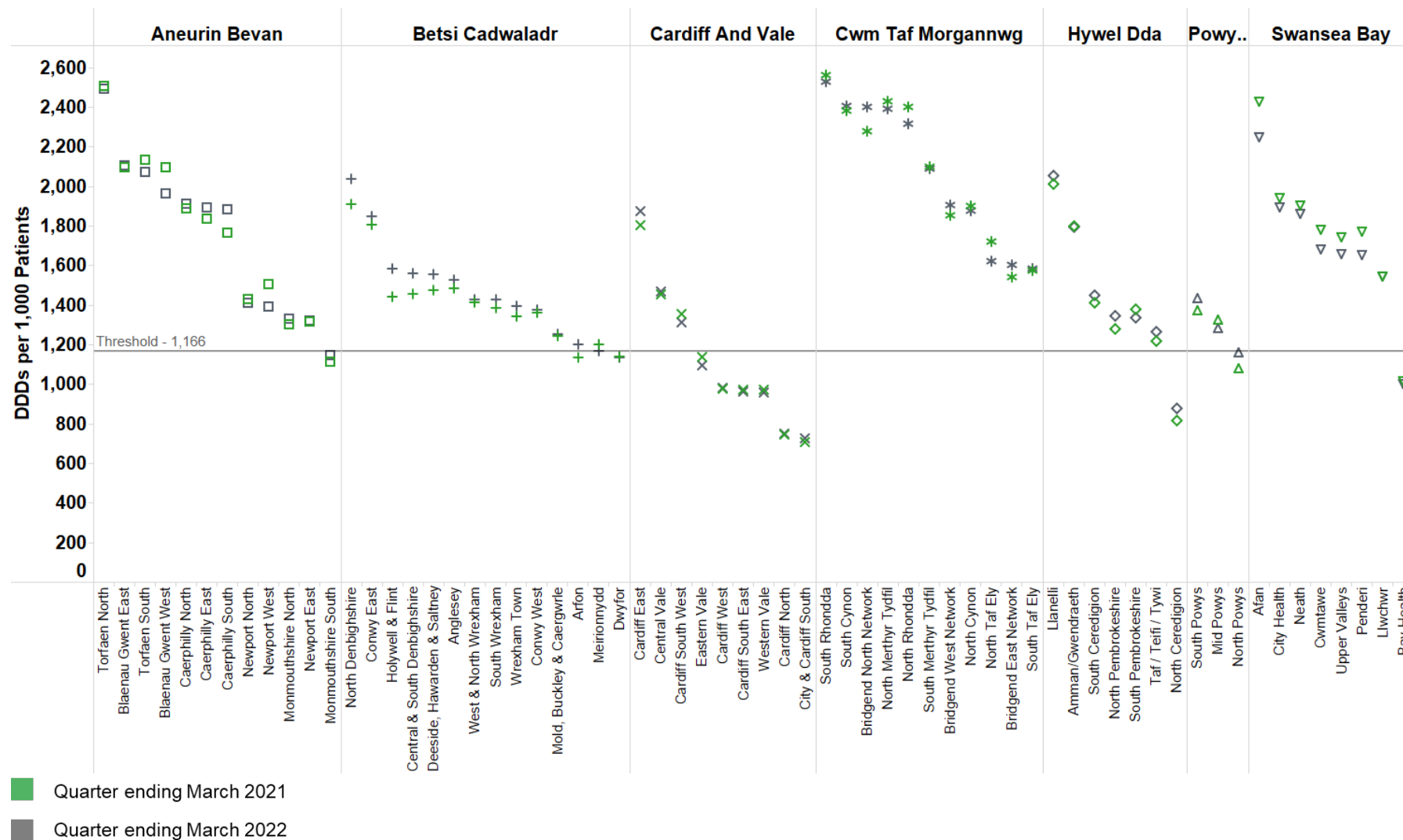


Figure 4. Antimicrobial prescribing – Quarter ending March 2022 versus quarter ending March 2020

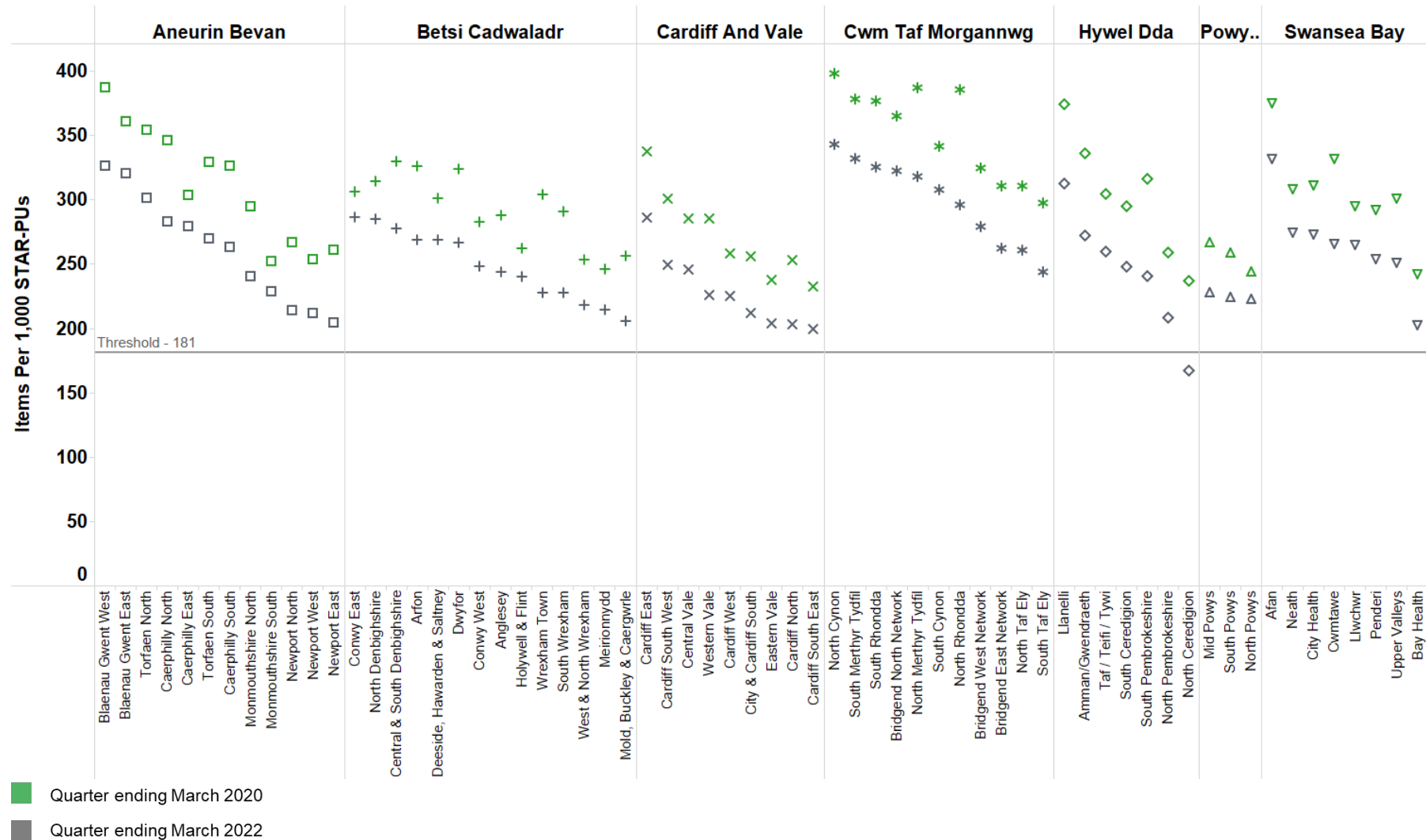


Figure 5. 4C prescribing – Quarter ending March 2022 versus quarter ending March 2020

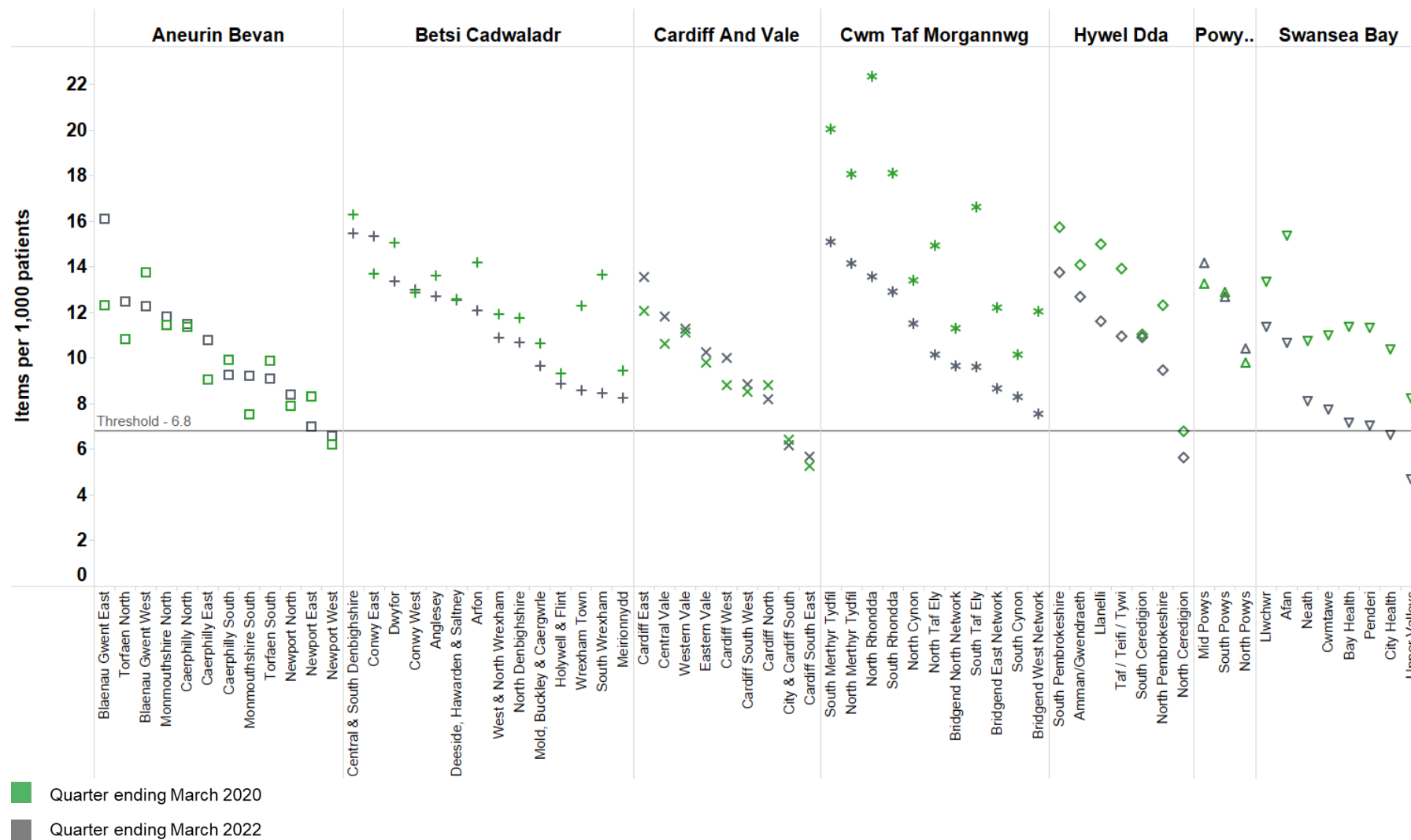


Figure 6. Proton Pump Inhibitor prescribing – Quarter ending March 2022 versus quarter ending March 2021

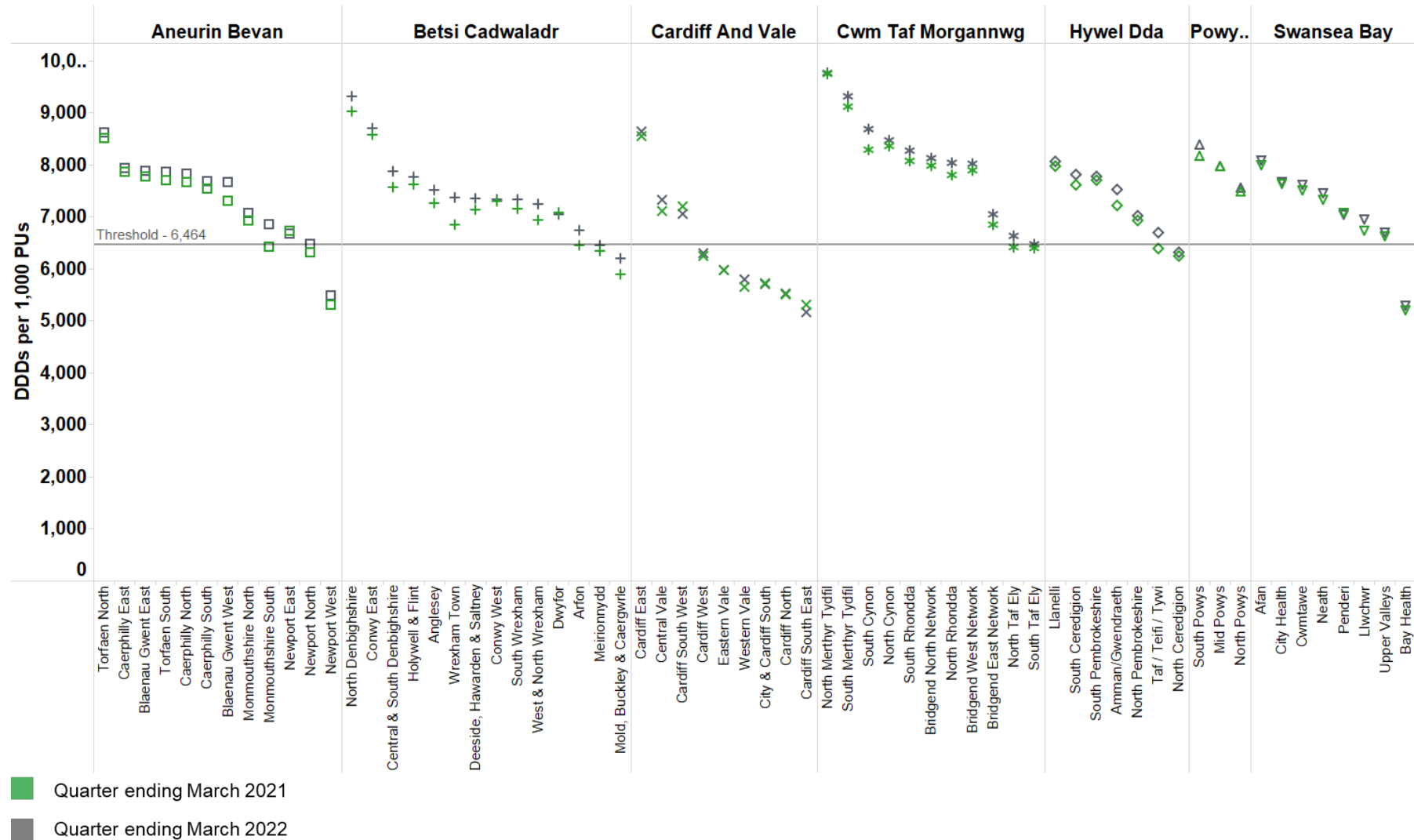


Figure 7. Hypnotic and anxiolytic prescribing – Quarter ending March 2022 versus quarter ending March 2021

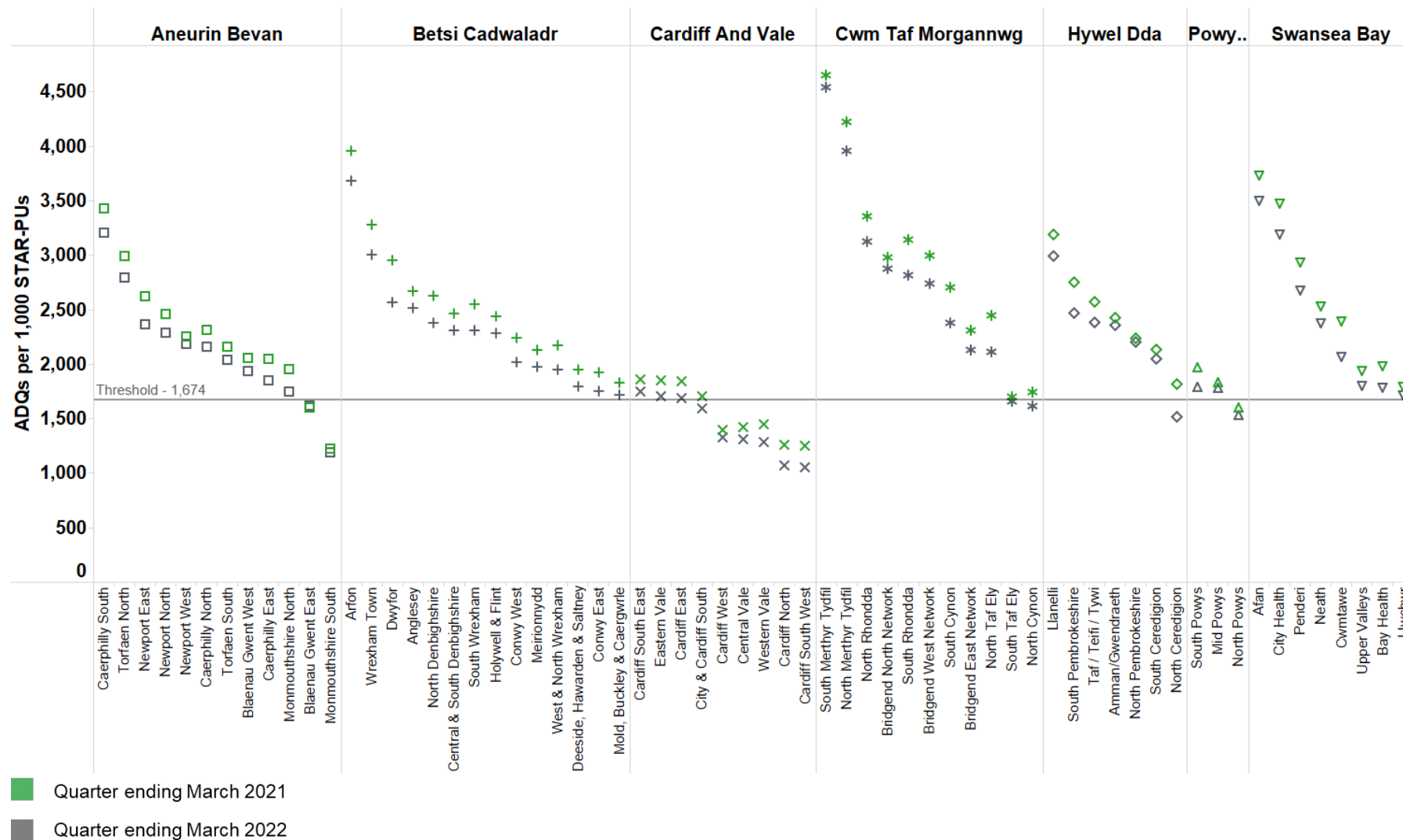


Figure 8. Long-acting insulin analogues as a percentage of total long- and intermediate-acting insulin prescribing in primary care
– Quarter ending March 2022 versus quarter ending March 2021

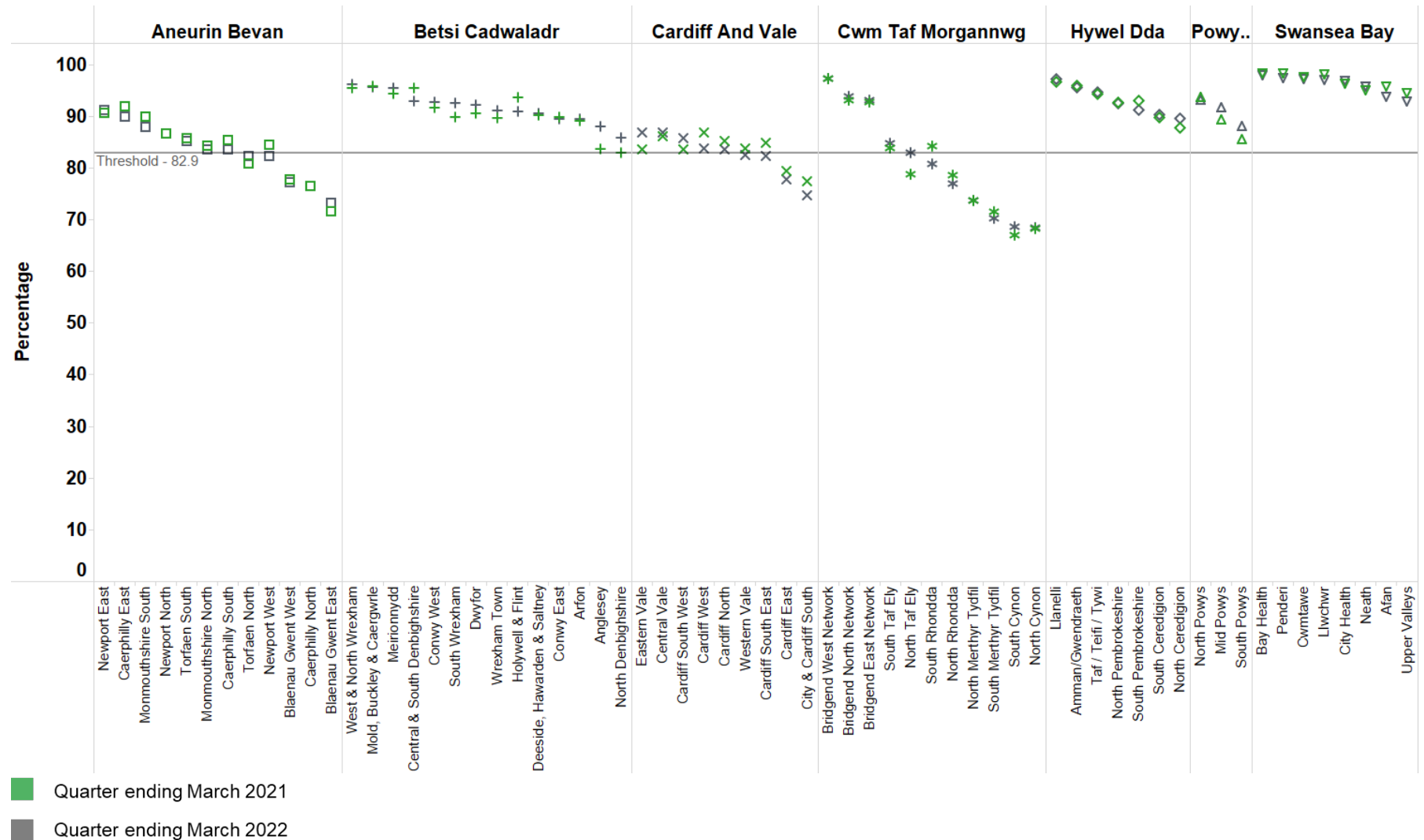


Figure 9. Low value for prescribing UDG spend (£) per 1,000 patients – Quarter ending March 2022 versus quarter ending March 2021

