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

In focus report:
Antibiotic course duration for respiratory tract infection

May 2026

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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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National Prescribing Indicators 2025–2026: A focus on antibiotic course duration for respiratory tract infection

This report provides supplementary information to that contained within the National Prescribing Indicator (NPI) quarterly reports in order to provide a more detailed picture of prescribing by GP practices across Wales. NHS Wales network users can access the data used to create the graphs in this report via the interactive Server for Prescribing Information Reporting and Analysis (SPIRA) dashboards. Examples of good practice for the NPIs are published on the AWTTC website.

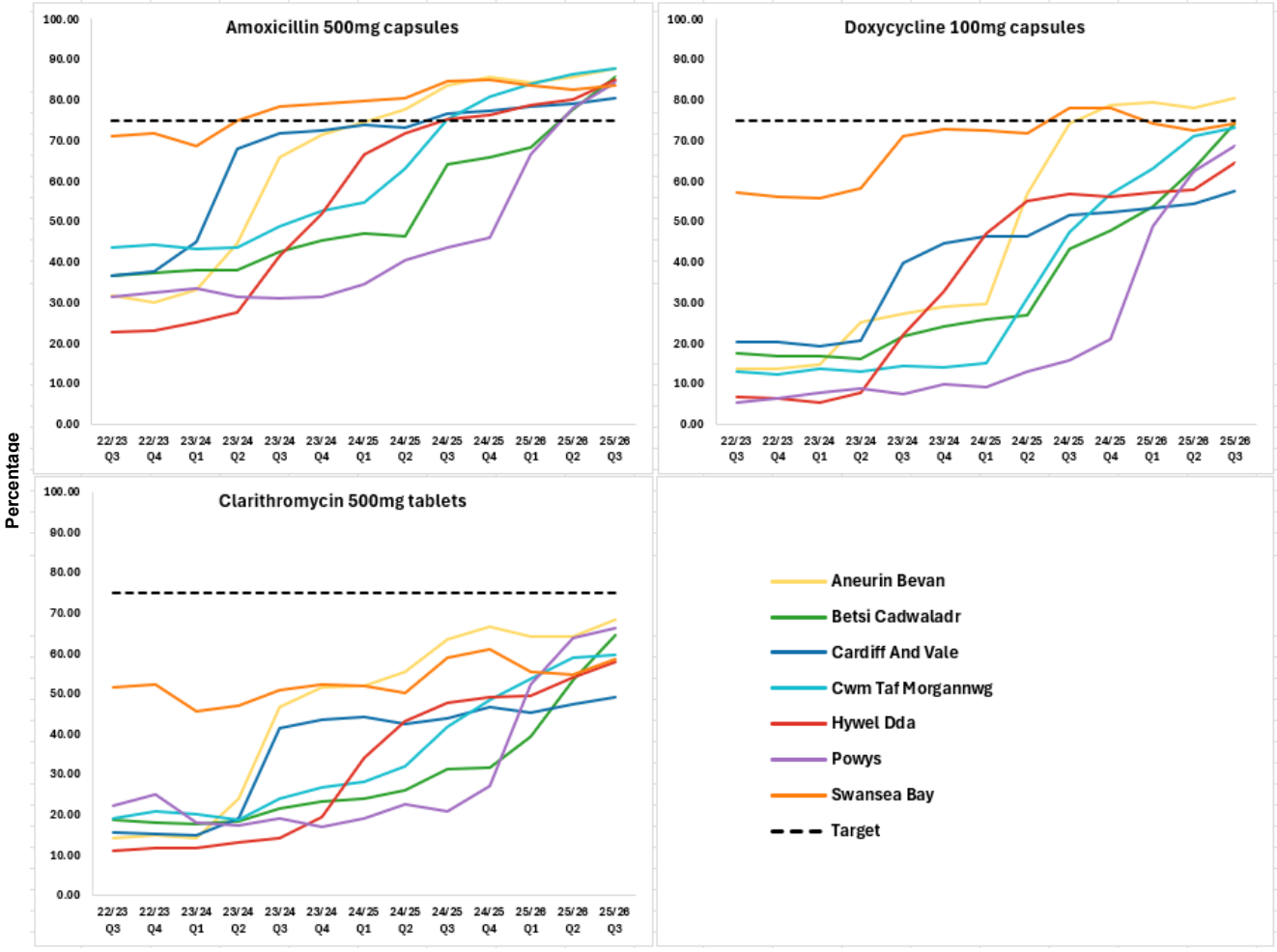
Antibiotic course duration for acute respiratory tract infections (RTIs) was introduced as part of the NPIs in 2025–2026. The antibiotics included in this indicator are:

- amoxicillin 500 mg capsules
- doxycycline 100 mg capsules
- clarithromycin 500 mg tablets

The target is for 75% of all 5- and 7-day course prescriptions to be issued as a 5-day course.

Since the introduction of this indicator, the percentage of antibiotics issued as a 5-day course has been increasing for all three antibiotics (Figure 1).

Figure 1. Trend in 5-day course duration (as a percentage of 5- and 7-day course durations) for amoxicillin, doxycycline and clarithromycin



There continues to be variation in prescribing for each of the three antibiotics, when comparing GP practices across Wales, and within health boards, as demonstrated by Figure 2, Figure 3 and Figure 4. The box and whisker plots show the median and quartiles for each health board. A trend line indicating the mean is also included.

Figure 2. Box and whisker plot – amoxicillin 5-day course duration (as a percentage of 5- and 7-day course durations) from Q3 2023–2024 to Q3 2025–2026

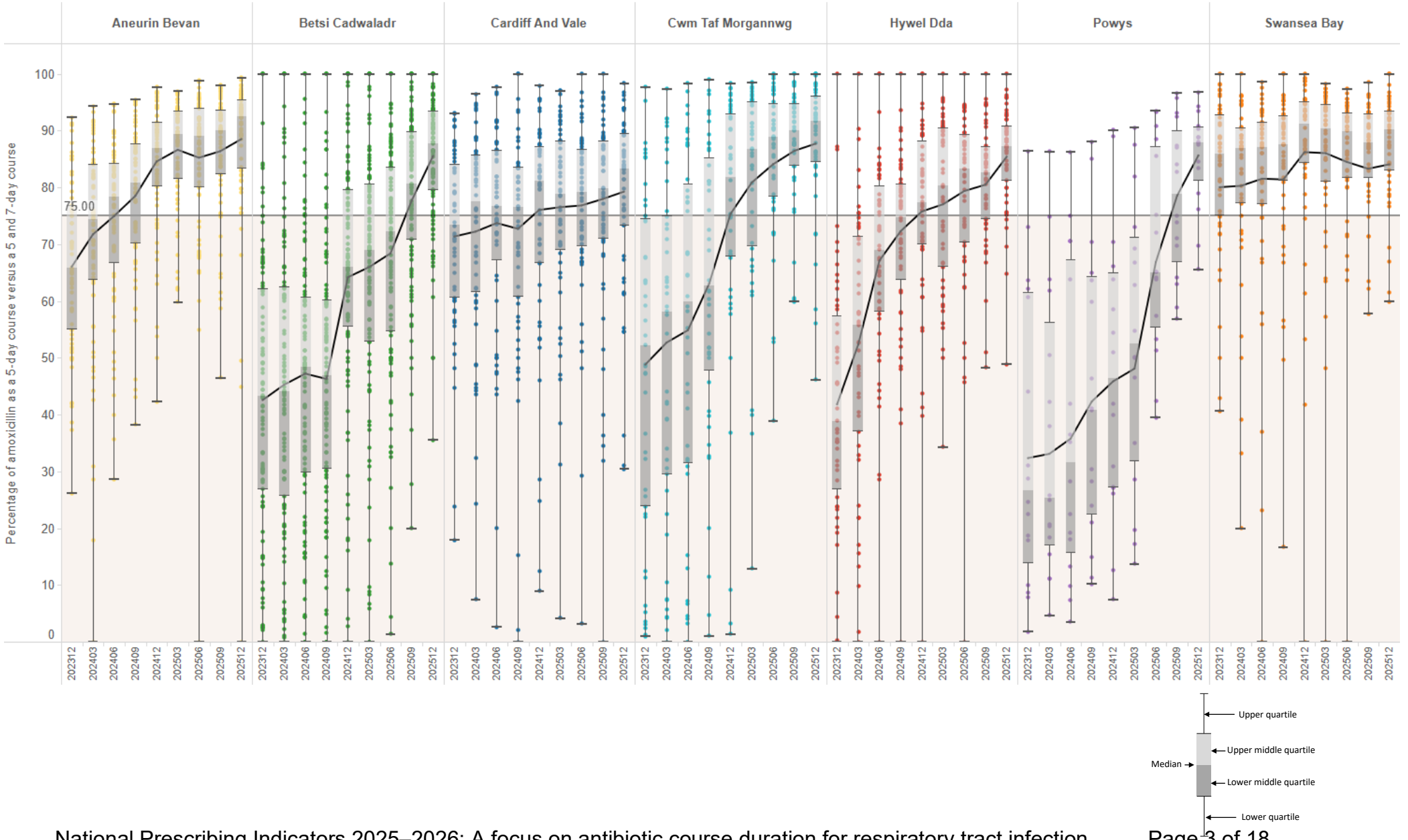


Figure 3. Box and whisker plot – doxycycline 5-day course duration (as a percentage of 5- and 7-day course durations) from Q3 2023–2024 to Q3 2025–2026

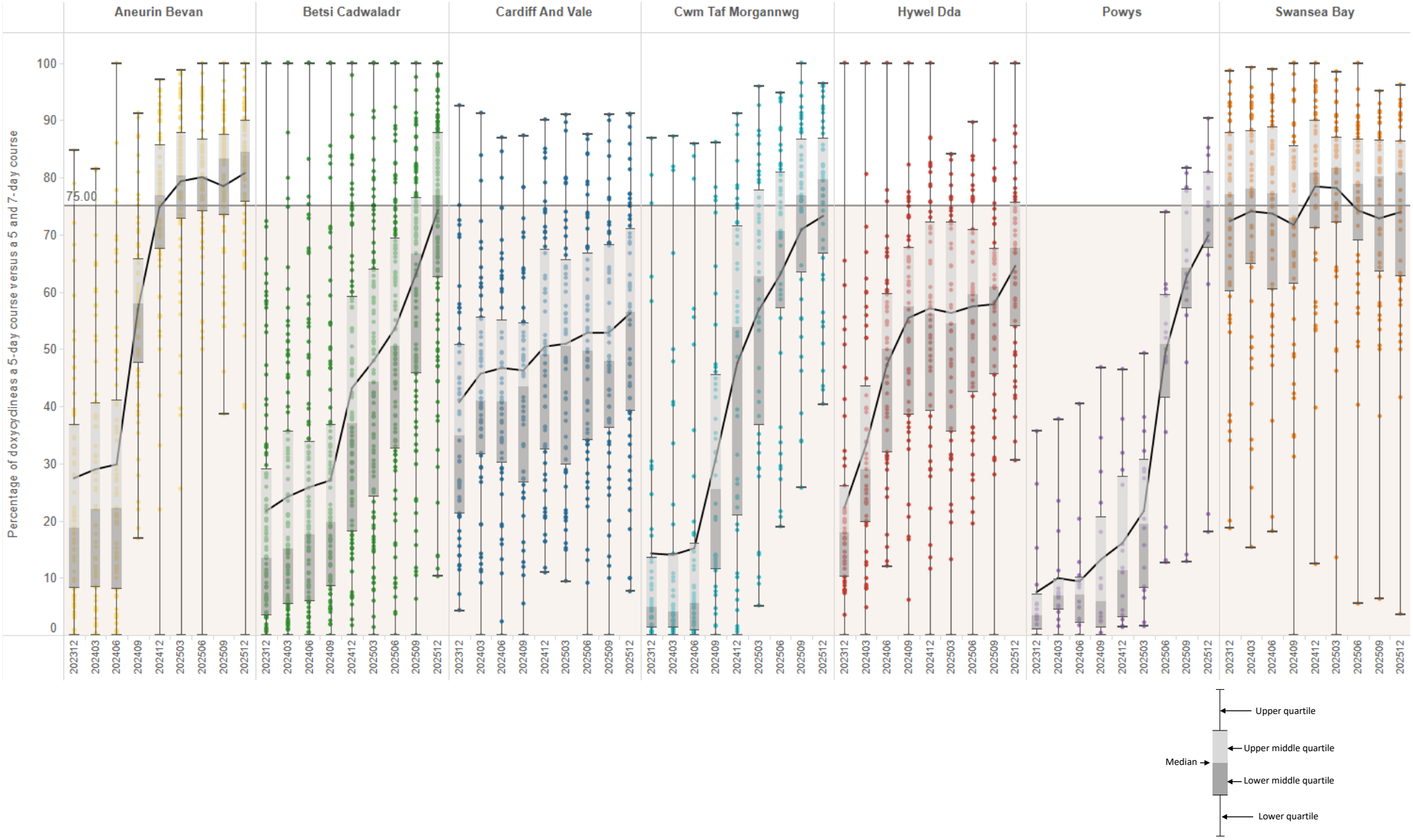


Figure 4. Box and whisker plot – clarithromycin 5-day course duration (as a percentage of 5- and 7-day course durations) from Q3 2023–2024 to Q3 2025–2026

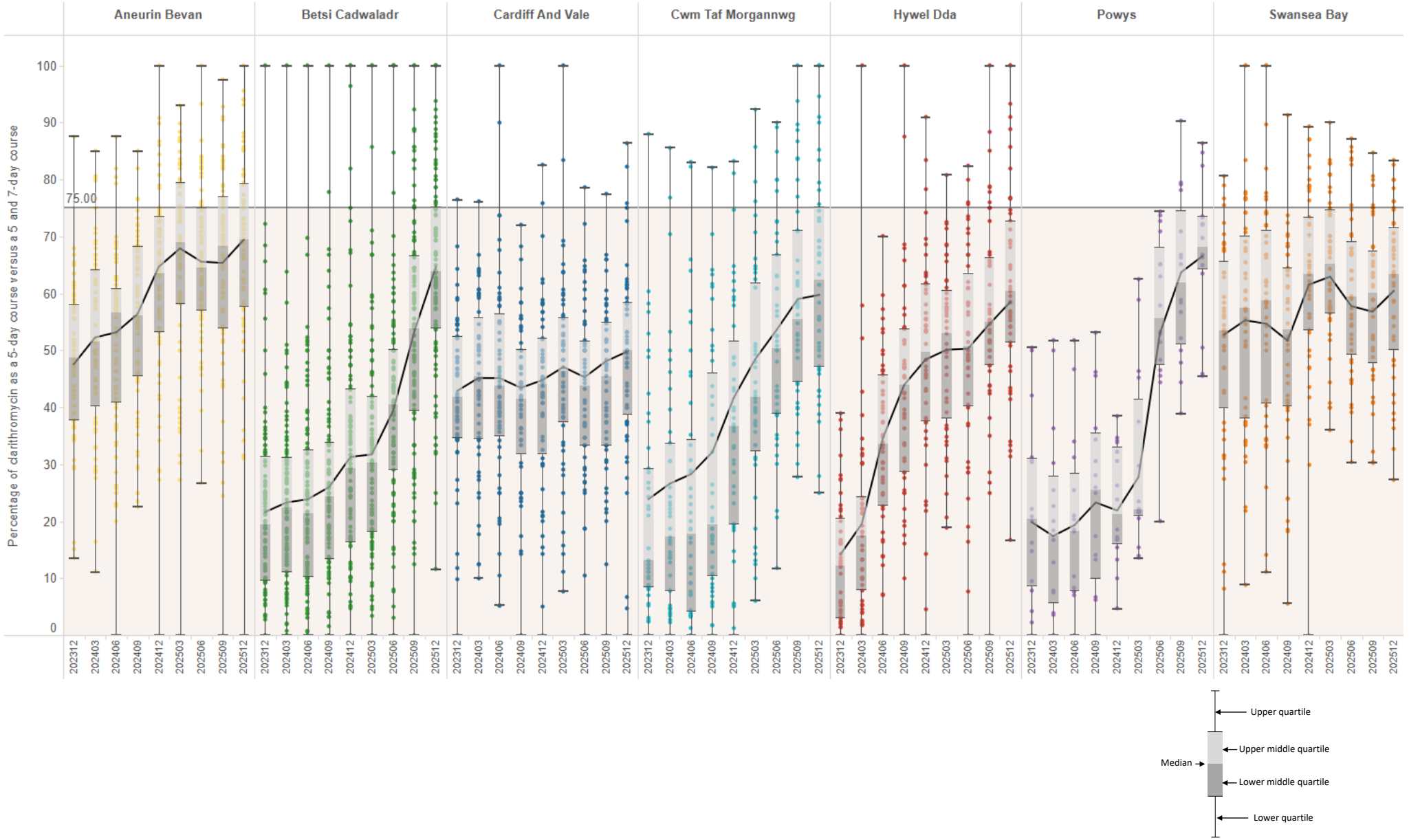


Figure 5, Figure 6 and Figure 7 show 5-day course duration (as a percentage of 5- and 7-day course durations) for amoxicillin, doxycycline and clarithromycin respectively for each cluster for the quarter ending December 2025.

Figure 5. Amoxicillin 5-day course duration (as a percentage of 5- and 7-day course durations) by cluster for quarter ending December 2025

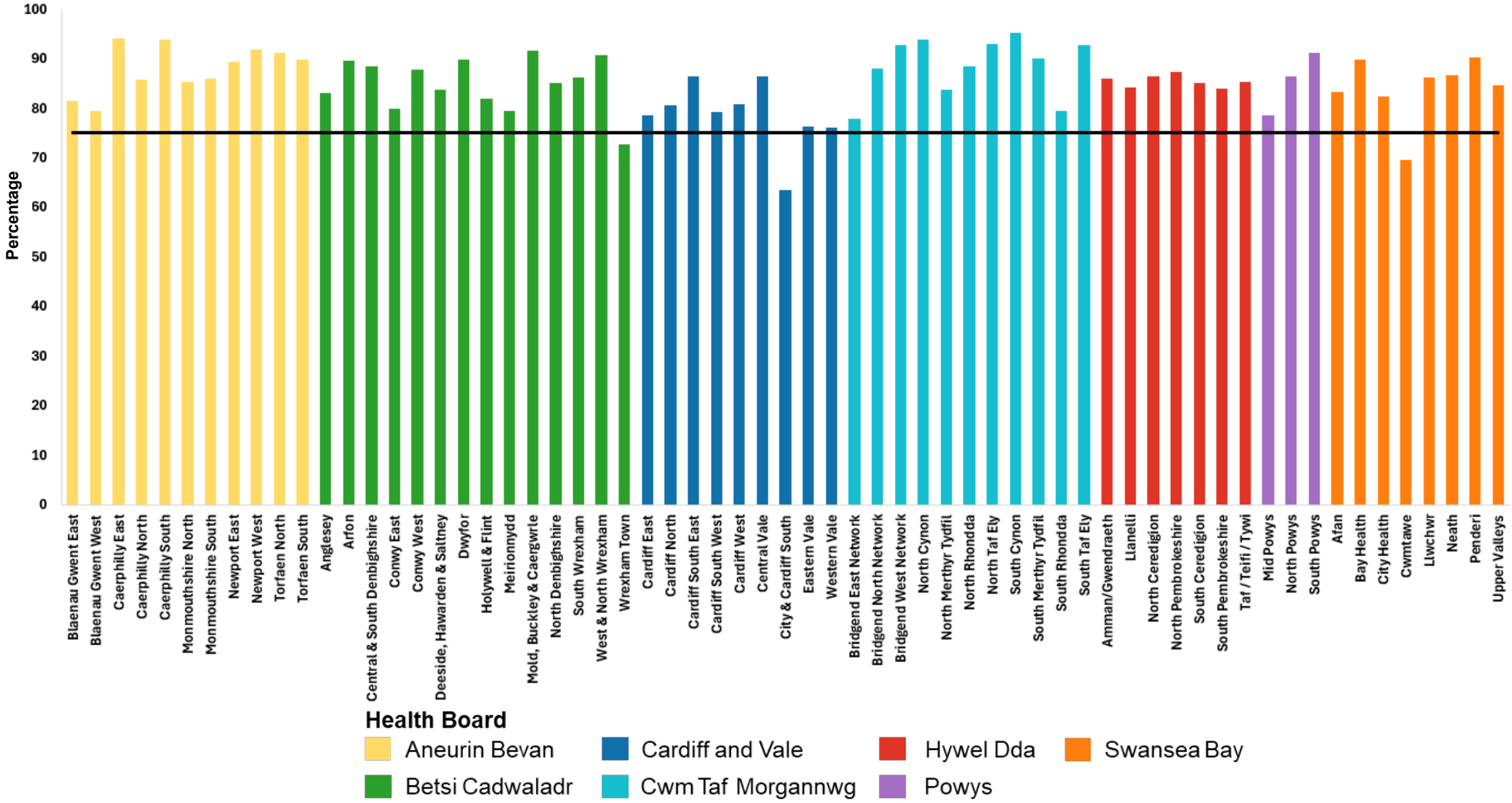


Figure 6. Doxycycline 5-day course duration (as a percentage of 5- and 7-day course durations) by cluster for quarter ending December 2025

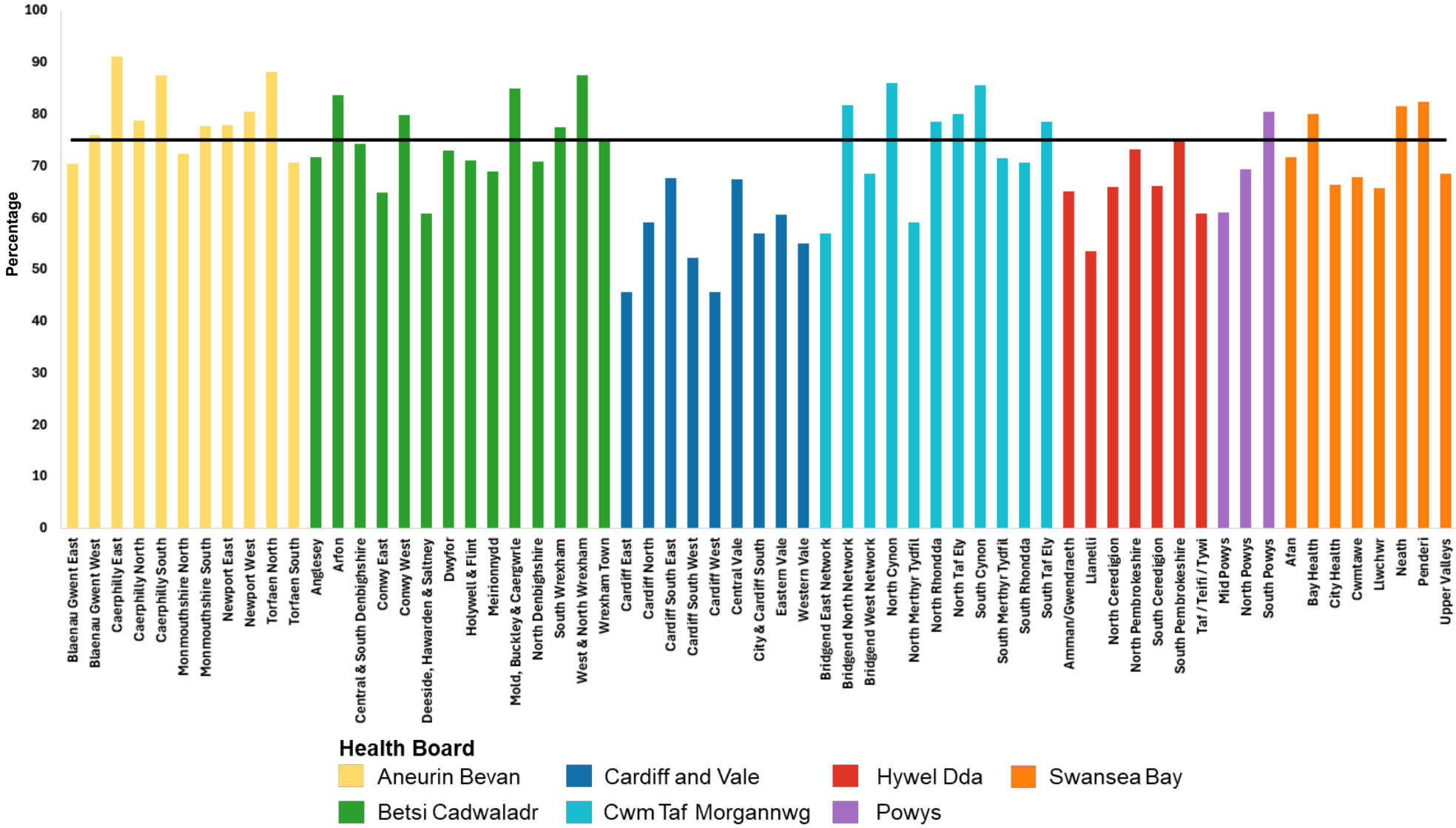


Figure 7. Clarithromycin 5-day course duration (as a percentage of 5- and 7-day course durations) by cluster for quarter ending December 2025

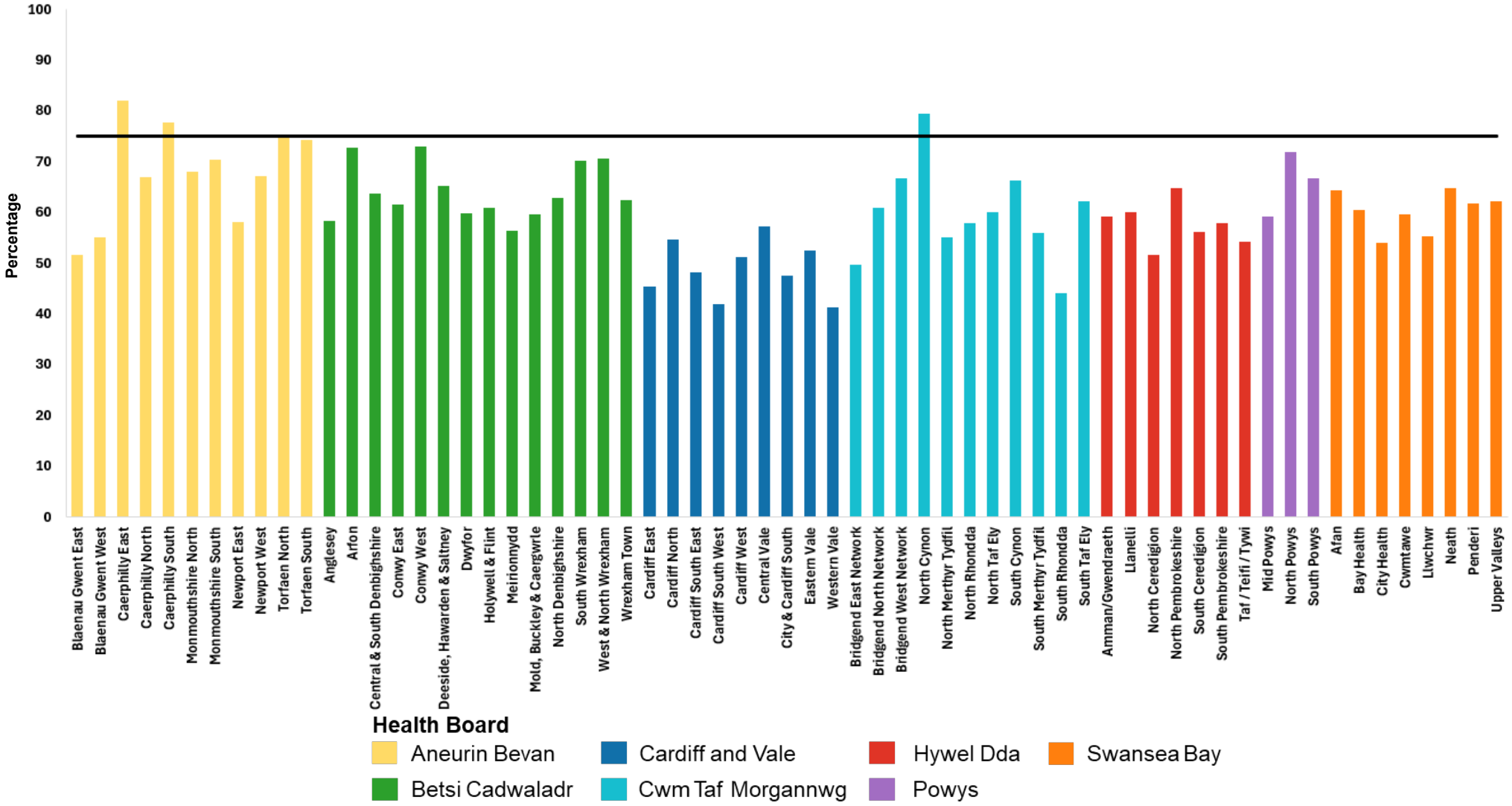
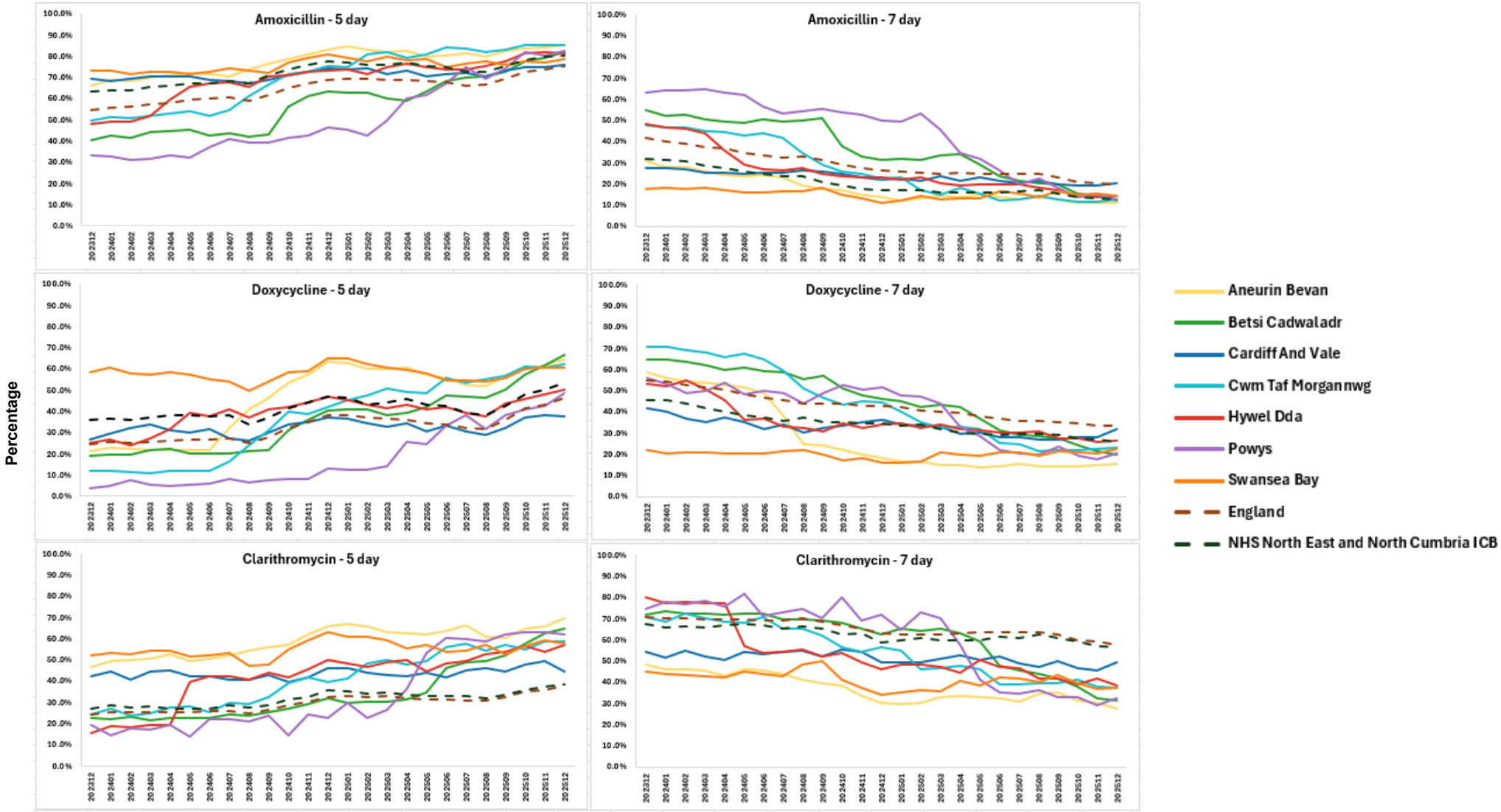


Figure 8 shows trends in 5-day and 7-day amoxicillin, doxycycline and clarithromycin course durations (as a percentage of all course durations) for each health board, England and North East and North Cumbria Integrated Care Board (ICB).

Figure 8. Trends in 5- and 7-day amoxicillin, doxycycline and clarithromycin course duration (as a percentage of all course durations) by health board from December 2023 to December 2025[1]



[1] Due to differences in reporting, data comparing Wales and England are reported as a percentage of all prescribing.

Figure 9 shows trends in defined daily doses (DDDs) per 1,000 patients by antibiotic for each health board and Wales. A linear trend line for Wales is also included, showing a reduction in DDDs per 1,000 patients for all three antibiotics.

Figure 9. Trends in amoxicillin, doxycycline and clarithromycin DDDs per 1,000 patients by health board from December 2023 to December 2025

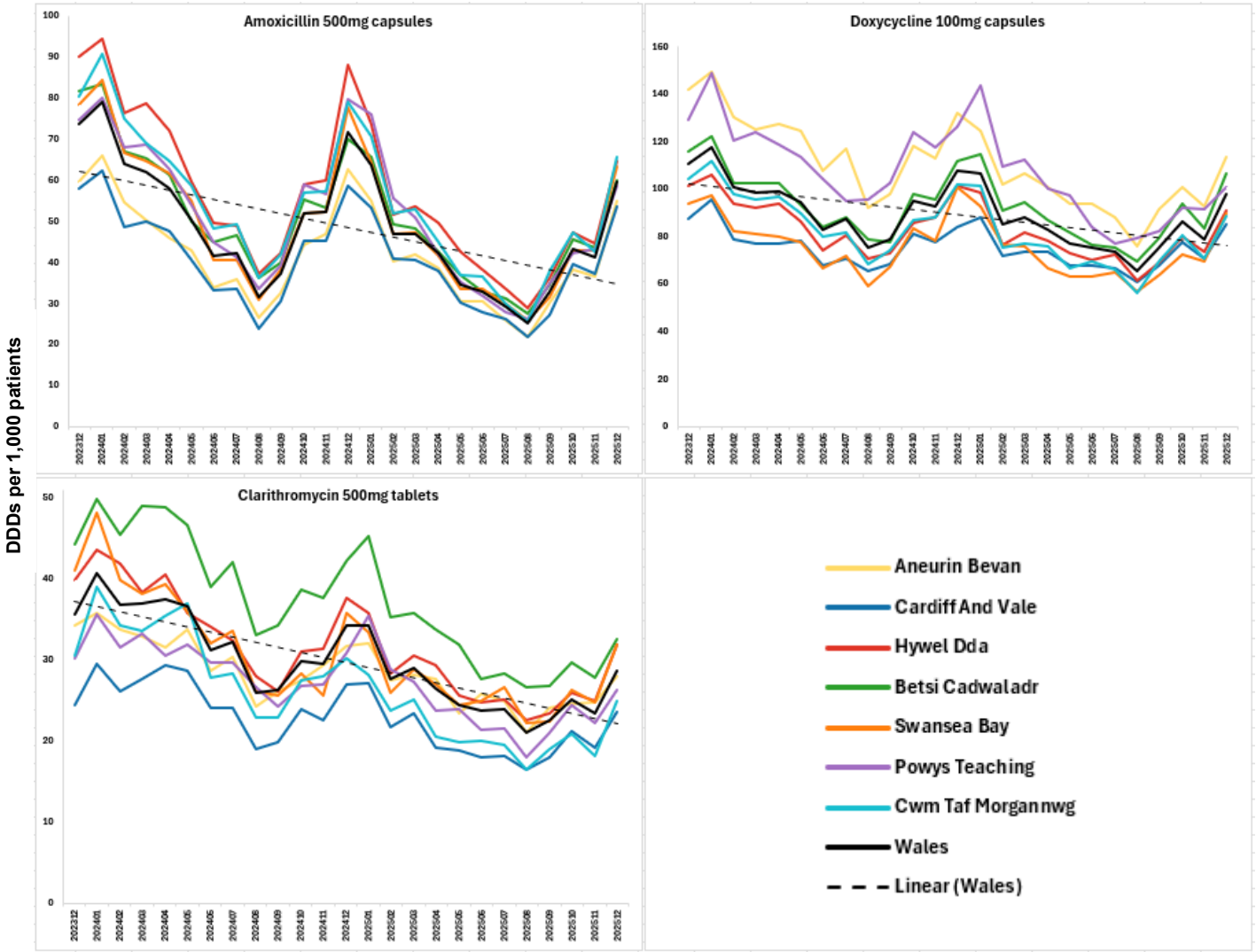


Figure 10, Figure 11 and Figure 12 show trends in 5-day, 7-day and all other course durations as a percentage of all durations.

Figure 10. Trends in amoxicillin 5-day, 7-day and all other course durations (as a percentage of all course durations) by health board from December 2023 to December 2025

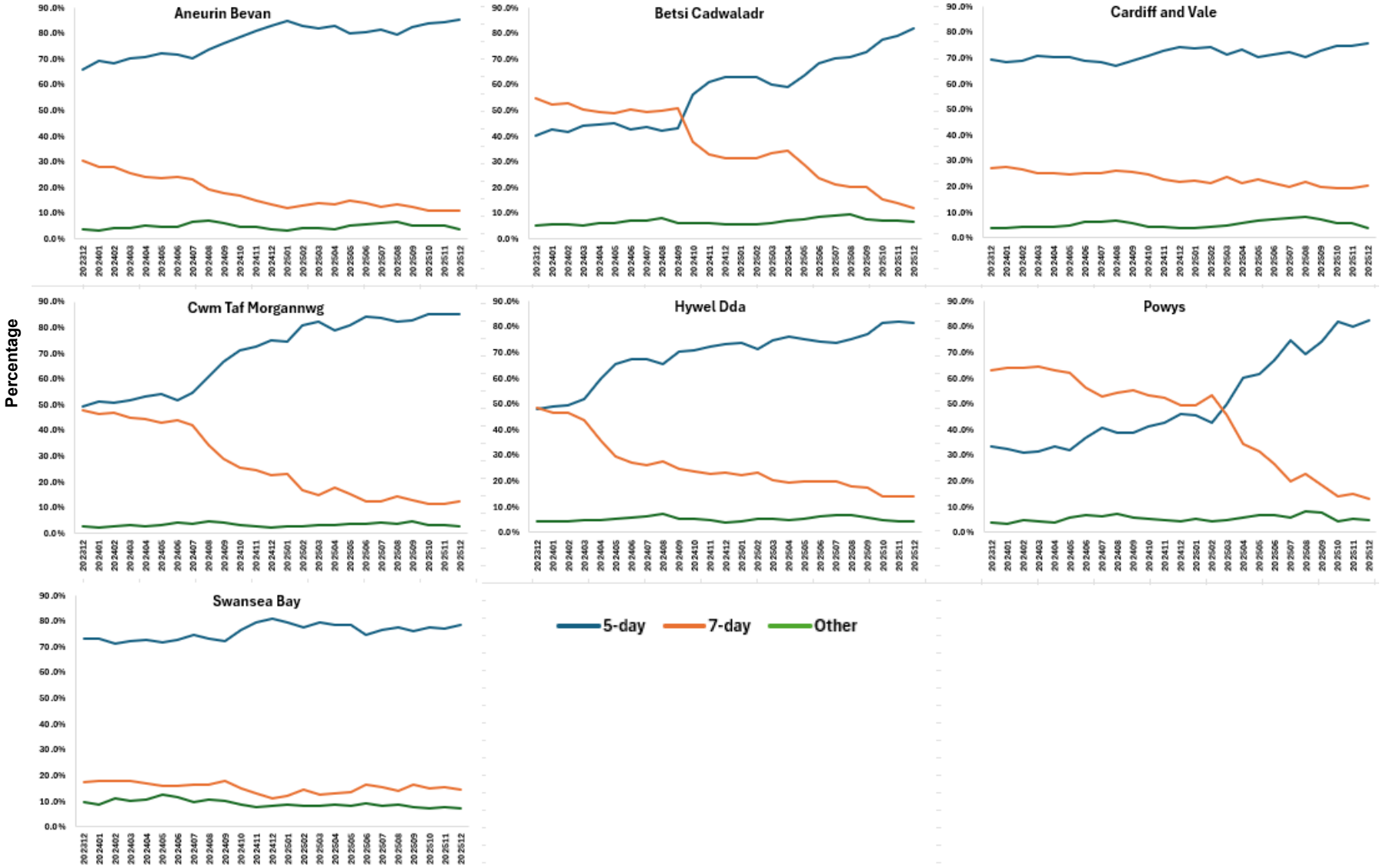


Figure 11. Trends in doxycycline 5-day, 7-day and all other course durations (as a percentage of all course durations) by health board from December 2023 to December 2025

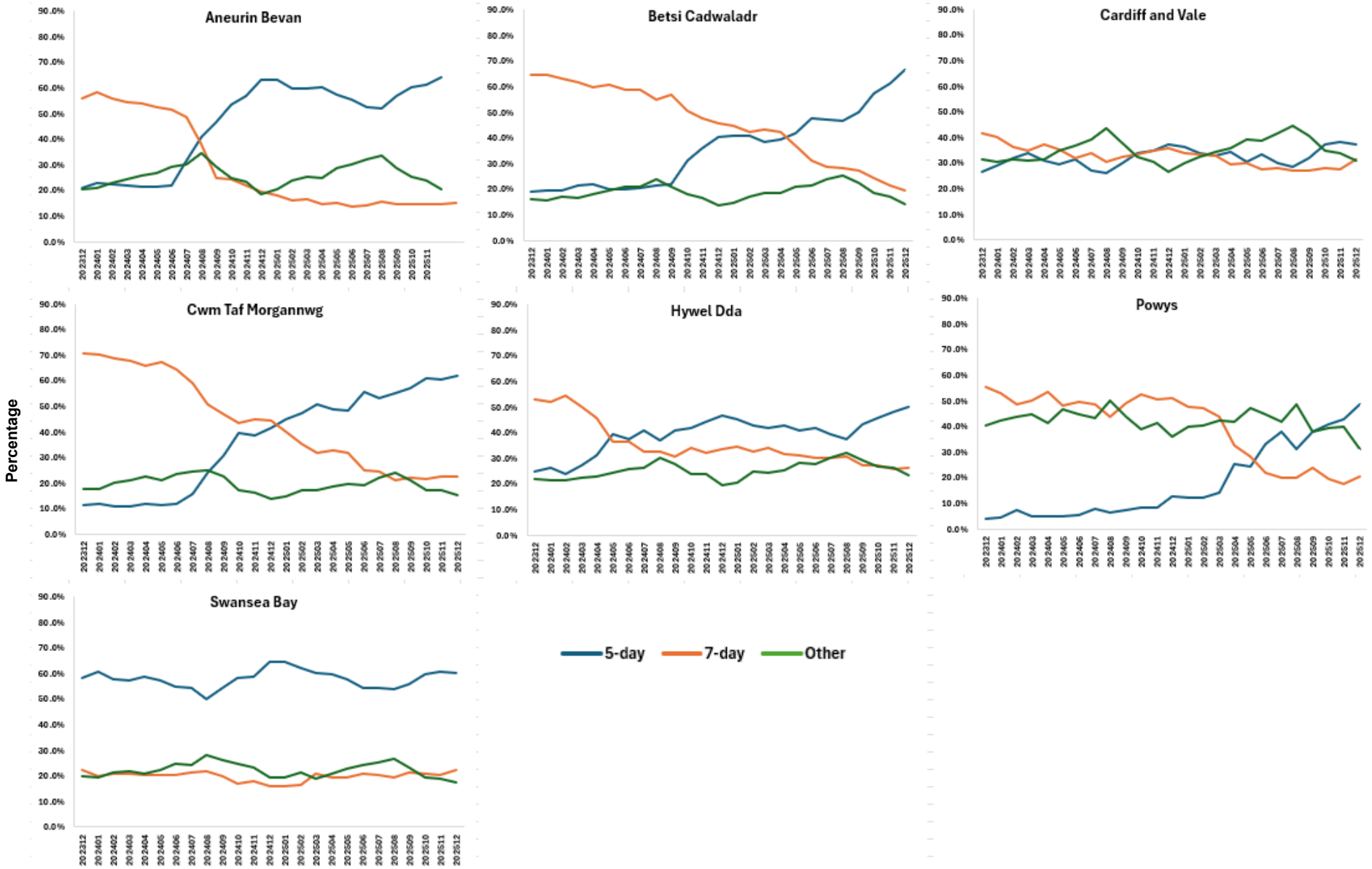
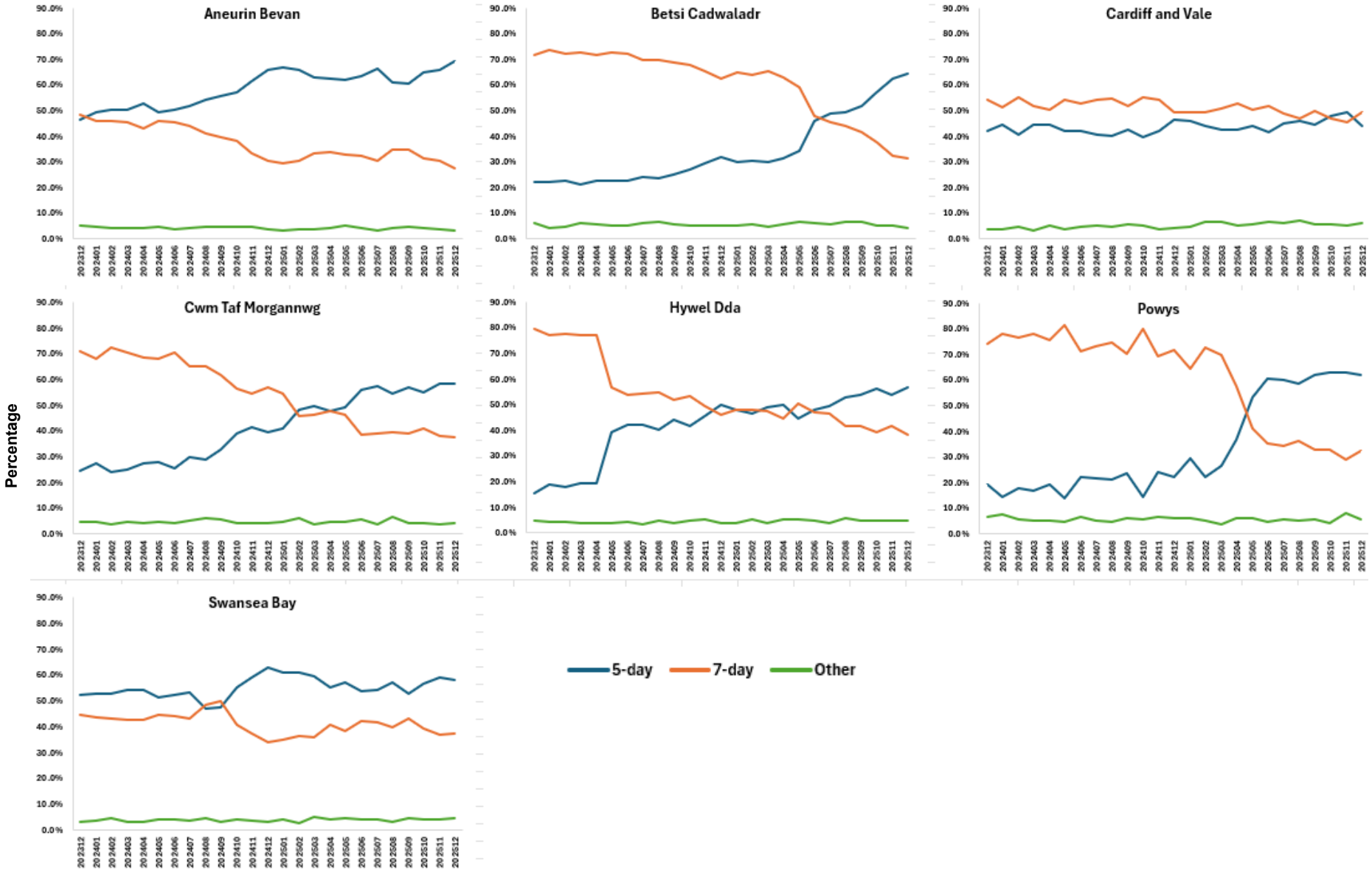


Figure 12. Trends in clarithromycin 5-day, 7-day and all other course durations (as a percentage of all course durations) by health board from December 2023 to December 2025



Target achievement

The target for each antibiotic is for 75% of 5- and 7-day course prescriptions to be issued as a 5-day course. Figure 13 shows the percentage of GP practices:

- Above the target (GP practice mean 5-day course percentage is greater than 75% for that quarter).
- Moving towards the target (GP practice mean 5-day course percentage is less than 75% but has increased compared with the previous quarter).
- Moving away from the target (GP practice mean 5-day course percentage is less than 75% and has decreased compared with the previous quarter).

Figure 13. Trend in percentage of GP practices that are above, moving towards, and moving away from the target

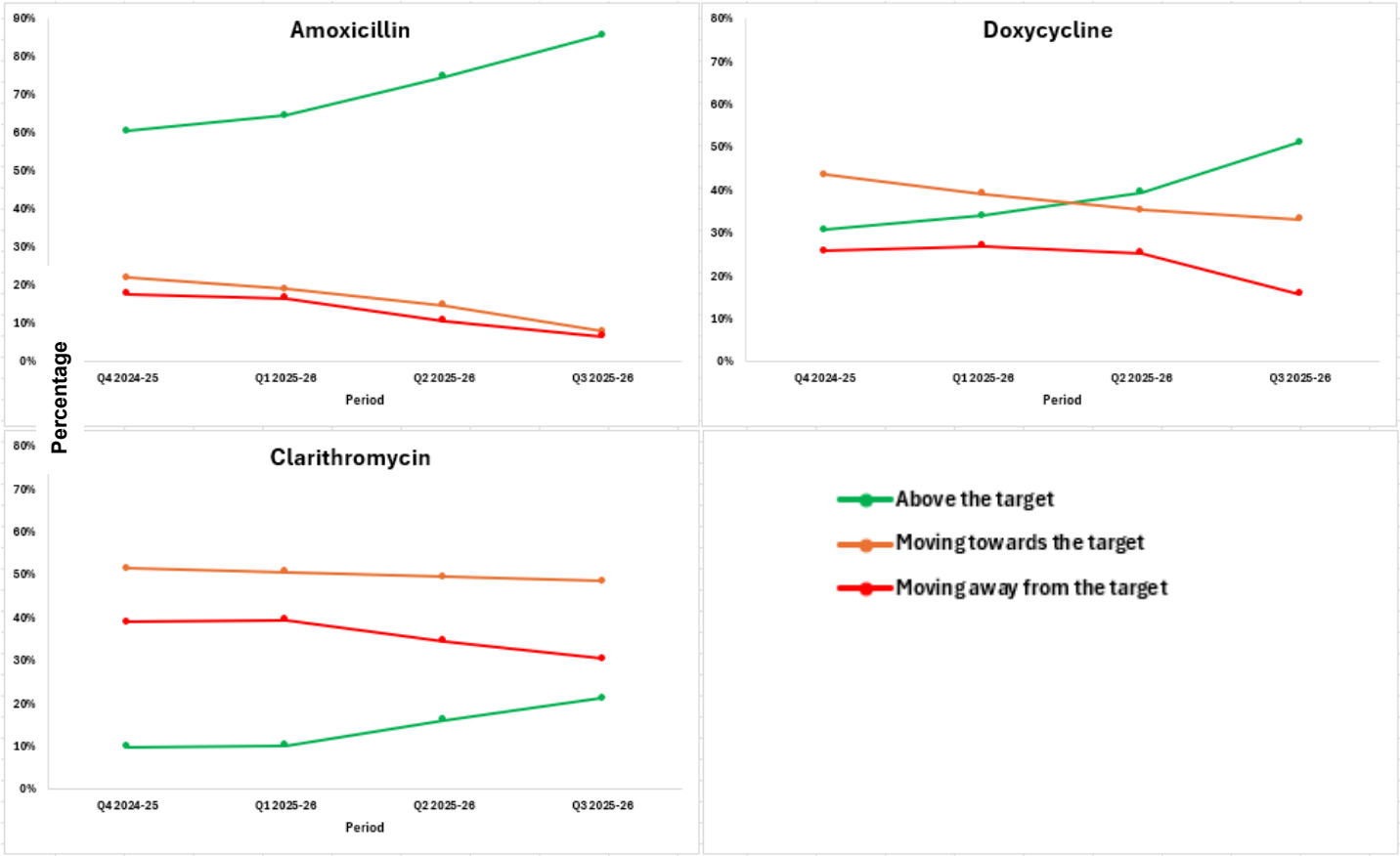
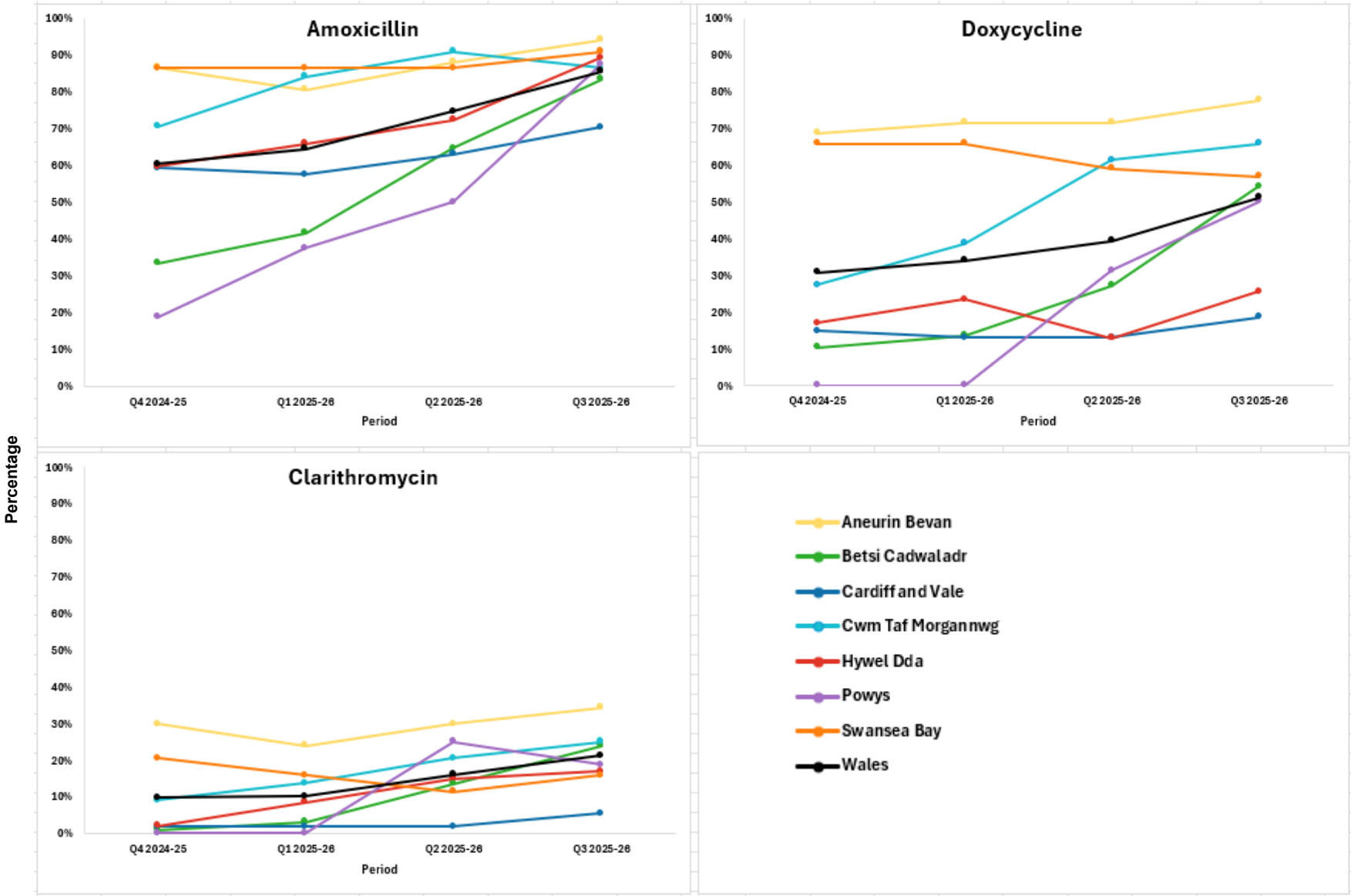


Figure 14 shows the trend in percentage of GP practices above the target for each health board.

Figure 14. Trend in percentage of GP practices that are above the target by health board



A monthly average has been calculated and used to compare cost, quantity and spend by antibiotic for Wales in 2024 and 2025 (Table 1). The cost of clarithromycin increased following the group A streptococcus outbreak in winter 2022 due to shortages and has slowly reduced. Figure 15 shows the trend in cost per pack by antibiotic from December 2022 to December 2025 (based on drug tariff). Quantity and spend data included here are for 5- and 7-day course durations only. Figure 16 shows percentage change in quantity prescribed for each antibiotic by health board.

Table 1. Average monthly cost, quantity and spend by antibiotic for Wales in 2024 and 2025

	Amoxicillin			Doxycycline			Clarithromycin		
	2024	**2025**	**2025 vs 2024**	**2024**	**2025**	**2025 vs 2024**	**2024**	**2025**	**2025 vs 2024**
Cost per pack*	£1.08	£0.94	-£0.14 (-13%)	£1.00	£0.78	-£0.22 (-22%)	£6.15	£3.27	-£2.88 (-47%)
Quantity (capsules/ tablets)	456,779	349,110	-107,669 (-24%)	145,619	118,261	-27,358 (-19%)	96,062	74,082	-21,980 (-23%)
Spend	£32,678	£21,903	-£10,774 (-33%)	£18,151	£11,687	-£6,464 (-36%)	£44,938	£17,524	-£27,414 (61%)

*Pack sizes were 15 capsules for amoxicillin, 8 capsules for doxycycline and 14 tablets for clarithromycin.

Annual spend decreased by £129,293, £77,571 and £328,962 for amoxicillin, doxycycline and clarithromycin respectively. The change in spend is a combination of the change in cost of the medicine and the change in the quantity prescribed.

- For amoxicillin, the change in quantity appears to account for approximately two thirds of the change in spend, equating to an approximate saving of £86,000.
- For doxycycline, the change in quantity appears to account for approximately half of the change in spend, equating to an approximate saving of £38,500.
- For clarithromycin, the change in quantity appears to account for approximately one third of the change in spend, equating to an approximate saving of £109,500.
- The reduction in quantity prescribed will additionally have an impact on the environment by lowering associated carbon emissions.

Figure 15. Trend in cost per pack of each antibiotic from December 2022 to December 2025

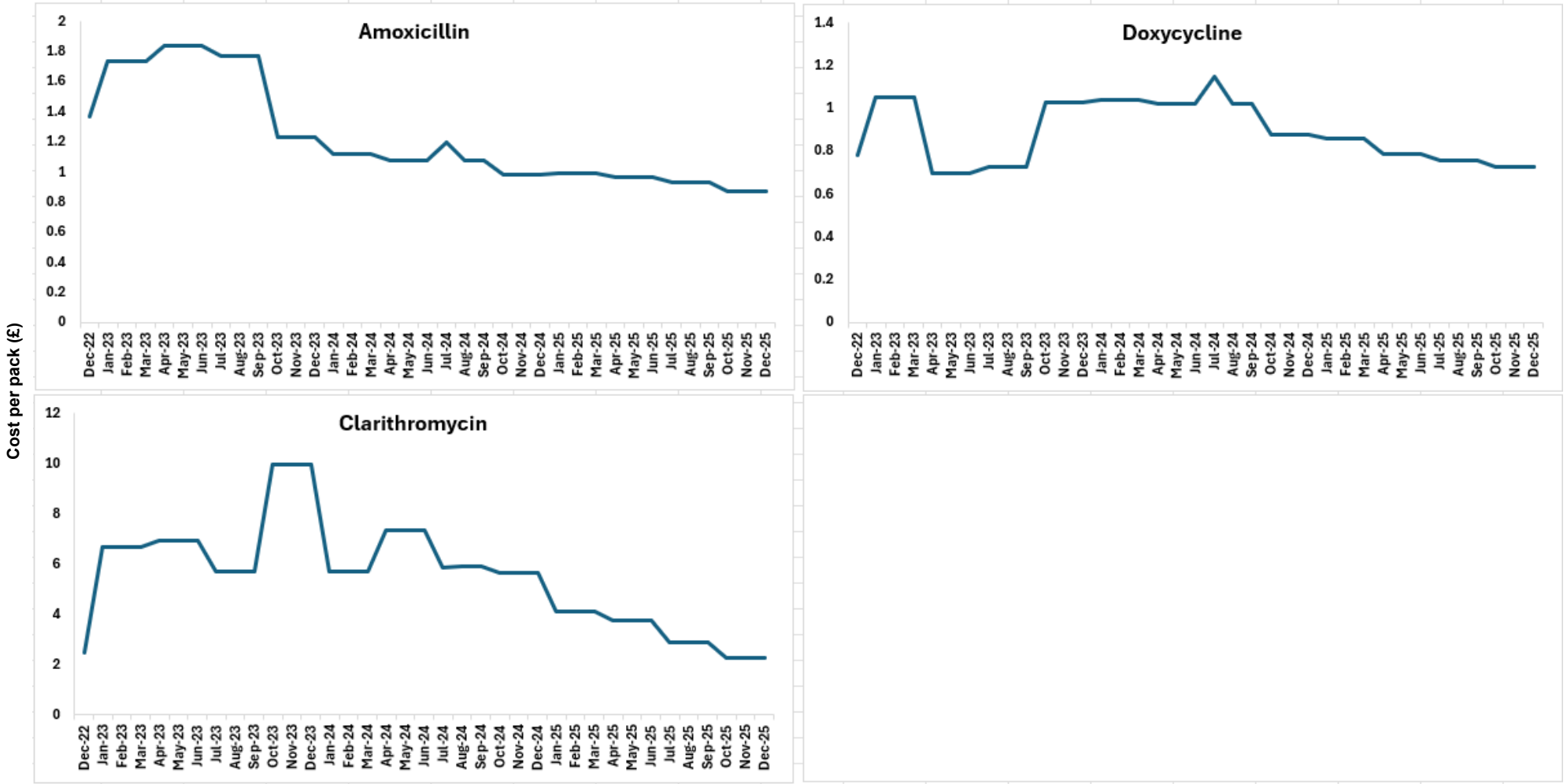


Figure 16. Average percentage change in quantity prescribed for each antibiotic by health board for 2025 versus 2024