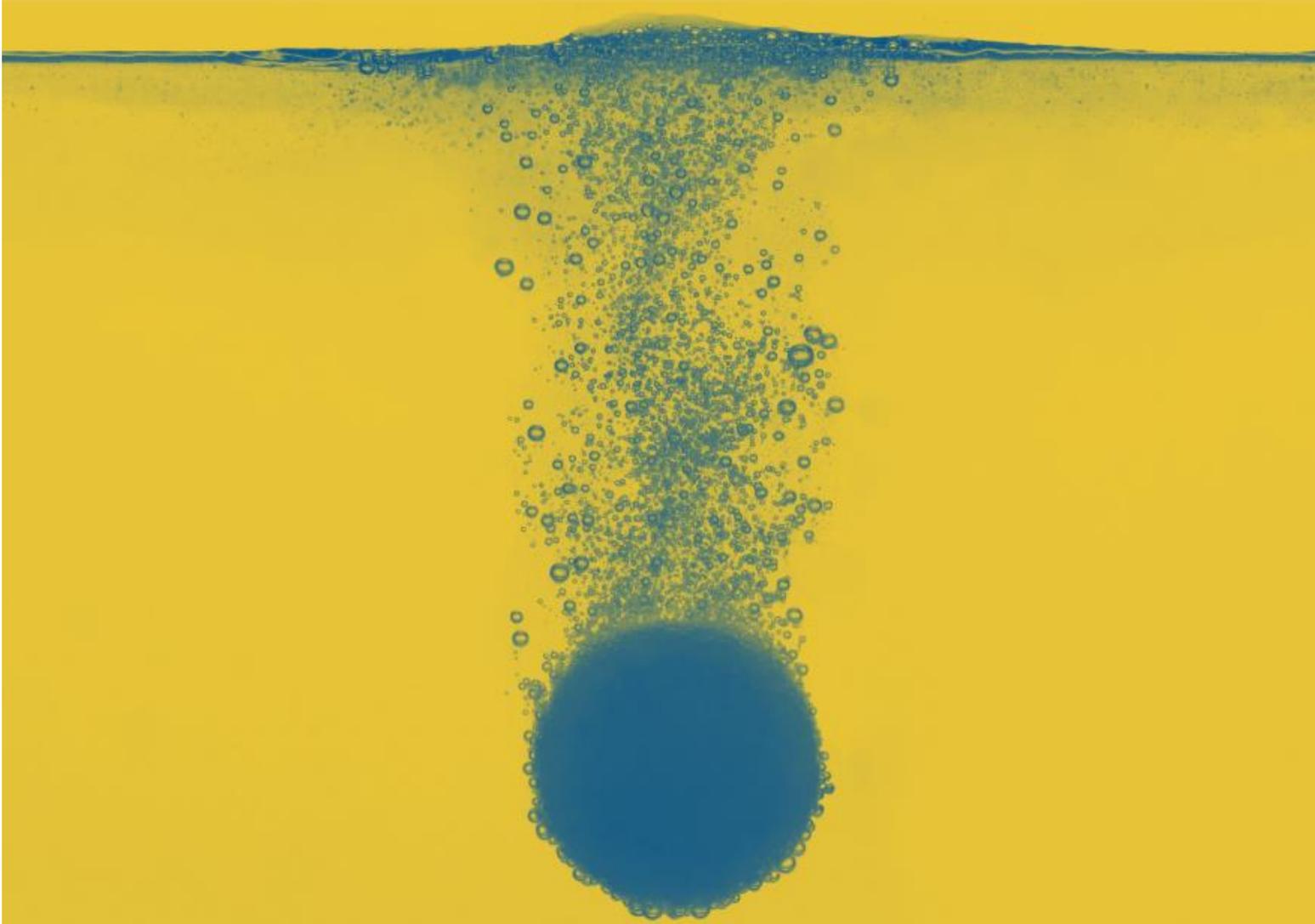




YCC Wales

Yellow Card Centre Wales
Canolfan Cerdyn Melyn Cymru

Annual Report 2022-2023





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YELLOW CARD CENTRE WALES ANNUAL REPORT TO MHRA

Date: 2022/23

1. TEAM

Executive Team

| | |
|---------------|--|
| Mrs D Burnett | National Lead Pharmacist, Welsh Medicines Advice Service (WMAS) |
| Dr A M Thomas | Medical Director, Yellow Card Centre (YCC) Wales |
| Mrs J Walker | Specialist Pharmacist – Pharmacovigilance and Patient Safety, WMAS |
| Dr C Norris | Project Manager & Medical Writer, YCC/WMAS |

Advisory Board

| | |
|---------------------|---|
| Mrs A Adams [Chair] | Principal Pharmacist, Welsh Medicines Advice Service (WMAS) |
| Dr R Bracchi | Medical Advisor, All Wales Therapeutics and Toxicology Centre (AWTTC) |
| Professor J Coulson | Clinical Director, AWTTC |
| Dr A Cope | Dental Consultant, Public Health Wales |
| Mr A Evans | Chief Pharmaceutical Officer, Welsh Government |
| Dr L Gray | Medical Director, National Poisons Information Service Cardiff |
| Ms K Haines | Head of Welsh Analytical Prescribing Support Unit, AWTTC |
| Ms C Howard | Immunisation Co-ordinator, Child Health, Cardiff and Vale UHB |
| Dr L Hughes | Senior Lecturer in Pharmacy, Cardiff University |
| Dr L James | All Wales Consultant Pharmacist, Acute Care & Medication Safety |
| Mrs N Mahon | Immunisation Co-ordinator, Child Health, Cardiff and Vale UHB |
| Mr A Meudell | Patient representative |
| Dr R Ratcliffe | General Practitioner, Wales Deanery |
| Mrs K Samuels | Head of Patient Access to Medicines Service, AWTTC |
| Dr M Singh | Consultant in Acute Medicine, Aneurin Bevan UHB |

2. EXECUTIVE SUMMARY

During 2022/23, the impact of the COVID-19 pandemic on the health care system throughout Wales and the UK continued to affect the way in which the Yellow Card Centre (YCC) Wales was able to carry out their promotional and educational activities. Despite the challenges faced, the team from YCC Wales continued to promote the reporting of suspected adverse drug reactions (ADRs) via the Yellow Card scheme to healthcare professionals and members of the public across Wales.

The number of Yellow Card reports for medicinal products submitted from Wales increased from 2084 in 2021/22 to 4024 in 2022/23, an increase of 93%. From July 2022, suspected ADRs to COVID-19 vaccines were included in the reporting numbers. The highest percentage increase was seen in Powys Teaching HB, with an increase of 198% when compared with 2021/22. The largest percentage decrease was seen in Velindre NHS Trust, where the number of reports fell by 38%.

Throughout 2022/23 YCC Wales continued to work with key stakeholders to raise awareness of the importance of ADR reporting to COVID-19 vaccines. In addition to the 4024 Yellow Card reports mentioned above, 388 reports of suspected ADRs to the COVID-19 vaccines were submitted from Wales during Q1 2022/23 (April – June 2022). YCC Wales also worked with the National Antiviral Service to develop materials promoting reporting of suspected ADRs to COVID-19 treatments.

Patients, parents, carers and consumers were the highest reporting group during 2022/23, contributing 42% (1696) of the total number of reports for the year. This was an increase of 222% when compared with 2021/22. The largest percentage increase (+300%) was seen in the number of reports submitted by paramedics. An increase was also seen in the number of reports from



pharmacists, hospital pharmacists, nurses/midwives, hospital doctors, pre-registration pharmacists, other healthcare professionals, hospital nurses, pharmacy assistants, community pharmacists and radiographers.

1st March 2023 was the 40th Anniversary of the Yellow Card Centre Wales and there are plans to mark this occasion at the annual YCC Wales Medicine Safety Training Day later in the year.

YCC Wales continued to support local Yellow Card Champions and continued to engage with the Welsh Medication Safety Officers (MSOs) and other members of the Welsh Medicines Safety Network. During 2022/23, YCC Wales continued to develop their relationship with colleagues and students at Swansea University, by providing teaching to their first- and second-year Pharmacy undergraduate students.

Throughout the year, YCC Wales continued to use and develop bilingual promotional materials for use in primary and secondary care. YCC Wales’ mascot ‘Yellow Card Charlie’ continued to feature in these. In November 2022, YCC Wales launched their animated video to promote the Yellow Card scheme to member of the public and healthcare professionals across Wales. The Yellow Card National Prescribing (reporting) Indicators remained in place, with two targets having been revised since 2021/22. The YCC Wales website (yccwales.org) continued to be maintained.

It is encouraging to see that there was an increase in the number of Yellow Card reports submitted from Wales during 2022/23, although it must be noted that suspected ADRs to the COVID-19 vaccines were included in the reporting data from July 2022.

During 2023/24, YCC Wales will continue to introduce new initiatives to promote and encourage reporting of suspected ADRs via the Yellow Card scheme throughout Wales and hopes to see a further increase in reporting rates.

3. YELLOW CARD DATA

a. Total numbers

A total of 4024 reports of suspected ADRs to medicinal products originated from the YCC Wales region in 2022/23. This includes reports of suspected ADRs to COVID-19 vaccines submitted during July 2022 to March 2023 (Q2 - Q4). The total number of reports represents an increase of 93% when compared with 2021/22 (2084). However, it is important to note that the 2021/22 reporting data did not include reports for COVID-19 vaccines. When COVID-19 vaccine reports from Q2 – Q4 are excluded from the 2022/23 reporting data, the total number of reports is 2839. This represents an increase of 36% when comparing non-COVID-19 vaccine reports from 2021/22 to 2022/23. Table 1 and Figure 1 show the total number of Yellow Card (YC) reports from Wales over the last 5 years.

| Year | Number of reports | Percentage change on previous year |
|---------|-------------------|------------------------------------|
| 2022/23 | 4024 [†] | +93 [†] |
| 2021/22 | 2084 [*] | +7 [*] |
| 2020/21 | 1955 [*] | -33 [*] |
| 2019/20 | 2927 | -8 |
| 2018/19 | 3192 | +5 |

Table 1: Number of Yellow Card reports submitted from Wales over the last 5 years

[†] For the year 2022/23, the number of Yellow Card reports stated in Table 1 includes reports of suspected adverse drug reactions to the COVID-19 vaccines for Q2-Q4.

^{*} For the years 2020/21 and 2021/22, the number of Yellow Card reports stated in Table 1 does not include reports of suspected adverse drug reactions to the COVID-19 vaccines

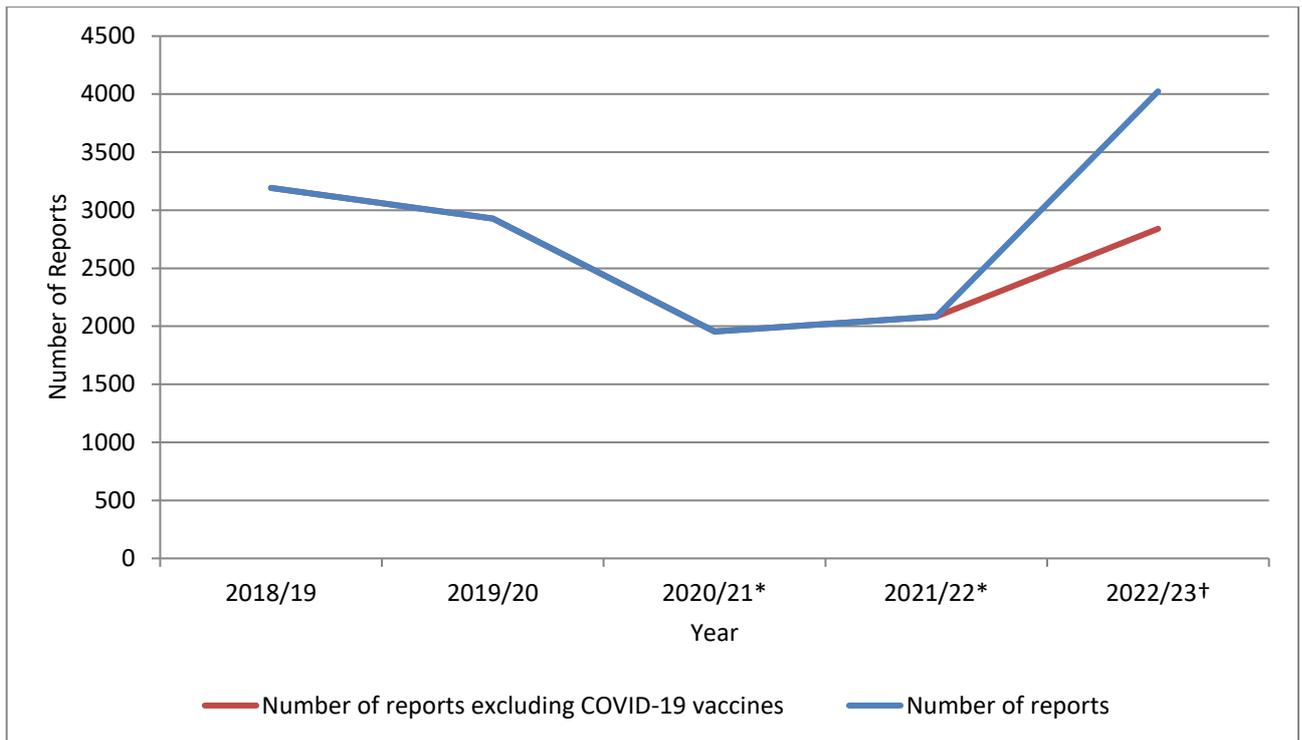


Figure 1: Number of Yellow Card reports submitted from Wales over the last 5 years

† For the year 2022/23, the number of Yellow Card reports stated in Table 1 includes reports of suspected adverse drug reactions to the COVID-19 vaccines for Q2-Q4.

* For the years 2020/21 and 2021/22, the number of Yellow Card reports shown in Figure 1 does not include reports of suspected adverse drug reactions to the COVID-19 vaccines.

In addition to the 4024 Yellow Card reports shown above, 388 suspected ADRs to the COVID-19 vaccines were submitted from the YCC Wales region during April 2022 – June 2022 (Q1). See Appendix 1 for a breakdown summary of the number of reports submitted by vaccine brand, reporter qualification, sex and age.

Note on Reporting Data Totals

The total number of Yellow Card reports stated in Table 1 and Figure 1 (4024) is lower than the number of reports reflected in Figure 2 onwards (4029). This is due to merger of duplicate reports by the Medicines and Healthcare products Regulatory Agency (MHRA). From Figure 2 onwards, the data reflects the total number of Yellow Card reports, which allows for the differentiation of Yellow Card reports relating to the same suspected ADR which have been submitted by different reporters e.g. a GP and a Pharmacist. Five suspected ADRs were submitted by two reporters each in 2022/23.

Figure 2 shows the seven Health Boards in Wales and Figure 3 the number of reports from each Health Board over the past five years. Reporting numbers for Velindre NHS Trust have also been included.

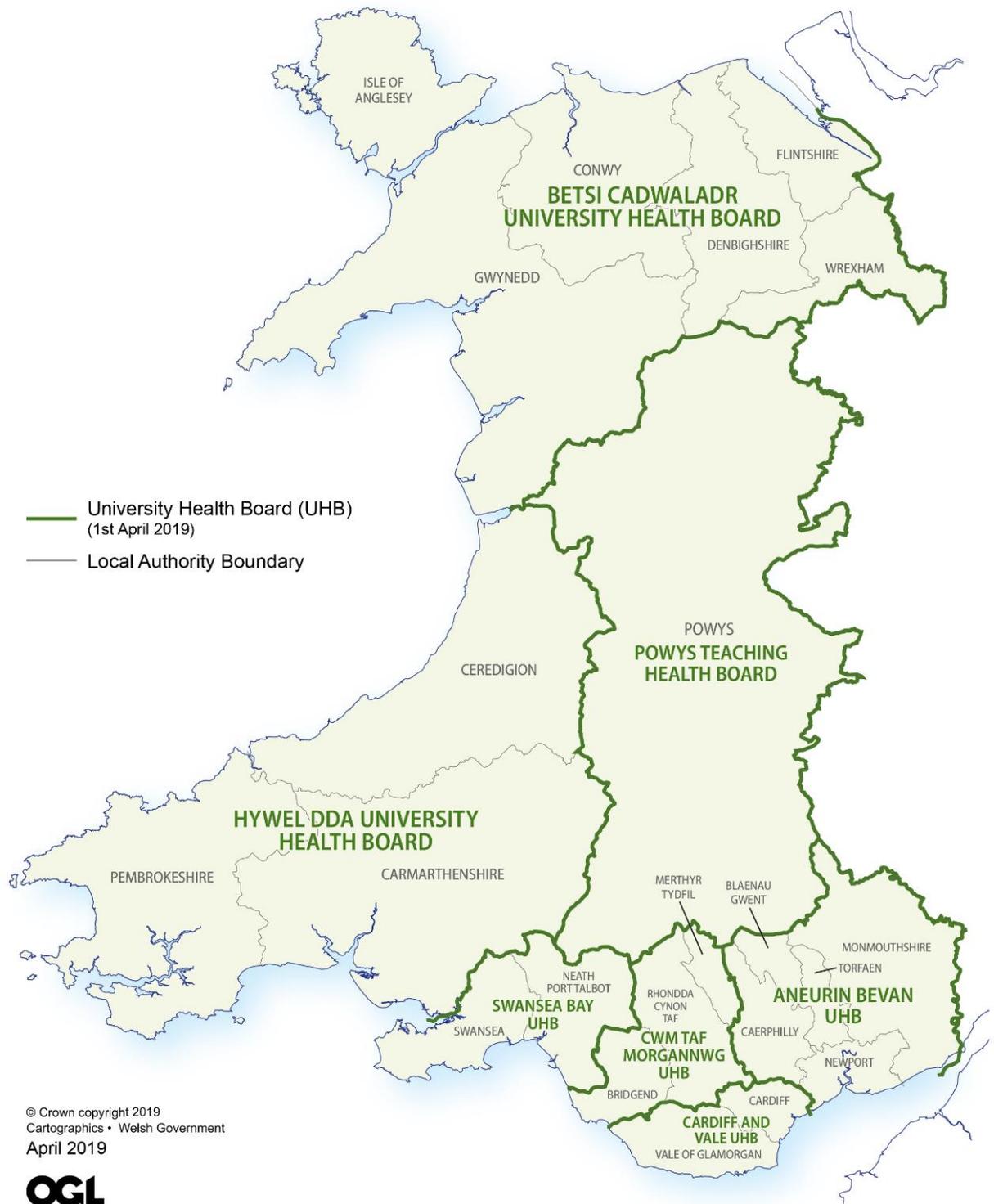


Figure 2: Map showing Health Boards in Wales

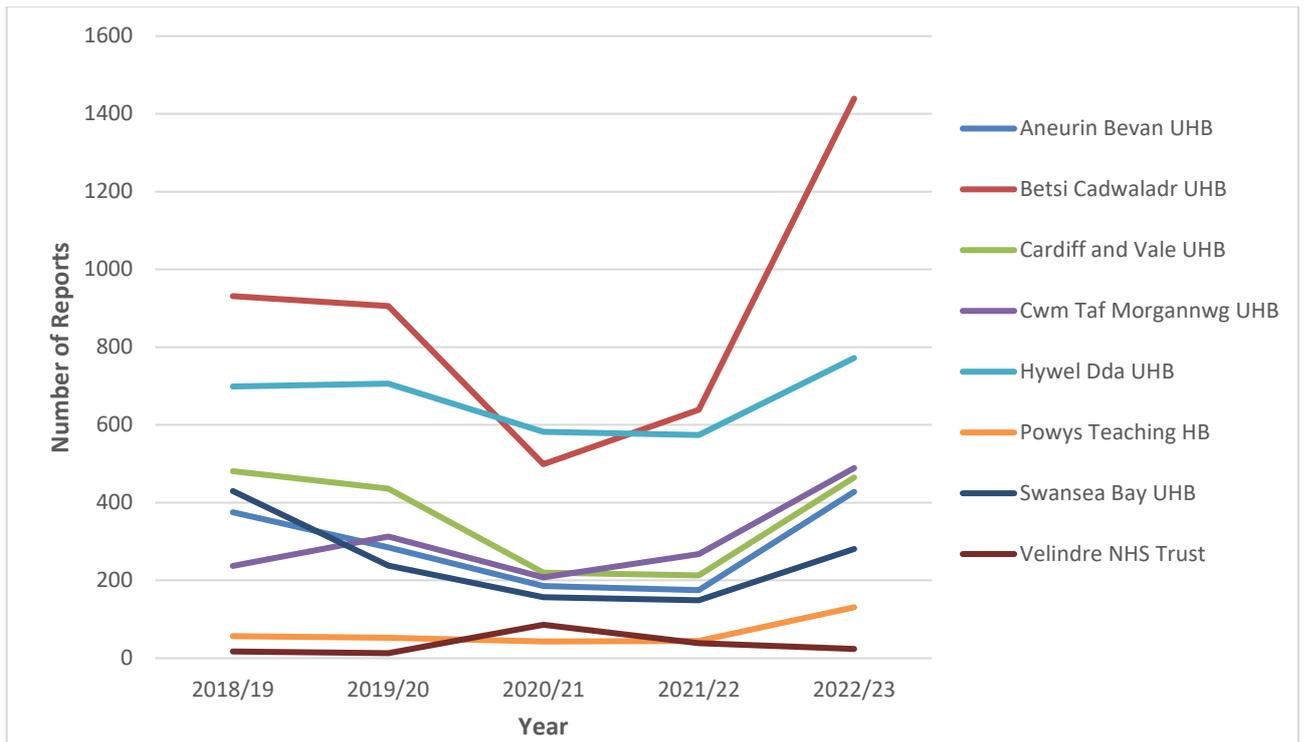


Figure 3: Number of Yellow Card reports submitted from each Health Board/NHS Trust in Wales over the last five years

b. Reporter qualifications

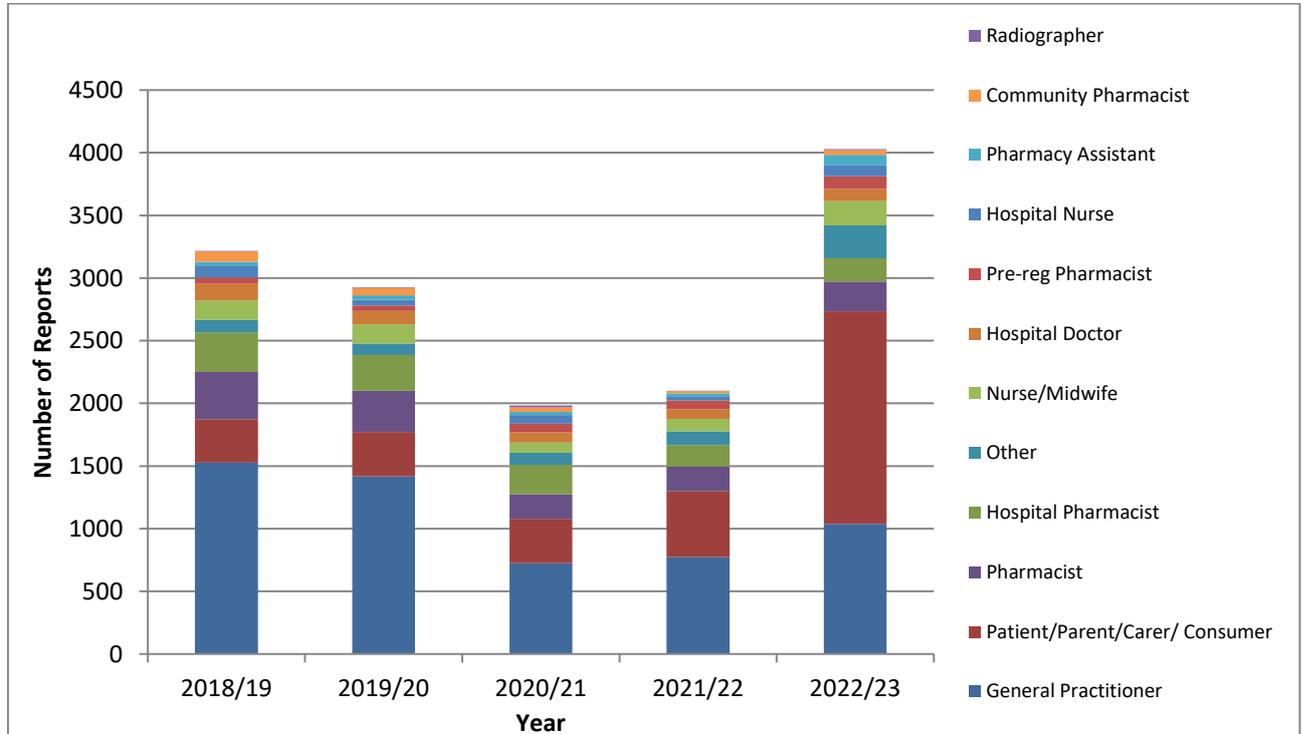


Figure 4: Number of Yellow Card reports submitted from Wales over the last 5 years by reporter qualification

***Other reporter qualifications = dentist, medical student, optometrist, hospital health professional, other health professional, paramedic, physician, chiropodist**



| Reporter | 2018/19 | 2019/20 | 2020/21 | 2021/22 | 2022/23 |
|-------------------------------|---------|---------|---------|---------|---------|
| General Practitioner | 1527 | 1417 | 725 | 774 | 1038 |
| Patient/Parent/Carer/Consumer | 346 | 355 | 353 | 527 | 1696 |
| Pharmacist | 378 | 328 | 197 | 195 | 239 |
| Hospital Pharmacist | 315 | 286 | 235 | 171 | 185 |
| Nurse/Midwife | 154 | 152 | 82 | 101 | 192 |
| Hospital Doctor | 134 | 108 | 83 | 76 | 98 |
| Pre-registration pharmacist | 51 | 42 | 69 | 70 | 101 |
| Unknown | 0 | 0 | 0 | 33 | 133 |
| Other Health Professional | 84 | 72 | 69 | 29 | 94 |
| Hospital Nurse | 87 | 46 | 68 | 29 | 88 |
| Pharmacy assistant | 38 | 37 | 26 | 28 | 82 |
| Physician | 0 | 0 | 7 | 20 | 7 |
| Hospital Health Professional | 13 | 29 | 5 | 19 | 19 |
| Community Pharmacist | 81 | 58 | 34 | 17 | 39 |
| Radiographer | 5 | 5 | 15 | 4 | 8 |
| Medical student | 2 | 6 | 4 | 3 | 2 |
| Dentist | 6 | 7 | 7 | 2 | 2 |
| Optometrist | 1 | 0 | 2 | 2 | 1 |
| Paramedic | 1 | 1 | 0 | 1 | 4 |
| Coroner | 2 | 1 | 1 | 0 | 0 |
| Chiropodist | 0 | 0 | 0 | 0 | 1 |

Table 2: Number of Yellow Card reports submitted from Wales over the last 5 years by reporter qualification

a. Serious reports

| Year | Number of serious reports | Percentage of total reports | Percentage change on previous year |
|---------|---------------------------|-----------------------------|------------------------------------|
| 2022/23 | 1624 | 40 | +2 |
| 2021/22 | 790 | 38 | -1 |
| 2020/21 | 771 | 39 | 0 |
| 2019/20 | 1138 | 39 | +2 |
| 2018/19 | 1176 | 37 | -5 |

Table 3: Number of serious reactions reported from Wales over the last five years

b. Fatal reports

| Year | Number of fatal reports | Percentage of total reports | Percentage change on previous year |
|---------|-------------------------|-----------------------------|------------------------------------|
| 2022/23 | 29 | 0.7 | -0.4 |
| 2021/22 | 23 | 1.1 | -0.1 |
| 2020/21 | 23 | 1.2 | 0 |
| 2019/20 | 36 | 1.2 | 0 |
| 2018/19 | 37 | 1.2 | +0.4 |

Table 4: Number of fatal reports submitted from Wales over the last five years

It is important to note that suspected ADRs are associations only and there is not necessarily a causal link between any of the medicines reported on a particular Yellow Card and the fatal outcome.



c. Age breakdown

| Age band (years) | 2020/21 | 2021/22 | 2022/23 |
|------------------|-------------|-------------|-------------|
| Unknown | 64 | 212 | 702 |
| Under 2 | 24 | 35 | 40 |
| 2 - 6 | 25 | 19 | 41 |
| 7 - 12 | 18 | 25 | 43 |
| 13 - 17 | 34 | 52 | 33 |
| 18 - 24 | 101 | 81 | 132 |
| 25 - 34 | 181 | 173 | 277 |
| 35 - 44 | 156 | 170 | 284 |
| 45 - 54 | 212 | 229 | 467 |
| 55 - 64 | 286 | 280 | 622 |
| 65 - 74 | 406 | 395 | 700 |
| 75 - 84 | 312 | 289 | 516 |
| 85+ | 136 | 124 | 172 |
| Total | 1955 | 2084 | 4029 |

Table 5: Number of Yellow Card reports submitted from Wales over the last three years by patient age

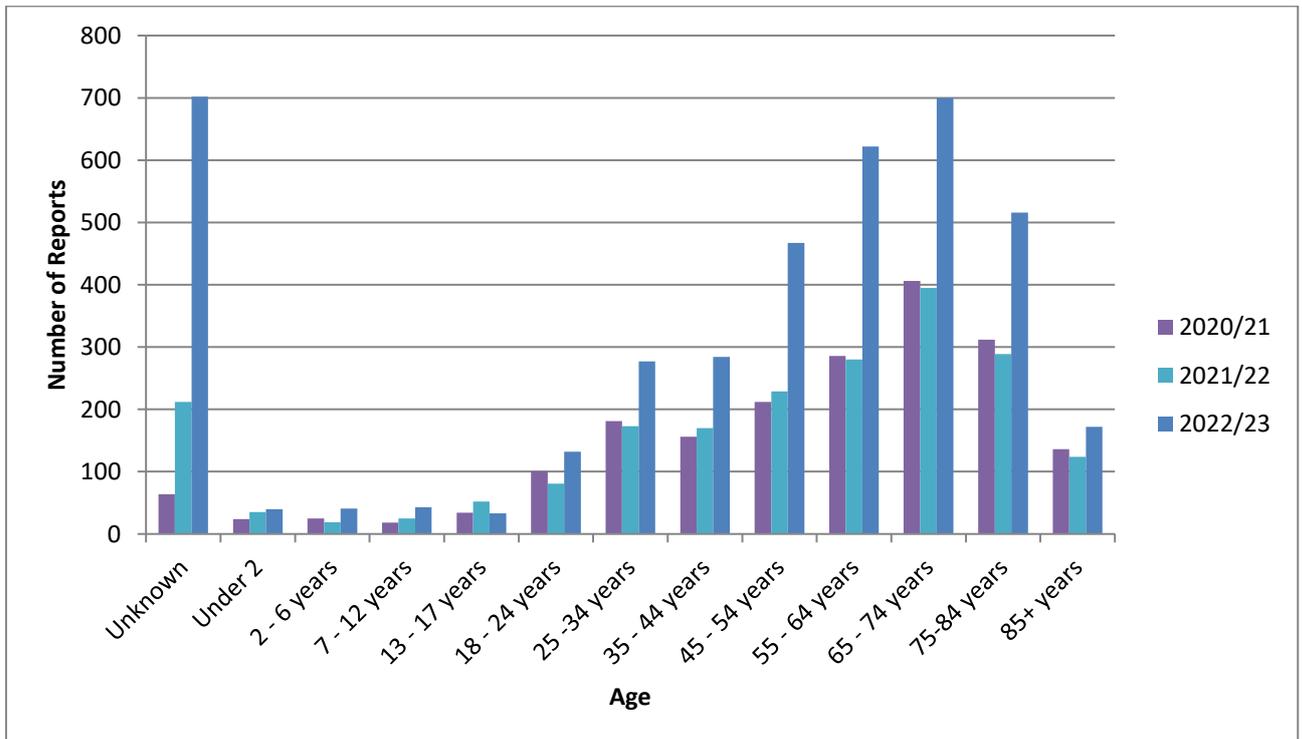


Figure 5: Number of Yellow Card reports submitted from Wales over the last three years by patient age



d. Top 10 suspected medicines - comparison of last two years

| Drug name | Number of reports (2021/22) | Number of reports (2022/23) |
|---|-----------------------------|-----------------------------|
| COVID-19 vaccine (Moderna) ▼ | N/A† | 618 |
| COVID-19 vaccine (BioNTech and Pfizer) ▼ | N/A† | 486 |
| Nirmatrelvir and Ritonavir (Paxlovid) ▼ | 0# | 125 |
| Influenza Virus Vaccines* (▼ some brands) | 116 | 97 |
| COVID-19 vaccine (AstraZeneca) ▼ | N/A† | 78 |
| Amlodipine | 53 | 74 |
| Ramipril | 46 | 69 |
| Sertraline | 65 | 66 |
| Atorvastatin | 29 | 63 |
| Nitrofurantoin | 54 | 61 |

Table 6: Comparison of the number of Yellow Card reports submitted over the last two years for the top 10 suspected medicines in Wales.

For Table 6 only: Note that when multiple suspected medicines are submitted on a single Yellow Card report, each suspected medicine is counted individually.

▼ medicine subject to additional monitoring

† reports of suspected ADRs against COVID-19 vaccines were not included in 2021/22 data

Paxlovid was available in Wales from February 2022

* multiple brands



e. Sources of reports – detailed breakdown

| Reporter | 2020/21 | | 2021/22 | | 2022/23 | |
|----------------------------------|-------------|------------|-------------|------------|-------------|------------|
| | Number | % of total | Number | % of total | Number | % of total |
| Carer | 19 | 1.0 | 18 | 0.9 | 2 | 0.0 |
| Parent | 38 | 1.9 | 55 | 2.6 | 81 | 2.0 |
| Patient | 290 | 14.8 | 451 | 21.5 | 1562 | 38.8 |
| Consumer | 6 | 0.3 | 3 | 0.1 | 51 | 1.3 |
| Community Pharmacist | 34 | 1.7 | 17 | 0.8 | 39 | 1.0 |
| Hospital Pharmacist | 235 | 12.0 | 171 | 8.1 | 185 | 4.6 |
| Pharmacist | 197 | 10.0 | 195 | 9.3 | 239 | 5.9 |
| Pharmacy Assistant | 26 | 1.3 | 28 | 1.3 | 82 | 2.0 |
| Pre-reg pharmacist | 69 | 3.5 | 70 | 3.3 | 101 | 2.5 |
| Hospital Nurse | 68 | 3.5 | 29 | 1.4 | 88 | 2.2 |
| Nurse | 78 | 4.0 | 101 | 4.8 | 183 | 4.5 |
| GP | 725 | 36.9 | 774 | 36.8 | 1038 | 25.8 |
| Hospital Doctor | 83 | 4.2 | 76 | 3.6 | 98 | 2.4 |
| Physician | 7 | 0.4 | 20 | 1.0 | 7 | 0.2 |
| Coroner | 1 | 0.1 | 0 | 0.0 | 0 | 0.0 |
| Dentist | 7 | 0.4 | 2 | 0.1 | 2 | 0.0 |
| Midwife | 4 | 0.2 | 0 | 0.0 | 9 | 0.2 |
| Optometrist | 2 | 0.1 | 2 | 0.1 | 1 | 0.0 |
| Chiropodist | 0 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Paramedic | 0 | 0.0 | 1 | 0.0 | 4 | 0.1 |
| Radiographer | 15 | 0.8 | 4 | 0.2 | 8 | 0.2 |
| Hospital Healthcare Professional | 5 | 0.3 | 19 | 0.9 | 19 | 0.5 |
| Healthcare Assistant | 2 | 0.1 | 4 | 0.2 | 10 | 0.2 |
| Other Healthcare Professional | 67 | 3.4 | 25 | 1.2 | 84 | 2.1 |
| Medical Student | 4 | 0.2 | 3 | 0.1 | 2 | 0.0 |
| Unknown | 0 | 0.0 | 33 | 1.6 | 133 | 3.3 |
| Total | 1982 | 100 | 2101 | 100 | 4029 | 100 |

Table 7: Number of Yellow Card reports submitted from Wales over the last three years by reporter type



f. Type of Reports

| Report Type | Number of reports (2022/23) | Percentage of total reports |
|-------------|-----------------------------|-----------------------------|
| EYC | 2443 | 61 |
| GP systems | 666 | 17 |
| App | 838 | 21 |
| Paper | 73 | 2 |
| MiDatabank | 9 | <1 |

Table 8: Number of reports submitted during 2022-23 from Wales by submission route

4. DISCUSSION OF YELLOW CARD DATA

An increase of 93% was seen in the number of Yellow Card reports submitted for medicinal products from Wales during 2022/23 (4024) when compared with the previous year (2084). This includes suspected ADRs reported to COVID-19 vaccines during Q2-Q4 2022/23.

The health board with the largest percentage increase in the number of Yellow Card reports that were submitted was Powys Teaching HB, where there was an increase of 198% in 2022/23 compared with 2021/22. Aneurin Bevan UHB, Betsi Cadwaladr UHB, Cardiff and Vale UHB, Cwm Taf Morgannwg UHB, Hywel Dda UHB and Swansea Bay UHB also showed increases in the number of Yellow Card reports submitted. Velindre NHS Trust had a decrease in the number of Yellow Card reports submitted (-38%).

The highest number of reports came from the Patient/Parent/Carer/Consumer group, which contributed 42% (1696) of the total number of reports received for the year. This was an increase of 222% when compared with the previous year. The second highest reporting group was General Practitioners who contributed 26% (1038) of the total number of reports received for the year. When compared with the previous year, there was an increase of 34% in the number of Yellow Card reports submitted by this group.

An increase was seen in Yellow Card reporting numbers from hospital pharmacists (171 to 185, +8%), pharmacists (195 to 239, + 23%), hospital doctors (76 to 98, +29%), pre-registration pharmacists (70 to 101, +44%), , nurses/midwives (101 to 192, +90%), radiographers (4 to 8, +100%), community pharmacists (17 to 39, +129%), pharmacy assistants (28 to 82, +193%), hospital nurses (29 to 88, +203%), other healthcare professionals (29 to 94, +224%), and paramedics (1 to 4, +300%). No change was seen in the number of reports submitted from hospital healthcare professionals, dentists or coroners. A decrease was seen in the number of reports submitted from physicians, medical students and optometrists.

The percentage of serious suspected ADR reports submitted within Wales increased by 2% to 40% when compared with 2021/22.

As in the previous year the highest number of reports concerned patients in the group aged 65-74 years (700). There was a reduction in the number of reports for the 13-17 years age group (52 to 33). There was an increase in the number of reports across all other age groups.

The most frequently reported suspected medicine from the YCC Wales region was the Moderna COVID-19 vaccine ▼ with 618 reports. Four vaccines featured in the top 10 suspected medicines list: three COVID-19 vaccines (Moderna, BioNTech and Pfizer, and AstraZeneca) and the Influenza Virus vaccines. One antiviral agent (nirmatrelvir and ritonavir ▼) and one antimicrobial agent (nitrofurantoin) featured in the top 10 suspected medicines list. Five of the top 10 suspected medicines were on the list of medicines subject to additional monitoring (identified using an inverted black triangle ▼).



The majority (61%) of reports were submitted as electronic Yellow Cards. An increase in the percentage of reports submitted via the app was seen with 21% submitted this year compared to 4% last year. However, only 0.2% were submitted via MiDatabank, which represents a small decrease from 0.8% last year. YCC Wales will continue to advertise the availability of the app and will work with Medicines Information Teams across Wales to increase Yellow Card reporting via the MiDatabank programme.



5. PROMOTIONAL ACTIVITIES

a. Training delivered to healthcare professionals and their respective groups

| Audience type | Session type | Duration (hours) | Number of sessions | Total audience numbers | Total hours training |
|--|-----------------------|------------------|--------------------|------------------------|----------------------|
| Healthcare professionals | Training day | 8 | 1 | 45 | 8 |
| Healthcare professionals | HEIW webinar | 2 | 1 | ? | 1 |
| Healthcare professionals and external colleagues | Conference stand | 2 | 1 | 100 | 2 |
| Health Board Staff* | Information stand | 4 | 1 | 20 | 4 |
| Health Board Staff* | Information stand | 4 | 2 | 30 | 8 |
| Health Board Staff* | Awareness campaign | 1 | 1 | Not known | 1 |
| IPFR panel members and clinicians | Information stand | 2 | 1 | 75 | 2 |
| Junior Doctors | Lecture | 1 | 1 | 60 | 1 |
| Junior Doctors* | Lecture | 1 | 1 | 12 | 1 |
| Medication Safety Officers and Medicines Management nurses | Meeting | 0.25 | 4 | 10 | 1 |
| MSc Experimental Therapeutics | Lecture | 1 | 1 | 11 | 1 |
| Neighbourhood Care Network* | Provided presentation | 0.5 | 1 | 18 | 0.5 |
| Neighbourhood Care Network* | Provided presentation | 0.5 | 1 | 21 | 0.5 |
| Non-medical prescribers | Lecture | 3 | 1 | 30 | 3 |
| Pharmacy Technicians* | Workshop | 1 | 3 | 15 | 3 |
| Post-graduate non-medical prescribing for Optometrists | Pre-recorded lecture | 0.5 | 2 | Not known | 1 |
| Trainee Pharmacists | Lecture | 1 | 1 | 6 | 1 |
| Trainee Pharmacists | Lecture | 2 | 1 | 6 | 2 |
| Trainee Pharmacists* | Lecture | 1 | 1 | 15 | 1 |
| Welsh Government colleague | Meeting | 0.5 | 1 | 1 | 0.5 |
| Yellow Card Champions | Meeting | 1 | 1 | 10 | 1 |

Table 9: Training activities delivered to healthcare professionals during 2022/23

* Activities undertaken by YCC Wales Yellow Card champions

Yellow Card Champions also undertook other pieces of promotional work to encourage reporting by healthcare professionals. One example by Champions based in the Aneurin Bevan University Health Board was to send award certificates to GP practices for the number of Yellow Cards they completed.



b. Training delivered to patients and their respective groups

| Audience type | Session type | Duration (hours) | Number of sessions | Total audience numbers | Total hours training |
|--|-------------------|------------------|--------------------|------------------------|----------------------|
| All Wales Diabetes Patient Reference Group | Meeting | 1 | 1 | 10 | 1 |
| Members of the public | Information stand | 4 | 1 | 100 | 4 |
| Patient and Public Interest Group (PAPIG) | Meeting | 1 | 2 | 20 | 2 |
| Pembrokeshire Show | Information stand | 6 | 2 | 200 | 12 |
| Sixth form college students* | Talk | 1 | 1 | Not known | 1 |

Table 10: Training activities delivered to patients and their respective groups during 2022/23

* Activities undertaken by YCC Wales Yellow Card champions

c. Training delivered to undergraduates

| Audience type | Session type | Duration (hours) | Number of sessions | Total audience numbers | Total hours training |
|-------------------------------|-----------------------------|------------------|--------------------|------------------------|----------------------|
| Medical students | Lecture | 0.75 | 1 | 300 | 0.75 |
| Pharmacy students | Lecture | 1 | 1 | 70 | 1 |
| Pharmacy students | Workshop | 2 | 2 | 35 | 4 |
| Pharmacy students | Pre-recorded lecture | 1 | 1 | 120 | 1 |
| Pharmacy students | Workshop | 2 | 3 | 120 | 6 |
| Pharmacy and medical students | Inter-professional learning | 3 | 3 | 180 | 9 |

Table 11: Training activities delivered to undergraduates during 2022/23



Promotional stand at the Pembrokeshire Show, August 2022



d. Materials developed for YCS promotion

YCC Wales continued to produce bilingual posters and other promotional resources (e.g. display screen materials) to raise awareness of Yellow Card reporting amongst healthcare professionals and members of the public.

Materials were developed in support of World Patient Safety Day 2022 and #MedSafetyWeek 2022. Yellow Card promotional materials were distributed electronically to Yellow Card champions, members of the Welsh Medicines Safety Network, GP practices and Community Pharmacies across Wales. Posters promoting Yellow Card reporting to COVID-19 vaccines were distributed to Mass Vaccination Centres.

YCC Wales developed an electronic resource for Yellow Card Champions to provide information to enable them to undertake their role effectively, including the champion role outline, YCC Wales contact information, and links to available resources.

In November 2022 YCC Wales launched an animated video to promote the Yellow Card scheme to members of the public and healthcare professionals. The video was produced in Welsh and English and features the Yellow Card Centre Wales mascot.

6. PUBLICATIONS

Full Articles

Deslandes PN, Bracchi R, Jones K, Haines KE, Carey E, Adams A, Walker J, Thomas A, Routledge PA. Changes in suspected adverse drug reaction reporting via the yellow card scheme in Wales following the introduction of a National Reporting Indicator. *Br J Clin Pharmacol.* 2022 Aug;88(8):3829-3836. doi: 10.1111/bcp.15326. Epub 2022 Apr 7. PMID: 35322450

7. YCC WEBSITE

a. Website updates

The [YCC Wales site](#) is incorporated into the All Wales Therapeutics and Toxicology Centre (AWTTC) website. A Welsh language [website](#) is also available.

The site includes:

- Information about YCC Wales
- Yellow Card reporting information for healthcare professionals
- Yellow Card reporting information for patients, carers and the public
- Information about the YCC Wales Yellow Card Champion scheme
- Links to external educational and drug safety resources
- YCC Wales promotional materials and annual reports.

Information contained on the website is regularly reviewed and updated.

b. Number of website hits

This function has not yet been activated but will be for future years.



8. RESEARCH AND ONGOING INITIATIVES

8.1 Yellow Card Champion Scheme

In November 2012 the All Wales Chief Pharmacists Committee agreed to the implementation of the Yellow Card Hospital Champion Scheme. Whilst the scheme was initially aimed at recruiting hospital pharmacists and pharmacy technicians as Champions it has now been expanded to primary care pharmacists. Champions working across all sectors are invited to attend our training days.

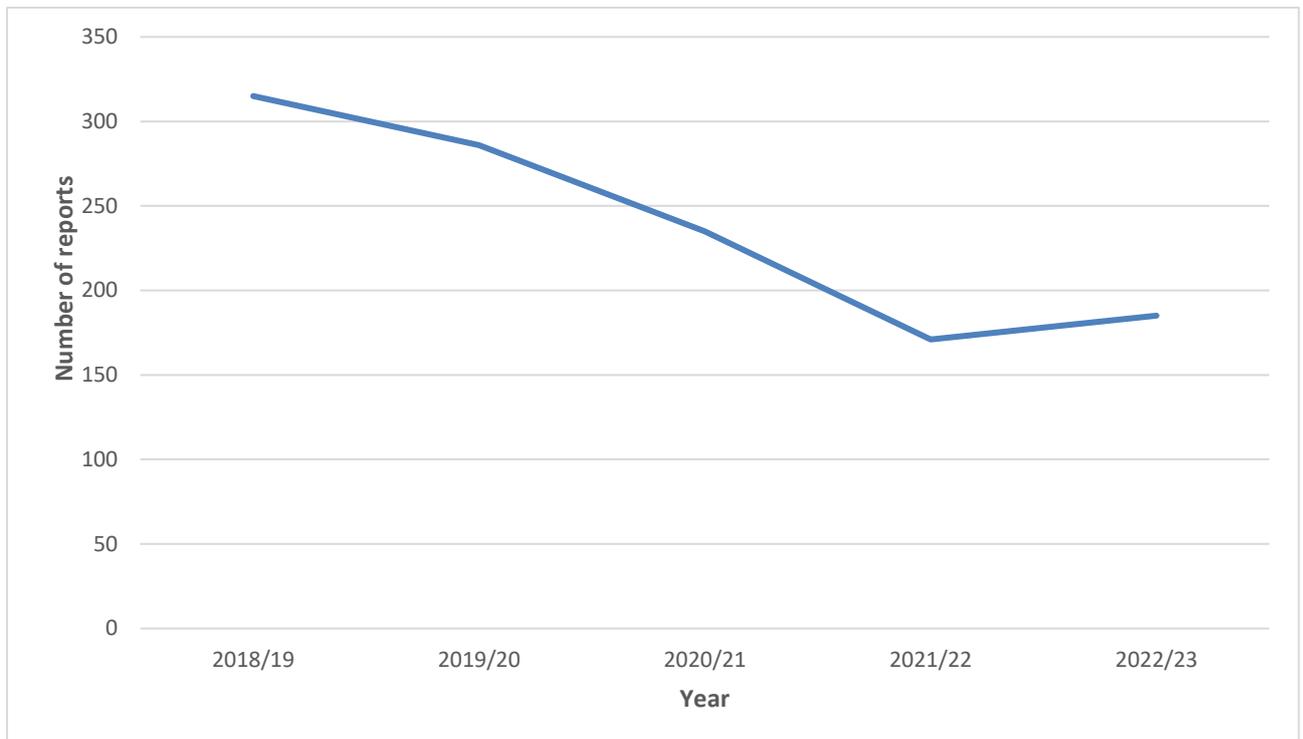


Figure 6: Number of Yellow Card reports submitted by Hospital Pharmacists in Wales over the last five years

Figure 6 shows the number of Yellow Card reports submitted by hospital pharmacists during 2022/23. There was a 7.6% increase in the number of reports submitted when compared with the previous year. We hope to continue this upward trend over the next year.

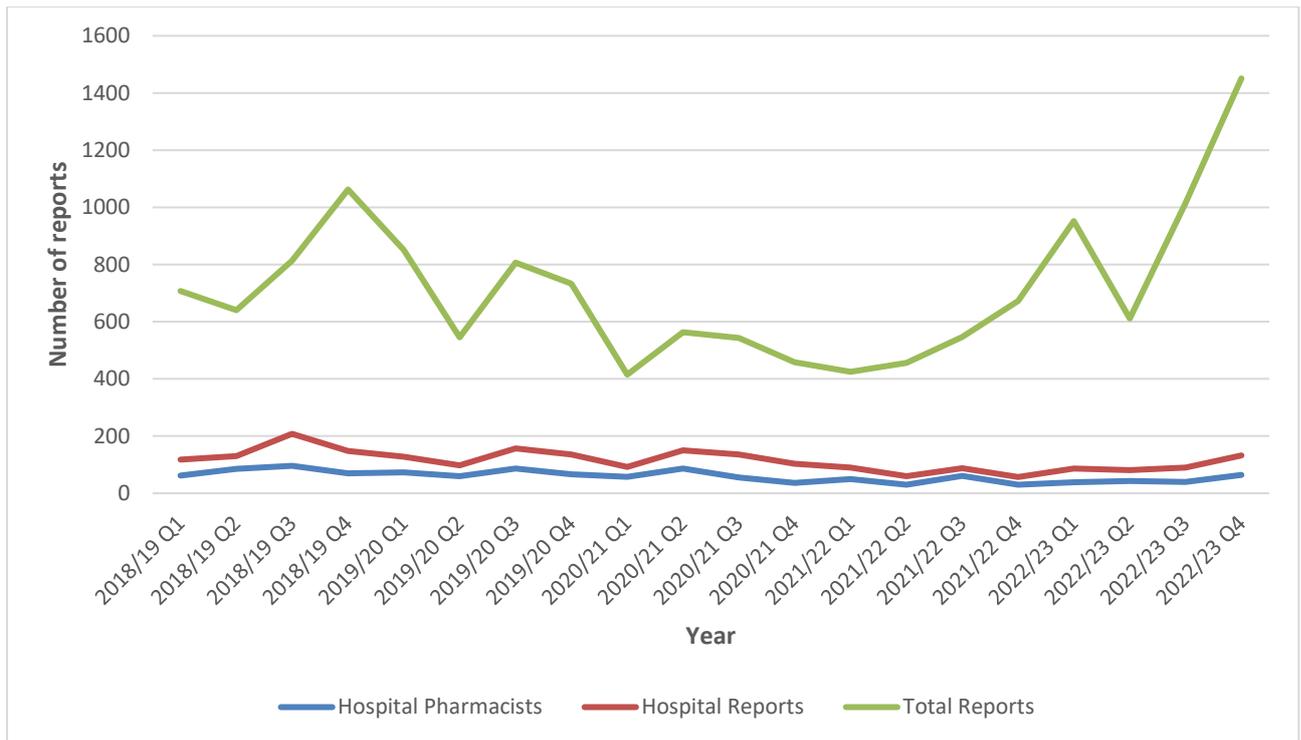


Figure 7: Number of Yellow Card reports submitted by Hospital Pharmacists, Hospital Reporters and all reporters in Wales over the last five years

***Hospital reporter qualifications = hospital doctor, hospital nurse, hospital pharmacist, hospital healthcare professional**

Figure 7 illustrates that there has been an overall increase in the number of Yellow Card reports from secondary care sources. The Yellow Card Champions have continued to provide education to healthcare professionals working within primary and secondary care, however they have reported that the number of activities carried out during 2022/23 was lower than previous years as a result of COVID-19 related work pressures. YCC Wales has continued to recruit and train new Yellow Card Champions.

Work is underway to introduce Hospital Electronic Prescribing and Medicines Administration (HEPMA) systems to hospitals across Wales. YCC Wales has put forward a strong recommendation that the systems must support integrated Yellow Card reporting. This will simplify the reporting process and encourage reporting amongst healthcare professionals working in secondary care.

In 2022/23 YCC Wales began to strengthen and revitalise the Yellow Card Champion scheme by re-establishing quarterly meetings with the Champions and utilising the Champions MS Teams channel. Regular updates regarding YCC Wales and MHRA workstreams were provided.

YCC Wales continues to work with members of the All Wales Medicines Safety Network (MSOs and medicines management nurses) to enable them to provide encouragement and support to the Yellow Card Champions working within their Local Health Boards.

YCC Wales held their annual Medicine Safety Training Day in June 2022. Yellow Card Champions, members of the All Wales Medicines Safety Network and healthcare professionals with an interest in the safe use of medicines were invited. The day's events included the following sessions:

- COVID-19: a personal experience
- Psychology of safety
- Regulating During a Pandemic and Yellow Card Biobank
- A pharmacogenomics service for NHS Wales; is this fact or fiction



- Hot tubs and horse pills; Your pandemic impulses and the enduring importance of pharmacovigilance
- Delivering safe new medicines services during a pandemic
- Let's go Green for Med Safety
- Interventions that could increase the reporting of adverse drug reactions in children
- Motivational Session.

8.2 National Prescribing Indicator

In 2022/23, Yellow Card reporting continued as a National Prescribing (reporting) Indicator (NPI) in Wales. NPIs are developed annually to promote national prescribing, balancing both quality and efficacy.

The following targets were in place for 2022/23:

- GP practices - GP practices to submit one Yellow Card per 2,000 practice population.
- Health Boards - submit one Yellow Card per 2,000 Health Board population.
- Health Boards - demonstrate a 10%, or greater, increase from baseline*, for Yellow Cards submitted by secondary care.
- Health Boards - demonstrate a 25%, or greater, increase from baseline*, for Yellow Cards submitted by members of the public.
- Yellow Cards submitted in community pharmacy - no target value set.

*Baseline: number of Yellow Cards submitted in 2021/22.

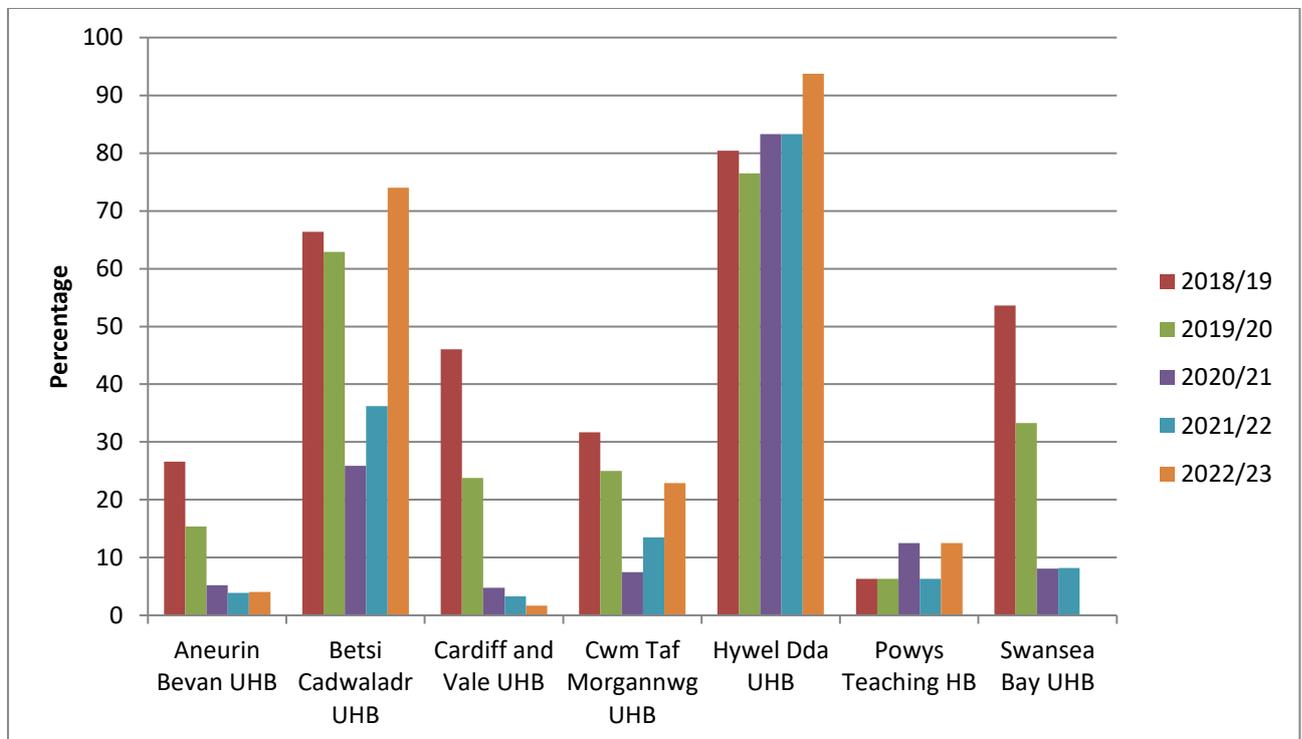


Figure 8: Percentage of practices per Health Board attaining the NPI target of 1 Yellow Card submitted per 2,000 patients, over the last five years

Figure 8 shows the percentage of GP practices achieving the target of submitting 1 Yellow Card per 2,000 patients. All Health Boards have practices achieving this target except for Swansea Bay UHB.



The percentage of practices attaining the target has reduced in Cardiff and Vale UHB and Swansea Bay UHB, but has increased in the other five Health Boards when compared with 2021/22.

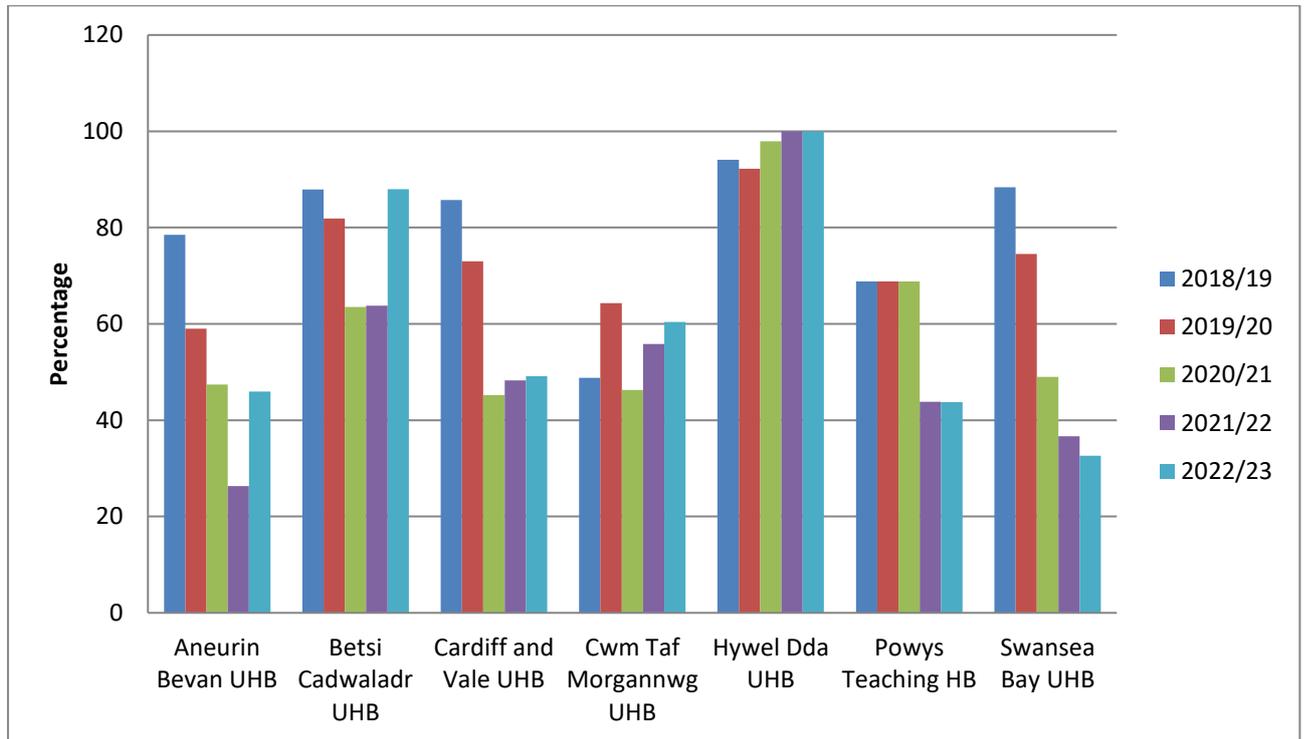


Figure 9: Percentage of GP practices in each Health Board submitting a Yellow Card over the last 5 years

Figure 9 shows the percentage of GP practices who have submitted at least one Yellow Card. Practice level data is published on a quarterly basis by the Welsh Analytical Prescribing Support Unit (WAPSU) on the [Server for Prescribing Information Reporting and Analysis \(SPIRA\) NPI dashboard](#). This dashboard is available for all Health Boards to view and can be used to target those practices who have not submitted a Yellow Card and to offer additional training and support. YCC Wales also continues to work with local Yellow Card Champions throughout Wales.

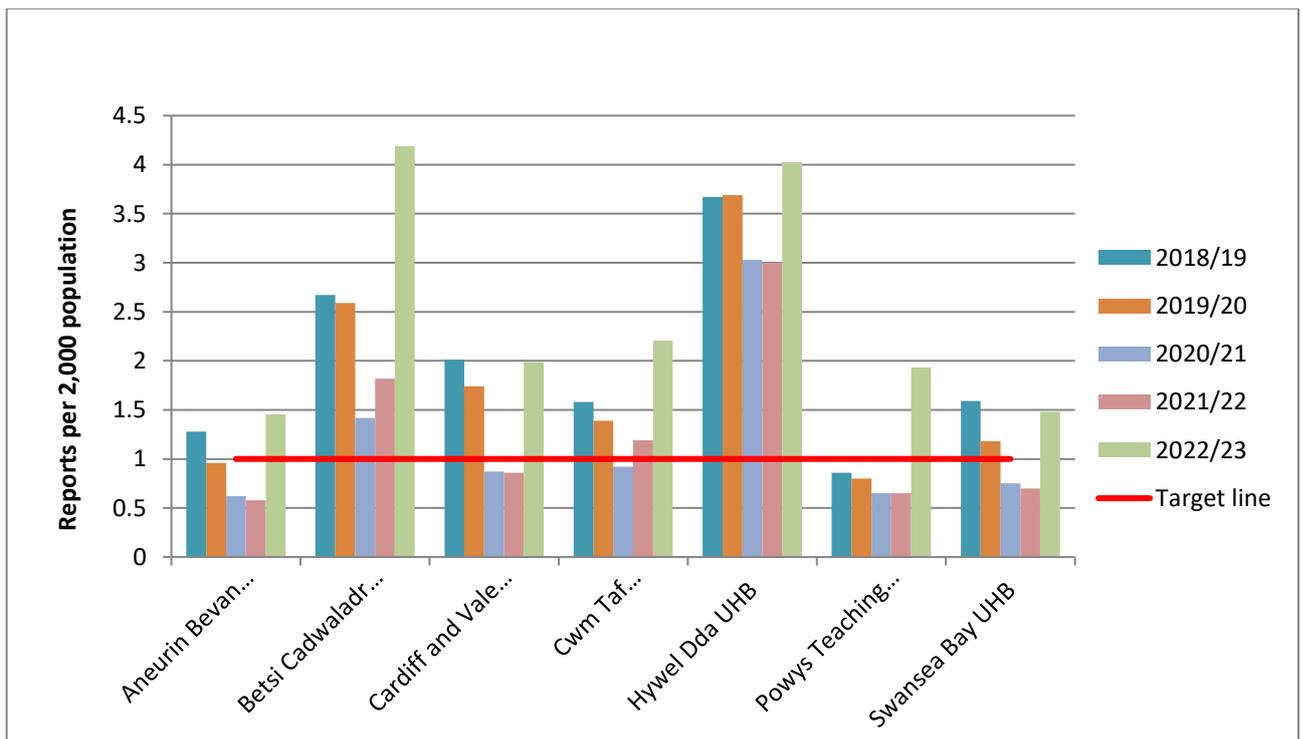




Figure 10: Number of Yellow Card reports per 2,000 patient population submitted per Health Board over the last 5 years

Figure 10 shows the performance of each Health Board against the target to submit in excess of one Yellow Card per 2,000 Health Board population. All seven Health Boards achieved the target and all seven also saw an increase in reporting rate. The largest percentage increase, when compared with 2021/22, was seen in Powys Teaching HB where the number of Yellow Card reports per 2,000 patient population increased by 197%.

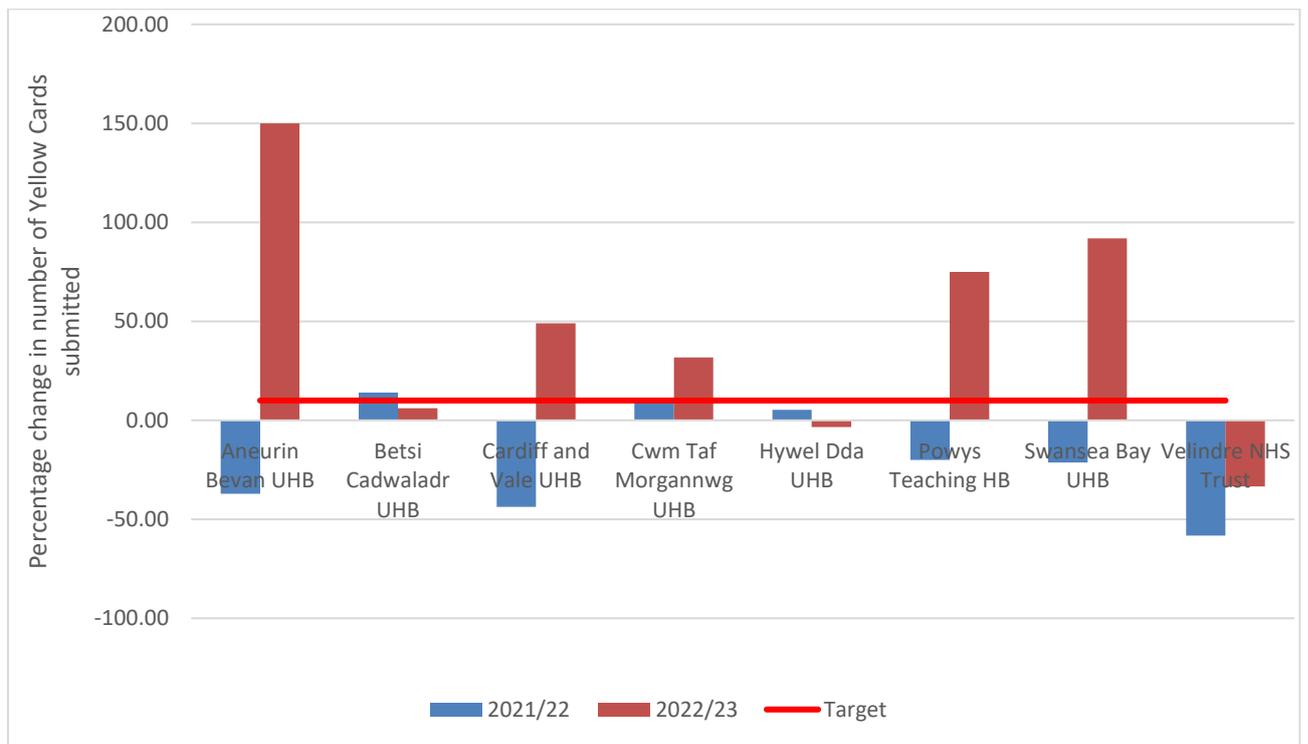


Figure 11: Performance of each Health Board/NHS Trust against the NPI Secondary Care Target demonstrate a 10%, or greater, increase from baseline, for Yellow Cards submitted by secondary care)

Figure 11 shows the performance of each Health Board/NHS Trust against the secondary care target.

The performance target for each health board is to demonstrate a 10% or greater, increase from baseline in the number of Yellow Cards submitted by secondary care.

Five Health Boards achieved the target to increase Yellow Card reporting by 10% in secondary care. Aneurin Bevan UHB saw the largest percentage increase of (+150%) and Velindre NHS Trust saw the largest percentage decrease (-33%). YCC Wales are working with colleagues, including Yellow Card Champions and MSOs, in all Health Boards to improve reporting in secondary care.

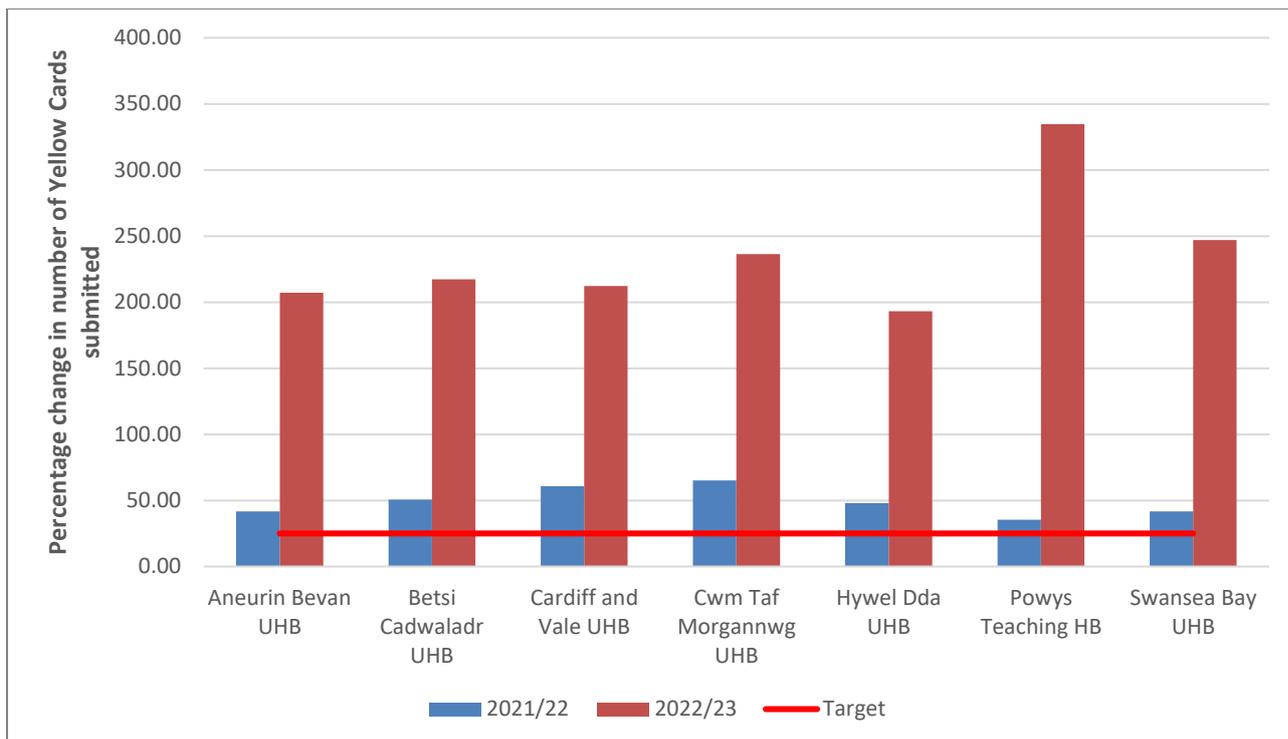


Figure 12: Performance of each Health Board against the NPI Public Target (demonstrate a 25%, or greater, increase from baseline, for Yellow Cards submitted by members of the public)

Figure 12 shows the performance of each Health Board against the target for reports from members of the public.

The performance target for each health board is to demonstrate a 25% or greater, increase from base in the number of Yellow Cards submitted by members of the public.

All seven Health Boards achieved the target to increase Yellow Card reporting by 25% by members of the public. Member of the public reporting rates also increased in all seven Health Boards. The highest percentage increase (+355%) was seen in Powys Teaching HB.

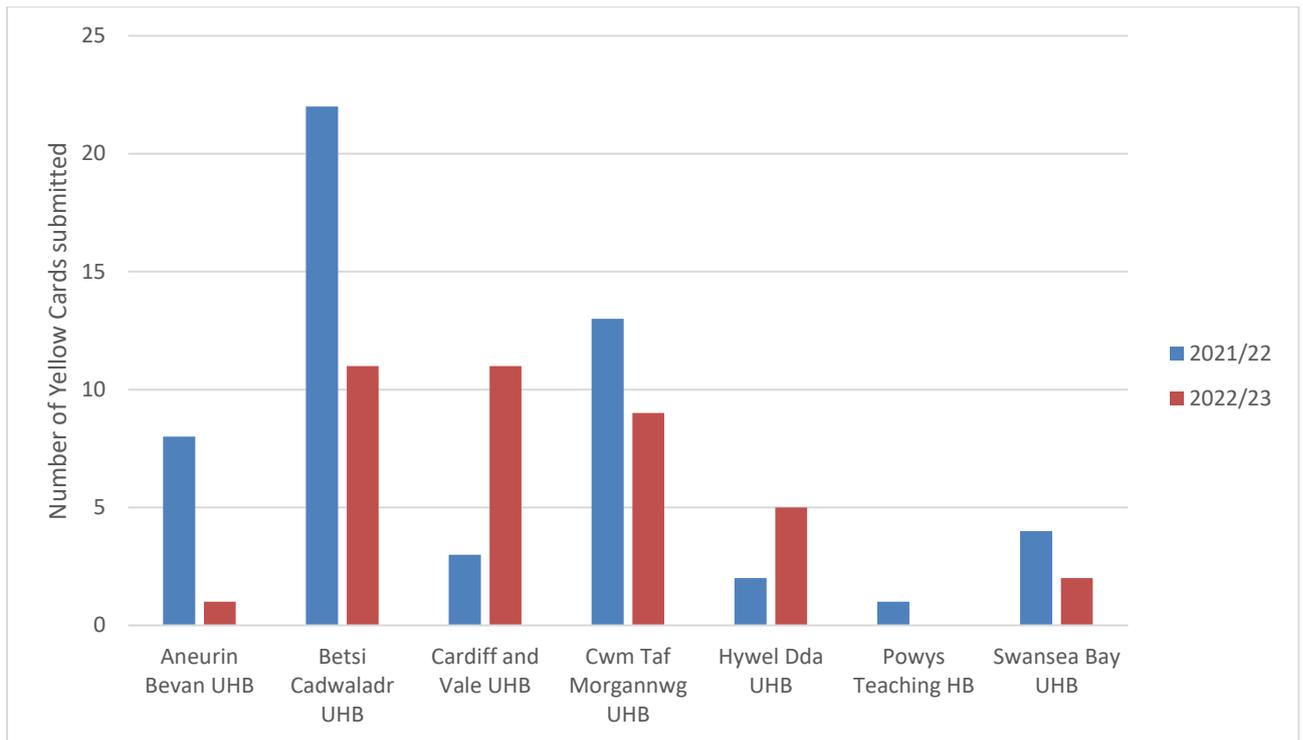


Figure 13: Number of Yellow Cards submitted by Community Pharmacy in each Health Board

Figure 13 shows the performance of each Health Board against the Community Pharmacy NPI. No target was set for the number of Yellow Cards submitted by community pharmacies. An increase was seen in the number of reports submitted from community pharmacies in Cardiff and Vale UHB, while a reduction in the number of reports submitted was seen in all other Health Boards.

8.3 Social Media

Posts are published to encourage Yellow Card reporting amongst healthcare professionals and members of the public. In order to increase awareness of the Yellow Card scheme and encourage Yellow Card reporting amongst members of the public and healthcare professionals, YCC Wales contributed to a number of social media campaigns.

Twitter

At the time of publishing this annual report, Twitter Analytics is undergoing improvement work and monthly engagements and impressions metrics are unavailable.

To date YCC Wales has 423 followers. It is hoped that this number will increase further over the next year.

Facebook and Instagram

In June 2017, YCC Wales launched a YCC Wales Facebook page. The current page following is 136. YCC Wales are hopeful that the following will increase over the next year.

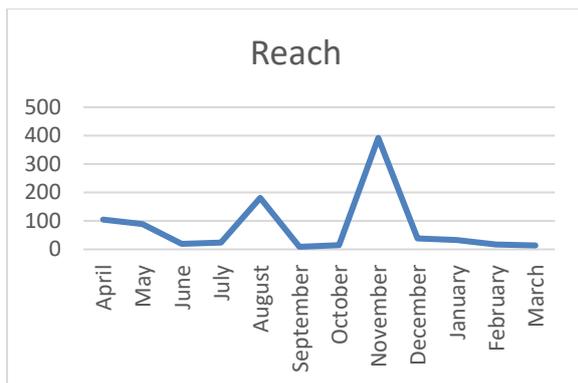


Figure 14: Monthly Facebook reach during 2022/23



Figure 15: Number of monthly Facebook profile visits during 2022/23

As can be seen in Figures 14 and 15, peak Facebook reach and profile visits were seen in November 2022, which coincided with Med Safety Week.



Figure 16: Monthly Instagram reach during 2022/23



Figure 17: Number of monthly Instagram profile visits during 2022/23

YCC Wales' Instagram page, aims to spread the word wider about the Yellow Card scheme and the importance of reporting ADRs. To date YCC Wales has 72 followers but hopes to make further use of this platform and increase their following over the next year. Peak Instagram reach was seen in November 2022, which once again coincided with Med Safety Week.

Due to connectivity issues with Meta Business Suite monthly engagement data for Facebook and Instagram is currently unavailable.

9. CONCLUSIONS

During 2022/23 a 93% increase was seen in the number of Yellow Card reports submitted for medicinal products, including COVID-19 vaccines from Q2-Q4, from Wales during 2022/23 (4024) when compared with the previous year (2084). It is promising to see a significant increase in the number of Yellow Card reports submitted from the majority of Reporter Qualifications, with the largest numbers of reports submitted by members of the public and GPs. Despite ongoing difficult circumstances as a result of the COVID-19 pandemic YCC Wales worked hard to promote the Yellow Card scheme and encourage reporting amongst healthcare professionals and members of the public. The Yellow Card Champion scheme continued to be expanded and the Yellow Card National Prescribing (reporting) Indicator was maintained with revised targets.

Whilst it is not possible to say with certainty, it appears that the ongoing impact of the COVID-19 pandemic on the healthcare system continued to have an effect on Yellow Card reporting



rates in Wales. As the Quarterly Reporting data will now include suspected ADRs to COVID-19 vaccines as standard, will be able to more accurately compare the annual reporting rates for Wales from next year.

Our strategy for 2023/24 will be to:

- Develop and implement a strategy to show the Wales Yellow Card promotional video in different healthcare settings across Wales.
- Increase awareness of the Yellow Card scheme and reporting rates amongst members of the public through patient centred initiatives e.g. visits to public events throughout Wales.
- Celebrate the 40th Anniversary of YCC Wales.
- Continue to raise awareness of the National Prescribing (reporting) Indicator amongst primary and secondary care organisations and provide appropriate support.
- Continue to improve communication and engagement of Yellow Card Champions and Welsh MSOs by utilising platforms for team working such as Microsoft Teams.
- Target low reporting groups and Health Boards.
- Increase activity on Social Media to reach a wider audience.



10. ACKNOWLEDGEMENTS

YCC Wales acknowledges the contribution made by the following individuals during 2022/23 in helping us to promote and develop our current initiatives:

Secondary Care Yellow Card Champions

Rosemary Allgeier, Public Health Wales
Jennifer Bristow, Betsi Cadwaladr UHB
Huw Carson, Aneurin Bevan UHB
Samantha Clitheroe, Betsi Cadwaladr UHB
Ellen Crowley, Swansea Bay UHB
Rebecca Dent, Velindre NHS Trust
Petra Francis, Swansea Bay UHB
Andrea Griffiths, Cardiff and Vale UHB
Ciara Griffiths, Hywel Dda UHB
Amanda Halloway, Cwm Taf Morgannwg UHB
Katherine Howard, Cwm Taf Morgannwg UHB
Judith Harding, Aneurin Bevan UHB
Jennifer Haughey, Hywel Dda UHB
Jasmine Ingram, Betsi Cadwaladr UHB
Joanna Israel, Hywel Dda UHB
Rafia Jamil, Cwm Taf Morgannwg
Hannah Leggett, Hywel Dda UHB

Edward Jones, Swansea Bay UHB
Kelly Jones, Swansea Bay UHB
Lowri Jones, Hywel Dda UHB
Esyllt Jenkins, Cardiff and Vale UHB
Rhian Jenkins, Hywel Dda UHB
Bethan Owen, Betsi Cadwaladr UHB
Glesni Owen, Betsi Cadwaladr UHB
Ann Pearson, Swansea Bay UHB
Bethan Perry, Powys Teaching HB
Alexander Reed, Aneurin Bevan UHB
Anwen Richards, Hywel Dda UHB
Nia Sainsbury, Cwm Taf Morgannwg UHB
Cerys Sessini, Hywel Dda UHB
Llinos Strange, Hywel Dda UHB
Janet Thomas, Betsi Cadwaladr UHB
Lowri Thomas, Cardiff and Vale UHB
Sean Thomas, Hywel Dda UHB
Robert Weller, Aneurin Bevan UHB

Primary Care Yellow Card Champions

Christina Birkby, Aneurin Bevan UHB
Elizabeth Hallett, Aneurin Bevan UHB
Lloyd Hambridge, Aneurin Bevan UHB
Suzanne Hemming, Aneurin Bevan UHB
Lucy Higgins, Aneurin Bevan UHB

Hywel Jones, Aneurin Bevan UHB
Sarah Watkins, Aneurin Bevan UHB
Charlotte Watts, Aneurin Bevan UHB
Rhian Welham, Hywel Dda UHB
Sally Western, Aneurin Bevan UHB

Medication Safety Officers

Rebecca Dent, Velindre NHS Trust
Judith Green, Betsi Cadwaladr UHB
Rafia Jamil, Powys Teaching HB
Hannah Leggett, Hywel Dda UHB
Rhian Lloyd-Evans, Aneurin Bevan UHB

Anne-Marie Montoto, Cwm Taf Morgannwg UHB
Jatinder Parmar, Swansea Bay UHB
Jenna Walker, Cardiff and Vale UHB

All Wales Therapeutics and Toxicology Centre

Anne Coles
Kath Haines
Ruth Lang
David Lewis
Jessica Morgan

Trevor Morgan
Laura Phillips
Laura Taylor
Claire Thomas
Maria Thompson

Welsh Medicines Advice Service - Cardiff

Diane Skillern

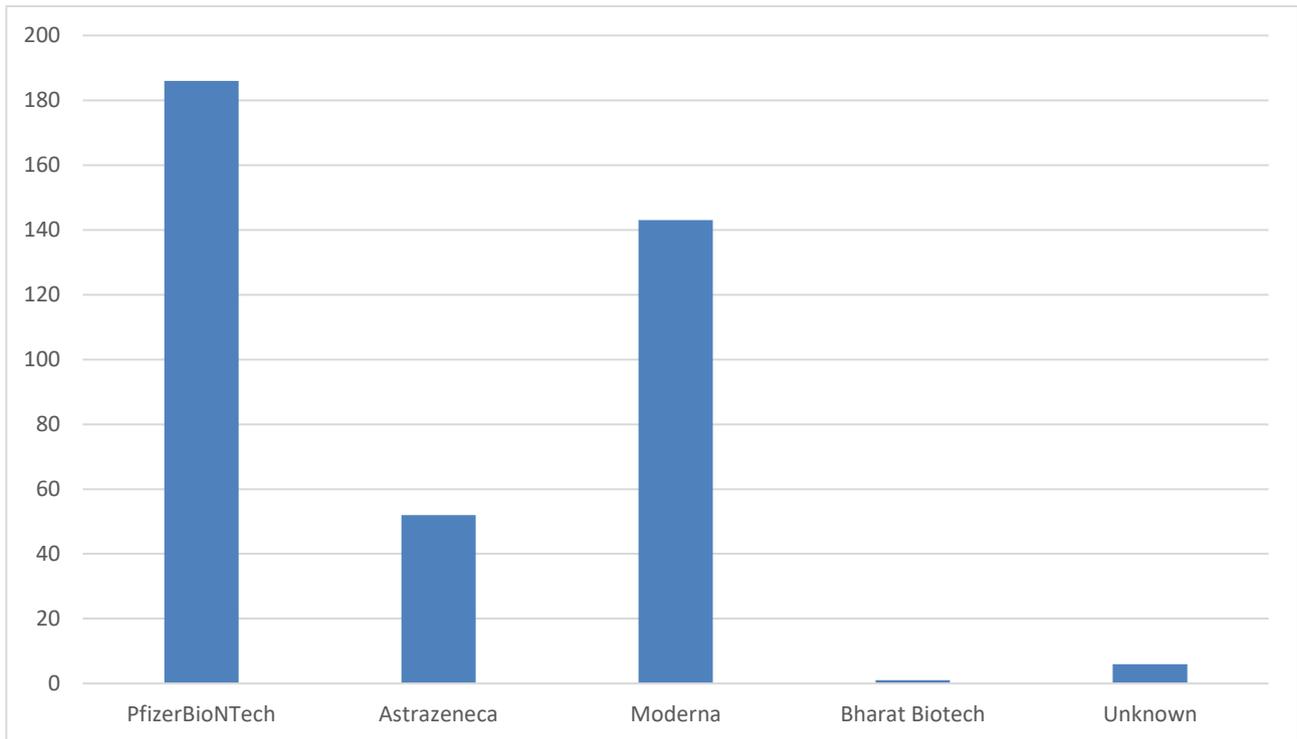


11. APPENDIX 1

Summary of reports of suspected ADRs to COVID-19 vaccines

Reports of suspected ADRs to COVID-19 vaccines were provided separately for Q1 2022/23 (01 April 2022 – 30 June 2022). The data from these reports are summarised below. Note that these data are summarised separately as the dataset contains a reduced number of fields compared to the Quarterly Reports and so are not directly comparable.

Brand of vaccine





Reporter Qualification

| Reporter | Number of Reports |
|-------------------------------|-------------------|
| Patient/carer/parent | 326 |
| GP | 33 |
| Pharmacist | 9 |
| Nurse | 6 |
| Other Healthcare Professional | 4 |
| Dentist | 3 |
| Healthcare Assistant | 3 |
| Hospital doctor | 3 |
| Paramedic | 1 |
| Total | 388 |

Sex of individual experiencing suspected ADR

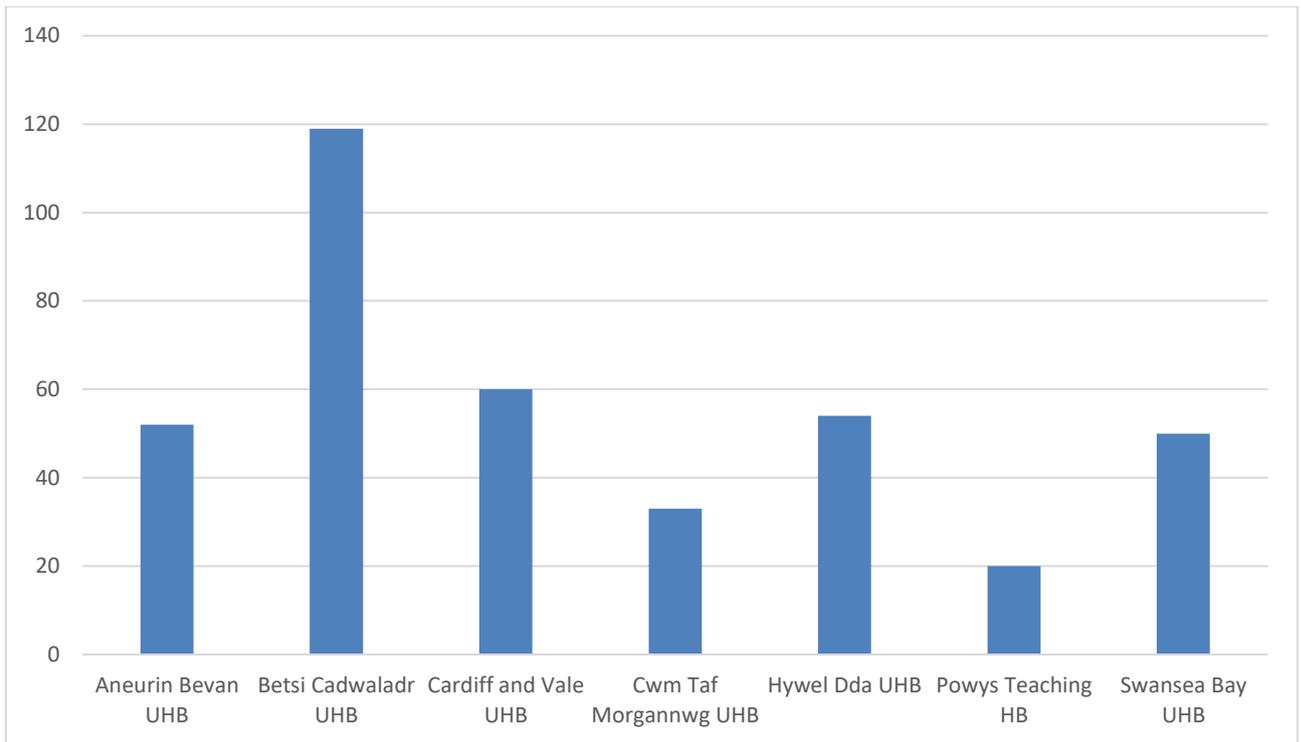
| Sex | Number of Reports |
|--------------|-------------------|
| Female | 251 |
| Male | 107 |
| Unknown | 30 |
| Total | 388 |

Age breakdown

| Age band (years) | Number of Reports |
|------------------|-------------------|
| Under 18 | 15 |
| 18-24 | 12 |
| 25-34 | 30 |
| 35-44 | 25 |
| 45-54 | 43 |
| 55-64 | 54 |
| 65-74 | 35 |
| 75-84 | 103 |
| 85+ | 22 |
| Unknown | 49 |
| Total | 388 |



Health board breakdown



Number of COVID-19 vaccination reports submitted by health board 01 April 2022 – 30 Jun 2022



12. ANNEX 1 – Progress report summary against objectives

| <u>General Objectives</u> | <u>Performance measures and targets</u> | <u>Progress at end of year</u> |
|--|--|--|
| 1. Education – <i>To educate and inform stakeholders including healthcare professionals and patients about the Yellow Card Scheme</i> | 1.1. To develop and update on-going training programmes for students, including undergraduates and postgraduates, and all healthcare professional stakeholders, including GPs, community pharmacists, hospital pharmacists, hospital doctors and hospital nurses | Training presentations maintained this year. All workshops and lectures for undergraduate students updated. |
| | 1.2. To provide at least 15 lectures, workshops or other events per year, to educate students and healthcare professionals about ADRs, medication errors, pharmacovigilance and the Yellow Card Scheme | Achieved |
| | 1.3. To maintain regular contact and support local Medication Safety Officers (MSOs) within YCC region to increase awareness levels of Yellow Card Scheme and reporting rates | Worked with local and national MSO throughout year. YCC Wales has a regular agenda item at the Welsh Medicines Safety Network monthly meetings. |
| | 1.4. To maintain and expand current network of stakeholders | New YC Champions recruited. |
| 2. Patient Reporting – <i>To increase patient awareness of Yellow Card reporting and help drive an increase in patient reporting</i> | 2.1. To engage with community pharmacists to increase patient awareness of Yellow Card reporting | Ongoing. |
| | 2.2. To engage or make contact with five local patient groups per financial year, including giving presentations and talks | Achieved. |
| | 2.3. To develop and maintain strategy programmes which can include talks, for sharing information such as Yellow Card data, case studies and reporting trends with stakeholders including local patient groups, hospital pharmacists and GPs to promote patient awareness of patient Yellow Card reporting | Continued to support and expand YC Champion role throughout Wales. NPI data shared quarterly with relevant stakeholders including primary care leads. YCC Wales promotional video produced and launched. |



| | | |
|---|--|---|
| 3. External / Stakeholder communications – To communicate information about the Yellow Card Scheme to stakeholders | 3.1. To develop and maintain the YCC website, ensuring that they contain easily accessible information on the reporting of ADRs | Content reviewed and updated. |
| | 3.2. To ensure that the YCC websites contain accessible links to agreed Yellow Card partners | YCC Wales website updated throughout 2022/23. |
| | 3.3. YCCs that wish to communicate information to stakeholders through educational material on their websites are to develop and update these training and resource materials accordingly on their websites, including promoting e-learning modules where e-learning modules are available | YCC Wales website updated throughout 2022/23. |
| | 3.4. YCCs to promote and disseminate safety messages from MHRA to YCC stakeholders as required, such as drug safety updates, pharmacovigilance issue, and e-learning modules | Information regularly disseminated to YC Champions and MSOs via YCC Wales. |
| | 3.5. To monitor the number of hits on YCC websites | Monitoring has not yet been activated. Will be looked into for the next financial year now that new website platform has been launched. |
| 4. Facilitation – To raise awareness and encourage facilitation of direct ADR reporting from healthcare systems | 4.1. Raise awareness of electronic reporting methods in primary and secondary care such as MiDatabank, SystmOne and the Yellow Card mobile application | SOP in place for submitting reports via MiDatabank. YC reporting via MiDatabank encouraged at MIOG and numbers of reports fed-back. Electronic reporting via Vision and Emis web. |
| | 4.2. To identify potential local contacts for further development in this area | Continued contact with DHCW, local IT department and digital leads. |
| | 4.3. To provide input to the MHRA on strategy and development of the Yellow Card Information Standard for the GP System of Choice | Completed via quarterly meetings and AGM. |
| 5. Internal communications – To communicate with the MHRA on a regular basis regarding Yellow Card Strategy and ADR reporting from the YCC regions | 5.1. Annual report - YCCs to produce an annual report describing their activities over the past year. The report should be produced and sent to the MHRA within three months of receipt of annual Yellow Card data from the MHRA | Completed. |
| | 5.2. Quarterly Teleconference - To participate in a quarterly teleconference between the YCCs and MHRA to discuss progress and share information | Completed. |
| | 5.3. Yellow Card Strategy – To provide views and input into the Yellow Card Strategy | Completed |
| | 5.4. YCCs to provide further information and updates on research and education strategies | Completed |



| | | |
|--|--|--|
| 6. Analysis – <i>To analyse quarterly supply of Yellow Card data and identify targets for improvement</i> | 6.1. To identify local areas of low Yellow Card reporting by analysing Yellow Card quarterly data | Working with Yellow Card Champions and MSOs in HBs to encourage reporting. |
| | 6.2. To promote the Yellow Card Scheme with the intent of increasing reporting in these areas of low Yellow Card reporting | Recruited new Champions and increased engagement with MSOs. |
| | 6.3. To identify low reporting groups and engage with them to promote the Yellow Card Scheme with the intent of increasing reporting | Completed. |
| | 6.4. To provide MHRA with updates on any other actions taken with the quarterly statistics | Completed. |



YCC Wales

Yellow Card Centre Wales
Canolfan Cerdyn Melyn Cymru

For further information visit:

[YCCWales.org](https://www.yccwales.org)

or e-mail:

YCCWales@wales.nhs.uk