

# Yellow Card Centre North West

## ANNUAL REPORT

TO THE MEDICINES AND HEALTHCARE  
PRODUCTS REGULATORY AGENCY

**2021/22**

# YELLOW CARD CENTRE NORTH WEST

## ANNUAL REPORT TO THE MEDICINES AND HEALTHCARE PRODUCTS REGULATORY AGENCY

2021/22

### 1. STAFF

Dr Lauren Walker – Director  
Christine Randall – Senior Medicines Information Pharmacist  
David Moloney – Medicines Information Technician  
Helen Edmondson – Medicines Information Technician  
Marian Madden – Administrative Assistant

### 2. EXECUTIVE SUMMARY

In 2021/22 a total of 3,851 Yellow Cards (YCs) were submitted by health professionals, patients and carers from Yellow Card Centre North West (YCCNW). This is a 4.8% decrease on 2020/21 almost certainly as a continuing consequence of the pandemic. Compared to five years ago reporting has decreased by 2.2%.

Patient/carer reporting rose by 43% in 2021/22, accounting for 29% of reporting. Although overall reporting by healthcare professionals decreased this year, there was increased reporting by; pre-registration pharmacists 176 reports (up 29%), Hospital doctors 176 report (up 15%) and 'Other healthcare professionals' 82 reports (up 173%). Although hospital pharmacists reported more YCs than any other group, 1,153 reports (30% of the total), their reporting was down by 29%. Reporting also fell significantly by pharmacy technicians/assistants 294 reports (down by 38%) with all other groups seeing a slight decline in reporting this year.

Serious adverse drug reactions (ADRs) accounted for 60% of all reports (41 reports [1.8% of serious reports] had a fatal outcome).

The top reported suspect drug was influenza vaccine with 180 reports. Six of the 2021/22 top ten suspect drugs appeared in the 2020/21 top ten; influenza vaccine, apixaban, adalimumab, sertraline, edoxaban and warfarin. Re-entries to the 2021/22 top ten are phenoxymethylpenicillin, atorvastatin, nitrofurantoin and flucloxacillin.

Reporting of ADRs via YCs embedded in electronic healthcare systems account for 21% of all our reports. Current systems in use in the North West are MiDatabank (pharmacy medicines information system) which contributed 464 reports (22% of hospital pharmacy reports), SystemOne (GP patient management system that is also used in prisons, custody centres and some hospices) which contributed 267 reports, up from 168 reports last year, 73 EMIS (GP patient management system), down from 106, 1 Vision (GP patient management system) and 3 CERNA (secondary care electronic patient management system). 73% of North West GP reports were made using SystemOne, EMIS or Vision with 22% of GP reports were made by GPs working in the prison service.

The North West-wide network of Yellow Card Champions met twice via Teams in 2021/22. 28 trusts/organisations in the North West engage with the Champions network.

YCCNW continues support local reporters, health professionals, students and patients. In 2021/22 19 training sessions were provided virtually and 2 sessions were prerecorded for upload to educational institutions. Over 390 individuals engaged.

In 2021/22 YCCNW continued to support reporting to the Yellow Card Scheme:

- locally by providing quarterly feedback to NHS Trusts on their reporting.
- nationally by contributing review of medication safety alerts, communications and publications for the monthly MSO WebEx event facilitated by NHS England.

- Supporting the North West MRC Fellowship Scheme in Clinical Pharmacology by providing 'Current issues in Pharmacovigilance' sessions
- Supporting new Champions with one to one support and training slides
- Participating in and supporting the MHRA initiative to improve information on ADRs and the Yellow Card Scheme to children and young people.
- by updating the CPPE ADR e-learning programme assessment.
- on social media via our Twitter account @yellowcardnw and Instagram account.

Note that reports of suspected ADRs to COVID-19 vaccines are not included in the body of our annual report. This is due to the large volume of Yellow Card reports received and analysed by the Medicines and Healthcare products Regulatory Agency in relation to the COVID-19 vaccines meaning this data is handled and reported separately by the agency. As a result, YCC North West has limited access to information required for analysis. An abbreviated summary is included as an Annex, see Section 10 – Annexe 1 - COVID-19 VACCINE REPORTING APRIL 2021 to MARCH 2022, on page 17.

### 3. YELLOW CARD DATA

#### • ADR reports received

Overall 3,851 reports of suspected ADRs were made by healthcare professionals and patients/carers from the YCCNW region in 2021/22. Table 1 highlights the total number of reports originating from the YCCNW region for the past five years and Figure 1 is a graphical representation of this data. Figure 2 shows the split by reporter type for Yellow Card reports originating in the YCCNW region in 2021/22 and Figure 3 compares the number of reports for each reporter type received in 2021/22 with those received in the previous four years.

**Table 1. The total number of reports and percentage change over the last five years from the YCCNW region.**

Year	Number of reports	Percentage change on previous year
<b>2021/22</b>	<b>3,851</b>	<b>-4.8%</b>
2020/21	4,044	-16.8%
2019/20	4,859	+17.1%
2018/19	4,148	+5.4%
2017/18	3,936	+5.3%

Figure 1. Line graph summarising the total number of reports originating from the YCCNW region for the past five years.

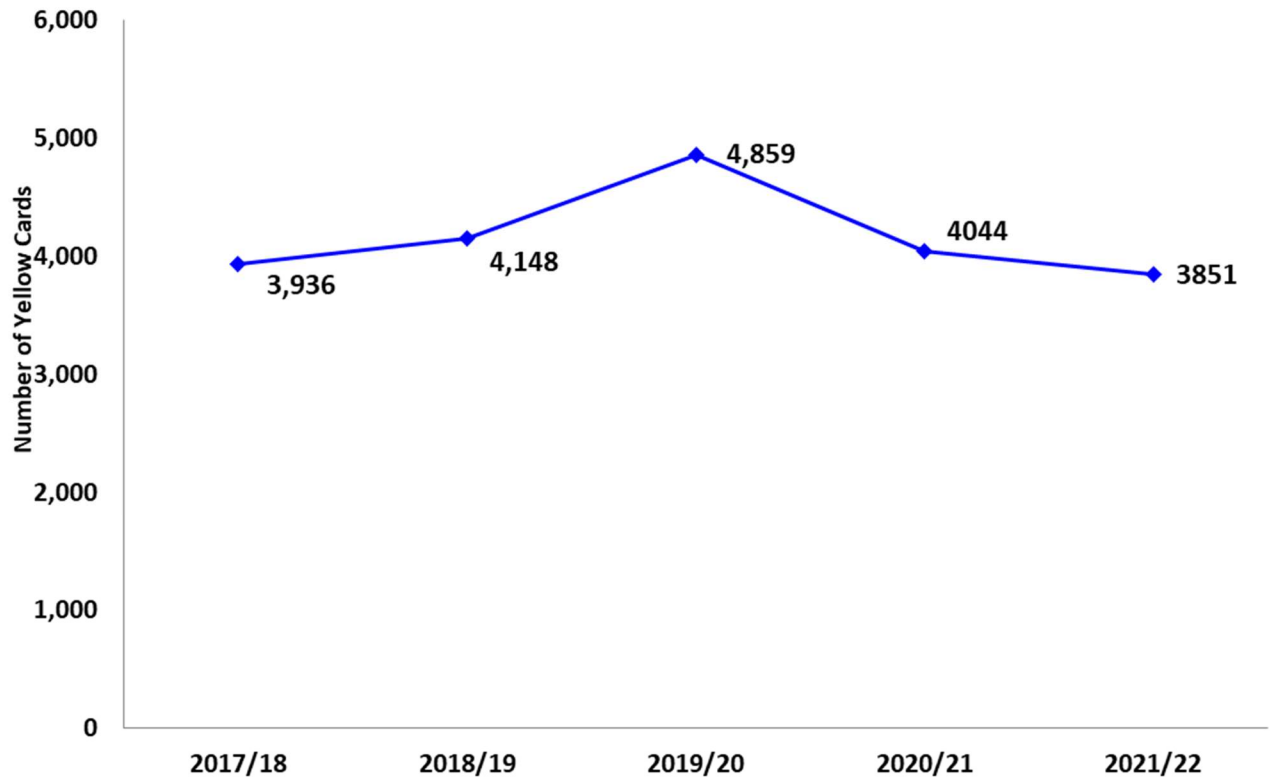
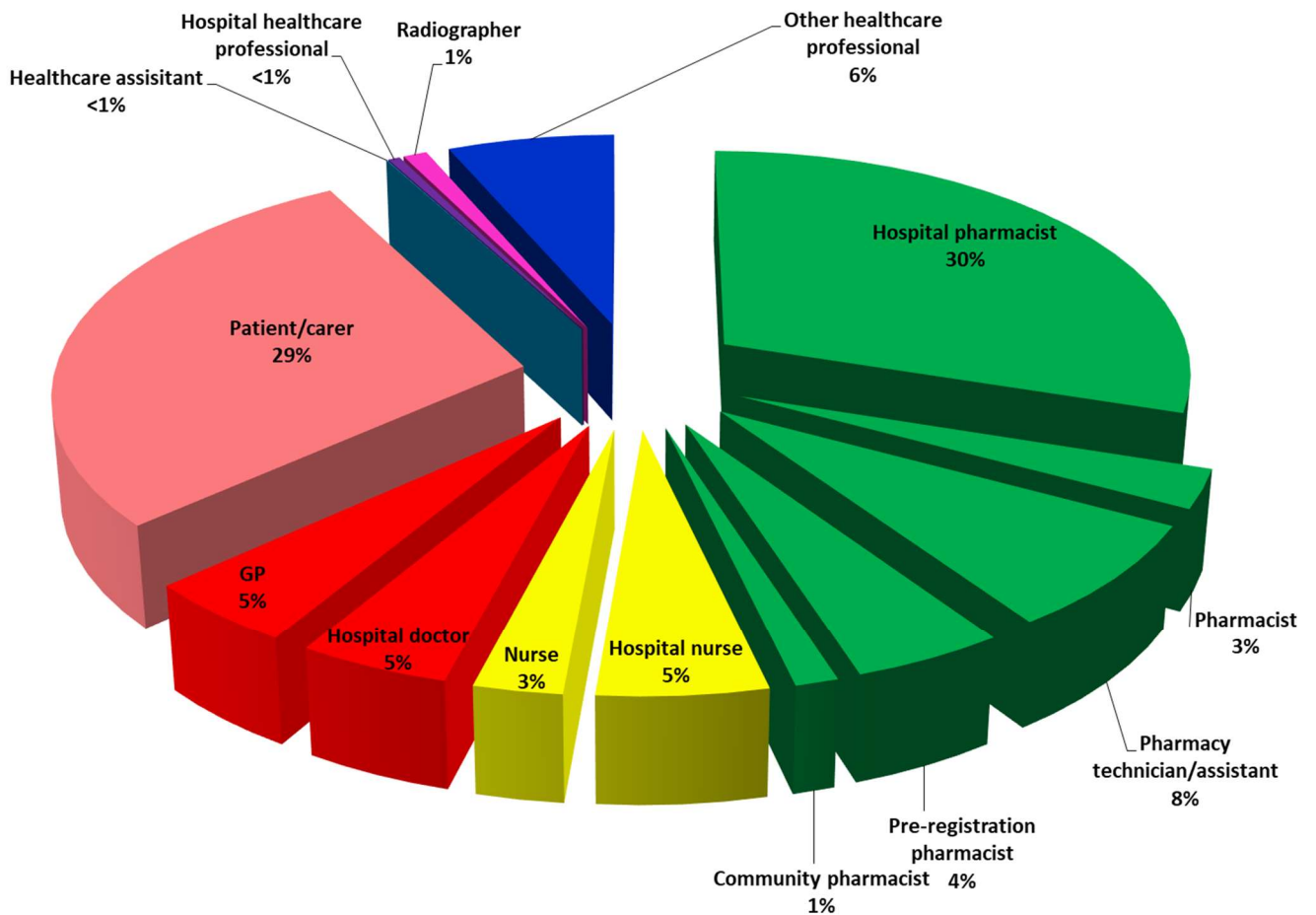
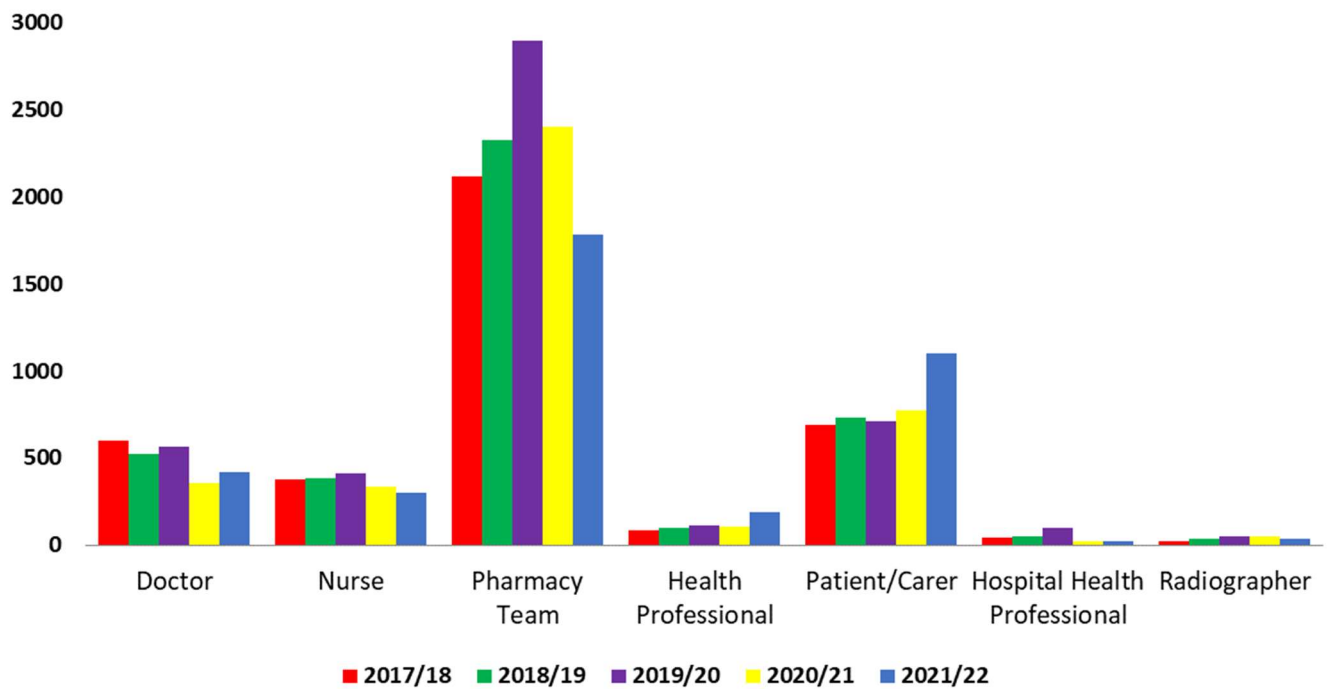


Figure 2. Percentage of Yellow Card reports that originated from the YCCNW region for each reporter group in 2021/22.



**Figure 3. Number of Yellow Card reports received from each reporter group in 2021/22 compared with the previous four years.**



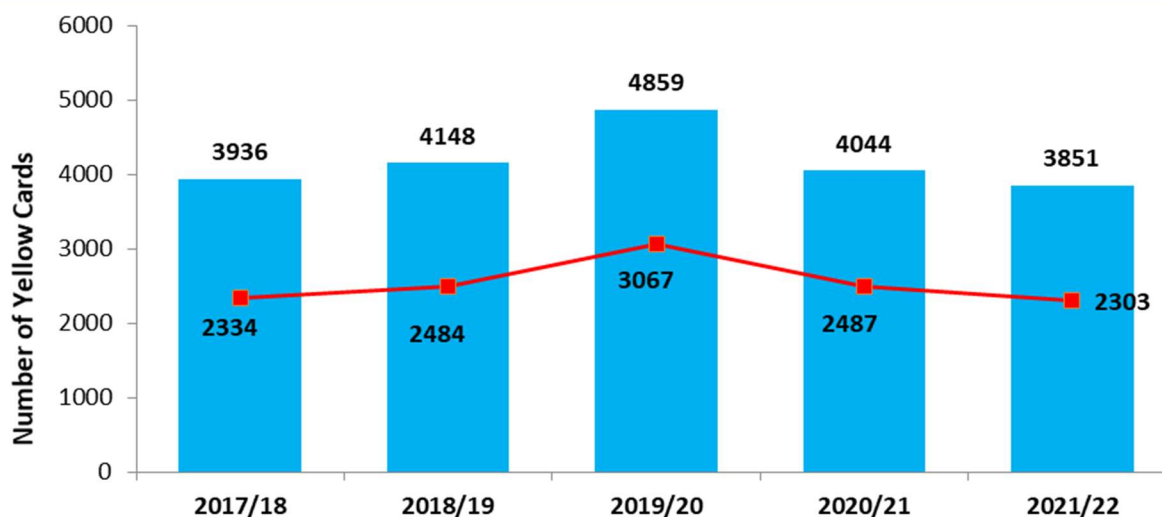
- Serious reactions**

Total number of reports classified as serious that originated from the YCCNW region in 2021/22 and comparative data for previous years are shown in Table 2 and displayed graphically in Figure 4. A fatal outcome was reported on 41 Yellow Cards in 2021/22.

**Table 2**

Year	Number of serious reports	Percentage of total reports	Percentage change on previous year
<b>2021/22</b>	<b>2,303</b>	<b>60%</b>	<b>-7.4%</b>
2020/21	2,487	61%	-18.9%
2019/20	3,067	63%	23.5%
2018/19	2,484	60%	6.4%
2017/18	2,334	59%	-1.4%

**Figure 4. Serious Yellow Card reports as a proportion of total reports from 2017/18 to 2021/22 for the YCCNW region.**



- Fatal reports**

Total number of fatalities that were reported from within the YCCNW region in 2021/22 and comparative data from previous years are shown in Table 3.

**Table 3**

Year	Number of fatal reports	Percentage change on previous year
<b>2021/22</b>	<b>41</b>	<b>-34.9</b>
2020/21	63	+12.5
2019/20	56	+3.7
2018/19	54	-12.9%
2017/18	62	+67%
2016/17	37	-13.9%

- **Age breakdown**

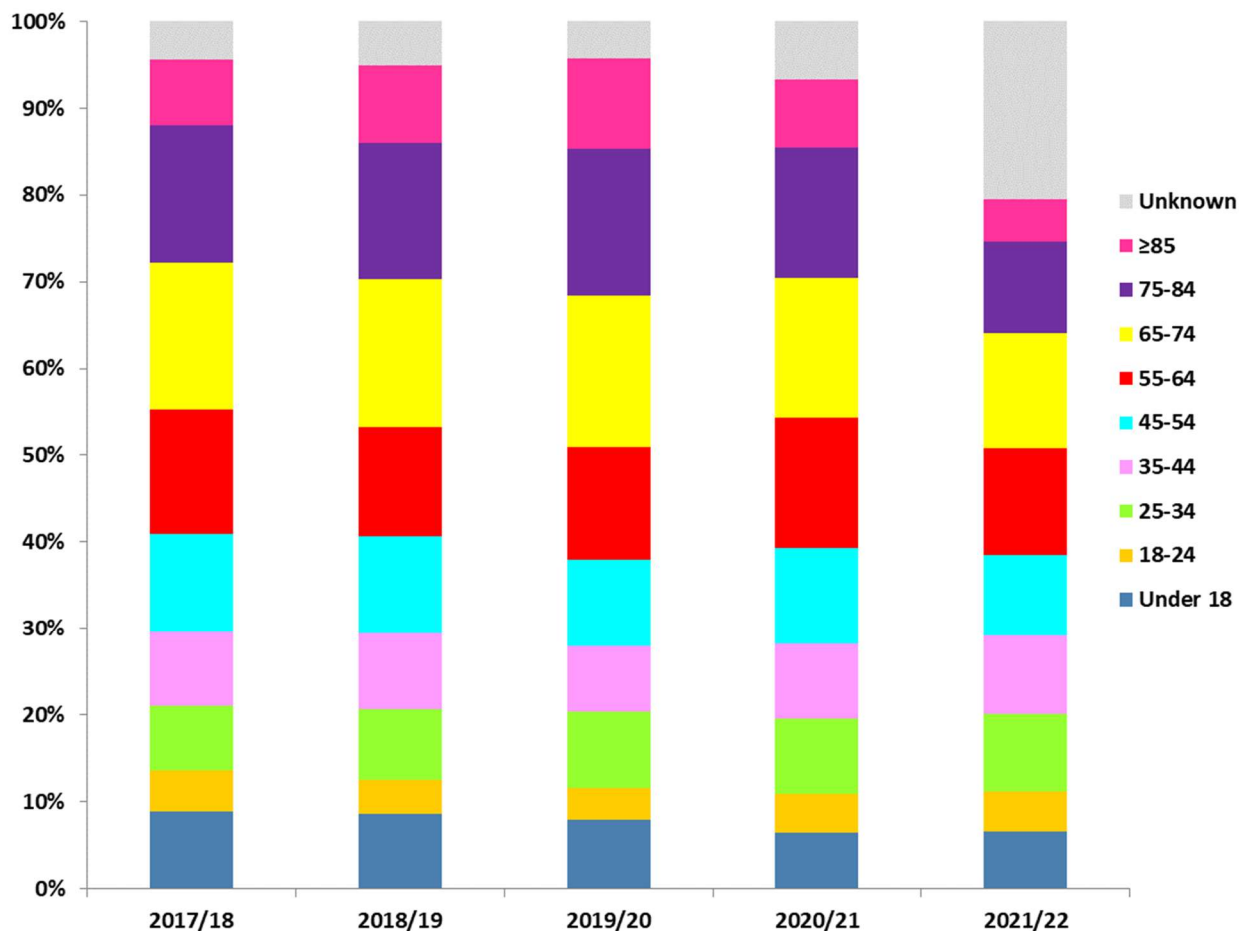
Table 4 shows the number of Yellow Cards originating from within the YCCNW region stratified by patient age at time of reaction, 2017/18 to 2021/22. Figure 5 is a graphical representation of this data.

**Table 4**

Age band (years)	2017/18	2018/19	2019/20	2020/21	2021/22
Under 2	95	98	102	65	61
2-6	77	89	88	47	59
7-12	68	71	79	50	52
13-17	110	97	112	95	82
18-24	183	165	183	184	175
25-34	293	334	424	350	345
35-44	338	367	367	349	350
45-54	445	464	492	451	357
55-64	569	525	625	605	474
65-74	661	704	849	653	510
75-84	627	653	827	608	409
≥85	296	371	502	318	189
Unknown	174	210	209	269	788
<b>Total</b>	<b>3,936</b>	<b>4,148</b>	<b>4,859</b>	<b>4,044</b>	<b>3,851</b>

Percentage of Yellow Cards

**Figure 5. Percentage of Yellow Card reports that originated from the YCCNW region, stratified by age group from 2017/18 through to 2021/22.**



## Top ten drugs

Table 5 lists the top ten reported suspect drugs originating from within the YCCNW region for 2021/22. Overall there were 4,202 suspect drugs reported on 3,851 Yellow Cards (some Yellow Card reports had more than one suspect drug). The top ten suspect drugs accounted for 18% of total suspect drugs reported on a Yellow Card. Table 6 contains the top ten reported suspect drugs originating from within the YCCNW region for 2020/21; these drugs accounted for 18% of total suspect drugs reported on a Yellow Card in 2020/21.

**Table 5. The top ten reported suspect drugs for Yellow Cards that originated from the YCCNW region in 2021/22.**

Drug name	Number of times reported as a suspect drug (2021/22)
Influenza virus (some▼)	180
Apixaban	135
Adalimumab (some▼)	84
Phenoxymethylpenicillin	66
Sertraline	60
Edoxaban	56
Warfarin	51
Atorvastatin	51
Nitrofurantoin	50
Flucloxacillin	48
Total	768

**Table 6. The top ten reported suspect drugs for Yellow Cards that originated from the YCCNW region in 2020/21.**

Drug name	Number of times reported as a suspect drug (2020/21)
Influenza virus (some▼)	149
Apixaban	127
Adalimumab (some▼)	102
Sertraline	94
Omeprazole	73
Edoxaban▼	72
Rivaroxaban▼	68
Warfarin	64
Aspirin	60
Clopidogrel	57
Total	852



- Source of reports

Table 7 Number of Yellow Cards originating from within the YCCNW region stratified by reporter type from 2019/20 to 2021/22.

Reporter	2019/20		2020/21		2021/22	
	Number	% of total	Number	% of total	Number	% of total
Carer	36	0.7%	37	0.9%	40	1.04%
Parent	127	2.6%	63	1.5%	91	2.36%
Patient	543	11.2%	670	16.6%	972	25.24%
Community Pharmacist	140	2.9%	59	1.4%	50	1.3%
Hospital Pharmacist	2,147	44.2%	1,619	40%	1153	29.94%
Pharmacist	95	2.0%	120	2.97%	107	2.78%
Pharmacy Technician/assistant	399	8.2%	471	11.6%	294	7.63%
Pre-reg pharmacist	122	2.5%	136	3.3%	176	4.57%
Hospital Nurse	234	4.8%	205	5%	197	5.12%
Nurse	172	3.5%	128	3.1%	103	2.67%
GP	342	7.0%	189	4.7%	180	4.67%
Hospital Doctor	217	4.5%	153	3.8%	176	4.57%
Physician	5	0.10%	10	0.25%	62	1.61%
Coroner	1	0.02%	0	0.0%	3	0.08%
Dentist	9	0.2%	15	0.37%	61	1.58%
Midwife	8	0.2%	4	0.1%	4	0.1%
Optometrist	3	0.1%	3	0.07%	3	0.08%
Paramedic	3	0.1%	5	0.12%	7	0.18%
Radiographer	51	1.0%	47	1.16%	36	0.93%
Hospital Healthcare Professional	88	1.8%	24	0.59%	18	0.47%
Healthcare Assistant	9	0.2%	5	0.12%	1	0.03%
Other Healthcare Professional	107	2.2%	75	1.85%	107	2.78%
Medical Student	2	0.04%	3	0.07%	5	0.13%
Other	0	0%	3	0.07%	5	0.13%
<b>Total</b>	<b>4,859</b>	<b>100%</b>	<b>4,044</b>	<b>100.0%</b>	<b>3,851</b>	<b>100%</b>

Green – increasing figures  
 Red – decreasing figures  
 Black – no changes

## Type of report

Table 8 shows the method used to report an ADR to the Yellow Card Scheme in 2021/22.

**Table 8. Number of Yellow Card reports from each reporting method originating from the YCCNW region in 2021/22.**

	Number of reports	Percentage of total reports
Electronic Yellow Card	2666	69%
MiDatabank (Pharmacy medicines information)	464	12%
SystemOne (1° care patient management system)	267	7%
APP	302	8%
EMIS (1° care patient management system)	73	2%
Paper	71	2%
Vision (1° care patient management system)	1	<0.1%
APPCOV (COVID report App)	4	0.1%
CERNER (2° care electronic patient record system)	3	<0.1%

## 4. INTERPRETATION OF REPORTING FIGURES

Yellow Card reports originating from the YCCNW region declined this year, down 4.8% in 2021/22 compared with 2020/21, decreasing by 2.2% over the last five years. The increased workload and changing priorities experienced by healthcare professionals within the NHS as a consequence of the COVID-19 pandemic has almost certainly influenced the reporting rate of ADRs. However, patient/carer reporting rose by 43% accounting for 29% of total reporting.

There were 2,033 reports from acute trusts, 53% of all reports. 319 (8%) reports came from primary care, 179 (5%) from community/mental health trusts, 90 (2%) from prisons/custody centres, 49 (1%) from private organisations and 69 (2%) classed as 'other'.

Within the acute sector pharmacy teams continue to lead reporting within their trusts. Hospital pharmacists continued to report more YCs than any other healthcare professional group making 1,153 reports and accounting for 30% of the total; 40% of these were made via MiDatabank, 45% electronically through the Yellow Card web portal and 14% via the YellowCard App. Pharmacy technicians/assistants made 294 reports (down by 38%) and pre-registration pharmacists 176 reports (up by 29%). This high level of reporting continues to reflect the commitment and enthusiasm of the pharmacy teams who engage with the North West Champions network. This commitment could not be achieved without the support and encouragement provided by Chief Pharmacists and their senior teams. Hospital doctor reporting also increased to 176 reports, a 15% increase.

Reporting fell within the following reporter categories; GPs 180 reports (down 10%), hospital pharmacist 1153 reports (down 29%), nurses 103 reports (down 20%) and radiographers 36 reports (down 23%) and community pharmacists 50 reports (down 15%).

Reporting from dentists appear to show an increase of 307% (61 reports) however, this may be an anomaly associated with the re-platforming of the database. Reporting from 'Other healthcare professionals' is up 139% (251 reports).

Reporting via electronic healthcare systems with embedded YCs continues to increase and they now contribute 21% of all YCCNW reports (808 YC reports), contributions from each are:

- 464, MiDatabank (pharmacy medicines information system),
- 267 SystemOne (GP patient management system). Also used in prisons, custody suites, minor injuries units and hospices.

- 73 EMIS (GP patient management system). EMIS is the most prevalent GP management system in the North West and reporting via this interface is increasing following introduction of an embedded Yellow Card in February 2020.
- 1 Vision (GP patient management system).
- 3 Cerner (secondary care patient management system)
- 73% of North West GP reports were made using SystmOne, EMIS or Vision with 22% of those made by GPs working in the prison service.

Reporting via the APP has greatly increased, 302 reports in 2021/22, up by 167 (224% increase) compared to 2020/21. 76 (25%) of APP reports were made by patients/parents and 213 (71%) came from secondary care.

The top reported suspect drug for 2021/22 was influenza vaccine with 180 reports. Apixaban, with 135 reports, was number two as it was last year, ten of these reports were fatalities. Six of the top ten suspect drugs also appeared in the 2020/21 top ten; influenza vaccine, apixaban, adalimumab, sertraline, edoxaban and warfarin. Re-entering the 2021/22 top ten are phenoxymethylpenicillin (66 reports), atorvastatin (51 reports), nitrofurantoin (50 reports) and flucloxacillin (48 reports).

Serious adverse drug reactions (ADRs) accounted for 60% of all reports (41 reports [1.8% of serious reports] had a fatal outcome). Black triangle drugs in the top ten include biosimilar adalimumab and some of the influenza vaccines.

254 reports related to children under the age of 18 years, 36% of these reports related to vaccines and 16% related to antimicrobials.

Observations and associations in 2021/22:

- 135 reports listed apixaban as the suspect drug, 92% of these reports were made by hospital the pharmacy teams. The apixaban reports included 115 of suspected haemorrhage/bleeding reactions and 10 suspected to be associated with a thromboembolic event.
- 31 (42%) of 74 community pharmacy team reports were to vaccines, including 28 for influenza vaccines. Probably a reflection of the increasing role of community pharmacists in delivering vaccinations.
- Of 188 reports made by GPs 48 (26%) were to antimicrobials. GPs also made 19 reports associated with antidepressant or antipsychotic agents.
- Radiographers made 36 reports of which 4 described anaphylactic reactions or angioedema and 22 described other hypersensitivity reactions (rash, urticaria, drug eruption)
- Ten cases of serious skin reactions were reported: 1 of erythema multiforme (lisdexamfetamine), 1 of toxic epidermal necrolysis (desogestrel), and 6 of Steven's Johnson Syndrome (amlodipine, amoxicillin, co-trimoxazole (2), carbamazepine, lamotrigine) and 2 of necrotising fasciitis (dapagliflozin).
- 12 reports were for ECG QT interval prolongation suspected to be associated with medication, these included; 6 antidepressants, 2 antipsychotics, gabapentin, amiodarone, methadone and quinine.
- 49 reports were for acute kidney injury these included: 11 ACEI/ARBs, 8 loop diuretics,
- Of 1,095 patient/carer reports 137 (13%) listed the flu vaccine as the suspect drug.
- 82% of pharmacy technician reports in acute trusts came from three trusts (42% from Wirral, 23% from Wroughtington, Wigan and Leigh and 16% from East Lancashire.

## 5. PROMOTIONAL ACTIVITIES

- **Training delivered**

Training carried out during 2021/22 was almost exclusively undertaken remotely and is detailed in Tables 9, 10 and 11. Table 9 contains data relating to training of healthcare professionals, table 10 contains data relating to training undergraduates. Table 11 details training for patients.

**Table 9. Training provided to healthcare professionals in 2021/22**

Audience type	Session type	Duration (hours)	Number of sessions	Total audience numbers	Total hours training
Dentists	Lecture	2 hours 0.5 hours	1 1	120 (virtual)	2.5
Dentists – foundation trainees	Lecture	0.5 hours	1	15 (virtual)	0.5
MRC fellows	Lecture	0.75 hours	1	20 (virtual)	1
GPs	Lecture	0.5	3	25 (virtual)	1.5
Non-medical prescribers	Lecture	0.75 hour	3	60 (virtual)	2.25
Pre-registration pharmacists	Lecture	1 hour	1	25 (virtual)	1
Hospital pharmacy team	Lecture	0.75 hours	2	50 (virtual)	1.5
<b>Totals</b>			<b>13</b>	<b>315</b>	<b>10.25</b>

**Table 10. Training provided to undergraduates in 2018/19**

Audience type	Session type	Duration	Number of sessions	Total audience numbers	Total hours training
Dental undergraduates	Lecture	0.5 hours	1	Online - uploaded	0.5
Medical students	Lecture	1.0	2	Online - uploaded	2
Pharmacy students	Lectures/study day	1.25	2	60 (Virtual)	2.5
<b>Totals</b>			<b>5</b>	<b>60</b>	<b>5</b>

**Table 11. Training provided to patients in 2021/22**

Audience type	Session type	Duration	Number of sessions	Total audience numbers	Total hours training
Patient group (SJS survivors group)	Lecture	1 hours	1	15 (virtual)	1

- **Meetings attended**  
None

- **Lectures delivered (invited)**

2021 UKMi conference (virtual) – ‘From Yellow Cards to Drug Alerts’ lecture in conjunction with Mitul Jadeja (MHRA)

Bradford University pharmacy student YC champion event – national event run virtually, co-ordinated by Bradford with presentations by Christine Randall, YCC NW and Mitul Jadeja, MHRA (60 participants from pharmacy schools in all 4 devolved administrations).

- **Materials developed/maintained to promote YCS**

SPS Website COVID-19 vaccine support - **Reporting suspected COVID-19 vaccine side effects, and potential product defects or counterfeit products** - Ongoing update in 2021/22

CPPE e-learning programme ADRs – ongoing review and updating of assessment questions.

Christine Randall contributes to updating the NHS Medicines Safety App. The app is a quick way for healthcare professionals to test their knowledge on high risk areas for medicines safety incidents. It provides a quiz with a series of ten multiple choice questions chosen randomly from a bank of questions for each topic or mixed up in a ‘lucky dip’.

Training materials used to deliver educational sessions on ADRs and the Yellow Card scheme continue to be updated, with PowerPoint presentations tailored to the audience and medium.

## 6. PUBLICATIONS (2021/22)

- Osanlou R, **Walker L**, Hughes DA, et al. Adverse drug reactions, multimorbidity and polypharmacy: a prospective analysis of 1 month of medical admissions *BMJ Open* 2022;12:e055551. doi: 10.1136/bmjopen-2021-055551
- **Walker LE**, Sills GJ, Jorgensen A, Alapirtti T, Peltola J, Brodie MJ, Marson AG, Vezzani A, Pirmohamed M. High-mobility group box 1 as a predictive biomarker for drug-resistant epilepsy: A proof-of-concept study. *Epilepsia*. 2022 Jan;63(1):e1-e6
- Griffiths GO, FitzGerald R, Jaki T, Corkhill A, Reynolds H, Ewings S, Condie S, Tilt E, Johnson L, Radford M, Simpson C, Saunders G, Yeats S, Mozgunov P, Tansley-Hancock O, Martin K, Downs N, Eberhart I, Martin JWB, Goncalves C, Song A, Fletcher T, Byrne K, Lalloo DG, Owen A, Jacobs M, **Walker L**, Lyon R, Woods C, Gibney J, Chiong J, Chandiwana N, Jacob S, Lamorde M, Orrell C, Pirmohamed M, Khoo S; AGILE investigators. AGILE: a seamless phase I/IIa platform for the rapid evaluation of candidates for COVID-19 treatment: an update to the structured summary of a study protocol for a randomised platform trial letter. *Trials*. 2021 Jul 26;22(1):487.
- Khoo SH, Fitzgerald R, Fletcher T, Ewings S, Jaki T, Lyon R, Downs N, **Walker L**, Tansley-Hancock O, Greenhalf W, Woods C, Reynolds H, Marwood E, Mozgunov P, Adams E, Bullock K, Holman W, Bula MD, Gibney JL, Saunders G, Corkhill A, Hale C, Thorne K, Chiong J, Condie S, Pertinez H, Painter W, Wrixon E, Johnson L, Yeats S, Mallard K, Radford M, Fines K, Shaw V, Owen A, Lalloo DG, Jacobs M, Griffiths G. Optimal dose and safety of molnupiravir in patients with early SARS-CoV-2: a Phase I, open-label, dose-escalating, randomized controlled study. *J Antimicrob Chemother*. 2021 Nov 12;76(12):3286-3295.
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- **Walker LE**, Cremers S. Concise advice: Introducing a new clinically focused BJCP series on evidence-based (de)prescribing in challenging situations. *Br J Clin Pharmacol*. 2021 Dec;87(12):4484-4487
- Shiakolas AR, Johnson N, Kramer KJ, Suryadevara N, Wrapp D, Periasamy S, Pilewski KA, Raju N, Nargi R, Sutton RE, **Walker L**, Setliff I, Crowe JE, Bukreyev A, Carnahan RH, McLellan JS, Georgiev IS. Efficient discovery of potently neutralizing SARS-CoV-2 antibodies using LIBRA-seq with ligand blocking. *bioRxiv [Preprint]*. 2021 Jun 30:2021.06.02.446813.

- **Walker LE**, Cooper C. Long-term bisphosphonate therapy and atypical femoral fracture: Can you have too much of a good thing? Br J Clin Pharmacol. 2021 Dec;87(12):4877-4879.
- Essa H, **Walker L**, Sankaranarayanan R. Sodium-glucose co-transporter-2 inhibitors in the non-diabetic heart failure patient. Br J Clin Pharmacol. 2022 Jun;88(6):2566-2570.
- Essa H, Sankaranarayanan R, **Walker L**. Triple antithrombotic therapy and dual therapy - What is the evidence base? Br J Clin Pharmacol. 2022 Jul;88(7):3009-3012.
- FitzGerald R, Dickinson L, Else L, Fletcher T, Hale C, Amara A, **Walker L**, Panchala SD, Lyon R, Shaw V, Greenhalf W, Bullock K, Lavelle-Langham L, Reynolds H, Painter W, Holman W, Ewings S, Griffiths G, Khoo S. Pharmacokinetics of  $\beta$ -d-N4-hydroxycytidine, the parent nucleoside of prodrug molnupiravir, in non-plasma compartments of patients with SARS-CoV-2 infection. Clin Infect Dis. 2022 Mar 10:ciac199.
- Daniel Finn, **Christine Randall** and E. Anne Field. UK Dental Medicines Advisory Service: questions asked by dentists – part 5: prescribing for oromucosal diseases and dry mouth. Br Dent J, 2021; 231: 689–695.
- Phillip M. Brown, Kathryn Fox, E. Anne Field and **Christine Randall**. UK Dental Medicines Advisory Service: questions asked by dentists – part 4: prescribing of high-strength fluoride toothpastes and use of fluoride varnishes in dental practice. Br Dent J, 2021; 231: 623–628.
- Kathryn Finn, Andrew Kwasnicki, E. Anne Field and **Christine Randall**. UK Dental Medicines Advisory Service – questions asked by dentists: part 3 – prescribing of anxiolytic medications in dental practice. Br Dent J, 2021; 231: 556–561.
- Gillian L. Barker, E. Anne Field & **Christine Randall**. UK Dental Medicines Advisory Service: questions asked by dentists - part 2: drugs used for medical emergencies in dental practice. Br Dent J, 2021; 231: 458–462.
- **Christine Randall**, Daniel Finn & E. Anne Field. UK Dental Medicines Advisory Service: questions asked by dentists - part 1: prescribing regulations and medicines use. Br Dent J, 2021; 231: 393–397.
- Field & **C. Randall**. Betamethasone vigilance (letter). Br Dent J, 2021; 231: 317.
- Anne Field and **Christine Randall**. Patients must be warned not to swallow betamethasone soluble tablets (letter). Pharmaceutical Journal 26<sup>th</sup> August 2021 <https://pharmaceutical-journal.com/article/letters/patients-must-be-warned-not-to-swallow-betamethasone-soluble-tablets>
- Nicholas Ransford, Ben Marnell, **Christine Randall**, Clare Yates & Gillian Howie. Systemic medicines taken by adult special care dental patients and implications for the management of their care. Br Dent J, 2021; 231: 33–42.

## 7. YCC WEBSITE AND SOCIAL MEDIA

### Website updates

The YCC North West website went live in September 2021, it currently hosts our annual reports, information on how to report, contact details for requesting training session as well as displaying the feeds for Instagram and Twitter

### Number of website hits

Since September 2021 to April 2022 the site has seen 453 visits, 337 unique visitors with a total page views of 791

### Twitter presence

In October 2018 we created a twitter account, @yellowcardnw, as of April 2022 we have just over 230 followers impressions are low even #medsafetyweek only saw a top of 1.3k impressions, engagement rate has been overall quite low. It is currently used to raise local and national awareness around safety in health and medicines, reporting ADRs as well as promoting our learning days and champions meetings. This year it has been difficult to penetrate our messages and we have tweeted less optimally than expected.

## **8. RESEARCH AND ONGOING INITIATIVES**

### **YCCNW Champions network**

The North West-wide network of Yellow Card Champions, set up in 2015, shares good practice, explores ideas and initiatives and lends support. The Champions meet twice a year and the group continues to expand, since 2020 meetings have been virtual and this will continue. Secondary care and community or mental health trusts who have active members of the network (19 of 26 acute trusts plus 7 of 8 community /mental health) contributed 1,925 reports in 2021/22 (50% of all reports, 95% of secondary care reports and 85% of community/mental health trusts). Eight of the top ten reporting secondary care trusts actively participated in the Champions network in 2021/22.

## **9. CONCLUSION**

In 2021/22 3,851 Yellow Cards were submitted by health professionals, patients and carers from the YCCNW region. This is a 4.8% decrease compared to 2020/21, the reduction is expected to be related to the changing work priorities of healthcare staff during the COVID-19 pandemic. Hospital pharmacists continued to be the highest reporting group (1,153 reports (30% of the total) but they are followed closely by patient/carer reporting which is our fastest increasing group (1,103 reports (29% of the total)). This continuing high level of hospital pharmacy reporting correlates well with active participation in the North West-wide Champion network. The highest percentage increase in reporting in 2021/22 came from patients (43% increase).

## 10. ANNEX 1 - COVID-19 VACCINE REPORTING APRIL 2021 to MARCH 2022

Table 12 Summary of COVID-19 vaccine reporting April 2021 to March 2022

<b>Vaccine Brand</b>	<b>Number of reports</b>
PfizerBioNTech/Comirnaty	11,210
Astrazeneca	10,589
Moderna	2,911
Sinovac	2
Unspecified	98
<b>Reporter</b>	
Patient/carer/recipient	21,561
Doctor	1,092
Nurse	595
Pharmacist	708
Healthcare professional	436
Healthcare assistant	169
Medical student	31
Dentist	156
Radiographer	20
Paramedic	31
Optometrist	5
Chiropodist	4
Coroner	1
Lawyer	1
<b>Sex</b>	
Female	17,309
Male	6,059
Unknown	1,442
<b>Age</b>	
0 -18	456
19-30	3965
31-40	5053
41-50	4964
51-60	3448
61-70	1835
71-80	852
81-90	242
>90	32
Unknown	3963



