

**YCC West Midlands**

**ANNUAL REPORT  
2017/18**

**ANNUAL REPORT OF YELLOW CARD CENTRE WEST MIDLANDS  
TO THE MEDICINES AND HEALTHCARE PRODUCTS REGULATORY AGENCY**

**2017/18**

**1. STAFF**

Professor J J Coleman – Director  
Professor R E Ferner – Director Emeritus  
Dr J K Aronson – Honorary Consultant Physician  
Mr C Anton – Administrative Co-ordinator  
Mrs K Badyal – Pharmacovigilance Pharmacist  
Dr A R Cox – Honorary Pharmacovigilance Pharmacist  
Mrs T J Ahmad – Information Scientist

**2. SUMMARY**

Our priorities for the year remain focused on teaching and providing information and we have continued our programmes for all grades of staff from student nurses to consultants. We have continued to expand our network of ADR Champions and now have a champion in each of the acute Trusts. Work is continuing to recruit Champions in community and mental health trusts.

The number of reports from the region rose for the fifth year in a row with the total numbers up by 3%. There was an increase of 18% in reports from hospital pharmacists. The number of patient reports continues to increase and they now comprise 28% of all our reports. Reports from GPs rose. Few GPs in the region have electronic systems capable of submitting Yellow Cards directly. Electronic reports rose again and now comprise nearly 91% of our reports. The percentage of serious reports rose to 57%

**3. YELLOW CARD DATA**

*Number of reports*

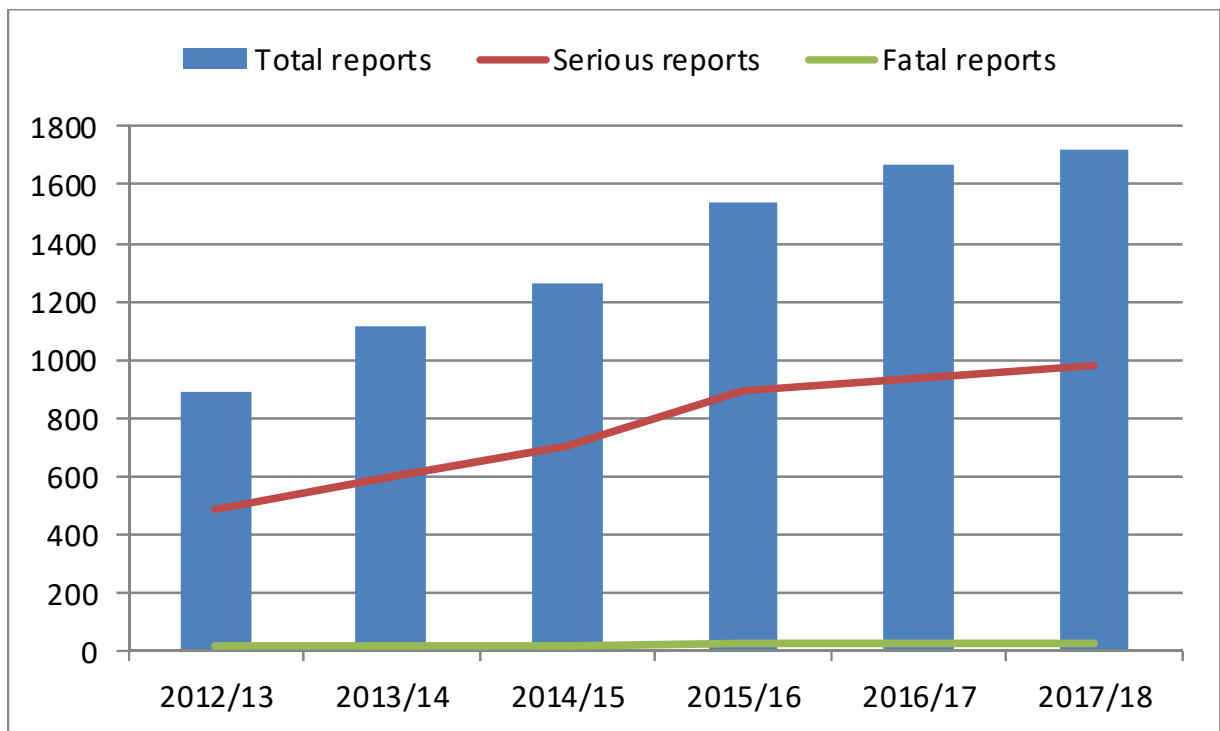
Year	Number of reports	As a percentage of national reports
2017/18	1724	5.8%
2016/17	1668	6.2%
2015/16	1540	6.6%
2014/15	1263	6.5%
2013/14	1114	6.4%

*Serious reports*

Year	Number of serious reports	As percentage of total reports
2017/18	976	57%
2016/17	937	56%
2015/16	891	58%
2014/15	699	55%
2013/14	596	54%

*Fatal reports*

Year	Number of fatal reports	As percentage of total reports
2017/18	28	1.6%
2016/17	31	1.9%
2015/16	23	1.5%
2014/15	20	1.6%
2013/14	19	1.7%



### Age banding

Age range	Percentage of reports 2017/18	Percentage of reports 2016/17	Percentage of reports 2015/16	Percentage of reports 2014/15	Percentage of reports 2013/14
<18	11%	11%	11%	13%	12%
18-24	6%	7%	6%	6%	4%
25-34	8%	9%	9%	9%	8%
35-44	9%	11%	10%	9%	11%
45-54	12%	11%	13%	12%	14%
55-64	15%	15%	12%	12%	14%
65-74	16%	16%	17%	18%	16%
75-84	12%	11%	13%	11%	13%
>85	4%	4%	5%	4%	2%
unknown	7%	6%	4%	5%	4%
<b>Total</b>	<b>1724</b>	<b>1668</b>	<b>1540</b>	<b>1263</b>	<b>1114</b>

### Source of report

Reporter qualification	2017/18	2016/17	2015/16	2014/15	2013/14
Carer	15	13	7	11	9
Community Pharmacist	113	111	83	47	90
Coroner	1	1		2	1
Dentist	2	1	4	5	8
GP	265	252	325	279	248
Healthcare Assistant		2		1	3
Hospital Doctor	167	189	174	176	155
Hospital Health Professional	44	28	16	36	31
Hospital Nurse	116	141	97	128	85
Hospital Pharmacist	294	250	230	121	92
Nurse	89	112	181	115	131
Other Health Professional	45	51	20	47	39
Parent	73	58	49	22	24
Patient	393	355	301	254	135
Pharmacist	17	25	14		16
Pharmacy Assistant	17	11	7		
Physician	7	12	3	7	11
Pre-reg Pharmacist	48	32	16		
Radiographer	16	24	9	7	11

### Report type

Report type	2017/18	2016/17	2015/16	2014/15
eYC	1291	1219	988	768
Paper	171	198	214	275
GP systems	14	6		117
TPP	228	104	297	61
MiDB	20	46	41	37

We have created a number of additional graphs to examine some local trends in reporting.

Figure 1: All Patient Reports (combined patient, carer, and parent reports)

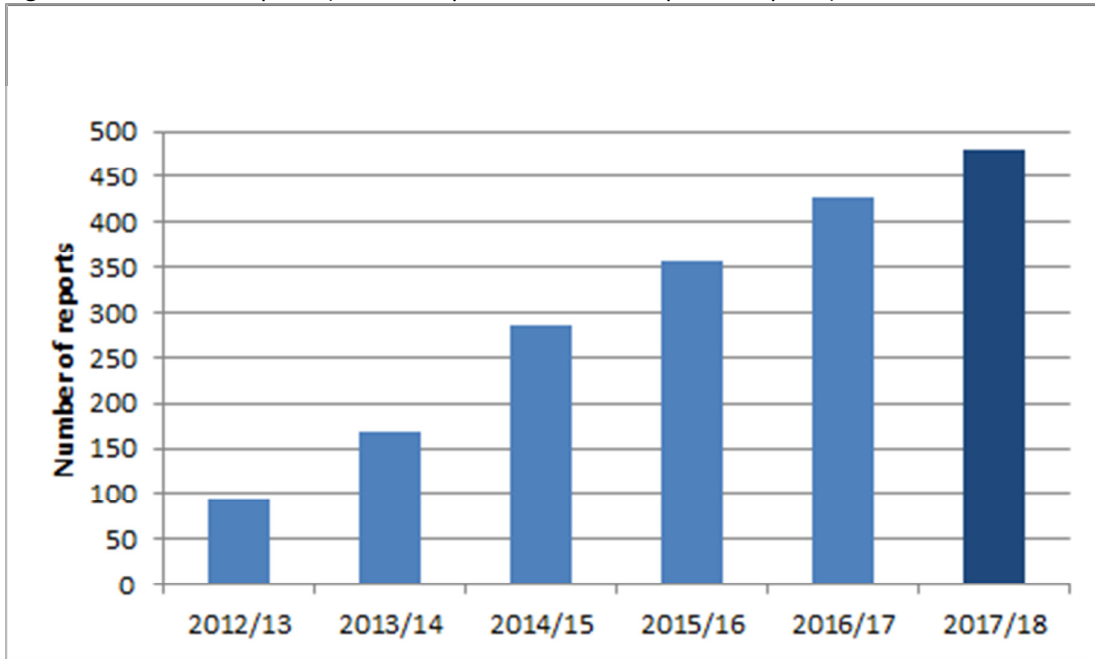


Figure 2: All hospital Reports (Combination of hospital doctor, hospital nurse, hospital pharmacist & hospital other healthcare professional)

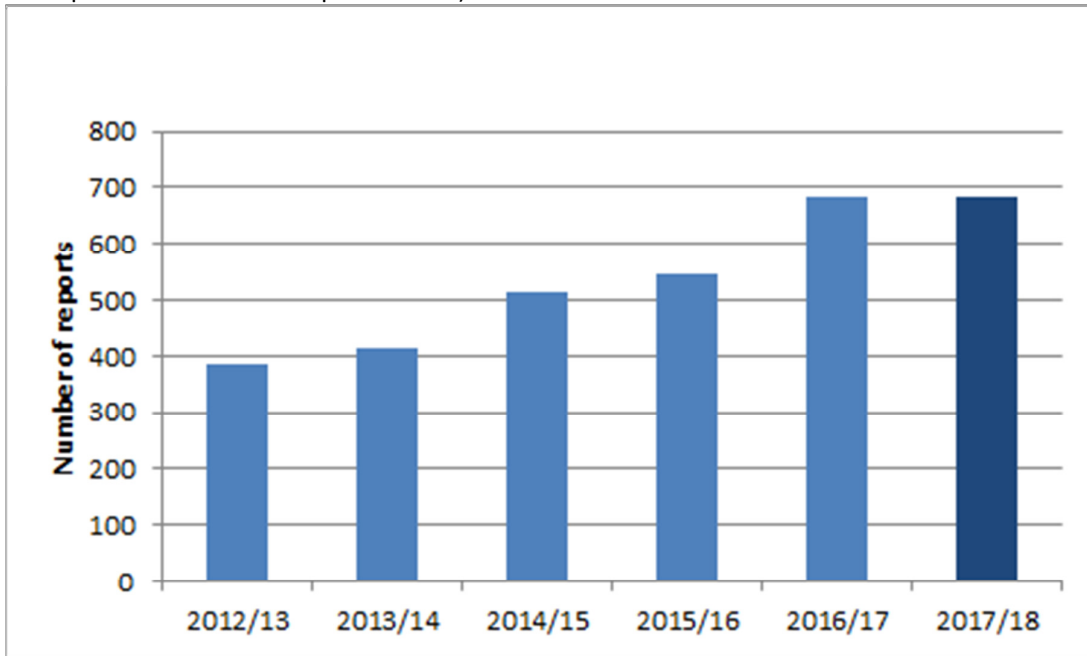


Figure 3: All Pharmacist Reports (Combination of pharmacist, community pharmacist, & hospital pharmacist).

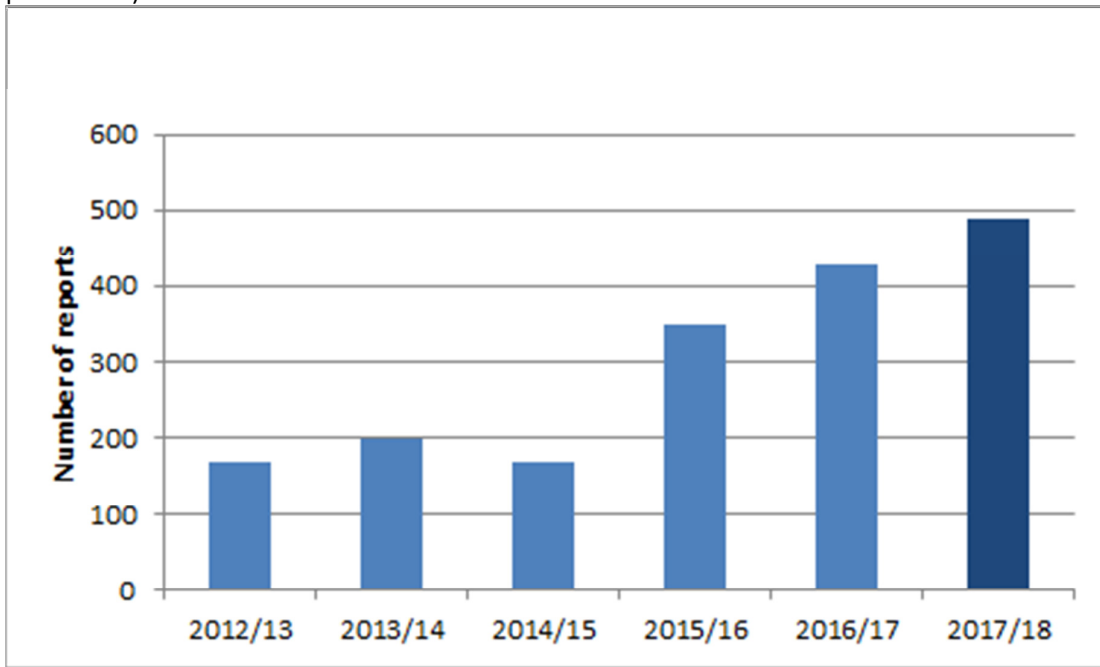


Figure 4: Hospital Doctor Reports

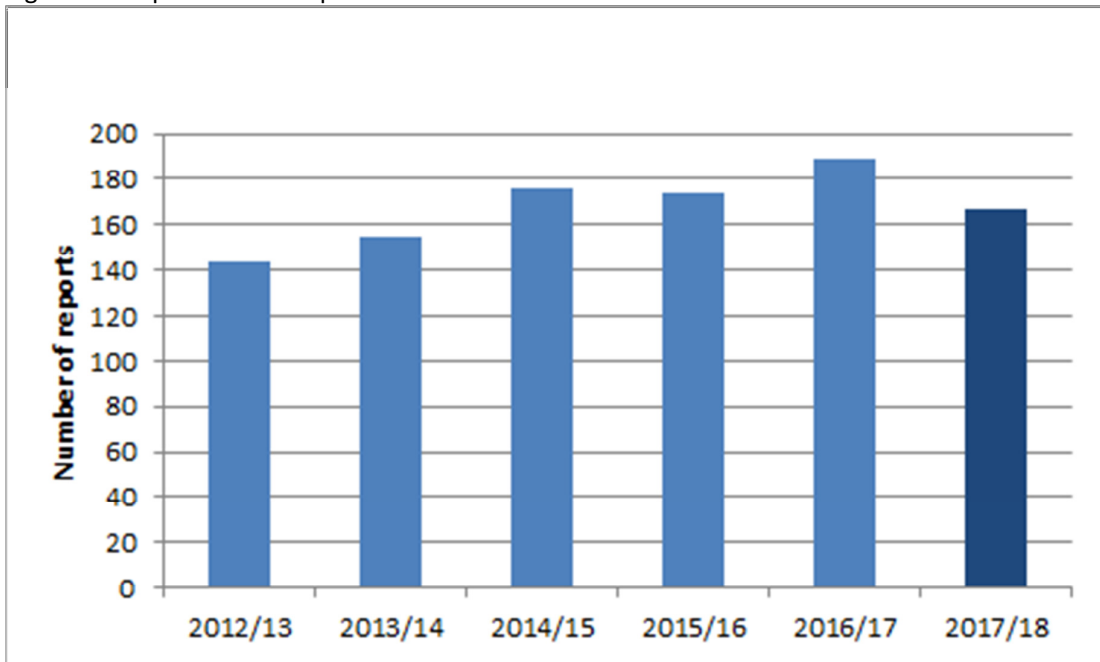


Figure 5: All Healthcare Professional Reports

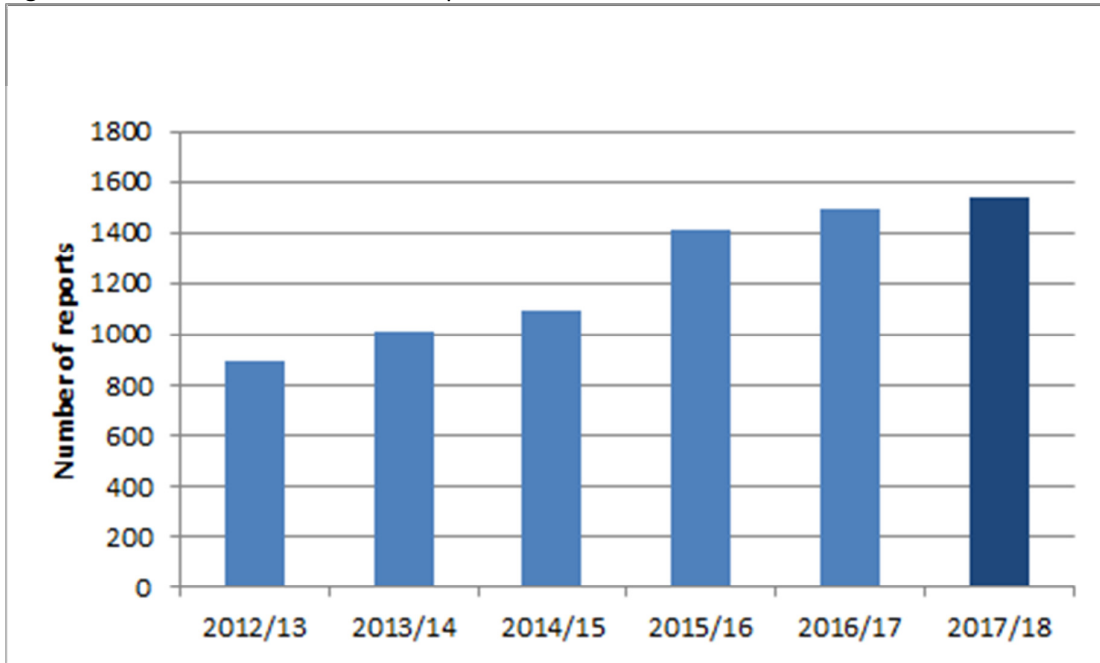


Figure 6: All Nurse Reports (Nurse, and Hospital Nurse)

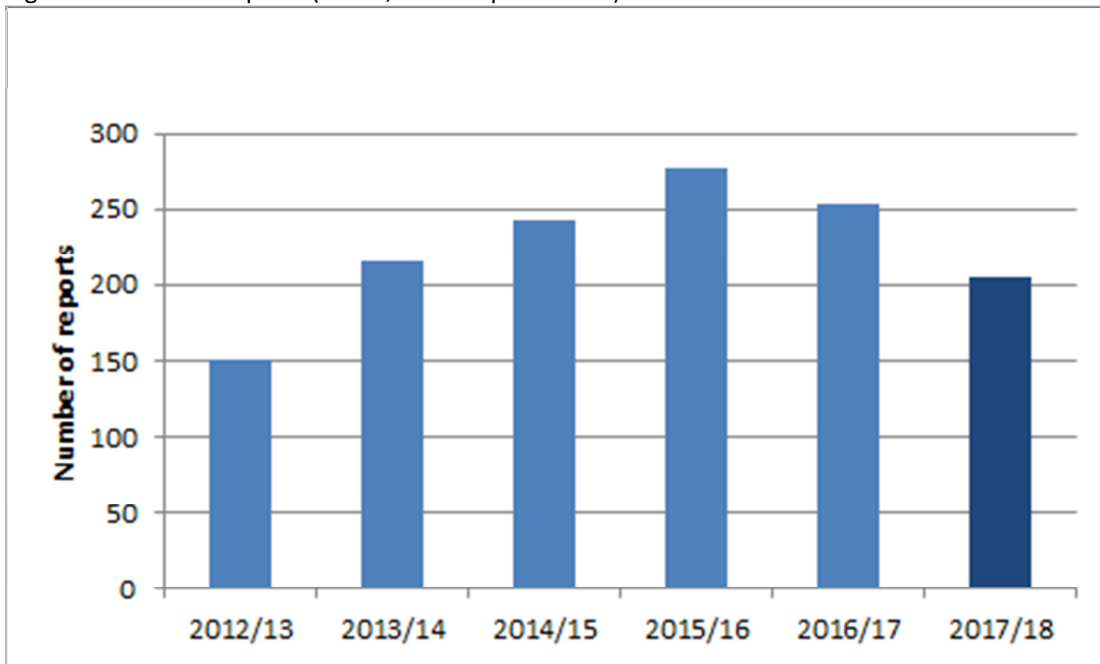
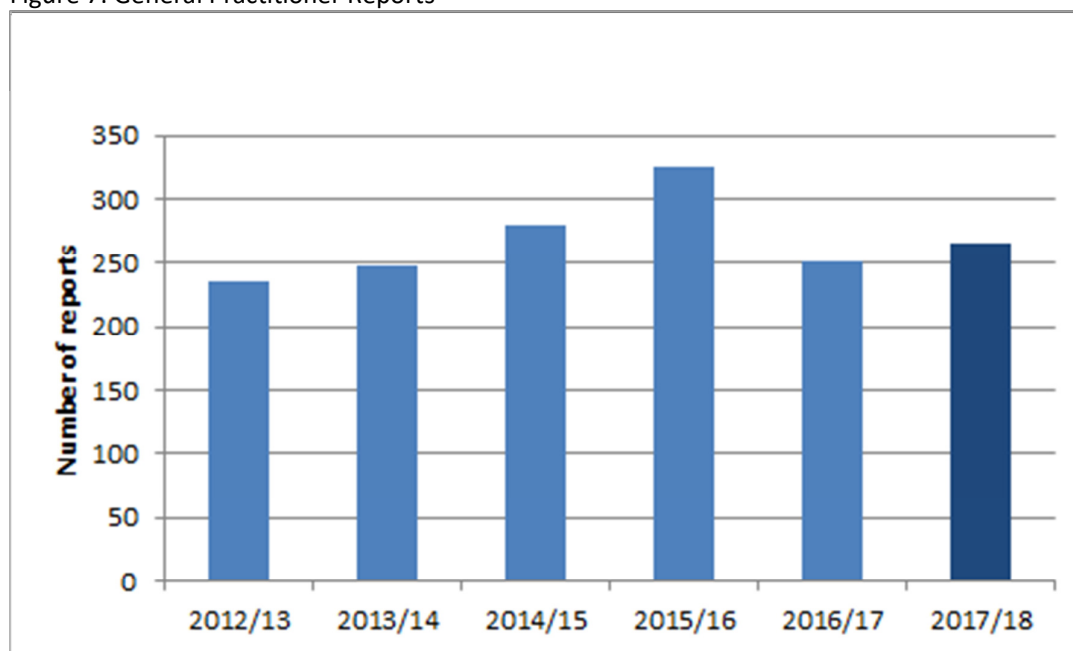


Figure 7: General Practitioner Reports



#### Top 10 drugs

The top 10 drugs listed as suspect drug are shown below

Suspect drug	No of reports
RIVAROXABAN ▼	55
INFLUENZA VIRUS ▼	41
APIXABAN	40
NEISSERIA MENINGITIDIS	37
FLUCLOXACILLIN	31
SERTRALINE	30
PHENOXYMETHYLPENICILLIN	25
ATORVASTATIN	24
RAMIPRIL	24
SACUBITRIL/VALSARTAN ▼	24

#### 4. PROMOTIONAL ACTIVITIES

We have promoted the scheme with numerous talks and lectures during the year. Details of them are listed below.

##### Meetings

Professor Coleman regularly attended meetings of PEAG and deputized on occasions for Professor Pirmohamed as Chair, and also attended CHM as an invited expert.

Professor Coleman is the Vice Chair of the European Association of Clinical Pharmacology and Therapeutics and will take over as chair in July 2019. He is the Chair of the Clinical Pharmacology and Therapeutics Specialist Advisory Committee and vice chair of the clinical section of the British



Pharmacological Society. Professor Coleman has also been elected on to the Clinical Division executive committee of the International Union of Basic and Clinical Pharmacology (IUPHAR).

Professor Ferner attended a discussion group at the OECD on the availability of medicines

We held a study day in October in collaboration with the West Midlands AHSN and which was well received.

### ADR Champions

We continue to engage with the Champions in the region providing them with data for talks.

Work is continuing to recruit Champions in mental health and community Trusts and in GP practices and CCGs.

### Teaching/Meetings

Date	Venue	Audience	Numbers	Sector
26/04/2017	BSC CCG NET event	GP's	50	Primary Care
08/05/2017	Dudley	nurses, doctors, pharmacists	70	Secondary Care
15/05/2017	Dudley	nurses, doctors, pharmacists, patients	200	Secondary Care
22/05/2017	Walsall Manor	pharmacists	15	Secondary Care
01/06/2017	SWBH	pharmacists	8	Secondary Care
07/06/2017	SWBH	pharmacists	8	Secondary Care
20/07/2017	Meridien	study day	0	study day attended
24/06/2017	SWBH	pharmacists	2	Secondary care
16/07/2017	Walsall Manor	doctors	10	Secondary care
22/08/2017	SWBH	doctors	15	Secondary care
04/09/2017	Walsall Manor	awareness week	200	Secondary care
14/09/2017	Birmingham	medical students	370	
12/10/2017	Regional event with AHSN	pharmacists, doctors, nurses, patients	90	
16/10/2017	ISoP		200	
25/10/2017	FY1 Sandwell	doctors	20	Secondary care
31/10/2017	UHBFT	Doctors (FY2)	25	Secondary care
14/11/2017	Aston Uni MPharm	students	100	
20/11/2017	Keele University	students	100	
30/11/2017	Birmingham University	Dental students	60	
19/12/2017	NMP forum	nurses	60	Secondary care
17/01/2018	Aston IP course	pharmacists	25	
13/01/2018	Dudley	doctors	18	
10/02/2018	Birmingham	pharmacy undergraduates	80	
13/03/2018	YCC Wales	pharmacists/ doctors	20	
26/03/2018	Dental undergrads	dentists	80	

## **Lectures given include**

Medication Errors to the BAPIO (British Association of Physicians of Indian Origin) West Midlands division and our Patient Safety Forum are organising the third Patient Safety Symposium

British Association of Physicians of Indian Origin, Birmingham, April 2017: 'Medication errors.'

Royal College of Physicians, London, July 2017: 'Plants that kill.'

Nordic Nations Toxicology Group, Elsinore, September 2017: 'Post-mortem drug redistribution.'

University Graduates' Club, Birmingham, October 2017: 'Medical manslaughter.'

Academic Health Sciences Network, Birmingham, October 2017: 'Adverse drug reactions.'

South Asian College of Clinical Pharmacology, Mumbai, March 2018: 'Developing a successful eLearning tool – UK experience'

We supervised 3 MPharm fourth year projects at the University of Birmingham and presented posters arising from them at the ISOP meeting in Liverpool in October 2017.

## **6. PUBLICATIONS AND CONFERENCES**

Publications for 2017/18 include:

Adderley NJ, Mallett S, Marshall T, Ghosh S, Rayman G, Bellary S, Coleman J, Akiboye F, Toulis KA, Nirantharakumar K. Temporal and external validation of a prediction model for adverse outcomes among inpatients with diabetes. *Diabet Med*. 2018 Feb 27. doi: 10.1111/dme.13612. [Epub ahead of print]

Aronson JK, Ferner RE. Unlicensed and off-label uses of medicines: definitions and clarification of terminology. *Br J Clin Pharmacol*. 2017 Dec;83(12):2615-2625. doi: 10.1111/bcp.13394. Epub 2017 Sep 26

Aronson JK, Ferner RE. Biomarkers—A general review. *Curr Protoc Pharmacol* 2017; 76: 9.23.1-9.23.16. doi: 10.1002/cpph.19

Badyal KK, Badyal IS. Adverse reactions to ophthalmic medicines. *Adverse Drug Reaction Bulletin*. 2017 Dec; 307:1. pp. 1187-1190(4)

Brooks HL, Pontefract SK, Vallance HK, Hirsch CA, Hughes E, Ferner RE, Marriott JF, Coleman JJ. Perceptions and Impact of Mandatory eLearning for Foundation Trainee Doctors: A Qualitative Evaluation. *PLoS One*. 2016 Dec 22;11(12):e0168558. doi: 10.1371/journal.pone.0168558. eCollection 2016.

Brown CL, Reygate K, Slee A, Coleman JJ, Pontefract SK, Bates DW, Husband AK, Watson N, Slight SP. A literature review of the training offered to qualified prescribers to use electronic prescribing systems: why is it so important? *Int J Pharm Pract*. 2017 Jun;25(3):195-202. doi: 10.1111/ijpp.12296. Epub 2016 Aug 4.

Coleman, JJ. Temporal and external validation of a prediction model for adverse outcomes among inpatients with diabetes. *Diabetic Medicine*. 2018 Feb 27. doi: 10.1111/dme.13612. [Epublication ahead of print]

Coleman, JJ. Impact of a commercial order entry system on prescribing errors amenable to computerised decision support in the hospital setting: a prospective pre-post study. *BMJ Quality & Safety*. 2018 Mar 23. doi: 10.1136/bmjqs-2017-007135

Coleman, JJ. Investigating the ways in which health information technology can promote antimicrobial stewardship: a conceptual overview. *Journal of the Royal Society of Medicine*. 2017 Aug; 110(8): 320-329

Ferner R. Disposition of toxic drugs and chemicals in man 11th edition. (Review). *Clin Toxicol (Phila)* 2017 Dec 4;1. doi: 10.1080/15563650.2017.1388920.

Ferner RE, Easton C, Cox AR. Deaths from Medicines: A Systematic Analysis of Coroners' Reports to Prevent Future Deaths. *Drug Saf*. 2018 Jan;41(1):103-110. doi: 10.1007/s40264-017-0588-0.

Ferner RE, Aronson JK. The toxicological significance of post-mortem drug concentrations in bile. *Clin Toxicol (Phila)*. 2018 Jan;56(1):7-14. doi: 10.1080/15563650.2017.1339886. Epub 2017 Jul 6

Holland MG, Ferner RE. A systematic review of the evidence for acute tolerance to alcohol - the "Mellanby effect". *Clin Toxicol (Phila)*. 2017 Jul;55(6):545-556. doi: 10.1080/15563650.2017.1296576. Epub 2017 Mar 9.

King A, Cresswell KM, Coleman JJ, Pontefract SK, Slee A, Williams R, Sheikh A. Investigating the ways in which health information technology can promote antimicrobial stewardship: a conceptual overview. *J R Soc Med*. 2017 Aug;110(8):320-329.

Maxwell SRJ, Coleman JJ, Bollington L, Taylor C, Webb DJ. Prescribing Safety Assessment 2016: Delivery of a national prescribing assessment to 7343 UK final-year medical students. *Br J Clin Pharmacol*. 2017 Oct;83(10):2249-2258. doi: 10.1111/bcp.13319. Epub 2017 Jun 13.

McGettigan P, Ferner RE. PCSK9 inhibitors for hypercholesterolaemia. *BMJ*. 2017 Jan 19;356:j188. doi: 10.1136/bmj.j188

Pontefract SK, Hodson J, Slee A, Shah S, Girling AJ, Williams R, Sheikh A, Coleman JJ. Impact of a commercial order entry system on prescribing errors amenable to computerised decision support in the hospital setting: a prospective pre-post study. *BMJ Qual Saf*. 2018 Mar 23. pii: bmjqs-2017-007135. doi: 10.1136/bmjqs-2017-007135.

We produced and distributed 2 editions of our *ad hoc* Bulletin, re:Action and edited 6 editions of the Adverse Drug Reaction Bulletin

## **7. RESEARCH**

Our current research activity is concerned with adverse drug reactions, including classification, monitoring, and the patient experience of adverse drug reactions and the Yellow Card scheme, and medication errors.