Adverse drug reaction reporting by community pharmacists – the barriers and facilitators

Running head: ADR reporting: barriers and facilitators

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Key points

- This article investigates the views of community pharmacists in Wales regarding spontaneous reporting of ADRs through the UK's 'Yellow Card Scheme'
- Key barriers to reporting identified by pharmacists were that they don't see many ADRs, they don't have time to report and there is difficulty identifying the causative drug
- Main suggestions to increase reporting were being able to report through normal dispensing software, to have clearer guidance, and to receive remuneration for reporting
- Pharmacists who had never reported an ADR were less confident about identifying and reporting ADRs and would particularly benefit from further guidance
- Addressing community pharmacists' self-identified barriers and facilitators may help increase reporting rates

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Abstract

Purpose: The UK's 'Yellow Card Scheme' for reporting of adverse drug reactions (ADRs) has been operating for 50 years, but reporting rates by community pharmacists remain low. The aim of the study was therefore to investigate the views and experiences of ADR reporting by community pharmacists in Wales, with a particular focus on the potential barriers and facilitators to reporting.

Methods: Following Ethics approval and piloting, a self-complete questionnaire was mailed to all registered community pharmacies in Wales, UK (n=713). A follow-up mailing was sent to non-responders after two weeks.

Results: A response rate of 52% (n=372) was achieved, of whom 57% had never submitted a yellow card. Key barriers to reporting were not seeing ADRs, difficulty identifying the causative drug, not being sure which ADRs to report and lack of time. Key facilitators were being able to report through dispensary software and having clearer guidelines about what to report. Differences between those who had previously reported ADRs and those who had not suggested lack of confidence and uncertainty about what to report were more of a barrier for non-reporters. Conversely, reporters wanted feedback on reports, ability to keep reports on their dispensary records and remuneration to aid them with reporting.

Conclusions: While the respondents generally expressed positive attitudes towards ADR reporting, a number of barriers and potential facilitators were nevertheless identified. Clearer support and guidance for reporting, such as through a 'champions' scheme similar to that run in Welsh hospitals may help current non-reporters to engage.

Introduction

Adverse drug reactions (ADRs) are of huge significance to healthcare in terms of the burden to individuals' health and wellbeing, as well as the costs associated with treating patients with ADRs [1]. In order to identify (and ideally therefore prevent) such ADRs, pharmacovigilance systems have been set up in many countries [2]. These predominantly utilise spontaneous reports from health professionals and, increasingly, patients to monitor the safety of drugs throughout their marketed life.

It is 50 years since the 'Yellow Card Scheme' (YCS) for spontaneous reporting of ADRs was launched in the United Kingdom [3]. In the intervening years, a range of initiatives, including widening access, have been implemented to increase reporting rates, including allowing community pharmacists to join the scheme in 1999 [3]. Nevertheless, in common with many other spontaneous reporting schemes, under-reporting (including by community pharmacists) is a limitation [4].

The reasons for low reporting rates by community pharmacists are not easy to identify. Research which has looked into this issue is predominantly from countries where ADR spontaneous reporting schemes are relatively newly established such as India, Iran, Nepal, Nigeria and Saudi Arabia [5-13]. The authors of these studies have identified possible reasons for non-reporting of ADRs such as lack of knowledge of the reporting schemes and processes, lack of awareness of the scheme, lack of access to reporting forms, lack of certainty regarding causality, reactions which are seen are too mild to report, reactions too well known to report and workload and time pressures [5-13]. These findings may, however, be associated with the relative newness of the schemes – particularly lack of knowledge of how it works or access to forms. Nevertheless even in countries with more established schemes where pharmacists have been involved for longer, a number of barriers have been noted such as uncertainty regarding causation [14-15], lack of time [14-16], reactions which are seen are minor [15], reactions which are seen are well-known [14,16] and simply forgetting to report [15].

In the UK, published studies which investigated community pharmacists' role in ADR reporting were undertaken at the time when ADR reporting by community pharmacists was a pilot scheme (in the late 1990s) [17,18,19]. Reasons for not reporting were identified as being the fact the reaction was well recognised [17,19], there was not enough information about the ADR [17], they were not sure about causality [19] and there was insufficient time in the working day for reporting [17]. As considerable time has now passed and reporting by pharmacists has become established, reporting rates might be expected to have increased and indeed reporting rates by pharmacists in general have increased [20]. Nevertheless, overall reporting by community pharmacists, particularly within Wales, is still relatively low [21-24]; for example, just 4% of reports in Wales came from community pharmacists in 2013-14 [21]. Although initiatives such as linking ADR reporting to the New Medicine Service in England have boosted community pharmacist rates locally – such as a 92% increase in 2011-2 in the Northern and Yorkshire region [25], the levels still remain lower than for hospital pharmacists and doctors. It is important therefore to find out what is preventing community pharmacists from reporting.

The aim of the study was therefore to investigate the views and experiences of ADR reporting by community pharmacists in Wales, with a particular focus on the potential barriers and facilitators to reporting.

Methods

Attitudes and experiences of community pharmacists working in Wales towards ADR reporting were assessed through means of a cross-sectional postal survey. Approval was granted from a University Ethics Committee to undertake the study.

The questionnaire was developed based on the literature and exploratory interviews with a purposive sample of seven community pharmacists covering a range of roles and levels of experience including experience of the YCS. The questions included pharmacist demographics and experience of training on ADRs and reporting through the yellow card scheme. A further section asked about barriers and facilitators to reporting, while the final section provided a number of statements with which respondents were asked to indicate their level of agreement using a 5-point Likert-style scale ranging from strongly agree to strongly disagree. Questions were predominantly closed-format, although space was provided to expand on some answers (see appended questionnaire). There was opportunity at the end of the questionnaire for respondents to add any further comments on the topic.

Following piloting on a random sample of 140 pharmacies in a demographically similar region in the North East of England, a few changes were made to the questionnaire. Most were related to formatting, but some additional questions were added relating to additional roles and qualifications and also respondents were asked to identify their main barrier / facilitator (if they had one).

The amended questionnaire was mailed to all registered community pharmacies in Wales (n=713) addressed to 'The Pharmacist'. This was for reasons of practicality and also ensured that those sent a questionnaire were actively working in community pharmacy. The addresses were obtained from the NHS Direct Wales website [26]. Each questionnaire was coded to allow identification of non-responders and to determine the region in which the pharmacy was based. The mailing pack also contained a cover letter and freepost envelope. Respondents were asked to return the completed questionnaires within two weeks. After two weeks, non-responders were identified and a repeat mailing sent.

Data were analysed in SPSS® version 20 using descriptive statistics and comparative analysis between reporters and non-reporters through the YCS, using Fisher's exact test. Qualitative data was coded and analysed using content analysis or thematic analysis as appropriate.

Results

A total of 372 questionnaires were returned; a response rate of 52%. There were equivalent proportions of male and female pharmacists (49.5% vs 50.4%) – other key demographics are shown in Table 1. In terms of experience of ADR reporting, 57% (208/368) of respondents had never reported an ADR through the YCS.

Pharmacists were presented with a list of possible factors which may deter or prevent people from reporting ADRs. They were asked to tick all of those with which they agreed (four people did not answer this question). Respondents were then asked if they had one main barrier and, if so, to note which it was: 102 respondents stated a main barrier (one stated more than one option). The results are shown in Table 2. Non-reporters were more likely to identify lack of confidence, uncertainty over what to report and not seeing ADRs as being barriers than were those who had previously reported an ADR ($p=0.001$, $p=0.012$, $p<0.0005$, respectively, Fisher's exact test).

Pharmacists were then given a list of possible factors which may encourage people to report ADRs. They were asked to tick all of those with which they agreed (fifteen people did not answer this question). Respondents were then asked if they had one main facilitator and, if so, to note which it was: 120 respondents stated a main facilitator (four stated more than one option). The results are shown in Table 3. Non-reporters were more likely than reporters to identify clearer guidance as a facilitator (65% vs 52%, p=0.007 Fisher's Exact) while reporters were more likely to identify getting feedback from the MHRA, being able to keep records of ADR reports in their dispensing software and remuneration as facilitators than did non-reporters (Table 3). Non-reporters were also more likely than reporters to state that nothing would encourage them to report (5% vs 1%, p=0.030).

In the final section of the questionnaire, a series of statements based on the literature or on the interviews were presented to the pharmacists who were asked to express their level of agreement with each statement. These related to a wide range of aspects of ADRs and ADR reporting. The respondents indicated positive attitudes towards reporting with the majority disagreeing with the statement that "ADR reporting is not my responsibility" (45% disagreed and 44% strongly disagreed). Similarly, the majority agreed that "I see ADR reporting as part of my professional role" (23% strongly agreed and 65% agreed). There were also positive attitudes towards patient reporting of ADRs with 11% strongly agreeing and 53% agreeing that they would be happy to encourage a patient to report through the YCS. Statements relating to identification of ADRs and reporting of ADRs are presented in Tables 4 and 5.

Although the reporters' overall view of the scheme was not significantly different from that of non-reporters, some differences were noted between reporters and non-reporters for certain statements. These differences are presented in Table 6.

Discussion

This study sought to obtain the views of community pharmacists working in Wales regarding ADR reporting. In general it was found that these pharmacists had positive views about ADR reporting, although fewer than half had ever submitted a report. Of the main barriers to reporting which were highlighted, a number were those previously identified in studies in other countries with established schemes [14-16], suggesting that community pharmacists in the UK are no different in terms of these universal issues such as time pressures and difficulties in identifying causative drugs. Similarly, harder to modify factors such as not seeing reportable reactions [14-16] were also identified in the present study.

What was a more surprising finding in the current study was the lack of confidence in identifying and knowing how to report ADRs. This lack of certainty was also reflected in the proposed facilitators where respondents said they needed clearer guidance about what to report. While these factors have previously been reported in countries with newer reporting schemes [5-13], UK community pharmacists have been involved in ADR reporting for almost 20 years. Further, during the pilot of community pharmacist ADR reporting only 3% said they lacked confidence to report [17]. Since many of these pilot pharmacists received training as part of their participation, this may account for their confidence; likewise a study in Norway [27] found that training pharmacists helped address some of these factors. Since the issues around knowledge and confidence were particularly highlighted by those respondents who had never reported an ADR it may be these individuals would most benefit from some targeted training. Although, what is not clear is the relationship between these factors – are confident pharmacists more likely to report or do they become confident because they have had the experience of reporting? Further research into this association would be beneficial.

While other research has identified barriers to reporting, there has been little consideration of what the potential reporters themselves think would increase their ability and willingness to report. The present study was able to identify a number of such facilitators which could increase reporting rates. The MHRA have already identified that many health professionals are unaware of the scheme [28] and while the respondents were generally aware of the scheme they still felt they needed more information about what they should be reporting - this could be addressed through promotional activities and alerts. Reminders and alerts appear to be beneficial in terms of acting as a prompt to increase reporting rates but the effects wear off over time [29]. Therefore if these were to be utilised, as suggested by respondents, they would need to be appropriately timed to avoid reminder-fatigue. Peer support can also be a facilitator – the 'Yellow Card Champions' initiative launched in Wales in 2013 uses local hospital pharmacist 'champions' to promote ADR reporting in their workplace and support colleagues in reporting and has been associated with a rise in hospital pharmacist reporting [21]. The scheme was extended to community-based pharmacists in 2016 [30] and it is hoped that this will have a similar impact in due course.

In terms of technology, a smart-phone ADR reporting application was launched by the MHRA in 2015 [31], but this idea was not particularly popular with the study respondents as a facilitator. Rather, they preferred a system which would enable the pre-population of yellow card report forms from dispensary software. The use of such systems linkage between GP software and ADR reporting software has already resulted in significant increases in the numbers of GP reports submitted in England [20] and a similar approach could likewise enhance community pharmacist reporting, as suggested by the authors of a review paper in 2005 [32].

One facilitator which was particularly highlighted by those with experience of reporting was remuneration. This may reflect their views of the time and work involved in reporting, in contrast to those without such experience. This was also highlighted during the pilot phase of community pharmacist ADR reporting in the late 1990s, with 37% of respondents believing a fee would increase reporting rates [17]. A small number of studies have looked at the role of small financial incentives for reporting and found this did lead to an increase in report numbers [33,34] but it is not clear whether the costs are warranted for the benefits or whether the same (or greater) benefits can be achieved through other means. As such, this is unlikely to be taken up as a realistic facilitator by MHRA.

Although the response rate for this study was only 52%, this is not unusual for similar surveys of pharmacists regarding ADRs [6,8,14]. Importantly the sample included pharmacists actively working in community practice and therefore in a position to have opportunity to identify and report ADRs. A wide mix of demographics was also clear, suggesting a broad range of viewpoints could be obtained. Although a higher than expected proportion of respondents had reported an ADR, even these engaged participants were able to identify barriers and potential facilitators which may help to further enhance reporting rates.

It is clear that, despite low reporting rates, community pharmacists demonstrate positive views about the importance of ADR reporting and are not averse to submitting reports with the right support in place. It is therefore hoped that more can be done to provide this support, such as provision of further training, alerts, peer support and innovative technology approaches. Such provisions can enable these willing pharmacists to become more active reporters, with subsequent benefits for patient safety.

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Tables and figures

Table 1 Respondent demographics N=372

	Number	%
Number of company/ies worked for (6 did not answer)		
One	327	89
More than one	39	11
Type of company/ies worked for (4 did not answer)		
Large multinational	207	56
Medium chain	54	15
Small chain	48	13
Independent	79	22
Work hours (2 did not answer)		
Full time	300	81
Part time	70	19
Time since qualification (2 did not answer)		
0-2 years	32	9
3-5 years	52	14
6-10 years	59	16
11-20 years	65	18
21-30 years	76	21
31-40 years	57	15
Over 40 years	29	8
Role (2 did not answer; 5 gave multiple answers)		
Locum pharmacist	15	4
Relief pharmacist	18	5
Manager	227	62
Regular pharmacist	87	24
Owner / proprietor	18	5
Prescriber status (2 did not answer)		
Independent prescriber	4	1
Supplementary prescriber	2	0.5
None	364	98

Table 2 Barriers to reporting (respondents could select more than one barrier then were asked to identify if they had a single main barrier)

Possible barrier	Agree (n=368)	Identified as the main barrier (n=102)	Significant differences between non-reporters (NR) and reporters (R) (Fisher's exact test)		
			NR	R	p-value
I don't see many ADRs	194 (53%)	25 (25%)	-	-	-
I don't see many ADRs which meet the reporting criteria	133 (36%)	9 (9%)	43%	26%	<0.0005
It's often too difficult to identify the causative drug	113 (31%)	13 (13%)	-	-	-
I am not sure which ones I am supposed to report	101 (27%)	10 (10%)	32%	21%	0.012
I don't have the time	76 (21%)	19 (19%)	-	-	-
Nothing deters or prevents me from reporting	65 (18%)	2 (2%)	-	-	-
I'm not confident in identifying ADRs	55 (15%)	5 (5%)	20%	8%	0.001
I just don't remember about the Yellow Card scheme	44 (12%)	5 (5%)	-	-	-
I assume the patient's GP will complete a Yellow Card instead	44 (12%)	1 (1%)	-	-	-
I'd be worried I would have to complete 'follow up' reports which would generate a lot of work	41 (11%)	2 (2%)	-	-	-
I don't have access to the information I would need in order to report	29 (8%)	4 (4%)	-	-	-
It's too complicated to report	17 (5%)	-	-	-	-
I don't see ADR reporting as a priority	10 (3%)	-	-	-	-

Table 3 Facilitators for reporting (respondents could select more than one facilitator then were asked to identify if they had a single main facilitator)

Possible facilitator	Agree (n=357)	Identified as the main facilitator (n=120)	Significant differences between non-reporters (NR) and reporters (R) (Fisher's exact test)		
			NR	R	p-value
If I had a way of reporting through my normal dispensary software	229 (64%)	41 (34%)	-	-	-
If there was clearer guidance about which reactions to report	213 (60%)	41 (34%)	65%	52%	0.007
If I were remunerated for reporting	96 (27%)	15 (13%)	22%	33%	0.022
If I received regular alerts to remind me about reporting	81 (23%)	3 (3%)	-	-	-
If I knew I would get feedback from the MHRA with an update after submitting a report	78 (22%)	3 (3%)	18%	28%	0.018
If I had a way of keeping records of the ADRs I reported within my own dispensing software	73 (20%)	2 (2%)	15%	28%	0.002
If the Yellow Cards were more accessible	57 (16%)	2 (2%)	-	-	-
If I had a reporting app for my smartphone	56 (16%)	2 (2%)	-	-	-
If I received promotions about reporting through the post	30 (8%)	2 (2%)	-	-	-
If there was a reminder about reporting on the front of the BNF	30 (8%)	1 (0.8%)	-	-	-
Nothing would encourage me to report	10 (3%)	2 (2%)	-	-	-

Table 4 Statements related to identification of ADRs: data presented as number of responses

Statement	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree	Don't know
The Discharge Medicines Review is a good way to identify ADRs (n=369)	44	185	93	28	10	9
The Medicines Use Review service is a good opportunity to identify ADRs (n=369)	104	237	23	2	2	1
Patients are more likely to report ADRs to the pharmacist than to the GP (n=370)	26	107	142	73	11	11

Table 5 Statements relating to reporting of ADRs (barriers and facilitators): data presented as number of responses

Statement	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree	Don't know
I have limited time and so other tasks take priority over ADR reporting (n=369)	69	130	94	56	20	0
Pharmacists should be remunerated for reporting ADRs (n=369)	54	108	110	74	14	9
With serious ADRs I usually refer the patient to the doctor and it's up to them whether or not to complete a report (n=366)	36	124	81	92	24	9
I can't easily access the Yellow Card website in work (n=369)	40	80	77	98	38	36
ADR reporting is promoted well (n=369)	6	30	107	189	35	2
I would be put off from reporting again if the MHRA did not acknowledge my report (n=369)	20	115	122	87	20	5
I would be worried about reporting in case I got it wrong (n=369)	12	98	81	139	39	0
I am confident in knowing which ADRs to report (n=370)	11	107	106	122	20	4

Table 6 Differences in responses to statements about ADR reporting between previous reporters and previous non-reporters of ADRs (data presented as %)

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree	Don't know
ADR reporting is not my responsibility*						
Reporters (n=159)	0	0.6	3.1	49.7	48.4	0
Non-reporters (n=205)	0	2.4	12.7	43.9	40.5	0.5
I would be worried about reporting in case I got it wrong**						
Reporters (n=159)	1.9	18.2	22.6	42.1	15.1	0
Non-reporters (n=206)	4.4	32.5	20.9	35.0	7.3	0
With serious ADRs I usually refer the patient to the doctor and it's up to them whether or not to complete a report*						
Reporters (n=157)	7.6	26.8	21.7	30.6	10.2	3.2
Non-reporters (n=205)	11.7	39.5	22.4	20.5	3.9	2.0
I can't easily access the Yellow Card website in work**						
Reporters (n=159)	8.2	21.4	18.2	31.4	15.1	5.7
Non-reporters (n=206)	13.1	21.8	22.8	22.3	6.8	13.1
I see ADR reporting as part of my professional role*						
Reporters (n=159)	26.4	68.6	3.8	1.3	0	0
Non-reporters (n=207)	20.8	62.3	14.0	1.9	0.5	0.5
Pharmacists should be remunerated for reporting ADRs*						
Reporters (n=158)	12.0	34.8	29.1	20.3	0.6	3.2
Non-reporters (n=207)	16.4	25.1	30.4	20.3	5.8	1.9
I would be happy to encourage a patient to report through the Yellow Card Scheme*						
Reporters (n=159)	13.8	57.9	10.1	15.1	1.3	1.9
Non-reporters (n=206)	8.3	50.0	22.3	16.0	1.5	1.9
I am confident knowing which ADRs to report**						
Reporters (n=159)	5.0	37.1	29.6	23.3	3.1	1.9

Non-reporters (n=207)	1.4	22.2	28.0	40.6	7.2	0.5

* p≤0.05, ** p≤0.005: Fisher's exact, 2-sided significance

Adverse Drug Reaction Reporting Questionnaire

The aim of this study is to find out the views and experiences of community pharmacists, like you, with regard to adverse drug reaction (ADR) reporting and the MHRA's Yellow Card Scheme.

It doesn't matter if you have not reported an ADR: your views are really important to this research, regardless of whether or not you have made a report through the Yellow Card Scheme.

The questionnaire should take no more than **10 minutes** to complete.

A freepost envelope is provided for you to return your questionnaire.

Please remember that all replies are completely **confidential**.

Instructions:

Please just tick one answer for each question unless instructed otherwise.

Please note that the abbreviation 'ADR' for 'adverse drug reaction' is used throughout this questionnaire. 'Adverse drug reaction' is being used to cover all drug-induced effects from minor side effects to serious reactions.

A) Background Questions

In order to help analyse the data, please answer the following questions about yourself:

A1) Are you: ☐ Male ☐ Female

A2) Approximately how long have you been qualified as a pharmacist?

☐ 0-2 years ☐ 3-5 years ☐ 6-10 years ☐ 11-20 years
☐ 21-30 years ☐ 31-40 years ☐ Over 40 years

A3) Are you qualified as a supplementary or independent prescriber?

☐ No ☐ Yes, supplementary prescriber ☐ Yes, independent prescriber

A4a) Do you work for more than one pharmacy company? ☐ Yes ☐ No

A4b) How would you describe this company(ies)? (***Please tick all which apply***)

☐ Large Multinational ☐ Medium sized chain (over 10 pharmacies)
☐ Small chain (up to 10 pharmacies) ☐ Independent pharmacy

A5) How would you describe your position?

☐ Locum ☐ Relief pharmacist ☐ Manager ☐ Regular pharmacist

☐ Other (please state)_____

A6) Do you work full time or part time as a community pharmacist?

☐ Full time (more than 35 hours per week) ☐ Part time (35 hours or less per week)

A7) Do you work as a pharmacist in any other settings? (***Please tick all which apply***)

☐ Industry ☐ Primary care ☐ Hospital ☐ Academia

☐ Other e.g. portfolio / interface (please state) _____

B) ADR Education and Training

B1) Have you received any education or training about identifying and/or reporting ADRs?

☐ No, I have not received any training or education on ADRs (***go to section C)***

☐ Yes, but only as an undergraduate (***go to section C***)

☐ Yes, but only post-qualification (***go to question B2***)

☐ Yes, both while an undergraduate and post-qualification (***go to question B2***)

B2a) If you have received post-qualification education or training on ADRs was this (***please tick all which apply***)

- ☐ Part of a postgraduate Diploma / Masters / other degree
- ☐ Provided through an education /training body (e.g. a course / distance learning pack)
- ☐ Informal CPD activity (e.g. reading journals)
- ☐ Other (please state)_____

B2b) How long ago did you last receive education or training on ADRs?

☐ Within the last year ☐ Over one year ago but within the last five years ☐ Longer than five years ago

C) ADR Experiences

C1) While working as a community pharmacist, approximately how often do you see an ADR (either ones you have identified or ones the patients present with)?

- ☐ More than once a day
- ☐ Once a day
- ☐ Once a week
- ☐ Once a fortnight
- ☐ Once a month
- ☐ Less than once a month
- ☐ Never

C2a) In your day-to-day practice how would you distinguish a 'serious' ADR from a 'minor' ADR?

C2b) Approximately what proportion of the ADRs you see would you class as 'serious'?

☐ All ☐ Most (≥ 50%) ☐ Some (< 50%) ☐ None

C3) Have you ever reported an ADR through the Yellow Card scheme?

☐ Yes (***go to question C4***) ☐ No (***please go to section D, on the next page***)

C4) How many yellow cards have you submitted during your career?

☐ One ☐ 2-5 ☐ 6-10 ☐ 11-15 ☐ 16-20 ☐ >20

C5a) Considering the last report you submitted, how long ago was this?

- ☐ Within the last month
- ☐ More than one month ago but in the last year
- ☐ More than a year ago but in the last five years
- ☐ Longer than five years ago

C5b) How did you submit this report?

- ☐ Using a Yellow Card from the BNF, sent in the post
- ☐ Using a Yellow Card downloaded from the MHRA website, sent in the post
- ☐ Using a Yellow Card you obtained from elsewhere (please state where below)
- ☐ Online through the MHRA website
- ☐ Other (please state)_____

C5c) What is the **main** reason you decided to report this reaction?

C5d) How did you find the process of reporting? (***Please tick all which apply***)

- ☐ Easy
- ☐ Complicated
- ☐ Quick
- ☐ Difficult
- ☐ Straightforward
- ☐ Time-consuming

Please use the box below to briefly explain your answer or add any additional comments.

D) Views on ADR reporting

D1a) What are the factors that deter or prevent you from reporting ADRs? (***Please tick all which apply***)

- ☐ I don't have the time
- ☐ I don't see many ADRs
- ☐ I don't see ADR reporting as a priority
- ☐ It's too complicated to report
- ☐ I'm not confident in identifying ADRs
- ☐ I don't have access to the information I would need in order to report
- ☐ Nothing deters or prevents me from reporting
- ☐ I am not sure which ones I am supposed to report
- ☐ I don't see many ADRs which meet the reporting criteria
- ☐ It's often too difficult to identify the causative drug
- ☐ I assume the patient's GP will complete a Yellow Card instead
- ☐ I just don't remember about the Yellow Card scheme
- ☐ I'd be worried I would have to complete 'follow up' reports which would generate a lot of work
- ☐ Other (please state)_____

D1b) Which of these is the main barrier for you? _____
_____ ***(Leave blank if no single main barrier)***

D2) What factors would encourage you to report ADRs? (***Please tick all which apply***)

- ☐ If the Yellow Cards were more accessible
- ☐ If there was a reminder about reporting on the front of the BNF
- ☐ If there was clearer guidance about which reactions to report
- ☐ If I received promotions about reporting through the post
- ☐ If I received regular alerts to remind me about reporting
- ☐ Nothing would encourage me to report
- ☐ If I had a way of reporting through my normal dispensary software
- ☐ If I had a reporting app for my smartphone
- ☐ If I knew I would get feedback from the MHRA with an update after submitting a report
- ☐ If I had a way of keeping records of the ADRs I reported within my own dispensing software
- ☐ If I were remunerated for reporting
- ☐ Other (please state)_____

D2b) Which of these would be the main factor to encourage you? _____ _____ ***(Leave blank if no single main factor)***

D3) Which of the following do you feel have a responsibility to report ADRs? (***Please tick all which apply***)

☐ Doctor ☐ Pharmacist ☐ Nurse ☐ Dentist

☐ Patient / Carer ☐ No-one ☐ Other (please state) _____

D4) What do you think of the current Yellow Card reporting scheme overall?

- ☐ It works very well as it is and no improvements are needed
- ☐ It works well but some improvements could be made
- ☐ It works fairly well but some improvements are needed
- ☐ It doesn't work very well and improvements are needed

If you feel improvements are needed, please use the box below to briefly explain what these are.

D5) For **EACH** of the following statements, please indicate your level of agreement.

	Statement	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree	Don't know
a	I have limited time and so other tasks take priority over ADR reporting						
b	ADR reporting is not my responsibility						
c	The Discharge Medicines Review is a good way to identify ADRs						
d	I see ADR reporting as part of my professional role						
e	Patients are more likely to report ADRs to the pharmacist than to the GP						
f	Pharmacists should be remunerated for reporting ADRs						
g	With serious ADRs I usually refer the patient to the doctor and it's up to them whether or not to complete a report						
h	I can't easily access the Yellow Card website in work						
i	ADR reporting is promoted well						
j	The MUR service is a good opportunity to identify ADRs						
k	I would be put off from reporting again if the MHRA did not acknowledge my report						
l	I would be worried about reporting in case I got it wrong						
m	I would be happy to encourage a patient to report through the Yellow Card scheme						
n	I am confident in knowing which ADRs to report						

E) Final comments

Do you have any other comments about ADR reporting? If so, please use the box below.

Thanks for taking the time to complete this questionnaire

Now please place it in the **freepost** envelope provided and return to:

Pharmacy Education and Practice, FREEPOST CF3505, Cardiff School of Pharmacy and Pharmaceutical Sciences, Cardiff University, Redwood Building, King Edward VII Avenue, Cardiff CF10 3NB