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Research Article

**A STUDY ON ASSESSING KNOWLEDGE, ATTITUDE AND  
PRACTICE OF PHYSICIAN IN REPORTING ADVERSE DRUG  
REACTION IN A TERTIARY CARE MULTISPECIALITY HOSPITAL IN NORTH INDIA.****Elizabeth Wilson Baby<sup>1\*</sup>, Dijo Wilson<sup>1</sup>, Elza Mathew<sup>1</sup>, Sreenath.K<sup>1</sup>, Apollo James<sup>2</sup> and  
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Erode, Tamilnadu<sup>3</sup>Principal, Nandha College of Pharmacy, Erode, Tamilnadu**Abstract:**

**Background and objective:** Adverse drug reaction can cause harmful injuries to the patient. Through reporting of adverse drug reaction, it can reduce morbidity and mortality rate. It also increases the patient safety. Knowledge, attitude and practice of physician towards the reporting of adverse reactions play a major impact in patient care.

**Methods:** A cross sectional study was carried out in 100 physicians and 29 questionnaire form was framed to evaluate the physicians' knowledge, attitude and practice of reporting adverse drug reaction.

**Results:** Out of 100 physicians most of doctors have good knowledge about adverse drug reactions. 58% of physicians' attitude that ADR reporting system would benefit patient care and 49% of the physicians do not report because of their busy work schedule to fill the form. In practice, 45% of physicians reported suspected adverse drug reaction.

**Conclusion:** Continuous educational programme has helped to improve the knowledge about adverse drug reaction and guide the physicians on how to report an adverse drug reaction.

**Keywords:** Adverse drug reaction, Knowledge, Attitude, Practice, Outpatient department, Inpatient department

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**INTRODUCTION:**

Adverse drug reaction is a major problem in world wide. It is one of the common causes of morbidity and mortality in both hospital and community settings.[6] WHO defines ADR as any response to a drug noxious, unintended and which occur at doses normally used in man for prophylaxis, diagnosis or therapy of disease or for the modification of physiological function. Adverse drug event is an injury resulting from the use of the drug, it includes harm caused by the drug including dose reduction and discontinuation of the drug therapy.[1]

Documenting ADRs mainly aimed at preventing harmful injuries to the patient. In the mid20th century, thalidomide disaster led to the start of Pharmacovigilance and reporting of ADR.[2] [10]In previous year detection of serious and unusual ADR were undetectable and many drugs are withdrawn from market such as 'rofecoxib'. Therefore in the past, it has been noticed that, ADR reporting has provided early warning signs and patient safety.[3]

Several methods are used for detecting ADR. In many countries, spontaneous reporting is the one that contributed significantly to improve the levels of pharmacovigilance. Lopez –Gonzalez E et al observed through his study that, the other factors that influence for under reporting among doctors includes 'ignorance'(95%) that only severe ADR need to be reported; The fear of appearing ridiculous for reporting merely suspected ADR is that (72%)

'diffidence'; 77% in 'lethargy' is that lack of interest or find the time for report and other excuses; one case that an individual doctor might see could not contribute to medical knowledge is that 'indifference'; 'insecurity' in 67% is impossible to determine whether or not a drug is responsible for a particular adverse reaction; 'complacency' in 47% is that only safe drugs are allowed on the market.[4]

The knowledge, attitude and practice (KAP) of physician towards ADR and ADR reporting contributes significantly in patient care & drug safety. In this contest, positive attitude favours ADR reporting while practices refers to the actual reporting of ADR in clinical settings.

**MATERIALS AND METHOD:**

The cross sectional questionnaire based survey was carried out among Physicians of a multi super speciality hospital. The inclusion criteria were all the physicians, resident medical officer and directors. While the exclusion criteria were paramedical and other non- healthcare professionals. The physicians were directly contacted in their OPD and IPD units. The study intention was conveyed to the physicians and those physicians who agreed to participate in the study were provided with the questionnaire. An average of 10 minutes was provided to fill the same. The 100 questionnaires were collected and the physician response in it made up the data for our survey. This was analysed and evaluated.

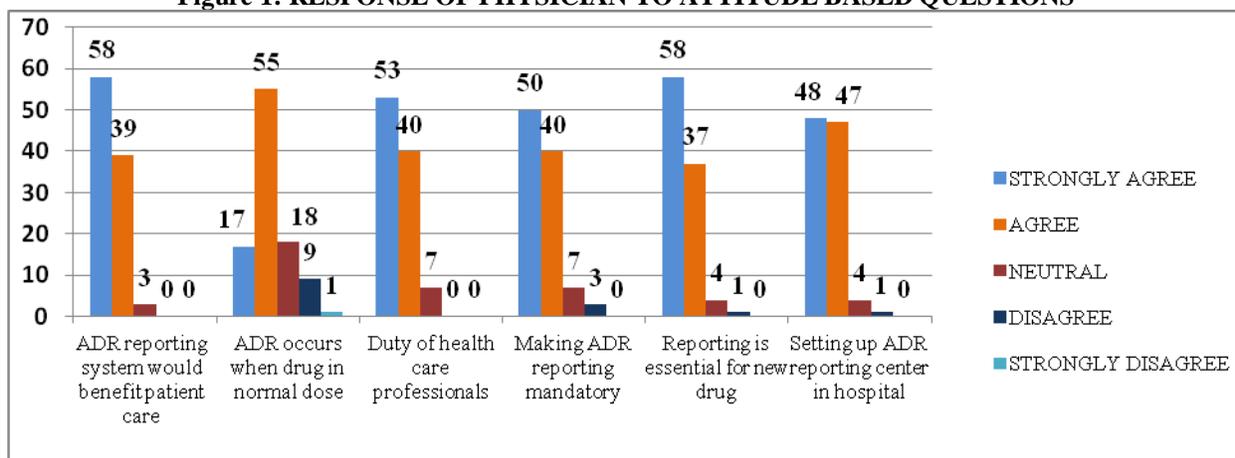
**RESULT:****Table 1: RESPONSE OF PHYSICIAN TO KNOWLEDGE BASED QUESTIONS**

QUESTIONNAIRE	YES	%	NO	%
Information about ADR reporting system in India	51	51%	49	49%
Commonly associated with ADR:	51	51%	49	49%
a.Old age				
b.Polypharmacy	75	75%	25	25%
c.Patient in ICU	56	56%	44	44%
d.Multiple co morbidities	67	67%	33	33%
e.Children's aged 1-4 years	49	49%	51	51%
Any drug withdrawn from market	70	70%	30	30%
Mention about withdrawn drug	33	33%	67	67%
Essential information while reporting ADR:	73	73%	27	27%
a.Patient initials				
b.Suspected medication	99	99%	1	1%
c.Date of start reaction	96	96%	4	4%
d.Outcome of the event	96	96%	4	4%
e.Name of the reporter	71	71%	29	29%

In our study, 29 questionnaires were framed and it comprised of 13 knowledge, 15 attitudes and 1 practice related questions (Appendix 1).

51% of physicians were expertise about suspected ADR reporting system in India. Whereas 49% of physician were not aware about ADR reporting system. Out of the respondents, 75% of the physicians were in the point of view that, polypharmacy is commonly associated with ADR.99% of the physicians were aware of that suspected medication related information is needed while reporting an ADR. Among 100 physicians 70% of physician had a knowledge regarding the drugs withdrawn from the market due to safety reasons. Whereas 30% physicians doesn't know about the same. Only 33% of physicians had mentioned the drug withdrawn from the market. (Table1)

**Figure 1: RESPONSE OF PHYSICIAN TO ATTITUDE BASED QUESTIONS**

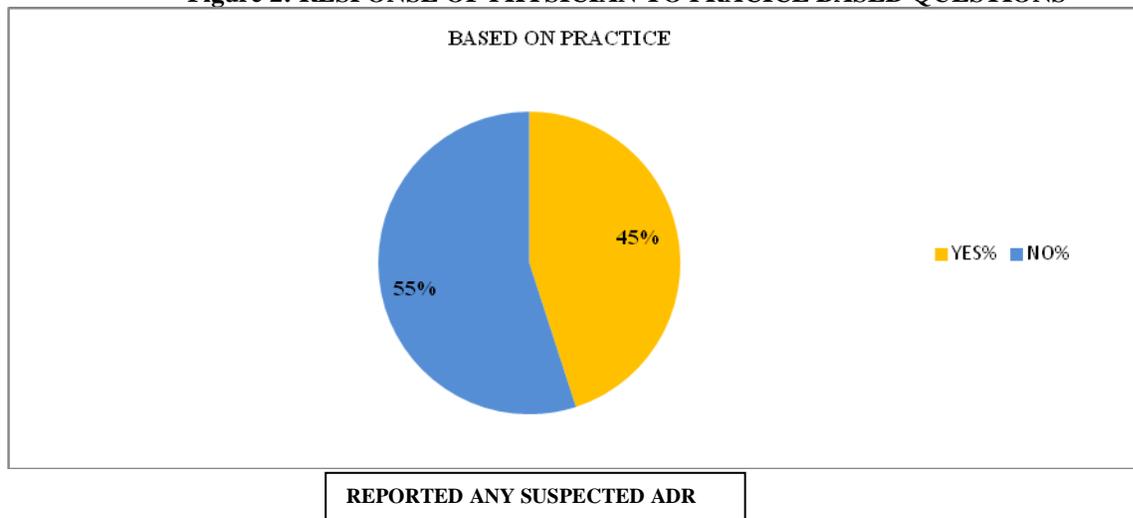


The majority of physicians(58%) strongly agreed that ADR reporting system would benefit patient care. 53% of physicians strongly agreed and 40% the ADR reporting is the duty of health care professionals. Whereas 50% of physician strongly agreed that ADR reporting should be mandatory, 58% of the respondents strongly agreed that reporting of ADR is essential for all new drugs. Among respondents, 48% strongly agreed and 47% agreed on setting up ADR reporting centre in their hospital. (Figure1)

**Table 2: REASON FOR NOT REPORTING ADVERSE DRUG REACTION**

QUESTIONNAIRE	STRONG LY AGREE (%)	AGRE E (%)	NEUTRA L (%)	DISA GRE E (%)	STRONG LY DISAGRE E (%)
Concern about sending inappropriate form	5	34	29	31	1
Non-payment for reporting	14	41	24	41	14
Busy work schedule to fill the form	20	49	11	19	1
Extra work is required to fill and send report	16	43	15	24	2
Difficult to diagnose ADR in clinical practice	3	26	25	41	5
Not reporting ADR may not contribute a lot to patient care	3	24	14	51	8
Lack of time to look for ADR	4	29	19	42	6
Non availability of time at work place	8	41	24	24	3
previous known ADR is not required	3	26	26	39	6

The main factor influencing majority of the physicians from reporting ADR is their busy work schedule to fill the form (49%). Other reason for not reporting ADR is the concern of extra work (43%), and 41% physician agreed that non-availability of time at work place.(Table No:2)

**Figure 2: RESPONSE OF PHYSICIAN TO PRACTICE BASED QUESTIONS**

In our study, majority of physicians has not reported any suspected ADR. 45% physicians have report the ADR. 55% of physicians have not reported the ADR. [9](Figure 2)

### DISCUSSION:

Most of the studies reveal that the large number of morbidity and mortality rate is due to ADR. In UK, due to ADR 6.5% patients were admitted in hospital and the 0.5% was fatal [5] [8]. This study is carried out to assess knowledge, attitude and practice (KAP) of physicians in reporting of adverse drug reaction in multi-speciality hospital in north India.

Throughout our study we observed the physicians knowledge, attitude and practice. Majority doctors were aware about the suspected ADR reporting system in India which is commonly associated with polypharmacy. From the attitude survey, it indicates the adequate level of attitude of physician towards the reporting of ADR. Most of the doctors strongly agreed that ADR reporting should be mandatory and reporting of ADR is the duty of health care professionals.

Most reasons for the underreporting are busy work schedule, misperception that extra work is required to fill & report ADR, Non-availability of time at work place. In our study, 55% of physicians has not reported the ADR .which indicate poor ADR reporting practice and its impact on patient safety.

### CONCLUSION:

From this study we conclude that the physicians included in our survey had good knowledge about ADR reporting, adequate level of attitude towards the ADR reporting but only poor practice. Physicians should be given knowledge about ADR reporting through the educational interventions and allow them

to include this into their practice. This educational program may help to guide the physicians on how to report an ADR.

### ACKNOWLEDGEMENT:

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**Appendix 1****A STUDY ON ASSESSING KNOWLEDGE, ATTITUDE AND PRACTICE OF PHYSICIANS IN REPORTING ADVERSE DRUG REACTION IN A TERTIARY CARE MULTISPECIALITY HOSPITAL IN NORTH INDIA.**

1. Are you well informed about suspected adverse reaction reporting system in India. If yes, mention?

**Yes/No**

2. Which among the following are commonly associated with ADR?

a. Old age **Yes/No**

b. Polypharmacy **Yes/No**

c. Patient in ICU **Yes/No**

d. Multiple co-morbidities **Yes/No**

e. Children aged 1-4 years **Yes/No**

3. Do you know about any drug withdrawn from market due to safety reason? If yes, mention.

**Yes/No**

4. Do you think that ADR reporting system would benefit patient care?

**Strongly agree / Agree / Neutral / Disagree / Strongly disagree**

5. Do you think, ADR occurs when drug is given in normal dose?

**Strongly agree / Agree / Neutral / Disagree / Strongly disagree**

6. Do you think ADR reporting is the duty of health care professionals?

**Strongly agree / Agree / Neutral / Disagree / Strongly disagree**

7. What is your opinion on making ADR reporting mandatory?

**Strongly agree / Agree / Neutral / Disagree / Strongly disagree**

8. Do you think, ADR reporting is essential for all new drugs?

**Strongly agree / Agree / Neutral / Disagree / Strongly disagree**

9. What is your suggestion about setting up a ADR reporting center in your hospital?

**Strongly agree / Agree / Neutral / Disagree / Strongly disagree**

10. Which among the following are the reasons for not reporting ADR?

Reason	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
a. Concern about sending inappropriate form					
b. Non-payment for reporting					
c. Busy work schedule to fill the form					
d. Misperception that extra work is required to fill & send the report					
e. Difficult to diagnose ADR in clinical practice					
f. Thinking that not reporting an ADR may not contribute a lot to patient care					
g. Lack of time to look for ADR					
h. Non-availability of time at work place					
i. Misperception that reporting of previous known ADR is not required					

11. Have you ever reported any suspected ADR?

**Yes/No**

12. Which among the following information are essential while reporting an ADR?

- a. Patient initials **Yes/No**
- b. Suspected medication **Yes/No**
- c. Date of start reaction **Yes/No**
- d. Outcome of the event **Yes/No**
- e. Name of reporter **Yes/No**

**Name:**  
**Designation:**

**Emp. ID:**  
**Signature:**