Role of pharmacy students in reducing medication error- a survey

Sreevidya S¹, Dhanya Dharman², Deepa Manohar³, Shaiju S Dharan³

¹IVth year Pharm D student, Ezhuthachan College of Pharmaceutical sciences, Trivandrum, Kerala, India.
²Department of pharmacy practice, Ezhuthachan College of Pharmaceutical sciences, Trivandrum, Kerala, India.
³Department of pharmaceutics, Ezhuthachan College of Pharmaceutical sciences, Trivandrum, Kerala, India.

ABSTRACT

A medication error is any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of health care professional, patient, or consumer. The disciplines of medicine, nursing, and pharmacy all play a major role in preventing medication-related errors. To study the role of pharmacy students in reducing the occurrence of medication errors. A prospective survey will be carried out using the information gathered from students in Pharmacy Colleges. This study is to analyze the knowledge of the pharmacy students in reducing medication error. In the questionnaire how the medication error reported, Types of medication error, common drugs involved in medication error etc was included. Also, response is recorded. These collected data will be subjected to proper statistical analysis. About 50 students were responded through Google forms. Majority 44% Pharm-D students were responded well. About 88% of medication error was monitored and remaining 12% not. The majority of 60% antibiotics involved in the Medication error. About 96% of people have beneficial in patient care. About 94% responders having lack of knowledge and insufficient training of pharmacist is a problem. Responders of about 62% prescription error, 24% administration error and 14% dispensing error. 84% of responders documented the medication error. This study will help to aware pharmacy students the importance of reporting medication error and to reduce the occurrence of the medication error and also to study the knowledge of the pharmacy students in medication error reporting.

Keywords: Medication error; Patient care.

INTRODUCTION

The National Coordinating Council for Medication Error Reporting and Prevention (NCCMERP) has defined medication errors (MEs) as, "Any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the health care professional, patient, or consumer."[1] American Society of Hospital Pharmacists guidelines for MEs stated that incidence of MEs is not exactly known because of variations in different definitions of ME, different methods, or subject populations.[2] In India, studies done in Uttarakhand and Karnataka have documented ME rate to be as high as 25.7% and 15.34%, respectively, in hospitalized patients.[3,4] Unfortunately, most of the MEs remain undetected, if clinical significance or outcome does not adversely affect the patient. While some of the MEs also result into serious morbidity or mortality and have a significant economic impact on the patient and health care system. The Institute of Medicine estimated costs due to medical errors in the US of was approximately $37.6 billion/year. About $17 billion of it are associated with preventable errors.[5] Overall, MEs increase morbidity, mortality, and economic burden to health care system.

Nearly everybody in the world takes medication at one time or another. Most of the time the medications
are favorable or at least they root no harm but on occasion they do harm the person taking them. Sometimes these harms are due to errors occurred during medication use process which can be prevented. In hospitals, errors occur in every step of medication use process starting from procuring the drug to prescribing, transcribing, dispensing, administering and monitoring its effect. Annually 7000 mortalities have been reported due to medication errors. In India, the medication errors and medication related problems are mainly due to irrational use of medications.

OBJECTIVE

This study is to analyze the knowledge of the pharmacy students in reducing medication error. In the questionnaire how the medication error reported, Types of medication error, common drugs involved in medication error etc was included. Also response is recorded. These collected data will be subjected to proper statistical analysis.

METHOD

A Prospective survey will be carried out using the information’s gathered from students in Pharmacy Colleges. This study is to analyze the knowledge of the pharmacy students in reducing medication error. In the questionnaire how the medication error reported, Types of medication error, common drugs involved in medication error etc was included. Also response is recorded. These collected data will be subjected to proper statistical analysis.

STUDY PROCEDURE

This study will help to aware pharmacy students to the importance of reporting medication error and to reduce the occurrence of the medication error and also to study the knowledge of the pharmacy students in medication error reporting. Error reporting and cause analysis are important tools to identify the major causes of medication errors.

RESULT

About 50 students were responded through Google forms. Majority 44% Pharm-D students were responded well. About 88% of medication error was monitored and remaining 12% not. The majority of 60% antibiotics involved in the Medication error. About 96% of people have beneficial in patient care. About 94% responders having lack of knowledge and insufficient training of pharmacist is a problem. Responders of about 62% prescription error, 24% error are administration error and 14% dispensing error. 84% of responders were documented the medication error.

DISCUSSION

The goal of the drug therapy is the achievement of the best therapeutic outcomes and the improvement of the patient’s quality of life. Medication errors have significant implications on patient safety. About 88% of medication error was monitored and remaining 12% not. The majority of 60% antibiotics involved in the Medication error. About 96% of people have beneficial in patient care. About 94% responders having lack of knowledge and insufficient training of pharmacist is a problem. Responders of about 62% prescription error, 24% administration error and 14% dispensing error. 84% of responders were documented the medication error.

CONCLUSION

From this study will help to aware pharmacy students to the importance of reporting medication error and to reduce the occurrence of the medication error and
also to study the knowledge of the pharmacy students in medication error reporting. Error reporting and cause analysis are important tools to identify the major causes of medication errors.

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CONFLICTS OF INTEREST

The author declares no conflict of interests.

REFERENCE

1. The National Coordinating Council for Medication Error and Prevention (NCCMERP) (2010). The Council: Moving into the Second Decade “Developing Recommendations and Offering Tools”.
2. ASHP guidelines on preventing medication errors in hospitals, (1993) Am J Hosp Pharm., 50:305–14.
3. Gaur, S., Sinha, A., & Srivastava, B. (2012). Medication errors in medicine wards in a tertiary care teaching hospital of a hill state in India. Asian J Pharm Life Sci, 2, 56-63.
4. Arun Kumar, K. S., Venkateswarlu, K., & Ramesh, A. (2011). A study of medication administration errors in a tertiary care hospital. Indian Journal of Pharmacy Practice, 4(2), 37.
5. Kohn, L. T., Corrigan, J. M., & Donaldson, M. S. (2000). Institute of Medicine. To err is human: building a safer health system.
6. P.M. Goulding, (2016), Prevention of Medical Errors. Link Url: https://www.nursece.com/pdfs/2011_prevention_of_medical_errors.pdf
7. Aspeden, P., Wolcot, J. A., Palugod, R. L., & Bastein, T. Preventing Medication Errors, Institute of medicine, 2016. Brief Report in July 2006. Link Url: https://iom.nationalacademies.org
8. Hinojosa-Amaya, J. M., Rodríguez-García, F. G., Yeverino-Castro, S. G., Sánchez-Cárdenas, M., Villarreal-Alarcón, M. Â., & Galarza-Delgado, D. Á. (2016). Medication errors: electronic vs. paper-based prescribing. Experience at a tertiary care university hospital. Journal of evaluation in clinical practice, 22(5), 751-754.
9. M.G. Rajanandh, R. Varghese, C. Ramasamy, Assessment of drug information services in a south Indian tertiary care Hospital in kanchipuram district
10. Sheikh, D., Mateti, U. V., Kabekkodu, S., & Sanal, T. (2017). Assessment of medication errors and adherence to WHO prescription writing guidelines in a tertiary care hospital. Future Journal of Pharmaceutical Sciences, 3(1), 60-64.