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A Prospective Observational Study About Prescription Auditing In A Tertiary Care Teaching Hospital, Jaipur, Rajasthan

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ABSTRACT

Objective: A prescription auditing is a quality improvement or health care improvement process. A prospective observational study about prescription auditing in a tertiary care teaching hospital, Jaipur, Rajasthan.

Methods: This prospective observational study was conducted over a period of 3 months from March 2022 to May 2022. A total 136 numbers of prescriptions were randomly selected according to the inclusion and exclusion criteria of the study. Prescriptions were taken and analyzed as per the WHO "core prescribing indicators"

Result: A total 136 prescription were audit in this particular time period of the study. A total numbers of 718 drugs prescribed out of 136 prescriptions. The average number of drugs/prescription is found to be 5.279.There are total 14 parameters were assessed according to the checklist provided by the hospital during the study or audit of 136 cases. Therefore total 1967 counts out of which 865(44%) counts were compliance, 643(33%) counts were non-compliance and 459(23%) counts were not applicable, maximum number of problem facing in capital letter of drugs were 109, time of prescription were 95 and illegible handwriting were 82 during the prescription auditing. A total number of 718 drugs prescribed in 136 prescriptions during the treatment of the diseases. A maximum number of four drugs were prescribed per prescription in 35 prescriptions, 31 had five drugs and 21 had six drugs per prescription.

Conclusion: The study concludes that prescription auditing is very important for the improvement of patient health care and reduces the medical errors as well as prescribing errors and dispensing errors.

Keywords: *Prescription auditing, No. of drugs in prescription, problem facing during prescription audit*

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INTRODUCTION

Prescription auditing is a very important type of diligence activity. It is very useful for the clinical practitioner in term of reducing the burden of diseases due to medicine errors[1]. Prescribing pattern of medicines to the patients is an necessary part of medical care[2]. It measure the outflow of prescriptions from physician to pharmacists to patients. Prescription auditing can be done by according to the detailing parameter as per checklist of prescription audit[3]. The World Health Organization (WHO) has generated a check list "Core Prescribing Indicator" for improvement in rational drug use in the patients. It has prescribing indicators facility indicators and on the behalf of these indicators studies have been done all over the world[1]. Prescription auditing may be defined as to evaluate, monitor and modification in the prescription. A prescription auditing can be done for improving the quality of life by increasing the standard of the medical treatment by reducing the medical errors. An audit is known to be "the review and the evaluation of health care procedure and comparing the health care which is given to the patients according to their diseases"[3]. The auditing in prescription can reducing the errors. Errors can be done at any stage of the prescription process like:

1. **Prescription writing:** mistake in dosage form, superscription, improper route, illegible handwriting.
2. **Dispensing of medicine:** dispensing wrong medicine, wrong formulation and drug with wrong labeling.
3. **Route of administration:** administration medicine in wrong amount, by wrong route in wrong frequency and for wrong duration.
4. **Formulation packaging:** some errors can be done due to contaminants, wrong or misleading packaging of formulation.
5. **Selection of medication:**
   - Choosing of irrational inappropriate or ineffective medicine,
   - Low strength prescription (use of low dose of an appropriate medicine, failure of prescription).

- High strength prescription (prescribing a lot of medicine for long time duration).

If any errors should be found at any these stages of errors is known to be medication errors or medical errors[2].

MATERIALS AND METHODS [4,5]

This prospective observational study was conducted over a period of 3 months from March 2022 to May 2022. A total 136 numbers of prescriptions were randomly selected according to the inclusion and exclusion criteria of the study. Prescriptions were taken and analyzed as per the WHO "core prescribing indicators".

- Demographic characteristics of the patients involved.
- Morbidity pattern of study population.
- Therapeutic classification of drug prescribed.
- Pattern of antibiotics based on class and name.
- Number of antibiotics prescribed per encounter.
- Number of fixed dose combination prescribed.
- Any banned formulation in the prescription.

Inclusion criteria

- Prescription sheets
- Inpatient and outpatient.
- Male and female patients.

Exclusion criteria

- Patients who were not willing to participate in the study.
- Patients who were not taking medicine.

Data collection

Prescriptions were randomly selected. Prescription auditing was done through checking all the parameters of prescription audit. After checking filled prescription audit check list. Retrieved data was analyzed and was submitted to hospital pharmacy department and quality committee.

RESULT

A total one hundred thirty six prescription were audit in this particular time period of the study. A total numbers of 718 drugs prescribed out of 136 prescriptions. The average number of drugs/prescription is found to be 5.279. Therefore the following parameters can be assessed during the prescription auditing. There are total 14 parameters were assessed according to the checklist provided by the hospital during the study or audit of 136 cases. Therefore total 1967 counts out of which 865(44%) counts were compliance, 643(33%) counts were non-compliance and 459(23%) counts were not applicable. The maximum numbers of problem facing in capital letter of drugs were 109, times of prescription were 95 and illegible handwriting was 82 during the prescription auditing. A total number of 718 drugs prescribed in 136 prescriptions during the treatment of the diseases. A maximum number of four drugs were prescribed per prescription in 35 prescriptions, 31 had five drugs and 21 had six drugs per prescription. (Shown in Table-1, Table-2 & Table-3).

Table-1: There are total 14 parameters which were assessed from the prescription audit form.

Parameters of prescription audit	**YES**	**NO**	**NA**
Illegible handwriting	75	59	2
Capital letters	32	102	2
Dose of drug	98	36	2
Strength of drug	85	46	5
Route of drug	114	17	5
Frequency drug	116	9	11
Therapeutic duplication	3	126	7
Unapproved abbreviations	0	0	136
Drug-drug interaction	0	0	136
Drug-food interaction	0	0	136

Name of prescriber	84	50	2
Date of prescription	136	0	0
Time of prescription	41	95	0
Signature of prescriber	81	50	5
Total counts	**865**	**643**	**459**
% of total counts	**44**	**33**	**23**

Table-2: Problem facing during prescription auditing.

Problem arrived	**Number of prescription**
Strength of drug not mention	54
Dose of drug not mention	27
Capital letter not mention	109
Illegible handwriting not mention	82
Time of prescription not mention	95
Doctors name not mention	54
Route of drug not mention	12
Frequency of drug not mention	37

Table- 3: Total number of drugs prescribed in prescription during treatment of diseases.

Number of drugs	**Total no of prescription**
1	1
2	3
3	11
4	35
5	31
6	21
7	19
8	11
9	4

DISCUSSION

To improvement in the quality of life a good medical care can be given to the patients and medical care can be assessed by the medical audit and medical audit can be done by the prescription audit and prescription auditing is the part of medical audit. Prescription audit can improve the quality of patients care and providing the right medicine to the right people at the right time is the major priority of health care and patients care. Prescription auditing should asses problem that have serious issues for patients if the proper treatment of the diseases is not given, minimize the misuse of drugs, essential medicine selection and estimate time of drugs needs to patients.

In this study the total one hundred thirty six prescriptions were audited in this particular time period of the study. A total numbers of 718 drugs prescribed out of 136 prescriptions. The average number of drugs/prescription is found to be 5.279. This number is very much higher than the recommended limit of 2.0.2. Therefore increase in the number of average drugs per prescription may increases the adverse drug reaction, drug interaction and unwanted side effects and also increase prescribing and dispensing errors. There are total 14 parameters were assessed according to the checklist provided by the hospital during the study or audit of 136 cases. Therefore total 1967 counts out of which 865(44%) counts were compliance, 643(33%) counts were non-compliance and 459(23%) counts were not applicable. A lot of problem facing during the prescription auditing as follow a maximum number of problem facing in capital letter of drugs were 109, time of prescription were 95 and illegible handwriting were 82 during the prescription auditing. Total number of 718 drugs prescribed in 136 prescriptions during the treatment of the diseases. A maximum number of four drugs were prescribed per prescription in 35 prescriptions, 31 had five drugs and 21 had six drugs per prescription.

CONCLUSION

This study concludes that prescription auditing is very important for the improvement of patient health care and reduces the medical errors as well as prescribing errors and dispensing errors. Therefore prescription should be prescribed according to the WHO guideline in a proper manner. Prescription errors are recognized as a cause of concern. Prescription auditing improve the prescription pattern and make intervention in prescription for patient care or providing

a better health care and reduce the economic burden of diseases to the patient and their family and also reduce the patients stay in the hospitals.

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