A RETROSPECTIVE ANALYASIS ON TREATMENT CHART AUDIT & REVIEW FORM AT A TERTAIRY CARE HOSPITAL

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Abstract:

Clinical record review or chart review is a previously recorded data to answer clinical queries. Retrospective studies can be used to answer specific clinical questions in a relatively easy and less resource intensive manner. But these studies may be constrained by the limited information retrievable and inadequacy of records. Various types of data sources may be available for conducting such reviews (like case charts, computerized registries, etc), each with specific strengths and weaknesses. It was a simple workflow, source document was used to collect the data, the case sheet was then studied and findings were noted in the Treatment chart review form. This paper provides a broad overview of how to go about a clinical record review, and serves as a ready reference for those who would like to undertake such record reviews. For healthcare providers, the implementation of a medication chart has the potential to foster improved interdisciplinary collaboration and serves as a valuable counseling tool for patient interactions. Our assertion of moderate evidence is based on a comprehensive evaluation of overall study quality, the utilization of diverse data collection methods, and the robust qualitative outcomes. Furthermore, emphasizing the importance of including a clinical pharmacist in the healthcare team is essential for delivering enhanced clinical services to patients and bridging the communication gap between patients and clinicians. 1

Keywords*:* Treatment chart review, Drug therapy, Drug effectiveness, Drug safety

Introduction:

Clinical record review involves the retrospective examination of data to address clinical inquiries. This process is alternatively referred to as 'retrospective data analysis,' 'clinical chart review,' or simply 'chart review.' The aim is to gather historical information from medical records to provide insights into specific clinical questions.

Components of Treatment chart review form:

- Patient IP No
- Department &Unit
- Dated entry documented
- Patients initial exam
- complaint / initial assessment Chief
- Medical history(current&past)
- Physical exam
- Screening for problems
- Allergies / alerts (up-to-date?) (if any)
- Medications order entries (up-to-date?)
- Medications & dosage(dates)&appropriateness
- Daily progress notes
- Physician / provider signature
- Date /vital signs
- Nursing instructions
- Referrals
- Drug indications
- Drug effectiveness
- Drug safety
- Drug compliance
- Review date
- Staff signature
- Name of the student and signature

This approach proves valuable when analyzing data that has been previously documented in case notes or a structured database. The process involves a thorough examination of recorded data, encompassing summarization, relevant statistical analysis, and the derivation of meaningful inferences. Widely employed across various clinical domains such as medicine,[1] pediatrics,[2] orthopedics[3], psychiatry[4], and dermatology[5], record reviews play a pivotal role in

consolidating the scientific evidence base. By scrutinizing disease characteristics, progression over time, and treatment outcomes,[6,7] these reviews contribute significantly to our understanding of different medical fields. Conducting a clinical record review serves multiple purposes, including assessing the appropriateness of diagnoses, identifying problems, planning treatments and care, and evaluating adherence to guideline standards [8,9].

Conducting a retrospective record review offers several advantages. This type of study is less labor and time-intensive compared to prospective studies, making it a more resource-efficient option. It allows for the assessment of a large sample at a relatively low cost, leveraging routinely recorded information. This approach minimizes recall bias associated with events in the past and reduces the intrusion into patients' time for study assessments. In certain scenarios, such as analyzing prescription trends for a specific medication in a country[10], record review may be the most practical study method. However, record reviews come with certain drawbacks. Variability in data gathering and recording methods in charts can limit the extraction and interpretation of variables. Some records may be incomplete or lost over time, resulting in missing data. Additionally, records might not be stored in a readily retrievable manner, restricting their further utilization.

Clinical pharmacist role in TCR

Ensuring the suitability of medication orders falls within the purview of a pharmacist's the responsibilities includes:

- Taking medication history of patient.
- Rational prescription / selection of drug therapy properly.
- Patient monitoring / drug monitoring.
- Adverse drug reactions & drug interactions.
- Discharge counseling and patient compliance.

When data is incomplete or insufficient, the following problems may arise n monitoring treatment for patients:

1.**Biased or inaccurate results:** Incomplete or insufficient records may lead to biased or inaccurate results. If important data points are missing, researchers may not have a complete

understanding of the patient's condition, treatment, or outcomes. This can skew the findings and lead to erroneous conclusions.

2. Inability to generalize findings: Chart reviews aim to provide insights into broader patient populations. However, if the records are incomplete or insufficient, researchers may not have enough data to generalize their findings to a wider population. The limited sample size can undermine the generalizability and external validity of the study.

3. Inaccurate patient classification: Incomplete records may lack essential information required for accurate patient classification. This can make it difficult for researchers to identify and differentiate between various patient groups or cohorts, potentially leading to misclassification bias and impacting the validity of the study results.

4. Inability to control confounding factors: Incomplete records may lack crucial information about confounding factors that could influence the relationship between variables of interest. This can make it challenging for researchers to control for these factors during data analysis, potentially leading to confounding bias and compromising the validity of the findings.

5. Inability to address missing data: Incomplete records may also result in missing data, which can further impact the validity of the analysis. Researchers may need to address missing data through imputation or sensitivity analyses, but these methods can introduce additional uncertainty and potential bias.

6. Limited statistical power: Incomplete or insufficient records may result in a reduced sample size, leading to limited statistical power. This can affect the researchers' ability to detect significant associations or differences between variables, reducing the robustness and reliability of the findings. To mitigate these limitations, researchers should carefully assess the completeness and quality of the available records before conducting the chart review. They may need to consider alternative data sources, collaborate with healthcare providers, or implement strategies to address missing data and potential biases. Additionally, researchers should transparently report the limitations of incomplete or insufficient records in their study to provide a comprehensive understanding of the validity and generalizability of the findings.

Advantages of TCR

- Understanding the prescription patterns for a specific medication within a country [10].
- Record review emerges as the most practical study method for certain types of data.
- This study type demands less time and effort compared to prospective approaches.
- Swift and efficient.
- Facilitates the evaluation of a substantial sample with minimal expenses.
- Particularly valuable for studying rare diseases.

- Reduces recall bias when investigating past events.

Challenges and Limitations:

- In the course of time, some records may become incomplete or lost, resulting in data gaps.
- Absence of cause-and-effect relationships.
- Records might not be stored in a readily retrievable format, limiting their potential for further utilization.
- No study protocol.

Rationale for the investigation

- Clinical record review, or chart review, involves the examination of preexisting data to address clinical inquiries.
- The TCR study serves as a valuable approach for addressing specific clinical questions in a straightforward and resource-efficient manner.

OBJECTIVES:

- To study the importance of Treatment chart review
- To show the impact of clinical pharmacist role in treatment chart review.

METHODOLOGY:

The Retrospective Observational study was conducted at BLDEA's SSM College of Pharmacy and Research Centre Vijayapura with 150 patients sample size,for a period of 6 months

Inclusion criteria: Case sheets are having all data regarding previous medication, medical history patient's family history, gender, physical exam etc.

Exclusion Criteria: Case sheet & treatment chart audit and review form with incomplete documentation.

Source of Data: Case sheet – document used to collect details of disease/ condition, It encompasses details such as social demographics, past medications, medical history, general examination findings, treatment charts, and medication counseling.

WORK FLOW:

A retrospective chart review represents a form of clinical research investigation, in which data is collected solely from the medical record case to our designed case sheet,data collected for a period of 6 months with the sample size nearly 150 case papers and review it. About 19 questions were reviewed in this study. Patients answered 'yes' or 'no' to these questions. The following components we filled or left empty was checked by the clinical pharmacist and the components like IP Number, department & unit, review date, staff signature and name of the student and signature and etc then the collected data has was entered in excel sheet, and given the score for every question with one for yes and 0 for no, Then the mean of the all the patient was calculated and presented in the results

RESULT:

Table no 1 : Details of gender

Female	Male	Total
77	73	150
51%	48.6%	100%

Table no 2 : Details of department of the patient

Department	No of patient
Medicine	58
OBG -A	40
Pediatric	24
Surgery	28

Graph no 1: Details of allergies

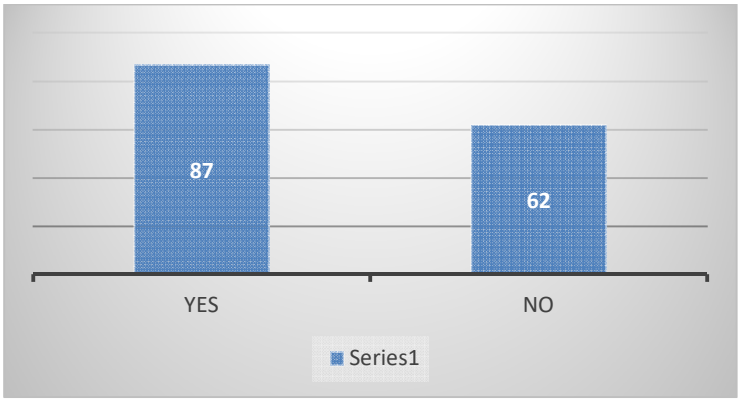

Table no 3: Major findings in the work

Slno	Major findings	Yes	No
1	Patients history	148	2
2	Family history	148	2
3	Allergies/History	87	62
4	Medication date appropriateness	147	3
5	Drug indication	22	128
6	Drug effectiveness	24	126
7	Drug safety	09	141
8	Drug compliance	10	140
9	Review dates	34	116
10	Staff sign	133	17
11	Name /sign of the students	31	119

Graphs no 2: Major Findings

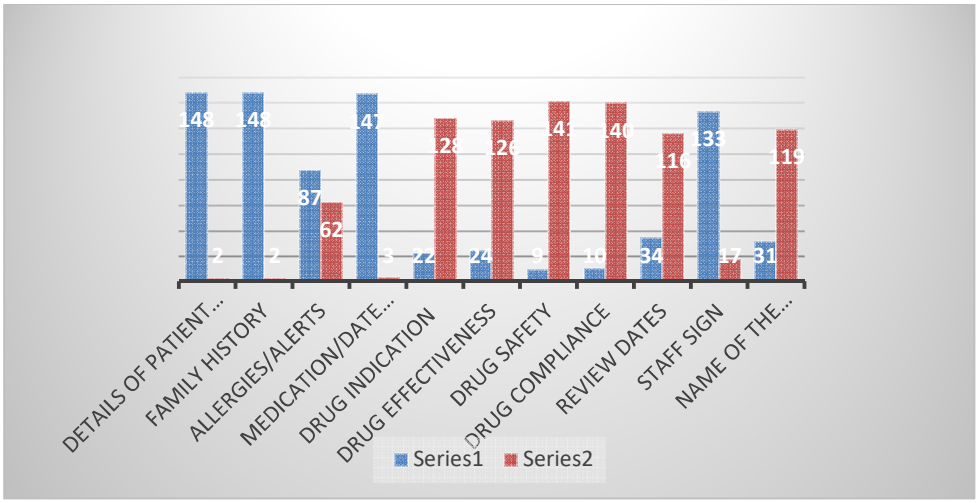

Table 03: Age Distribution of the patients

Sl no	Age (Years)	No of Patients
1	less the 20 year	26
2	20-30	18
3	30-40	35

4	40-50	31
5	50-60	15
6	60-70	25

Table on 04: Educational Background details of the patients

Sl no	Educations details	No of Patients
1	upto10th standard	56
2	PUC	24
3	Degree	36
4	Nil	34

RESULT & DISCUSSION:

Among 150 patients, about 51.33% patients are female and 48.33% patients are male (Graph:1). Among 150 patients, 38.66 % patients admitted in medicine department, 26.66% patients admitted in OBG department, 18.66% patients admitted in surgery department and 16 % patients admitted in pediatric department. Majority of patients admitted in medicine department followed by OBG, surgery and pediatric.

Among 150 patients, 35 patients belonged to the age group of 30-40 years, followed by 31 patients belonged to the age group of 40-50 years, followed by 26 patients belonged to the age group of less than 20 years, followed by 25 patients belonged to the age group of 60-70 years.

In a total of 150 patients, 56 patients had education background upto 10 standard, followed by 36 belonged to degree level, followed by 34 members belonged to illiterate group , followed by 24 patients educated to PUC level.

In a total of 150 patients, all patient data entry documents were mentioned. Among 150 patients, all patients' examination was performed and details were mentioned.

Among 150 patients, initial assessment was performed in all patients, 98% patient's medical history was mentioned & in 2% of patients it was not mentioned. It provides a foundation for assigning the appropriateness of patient's current therapy and directing future treatment choice. Out of 150 patients, family history was documented for 98% of them, while it was not mentioned for the remaining 2%.

Among 150 patients, the physical examination was performed in 150 patients, Screening for problems was mentioned in every 150 patients Among 150 patients, allergic problem was found in 58% of patients but in 42% patients it was not seen ;Among 150 patients, medication order entries are mentioned in 99% of patients. In 1% it was not properly mentioned Among 150 patients, In 98% the medication dosage was mentioned & It was not mentioned in 2% patients. Among 150 patients, in all case papers daily progress of patients has been mentioned .Among 150 case papers physician signature is mentioned in all case papers.

Among 150 case papers date /vital signs are mentioned in all 150 case papers Among150 case papers, all case papers mentioned appropriate nursing instruction. Among 150 case papers, all case papers mentioned appropriate referrals in it, Among 150 case papers 85% case papers did not mentioned the indication of the drug and 13% case papers mentioned it appropriately in it, Among 150 case papers, 84% case papers did not mentioned drug efficacy and 14% case paper mentioned in it ,Among 150 case papers, 75% case papers did not mentioned drug safety and 22% case papers mentioned in it ,Among 150 case papers, only 92% case papers not mentioned drug compliance and 9% case papers mentioned in it, Among 150 case papers, in 79% case papers review date was not mentioned. In 20% case papers it is properly mentioned in it, Among 150 cases, 60% case papers, staff signature is not mentioned properly and in 40 % case papers have staff signature in it, Among 150 cases, 75% details of students has been mentioned and only 11 % students name and signature not mentioned in it

DISCUSSION:

Treatment chart review is the process of evaluating and analyzing medical or healthcare records, also known as patient charts. During chart reviews, relevant information such as patient demographics, medical history, diagnoses, procedures, medications, and test results can be examined. Chart reviews are often conducted for various purposes, including quality improvement, research, risk management, and auditing. By reviewing patient charts, healthcare professionals can identify patterns, trends, and areas for improvement in patient care and outcomes. In the context of my knowledge, I can assist in understanding and analyzing medical records by extracting and summarizing information, answering specific queries about chart content, and providing insights based on the data available in the charts. However, it's important

to note that I don't have access to real patient data and my responses are based on general medical knowledge. It's always essential to consult with a healthcare professional for specific medical advice or interpretation of patient charts.

Clinical record review or chart review is that it involves the systematic evaluation and analysis of medical records, specifically patient charts, to assess various aspects of patient care. This process typically involves extracting relevant information from the charts regarding patient demographics, medical history, diagnoses, treatments, medications, and outcomes. The purpose of conducting a clinical record review is to gain insights into the quality of care provided, identify potential areas for improvement, assess adherence to clinical guidelines or protocols, and evaluate patient outcomes. Such reviews can be conducted for various reasons, including quality improvement initiatives, research studies, patient safety evaluations, and healthcare audits.

Medical professionals and researchers often conduct chart reviews to analyze patterns, trends, and variations in clinical practices, evaluate the effectiveness of interventions, or identify opportunities to enhance patient care. It's important to note that my understanding is based on the limited information provided in the abstract. The actual scope and details of a clinical record review may vary depending on the specific objectives and methodology employed in each study or evaluation.

CONCLUSION:

Mostly Retrospective studies, particularly in the field of medicine, have experienced a significant decline in recognition and utilization, leading to their undervaluation and underutilization. The retrospective chart review serves as a crucial methodology, offering distinct advantages and presenting valuable research opportunities, particularly in the medical domain. This approach empowers clinicians to conduct research that enriches and informs their practice. Through this methodology, our research endeavors have bolstered confidence among health planners in terms of data collection, statistical analyses, and the formulation of conclusions and pertinent recommendations. The studies under review have indicated several advantages associated with the utilization of medication charts for both patients and healthcare providers. Certain studies have shown that patients exhibited enhanced understanding of their medical treatments, potentially leading to increased medication adherence. For healthcare providers, the implementation of a medication chart has the potential to foster improved interdisciplinary

collaboration and serves as a valuable counseling tool for patient interactions. Our assertion of moderate evidence is based on a comprehensive evaluation of overall study quality, the utilization of diverse data collection methods, and the robust qualitative outcomes. Furthermore, emphasizing the importance of including a clinical pharmacist in the healthcare team is essential for delivering enhanced clinical services to patients and bridging the communication gap between patients and clinicians.

Review of the work by the author:

During our study period we have come across many case sheets, were in many data were missing in that, which crucially affects the treatment and outcome, so we have observed the odds and suggested them to the physicians of respective departments, necessary changes were accepted and implemented by performing treatment chart review process, it helped us in adopting ourselves as a healthcare team member, it helped us in providing

- A Comprehensive documentation
- Interdisciplinary Collaboration
- Identifying Patterns and Trends
- Continuous Learning and Improvement
- Addressing Documentation Challenges

Clinical record reviews play a vital role in promoting quality, safety, and efficiency in healthcare delivery. By leveraging insights from these reviews, healthcare organizations can enhance patient care, optimize resource utilization, and drive continuous improvement across the care continuum.

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