DAILY CLINICAL PHARMACIST ACTIVITIES

Abstract: Drug therapy monitoring involves checking and understanding the levels of medicine in a patient's blood. Pharmacists play an important role in reviewing medication charts to make sure prescriptions are appropriate. Clinical reviews are done to track a patient's progress and see how well treatments are working. During ward rounds, doctors, along with other healthcare professionals and students, visit patients to assess their condition. Patient counseling is when a pharmacist gives advice and information to help patients take their medications properly. Overall, it's the clinical pharmacist's main job to ensure medications are prescribed, dispensed, and administered correctly while keeping an eye on any side effects or benefits.

Keywords: Drug therapy, clinical review, Counselling, Ward round, Patient information leaflets(Add ,)

1. INTRODUCTION

1.1. Drug Therapy Monitoring includes Medication Chart Review and Clinical Review.

Monitoring drug therapy is the process of making sure that the medication(Add of) a patient is taking is safe, effective,(Remove ,) and cost-efficient, while also ensuring it is used correctly[1].(Remove .& add ;)

- To achieve the best results from medication, three goals need to be met:
- Ensure the drug has the intended effects.
- Maximize its effectiveness in the shortest time.
- Minimize the risk of harmful side effects[2].

1.1.1. Medication Chart Review

A key responsibility of a pharmacist is to make sure that medication orders are appropriate. This forms the foundation for other important tasks, such as providing medication counselling, reviewing drug interactions,(Remove ,) and monitoring for adverse drug reactions (ADRs)[3](figure 1).

Figure 1: Medication Chart Review(Alignment should be in middle, not matched fig. with fig. name)

1.1.2 Goals

- To improve the effectiveness of a patient's medication treatment.
- To prevent or minimize drug-related issues and medication errors[4].

1.1.3 Procedure

- This analysis also indicates that the patient's medical history should be checked in addition to the medication record.
- The current medication order has to be assessed in light of the most recent consultations, the treatment plans, and the daily progress of the patients.
- All active and prior scripts ordered should be critically assessed[5].

1.2. Clinical Review

A clinical review is an essential part of a medication review and should ideally be done daily. It involves evaluating the patient's progress to assess how well the treatment is working(Figure 2). The treatment goal for the particular condition should be clearly defined before starting the review[5].

Figure2: Clinical review(irrelevant fig. in this part , remove this)

1.2.1 Goals

These are the specific objectives of the clinical review:

- Assess the patient's compliance to the medication.

- Ensure the treatment plan is safe.
- Monitor disease progression and determine if changes in therapy are needed.
- Identify if any additional monitoring is required.
- Assess the convenience of the treatment to enhance patient compliance[5].

2. WARDROUND PARTICIPATION

A ward round is when a doctor, often with a group of health care practitioners and medical students, rounds on hospital patients on their beds to check on their health and progress (Figure3).

These rounds are usually done at least once a day. The healthcare team involved in ward rounds ensures(Should be singular form) that medications are used safely, effectively, and efficiently.

Ward rounds play a vital role in the patient's hospital journey, as they provide a structured way for the team to review each patient's condition and plan the next steps in their care[5].

Figure 3: Ward round participation

2.1 Goals

The objectives of clinical pharmacist ward round involvement are:

- Provide a better insight into the patient's overall health condition and progress.
- Offering information regarding various facets on the patient's medication including pharmacology, pharmacokinetics, drug availability, costs, drug-drug interactions and adverse effects.
- Enhancing the management of treatment.
- Identifying adverse drug reactions and interactions.
- Contributing to planning(Should be present indefinite form) the patient's discharge[5].

2.2Classification(Bold this word)

Ward rounds maybe classified according to the purpose of the round like the following:

1. Pre- rounds

2. Register or resident rounds

3. This is in addition to rounding by the professor or the unit chief.

4. Teaching rounds

1. Pre-Rounds: A medical postgraduate student or an intern does a patient round on his or her unit or ward on a daily basis. Clinical pharmacists may join these pre-rounds to review patients' medications and clinical status.

2.Registrar or Resident Rounds: Registrars and residents ensure that doctors make at least one round in the ward in a single day, typically in the morning. These rounds are valuable opportunities for both newcomers and experienced clinical pharmacists to attend.

1. **Professor or Unit Chief Rounds:** The unit chief or professor, along with their team of registrars, residents, and postgraduate students, conduct rounds daily. These rounds can be more demanding for the clinical pharmacists due to the advanced clinical knowledge required(Figure 4).
2. **Teaching Rounds:**Members of the academic medical staff conduct bedside teaching involving residents, postgraduate students, interns and medical undergraduates. These sessions may involve virtual teaching of therapeutics to medical and allied health aspiring professionals by clinical pharmacists[5].(Should be checked Numbering of subheadings)

Figure 4: Professor or Unit Chief Rounds

2.3Pre-Ward Round Preparation

- To actively participate in clinical decision-making, having up-to-date information on the patient's health status, disease, treatment plans, medical and medication needs is crucial[6].
- The clinical recording involving the medication chart should be done before the ward round[7].
- Any problems that appear before the wards round should be solved by consulting the relevant information[7].

- To actively engage in clinical decision-making, it's important to have accurate and current details about his or her general state, illness, treatment and medication records[8].

2.4Ward Round Follow-Up: It is common that Clinical pharmacists need to address issues that come up during ward rounds. These issues should be prioritized based on their urgency and importance. Some common follow-up tasks include:

- **Responding to Enquiries:** Any questions that remain unanswered during the ward round should be noted and addressed promptly. Responses can be provided by phone, email, in writing, or in person as needed,(Remove ,) and should be supported by proper references if required.
- **Communicating Information:** Sometimes, the pharmacist needs to relay changes in drug therapy from the ward round to other healthcare team members, including the employees of medical, nursing, (Remove ,)and pharmacy, technical and dietetics departments.
- **Completing Documentation:** Recommendations or actions made by the pharmacist during the ward round should be recorded as needed. Adverse drug reactions (ADRs) should be noted on an alert sheet, and if the pharmacist has consent, relevant details should be added to the patient's case sheet, including their identification,(Remove ,) and contact information, as well as a legal signature.
- **Altering the Patient's Care Plan:** The pharmacist might have to adjust the patient's management plan based on changes in management, such as monitoring drug levels, conducting lab tests, or adjusting doses after dialysis.
- **Discussing with Patients:** In this case, it may be appropriate for the pharmacist totalk to patients about changes in their drug therapy, including reasons for these changes, administration instructions, self-monitoring techniques,(Remove ,) and potential side effects[5].

.

3. PATIENT COUNSELING

Patient counseling involves education, counselling, and advocacy to enable the use of the medicines by the patientcorrectly[9](Figure 5). The pharmacist will offer information and recommendations to the patient or their proxy, which may encompass details about the patient's condition or suggested lifestyle modifications[5].

Figure 5: Patient counselling

In counseling, the pharmacist should evaluate the patient's comprehension of their illness and treatment, offering tailored advice and information to ensure the medication is used as safely and effectively as possible. To deliver precise guidance, the pharmacist needs a thorough understanding of the disease's pathophysiology and therapeutic options. Effective communication skills are essential to build trust with the patient and encourage adherence to the prescribed treatment plan[5].

Effective patient counseling aims to achieve several key outcomes:

- Enhanced patient comprehension of their condition and how medication aids in its treatment.
- Increased adherence to medication regimens.
- More effective drug therapy.
- Decreased occurrence of medicines related misuse, negative effects, and avoidable health costs.
- Enhanced patient outcome or quality of life.
- Improved approaches in managing antimonial medication side effects.
- Strengthened working partnership between the patient and the pharmacist[5].

3.1. Communication Skills for Effective Counseling

Effective counseling relies on both verbal and non-verbal communication skills.

Verbal Communication: This involves not just the words used but also paralinguistic elements like tone, volume, pitch, and speech rate. Paralinguistic features—how we say things—make up about 40% of how a message is received, influencing how well the patient understands.

- **Language:**Do not use complex technical terms when explaining things to the patient. Communication should also be done in the preferred language of the patient where possible.

- **Tone:**The attitude or the way you deliver the messagegreatly affects patient understanding. Variations in pitch and tone can convey emotions and attitudes. A caring and reassuring tone is ideal during counseling.
- **Volume:** While volume can vary depending on the situation, counseling should ideally occur in a quiet, private setting where there's no need to raise your voice. For patients with hearing difficulties, speaking louder may help, but moving closer can often be more beneficial.
- **Speed:** The pace of your speech affects clarity. Speaking too quickly can make the patient feel rushed, while speaking too slowly may lose their interest. Aim for a clear and steady pace that allows the patient to absorb and reflect on the information.

Non-Verbal Communication: This entails embracing gestures such ashead, limb, body movements, and aspects like professional attire. About 50% of communication is conveyed through body language.

- **Proximity:** The physical distance between you and the patient is important. This has been divided into intimate, personal, social and public space where intimate is anything within 45cm or below up to 1.2m, personal is between 45cm to 1.2m up to 3.6m and public more than 3.6m. Typically, intimate or personal distances are used in counseling.
- **Eye Contact:** The amount of eye contact varies with the role of the person speaking or listening. While listeners tend to make more eye contact, some patients may avoid it due to cultural reasons or personal feelings such as shyness or sadness.
- **Facial Expressions:** Use facial expressions to show empathy and understanding. Head nods, hand gestures, and body posture can also enhance communication[5].

3.2. Steps of Patient Counseling

Counseling is a mutual communication process.
(Reduce sentence gap)

Preparing for the session: Effectiveness of counseling depends on the knowledge and skill of the pharmacist. The pharmacist should obtain as much data about the patient and his or her therapy as is feasible. In a hospital, this can be done by getting the patient’s case notes, and examining them to determine insights on them. Some of the information may be obtained from the patient, his prescription, or past medication records. It's also important to consider the patient’s mental and physical condition. If they are in pain, rushed, or unwilling to communicate, effective counseling can be challenging. In such cases, the pharmacist might need to adjust the goals of the session or, with the patient's agreement, reschedule for another time.

Starting the session: The first aspect of counseling is the process of data collection.The pharmacist should introduce himself or herself and the patient and(Use as well as instead of and)call the patient by his/her first name. If unsure how to pronounce the name, it's fine to ask a colleague or the patient directly. It's a good idea to start with titles like Ms., Mrs., or Mr.

This kind of introduction helps the patient, especially in community pharmacies where they might be in a rush, to mentally prepare for spending some time with the pharmacist.

After that, the pharmacist elicits knowledge of the patient's appraisal of his illness, the medicine she/he is under,(Remove ,) and any use of homemade or ayurvedic medicine. Other relevant details might include any past drug allergies, medical history, or habits like chewing tobacco, smoking, or drinking alcohol.

Counseling content: The main part of the counseling session is when the pharmacist provides important details about the patient's medication and treatment plan(Figure 6). Some common topics discussed include:

- The name and strength of the medication that the patient needs to use
- If known, why it was prescribed and its functions
- What form it comes in, how taking it, its dosage form and how often it should be taken
- Duration of the treatment
- The expected benefits
- Possible side effects
- Potential interactions with other medications or certain foods
- How to store the medication properly
- How long it might take before seeing improvements
- How to handle when a dose is over looked
- Refer to special monitoring if any as for instance blood tests.

Figure 6: Counselling content (Not matched fig. with fig. name)

Closing the session: Before wrapping up, it's important to make sure the patient understands the information. This can be done with questions that elicit feedback such as, 'What is this medication used for?' and 'When should one use this medication?' While some of the patient's concerns may have been addressed during the conversation, new questions or doubts might arise. It's a good idea to end by asking, "Do you have any questions?" If there is time, reiterate the crucial points in a logical sequence, after restating their names. If necessary, the pharmacist can also leave their phone number and advise the patient to call them in case of anything pertaining the issue[13].

3.3. Counselling Aids

In general, cognition happens when the information given to a patient is verbal which poses a risk of the information being forgotten by the patient later[14]**.**Various teaching and educational tools have been created to support patient counseling.

This medication card can be of great help, especially to those patients who need to take multiple medications over time.These cards provide a clear, written summary of the patient's medications, either handwritten or computer-generated, in a format that is easy to understand. It's important to keep the card updated whenever there are changes to the patient's medication plan[15].

Patient information leaflets (PILS) are written information leaflets in simple language may be considered useful by patients. They contain information about the illness, the patient's treatments, prescribed drugs, and any necessary changes to behaviour patterns.These leaflets help patients better understand their condition and how to manage it[16].

4.CONCLUSION

Daily activities of clinical pharmacists are crucial for effective clinical pharmacy practice in hospitals[17]. They improve both healthcare professionals' and patients' understanding of the patient's condition[18].They help clarify the illness and its treatment, boost patient adherence to prescribed therapies, identify drug-related issues, and achieve better therapeutic outcomes[19].It gives pharmacists direct insights into how medications are administered and used from the patient's perspective[20].

REFERENCE

1.D Sudheer Kumar, J Krishnaveni, P Manjula. Fundamentals of Clinical Pharmacy Practice. 2010.

2.Rahman A, Shah M, Shord SS. Dosage optimization: a regulatory perspective for developing oncology drugs. Clinical Pharmacology & Therapeutics. 2024.

3.Mitra MS, Hasmi ST. A review article on patient medication history interview.

4.Wang T, Kang HC, Chen CC, Lai TS, Huang CF, Wu CC. The effects of pharmacist-led medication therapy management on medication adherence and use of non-steroidal anti-inflammatory drug in patients with pre-end stage renal disease. Patient preference and adherence. 2024 Dec 31:267-74.

5.A Textbook of Clinical Pharmacy Practice, Essential Concepts and Skills. Second Edition; G Parthasarathi, Karin Nyfort-Hasen, Milap C Nahata.

6.Sox HC, Higgins MC, Owens DK, Schmidler GS. Medical decision making. John Wiley & Sons; 2024 Feb 27.

7.Hall S, Reed M, Covers TC. Therapeutic engagement for mental health care. Essentials of Mental Health Nursing. 2024 Mar 21.

8.Stewart M, Brown JB, Weston WW, Freeman T, Ryan BL, McWilliam CL, McWhinney IR. Patient-centered medicine: transforming the clinical method. CRC press; 2024 Mar 6.

9.Hämeen-Anttila K, Mikkola H. Is there a need for standardization of medication counseling in community pharmacies?. Research in Social and Administrative Pharmacy. 2024 May 1;20(5):547-52.

10. Virk A, Kalia M, Singh P, Sharma SK, Goel S, Singh S, Sharma S. Tobacco use in currently married pregnant & lactating women in India; key findings from the National Family Health Survey-5. The Lancet Regional Health-Southeast Asia. 2024 Apr 1;23.

11. Sarwar F, Ring D, Donovan E. Clinician communication strategies to navigate differences of opinion with patients. Patient Education and Counseling. 2024 Jun 1;123:108185.

12.Hägglund S, Andtfolk M, Rosenberg S, Wingren M, Andersson S, Nyholm L. Do you wanna dance? Tales of trust and driving trust factors in robot medication counselling in the pharmacy context. Frontiers in Robotics and AI. 2024 Aug 7;11:1332110.

13. Pangallo M, Aleta A, del Rio-Chanona RM, Pichler A, Martín-Corral D, Chinazzi M, Lafond F, Ajelli M, Moro E, Moreno Y, Vespignani A. The unequal effects of the health–economy trade-off during theCOVID-19 pandemic. Nature Human Behaviour. 2024 Feb;8(2):264-75.

14. Gao S, Wang X, Lu Y, Liu Y, Jiang Q, Feng J, Kong W, Lin L, Cheng H. Current scenario and challenges of clinical pharmacists to implement pharmaceutical care in DRG/DIP payment hospitals in China: a qualitative interview study. Frontiers in Public Health. 2024 Feb 20;12:1339504.

15. Huang H, Zhang L, Yang Y, Huang L, Lu X, Li J, Yu H, Cheng S, Xiao J. Construction and application of medication reminder system: intelligent generation of universal medication schedule. BioData Mining. 2024 Jul 15;17(1):23.

16. Jasińska-Stroschein M, Dymek J, Drozd M, Sierpniowska O, Jędra A, Stankiewicz A, Stasiak P, Cholewa S, Nowakowska M, Waszyk-Nowaczyk M. An evaluation of written materials for supporting hypertensive patient education and counselling when performing a new medicine service in Poland. BMC Medical Education. 2024 May 10;24(1):521.

17. Clancy C. Critical conversations in healthcare: Scripts & techniques for effective interprofessional & patient communication. Sigma Theta Tau; 2024 Jun 4.

18. Hancox JE, Chaplin WJ, Hilton CE, Vadaszy N, Gray K, Game F, Vedhara K. Motivation communication training programme for healthcare professionals to support adherence in patients with diabetic foot ulcers: Proof of concept study. Plos one. 2024 Feb 8;19(2):e0295180.

19. Kengne AP, Brière JB, Zhu L, Li J, Bhatia MK, Atanasov P, Khan ZM. Impact of poor medication adherence on clinical outcomes and health resource utilization in patients with hypertension and/or dyslipidemia: systematic review. Expert Review of Pharmacoeconomics & Outcomes Research. 2024 Jan 2;24(1):143-54.

20. Greer D, Barta L, Liu MT, Andrews LB. Subjective and objective benefits of a novel opioid□related disorders simulation learning experience for pharmacy students. Journal of the American College of Clinical Pharmacy. 2024 Feb;7(2):133-9.