



Pharmacist's Role in Medication Adherence in Tertiary Care Teaching Hospital

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ABSTRACT

This review article outlines how community pharmacists can play an important role in medication adherence. WHO defines medication adherence as “the degree to which a person’s behavior corresponds to the agreed recommendations for the healthcare provider.” Though medication adherence commonly refers to drug compliance, in broader sense it includes all treatment instructions such as self-care, medical device use, and exercise and therapy sessions. Missing a single dose to medication leads to progression of disease, and this is referred as non-adherence. Non-adherence occurs due to both patients as well as providers barriers. Patient barrier includes cost, lack of understanding about the medicine regimen, side effects scares and many more and provider barrier like lack of awareness among clinicians about basic adherence management principles, or patient-physician miscommunication may be the reason. The basic requirement for adherence is trust towards healthcare professionals by patients. And this trust is gained by pharmacist by proper counselling for the disease as well as its medication. Adherence tools like pill cards, pill boxes and mobile medications apps are used which help the patient to adhere to treatment regimen. Pharmacist can play an important role to maintain the patient medication adherence. He/she can do all the possible efforts to make the patient comfortable. But the only required thing is, the patient must open up with the pharmacist and share all the problems regarding the medication, adverse effects or disease conditions to overcome the problems.

KEYWORDS *Adherence, healthcare provider, drug compliance, counselling, pill boxes, mobile medication apps*



INTRODUCTION

Medication adherence is voluntary action of the patients in taking drugs or medicine as prescribed, including its timings, dosages and frequency.¹ Non-Adherence is one of the most dominant reason for the failure of therapies.² In countries where medicines are available sufficiently to the population, improving adherence may have far greater results on health of population compared to any improvement in specific medical treatments.³ Optimal medicine adherence can be summarized as the following:⁴

- The intake of the right medicine;
- At right time;
- In right dosage;
- For prescribed duration;
- Without adding any uncontrolled self-medication.



Optimal implementation and persistence of therapy will help patients to attain better clinical outcomes and improve their quality of life.

Chronic disease accounts for about 70% of all deaths and are leading cause of morbidity and mortality in United States.⁵ Approximately 20-50% of patients are non-adherent to their medications. Non-adherence to medication leads to inferior therapeutics outcomes, higher hospitalization rates and increased health care costs.⁶

REASONS FOR NON-ADHERENCE:

Non-adherence can be intentional (i.e. the patient doesn't start the therapy because they don't accept the diagnosis or due to some other reason like high cost, personal beliefs and perceptions, etc.) or non-intentional (i.e. ignorance by patient as he forgets to take medicine as prescribed by some reason or the dosage regimen is too complicated for patient to follow).^{7,8}

There are 2 categories of barriers related to non-adherence:

- Patient barriers.
- Provider barriers.

Patient barriers include the following:

1. Cost.
2. Side effects of treatment.
3. Personal beliefs and perceptions.



4. Ignorance.
5. Forgetfulness.
6. Lack of resources.
7. Duration, frequency and complexity of therapy.
8. Improper administration technique.

Patient barriers manifest to be leading cause of non-adherence. Sometimes patient may discontinue medications if they don't have any quick response to the medication therapy or they have any kind of side effects. They also stop the medication if they can't afford the cost of medication. Without proper education, patients may not follow the therapy for longer duration of time, and will discontinue the therapy without consulting a physician or pharmacist. Because of these issues, the patient barriers vary clinical, humanistic, and economical factors. No single intervention by healthcare professionals can improve adherence to all existing non-adherent patients. Every patient needs an individual plan to overcome his or her non-adherence. If these barriers are identified correctly and accurately, overcoming them will be most chief step in managing adherence.

Provider barriers include the following:

1. Patient-physician miscommunications.
2. Lack of awareness among clinicians about basic adherence management principles.
3. Apathetic physician attitudes.

Provider barrier also play a role in creating adherence problems as patients may not receive the most optimal care required to manage the health conditions. It occurs as most of the providers are unaware of the prevalence of non-adherence and some of the physician do not consider addressing non-adherence as a part of their daily practice. These barrier can be managed by proper provider education of prevalence of non-adherence and by providing them information about active adherence.^{9, 10}

PHARMACIST INTERVENTIONS:

Pharmacist are the last healthcare professionals that patients will see before using the medicine and, thus, this may have an impact on their perception of the therapy. Pharmacist are the one who can influence the patient's expectation.¹¹ Once the reasons for non-adherence have been determined then pharmacist can intervene to help the patient to achieve the better therapeutic outcome.¹² Often, number of strategies must be employed to improve adherence, including counseling, patient education, and patient's memory enhancement.¹³



Trust in the healthcare professional and health care system plays a key role for adherence to medicine and for optimum health outcomes, thus trust should be built between healthcare professional and patients.¹⁴ Trust involves the following:¹⁵

1. Fidelity: caring for patient's interests or welfare and avoiding the conflicts of interest;
2. Competence: having good practice and making correct decisions and avoiding the mistakes;
3. Honesty: telling the truth;
4. Confidentiality: proper use of sensitive information.



Health care professionals must motivate the patients. Each consultation must be well prepared and should be motivational. Counselling of the patients by health care professionals must include each detail about the medications and some details about the diseases which is necessary. Saying the right words are not enough, they must be said in right manner so that patient feel motivated.

Simplifying the medication regimens through once daily dosing formulation may lead to decrease in confusion in patients and multiple dosing can be decreased.⁵ a pill card had developed that serve as a graphic aid for adherence of medication in the population. A card has least amount of necessary information. A color image of a pill, the indications, directions and time of administration (i.e. morning, afternoon, evening or bed time) were displayed on the card. Almost most of the population consider the card as a most useful tool for understanding the treatment.¹⁶



Another adherence tools may include pill boxes and medication apps. Pill boxes use to organize the medicines. This is much useful in geriatric patients.



A standard pill box has a separate compartment for each day of the week which is much helpful. Medication mobile applications are also in much use now. Reminders set on such apps usually pop up like push notifications when its time to take the medicine. Reminders can be set for different medications as required by patient.¹⁶

Pharmacist should always encourage the patients to make a list of the medications that they usually take. Such list should contain





all the information about treatment regimen including names of drugs, for which medical condition it is used for, its timings and its indications. Pharmacist can also advise the patient to give these copies to other family members or friends in case of any emergencies.

ROLE OF PHARMACIST:

A pharmacist is a person who dispenses the medication but the role of pharmacist is much more complex than it. Pharmacist can play an important role in patient care through various means such as counseling, disease state management, medication state management and so on. Pharmacist play a key role in patient's medication adherence and to get high therapeutic outcomes.¹⁷

Adherence measures should not be used to control the patients but it should be to reduce the errors and maintain the patient's health. Non-adherence is much complex issue and there is no specific solution to the problems.¹⁷ The pharmacist needs to understand patient's knowledge, and beliefs before starting an intervention and this is one of the most important thing.^{18,19}

The role of pharmacist starts with trust building, where the pharmacist introduces themselves, followed by taking medication history. Difficulties or problems can be solved at any stage by the pharmacist. For new medicine user, the pharmacist must take care that they give almost all the necessary information about the treatment regimen.²⁰

Information presented by pharmacist should be very clear and language should be used in which patient can understand and the patient must not only understand the importance of adherence but should also know the outcomes of non-adherence.²¹

Simplification of the doses and minimization of the adverse effects, results in improving the adherence. When filling the prescription, the pharmacist should see and check about the dosing schedule whether it's simple or not. The pharmacist should inquire about the adverse effects the patient is suffering and then pharmacist should consult the physician regarding their alternatives.²¹

If a dosing card is prepared, then only essential information for patient's medication should be added. These should include: Name of the pill, an image (if it's possible), the condition for which it's been used and the timings for the medication. This may help the patients a lot especially the one who have many medicines to take.²¹

Remainder calls, texts, or e-mails are much more helpful for many patients, especially for the one who have busy schedule. Automatic refills are much useful.²¹

Whatever the barrier may be but the only way to overcome it is to talk to patient about it. The pharmacist need to be particular about including the patient in treatment experience. The more trust



the patient have on the pharmacist, the more he or she will open up to pharmacist and disclose any problem or difficulties about taking medicines. Only then can pharmacist play an integral role in improving patient's adherence.²¹

CONCLUSION

Pharmacist have major role in improving adherence in patients. They can confirm that the patients are taking correct medications and not taking any other drugs which may cause the adverse effects. They can educate patients about using technology like pharmacy apps to set medication reminders on their phone to avoid the adherence. Pharmacist can also try other interventions that are discussed above to avoid non-adherence.



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