Review Article | **Pharmacy Services**

Enhancing Medication Adherence in Chronic Patients

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Abstract

Background: Due to the lack of gold standard techniques for adherence measurement, accurate measuring and monitoring of patient medication adherence is a problem that affects the entire world. Adoption of technology for medication adherence monitoring has received recent attention since it allows for the ongoing monitoring of patient behaviour with regard to medication adherence. However, there are differences in the technological characteristics and data collection techniques of the many medication adherence monitoring technologies currently in use, which affects how well they can be used and how well they can perform. Overall, there is a dearth of adequate standards to evaluate medication adherence monitoring technology for the best uptake and application. **Objective:** In order to encourage technology development and implementation, this study seeks to offer a narrative review of the available medication adherence monitoring systems.
Keywords: Medication adherence, method of adherence & Polypharmacy.
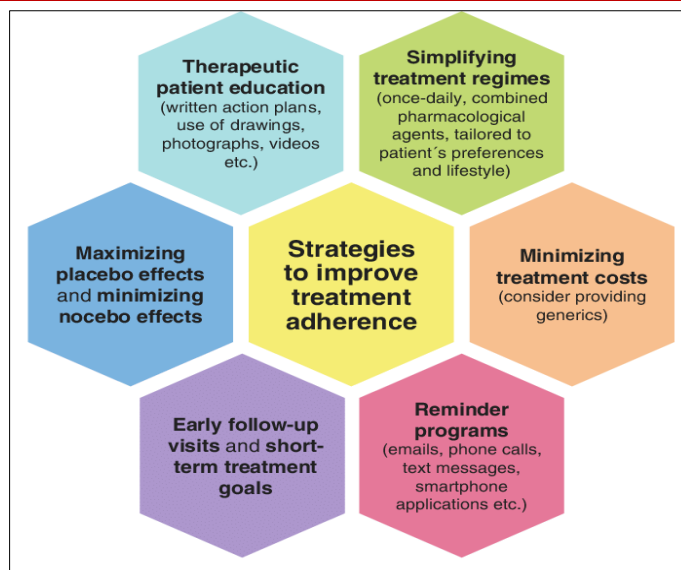
INTRODUCTION

Medication adherence is defined by the World Health Organization as "the degree to which the person's behaviour corresponds with the agreed recommendations from a health care provider. Patients with chronic conditions and complex medication regimens are at an especially high risk of not taking the medications they need to successfully treat their conditions as medications don't work in patients who don't take them. Failure to follow a medication regimen as prescribed is widely recognized as a top reason for treatment failures, low clinical outcomes, serious adverse reactions and even deaths. In addition to poor patient outcomes, medication non-adherence can lead to hospital readmissions and expensive treatments that drive higher downstream healthcare costs. Pharmacists are accessible and trusted medications experts are ideally positioned to enhance medications adherence with positive patients' clinical outcomes [1]. Need of medication adherence monitoring is necessary in chronic as well as life styles diseases. For example:

Patients' adherence to antihypertensive drug therapy-especially at the beginning of treatment-is essential for preventing serious cardiovascular complications over the long term. Medication adherence is crucial in patients with heart failure; however, the rate of medication non-adherence in the heart failure population is 50%, making it a significant problem [2].

Methods to Improve Medication Adherence

The efficacy of a medicine and the patient's compliance with the prescribed course of therapy are both important factors in treatment success. To increase drug adherence, there are three groups that can help: patients, healthcare professionals, and healthcare systems. A variety of adherence approaches should be used in conjunction to promote patient adherence to their recommended treatment because a single method cannot increase drug adherence [3, 4]. The following are some systematic steps that could be taken to increase drug adherence:

Essential Steps need for medication adherence [5-7]

Step	Description
Level of prescribing	Introduce a collaborative approach with the patient at the level of prescribing. Whenever possible, involve patients in decision making regarding their medications so that they have a sense of ownership and they are partners in the treatment plan.
Communicating with the patient	Address the key information about the drugs (what, why, when, how, and how long). Inform the common side effects and those that patient should necessarily know (Patients would be more worried and lead to non-adherence due to side effects that was not cautioned to them in advance by health care professionals). Provide medication calendars or schedules that specify the time to take medications, drug cards, medication charts or medicine related information sheets or specific packaging's such as pill boxes, 'unit-of-use' packaging, and special containers indicating the time of dose.
During follow up	Monitoring the medication adherence should also be a criteria while scheduling patient follow up.
Educating Patient	Patients' worries and anxiety about adverse drug reactions can be reduced by educating them about common side effects of the medications they are taking, showing them how to avoid one if at all possible, and persuading them that they need to receive therapy.
Complexity of drug regimen	Medication adherence is reported to be negatively impacted by drug regimen complexity. The frequency of administration, the number of different medications, and/or their replacement, if necessary, with combination products, will need to be changed in pharmaceutical regimens. This approach emphasises patient involvement in disease management because it frequently requires the patient's assistance.

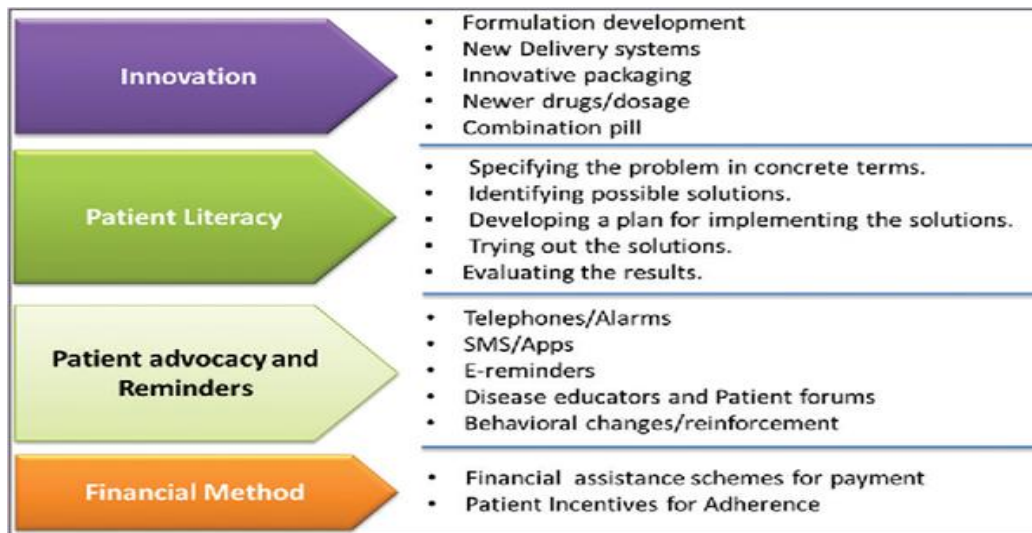## Barrier in Medication Adherence [8]

Facilitators of Medication Adherence [9-11]

Methods Improving Medication Adherence

Health literacy, the degree to which individuals are able to obtain, process, and understand basic health information and services, is a social determinant of health that can greatly affect patient compliance with medication [12, 13].
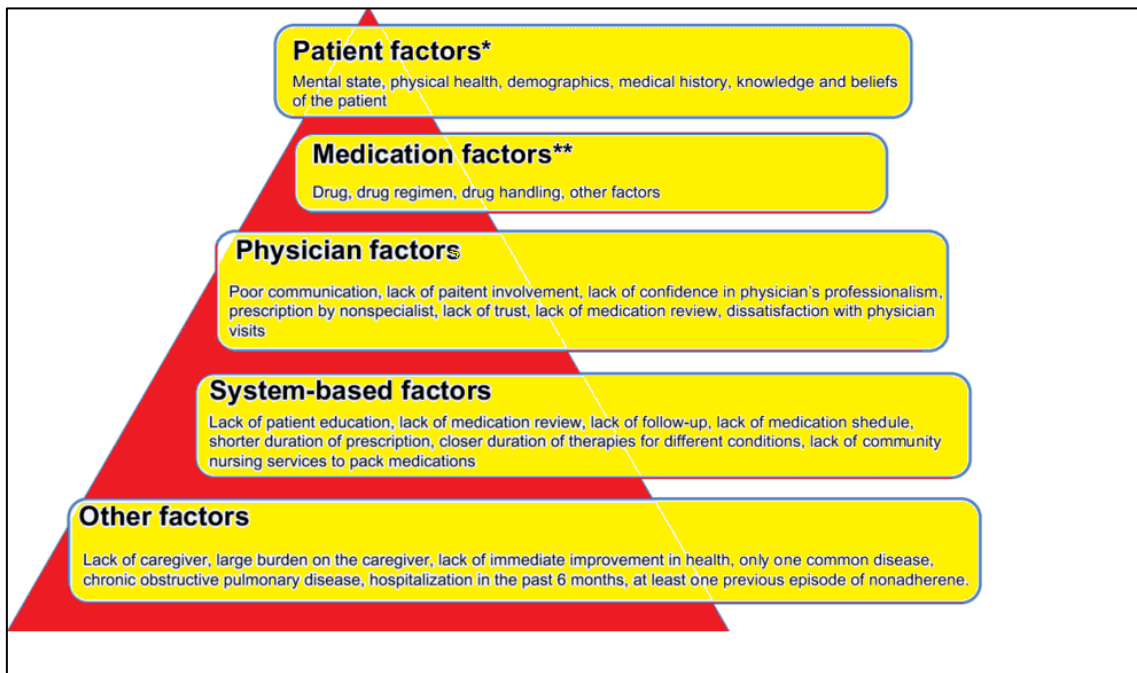

Improvisation of Medication Adherence

The health of our people may be affected by better medication adherence more so than by the development of any new treatments. 50% of the time, patients don't take their medication as prescribed [14]. Although the majority of doctors think forgetfulness or a lack of access is the main causes of non-adherence, the patient may purposefully choose not to follow their treatment plan. Emotions on the side of both the patient and the physician frequently drive a patient's concealment of their medication-taking behaviour, with potentially disastrous results. Improved patient access, awareness of pharmaceutical benefits, and trust in their physician and healthcare system are just a few of the many methods being used to increase medication adherence [15, 16]. It's also important to develop physicians' awareness of and knowledge of patients' values, beliefs, and prejudices.

Methods of Assessing Medication Adherence in Chronic Diseases [17-19]

| Direct method	Indirect method
Direct observation	Dietaries monitoring
Measurement of drug concentration in blood	Measurement of physiological marker
Biological marker measurement	Monitoring via a electronic tools
	Clinical response and dose calculation

Factor Affecting Medication Adherence [20]

Needs of Medication Adherence in some of the Chronic Diseases

Medication adherence is an important part of chronic disease management. Understanding medication adherence in older adults is important as they become a larger part of the population with chronic and multiple diseases.
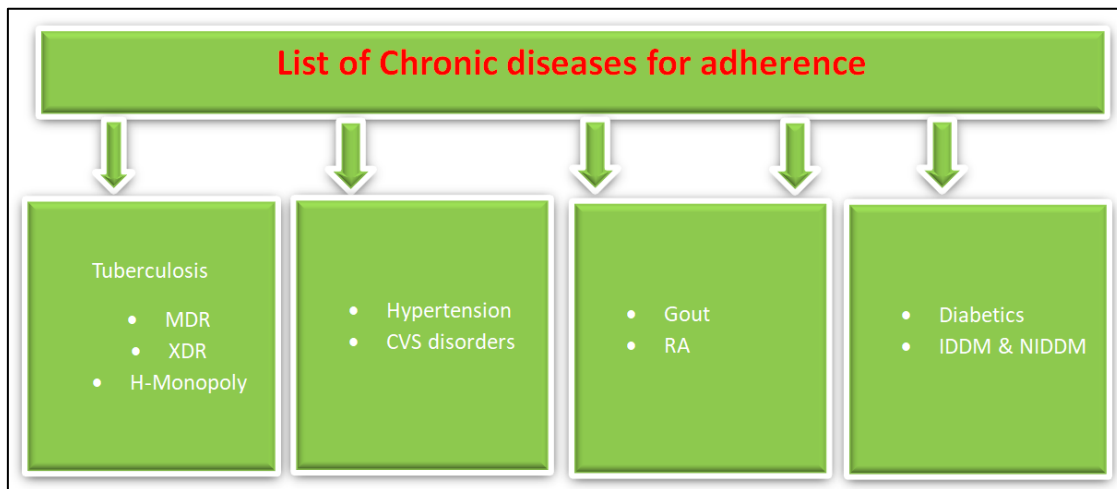
Challenges/Limitation

Utilization of Modern Sources for Medication Adherences

Smart phone application	Related disease
Tuberculosis	• Nik shay: Including notification, Drug dispensation, DBT, Follow up as well as outcome. • Shastra • Prevent T.B.
For new birth child	• Like National programme; which includes 35 diseases and disorder including congenital defect as well deficiency diseases.
Blood Pressure	• Hypertension digital App development
CVS	• CVS Pharmacy

CONCLUSION

Long-term medication is often used in the treatment of chronic conditions. The majority of patients—about 50%—do not take their drugs as directed, despite the fact that they are helpful in treating disease. As a result, their full advantages are frequently not realised. Poor health literacy and lack of participation in treatment decision-making are just two examples of the many factors that affect patient medication adherence. Other factors include complex drug regimens prescribed by doctors, communication barriers, ineffective sharing of information about side effects, and the use of multiple doctors in the delivery of care, as well as factors related to health care systems due to obstacles to medication compliance. In the present review work an attempt had been to assess the various aspects of medication adherence which was necessary required for the chronic disease. Medication adherence is influenced by a range of variables, including the patient's personal traits, his or her family and cultural background, contacts with healthcare professionals, and the healthcare system as a whole. Poor medication adherence is seen as a possible contributor to differences in health outcomes found for numerous illnesses across racial and ethnic groups due to its relationship with worse results. It is evident that patient, provider, cultural, historical, and healthcare system factors all have a role in patterns of pharmaceutical usage, even if there are no easy answers.

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