

**ROLE OF COMMUNITY PHARMACIST IN PATIENT'S HEALTHCARE - A GROWING
NEED IN CHRONIC DISEASES****M. Uday Venkat^{1*}, A. Nagesh², R. Thiyagu¹, V. Rajesh¹ and A. Nagappa Naik³**¹Department of Pharmacy Practice, Manipal College of Pharmaceutical Sciences, Kasturba Hospital, Manipal, Karnataka, India.²Department of Pharmacy Practice, Vaagdevi College of Pharmacy, Warangal, Andhra Pradesh, India.³Department of Pharmaceutical Management, Manipal College of Pharmaceutical Sciences, Manipal, Karnataka, India.*Corresponding author: udayvenkatmateti@gmail.com**ABSTRACT**

Community pharmacist is only healthcare professional who will interact with several individuals each day and can make successful efforts to educate the patients and guide him about the disease, drugs and life style modification. Patient understanding regarding the diseases plays a very important role in management of chronic diseases. Since chronic diseases move through different phases and these phases of diseases require different kinds of managing strategies these patients are primarily concerned with quality of life. In this article the authors make an attempt to emphasize some of the commonly seen chronic diseases where community pharmacists can play an active role through patient's healthcare.

Keywords: Patient Care, Chronic Diseases, Community Pharmacist.**INTRODUCTION**

It is well known that the most prevalent chronic diseases are strongly linked to specific behaviors such as smoking, diet, sedentary lifestyle, intravenous drug abuse etc. Prevention and effective treatment of these diseases require behavior changes¹. Community Pharmacists familiarize themselves with recent developments in the scientific study of the behavior change. Moreover, chronic diseases in many cases are life-long. It damages the patients' "biography" and self-image and usually has a more severe impact than acute diseases on quality of life. When providing medication counseling to patients with chronic diseases, pharmacists must be sensitive to the broad array of challenges the patients face. For the patients with chronic diseases, home is the central site

of managing diseases and these patients also require more knowledge on the management

of their diseases. Since chronic diseases move through different phases and these phases of diseases require different kinds of managing strategies these patients are primarily concerned with quality of life^{2,3}. In this article the authors make an attempt to emphasize some of the commonly seen chronic diseases where community pharmacists can play an active role through patient's healthcare.

1. Diabetes

Diabetes is a group of metabolic disorder in which a person has high blood sugar, either because the body does not produce enough insulin, or because cells do not respond to the insulin that is produced. This high blood sugar produces the classical symptoms of increased

hunger, increased thirst and frequent urination. The chronic complications of diabetes are known to affect the quality of life of diabetic patients⁴.

Non-pharmacotherapeutic measures: The pharmacist can explain about diabetes, stress, family involvement and social support, nutrition, exercise and activity, monitoring and use of results, relationship between nutrition, exercise, medication, and blood glucose level. Advice regarding the prevention, detection and treatment of acute / chronic complications, foot, skin and dental care, behavior change strategies, goal setting, risk factor reduction, and problem solving, preconception, pregnancy and postpartum management³.

Pharmacotherapeutic measures: Tight glycemic control depends upon the patients' adherence towards drug therapy as well as on diet and exercise. Educating the patients on the use of Sulfonylureas "Taken 30mins before food" and also the "awareness of hypoglycemia" during insulin therapy etc^{5,6}. Table 1 list some of the important pharmacotherapeutic measures a pharmacist should stress while doing the diabetic patients care

2. Hypertension

High blood pressure is designated as either essential (primary) hypertension or secondary hypertension and is defined as a consistently elevated blood pressure exceeding 140/90 mm Hg. In essential hypertension (95% of people with hypertension), no specific cause is found, while secondary hypertension (5% of people with hypertension) is caused by an abnormality somewhere in the body, such as in the kidney, adrenal gland, or aortic artery. The management of hypertension requires non-pharmacotherapeutic as well as pharmacotherapeutic methods.

Non-pharmacotherapeutic measures: In many occasions non pharmacotherapeutic treatment alone may suffice in the Management of hypertension. A pharmacist can counsel the patient's regarding⁷:

- Patients should stop smoking (offer help ± nicotine replacement therapy).
- Weight reduction should be suggested if necessary, to maintain ideal body

mass index (BMI) of 20-25 kg/m². Offer a diet sheet and/or dietetic appointment. Dietary self-help, e.g. dieting clubs, may be appropriate⁸.

- Reduce their salt, total fat, saturated fat and cholesterol intake, while increasing consumption of polyunsaturated, monosaturated fats and oily fish. Encourage fruit, vegetables, legumes and whole grains; and low-fat (or zero-fat) dairy, poultry meat, fish and shellfish products - as in the Dietary Approaches to Stop Hypertension (DASH) eating plan.
- Cut alcohol intake to no more than 21 units (male) or 14 units (female) of alcohol per week.
- Encourage and training sessions on regular dynamic exercise per week for a young adult, or brisk walking for ≥30 minutes most days for the older individuals.

Pharmacotherapeutic measures: Educating the patients on the use of Antihypertensives is one of the important roles of pharmacists^{5,6}. Some of the important pharmacotherapeutic measures are listed in table 2.

3. Coronary heart disease

It is a general term that refers to a number of diseases other than atherosclerosis, which causes a narrowing of the major epicardial coronary arteries. As with other chronic diseases, the main aim of treatment is to reduce the morbidity, mortality and associated impairment in the quality of life⁹. A community pharmacist can play an active role in the management of these chronic diseases in several ways.

Non-pharmacotherapeutic measures: Non-pharmacotherapeutic measures that may be useful to fight coronary disease include Weight control, Smoking cessation, Exercise, Healthy diet over the past 50 years, doctors has recommended the reduction of animal based foods and an increase in plant based foods and Consumption of Fish oil to increase omega-3 fatty acid intake⁹.

Pharmacotherapeutic measures: Educating the patients on the use of nitrates in case of an acute anginal attack is one of the important roles of pharmacists^{5,6}. Some of the important

pharmacotherapeutic measures are listed in table 3.

4. Dyslipidemia

The management of dyslipidemia always requires lifestyle modifications along with adherence to medications. Dietary advice is the cornerstone of management.

Non- pharmacotherapeutic approaches: It includes regular exercise to reduce body weight, use of unsaturated fats, fruits and vegetables containing antioxidants, stress management, avoidance of drugs that are known to increase cholesterol level etc.

Pharmacotherapeutic measures: The potential life threatening rhabdomyolysis due to statins especially when combined with fibrates necessitates patient counseling for hypolipidemic drugs. Some of the patients care points are listed in table 4.

5. Asthma

Asthma is a chronic condition requiring lifelong drug therapy. Pharmacist can play an active role in educating the patient regarding self monitoring of drug therapy, other life style modifications and usage of specialized dosage forms such as metered dose inhalers, dry powder inhalers, spacers³ etc.

Non- pharmacotherapeutic measures: Safety measures while traveling, prophylactic use of

drugs before exercise, avoidance of allergens, stopping cigarette smoking³etc.

Pharmacotherapeutic measures: Patient involvement in management of asthma is very important. Specific counseling on drug therapy should concentrate on three areas; drugs to relieve symptoms, drugs used to prevent asthma attack and those drugs which are given only as reserve treatment for severe attacks. Training regarding use of the metered dose inhaler is one of the important roles of the community pharmacist. Many times the patients fail to take the inhaled steroids, as they do not produce any immediate effects^{5, 6}. Some of the pharmacotherapeutic measures to be included while doing the patient care are summarized in table 5.

CONCLUSION

Among all Healthcare Professionals including the scientists, clinicians, pharmaceutical manufactures, drug developers, regulators and nurses. Community pharmacist is only healthcare professional who will interact with several individuals each day and this is major platform to communicate with common individuals. In the world large number of patient pool goes directly to pharmacies and depends on pharmacist to tell them what medicines to take. Major role of community pharmacist is to educate consumers on preventive measures and disseminate concise and up-to-date information to the public

Table 1: Pharmacotherapeutic measures in Diabetics

Drug category	Pharmacist role
Insulin	Educate the patient regarding insulin administration techniques, proper storage conditions for insulin. Advise the patient to monitor allergic reactions and also for hypoglycemia. Ask the patient to carry chocolates, sugar candies or other sweets during travel and ask patient not to miss the meals.
Sulfonylureas	Monitor for the symptoms of jaundice, hepatitis, hepatic failure and hypoglycemia. Discuss the food administration time and need for alcohol the willful avoidance.
Metformin	Advise the patient to take medication with/after food. Monitor for abdominal discomfort, unusual sleepiness, nausea, stomach upset, rarely lactic acidosis (withdraw treatment) and weight loss.
Thiazolidinediones	Take history of hepatic problems; monitor the patients for yellow discoloration of urine. Monitor the patient for peripheral edema.
Acarbose	Encourage the patient to take the medications with the first bite of food. Monitor for flatulence, soft stools, diarrhoea (may need to reduce dose or withdraw), abdominal distention and pain; rarely, nausea, abnormal liver function tests and skin reactions; very rarely ileus, oedema, jaundice, and hepatitis.

Table 2: Pharmacotherapeutic measures in Hypertension

Drug category	Pharmacist role
ACE inhibitors	Monitor for hypotension, angioedema, dizziness, cough, taste disturbances and rash.
Alpha blockers	Monitor for orthostatic hypotension. Patients on Gastro Intestinal Therapeutic System (GITS) preparation should be told not to crush/chew the tablets.
Beta blockers	Monitor for hypotension, dizziness, headache, tachycardia and sweating. Educate regarding possibility of nocturnal dreams, impotence and CNS problems. Explain the need for dose tapering before stopping the drug.
Calcium channel blockers	Monitor for swollen gums, dizziness, headache, flushing. Educate the patient to swallow the extended release tablets as a whole. Educate the patient how to monitor his heart rate by measuring the pulse rate.
Diuretics	Monitor for electrolyte disturbance, muscle weakness, confusion, and dizziness. Ensure the patient participation in dose modulation. choose the appropriate dose timing to avoid frequent urination in the night.

Table 3: Pharmacotherapeutics measure in Coronary heart disease

Drug category	Pharmacist role
Aspirin	Encourage the patient to take medication with food. Monitor for abdominal pain, tarry stools, spitting of blood. In case of enteric-coated preparations, ask the patient not to crush or chew the tablets.
Beta-blockers	Monitor for hypotension, dizziness, headache, tachycardia and sweating. Educate regarding possibility of nocturnal dreams, impotence and CNS problems. Explain the need for dose tapering before stopping the drug.
Nitrates	Monitor for hypotension, tachycardia, headache and flushing. Sublingual tablets should not be chewed or crushed, use of transdermal patches, do not stand up immediately while using this medication. Monitor for bluish colored lips, fingernails or palms.

Table 4: Pharmacotherapeutic measures in Dyslipidemia

Drug category	Pharmacist role
Anion exchange resins	This medicine should never be taken in dry form. Mix the medicine with beverage or orange drinks. Monitor for constipation, stomach pain, nausea and vomiting, belching, bloating and diarrhea.
Fibrates	Take the medications with or immediately after food to lessen stomach upset. Monitor for blood in urine, chest pain and shortness of breath, weakness and stomach pain.
Nicotinic acid derivatives	Do not crush or chew the extended release medication. Monitor for darkening of urine, loss of appetite, severe stomach pain, and yellow eyes.
Statins	Educate the patient to take these medications after food. It is advisable to take these medications during night (except for atorvastatin). Ask the patient to report to the doctor if any signs of muscle pain appear.

Table 5: Pharmacotherapeutic measures in Asthma

Drug category	Pharmacist role
Anticholinergics	Monitor for nausea, headache, dry throat, blurred vision and painful urination.
Beta receptor agonists	Monitoring for tremors and muscle pain. Short acting medications belonging to this category should be used mainly for symptom relief. Patients on long acting medications should be told that the medication may take some time period to show the action. Patient also needs
Corticosteroids	Medications should not be stopped abruptly. It needs dose tapering before stopping. Emphasize gargling of mouth after use of inhaled medications.
Theophyllines	Patients on sustained release preparations should be told not to crush/chew the tablets.
Mast cell stabilizers	Patient should be told that these drugs are used to prevent the asthma attack and it does not relieve bronchospasm that has already started.

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