

**PHARMACIST'S INTERVENTION IMPACT ON QUALITY OF LIFE OF PATIENTS  
WITH CHRONIC DISEASE – A REVIEW****Jayesh Sandip Sawarkar\* and Anand Shriram Baley**

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**ABSTRACT**

Chronic diseases like Hypertension, Diabetes represent a significant burden to Indian health care system. Due to various factors as lack of knowledge, poverty, very formal approach towards the health and chronic diseases, non-compliance, lack of regular checkup and monitoring, medication non adherence, non-availability of proper chronic diseases management protocol etc, these diseases are gaining worst situation in Indian population mainly in rural areas. Patients with such chronic diseases need regular and proper monitoring to maintain optimum health parameters to achieve the desired health goals for a better quality of life. Five M-Monitoring, Management medication, Modification of lifestyle, Medication adherence, Maintaining Quality of life are the significant points for patients with hypertension and diabetes. Community Pharmacist is front-line leader to assist the patients to achieve this goal.

**INTRODUCTION**

Patient's with Non-Communicable Diseases like Hypertension and Diabetes are under multiple drug therapy at the same time, with comorbidity like renal or liver impairment, obesity etc. Proper pharmacotherapeutic management is necessary in such situation to obtain the desired outcome from the treatment. Regular monitoring of (BMI) body mass index, ECG, serum creatinine levels, sodium and potassium levels, liver function parameters, lipid profiles are equally important. Maintenance of optimum range of these parameters and along with pharmacotherapy, patient education, lifestyle modification can help to achieve the desired therapeutic goal. Community Pharmacist plays a key role to work in collaboration with Physicians for attaining a quality health outcome of chronic patients and live a good quality of life.

It is found that Pharmaceutical services and Pharmacist intervention is mainly related to patient counseling and education only in conducted research. Health screening, cost effective generic medicines, medicines at door step, home health screening monitoring, use of electronic medium, smart phones is not done. Mostly Research is found to be done in different demographic situations in big cities not in highly populated, remote rural sectors, and backward areas. Most of the research is based on survey and questionnaires only. Cognitive Pharmaceutical Services(CPS) are not provided fully according to Pharmacy Practice regulation 2015. Various parameters as Adverse drug reaction reporting, non-adherence to therapy, patient noncompliance, feedback

and follow-up reporting, patient medication records, not taken to consideration.

Optimization of health dependent quality of life of patients and getting optimum positive clinical parameters with affordable cost of medicines is the aim of pharmacy care by cognitive pharmaceutical services. Regularly performance evaluation and creating system for medication use by optimizing the structure of pharmacy organization can assist the pharmacist to optimize the drug therapy quality.<sup>[1]</sup> Body mass index, adherence to medicines and self-care awareness activities have improved by the interventions of community pharmacist.<sup>[2]</sup>

Pharmacist's intervention effectiveness can be evaluated by study of quality of life by patient health outcome done by the pharmacist.<sup>[3]</sup> Interpersonal skills and new services by the pharmacist can get good effect on patients satisfaction from the therapy however, patient may be more demanding and expecting from the community pharmacist as to how a pharmacist can give special care other than dispensing and counselling.<sup>[4]</sup>

Patients with chronic diseases like hypertension and diabetes have to live with it for life. Accepting this reality and following pharmaceutical care plan, can help to make their living health physically, mentally, emotionally strong, life with less pain, with minimum adverse effects and life with full of vitality and energy. Community Pharmacist is a first line health professional, who can contribute to chronic patient's improvement in Health dependent quality of life.

## **Cognitive Pharmaceutical Services by the Community Pharmacist**

### **Preparation of Pharmaceutical care plan**

Implementations of pharmacy specialized care in actual practise can reduce errors in medications, reduce cost of treatment, can give good patient health result. Pharmacist knowledge and skills in pharmacy practice can be a opportunity for the health team in assisting the physician for continues and long term relief to the patients. Health care professional team can get help of clinical pharmacist working in collaboration with physicians to provide optimum result-oriented care to patients with proper protection and preventing patients from any side effects and adverse events of medicines.<sup>[5]</sup> The pharmacist should be invited to take active part in treatment process and help the physicians to complete the treatment in more adequate way. Pharmacist have to step out of pharmacy for giving more specialised services in form of ambulatory monitoring, home care services and sharing his skilled presence and knowledge. Rational use of prescribed medicines can be provided with advanced health care provisions by improving pharmaceutical care services by a specialist that is The Pharmacist.

Pharmacist oriented care to the patients can not affect all the domains of health related quality of life but can only show significance in some domains. SF-36 measures which are existing used for social function, general health, physical health can have moderate effectiveness due to pharmacist intervention.<sup>[6]</sup> Quality of life parameters are not specifically designed for pharmacist intervention impact measurement since the available factors are generalized. Improvement in HRQoL can be observed by development of appropriate parameters having all the required domains involving pharmacist interventions measure which will precisely give the positive health outcome.

Pharmacist is facing the barrier to become a part of health care team since there exists a professional barrier but the physician and pharmacist which hampers the integrity of pharmacist ethical values. A good professional relationship is necessary with other health professionals since they are working for same goal, that is for the benefit of the patients and their wellbeing.<sup>[7]</sup> It is necessary to maintain the interactive relationship with the general physicians for proper working of total operations and depending on the references of prescriptions. Trust between the professionals with good collaboration with each other establishes a good teamwork for betterment of society and in therapeutic activity in patient care.

### **Performing medicine use review (MUR)**

Management of medicines for older or bedridden patients at home not able to approach the pharmacy, with chronic diseases can be improved by pharmaceutical care provided by Community Pharmacist by assistance of physically impaired patients, arranging palliative care, making arrangement and techniques for resolving

problems in drug administration, drug drug interaction, adverse drug reaction screening, tracking the drug adherence.

Medication adherence can be improved by counselling Patients about therapy importance and effect on their quality of life. Understanding the adherence by evidence base strategy and designing monitoring methods, developing team oriented strategies between the patients and health professionals and reducing health problems, by community pharmacist can reduce non adherence.<sup>[8]</sup>

Drug regime effectiveness followed by the patient properly determines the success of the treatment. Healthcare system comes under the burden if there is minimum level of treatment adherence in chronic diseased condition giving rise to low outcome and reduced quality of life.<sup>[9]</sup> This problem can be challenging since different roles of various methods, classification, patient related parameters are existing, and which is the best in which situation needs to be clearly identified.

Pharmacist mediated smartphones assistance in chronic disease management is effective electronic device. Smart phone managed apps which are related to health can build confidence in patients with chronic diseases that their health is very minutely observed and updated information and knowledge is provided to them, effective management of all health parameters is done, self-management and watch on own health can be done.<sup>[10]</sup> Long term management of patients health related apps are presently very few and they do not cover all the significant points that are important for patients quality of life hence there is utmost need and opportunity in information technology sector for development of very innovative apps that will be equally handy for patients, pharmacist, nurses and the physicians

### **Point of care testing and additional specialised services**

Preventing the community pharmacy progress and growth in care services depends on may no of notable reasons like, patients are still not willing to pay for the extra services provided by the pharmacist, pharmacist can not spare extra time from his regular duty of dispensing for pharmacy services, unable to get proper patient information, not having good relationship with the physicians, other health professionals don't consider pharmacist as capable for added services, pharmacist is not considered as a link between the patient and physician for the pathway of treatment, not having good contacts with other pharmacists for sharing of knowledge and lack of awareness among the pharmacist himself regarding the value added services.<sup>[11]</sup> Community pharmacist can play an active roll in management of weight in chronic patients, control of cholesterol levels ,hypertension management ,government vaccination programs, making patient aware about immunity and importance of regular exercise ,yoga foer

healthy living. Community pharmacist can become an integral part of national health program protocol since he is expert in various fields of medicines.

Cognitive pharmaceutical services are needed to undergo drastic change in view of access and availability of care to the patients which is more convenient and proper follow-up based available with all the speciality treatment services on a single platform. Ehealth services is a latest version helping the health care to boost up the care provisions.<sup>[12]</sup> Chronic diseases treatment and management need the development of a highly technically sound system building for health management using the latest internet based technology where the patient can get access to various services from a remote area including consultation, counselling, guidance, references, medicines and information about side effects at a single click. This is important since physician have time shortage, remote and rural area are not approachable, and services should be cost effective. Health industry can take advantage of electronic based health services in form of apps, smart devices, robotic medical devices which can give a scientifically approved good quality services to the patients with non-communicable diseases. Community pharmacy has to transform it self in a new role and accepting this challenge, community pharmacist should refresh his knowledge and learn new techniques for providing the services at his best.

#### **Monitoring of adverse drug reactions**

Pharmacovigilance program of India (PvPI) is continuously taking steps for safety of patients and society with least adverse effects of medicines. PvPI has taken step towards encouraging reporting of Adverse drug reactions by providing a systematically prepared adverse drug reporting form for patients and healthcare professionals in various Indian languages.<sup>[13]</sup>

When it comes to patient health the main thing is the patient's safety, efficiently delivery of services as dispensing, counselling, and other important cognitive pharmaceutical services in the system of health care.<sup>[14]</sup> Significant role of pharmacist engaged in providing specialized services need to identify, initiate and monitor the services, preventing adverse drug reactions during the treatment of the diseases, and patient should feel satisfied and safe by the therapeutic regime. To obtain these objectives the services must be patient focused and targeted with specific and time bound, achievable therapeutic regime must be considered. Guidelines prescribed by responsible authorities regarding good pharmacy practices are available to follow.

#### **Patient counselling**

Dol, H. S. et al., (2015) found that patient counselling facility was provided in retail pharmacies and hospital pharmacies at different scales. Patient should be informed about the need and importance of counselling to ensure effective disease management and therapy.

Survey concluded that pharmacists also think that patient counselling should be compulsorily provided by important health care member that is the Pharmacist and very few patients consider this duty of physicians. Hospital admission and emergency requirement can be reduced and improve the health of patients and quality of life by involving the pharmacist in patient care. Goruntla, N. et al., (2019) reported that research was done to study the effect of counseling to the patients regarding medicines, on knowledge, attitude and practice and maintaining normal blood pressure in patients with hypertension. Non-government organisation hospital outpatient department visiting patients with hypertension were enrolled for randomised controlled trials for the research. Final follow-up visit showed a notable difference in systolic and diastolic blood pressure readings in control and enrolled group for research. Values of KAP in intervention batch was better than in control group. Conclusion says that the pharmacist is very important member of health care organisation to provide services to chronic diseased patients that can give a positive health parameter changing the living of the patient

Ravi, K. et al., (2018) reported that it is necessary to undergo epidemiological study and knowledge, attitude and practice study data on diseases for designing proper program and prevention of diseased state. Such programs should be enhanced to get maximum efficiency that will control the disease rapidly. Pharmacist is a right person as a responsible health professional since he can provide proper knowledge about diseases and medicines which will give better outcome in patient health. In this study patient counselling was done and KAP and QOL was compared with subsequent counselling. SPSS software was used for analysis. Enrolled patients for study were having mostly hypertension and diabetes. Scores of knowledge, attitude and practice showed a rise starting from baseline data to follow-up and showed a significance difference in both the data. Parameters of quality of life in chronic patients with diabetes and hypertension showed improvement by step by step followup. Educational training and courses about KAP and QOL system is needed which can control disease related complications.

Hidden hurdles in patient counselling like there is large amount of work to do, attitude of the patients suffering from chronic diseases about the medicines, and perception about the disease, no area in the pharmacy for providing these value added services, no proper interaction with physicians regarding the patients' health, attitude of physicians towards pharmacist and not accepting him as active member of health team equivalent to him, low level of knowledge to pharmacist regarding the medicines. (Raisch, D. W. (1993). Solution to this problem is to provide proper payment to given services, training to pharmacist about the services, cognitive services department in the pharmacy with proper counselling and monitoring area, changing

pharmacist perception about his role and using the latest techniques for sending and transferring information to the patients by proper path who are not approachable to the pharmacy.

## CONCLUSION

The success of medicine therapy for chronic diseased patients comprises of preventing the diseased state from deteriorating, to gain a specific result and progress in health, curing the patient, reducing and slowing the process of disease and optimization of healthy living of patient. Pharmacist should get involved in identification, prevention, and provide solution for drug dependent issues by proper expertness in pharmacy care and collaboration with other health care workers as physicians, nurses, and the main person that is the patient. Community pharmacist are last but not the least person in contact with the patients during dispensing of medicines, hence main responsibility of community pharmacist is to guide and counsel the patients with non-communicable diseases regarding the severity of disease, lifestyle importance, medicine compliance importance. The benefits and importance of pharmaceutical care is identified by Pharmacy council of India and hence mentioned and clarified the importance and duties of community, clinical and hospital Pharmacist in Pharmacy Act 1948, and also amendment made in 2015 giving rise to Pharmacy Practice Regulations 2015 and gave specific powers and duties to the Pharmacist for better care of society.

It is very need of hour to find an appropriate solution and to find out how these critical situations can be handled by the Community Pharmacist as a responsible health care provider.

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