

UNDERSTANDING THE PHARMACEUTICAL CARE CONCEPT: A REVIEW

Jisha.M.L*, N.Minaz

Bharat Institute of Technology- Pharmacy, Hyderabad, AP, India

Article Received on: 11/07/11 Revised on: 20/08/11 Approved for publication: 12/09/11

*E-mail: jishajo06@yahoo.co.in

ABSTRACT

Pharmaceutical Care is a patient-centered, outcomes oriented pharmacy practice. The pharmacist is working in concert with the patient and the patient's other healthcare providers to promote health, prevent disease, and to assess, monitor, initiate and modify medication use, to assure that drug therapy regimens are safe and effective. The goal of pharmaceutical care is to optimize the patient's health-related quality of life, and achieve positive clinical outcomes, within realistic economic expenditures. Now it is a necessary element of healthcare system. Pharmaceutical care concepts difficulties included lack of cooperation between the health care professionals, lack of pharmaceutical care-related education and lack of awareness of the concept.

KEYWORDS: Pharmaceutical Care, Patient, Quality of life

INTRODUCTION

Pharmaceutical care is a buzz-word in pharmacy. Although the term originated in the USA, it is increasingly used in all over the world. The profession of pharmacy experience significant growth and development. Pharmacy practice has changed significantly since the past years from product-oriented to patient-oriented practice to ensure the best drug therapy and patient safety, and continues to advance towards the provision of pharmaceutical care¹. Now Pharmaceutical care is a necessary element of healthcare. Pharmaceutical care as a concept was first discussed by Hepler and Strand in 1990, they defined it as the responsible provision of medicine therapy for the purpose of a definite outcome that improves a patient's quality of life². It was officially endorsed and defined by the ASHP in 1993 as "The direct responsible provision of medication-related care for the purpose of achieving definite outcomes that improve patient's quality of life"³.

Pharmaceutical Care is a process that involves direct professional relationship between patient and pharmacist, requires patient-specific and medication-specific information to be collected, patient-specific medical information to be evaluated, and a therapeutic plan to be designed, implemented, and monitored to achieve the best outcome of therapy⁴. Pharmacists, as part of the National Health Care System, share with patients, physicians, other health care professionals, and the Health Authorities the mission of guaranteeing the safe, effective and efficient use of medicines. In this multidisciplinary setting, the pharmacist must contribute specific knowledge and skills to improve patient quality of life in relation to pharmacotherapy and its objectives^{4,5}.

PRINCIPAL ELEMENTS

The principal elements of pharmaceutical care are that it is medication related; it is care that is directly provided to the patient; it is provided to produce definite outcomes; these outcomes are intended to improve the patient's quality of life; and the provider accepts personal responsibility for the outcomes³.

Medication Related: Pharmaceutical care involves not only medication therapy (the actual provision of medication) but also decisions about medication use for individual patients. As appropriate, this includes decisions not to use medication therapy as well as judgments about medication selection, dosages, routes and methods of administration, medication therapy monitoring, and the provision of medication-related information and counseling to individual patients³.

Care: Patient healthcare is an integrated process by which physicians, nurses, pharmacists and other health professionals provide care to patients according to their expertise. Pharmacists as members of this caring team should commit a direct care to patients

by applying all their knowledge and skills to achieve the best therapy outcome. The heart of the pharmaceutical care is one pharmacist in a direct professional relationship with one patient. In this relationship, the pharmacist provides care directly to the patient and for the benefit of the patient. The pharmacist cooperates directly with other professionals and the patient in designing, implementing, and monitoring a therapeutic plan intended to produce definite therapeutic outcomes that improve the patient's quality of life³⁻⁷.

Outcomes: It is the goal of pharmaceutical care is to improve an individual patient's quality of life through achievement of definite (predefined), medication-related therapeutic outcomes.

The outcomes sought are

- Cure of a patient's disease.
- Elimination or reduction of a patient's symptomatology.
- Arresting or slowing of a disease process.
- Prevention of a disease or symptomatology⁴.

This, in turn, involves three major functions: (1) identifying potential and actual medication-related problems, (2) resolving actual medication-related problems, and (3) preventing potential medication-related problems. A medication-related problem is an event or circumstance involving medication therapy that actually or potentially interferes with an optimum outcome for a specific patient. There are at least the following categories of medication-related problems^{7,8}.

- Untreated indications. The patient has a medical problem that requires medication therapy (an indication for medication use) but is not receiving a medication for that indication.
- Improper drug selection. The patient has a medication indication but is taking the wrong medication.
- Subtherapeutic dosage. The patient has a medical problem that is being treated with too little of the correct medication.
- Failure to receive medication. The patient has a medical problem that is the result of not receiving a medication (e.g., for pharmaceutical, psychological, sociological, or economic reasons).
- Over dosage. The patient has a medical problem that is being treated with too much of the correct medication (toxicity).
- Adverse drug reactions. The patient has a medical problem that is the result of an adverse drug reaction or adverse effect.
- Drug interactions. The patient has a medical problem that is the result of a drug-drug, drug-food, or drug-laboratory test interaction.
- Medication use without indication. The patient is taking a medication for no medically valid indication^{7,8}.

Quality of Life: A complete assessment of a patient's quality of life should include both objective and subjective (e.g., the patient's own)

assessments. Patients should be involved, in an informed way, in establishing quality-of-life goals for their therapies^{10,11}.

Responsibility: Responsibility involves both moral trustworthiness and accountability. In pharmaceutical care, the direct relationship between an individual pharmacist and an individual patient is that of a professional covenant in which the patient's safety and wellbeing are entrusted to the pharmacist, who commits to honoring that trust through competent professional actions that are in the patient's best interest. As an accountable member of the health-care team, the pharmacist must document the care provided.¹¹⁻¹³

ACTIVITIES

The primary activities involved in pharmaceutical care are generally well known. They include the following^{2, 14}

- Assessment, such as taking a medication history and identifying real and potential drug-related problems (DRPs).
- Pharmacy care plan development, such as making and implementing recommendations and monitoring parameters to resolve and prevent DRPs.
- Evaluation, such as following up to determine whether clinical outcomes have been achieved.

FUNCTIONS OF PHARMACEUTICAL CARE

According to the ASHP Standards of practice, the pharmaceutical care functions are:

- Collecting and organizing patient-specific information
- Determining the presence of medication-therapy problems
- Summarizing patient's health care needs
- Specifying pharmacotherapeutic goals
- Designing a pharmacotherapeutic regimen
- Designing a monitoring plan
- Developing a pharmacotherapeutic regimen and corresponding monitoring plan in
- collaboration with the patient and other health professionals
- Initiating the pharmacotherapeutic regimen
- Monitoring the effects of the pharmacotherapeutic regimen
- Redesigning the pharmacotherapeutic regimen and monitoring plan
- Answering the physician in choosing right drug and ancillary therapy¹⁵⁻¹⁹.

LEVELS OF PHARMACEUTICAL CARE

The different levels of pharmaceutical care include,

- Primary pharmaceutical care
- Secondary pharmaceutical care
- Tertiary pharmaceutical care

A patient needs to know the types of pharmaceutical care services that must be provided by the pharmacist. The pharmacist is responsible for achieving the desired outcomes at all levels of pharmaceutical care^{2, 20}.

IMPLEMENTING PHARMACEUTICAL CARE

Pharmaceutical care is applicable in all practice settings in hospitals for inpatients, and outpatients, or community pharmacies. To operationalize the concept it is essential to consider pharmaceutical care in the mission of the pharmacy and develop a practice model that accommodates pharmaceutical care functions^{1, 5, 21}.

A professional relationship must be established and maintained.

Professional communication between pharmacists and patients, and between pharmacists and the other healthcare professionals to assure continuous seamless patient care.

Patient-specific medical information must be collected, organized, recorded, and maintained

Pharmacists must collect and/or generate subjective and objective information regarding the patient's general health and activity status, past medical history, medication history, social history, diet and exercise history, history of present illness, and economic situation

(financial and insured status). Sources of information may include, but are not limited to, the patient, medical charts and reports, pharmacist-conducted health/physical assessment, the patient's family or caregiver, insurer, and other healthcare providers including physicians, nurses, mid-level practitioners and other pharmacists. It must be timely, accurate, and complete, and it must be organized and recorded to assure that it is readily retrievable and updated as necessary and appropriate. Patient information must be maintained in a confidential manner

Patient-specific medical information must be evaluated and a drug therapy plan developed mutually with the patient.

Based upon a thorough understanding of the patient and his/her condition or disease and its treatment, the pharmacist must, with the patient and with the patient's other healthcare providers as necessary, develop an outcomes-oriented drug therapy plan. The plan may have various components which address each of the patient's diseases or conditions. In designing the plan, the pharmacist must carefully consider the psycho-social aspects of the disease as well as the potential relationship between the cost and/or complexity of therapy and patient adherence. The essential elements of the plan, including the patient's responsibilities, must be carefully and completely explained to the patient. Information should be provided to the patient at a level the patient will understand. The drug therapy plan must be documented in the patient's pharmacy record and communicated to the patient's other healthcare providers as necessary.

The pharmacist assures that the patient has all supplies, information and knowledge necessary to carry out the drug therapy plan.

The pharmacist providing Pharmaceutical Care must assume ultimate responsibility for assuring that his/her patient has been able to obtain, and is appropriately using, any drugs and related products or equipment called for in the drug therapy plan. The pharmacist must also assure that the patient has a thorough understanding of the disease and the therapy/medications prescribed in the plan.

The pharmacist reviews, monitors, and modifies the therapeutic plan as necessary and appropriate, in concert with the patient and healthcare team.

The pharmacist is responsible for monitoring the patient's progress in achieving the specific outcomes according to strategy developed in the drug therapy plan. The pharmacist coordinates changes in the plan with the patient and the patient's other healthcare providers as necessary and appropriate in order to maintain or enhance the safety and/or effectiveness of drug therapy and to help minimize overall healthcare costs. Patient progress is accurately documented in the pharmacy record and communicated to the patient and to the patient's other healthcare providers as appropriate.

DOCUMENTING PHARMACEUTICAL CARE

Different terms have been used to describe methods of pharmaceutical care documentation:

- PWDT (Pharmacists' Workup of Drug Therapy)
- PMDRP (Pharmacists' Management of Drug-Related Problems)
- PCP (Pharmacist Care Plan)
- SOAP (Subjectives, Objectives, Assessment, Plan of care)

In all methods Patient information, medication information (past, present), medication related problems, recommendations, desired outcomes and goals, monitoring parameters and evaluation should be documented. Pharmacists must have a good knowledge about diseases and therapy, and should exert good analytical thinking in gathering all essential information either directly from patients, or through the medical records with maintaining confidentiality.

EVIDENCE OF PHARMACEUTICAL CARE EFFECTIVENESS

Systematic delivery of pharmaceutical care will improve the patients' compliance to therapy which increases clinical outcomes and reduce total costs for medical care allowing them to be partners of their own health care thereby improving their quality of life.³Douglas L. Jennings and et al conduct an observational study in Medical University of South Carolina Family Medicine clinic for one year, demonstrates that most patients being followed by clinical pharmacist diabetes educators reported an excellent quality of life²². Another cooperative study conducted by Shahina.P.T et al in India demonstrates that pharmacist's interventions achieved significant reduction in mean systolic BP and diastolic BP and improvement in quality of life of hypertensive patients²³. A Prospective, standard care-controlled study conducted in Thailand find out that pharmacist's interventions in intensive care unit had a positive potential impact on overall drug cost²⁴. The pharmacist, using unique knowledge and skills to meet a patient's drug related needs, practices patient focused care in partnership with patients and other health care providers to achieve positive health outcomes and/or to maintain or improve the quality of life for the patient^{20, 25}

CONCLUSION

Pharmaceutical care represents an exciting new vision for pharmacy. It represents growth in the profession beyond clinical pharmacy. Pharmaceutical care can be conceived as both a purpose for pharmacy practice and a purpose of medication use processes. It is pharmacists' duty and responsibility to ensure that patients receive an acceptable level of pharmacist care

REFERENCES

1. JW Foppe van Mi, Martin Schulz and Th. F. J. (Dick) Pharmaceutical care, European developments in concepts, implementation, teaching, and research: a review Pharm World Sci 2004; 26: 303-311.
2. Hepler DD & Strand LM. Opportunities and Responsibilities in Pharmaceutical Care, Am.J. Pharm. Educ. 1989 ;53:7-15
3. American Society of Hospital Pharmacists. ASHP statement on pharmaceutical care. Am J Hosp Pharm. 1993; 50:1720-3.
4. Briyan J Isletts Systems of pharmaceutical care.In:Andrew M Peterson editors. Managing pharmacy practice principle strategies and systems 1st ed. New York 2004 page number 233-60
5. Nuttan Tanna.. Progress Made Towards Implementing Pharmaceutical Care, The Pharmaceutical Journal 2002; 269:3
6. M.Patricia Lee and Max D.Ray. Planning for Pharmaceutical care. The Am J Hosp Pharm 1993;50

7. Strand LM, Motley PC, Cipolle RJ, Ramsey R, Lamsam GD. Drug-Related Problems: Their Structure and Function, DICP Ann.Pharmacother.(1990 ;24,1093-1097
8. Gouveia WA. Measuring and managing patient outcomes. Am J Hosp Pharm. 1992; 49:2157-8
9. MacKeigan LD, Pathak DS. Overview of health-related quality-of-life measures. Am J Hosp Pharm. 1992;49:2236-45
10. Penna RP. Pharmaceutical care: pharmacy's mission for the 1990s. Am J Hosp Pharm. 1990; 47:543-9
11. Galinsky RE, Nickman NA. Pharmacists and the mandate of pharmaceutical care. DICP Ann Pharmacother. 1991; 21:431-4.
12. Angaran DM. Quality assurance to quality improvement: measuring and monitoring pharmaceutical care. Am J Hosp Pharm. 1991; 48:1901-7.
13. Cipolle RJ, Strand LM, Morley PC. The patient care process. In: Pharmaceutical Care Practice. New York, NY: McGraw-Hill; 1998:121-75.
14. Shepherd MF. Clinical skills program pharmacotherapy series module 1. Reviewing patient medical charts. Bethesda, MD: American Society of Hospital Pharmacists; 1992.
15. Mason N, Shimp LA. Clinical skills program pharmacotherapy series module 2. Building a pharmacist's patient data base. Bethesda, MD: American Society of Hospital Pharmacists; 1993.
16. Mason N, Shimp LA. Clinical skills program-module 3. Constructing a patient's drug therapy problem list. Bethesda, MD: American Society of Hospital Pharmacists; 1993.
17. Jones WN, Campbell S. Clinical skills program pharmacotherapy series module 4. Designing and recommending a pharmacist's care plan. Bethesda, MD: American Society of Hospital Pharmacists; 1994.
18. Frye CB. Clinical skills program pharmacotherapy series module 5. Monitoring the pharmacist's care plan. Bethesda, MD: American Society of Hospital Pharmacists; 1994.
19. Smith WE, Benderev K. Levels of pharmaceutical care: a theoretical model. Am J Hosp Pharm. 1991;48:540-46.
20. Faus MJ. Pharmaceutical care as a response to a social need. ARS Pharmaceutica. 2000; 41:137-43
21. Rosemin Kassam, Karen B. Farris, Lisa Burbach, Carlyn I. Volume, Cheryl E. Cox, and Andrew Cave Pharmaceutical Care Research and Education Project: Pharmacists' Interventions J Am Pharm Assoc. 2001;41(3)
22. Douglas I. Jennings, Kelly R. Ragucci, Elinor C. Chumney, Andrea M. Wessell Impact of clinical pharmacist intervention on diabetes related quality-of-life in an ambulatory care clinic Pharmacy Practice 2007;5 (4):169-173.
23. Shahina PT, Revikumar KG, Krishnan R, Jaleel VA, Shini VK. The impact of pharmacist interventions on quality of life in patients with hypertension international journal of pharmaceutical sciences review and research 2010; 5;3:31
24. Saokaew S, Maphanta S, Thangsomboon P. Impact of pharmacist's interventions on cost of drug therapy in intensive care unit. Pharmacy Practice (Internet) 2009;7(2):81-87.
25. National Association of Pharmacy regulatory Authorities. (Last updated: 2001 -3-21; Cited: 2007- 2- Available at: <http://www.napra.org/docs/0/95/157/166/181.asp#10>