

Overview of pharmaceutical care and data collection

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ABSTRACT

The concept of pharmaceutical care is defined as the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient's quality of life. They stressed that the practice of pharmacy must restore what has been missing for years: a clear emphasis on the patient's welfare, a patient advocacy role with a clear ethical mandate to protect the patient from the harmful effects of . . . 'drug miss adventuring. Data Collection is an important aspect of any type of research study. Inaccurate data collection can impact the results of a study and ultimately lead to invalid results. Data collection methods for impact evaluation vary along a continuum. At the one end of this continuum are quantitative methods and at the other end of the continuum are Qualitative methods for data collection.

Keywords: Pharmaceutical care, Data collection.

1. INTRODUCTION

Pharmaceutical care is the necessary elements of the health care system. According to the definition of Heples & Strand (1981)^[1]. The concept of pharmaceutical care is the active participation of the patient in medication therapy decision, the co-operation of health care providers across disciplines and gives priority to the direct benefit to the patient. Throughout the 1990's much of the profession's activation turned to developing and studying the practice model of pharmaceutical care. Barodie says that the need for drug use controls system using the knowledge, understanding, judgments', procedures, skills, controls and ethics that sure optimal safety in the distribution and use of the medicines ^[2].

1.1. Definition

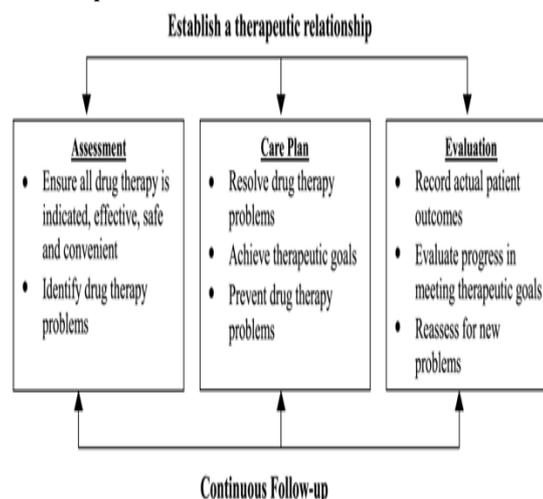
Pharmaceutical care is the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient's quality of life.

The outcomes are:

- Cure of diseases.
- Elimination or reduction of a patient symptomatology.
- Arresting or slowing of a disease process.
- Preventing a diseases or symptomatology.

Pharmaceutical care involves the process through which a pharmacist co operate with a

patient and other professionals in designing, implementing and monitoring a therapeutic plan that will produce specific therapeutic outcomes for the patient.^[1]



This in turn involves three major functions:

- Identifying potential and actual drug related problems.
- Resolving actual drug related problems.
- Preventing potential drug related problems.

Pharmaceutical care is the necessary elements of healthcare and should be integrated with other elements.

Pharmaceutical care is, however provided for the direct benefit of the patients and the pharmacist is responsible directly to the patients for the quality of that care.

The fundamental relationship is pharmaceutical care is mutually beneficial exchange in which the patients grants authority to the provider and the provider gives competence and commitment (accept responsibility) to the patients.

The fundamental goals, process and relationships of pharmaceutical care exist regardless of practice setting.

1.2. Adopting a new philosophy

Providing pharmaceutical care means adopting a philosophy of practice where pharmacists work with and for the patients to optimize the outcomes of medication therapy.

Because a patient does not ask the pharmacist about an issue or problem, it can't be assumed that one does not exist.

Pharmacist assesses the patient and the patient medications to understand the current status and act on the patient behalf.

Pharmacists use their knowledge and skills to benefit their patient by providing ongoing care overtime^[6].

Some basic benefits that are important to pharmaceutical care practioners are:

- Patient need and deserve excellent care.
- Pharmacists have more to offer patients than the safe delivery of medications. They can help bring about long term benefits to patients health.
- Pharmacist as individuals should provide personalized direct care to patients.

1.3. From products to people

The ASHP (American society of health system) the direct, responsible provision of medication related care for the purpose of achieving definite outcomes that improve a patient quality of life.

1.4. Process of counseling

The American pharmacist association principles of practice for pharmaceutical care describe five steps to the pharmaceutical care process. As a pharmacist carries out the activities required to perform each of these steps, he is practicing pharmaceutical care.^[3]

1.5. The American pharmacist association principles spell out five characteristics of pharmaceutical care

- A professional relationship must be establish and maintained.
- Patient specific medical information must be collected, organized, recorded and maintained.
- Patient specific medical information must be evaluated and a drug therapy plan developed mutually with the patient.
- The pharmacist must assure that the patient has all supplies information and knowledge necessary to carry out the drug therapy plan.
- The pharmacist must review, monitor and modify the therapeutic plan as necessary and appropriate in concern with the patient and health care team.

1.6. Response to problems in the system

The safety health care system noted that deficiencies in the current drug distribution and medication use system contribute to more than 44000 Americans dying per year, with medication errors contributing 7000 deaths to this number.

Two (2%) of those admitted to a hospital experience a preventable adverse drug event and each event results in 4700 additional cost to the health care system.

The recently released IOM report, preventing medications errors, an important safety issue in our health care system.

It estimates 1.5 million preventable adverse drug effects occur each year in the United States.

This report further estimates that at least a quotes of these harmful adverse effects are preventable.

1.7. Lowering the cost and improving outcomes

The IOM recommended the following actions among others to improve patient safety.

- Health professions performance standards and expectations should focus greater attention on patient safety.
- Health professions should, with their health care organization, continually improve patient safety.
- Health care organizations should implements proven medication safety practices.

2. Identifying drug therapy problems

Drug therapy problems are not a dispensing error or other accidental variations from what the prescriber intended the patient to receive. Such errors and variations are simply mistakes.

2.1 Seven drug therapy problems

The seven drug therapy problems that pharmaceutical care addresses are

- Unnecessary drug therapy
- Wrong drug (sometimes called ineffective drugs)
- Dosage too low
- Adverse drug reaction
- Dosage too high
- Inappropriate compliance (sometimes called adherence)
- Needs additional drug therapy

Drug therapy problems may be identified during steps 2 and 3, since this is where the pharmacist gathers patient specific data and critically examines the data to determine if a problem exists. In a pharmaceutical care model of practice, the pharmacist goes beyond counseling to assume responsibility for all patient drug related needs. An understanding of a patient's need is important because wherever one or more of a patient's drug related needs are not met, a drug therapy problem develops. So, if pharmaceutical care means finding and fixing drug therapy problems, by definition, a pharmacist will have to assume responsibility for ensuring that a patient's drug related needs are being met.

2.3. Five key drug – related needs of patients:

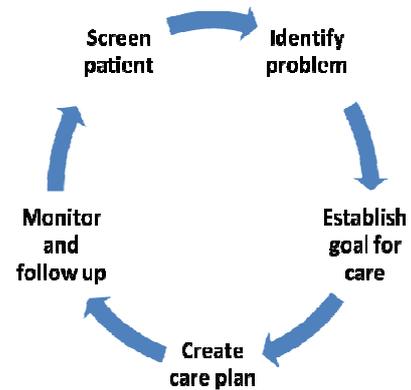
- Patient's need every medication they are taking to have an appropriate indication.
- Patient's need their drug therapy to be effective.
- Patient's need their drug therapy to be used.
- Patient's need to be able to comply with drug therapy and other aspects of their care plan.

Patient's need to receive all drug therapies necessary to resolve any untreated indications.

2.4. The pharmaceutical care cycle

In a traditional patient oriented practice the pharmacist provided education and other services that are intended to fix immediate problems or complaints.

There is rarely any organized attempt to find out if the problem has been solved or if new problems have arisen^[4].



The pharmaceutical care cycle never stops; at each follow up visit the pharmacist will ask a few screening questions to determine if the problem has been resolved or if a new problem has been arisen.

If the patient is stable and has no new problem nothing further is done until the next scheduled follow up.

If the goal has not been achieved, or if the patient subsequently develops a new drug therapy problem, the pharmaceutical care cycle begins again.

Each time the pharmacist detects a drug therapy problem it is a cue for him to act

2.5. Drug therapy problems / not medical problem

It's important to understand the difference between medical problems and drug therapy problems. A medical problem is a disease state that is a problem to attend physiology resulting in clinical evidence of damage. A drug therapy problem, however, is a problem a patient has that is either caused by or may be treated with a drug.

3. Patient data collection

Data collection is the first step towards creating a permanent record that can be used for ongoing care of the patient.

The initial interview establishes the professional relationship and initiates the patient's pharmacy record.

To collect an accurate, comprehensive patient history there must be a strong professional relationship between pharmacist and patient characterized by caring, trust, open communication, co-operation and mutual decision making.

Table -1: Causes of drug therapy problems

Drug therapy problem	Causes
Unnecessary drug therapy	➤ No medical indication
	➤ Addiction / recreational drug use
	➤ Non drug therapy more appropriate
	➤ Duplicate therapy
	➤ Treating avoidable adverse reaction
Wrong drug	➤ Dosage form in appropriate
	➤ Contra indication present
	➤ Condition refractory to drug
	➤ Drug not indicated for condition
	➤ More effective drug available
Dosage too low	➤ Wrong dose
	➤ Frequency in appropriate
	➤ Duration in appropriate
	➤ Incorrect dosage
	➤ Incorrect administration
Adverse drug reaction	➤ Drug interaction
	➤ Un safe drug for patient
	➤ Allergic reactions
	➤ Incorrect administration
	➤ Drug interaction
Dosage too high	➤ Undesirable effect
	➤ Dosage increased or decreased too quickly
	➤ Wrong dose
	➤ Frequency inappropriate
	➤ Distribution inappropriate
Inappropriate compliance	➤ Drug interaction
	➤ Drug product not available
	➤ Cannot afford drug product
	➤ Can't swallow or otherwise administer drug
	➤ Does not understand instruction
Need additional drug therapy	➤ Patient prefers not to take drug
	➤ Untreated condition
	➤ Synergistic drug therapy
	➤ Prophylactic therapy

The insightful pharmacist who focus on the patient asks good, open ended questions and listens attentively will be successful at developing these relationships.

3.1. S. O. A. P. NOTE

S = Subjective or summary statement by the client. Usually, this is a direct quote. The statement chosen should capture the theme of the session. If adding your own explanatory information, place within brackets ^[8] to make it clear that it is not a direct quote.

O = Objective data or information that matches the subjective statement. Descriptions may include body language and affect.

A = Assessment of the situation, the session, and the client, regardless of how obvious it might be based on the subjective and/or objective statements.

P = Plan for future clinical work. Should reflect interventions specified in treatment plan including homework assignments. Reflect follow-up needed or completed. ^[7]

3.1. Subjective

Subjective data such as the patient's medical history, chief complaints, history of patient illness, general health and activity status and social history are often supplied by the patient.

This information can't be measured directly and may not always be accurate or reproducible. Pharmacists are limited in their ability to conform the accuracy of data the patient provides.

3.2. Subjective and objective data

Subjective data, such as the patient's medical history, chief complaints, history of the present illness, general health and activity status and social history are often supplied by the patient. This information cannot be measured directly and may not always be accurate or reproducible; pharmacists are limited in their ability to confirm the accuracy of data the patient provided.

Objective data can be measured, are observable and are not inflamed by emotion or prejudice. Much objective information's is numerical.

Examples are vital sign and laboratory measures of substances such as blood lipids.

4. The patient interview

The patient interview is critical because it provides the pharmacist with necessary information used to identify drug therapy problem, make drug therapy decision and develop a care plan. Through the interview, the following subjective and objective data are collected:

- Demographic information, including patient's financial and insurance status.
- General health and activity status, including diet, exercise and social information.
- Chief complaints.
- History of present illness.
- Past medical history.
- Medication history including all prescription drug, samples, non prescription medications, herbals and nutritional products.
- Patient's thoughts or feelings and perceptions of their condition or diseases, including their desired outcome and preferred means used to achieve that outcome.

The information must be timely, accurate and complete; organized and recorded to assure that is readily retrievable; updated as necessary;

and maintained in a confident manner. Most information can be gathered by talking with and observing the patient, but the interview should be organized and professional. The interview must be confidential and private, and should be long enough to ensure that questions and answers can be fully developed.

The best time of conduct a patient interview is as soon as a problem is suspected or at the time when the patient requests the pharmacist assistance. If this is not convenient for either the patient or the pharmacist, they can scheduled an interview later, to take place in the pharmacy, over the telephone, via e-mail or even in the patient home. Another option is to perform a rapid screening interview immediately and then follow-up later.

4.1. Tips for good interviews

To ensure an interview is effective and runs smoothly, pharmacist should:

- Greet the patient
- Explain the interviewing process
- Direct the patient to the consultation area if you have one.
- Introduce the interview process in more detail.
- Indicate how long the interview will last.
- Use words and manners that convey professionalism.
- Pay attention to body language.
- Ask open ended questions.
- Give patient adequate time for response.
- Use good listening skills.
- Use a list of questions as a prompt.
- Ask the patient to restate any unclear information.
- Communicate at the appropriate educational level and avoid medical jargon.

5. Role of pharmacist in pharmaceutical care

Pharmacists are active members of the patient care team, responsible for overseeing the optimal, safe and cost effective medication therapy management using evidenced-based medicine to improve overall patient care in all patients:

- Each inpatient unit has a pharmacist dedicated to performing patient care activities each day.

- Pharmacists participate and maintain a significant role in multidisciplinary patient care rounds.
- Pharmacists are involved in all processes of care - including product selection, dosing, route selection, regimen review, ensuring safe medication administration, monitoring for desired therapeutic outcomes, identifying and avoiding medication errors and adverse drug events, etc.
- Pharmacists review all non-emergent medications orders prior to the first dose being administered to a patient.
- Pharmacists include appropriate indications for each patient medication order during the order entry/transcription process to eliminate nursing and physician confusion regarding the use of the medication.
- Pharmacists clarify all vague medication orders with the prescriber in an effort to facilitate safe and effective administration of patient medications.
- A pharmacist interviews all patients upon admission to the hospital to obtain a complete list of the patient's home medications and to make sure the medications are properly continued throughout their hospital stay.
- A pharmacist is also involved in the education of patients about new medications and in the education of all patients about their discharge medications^[5].

6. CONCLUSION

Introduce in all countries of the world, the pharmaceutical care philosophy and related working methods are a pivotal strategy in ensuring the appropriate uses of medicine in a mutually beneficial way. Pharmaceutical care helps to achieve the best possible outcome from the prescribed medication, therapy and improving quality of life. By increasing the cost efficiency of medicine use pharmaceutical care will contribute to more efficient and effective consumption of existing recourses.

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