

Pharmaceutical Care and Disease State Management

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I. INTRODUCTION

A. *Practice of pharmacy.* The practice of pharmacy embraces a variety of settings, patient populations, and specialist and generalist pharmacists. Central to the practice of pharmacy, however, is the provision of clinical services directly to, and for the benefit of, patients.

B. *Definition.* The term pharmaceutical care (sometimes called pharmacist care) describes specific activities and services through which an individual pharmacist “cooperates with a patient and other professionals in designing, implementing and monitoring a therapeutic plan that will produce specific therapeutic outcomes for the patient.”

C. *Pharmaceutical care* is increasingly being augmented by activities that may be described as focused areas of practice, wherein the pharmacist is engaged in:

1. Drug monitoring, for a specific drug or for therapy for a specific disease state
2. Disease monitoring, for a specific disease state
3. Drug therapy and disease management /collaborative practice, by protocol
4. A pharmacist may incorporate one or more areas of focused practice into a general practice of pharmacy or may specialize within a narrow field of practice.

Examples of highly specialized practice include pharmacist -directed diabetes management clinics, hyper tension clinics, anticoagulation clinics, and hospital -based infectious disease services.

II. SCOPE OF PRACTICE WITHIN PHARMACEUTICAL CARE

A. *Role.* Pharmaceutical care has evolved from an emphasis on prevention of drug related problems (basically drug management) to the expanded roles of pharmacists in the triage of patients, treatment of routine acute illnesses, management of chronic diseases, and primary disease prevention.

B. *Function.* The provision of pharmaceutical care does not imply that the pharmacist is no longer responsible for dispensing functions. In many instances, however, implementation of pharmaceutical care services necessitates a redesign of the professional work flow, with assignment of technical functions to technical personnel under the direct supervision and responsibility of the pharmacist.

III. UNIQUENESS OF PHARMACEUTICAL CARE.

Provision of pharmaceutical care overlaps somewhat with other aspects of pharmacy practice (Table 20-1). However, pharmaceutical care is not the same as these other areas, which include

A. Clinical pharmacy

B. Patient counseling

C. Pharmaceutical services; when the activities of a pharmacy or pharmacy department are performed for “faceless” patients or charts, the activity is one of pharmacy service, not pharmaceutical care (i.e., chart or drug profile reviews without input from the patient or caregiver is not pharmaceutical care).

IV. ESSENTIAL COMPONENTS OF PHARMACEUTICAL CARE

A. *Pharmacist-patient relationship.* The importance of putting a face and personality with the clinical picture is a key component of pharmaceutical care. A pharmacist can have a caring relationship with a patient but not with a chart or drug profile. A pharmacist cannot have empathy for words on a page or on a computer screen. Pharmaceutical care is based on a collaborative effort between pharmacist and patient.

B. *Pharmacist’s workup of drug therapy (PWDT).* The provision of pharmaceutical care is often centered around a process described as the PWDT. The PWDT contains the thought processes necessary for pharmaceutical care. The PWDT is too lengthy to be used as the chart note for pharmacist interventions; an abbreviated format known as a FARM (findings, assessment, resolutions/ recommendation, and monitoring) note or a SOAP (subjective, objective, assessment, and plan) note is more appropriate for a chart notation (Table 20-2). Nonetheless, it is helpful to the pharmacy student, or to a pharmacist entering a new field of pharmacy practice, to write out complete PWDTs for a variety of patients as training or orientation exercises. Although the forms and methods used for the PWDT may vary, the components are essentially the same.

1. Data collection. Collect, synthesize, and interpret relevant information, such as:

a. Patient demographic data: age, race, sex

b. Pertinent medical information

(1) Current and past medical history

(2) Family history

(3) Social history

(4) Dietary history

(5) Medication history (prescription, OTC, social drugs; allergies)

(6) Physical findings (e.g., weight, height, blood pressure, edema)

(7) Laboratory or other test results (e.g., serum drug levels, potassium level, serum creatinine as relevant to drug therapy)

c. Patient complaints, symptoms, signs

2. Develop or identify the CORE pharmacotherapy plan³

a. **C = condition or patient need.** Note that this may include nonmedical conditions or needs and is thus not a reiteration of the current medical problems.

b. O = outcome(s) desired for the conditions or needs.

(1) *Patient outcomes* (POEMS: patient-oriented evidence that matters) . There are generally five categories of patient outcomes:

(a) Mortality

(b) Morbidity

(i) Related to disease process

(ii) Related to medication/ treatment plan

(c) Behavior

(d) Economic

(e) Quality of life

(2) *Therapeutic end points* (surrogate markers; DOES: disease-oriented evidence)

(a) A therapeutic end point represents the pharmacological or therapeutic effect that is expected, ultimately, to achieve the desired outcome(s)..

(b) More than one end point is usually needed to achieve an outcome—for example, both near-normal glycemic control and normalization of blood pressure are necessary to significantly reduce the risk of end-stage renal disease.

c. R = regimen to achieve the desired outcome(s)

(1) *Therapeutic regimens*

(a) Existing therapy. For example, a pharmacist is asked to work with a patient for whom one or more agents are already prescribed for the disease process or problem.

(i) Evaluate the current drug regimen for its potential to achieve desired end points and to meet the patient 's individual needs.

(ii) Revise the regimen as appropriate.

(b) Initial therapy. A pharmacist is asked to work with a patient whose condition was newly diagnosed or is asked to develop an initial treatment plan.

(i) List the therapeutic options (drug and regimen) most likely to achieve the desired end points.

(ii) Select the option best suited for the patient's medical, physical (e.g., handicap), psychosocial (e.g. , support system) , mental (motivation, denial , fear) , and financial well-being.

2) Goal setting and behavior regimens. The patient is an essential partner for setting and achieving intermediate- and short - term goals and the behavior changes necessary to achieve those goals. To construct effective behavior regimens, the pharmacist practitioner must incorporate the following concepts:

(a) Identify the type of goal being set, such as the following:

- (i) Start a new positive action—for example, start an exercise program.
- (i i) Increase the frequency or intensity of a positive action—for example, drink two more cups of water daily.
- (i i i) Stop or decrease the frequency or intensity of a destructive action—for example, stop smoking.
- (iv) Continue an action that is “perfect ”—for example, continue to exercise 30 min a day, every day.

(b) State the behavior goal in terms that are clear, specific, and reasonable.

- (i) Set time limits—for example, “Over the next 3 weeks. ”
- (i i) Target a specification—for example, “ I will walk. ”
- (i i i) Set measures and frequency—for example, “six blocks, three days a week.”
- (iv) Divide a big task into several small ones, making each change small relative to the current patient behavior . The old saying “ I t 's hard by the yard, but a cinch by the inch” is t rue.

d. E = evaluation parameters to assess outcome achievement.

(1) Efficacy parameters. What should be monitored, how often, and by whom to ensure that therapeutic end points or patient outcomes are being achieved.

(2) Toxicity parameters. What should be monitored, how often, and by who to ensure that adverse effects, allergic reactions, or toxicity is not occurring.

3. Identify the PRIME pharmacotherapy problems or indications for pharmacist interventions,

4. Sometimes referred to as drug-related problems. 5 The goal is to identify actual or potential problems that could compromise the desired patient outcomes (Table 20-3) .

Table 20-3. PRIME Pharmacotherapy Problem Types

P = Pharmaceutical-based problems

- Patient not receiving a prescribed drug, device, or intervention
- Routine monitoring (labs, screenings, exams) missing

R = Risks to patient

- Adverse drug reaction/drug allergy
- Potential for overlap of adverse effects (must be kept in mind as part of the workup or evaluation of any new complaint or problem reported by patient)

I = Interactions

- Drug-drug, drug-disease, drug-food interactions

M = Mismatch between medications and condition or patient needs

- No indication for a current drug, device, or intervention
- Indication for a drug, device, or intervention but none prescribed

E = Efficacy issues

- Too much of the correct drug
- Too little of the correct drug
- Wrong drug, device, intervention, or regimen prescribed; more efficacious choice possible.

PRIME

a. P = pharmaceutical -based problems

- (1) Patient not receiving a prescribed drug, device, or intervention
- (2) Routine monitoring (labs, screenings, and exams) missing

b. R = risks to patient

- (1) Adverse drug reaction/drug allergy
- (2) Potential for overlap of adverse effects; must be kept in mind as part of the workup or evaluation of any new complaint or problem reported by patient

c. I = interactions

- (1) Drug-drug, drug-disease, drug-food, drug-lab interactions

d. M = mismatch between medications and condition or patient needs

- (1) No indication for a current drug, device, or intervention
- (2) Indication for a drug, device, or intervention but none prescribed
- (3) Perceived or actual barriers to implementation of medication or behavior regimen, such as financial constraints; lifestyle issues; and intellectual, physical, or emotional limitations.

e. E = efficacy issues

- (1) Too much of the correct drug
- (2) Too little of the correct drug
- (3) Wrong drug, device, intervention, or regimen prescribed or more efficacious choice possible

C. Documentation of pharmaceutical care.

Formulate a FARM note or SOAP note

To describe and document the interventions intended or provided by the pharmacist . Some healthcare facilities may specify one format over the other; pharmacists need to become proficient in each.

1. Format of a FARM note

a. **F = findings.** The patient -specific information that gives a basis for, or leads to the recognition of a pharmacotherapy problem or indication for pharmacist intervention. Within the FARM format , findings include subjective and objective information about the patient .

b. **A = assessment** .The pharmacist 's evaluation of the findings, including statements of :

(1) Any additional information that is needed to best assess the problem to make recommendations

(2) The severity, priority, or urgency of the problem

(3) The short - term and long- term goals of the intervention proposed or provided.

(a) Examples of short - term goals: eliminate symptoms, lower blood pressure (BP) to 140/90 mm Hg within 6 weeks, manage acute asthma flare up without requiring hospitalization

(b) Examples of long- term goals: prevent recurrence, maintain BP at <130/80 mmHg, prevent progression of diabetic nerve disease

c. **R = resolution** (including prevention) . The intervention plan includes actual or proposed actions by the pharmacist or recommendations to other healthcare professionals. The rationale for choosing a specific intervention should be stated.

Intervention options may include the following:

(1) Observing, reassessing, or following—no intervention necessary at this time. If no action was taken or recommended, the FARM note serves as a record of the event and should constitute part of the patient 's pharmacy chart or database.

(2) Counseling or educating the patient or caregiver

3) Making recommendations to the patient or caregiver

(4) Informing the prescriber

(5) Making recommendations to the prescriber

(6) Withholding medication or advising against use

d. **M = monitoring and follow-up.** The parameters and timing of follow-up monitoring to assess the efficacy, safety, and outcome of the intervention. This portion of the

FARM note should include the following:

(1) The parameter to be followed (e.g. , pain, depressed mood, serum potassium level)

(2) The intent of the monitoring (e.g. , efficacy, toxicity, adverse event)

(3) How the parameter will be monitored (e.g., patient interview, serum drug level , physical examination)

(4) Frequency of monitoring (e.g. , weekly, monthly)

(5) Duration of monitoring (e.g. , until resolved, while on antibiotic, until resolved then monthly for 1 year)

(6) Anticipated or desired finding (e.g. , no pain, glycemia, healing of lesion)

(7) Decision point to alter therapy when or if outcome is not achieved (e.g. , pain still present after 3 days, mild hypoglycemia more than two times a week)