If there is no documentation, then it didn’t happen! This philosophy is the standard in all health care settings as physicians, nurses, respiratory therapists, physical therapists, social workers, and other health care providers generate and maintain detailed notes regarding the patient’s situation and their efforts to achieve the best possible outcomes for the patient. Documentation chronologically outlines the care the patient received and serves as a form of communication among health care providers, so that each practitioner involved knows what evaluation has occurred, what the plan for the patient’s treatment is, and who will provide it. Furthermore, third-party payers require reasonable documentation from practitioners that assures that the services provided are consistent with the insurance coverage. General principles for documentation include:

- A complete and legible record.
- Documentation for each encounter with a rationale for the encounter, physical findings, prior test results, assessment, clinical impression (or diagnosis) and plan for care.
- Identified health risk factors.
- The patient’s progress, response to and changes in treatment, and revision of the original diagnosis/assessment.

Much of this documentation is derived from a systematic patient care process of evaluation that is standardized within each discipline. For example, physicians are taught to perform a history and
physical examination based upon a standardized review of body systems and to document their results using a universally accepted, standardized, systematic process.

Several evaluation/documentation systems have been suggested for health care professionals. More than 30 years ago, the use of a Problem-Oriented Medical Record was proposed, and most physicians, nurse practitioners, physician associates, and other health care practitioners have been taught to write progress notes using the Subjective, Objective, Assessment, Plan (SOAP) format. Institutional consultant notes often use an abbreviated version of the SOAP format. This abbreviated version usually includes Findings (i.e., subjective and objective information), Assessment (or Impression), and Diagnosis (or Recommendations). Other variations of this standard exist, such as SOAPER, which includes Education and Return instructions; SOAPIE, which includes Intervention and Evaluation; and SNOCAMP, which stands for Subjective, Nature of presenting problem, Objective, Counseling, Assessment, Medical decision making, and Plan. Because of the documentation guidelines proposed by the Centers for Medicare & Medicaid Services (formerly the Health Care Financing Administration [HCFA]) for release in fiscal year 2001, older formats such as SOAP will no longer meet minimal criteria for appropriate documentation in most cases.

Historically, pharmacy has not had a corresponding standard approach to the evaluation and documentation of the patient’s pharmacotherapy that is applicable to all types of pharmacy practice settings. Thus, pharmacy has not been as active as other disciplines in documenting its contributions to patient care.

**IMPORTANCE OF DOCUMENTATION**

Pharmaceutical care uses a process through which a pharmacist cooperates with a patient and other health care professionals in designing, implementing, and monitoring a therapeutic plan that will produce specific therapeutic outcomes for the patient. This process involves three major functions:

1. Identifying potential and actual drug-related problems
2. Resolving actual drug-related problems
3. Preventing potential drug-related problems

These functions aid in the provision of patient care through the identification of medication-related problems, development of a pharmacotherapeutic plan to address the problems, and the ultimate resolution or prevention of those problems.

As described in Chapter 1, a systematic approach is used in this casebook to identify and resolve the medication-related problems of patients. The steps can be summarized as follows:

1. Identification of real or potential medication-related problems
2. Determination of desired therapeutic outcomes and therapeutic endpoints
3. Determination of therapeutic alternatives
4. Design of an optimal pharmacotherapeutic plan for the patient
5. Identification of parameters to evaluate the outcome
6. Provision of patient counseling
7. Communication and implementation of the pharmacotherapeutic plan

Step 7 is crucial; the tenets of pharmaceutical care suggest that pharmacists should document, at the very least, the actual or potential medication-related problems identified, as well as the associated interventions that they desire to implement or have implemented. The pharmacist must adequately communicate his or her recommendations and actions to non-pharmacy health care practitioners (e.g., physicians, nurses), the patient or caregiver (e.g., parents), or other pharmacists. The goal is to provide a clear, concise record of the actual/potential problem, the thought process that led the pharmacist to select an intervention, and the intervention itself. Additionally, the ability to receive remuneration for services provided necessitates an acceptable documentation strategy.

TRADITIONAL DOCUMENTATION FORMAT: SOAP NOTES

In the SOAP note format, the subjective (S) and objective (O) data are recorded and then assessed (A) to formulate a plan (P). Subjective data include patient symptoms, things that may be observed about the patient, or information obtained about the patient. By its nature, subjective information is descriptive and generally cannot be confirmed by diagnostic tests or procedures. Much of the subjective information is obtained by speaking with the patient while obtaining the medical history, as described in Chapter 1 (chief complaint, history of present illness, past medical history, family history, social history, medications, allergies, and review of systems). Important subjective information may also be obtained by direct interview with the patient after the initial medical history has been performed (e.g., a description of an adverse drug effect, rating of pain severity using standard scales).

A primary source of objective information (O) is the physical examination. Other relevant objective information includes laboratory values, serum drug concentrations (along with the target therapeutic range for each level), and the results of other diagnostic tests (e.g., ECG, x-rays, culture and sensitivity tests). Risk factors that may predispose the patient to a particular problem should also be considered for inclusion. The communication note should include only the pertinent positive and negative findings. Pertinent negative findings are signs and symptoms of the disease or problem that are not present in the particular patient being evaluated.

The assessment (A) section outlines what the practitioner thinks the patient’s problem is, based upon the subjective and objective information acquired. This assessment often takes the form of a diagnosis or differential diagnosis. This portion of the SOAP note should include all of the reasons for the clinician’s assessment. This helps other health care providers reading the note to understand how the clinician arrived at his or her particular assessment of the problem.

The plan (P) may include ordering additional diagnostic tests or initiating, revising, or discontinuing treatment. If the plan includes changes in pharmacotherapy, the rationale for the specific changes recommended should be described. The drug, dose, dosage form, schedule, route of administration, and duration of therapy should be included. The plan should be directed toward achieving a specific, measurable, goal or endpoint, which should be clearly stated in the note. The
plan should also outline the efficacy and toxicity parameters that will be used to determine whether
the desired therapeutic outcome is being achieved and to detect or prevent drug-related adverse
events. Ideally, information about the therapy that should be communicated to the patient should
also be included in the plan. The plan should be reviewed and referred to in the note as often as nec-
essary.

AN ALTERNATIVE APPROACH TO DOCUMENTING
DRUG-RELATED PROBLEMS AND PLANS

There is a pharmacist equivalent of a physician’s progress note in a systematized approach for
the construction and maintenance of a record reflecting the pharmacist’s contributions to care.5 This
process includes provisions for the identification and assessment of actual or potential medica-
tion-related problems, description of a therapeutic plan, and appropriate follow-up monitoring of
the problems. Although there is no current uniform documentation system for the profession of
pharmacy, students are encouraged to try this system as they learn to document patient interven-
tions and compare its effectiveness with the SOAP format. In this system, problems that have been
identified are addressed systematically in a pharmacist’s note under the headings 

FINDINGS,
ASSESSMENT,
RESOLUTION,
AND MONITORING. The sections of the pharmacist’s note can be easily recalled with
the mnemonic FARM.

Identification of Drug-Related Problems

The first step in the construction of a FARM note is to clearly state the nature of the drug-related
problem(s). Each problem in the FARM note should be addressed separately and assigned a sequen-
tial number. Understanding the types of problems that may occur facilitates identification of
pharmacotherapy problems. Eight types of medication-related problems have been identified (see
Chapter 1):6

1. Untreated indications
2. Improper drug selection
3. Subtherapeutic dosage
4. Failure to receive drugs
5. Overdosage
6. Adverse drug events
7. Drug interactions
8. Drug use without indication

Use of a classification system such as this for the various types of medication-related problems
offers at least two advantages. First, it presents a framework, applicable in any practice setting, to
assure that the pharmacist has considered each possible type of problem. Second, categorization al-
 lows optimal data analysis and retrieval capabilities. Thus, problems as well as the interventions to
resolve them can be stored in a standardized format in a computer. When later analysis of this informa-
tion is needed, such as determining how much money was saved through an intervention, how
outcomes were improved by the pharmacist, or how many problems of a certain type have occurred, the problems and interventions can be reviewed by groups rather than individually.

**Documentation of Findings**

Each statement of a drug-related problem should be followed by documentation of the pertinent findings (F) indicating that the problem may (potential) or does (actual) exist. Information included in this section should include a summary of the pertinent information obtained after collection and thorough assessment of the available patient information. Demographic data that may be reported include a patient identifier (name, initials, or medical record number), age, race (if pertinent), and gender. As noted earlier under the section on SOAP notes, medical information included in the note should include both subjective and objective findings that indicate a drug-related problem.

**Assessment of Problems**

The assessment (A) section of the FARM note includes the pharmacist’s evaluation of the current situation (i.e., the nature, extent, type, and clinical significance of the problem). This part of the note should delineate the thought process that led to the conclusion that a problem did or did not exist and that an active intervention either was or was not necessary. If additional information is required to satisfactorily assess the problem and make recommendations, this data should be stated along with its source (e.g., the patient, pharmacist, physician). The severity or urgency of the problem should be indicated by stating whether the interventions that follow should be made immediately or within one day, one week, one month, or longer. The desired therapeutic endpoint or outcome should be stated. This may include both short-term goals (e.g., lower blood pressure to <140/90 mm Hg in a patient with primary hypertension [therapeutic endpoint]) and long-term goals (e.g., prevent cardiovascular complications in that patient [therapeutic outcome]).

**Problem Resolution**

The resolution (R) section should reflect the actions proposed (or already performed) to resolve the drug-related problem based upon the preceding analysis. The note should convey that, after consideration of all appropriate therapeutic options, the option(s) considered to be the most beneficial was either carried out or suggested to someone else (e.g., the physician, patient, or caregiver). Recommendations may include nonpharmacologic therapy, such as dietary modification or assisting devices (e.g., canes, walkers); the rationale for this method of treatment should be described. If pharmacotherapy is recommended, a specific drug, dose, route, schedule, and duration of therapy should be specified. It is not sufficient to simply provide a list of choices for the prescriber. Importantly, the rationale for selecting the particular regimen(s) should be stated. It is reasonable to include alternative regimens that would be satisfactory if the patient is unable to complete treatment with the initial regimen because of adverse effects, allergy, cost, or other reasons. If patient counseling is recommended, the information that will be included in the counseling session should be included. Conversely, if certain types of information will be withheld from the patient, the reasons for doing so should be stated. If no action is recommended or was taken, that should be documented as...
well. In this situation, the note serves as a record of the pharmacist’s involvement in the patient’s care. The pharmacist then has documentation that patient care activities were performed.

**Monitoring for End Points and Outcomes**

It is not enough, however, to only provide a clear, concise record of the nature of a problem, the assessment that led to the conclusion that a problem exists, and the selection of a plan for resolution of the problem. In the spirit of pharmaceutical care, the patient must not be abandoned after an intervention has been made. A plan for follow-up monitoring (M) of the patient must be documented and adequately implemented. This process is likely to include questioning the patient, gathering laboratory data, and performing the ongoing physical assessments necessary to determine the effect of the plan that was implemented to assure that it results in an optimal outcome for the patient.

Monitoring parameters to assess efficacy generally include improvement in or resolution of the signs, symptoms, and laboratory abnormalities that were initially assessed. The monitoring parameters used to detect or prevent adverse reactions are determined by the most common and most serious events known to be associated with the therapeutic intervention. Potential adverse reactions should be precisely described along with the method of monitoring. For example, rather than stating “monitor for GI complaints,” the recommendation may be to “question the patient about the presence of dyspepsia, diarrhea, or constipation.” The frequency, duration, and target endpoint for each monitoring parameter should be identified. The points at which changes in the plan may be warranted should be included. For example, in the case of a patient with dyslipidemia, one may recommend to “obtain fasting HDL, LDL, total cholesterol, and triglycerides after 3 months of treatment. If the goal LDL of <100 mg/dL is not achieved with good compliance at 3 months, increase simvastatin to 40 mg po QD. If goal LDL is achieved, maintain simvastatin 20 mg po QD and repeat fasting lipoprotein profile annually.”

**SUMMARY**

A SOAP or FARM progress note constructed in the manner described identifies each drug-related problem and states the pharmacist’s Findings observed, an Assessment of the findings, the actual or proposed Resolution of the problem based upon the analysis, and the parameters and timing of follow-up Monitoring. Either form of note should provide a clear, concise record of process, activity, and projected follow-up. When written for each medication-related problem, these notes should provide data in a standardized, logical system. In particular, FARM notes provide a convenient format for progress notes for all pharmacists, applicable to any practice setting.

**SAMPLE CASE PRESENTATION**

*The following case presentation illustrates how such a system can be used in practice.*

Margaret Jones is a 62-year-old woman seen on rounds Monday morning. She was admitted the previous evening with complaints of shortness of breath, fever, and cough productive of greenish sputum. She has a history of type 2 diabetes, mild CHF, and is S/P MI. At home, she is maintained
The physical exam on admission revealed the following findings:

**VS**
- BP 168/88, P 88, RR 20 and labored, $T_{\text{max}}$ 103°F/39.4°C

**Cor**
- S₃ gallop, PMI in the 6th intercostal space 3 cm distal to the midclavicular line

**Chest**
- Crackles and rales on the left; e-to-a changes and increased tactile fremitus over the left lower and middle lung fields

**Ext**
- 2+ pedal edema

**HEENT, GI, GU, Skin, Neuro**
- Unremarkable

**Labs on admission were unremarkable with the following exceptions:**
- INR 3.5
- Glu 156 mg/dL
- HbA₁c 8.3%
- Digoxin level 1.0 ng/mL
- WBC 16.0 $\times$ 10³/mm³ with 12% bands and 0% eosinophils

**Sputum Gram stain**
- Gram-positive cocci in pairs

**Chest x-ray**
- Left lower lobe consolidation with some diffuse patchiness in the left lower and middle lobes. Enlarged cardiac silhouette.

**Assessment**
- Probable community-acquired pneumonia (CAP)
- CHF
- Type 2 DM not optimally controlled

**Meds on admission Sunday night**
- Acetaminophen 325 mg po q 6 h PRN temp >101°F/38.3°C
- Gatifloxacin 500 mg po q AM for presumed CAP
- Azithromycin 500 mg po q AM for presumed CAP
- Metformin 500 mg po BID for type 2 DM
- Glyburide 10 mg po q AM for type 2 DM
Digoxin 0.125 mg po q AM for CHF  
Furosemide 80 mg po BID for CHF  
Warfarin 5 mg po q AM for S/P MI  
Aspirin 80 mg po QD for S/P MI  
Metoprolol XL 100 mg po q AM for S/P MI  
Famotidine 20 mg po BID for ulcer prophylaxis

**Construction of a SOAP or FARM Note**

*Note: The Subjective and Objective findings of the SOAP note are combined into Findings for a FARM note. The Plan of the SOAP note is split into Recommendations/Resolution and Monitoring/Follow-up in the FARM note.*

**Subjective**

Patient complains of SOB, fever, and cough with green sputum.

**Objective**

BP 168/88; P 88; T 103°F/39.4°C; R 20 and labored. Diminished breath sounds, e-to-a changes and increased tactile fremitus over the left lower and middle lung fields, 2+ pedal edema. Sputum Gram stain shows gram-positive cocci in pairs. WBC 16.0 × 10^3/mm^3 with 12% bands, INR 3.5. Blood glucose and HbA1c elevated. Chest x-ray indicates cardiomegaly and left lobe infiltrate.

**Meds on Admission**

Acetaminophen 325 mg PO q 6 h PRN temp >101°F/38.3°C  
Gatifloxacin 500 mg po q AM + azithromycin 500 mg po q AM for presumed community-acquired pneumonia  
Metformin 500 mg po BID + glyburide 10 mg po q AM for type 2 diabetes  
Digoxin 0.125 mg po q AM + furosemide 80 mg po BID for CHF  
Warfarin 5 mg po q AM + aspirin 80 mg po QD + metoprolol XL 100 mg po q AM S/P MI  
Famotidine 20 mg po BID for ulcer prophylaxis

**Assessment**

1. Community-acquired pneumonia: probably pneumococcal in origin. Azithromycin appears to be unnecessary without indication for atypical pneumonia.

2. Hypertension: currently untreated. BP of 168/88 would usually be classified as isolated systolic HTN, but present measurements may reflect infection and fever. The heart rate of 88 while on metoprolol and digoxin is a relative tachycardia, assuming that in the baseline environment the drugs would achieve a HR of 60 to 80 bpm.

3. CHF: Pedal edema and cardiomegaly on chest x-ray. Receiving no ACE inhibitor.
4. Anticoagulation: INR above target range of 2.0 to 3.0. Identify and remove causes or reduce warfarin dose.

5. Type 2 diabetes mellitus: HbA₁c above goal of <7%. Not receiving ACE inhibitor for renal protective effects.

6. Lipid panel: no recent results available; goal LDL is <100 mg/dL in patient with existing CAD.

7. Adverse effects: although metoprolol is a β₁-selective b-blocker, consider that its β₂-blocking properties (usually at higher doses) may contribute to SOB due to bronchoconstriction, negative inotropic effects, or both.

8. Medication without indication: There appears to be no need for famotidine in this situation.

**Plan**

**RECOMMENDATIONS/RESOLUTION**

1. Continue acetaminophen 325 mg po q 6 h PRN temp 101°F/38.3°C

2. Change gatifloxacin to 400 mg po QD, the dose indicated for community-acquired pneumonia (does not come in 500-mg strength); discontinue azithromycin.

3. D/C metformin during hospital stay, in light of potential hypoxia/hypoperfusion during acute respiratory distress.

4. Change glyburide 10 mg to glipizide XL 10 mg po QD.

5. Continue digoxin 0.125 mg po q AM.

6. Give warfarin 2.5 today and then resume 5 mg po QD; dose to be adjusted as needed based on INR.

7. Continue aspirin 80 mg po q AM.

8. Increase furosemide to 100 mg po BID because of persistent pedal edema.

9. Hold metoprolol until cause of SOB is identified.

10. D/C famotidine because of lack of indication in this patient.

11. Start enalapril 10 mg po QD to reduce mortality from CHF, provide protection from diabetic-associated nephropathy, and help control HTN.

12. Obtain fasting lipid panel and start medical nutrition therapy and pravastatin 10 mg po q AM if LDL is above 100 mg/dL.

13. Provide nasal O₂ if appropriate for SOB.
14. Obtain admission weight, and then measure daily weight. Obtain prior outpatient weight to serve as baseline if available.

15. Diet: 3 meals with bedtime snack, with no concentrated carbohydrate (CHO) choices. Limit CHO intake per meal to 60 g; snacks 15–20 g CHO. No added salt.

16. Check blood glucose AC and HS.

17. Assess adherence with therapy.

18. Supplement glyburide with insulin lispro for excessive premeal BG, based on an estimated insulin sensitivity of 1 unit per 30 to 40 mg/dL:

If blood glucose: Give insulin lispro:
>180 mg/dL 2 units
>220 3 units
>260 4 units
>300 5 units
>340 6 units, and test for urinary ketones.

Call MD if ketones moderate or large.

19. Anticipate reinstitution of metformin upon resolution of respiratory distress, peripheral edema, clearing of lung fields, and verification of SCr <1.4 mg/dL.

**MONITORING/FOLLOW-UP**

1. Obtain admission digoxin level and repeat q 5 days while taking gatifloxacin.

2. Check baseline electrolytes (K, Na, Ca, Mg levels in light of unopposed furosemide therapy of unknown duration, with digoxin), serum creatinine, and fasting lipid panel.

3. Monitor WBC and INR q AM.

4. Monitor blood glucose AC and hs.

5. Monitor Q shift: vital signs, peripheral edema, lung sounds, labored breathing, sputum production (quality & quantify), dehydration, O₂ saturation.

**REFERENCES**


