

## NONPRESCRIPTION MEDICATIONS AND SELF-CARE

### Integrating an Elective Self-Care Experience With a Required Advanced Pharmacy Practice Community Experience

Jan K. Hastings, PharmD, Schwanda K. Flowers, PharmD, and Daniel C. Spadaro, PharmD

College of Pharmacy, University of Arkansas for Medical Sciences

Submitted July 21, 2006; accepted August 15, 2006; published December 15, 2006.

#### ABSTRACT

The development, planning, implementation, and integration of a nonprescription medication (self-care) experience into an existing community advanced pharmacy practice experience (APPE) at the University of Arkansas for Medical Sciences College of Pharmacy is described. The APPE will provide enhanced self-care education and skill development for students in response to the new Accreditation Council for Pharmacy Education Standards and Guidelines for the Professional Program in Pharmacy Leading to the Doctor of Pharmacy Degree, which will take effect in July 2007. A description of the *Advanced Community Pharmacy Over-The-Counter* APPE is provided along with insights gleaned from the faculty involved.

**Keywords:** self-care, nonprescription drugs, advanced pharmacy practice experience, community practice

#### INTRODUCTION

In 1989, the University of Arkansas for Medical Sciences (UAMS) College of Pharmacy (COP) converted to the doctor of pharmacy (PharmD) degree program as its first professional degree program. At that time, the incoming class totaled 75 students and adequately provided for pharmacist manpower needs within the state. However, since that time, the demand for entry-level pharmacists in Arkansas has increased, and as the only college of pharmacy currently in the state, the class size has steadily increased. The College's Class of 2010 has 120 students.

Presently, the Class of 2007 has 80 students and each will complete eight 4-week advanced pharmacy practice experiences (APPEs). Of these 8 APPEs, students are required to complete 4 direct patient care experiences, 2 indirect patient care experiences, and 2 elective experiences. To assure that these students receive the APPEs required by the new Accreditation Council for Pharmacy Education Standards and Guidelines for the Professional Program in Pharmacy Leading to the Doctor of Pharmacy Degree,<sup>1</sup> an additional month of direct patient care APPEs was added. The majority of Arkansas is rural and more than 60% of the COP graduates' first employment has been within a community setting.<sup>2</sup> Therefore, students must complete at least 1 community APPE.

The increase in incoming students coupled with the increase in required hours by the new accreditation guidelines necessitates an expansion of available APPEs. As with all colleges of pharmacy, demands on faculty members' time are great, while recruiting and retaining faculty members is becoming more difficult. Therefore, the College is exploring ways to better utilize volunteer faculty preceptors to teach APPEs.

#### APPE Background

One UAMS COP faculty member taught the self-care (nonprescription medicine) course and offered an APPE in advanced self-care to approximately a dozen students each year. This APPE counted as an elective course and was well received by the students. Subsequently, because of new responsibilities, this faculty member was only able to offer this APPE to 4 students. Thus, the COP was faced with either discontinuing this popular and relevant APPE or innovate and create a strategy to preserve it for its students. At the same time, a way to provide increased numbers of APPEs to its steadily increasing class of students was needed.

In the previous elective self-care APPE, students selected the pharmacy where they would complete this APPE requirement and met weekly with the on-campus faculty member for case discussions and other assignments. They completed an assignment designed to have them explore the Federal Register web site and explore web sites devoted to consumer information related to self-care (Appendix 1). They also conceptualized and developed a project on a self-care subject. Frequently, student

---

**Corresponding author:** Jan K. Hastings, PharmD. Address: UAMS College of Pharmacy, 4301 W. Markham #522, Little Rock, AR 72205-7199. Tel: 1-501-686-6472. Fax: 1-501-296-1168. E-mail: HastingsJanK@uams.edu

evaluations suggested that this APPE be expanded as a learning opportunity for more students.

For more than 20 years, the College has also offered a direct patient care APPE in advanced community practice-disease state management (ACP-DSM). This APPE was coordinated by 2 faculty members. Originally, when it was implemented, the disease state management APPE was offered solely in central Arkansas and used 8 independent community pharmacy sites. Over the last 13 years, the faculty members have expanded this APPE statewide by searching out innovative pharmacists committed to providing advanced patient care services. Prior to the changes described in this article, this APPE was offered in cooperation with approximately 30 independent community pharmacists in all regions of our state. The students were given specific assignments to complete while spending 4 weeks in these community pharmacies. The major student assignment involved the performance of a complete drug review for an "at risk" patient and preparing a drug topic presentation related to this patient. Other assignments included documenting and presenting nonprescription drug recommendations, preparing for therapeutic topic discussions, completing management assignments, and developing a project related to patient care (ie, either prescription or self-care). One dedicated faculty member met with each student one-on-one in the middle of the month to discuss the case and topic presentations. During the 4-week APPE, all of the enrolled students met on campus to discuss their remaining cases, review a therapeutic "topic of the month," discuss a "self-care topic of the month," and take a quiz on the top 200 drugs.

The preceptors of disease state management APPE were either owners or managers of independent pharmacies across the state. The chain and mass merchandise pharmacists who had been approached about precepting the disease state management APPE expressed reservations about their patients accepting disease-state management services in their pharmacies, space for private meetings with patients, and/or time to dedicate to student learning. Clearly, the lack of participation by chain/mass merchandise pharmacies limited the College's ability to expand the APPE.

A review of the pharmacy landscape in Arkansas demonstrated that chain and mass merchandise pharmacies were located in many small towns. In addition, these pharmacies usually had large self-care or nonprescription medicine departments, which would offer optimal learning opportunities for pharmacy students. Many of the pharmacists in these pharmacies were extremely busy and complained of not having as much time as they would like to have for interaction with patients about self-care issues. Thus, being able to have a fourth-professional year

pharmacy student in their pharmacy to assist with patients' requests would be beneficial to these pharmacies. For these reasons, the College was interested in developing an APPE that could address the pharmacists' concerns, meet the needs of the students, and create a "win-win" situation. Doing so would greatly enhance the College's ability to offer this APPE to all of its students.

According to a study from *Drug Topics*, nonprescription medication and self-care recommendations occur frequently in community pharmacy settings.<sup>3</sup> With many product choices that differ only slightly in ingredients or indications, the self-care section of any pharmacy can be overwhelming to the patient or newly trained pharmacist and sometimes students have expressed that they feel inadequately educated and trained to assist in patient self-care. To overcome this dilemma, the College offers 2 didactic courses in self-care: one is a 2-credit hour required course for all second-professional year students and the other is a 2-credit hour advanced self-care elective in the third-professional year. In addition, faculty members have integrated self-care education into the advanced community practice-disease state management APPE by including self-care patient consultations and reviews of self-care topic discussions as part of the course requirements.

Because the elective advanced self-care APPE was working well operationally, the 2 faculty members who coordinated it made the decision to integrate its general design into the disease state management APPE model. The concept of this new APPE was creatively designed to afford 2 more self-care learning opportunities for the students. The first was a direct patient-care version titled, *Advanced Community Pharmacy Over-the-Counter (ACP-OTC) APPE*. The second was an indirect version titled *Advanced Community Pharmacy-Management (ACP-MGT) APPE*. Appendix 2 compares the course assignments for the 2 APPEs.

## **INTEGRATING THE OTC APPE WITH THE DSM APPE**

The ACP APPE utilizes many of the existing disease state management APPE preceptors as well as chain pharmacy preceptors. For the first offering, 2 chain pharmacies were recruited to ascertain how well the APPE would work in the chain setting. The first was classified as a small-chain (ie, Super-D/USA Drug) and the second as a mass-merchandise chain pharmacy (ie, Target). These chain pharmacies were selected because both had individual pharmacists who were extremely interested and dedicated to participating in experiential education. Previously, they had taught indirect care community practice APPEs for the College and they went beyond the dispensing aspects of practice in training their students. Because the ACPE

Standards 2007 refer to introductory pharmacy practice experiences (IPPEs) focusing mainly on the dispensing role of the pharmacist, the College needed preceptors in its APPEs who were willing to dedicate time to teach advanced practice skills. Both of these pharmacists expressed a willingness to do so. Additionally, the management at these 2 pharmacies was committed to their pharmacists' involvement in meeting their patients' self-care needs.

All of the newly built or recently remodeled USA Drug stores have private space devoted to wellness and health-care screenings and consultations. This provided an ideal setting for the students to meet with their patients about self-care issues. Further, Target Pharmacy has developed a program called the "Advanced Community Practice Program." This program is designed to assist their pharmacists who precept students for colleges of pharmacy. The curriculum includes advanced case studies on self-care issues and is required training for all pharmacists who are employed by Target. With both the pharmacists and the upper management of the corporation committed to self-care, these 2 sites became ideal partners in the first offering of this APPE. The ACP-OTC worked so well in these pharmacies during the first year of its implementation that 2 additional chain pharmacy sites were added to the ACP-OTC for the 2006-2007 academic year.

### **DESCRIPTION OF THE ACP-OTC**

Students are randomly assigned to the APPE by the Director and complete a general orientation to APPEs during the month before APPEs begin. They are provided instruction on how to complete an online orientation to the community APPEs during the week prior to initiation of the APPEs. They receive the URL for the web site and instructions for completing the orientation and the accompanying postorientation quiz. The quiz reviews the requirements for the APPE and a grade of 90% must be earned by each student. This ensures that students have reviewed the orientation material and are familiar with the course requirements. The students then contact 1 of the College's APPE faculty members prior to starting at their

preceptors' pharmacy. At this time, students are given the dates for a mid-month meeting and the end-of-the month meeting with the APPE faculty member at their APPE site. Students can also secure answers to their questions about the assignments from the faculty members at this time. Faculty members are available throughout the month to assist students with assignments via e-mail or telephone.

Over the 4-week ACP APPEs, students complete all assignments at their preceptor's pharmacy. The pharmacist preceptor and the assigned faculty member are responsible for 50% of the student's earned grade for the APPE. The preceptor grade is based on his/her assessment of the student's practice foundation skills, ability to deliver direct patient care, ability to utilize drug information resources, and practice management skills. The faculty member grades all College assignments. The principal assignment for the ACP-OTC APPE is student documentation of 8 self-care encounters using standard SOAP note format. These cases must encompass 8 different domains of self-care from a list included in each student manual (Appendix 3). All problems identified in the assessment portion of the note must be addressed in the plan portion of the note and each student must be prepared to discuss the therapy recommended. At the midpoint of the APPE, students meet with 1 of the 2 APPE faculty members at the preceptor's pharmacy for students to present 4 of the cases. Time permitting, the preceptor joins the discussions. Students present the patient SOAP notes, discuss the disease state being treated, and answer the questions listed in Table 1. Usually, these one-on-one educational sessions last about an hour and permit the students to receive direct feedback on their case preparations prior to the end of the APPE. The intent is that improvements can be made, if necessary. Additionally, faculty members can check on the student's progress in completing other APPE assignments. These include 2 Internet assignments that introduce the students to the Federal Register and consumer resources for self-care (Appendix 1).

Table 1. General Questions for Self-care Presentations

- 
1. What OTC products are available in this category?
  2. For what conditions are these products used, and how effective are these in the treatment or prevention of these conditions?
  3. What patient types cannot or should not use these products, and why?
  4. Are there any food or drug interactions that can occur with these products?
  5. What side effects may occur and what precautions should someone who uses these products take, if any?
  6. How should these products be used and for what period of time?
  7. Is there any controversy associated with the use of these products?
  8. What nonpharmacological measures can be performed by the patient to help alleviate or prevent the condition without utilizing OTC drug therapy?
-

With preceptor input and oversight, the student also completes a project on a self-care subject during the ACP-OTC APPE. Examples of some projects include a patient information brochure on the use of non-prescription drugs during pregnancy, a comparative table of blood glucose meters, and a quick-reference card on cold and allergy products. For the forthcoming academic year, the students will be charged with developing a self-care formulary in the nonprescription medication category of their choice.

Although, self-care is not the primary focus of the indirect patient care ACP-MGT APPE, students do gain exposure to self-care issues. As with the other ACP modules, the ACP-MGT APPE is conducted in a community pharmacy and the required project often relates to self-care. For example, one of the suggested projects within the College's APPE manual is the comparison of sales of a class of nonprescription products displayed on an end cap of a store shelf to the sales of those products in their regular shelf location. This project has been a very popular choice with the students and their preceptors. Typically, sales from the end cap are much higher than sales of the products from their regular shelf-space.

At the end of the APPE, all students from the *ACP-DSM*, *ACP-OTC*, and *ACP-MGT* APPEs meet together for case presentations and discussions at the College. The students from the DSM and OTC APPEs each present 2 self-care patient cases and must be prepared to answer the same questions found in Table 1. The MGT students present 2 problem scenarios for discussion. Additionally, attending faculty members conduct therapeutic review sessions (eg, diabetes, hypertension, or hyperlipidemia) and self-care review sessions (eg, pain, sinusitis/rhinitis, and dermatitis). All reviews are case-based and differ from month to month.

## DISCUSSION

The community APPE is a required experience for all students. However, continuing with the ACP-DSM version alone would not have accommodated all students when the 2010 class of 120 students reached their fourth-professional year. Also, many students use this APPE to satisfy more than 1 of their direct patient care requirements. With the present student enrollment of 80, the ACP APPE's account for 123/640 months of APPEs. Thus, approximately 20% of the APPE load is being handled by 2 full-time faculty members and 42 volunteer preceptors. When enrollment in these APPEs reaches 120 students, 2 faculty members will not be sufficient to conduct monthly one-on-one meetings with students. This is an operational problem for a number of reasons. First, the students benefit from these discussion

periods and frequently cite in their APPE evaluations how helpful the mid-month and end-of-month discussions are to their education. Occasionally, too, during a mid-month meeting, faculty members have learned that a student's assigned preceptor was no longer employed by the pharmacy or that some other quality control issue had arisen. In other words, these visits assist faculty members in maintaining control of the APPEs; therefore, the addition of more faculty members will be necessary as the number of students enrolled increases.

Historically, another obstacle to overcome has been the "halo effect" that the College's volunteer preceptors have had and their reluctance to assign a grade of less than "A" to an APPE student. By faculty members being responsible for decisions about assignments and grading, grade inflation has been minimized. Furthermore, consistency can be maintained from one APPE site to the next by requiring all students to perform the same assignments each month. These assignments are evaluated and graded by the 2 faculty members responsible for these APPEs. Thus, along with maintaining control of the APPEs, the faculty members ensure that each student is evaluated using the same standards from month to month and among a variety of APPEs.

## CONCLUSIONS

Community APPEs and self-care education within our College play a sizeable role in our experiential APPEs. Due to changes in the APPE program and an increasing student enrollment, adjustments needed to be made that would allow us to assure continuation of these opportunities. To do this, the faculty members involved in this APPE adapted the elective advanced self-care APPE to the existing ACP-DSM model to create a more versatile APPE. By doing this, an opportunity was provided to incorporate chain and mass merchandise pharmacies in the APPE and, thereby, insure that every student has the opportunity to gain exposure to advanced self-care education. Hopefully, this will complement their didactic education and skill development and better prepare them for practice.

## REFERENCES

1. Accreditation Council for Pharmacy Education. Accreditation Standards and Guidelines for the Professional Program in Pharmacy Leading to the Doctor of Pharmacy Degree. Adopted January 15, 2006. Available at: <http://www.acpe-accredit.org/standards/default.asp>. Accessed July 6, 2006.
2. West DS. UAMS College of Pharmacy 2006 Salary Survey Results. Available at: [http://www.arpharmacists.org/Salary%20Survey/2006\\_salary\\_survey.htm](http://www.arpharmacists.org/Salary%20Survey/2006_salary_survey.htm). Accessed June 10, 2006.
3. Levy S. Up front and center. *Drug Topics*. Jun. 2, 2003;147:44.

Appendix 1. Internet Exercise Examples

**Federal Register Exercise**

1. Using the Internet, search the 2003 Federal Register for the Final Monograph (FM) for Antidiarrheals. Find the amendment to the FM. What is the date for this Final Monograph? What is its compliance date? (<http://www.gpoaccess.gov/fr/index.html>)
2. According to this FM what are the monograph-approved ingredients? What is the recommended dosage of these ingredients?
3. According to this FM which ingredients are not monograph-approved?
4. What does the Federal Register tell you about the approved indications for the approved ingredients? What addition does the amendment make to the FM?
5. What did you find in the Federal Register that interested you the most and why? (Use back of this page if needed)

**OTC's and the Internet Exercise**

1. Go to the Internet site (<http://www.heartburnalliance.org/>) and briefly describe what information there would be helpful to you in your practice for patient education (use the back of this page if needed). Print and attach the "Alcohol consumption and heartburn" educational information from this site.
2. Go to the Internet site (<http://www.chpa-info.org>) and briefly describe their latest position on a third class of drugs. Also, find the list of ingredients switched since 1976. What are the last 6 ingredients/combinations to be switched according to that list (give dates)?
3. Go to the Internet site (<http://www.fda.gov>) and find the briefing information for the January 13-14, 2005 joint meeting between the Nonprescription Drug Advisory Committee and the Endocrine Advisory Committees. In this section find and review the section (use PPT file) entitled "Pivotal Label Comprehension Study Mevacor OTC." Print the proposed label for Mevacor OTC and briefly summarize the findings of this study.
4. Using the internet search engines, find at least three more sites providing information about nonprescription drugs for patients and/or pharmacists. One of the sites **must** deal with vitamin/minerals or herbals. List the name and Internet address of sites found.

Appendix 2. Comparison of ACP APPE assignments

**ACP-DSM- Direct patient care**

At-risk patient case – presented mid-month to faculty  
Therapeutic topic discussion – presented mid-month to faculty  
Four (4) OTC cases – no duplication of treatment domain\*  
    Documented by SOAP note  
    Two presented at end of month meeting  
    Two SOAP notes turned in for grade end of month  
    Follow-up required  
Project (clinical or management related)\*  
‘Mock’ State Board of Pharmacy Inspection  
Top 200 drug test\*  
Review of C-II ordering procedures  
Management discussion documentation (choice of 12 areas)

**ACP-OTC- Direct patient care**

Eight (8) OTC cases- no duplication of treatment domain\*  
    Documented by SOAP note  
    Four presented and discussed mid-month with faculty  
    Two presented at end of month meeting  
    Two SOAP notes turned in for grade end of month  
    Follow-up required  
Project related to self-care (clinical or management)\*  
Top 200 drug test\*  
Internet assignments – questions with answers found at websites  
    Federal Register  
    Consumer self-care information websites

**ACP-MGT- Indirect patient care**

In-service/CE presentation –presented to faculty and preceptor mid-month  
Two problem scenario presentations – end of month meeting  
Staffing change evaluation  
Written job description/real or ‘mock’ interview conducted  
Project-management#  
‘Mock’ State Board of Pharmacy Inspection<sup>†</sup>  
Top 200 drug test<sup>†</sup>  
Review of C-II ordering procedures<sup>†</sup>

---

\*Common assignments ACP-DSM and ACP-OTC

<sup>†</sup>Common assignments ACP-DSM and ACP-MGT

ACP = Advanced Community Practice; DSM = Disease State Management; MGT = Management

Appendix 3. Commonly Recognized Problems/Diseases/Domains

**Acne**

acne vulgaris

**Anthelmintics**

anisakiasis  
ascariasis  
enterobiasis  
hookworm  
whipworm

**Antidiarrheals**

diarrhea

**Antacids**

gastritis  
gastroesophageal reflux  
heartburn  
NSAID-induced ulcer  
overindulgence/hangover  
peptic ulcer disease

**Asthma**

asthma

**Cold, Cough, Allergy**

allergic rhinitis  
common cold  
cough  
influenza  
sore throat

**Dermatologics**

bug bites/stings  
burns/sunburn  
dandruff  
dermatitis  
diaper rash  
dry skin  
lice  
poison ivy/oak  
prickly heat  
psoriasis  
scabies

**Emetics/Antiemetics**

nausea  
poisoning treatment  
vomiting

**External Analgesics**

bursitis  
skeletal muscle pain

**Foot Care**

bunions  
calluses  
corns  
diabetic foot care  
warts

**Hemorrhoidals**

hemorrhoids

**Internal Analgesics**

arthralgia  
fever  
headache  
myalgia  
neuralgia

**Laxatives**

constipation  
laxative abuse

**Menstrual Products**

dysmenorrhea  
premenstrual syndrome  
vaginal dryness

**Ophthalmics**

blepharitis  
conjunctivitis  
contact lens problems  
dry eyes  
hordeolum

**Oral Health**

canker sores  
caries prevention  
cold sores  
denture problems  
gingivitis  
toothache

**Otics**

earwax  
swimmer's ear

**Sleep Aids**

insomnia

**Stimulants**

adjunct therapy with analgesics  
sleepiness

**Topical Anti-Infectives**

impetigo  
tinea capitis  
tinea corporis  
tinea pedis  
tinea cruris  
vaginal candidiasis

**Weight Control**

obesity

**Miscellaneous (comprehensive)**

contraceptive methods & products  
diabetes care  
hair growth  
infant formula products  
in-home diagnostic products  
alternative medicine (herbs, nutraceuticals)  
pediatric use of OTC's  
personal care products  
pregnancy/breast feeding & OTC's  
smoking cessation  
vitamins/minerals (nutrition)  
geriatric use of OTC's