NONPRESCRIPTION MEDICATIONS AND SELF-CARE

Engaging Students in Self-care Activities During an Advanced Community Pharmacy Practice Experience

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Submitted February 24, 2006; accepted June 2, 2006; published December 15, 2006.

Objective. To provide experiential rotation students with educational activities to enhance learning and patient communication skills with respect to nonprescription drug therapy.

Design. A longitudinal project, a consultation guide, and a list of mini-projects were developed for a 4-week community pharmacy rotation experience. The longitudinal project was a nonprescription pocket formulary consisting of 4 disease states and their respective treatment options. The consultation guide was a 1-page data collection form intended to capture patient information regarding the use of nonprescription products in a thorough and brief manner. The mini-projects were questions to be answered while spending time in the nonprescription medication aisles.

Assessment. Students were very creative in developing their formularies. They also became more familiar with using nonprescription product references and package labeling information. The consultation guide taught students to apply the “PQRSTA” mnemonic. It prompted discussion of self-care issues and served as a useful educational tool for the preceptor. The list of mini-projects forced students to become familiar with the many nonprescription products available, as well as product line extensions and duplication.

Conclusion. Students were able to apply and build upon what was learned during their didactic education. The activities provided an excellent means of enhancing patient counseling and problem-solving skills. Additionally, the preceptor relied on these activities to engage students in conversation pertaining to nonprescription products and self-care related issues.

Keywords: self-care, nonprescription medication, community pharmacy, experiential rotation, counseling, community advanced pharmacy practice experience

INTRODUCTION

Pharmacists employed in community practice settings are often the only healthcare professionals available to provide point-of-sale counseling on nonprescription medications. Therefore, it is imperative that they are comfortable with and capable of providing this consultative service. Pharmacists’ comfort levels with and knowledge of nonprescription products will vary and likely be reflective of their experiences as pharmacy students.

Practicing pharmacists can employ several methods for enhancing their nonprescription drug therapy knowledge. They can complete the OTC Advisor Pharmacy-based Self-care Services Modules,¹ which is a certificate training program offered by the American Pharmacists Association (APhA). APhA also publishes the Partners in Self-care² series, which consists of supplemental articles tailored to specific disease states. Alternatively, pharmacists can participate in other continuing professional education programs that review nonprescription medications or devices. As students, however, it becomes the responsibility of the educators to provide such information. Schools may offer core course work, elective course work, or integrate nonprescription product information into other didactic coursework. Further, students will gain exposure to nonprescription products and experience in counseling patients about such products during their experiential rotations.

Reports of student involvement with nonprescription medications during the experiential year are limited. One
study, however, discusses learning activities involving nonprescription medications designed for a pharmaceutical care clerkship program. During the development of the clerkship syllabus, focus groups were used to determine important criteria and learning objectives. Eight hours each week were to be devoted to pharmaceutical care for nonprescription medications and devices. A goal was that at least 10 patients were to be encountered during this time interval. In addition, students were to spend approximately 15 to 30 minutes each week with the preceptor to review nonprescription product consultations. Students were expected to present weekly nonprescription product synopses to the preceptor during the course of the rotation. As the purpose of this study was to gather information for a needs assessment, it is not known whether the established rotation criteria were implemented. The impact of such criteria on the rotation experience is also unknown. It is apparent that additional research is needed in this increasingly important area of pharmacy education.

This article outlines the educational activities used to enhance learning and patient communication skills with respect to nonprescription drug therapy and patient self-care activities in an advanced clinical community pharmacy practice experience offered by Butler University and Kroger Pharmacy in Indianapolis, Indiana. The objectives (Appendix 1) and expectations of the advanced pharmacy practice experience (APPE) provided ample opportunities for fourth-professional year doctor of pharmacy students to enhance their knowledge of nonprescription drug therapy.

DESIGN

To address the increasing need for student exposure to nonprescription medications and self-care activities, an emphasis on this area of pharmacy practice skills was incorporated into an APPE. The experiential site was located in a grocery chain environment that included a patient care center. The coordinator of the site was employed by Butler University and taught the Self-Care & Health Promotion course to second-professional year pharmacy students, and precepted students on rotation at the site. The site accepted 1 student per rotation for a duration of 4 weeks. One focus of this rotation was to encourage student exposure to nonprescription drug therapy and the counseling process.

Four hours were devoted each week for patient consultation outside of the patient care center appointments and activities. The students spent 2 hours in the pharmacy as the primary contact for counseling on prescription products and 2 hours were spent monitoring the aisles featuring nonprescription products. While in the pharmacy, the students were responsible for counseling patients on any new prescription medications dispensed and monitoring traffic in the nonprescription drug aisles. While working among the nonprescription medication aisles, the students were to devote time to patient interaction/consultation and completing their nonprescription medication activities which included a nonprescription pocket formulary project, a list of mini-projects, and a consultation guide. The nonprescription pocket formulary was a longitudinal project developed by the students.

To accomplish this, the students selected 4 common disorders treated with nonprescription products. A list of possible disease states was provided to students to guide the selection process (Table 1). They were also instructed to refer to Table 1-1 in the Handbook of Nonprescription Drugs, 14th edition, for a more complete list. However, students were not limited to this list.

The compilation of data contained in each formulary was to be concise and address the following:

- Disorder and/or symptoms treated
- Therapeutic class or product category
- Brand/generic names
- Dosage forms and strengths
- Dosing for:
  - Adults
  - Pediatrics
  - Pregnancy/lactation
  - Geriatrics
  - Other special populations, if applicable
- Contraindications/precautions
- Drug Interactions
- Adverse effects
- Cost per day (address generic availability)
- Rationale for use
- Patient education

The symptoms listed for each disease state were to be specific enough so that only 1 product could be selected. If multiple drug options were available for the chosen condition, the reason for the selected drug was to be

<table>
<thead>
<tr>
<th>Disease State</th>
<th>Nonprescription Pocket Formulary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allergy</td>
<td>Diarrhea</td>
</tr>
<tr>
<td>Congestion</td>
<td>Dermatitis</td>
</tr>
<tr>
<td>Cough</td>
<td>Minor wounds</td>
</tr>
<tr>
<td>Pain/inflammation</td>
<td>Fungal infection</td>
</tr>
<tr>
<td>Fever</td>
<td>Acne</td>
</tr>
<tr>
<td>Constipation</td>
<td>Nicotine addiction</td>
</tr>
<tr>
<td>Acid reflux</td>
<td>Insomnia</td>
</tr>
</tbody>
</table>
justified in the rationale. If the selected product would not be appropriate for certain patients or conditions, an alternative product needed to be recommended. The design of the formulary components was to be such that it could be carried in the pocket of a laboratory coat for convenience and ease of use when the student was approached with questions. If a patient were to present with symptoms that happened to be outlined in the student’s formulary, the student could refer to the recommendations and counseling points within the formulary to guide the consult.

The mini-project list consisted of questions regarding nonprescription medications given to the students at the start of the rotation. The list was compiled from questions or concerns presented to the preceptor by patients, students, and other pharmacists (Table 2). When time permitted during their weekly 2-hour blocks in the nonprescription drug aisles, the students were to work on select questions that interested them. As an answer was formulated, the response was presented to the preceptor. This was intended to prompt discussion and increase the student’s awareness of nonprescription medication issues.

The Nonprescription Medication Consultation Form is a 1-page guide to facilitate student interaction with patients in the nonprescription drug aisles. The main component of this form is the “PQRSTA” mnemonic (Table 3). The PQRSTA mnemonic is a set of predominantly open-ended questions designed to guide a patient consult. It is more commonly known as PQRST. Often, this abbreviated version is used by practicing nurses and other healthcare providers for pain management. Further, it is used by emergency response personnel (ie, emergency medical technicians, firefighters, first responders) when attempting to expedite a problem assessment. Butler University doctor of pharmacy students were introduced to this mnemonic during their pain management lectures in Therapeutics as well as in the Self-Care & Health Promotion course as a method for patient assessment.

<table>
<thead>
<tr>
<th>Table 2. List of Mini-Projects for Community Pharmacy Experiential Rotation Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Compare the costs of recent Rx-OTC switch medications to previously available OTC medications that treat the same condition (i.e. Claritin vs. 1st generation antihistamines, Prilosec OTC vs. other antacids or H2 blockers, Lamisil vs. other antifungals). What is the cost per day based on dosing recommendations?</td>
</tr>
<tr>
<td>2. Count the number of products that contain acetaminophen. What is the maximum amount of acetaminophen that can be taken each day?</td>
</tr>
<tr>
<td>3. Analyze ephedra-free weight loss products (safety/effectiveness of other ingredients or replacement ingredients). Why would these help with weight loss? Would you recommend them?</td>
</tr>
<tr>
<td>4. Count the number of products that contain Kava. What is the problem with Kava?</td>
</tr>
<tr>
<td>5. Analyze the effectiveness and safety of the available products marketed for menopause.</td>
</tr>
<tr>
<td>6. List the products that are marketed for people with diabetes and the rationale for doing so. Which products would you recommend?</td>
</tr>
<tr>
<td>7. Compare the costs of aspirin 81 mg/day vs. aspirin 325 mg/day vs. aspirin 325 mg every other day.</td>
</tr>
<tr>
<td>8. Compare the cost of calcium carbonate vs. calcium citrate products based on the number of tablets taken per day.</td>
</tr>
<tr>
<td>9. Compare the cost of women’s MVI w/ Calcium + 1 calcium supplement per day vs. regular MVI + 2 calcium supplements per day</td>
</tr>
<tr>
<td>10. Compile a list of products that patients with diabetes could use for foot care.</td>
</tr>
<tr>
<td>11. Count the number of products that contain neomycin sulfate vs. polymixin B sulfate.</td>
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<tr>
<td>12. Count the number of products that contain pseudoephedrine. Why is this important for patients with hypertension? How does pseudoephedrine HCl compare to phenylephrine HCl?</td>
</tr>
<tr>
<td>13. Compare the costs of smoking cessation products. What is the average cost of a pack of cigarettes?</td>
</tr>
<tr>
<td>14. Analyze carbohydrate and fat content of “nutritional” (possibly sugar-free) products marketed for patients with diabetes (eg, snack bars, sugar-free ice cream, sugar-free candy). What are sugar alcohols?</td>
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<tr>
<td>15. Analyze the sodium content of various food products (eg, frozen dinners, canned foods, boxed foods). Choose 10 items.</td>
</tr>
<tr>
<td>16. Analyze the cholesterol content of various food products (eg, seafood, red meat, chicken, tuna, dairy products). Choose 10 items.</td>
</tr>
<tr>
<td>17. List the products made by the same company that have different brand names but contain the same ingredients.</td>
</tr>
<tr>
<td>18. List the products that have different ingredients, but similar brand names.</td>
</tr>
<tr>
<td>19. Compare the ingredients of the various multivitamin products.</td>
</tr>
<tr>
<td>20. Compare/contrast all Robitussin products. Why would you recommend one vs. another?</td>
</tr>
</tbody>
</table>
In an attempt to avoid patient apprehension during the interaction, the consultation form was not to be completed during the face-to-face consult. Instead, it was completed immediately following the consult. No specific identifying information was recorded to protect patient confidentiality. Students needed to be familiar with the form prior to interacting with patients to collect and record the required data accurately. Once completed, the form was turned in to the preceptor for discussion of the consult. Each form was stored in a file in the Patient Care Center as a means to document the nonprescription consultations encountered at the site.

RESULTS

Initially, the entire nonprescription pocket formulary was not due until the end of the rotation. It became apparent that some students would wait until the final week to begin to work on the formulary. As a result, the requirements were subsequently changed so that one disorder was due at the end of each clerkship week. This prevented procrastination and allowed the students to use the completed sections during the remainder of the rotation.

Students tended to have difficulty making alternative recommendations for pediatric and pregnant patients. Most would fail to provide dosing guidelines for children less than 2 years of age and would solely state the pregnancy categories for products listed in their formularies. This could be due to their lack of experience in making such recommendations, apprehension in dealing with children and pregnant patients, and/or a reliance on the limited information contained in the package labeling. These actions had to be brought to their attention and it had to be explained that if such patients approached them, clear recommendations needed to be made. These might include physician referral for the condition, weight-based dosing, alternative product recommendations, or non-drug measures.

To date, students have been very creative in developing their formularies. The majority of students chose to use Microsoft Office Publisher to design their formulary pages. A few students have laminated and bound their pages. One student elected to do more than the 4 required disease states so as to have a more complete reference. The students also increased their familiarity with nonprescription product references such as the Handbook of Nonprescription Drugs, Drugs in Pregnancy and Lactation, and package labeling. These 2 textbooks were highly useful when students needed to expand their recommendations for pediatric and pregnant patients.

The list of mini-projects gradually grew longer as questions from patients, students, and other pharmacists were added. The questions encouraged students to become familiar with the many products available, product line extensions, and active ingredient duplication. Additionally, it kept them occupied and focused while spending time in the nonprescription medicine aisles. At times, however, students would become engrossed in answering a question from the list and forget that patient needs were to take precedence over project completion. If this occurred, they were reminded that the projects were to be completed only when patient interaction opportunities did not exist.

The consultation form taught students to apply the PQRSTA mnemonic. It prompted discussion of self-care issues and served as a useful educational tool for the preceptor. After 1 or 2 patient encounters, students realized the type and extent of questions required to solicit enough information to formulate a self-care recommendation.

As stated previously, the completed forms were kept in a file in the preceptor’s desk at the practice site. Between September 2003 and May 2005, 64 forms were collected (Figure 1). The majority (n = 31) of interactions resulted in a new or alternative product recommendation. Approximately one third (n = 22) of the patients purchased the product they originally sought. Five patients were instructed to seek additional medical attention from their physicians. Both product and physician referral were recommended to 4 patients.

Table 3. The PQRSTA Mnemonic for Symptom Analysis

P: Precipitating (What caused the condition?)
Q: Quality (Describe the condition.)
R: Relief (What has provided relief?)
S: Site/Severity (Where is the problem? How severe is it?)
T: Temporal factors (When did the problem begin? How often does it occur?)
A: Associated symptoms (Are there any other symptoms?)

Figure 1. Self-care recommendations made by students (n = 64).
Two patients were instructed to use non-drug measures in lieu of medication therapy.

DISCUSSION

The involvement of experiential students with nonprescription medication therapy can be an invaluable asset when addressing the needs of patients with self-care related problems. The students can assist the pharmacists with patient consults and at the same time are able to expand their knowledge in this important area of practice. With products such as loratidine and omeprazole having been recently switched to nonprescription drug status, products such as orlistat and emergency contraception potentially becoming nonprescription medications, and recent changes to flexible spending account criteria to include nonprescription items, the purchase of nonprescription products will likely continue to escalate. Different formulations such as those found with Kaopectate and Sudafed may lead to improper use or dosing. Given these changes, there is an obvious need for increased pharmacist intervention and consultation on such products. Additionally, pharmacist involvement with nonprescription medications could decrease physician office visits, and the use of nonprescription medications could save the US $20 billion a year in overall healthcare costs.

Pharmacists must be prepared and confident in their knowledge of nonprescription drug therapy. This extends beyond those practicing in community settings. A review of a patient’s chart in a hospital or long-term care setting, as well as discharge counseling, will likely involve nonprescription medications. The provision of medication therapy management services under Medicare Part D will also need to account for nonprescription medications.

With the exception of those practicing pharmacists who have taken the initiative to expand and continue their continuing professional education focusing on nonprescription products, such information is best disseminated through the doctor of pharmacy didactic coursework. Allowing experiential rotation students to engage in nonprescription drug-related activities, such as the described above, bridges the gap between didactic coursework and the clinical application of this information. Furthermore, encouraging students to consult with patients regarding nonprescription medications will help to meet the counseling demands of the rapidly evolving nonprescription drug market. Students will be encouraged to develop their confidence and reinforce their knowledge base when helping patients.

CONCLUSIONS

The self-care activities encouraged at the Kroger Pharmacy/Butler University Patient Care Center enhanced students’ awareness of and involvement with nonprescription medications. The nonprescription pocket formulary, list of mini-projects, and consultation guide served several purposes. Students were able to apply and build upon what was learned during their didactic education in the Self-Care & Health Promotion course at Butler University. The activities provided an excellent means of enhancing patient counseling and problem-solving skills. Additionally, the preceptor relied on the activities for engaging students in discussion pertaining to self-care related issues.

ACKNOWLEDGEMENTS

The author would like to acknowledge Maria Marzella Sulli, PharmD, for sharing her Nonprescription Consultation Form with other self-care faculty members and colleagues; Stefanie Ferreri, PharmD, COE, for her assistance in developing the Nonprescription Pocket Formulary project initially used at the University of North Carolina, Chapel Hill; and Nicholas G. Popovich, PhD, for his guidance in developing this manuscript.

REFERENCES

Appendix 1.

**Kroger Pharmacy/Butler University Clinical Community Pharmacy Rotation Objectives**

This is a 4-week rotation, which takes place in a clinical practice setting within the pharmacy at Kroger. The primary focus of this rotation is direct patient care in a community pharmacy environment. Emphasis will be placed on the management of disease states at the community level and incorporating this into daily pharmacy operations. No more than 20% of the student’s time will be spent in the prescription dispensing process. At least 80% of the student’s time will be devoted to direct patient care.

Upon completion of the rotation period, the student should be able to:

1. Communicate effectively with patients.
2. Communicate effectively with physicians and other health care providers.
3. Review drug therapy regimens and make appropriate recommendations, when deemed necessary.
4. Demonstrate proficiency with the point of care testing devices available for use.
5. Appropriately document patient care activities.
6. Develop and/or enhance patient care services.
7. Create marketing tools for the practice site.
8. Market patient care services to patients, health care providers, and the surrounding community.
9. Understand fee structures and reimbursement strategies.
11. Promote health and wellness in the various realms of community practice.
12. When called upon for drug information, accurately respond in a timely fashion.
13. Counsel patients regarding the medication dispensed.
15. Refer patients for clinical services.
16. Handle 3rd party issues.
17. Understand the principles of formulary management.
18. Discuss the handling of controlled substances with regard to record keeping, documentation, and inventory control measures.
19. Receive and transcribe verbal prescription orders.
20. Understand workflow and technician responsibilities.
21. Identify appropriate staffing and personnel management strategies.
22. Discuss quality assurance processes.