# **Evaluation of a Pilot Clinical Skills Workshop Series for Community Pharmacists**

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Clinical clerkship sites are needed in community pharmacies to prepare students to assume new roles as pharmaceutical care providers. A series of six clinical skills workshops were developed to train community pharmacists to become preceptors for students during clinical community pharmacy rotations. Learning was assessed by a final practicum. A self-assessment tool evaluated perceived improvement in attitude and clinical skills. A majority of the respondents reported positive changes in their daily practice, increased knowledge and confidence in all areas discussed in the workshops, and increased motivation/desire to counsel patients. All feel prepared to precept students in the near future; however, one-half think they first need additional instruction on precepting. A clinical skills workshop series is an effective method to begin preparing community pharmacists to become clinical role models and preceptors for community pharmacy clerkship rotations.

## INTRODUCTION

The role of the community pharmacist is evolving from that of a medication dispenser to one of a pharmaceutical care provider. Although most practitioners and educators agree that the preparation of pharmacy graduates for this evolving role is essential, opportunities for students to develop and practice clinical skills in the community environment remain limited. The majority of contemporary community pharmacy experiential rotations still emphasize the practice of traditional pharmacy dispensing and managerial tasks. While valuable, these experiences alone are insufficient in preparing students for future community-based pharmaceutical care roles. Therefore, colleges of pharmacy should seek to collaborate with community pharmacists in the development of clinical practice roles in the retail setting(1,2).

The evolution of the practice of pharmacy has resulted in re-engineering, which is quickening the change in pharmacist roles. Principles of practice for pharmaceutical care have been developed by the American Pharmaceutical Association (APhA) as a proposed standard of care(3). The American Society of Health-System Pharmacists (ASHP) has also proposed guidelines on a standardized method for pharmaceutical care(4). Both of these guidelines focus on responsibility for patient outcomes. The redirection of clinical pharmacy in a community setting and redefinition of practice must be combined with retraining/support for pharmacists' cognitive activities. The Iowa Center for Pharmaceutical Care (ICPC) has developed curricula to support evolving cognitive practice roles, and now serves as the template for the newly created American Center for Pharmaceutical Care(5). These training-based models focus on work patterns, job responsibilities, store layout, communication, marketing and reimbursement(6). Other innovative efforts to facilitate implementation of clinical activities include the Indian Health Service practice models(7) and collaborative drug therapy management initiative(8). The pharmacist care model, developed by the National Commu

nity Pharmacists Association (NCPA) (formerly the National Association of Retail Druggists) focuses on disease state management (for diabetes, respiratory care and cardiovascular care) and pharmacist care skills(6). Several software-based training models of pharmaceutical care are also available (e.g., MedOutcomes, CarePoint, Encounter)(6).

The focus of these pharmaceutical care training programs was on retraining practicing pharmacists. Unfortunately, training pharmacists to precept students and demonstrate the skills they need to assume new roles of pharmaceutical care providers when they graduate were not included in these programs. In addition, many of these programs focus on a process and not on skills. Pharmacists must first learn basic clinical skills and implement a clinical practice model before they can become preceptors and role models for students. A three-part program was created to meet these goals, and is currently being implemented. Phase I is a series of clinical skills workshops designed to introduce pharmacists to the management, monitoring and patient education of common chronic disease states. Phase II is also a series of workshops incorporating additional common chronic diseases and including more ways to precept students on clinical clerkships. Phase III is the actual precepting of clerkship students at the pharmacist's site with guidance from a clinical faculty member at St. Louis College of Pharmacy. Phase I of the program will be described in this paper.

## **OBJECTIVES**

The overall goal of the program was to train community pharmacists to serve as clinical clerkship preceptors and role models in the experiential program at St. Louis College of Pharmacy. The specific objectives for phase I of this program were to: (i) increase community pharmacists' clinical skills;(ii) increase community pharmacists' knowledge base in chronic disease state management of diabetes, asthma and hypertension; and (iii) to train community pharmacists

to be providers of quality pharmaceutical care to their patients. The specific disease were selected because they are common chronic conditions that pharmacists can easily monitor and teach patients to self-monitor at home.

#### **METHODS**

Participant/Preceptor Selection Criteria. The project was initiated in cooperation with local retail chain and independent pharmacies. Ten pharmacists were from an area retail chain pharmacy, one was an independent owner, and one a community pharmacy resident. The chain pharmacists and the independent owner were preceptors for the college in the community externship program. These eleven people consistently received either a very good or excellent on student evaluations as part of the college's experiential program. Selection of these participants was based on the following predefined criteria:

- professional competency, ethical standards, excellent character, and appropriate attitude to the presence of students;
- teaching qualities, particularly the ability to communicate with students;
- willingness to take on new challenging roles of the pharmacists as a member of the health care team; ability to counsel patients about prescriptions, overthe-counter medications and home monitoring devices; ability to perform simple physical assessment tests to assess patient compliance;
- 4. active in furthering his/her own professional education;
- 5. professional relationships with other health profession als in the community;
- 6. willingness to meet with other preceptors and the experiential coordinator for discussion and improvement of the course;
- 7. concern for the health of the community by providing quality pharmaceutical care to his/her patients; and
- 8. good standing with the Board of Pharmacy where he/she is licensed to practice pharmacy.

Selection of the pharmacists from the retail chain pharmacy was a collaborative effort from the three local district managers for the retail chain. Each manager suggested individuals from their area based on the above criteria. The pharmacist from the independent pharmacy was chosen because of his current innovative approach to rendering pharmaceutical care in the community setting.

#### **Pharmacy Selection**

Pharmacy selection was important in this program because the sites will also be clinical clerkship sites. The pharmacies were selected to participate in the community pharmacy clerkship program based on the following criteria. All participating pharmacies had to:

- 1. comply with all the standards for registration established by the laws of the state in which it is located;
- 2. provide a suitable environment for the practice of quality pharmaceutical care to patients;
- 3. provide an area for patient counseling services;
- 4. demonstrate a willingness from the management to permit full student participation in existing programs and in the development of new programs for quality patient care through the use of pharmaceutical skills;
- 5. display a current Missouri Internship permit through

- the Missouri Board of Pharmacy for those pharmacies located in Missouri; and
- 6. be in good standing with the Board of Pharmacy in the state where the pharmacy is located

## **Clinical Skills Workshop Series**

A series of six two-hour clinical skills workshops and a two-hour final practicum for a total of fourteen workshop hours were created. Facilitators of the workshops were selected on the basis of experience and expertise in specific disease state areas. The workshops were intended to develop the skills necessary for patient counseling, disease state management, instructing patients to self-monitor, documentation, monitoring and follow-up. The workshops were not intended to teach therapeutics, but rather to teach evaluation and monitoring of patients and medications to develop and practice clinical skills. Required reading materials introduced the topic and provided background information prior to the workshop session. Included in the background reading were national treatment guidelines (e.g., anticoagulation, asthma), if applicable. The guidelines were briefly discussed, however, they were not included as part of the workshops. All readings and cases were provided to each participant in a binder. Participants were expected to spend at least one hour reading and preparing for each workshop session for a total of approximately seven hours of reading time. The workshops were interactive and incorporated active learning techniques. Each workshop session centered around case studies, problem solving exercises and practice with the use of home monitoring devices. Emphasis was placed on the practical, hands-on experience needed to implement pharmaceutical care and disease state management. Twenty-one contact hours of continuing education credit were provided following completion of all the workshops and the final practicum.

#### Workshop I:

Principles of Pharmaceutical Care. This workshop provided a general introduction to the concept of pharmaceutical care and to the workshop series. Expected outcomes of the workshop program and the community clinical clerkship experience were discussed. Objectives of the workshop included: (i) identification of the purpose of a community clinical pharmacy clerkship program; (ii) description of site-specific practice models; and (iii) comparison of community clinical clerkships to traditional externship experiences. The rationale for implementing a clinical practice model in the community pharmacy was introduced, and barriers to implementation of clinical services were discussed.

## Workshop II:

Communication Skills and Patient Counseling. This workshop involved discussions and role-playing. Topics covered in the workshop included: (i) effective patient counseling; (ii) effective and tactful communication with physicians; (iii) development of skills such as active listening and body language; and (iv) utilization of the "four question" format developed by the Indian Health Service. The participants practiced good communication skills with both patients and physicians through role play exercises. Participants shared their past experiences involving difficult "patient encounters" and reviewed possible solutions. The participants were expected to demonstrate good communication and patient counseling.

## Workshop III:

**Documentation, Monitoring and Reimbursement.** This workshop introduced the concept of documentation and utilization of the SOAP (subjective, objective, assessment, plan) format. Currently available documentation tools (*e.g.*, NCPA pharmacist claim form) were introduced. Participants practiced writing SOAP notes and completing a pharmacist claim form. Each participant then devised a strategy to monitor and document patient care in their practice site.

## Workshop IV:

Clinical Skills: Diabetes. This clinical skills workshop provided practical skills needed to render pharmaceutical care to patients with diabetes. The workshop emphasized: (i) effective and efficient teaching to patients about diabetes and its complications; (ii) teaching of self-monitoring of blood glucose to patients; and (iii) effective and efficient counseling on lifestyle modifications and pharmacotherapy in the treatment of diabetes. The facilitator demonstrated the use of home blood glucose monitoring devices. Participants practiced using the different monitors on each other, and practiced teaching each other how to use the monitors in a role-playing situation. They were expected to demonstrate correct technique and teach another participant the proper use of a home blood glucose monitor.

## Workshop V:

Clinical Skills: Hypertension. This clinical skills workshop provided practical skills needed to provide pharmaceutical care for patients with hypertension. The workshop focused on: educating the patients about hypertension and their antihypertensive medications, proper use of home blood pressure monitoring (HBPM) devices, effective teaching of HBPM devices to patients, and proper monitoring for efficacy and toxicity of antihypertensive medications. The facilitator demonstrated the correct use of currently available HBPM devices, and participants practiced using the monitors and teaching others through role-playing. Selection of a patient-specific HBPM device was also examined.

#### Workshop VI:

Clinical Skills: Asthma. This clinical skills workshop provided practical skills needed to provide pharmaceutical care for patients with asthma. The workshop emphasized: (i) proper use of peak flow monitors and spacers; (ii) correct use of a metered dose inhaler; (iii) teaching patients about peak flow monitors, spacers and inhalers; (iv) and teaching patients about use of different inhalers for relief and prevention of asthma attacks. The facilitator demonstrated the proper used of the devices, and participants practiced using the devices and teaching others through role-playing. Each participant received a peak flow monitor to take home after determining their own red, yellow and green zones.

**Final Practicum.** The final two-hour practicum was designed as a role play exercise followed by a group discussion. In the first hour, residents or faculty (facilitators) posed as patients with either diabetes, hypertension, or asthma. The pharmacist participant played the role of a community pharmacist. The facilitators were given a patient profile and situation (see Appendix A) along with a set of questions the pharmacist should ask, what needed to be documented, a sample SOAP note and how follow-up should be conducted. Facilitators were encouraged to act as patients that were

difficult, combative, illiterate and/or depressed. The participants worked in pairs with one person playing the pharmacist and the other an observer. The pair was given the same patient profile and situation as the facilitators (see Appendix A). Before meeting with their "patient", the pair was given a few minutes to plan for the encounter. The encounter required the participant to assess, demonstrate, teach, counsel, document and follow-up. Facilitators were each in a separate room acting as patients. It was up to the pharmacist to ask all the appropriate questions, do the necessary teaching (or reteaching) of skills of self-monitoring, and counsel the patient about his/her medications, nonpharmacologic therapy, and monitoring. The observer for the pair took notes and made comments as the pharmacist interacted with the patient. Following the patient encounter, each participant pair was given time to develop and document a monitoring/follow-up plan. The observer also went over his/her impression of the counseling session as a way of providing feedback to the pharmacist. The entire procedure was repeated a second time with the roles of the pharmacist and observer reversed. This allowed the participants to play the role of the pharmacist and to see "patients" afflicted with two of the three disease states. The SOAP notes were collected for evaluation, and copies were returned to the participants. The last hour of the workshop was a large group meeting (all the facilitators and participants together) to discuss the results. The facilitators led the discussions, provided the correct responses to the scenarios. and answered questions from the participants. Feedback was provided as formative assessment; no objective evaluation was done.

#### Assessment of Practicum and Program

The practicum was assessed with a feedback form from the facilitator, the SOAP note, and the large group discussion. The whole workshop program was evaluated by a selfassessment tool to evaluate perceived improvement in attitude and clinical skills at the conclusion of the program (see Appendix B).

## **RESULTS**

All twelve participants completed the workshop series. Ten of the twelve participants completed the self-assessment tool, an 83 percent return rate. Only nine people answered the question regarding readiness to precept students. From the self-assessment tool, most of the participants felt that the workshop series increased their knowledge, improved confidence, and enhanced the desire to counsel patients. With one exception, the participating pharmacists made changes in their daily practice to increase cognitive activities after the workshop series concluded. These activities included the demonstration of home monitoring devices, increased patient education, phone follow-up or other types of patient monitoring, and documentation of the pharmacist's services. Five out of nine (56 percent) participants felt that they needed more training before precepting students.

All participants thought the interactive teaching methods were beneficial and enhanced learning. Seventy percent thought the handouts and guidelines were very useful and all participants thought that they would use the handouts and treatment guidelines in their practice in the future. Results of the self-assessment questionnaire are presented in Tables I, II, and III. Each participant's learning was rated as adequate, based on final practicum performance.

Table I. Self-assessment of participants on program outcomes.

	Percent increased		
Activity	Knowledge	Confidence	
Pharmaceutical care	90	90	
Patient counseling	90	70	
Documentation	80	90	
Monitoring/follow-up	90	90	
HTN/BP monitoring	100	100	
Asthma/peak flow/inhalers	100	100	
Diabetes/BG monitoring	90	90	

Table II. Changes in practicea after the workshop

	Percent		
	Yes	No	
Made changes in daily pharmacy practice	90	10	
Demonstrated home monitoring devices more frequently after the workshopb increased motivation/desire to counsel	80	10	
patients patients	90	10	

<sup>&</sup>lt;sup>a</sup>Changes in practice included the following: 1) follow-up phone calls or other monitoring (30%), 2) NCPA form or other documentation (40%), 3) increased patient education/counseling (70%), 4) disease state management (70%).

Table III. Readiness/comfort of participants in precepting students

	Percent	
Ready/comfortable now	78	
Ready in the near future	100	
Need more training on precepting	56	
Need more clinical skills training	11	

## DISCUSSION

A clinical skills/preceptor training program is one strategy for preparing pharmacists for new cognitive roles. Other programs designed to train community pharmacists to provide pharmaceutical care focus on process(5-8). Issues such as reorganization of workflow, changing dispensing responsibilities and making pharmacists accessible for direct patient contact are often taught(9). Other training programs focus on problem identification, action plan and documentation (10). However, even with a re-engineered pharmacy and pharmacists trained in process, the end product of provision of pharmaceutical care will fall short unless the essential elements are in place. Knowledge is critical. It helps build confidence and empowers pharmacists. Knowledge, along with clinical skills, are the most important tools to providing pharmaceutical care. However, many practicing pharmacists are not willing to make the change. A paradigm shift is necessary before an increase in cognitive services can occur(11).

There are some limitations to this training program and study results. The pharmacists were specially selected based on certain criteria. These pharmacists were considered to be more highly motivated among the area community pharmacists and thus may not be representative of the general pharmacist population. In the program, there were a limited number of disease states covered. The program was intended to cover common disease states that pharmacists can easily monitor and teach patient self-monitoring as a starting point. More disease states and methods to precept clerkship students are presented in phase II of the training program. In addition, knowledge and skills were not objectively evaluated. However, formative assessment with feedback may be a more effective evaluation tool in this situation than a written exam. Finally, the outcomes of this study have yet to be tested in a pharmacy environment. Plans are to test this once the pharmacists have completed phase II and begin phase III, which is to precept students as part of the college's experiential education program.

## CONCLUSIONS

A clinical skills workshop series is an effective method to begin preparing community pharmacists to become clinical role models and preceptors for community pharmacy clerkship rotations. Results of this study showed that this type of workshop series can be effective in influencing daily practice activities and professional attitudes toward pharmaceutical care. Most of the pharmacists made changes in their daily practice, exhibited increased motivation and desire to counsel patients, and demonstrated home monitoring devices more frequently. Although limited in scope, pharmacists participating in this workshop series gained new knowledge and clinical skills in the management of several major disease states. Even more importantly, they expressed new confidence in carrying out cognitive activities.

An important goal for colleges of pharmacy is the development of training sites for students and residents in community pharmacy settings. This clinical skills workshop series did not offer sufficient education on precepting students. Half of the participants had reservations about precepting without additional training on clinical teaching. However, the other half did feel that they were ready to precept students.

Phase II of this workshop series has recently been completed. In addition to presenting other common disease states, the workshops incorporated clinical teaching, precepting students and patient education into every session. Implementation of pilot clinical community clerkship sites and expansion of the preceptor training program is currently underway.

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#### APPENDIX A.

#### Clinical Skills Workshop - Practical **Diabetes Mellitus**

#### **Pharmacist**

A 74 year-old retired mail carrier visits your pharmacy and brings you a new prescription for "NPH insulin 15 units SQ qHS #1 bottle - 2RF". Because he has recently moved to St. Louis to live with his daughter (his wife passed away 2 months ago), he has not previously shopped at your pharmacy. He also states that his physician wants him to get a machine to check his blood sugar more often. He shows you a list of medications that he currently takes.

## **Current Medications:**

Glyburide 10 mg twice daily Capoten 25mg twice daily Nortriptyline 50 mg at bedtime Aspirin 325 mg each morning

#### Clinical Skills Workshop-Practical **Diabetes Mellitus**

#### Patient (Facilitator)

A 74-year-old retired mail carrier visits your pharmacy and brings you a new prescription for "NPH insulin 15 units SC QHS #1 bottle - 2 RF". Because he has recently moved to St. Louis to live with his daughter (his wife passed away 2 months ago), he has not previously shopped at you pharmacy. He also states that his physician wants him to get a machine to check his blood sugar more often. He shows you a list of medications that he currently takes.

#### **Current Medications:**

Glyburide 10 mg twice daily Capoten 25mg twice daily Nortriptyline 50 mg at bedtime Aspirin 325 mg each morning

#### Questions the pharmacist should ask the patient (and the answers you should give):

- What did the doctor tell you the insulin was for? Oh, he wants to control my diabetes better; he said my blood test was "13" or something.
- How did the doctor tell you to take the insulin? His nurse showed me how to measure it up and give the shots in my stomach.
- What did the doctor tell you to expect (efficacy and toxicity)? He said something about preventing complications, but I didn't really understand what he was talking about. I do know that he said the tingling pain in my feet was because of the diabetes \*\*Should teach you about complications\*\*
- How are you taking your other medicines? I have a pill box that I fill on Sundays. Sometimes I forget to take my medicines at night, though. The wife used to keep me

- straight.
- Are you taking any over-the-counter medications? A friend gave me a salve called "Zostrick" or something. I think it helps my feet!
- 6. Do you have any questions for me about your medications (new or old)?

This insulin stuff won't cause me to go into a coma or anything, will it?

## Counseling about the new medications: pharmacist should include:

review of insulin administration technique;

proper insulin storage;

proper use/storage of syringes;

rolling the insulin;

symptoms of HIGH blood sugar;

symptoms of LOW blood sugar;

what to do if having symptoms of LOW blood sugar.

## Selection and counseling on self-monitoring of blood glucose:

assessed whether the patient had any special needs/desires in a glucometer (just #'s vs.

graphing/storage, timing vs. One-touch/no wipe, etc.);

assessed whether patient had any disabilities (visual, dexterity) performing technique;

addressed cost issues:

discussed proper technique of obtaining a sample;

discussed quality control (control solutions, calibration);

discussed cleaning machine;

offered to help with any problems that arise:

confirmed understanding/requested patient to demonstrate technique.

#### APPENDIX B

## **Clinical Skills Workshop Program Outcomes**

1)	a)	Have you made changes in your daily pharmacy practice
		since the beginning of this program?

- $\Box$  yes
- If yes, which of the following changes have you made (you may check off>1)
- follow-up phone calls or other form of monitoring
- use of the NARD form or other form of documentation
- increased patient education or counseling activities П
- disease state management (e.g., hypertension, asthma, diabetes)
- other (please explain)
- How has the program affected your knowledge of the follow ing areas? (circle one for each):
  - pharmaceutical care same patient counseling/communication **b**) same documentation of pharmacy activities c) same d) monitoring and follow-up of patients same
  - hypertension/blood pressure monitoring e) same
  - f) asthma/peak flow monitoring/inhaler use same diabetes/blood glucose monitoring same
- 3) How has this program affected your comfort level/confidence in each of the following areas? (circle one for each):
  - pharmaceutical care a) same b) patient counseling/communication same documentation of pharmacy activities c) same monitoring and follow-up of patients d) same hypertension/blood pressure monitoring e)  $\downarrow$ same f) asthma/peak flow monitoring/inhaler use same g) diabetes/blood glucose monitoring same
- On a weekly basis, how many times have you demonstrated the use the following items to a patient since the start of this

	program?  a) blood pressure monitor b) blood glucose monitor c) peak flow monitor d) inhaler and/or spacer Is this □ less □ more, or □ the same as before the program (check one)?	9)	<ul> <li>□ diabetes</li> <li>□ asthma</li> <li>□ anticoagulation ("Chest" guidelines)</li> <li>□ AHCPR guidelines (any of them)</li> <li>Do you think you will use the handouts/guidelines in your practice in the future?</li> <li>□ no □ yes</li> </ul>
5)	How has your motivation/desire to counsel patients been affected by this program? (circle one)  □ increased □ decreased □ same	10)	The interactive teaching methods used in these workshops (check one):  uesign were beneficial and enhanced learning, and were more effective than lectures  uesign were satisfactory and provided the same learning as
6)	Approximately how many patients are you actually following up on, and/or documenting information about since this program began?  □ 0-5  □ 5-10  □ 10-15  □ 15-20  □ >20	11)	lectures  □ were not as effective as lectures would have been  □ were complicated and too advanced  How much more preparation do you feel you need before you can take students on clinical rotations?  □ I am ready to precept students on rotation now; I would feel (relatively) comfortable  □ I will be ready to precept students as soon as I am more
7)	How useful were the handouts and guidelines?  very useful moderately useful not useful		familiar with the new computer system; I would then feel comfortable  I need more training specifically on precepting students and what is expected of them before I would feel comfort able taking students on rotation
8)	Which of the guidelines provided have you referred to in your pharmacy? (check all that apply)  hypertension		☐ I need more training on clinical skills and disease state management before I would feel comfortable taking students on rotation