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## Adopting an Advanced Community Pharmacy Practice Experiential Educational Model Across Colleges of Pharmacy

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**Keywords:** community pharmacy services, pharmaceutical services, pharmacy education, faculty development, advanced pharmacy practice experiences

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### Abstract

**Objective:** To discuss the experience of sharing an experiential model of education and practice development between two colleges of pharmacy and to provide a framework to guide faculty in this type of collaboration.

**Case Study:** The Ohio State University College of Pharmacy (OSU COP) Partner for Promotion (PFP) program was developed in response to the need for advancing practice in the community pharmacy setting. After successful implementation of this program, the PFP program design and materials were shared, adapted, and implemented at the University of Utah College of Pharmacy (Utah COP). Collaborating faculty developed a framework based on lessons learned through this experience which proposes key guiding strategies as considerations to address prior to embarking on sharing any aspect of an educational program or model between institutions. Each step of the framework is described and applied to the process followed by The OSU COP and Utah COP in sharing the PFP program. Additional considerations related to transfer of educational models are discussed.

**Results/Conclusion:** Sharing the education model and materials associated with the PFP program between institutions has enhanced experiential opportunities for students and helped develop residency training sites in the community setting. In addition, the relationship between the two colleges has contributed to faculty development, as well as an increase in community pharmacy service development with community pharmacy partners at each institution. It is hoped this experience will help guide collaborations between other colleges of pharmacy to enhance education of future pharmacists while positively impacting pharmacy practice, teaching, and research by faculty.

### Introduction

Community and ambulatory care college faculty, as well as experiential staff, at institutions across the U.S. share similar struggles in stimulating growth in community pharmacy direct patient care services and, subsequently, enhancing experiential opportunities in the community. (1) Further compounding the insufficiency of sites is the national shortage of pharmacy faculty, which limits time current faculty have available for creation of new educational and practice programs. (2) One method to address this shortage is by sharing innovative, successful models of education and practice development, thereby allowing individuals and

institutions to maximize productivity and impact. The purpose of this paper is to discuss the experience of sharing an experiential model of education and practice development, The Ohio State University College of Pharmacy (OSU COP) Partner for Promotion (PFP) program, and to provide a framework for sharing educational models between colleges of pharmacy. By providing this framework, authors aim to encourage faculty to collaborate for efficiency in action to enhance education of future pharmacists.

### The Educational Model

The OSU COP PFP program is a 10-month, elective, longitudinal advanced community pharmacy practice experience (APPE) involving mentoring of pharmacy students and preceptors by OSU COP faculty via formal orientation; face-to-face training sessions, visits, and meetings; online monthly meetings; formal and informal feedback on service

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development materials and process; and a web site offering resources and discussion board. The OSU COP Partner for Promotion (PFP) program was developed in response to the needs for advancing pharmacy practice in the community and improving community experiential sites. More specifically, the goals of this program are to 1) enhance the skills and confidence of students and community pharmacy preceptors to deliver and expand advanced patient care services in community pharmacies, 2) create sustainable advanced patient care services in community pharmacies, and 3) increase the number of quality advanced community pharmacy practice experiential sites available for OSU COP Pharm.D. students. A detailed description of this program has been published. (3)

Approximately one hundred students and 50 pharmacy sites have been involved in the PFP program at OSU COP since 2005, spanning 15 Ohio counties and pharmacies in 3 additional states (West Virginia, Kentucky, Washington). Key outcomes gathered and reported relate to student skill development, new community advanced pharmacy practice experiences (APPEs), and service sustainability. (3) Student perceptions of attainment of service development skills are evidenced by an increase in the percentage of students agreeing they possess key skills from pre-PFP to post-PFP likert-type scale survey questions (Figures 1 and 2). Since its inception, thirty-five new community advanced pharmacy practice experiences (APPEs) have been added to the OSU COP through the PFP program. The program has engaged eight different pharmacy chains in the program and reports a rate of service sustainability at the pharmacy sites of approximately 50 percent. (3) A list of types of services developed through the PFP program at OSU COP are listed in Table 1. With the success of the PFP program at OSU COP, the feasibility of transferring this model to other colleges of pharmacy was piloted with the University of Utah College of Pharmacy (Utah COP). The community faculty member at Utah COP engaged in this collaborative model sharing to increase his impact on community pharmacy development beyond his practice site, expand experiential opportunities in community pharmacies for students, and build community pharmacy residency sites.

### Sharing the Educational Model

The materials provided in this model transfer included documents used in the planning and execution of the PFP program at OSU COP. A timeline for implementation was provided as well as templates of agendas, programming materials, planning guides, rubrics for evaluation, and resource lists (web sites, journal articles, textbooks) that could be adjusted for use in orientation, training, and mentoring of students and preceptors. The model included

access to online, recorded Power Point modules that provide a step by step process for developing and implementing a patient care service. These Power Point modules could be shared directly with preceptors and students engaged in the PFP program at Utah COP or adapted for use by the Utah faculty. In addition, outcomes survey templates for students and preceptors and other service materials examples, such as needs assessment surveys, were included in the model. Experience with the model and lessons learned were shared through formal guidance documents integrated into the model materials as well as through formal and informal communication between faculty members at the two institutions. Formal communication included a one and a half day visit by the OSU COP PFP Director to Utah COP, which assisted with guiding the use of materials provided with the model transfer. Informal discussions between the PFP Director at OSU COP and the faculty member at Utah COP occurred via conference calls and email periodically throughout the integration process. Faculty members at both OSU COP and Utah COP estimated spending less than five percent of their time during the academic year transferring the model between their institutions.

The University of Utah COP rolled out their inaugural PFP year in the spring of 2009 with two community pharmacy partner sites and four students. Each site had a preceptor that was very interested in starting a patient-centered pharmacy service but was unsure of how to proceed. The students were matched to the sites based on overall interest in the site and geographic location. Each community partner implemented a service by the end of the student year and one of the sites has maintained the program.

For the second year of the program, three practice sites and six students participated. One of the community partners from the first year continued in the second year in order to continue to evolve as a patient-centered pharmacy practice in preparation to partner with the college as the first community pharmacy residency practice site. This site matched with its first PGY1 Community Pharmacy Practice Resident for the 2011-2012 year. Each site developed a patient-centered program and implemented it during the PFP year; all three sites continue to offer the service developed through this program. Examples of the implemented programs include an influenza vaccine service, a pneumococcal vaccine service, a diabetes education program, and developing a collaborative relationship with a family medicine clinic which has developed into providing clinical pharmacy services at that location (Table 1). The pharmacy collaborating with family medicine site is serving as the PGY1 community residency site. For the 2011-2012 academic year, the University of Utah is partnering with three practice sites

(1 repeating from the 2010-2011 year and 2 new) for their third iteration of the program. Students engaged in the PFP program at both Ohio State and the University of Utah have described a positive impact on their professional development through involvement in the PFP experience. (Table 2)

### **A Framework to Guide Sharing of Educational Models**

Based on the experience of sharing the PFP program between The OSU COP and the Utah COP, numerous lessons have been learned about the process involved with this type of collaboration. Key guiding strategies were developed by faculty involved in this project and are discussed below. These strategies are offered as considerations to address prior to embarking on sharing educational programs between institutions.

#### *1. Identify key personnel and resources*

Initial steps to this collaborative relationship start locally at each college. It is important to identify one to two champions for the program at each institution to be the primary person(s) involved in sharing the model as well as to be the recipient(s) and implementer(s) of the program at the receiving college. Through our experience, one principle faculty member at the University of Utah COP reached out to the OSU COP PFP program director after learning of the program at the American Pharmacists Association's (APhA) Self-Care Institute in 2008. These two faculty worked directly with one another throughout the sharing and integration process.

Other key personnel and resources to consider include any stakeholders that may be needed to assure success in this type of endeavor. This may include reaching out to local pharmacy partners to assess interest in being involved in a new endeavor with the college as well as connecting with individuals at the college. Bringing senior faculty related to the topic area of the educational model as well as administrative colleagues (i.e., Division Chair) in on the initial discussions can help garner support for the adoption of a new program. Consider financial resources, such as grants, as well as technology and administrative resources that may be needed or desired to initiate and maintain the new curricular addition. Grants from pharmacy organizations, such as the American Pharmacists Association or the Community Pharmacy Foundation, may offer relevant opportunities. In addition, it may be useful to consider grants from outreach and/or community engagement organizations such as foundations for health care advancement, those that target improving health care access to underserved populations, as well as community service or educational funding opportunities affiliated with internal university departments.

In the case of the PFP program transfer, a teaching grant was applied for and awarded by the Utah COP for this innovative teaching model. The grant monies helped to cover the licensing and consultative fees that were associated with the implementation of the program.

#### *2. Set individual and collaborative goals and timelines*

Starting with a goal start date defined allows for all parties to plan backwards to develop individual goals, while working from a common timeline. Faculty may consider setting goals for each institution, as well as identifying common goals for the collaborative project, taking into account short and long term markers of success. As these goals evolve into objectives and a task list, insert the project plan into a timeline that is shared between faculty and institutions for distribution and adaptation of materials and subsequent implementation at the receiving college. When the faculty member at the Utah COP contacted the PFP program director at OSU in June 2008, he already had determined his goal of initiating the program at his institution starting with rotations offered the next academic year, May 2009. This information allowed the faculty members to consider internal goals and coordinate among the two institutions a shared timeline (Figure 3) for model transfer no later than January 2009 to allow adequate time to recruit students and pharmacies and roll out the program according to Utah's goal start date.

Allowing for individual adaptation of materials based on resource availability and personal teaching preferences is important to consider related to buy-in of faculty, including the likelihood of continuation of the curricular addition beyond the initial offering, and sticking with timelines. Adaptation of the program by the Utah COP based on the original OSU COP materials led to some changes in the design of the program to fit with Utah COP's experiential format (6 week rotations vs. 4 week rotations), account for differences in technological access, as well as consideration of the individual faculty program director's teaching style. The instructional materials (slide sets for student and preceptor training modules, handouts, grading rubrics, etc.) supplied to the Utah COP by OSU COP were integrated into the program by the faculty member at the Utah COP with modifications of components to be consistent to pharmacy practice and the laws in the state. Having these materials supported the program's short time line to implementation because it was not necessary to create these educational materials from scratch, but allowed for individualization of the materials.

#### *3. Involve college administration, licensing and/or legal departments*

Once faculty point persons are defined and timelines are discussed, college administration as well as institutional

licensing and/or legal departments may be consulted. College administration should be involved in assuring faculty are provided adequate time and resources to facilitate successful model transfer. Decision makers in the college, such as the Dean, Assistant or Associate Deans, Experiential Directors, and Division Chairs must also express buy-in for the sharing of materials between colleges. This may include approval of funds for purchase of materials, travel for faculty, administrative support, or consultation fees to faculty at the sharing institution. Licensing or legal departments must communicate between institutions to clarify copyright transfer and ownership of materials, including intellectual property and future uses and/or expansions derived from the shared materials.

As this was the first instance of formal transfer of any Partner for Promotion materials, the OSU PFP program director worked closely with the Technology, Licensing, and Commercialization office at The Ohio State University to determine contract terms related to intellectual property protections, derivative or reproductive works, as well as cost considerations. Once the license terms were determined internally at The Ohio State University, the Technology, Licensing, and Commercialization office worked directly with the faculty point person as well as the legal department at the Utah COP to negotiate terms of the contract for material transfer. A consultation agreement was arranged with the program director at OSU COP to facilitate sharing of the program, which included a visit to the Utah COP to meet with potential pharmacy partner sites, faculty, and experiential personnel at the college. Through this visit, the OSU program director was able to help the Utah COP faculty assess the interest of the pharmacy partners, help ensure that the structure was in place for the program to succeed, and articulate the program requirements as well as Ohio State's experience to faculty at the college and preceptors at the practice sites. The syllabus and other course materials were also modified or created by faculty at Utah COP, if they did not exist, in accordance with the license terms. A key step at Utah COP was, in addition to receiving approval from OSU, to receive approval from the Department of Pharmacotherapy and the curriculum committee at the University of Utah to move forward with the new program implementation.

#### *4. Establish and maintain open communication between faculty*

As the faculty point persons begin to communicate to initiate this collaboration and work together to continue it, open lines of communication are an undeniable key to success. It is advisable for faculty to work together to establish set roles and responsibilities for the immediate and ongoing collaboration. The development of a trusting, collegial,

working relationship between the point persons at each institution is imperative to the success of educational model transfer between colleges. Promptness, positivity, honesty, and directness in communication are characteristics that may support building this type of working relationship among faculty who have no prior history working together.

For the faculty at OSU COP and Utah COP, meeting initially in person at the APhA Self-Care Institute in June assisted with establishing a strong professional relationship. After the APhA meeting, the faculty engaged in regular phone and email conversations, with frank discussions on the program, the barriers they were encountering through the negotiations between institutions on the PFP model license, and struggles in processes associated with recruitment of pharmacy sites and students.

#### **Benefits and Risks**

Beyond the framework, the authors advise faculty to consider how this collaboration will affect them individually as well as the impact it may have on students, their institutions, and any community partners. It is suggested that faculty think through benefits, risks, workload, as well as individual and institution preferences, mission, and goals prior to engaging in this type of educational model sharing and adoption.

The model transfer between The Ohio State University College of Pharmacy (OSU COP) and the University of Utah College of Pharmacy (Utah COP) has had a large impact on the education provided to students, relationships with community pharmacy partners, and faculty development. The two PFP program directors have been able to share useful and applicable conversations on teaching and practice in community pharmacy that have translated directly into the individual faculty's contributions in their respective states through the PFP program and residency training, as well as patient care and classroom teaching. Faculty have collaborated on poster presentations, a continuing education presentation, and a manuscript. Future plans include collaborative research projects that will involve not only analyzing the implementation and delivery of this experiential education model at various colleges of pharmacy, but also using this partnership as the basis for practice-based research networks that may help answer clinical and educational questions in the area of pharmacy practice and education. In addition to the partnership between the OSU COP and Utah, the Partner for Promotion program was licensed to four additional colleges of pharmacy in 2010, Chicago State University, Midwestern University Glendale, Northeast Ohio Medical University, and West Virginia University. This expansion project of the PFP program at these institutions is evaluating the scalability of this model.

The main risks associated with sharing educational models between colleges of pharmacy include ownership of intellectual property, fees associated with initial purchase as well as ongoing use of the materials, and potential for discontinuation of the program. Through working with the Technology, Licensing, and Commercialization Office at Ohio State, in collaboration with the legal department at Utah, many of the logistics related to intellectual property and cost were negotiated and addressed prior to the transfer of model materials. The risk of the program no longer being offered unless the initial faculty members are engaged is a concern. At Utah and Ohio State, additional faculty have been invited to be involved in all elements of offering the PFP program to ensure that the program is not tied to just one faculty member. The team approach to offering this type of novel program helps reduce the risk of the program being discontinued. In addition, formal outcomes assessments are conducted annually at each institution so that evidence of the

impact of the program on students, community experiential sites, preceptors, and faculty is available to support continuation of the program at the respective colleges.

#### **Conclusion**

The Ohio State University College of Pharmacy and the University of Utah College of Pharmacy successfully shared a model of experiential learning and community pharmacy practice development, the Partner for Promotion program, by following a simple framework. Authors propose that a variety of models of education and training in both experiential and didactic settings may be successfully shared among colleges of pharmacy to help enhance the education provided to future and current pharmacists. Faculty, students, and community partners participating in this type of collaborative arrangement of sharing educational models between colleges of pharmacy may benefit their individual learning, the college, their communities, and the profession of pharmacy.

Figure 1: Partner for Promotion students (Ohio State) perceived skills related to providing and implementing innovative patient care services.

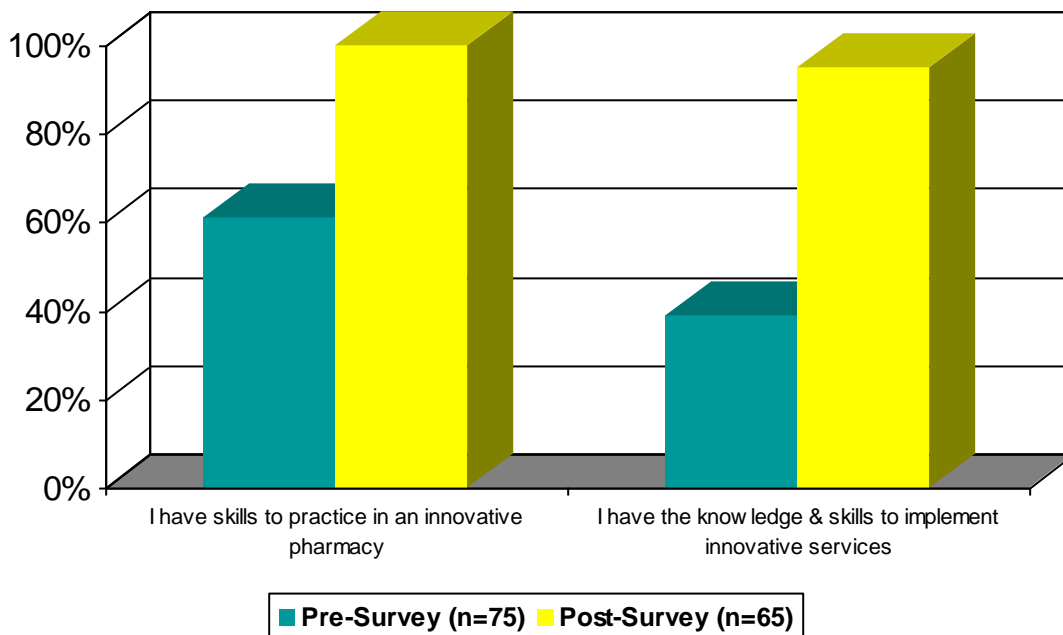
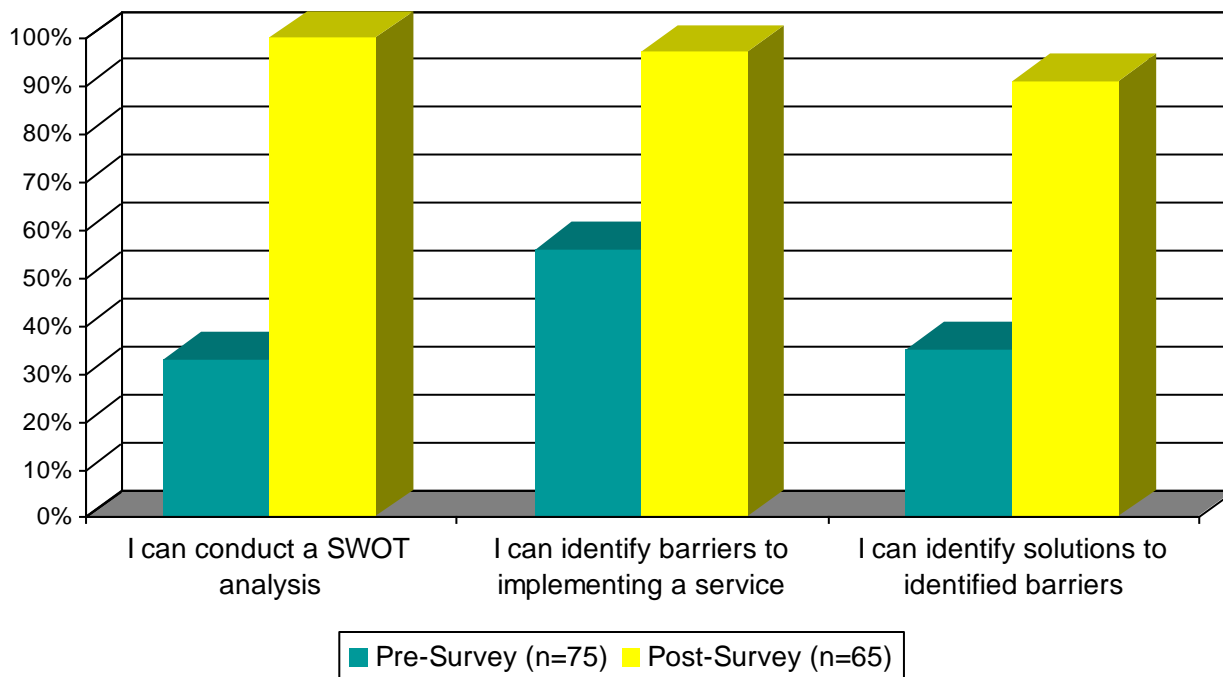
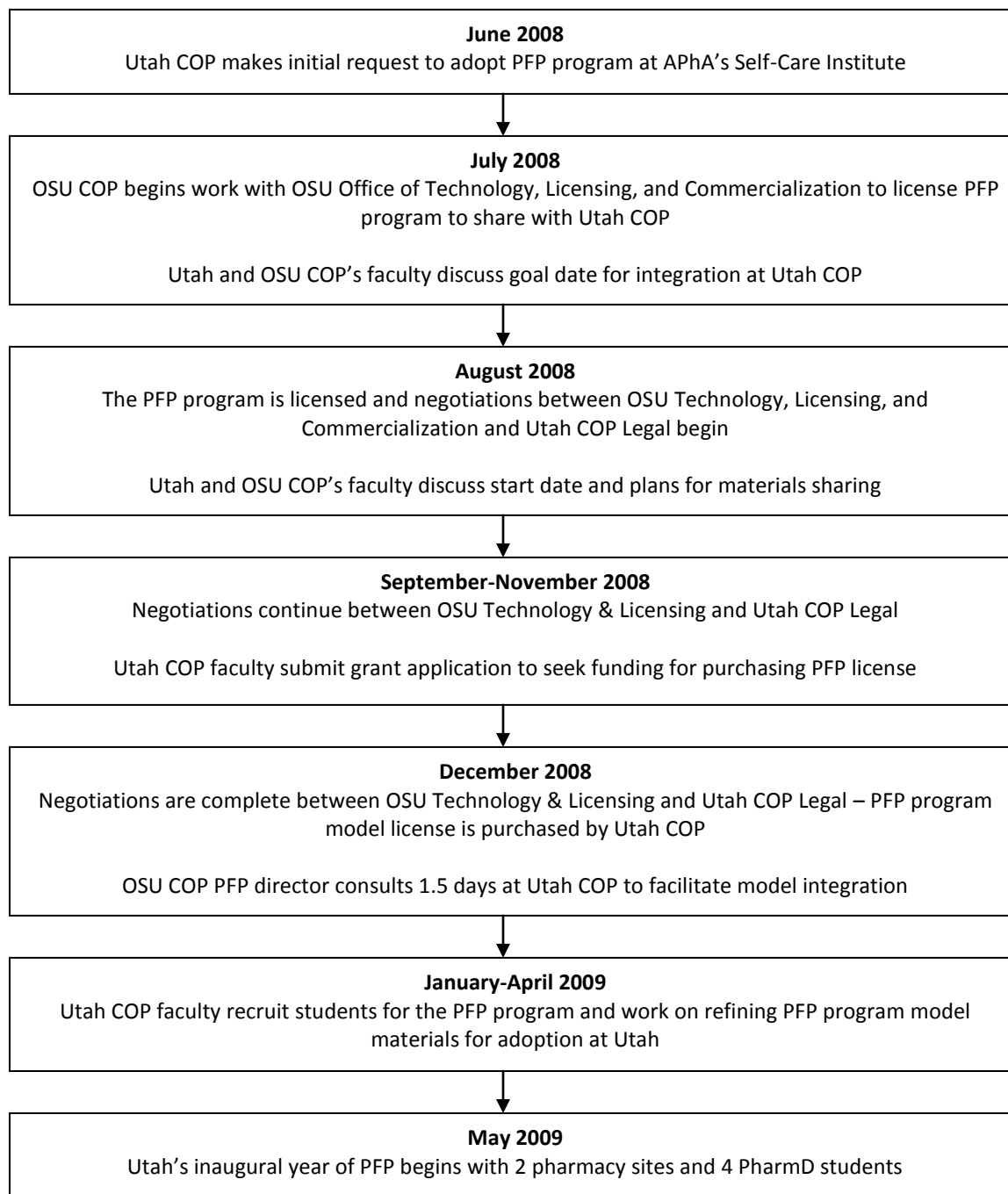


Figure 2: Partner for Promotion students (Ohio State) perceived skills related to specific service development skills.



\*SWOT = Strengths, Weaknesses, Opportunities, Threats; Refers to conducting a needs assessment including these elements.

**Figure 3: Timeline for Partner for Promotion Model Transfer**



**Table 1: Types of Services Developed by Pharmacies Participating in the Partner for Promotion Program**

<b>Ohio State</b>
Anticoagulation management Comprehensive medication reviews (general and disease-focused: HIV, transplant) Diabetes management Immunizations Osteoporosis screenings Tobacco cessation services Wellness screenings (blood pressure, weight, cholesterol, blood glucose)
<b>University of Utah</b>
Immunizations Diabetes education Clinical pharmacy services with a nearby family medicine clinic

**Table 2: Quotes from past Partner for Promotion student participants at Ohio State and the University of Utah**

<b>Ohio State</b>
I feel I learned a significant amount on how to manage and execute a plan. Meeting continuous deadlines and interacting with professionals on a level I had not been exposed to in school.
I think it gave me a very realistic perspective on exactly what it takes to find a need, develop a process, roll it out, and measure it to see if it's sustainable and worthwhile.
The program gave me the opportunity to practice my communication skills with physicians and with patients. It gave me the opportunity to discover the best way for me to locate and interpret data and how to present it to the respective audience. It also gave me confidence in my decisions and abilities to affect others in a positive way.
<b>University of Utah</b>
I learned how to do a cost analysis, talk with healthcare professionals...and how to write a collaborative practice agreement.
It gave me the confidence to build a clinical service from scratch.
The direction I received greatly expanded my skill set and set me up to succeed in the Ambulatory Care arena. I look forward to...providing professional services that improve patient outcomes and individuals' lives.

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