Successful Practices in

Experiential Education Delivery and Academia-Practice Partnerships

Administration of the Experiential Education Program, and Quality Assurance for Education, Scholarship and Patient Care in Community-based Partnerships

Pharmaceutical Education 2005
Massachusetts College of Pharmacy and Health Sciences  
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Boston, Massachusetts 02115

Experiential Education Delivery and Academia-Practice Partnerships  
Area of Successful Practice: Administration of Experiential Education Program

Description

In January 2003 with the Hiring of an Assistant Dean of Experiential Education and Professional Affairs, the Office of Experiential Education in the Department of Pharmacy Practice was restructured and reorganized into a separate Division which reports directly to the Dean of the School of Pharmacy. All members of the Division have academic appointments within the Department of Pharmacy Practice to maintain the connection with the Department. During this reorganization both on-campus and off campus experiential training programs were considered. The rationale for developing one body to oversee both on-campus and off-campus experiential education was to ensure consistency and proper progression of learning objectives and student development.

The organizational structure (figure 1) was created to ensure that each aspect of experiential education was given enough time and commitment to ensure the highest quality of education possible.

Over the first year of implementing this structure there were two major goals. The first goal was to hire qualified individuals, match their strengths to the right job descriptions and enable them to identify issues, develop solutions and implement those solutions. The second goal was to establish a Strategic Plan. This plan would review past experiences and performance, assess the current needs and areas for improvement and plan for the future.

The initial phase of the Strategic Plan was a SWOT analysis to identify what was working and what was not working as well as identify future concerns and potential opportunities.
Areas identified for improvement:
1. Consistency and communication occurring between on-campus and off-campus experiential activities
2. Consistency and communication between introductory and advanced rotations
3. Quality preceptor development, both formal and informal
4. Quality Management
5. Preceptor interaction and experiential site assessments

Outcomes
Through the creation of this organizational structure and team approach, the members of the Division have taken a major role in the over-sight and implementation of on-campus laboratory experiences such as the School’s Introductory Pharmacy Experience Laboratory, in the students first professional year, as well as the Advanced Practice Management Course, consisting of a Community Lab, Institutional Lab and Physical Assessment Lab, taught in the third professional year.

With the creation of the Director positions, each Director has been given responsibility of both the Introductory Experiences and Advanced Experiences within their respective areas. This has allowed for a greater consistency with preceptors and has enhanced the experiential learning, training and professional growth of students.

In the first 16 months following the development of this new Division there were six separate preceptor development programs which educated and trained 140 more preceptors in this academic year than in the previous academic year.

In respect to site visits, the members of the Division created a Total Quality Management System consisting of student evaluation tools of the site and Divisional site assessment tools utilized by the Directors during site visits. The Division was able to develop and initiate this comprehensive system and performed 250 more site visits in the 12 months after its creation than in the previous 12 months. During this time period new sites were created, older sites were either reengineered to meet the new standards of the entry-level degree program or were no longer utilized. Consequently, 92 sites were closed and 23 new sites were established.

Today the Division of Experiential Education continues to reevaluate their programs to ensure a continual improvement process. For example, members of the Division are fully integrated into the Department of Pharmacy Practice, have responsibilities within Department and School Committees such as teaching responsibilities in didactic courses, committee and task force assignments and access to further professional development. The members of this team have a higher job satisfaction due to seeing the tangible benefits and outcomes of their efforts.

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Experiential Education Delivery and Academia-Practice Partnerships

Description

The University of Montana School of Pharmacy and Allied Health Sciences (SPAHS) has, for the better part of two decades, incorporated quality assurance activities as a requirement for the mandatory general medicine Advanced Pharmacy Practice Experience (APPE – formerly called clerkship.) More recently, a quality assurance component has been incorporated into the mandatory ambulatory care APPE as well.

Saint Patrick Hospital (SPH) is a 200 bed facility that serves as the APPE site for more University of Montana pharmacy students than any other site. Currently, about 20-25 students complete their eight week general medicine APPE at SPH each year. Additionally, another 30 to 40 elective four week APPE experiences in a variety of specialty areas are hosted by SPH each year. Over the years, arrangements have been made to allow full-time SPAHS faculty to use SPH as their practice site as well as to serve as preceptors for pharmacy students assigned to the facility. In addition, SPAHS has “bought” time of pharmacy clinicians from the hospital to provide additional preceptorship of APPE students. Currently, two full-time SPAHS faculty are assigned to SPH as their practice site; additionally SPAHS buys varying amounts of time of three other pharmacy clinicians to precept students.

The required quality assurance activity of the mandatory general medicine APPE at SPH is generally structured as a DUE or CQI project to give the student exposure to an entire process of recognizing the issue, developing pertinent criteria for data collection, developing a data collection sheet, collecting the data, analyzing the results, and making suggestions for change or improvement if necessary. One of the preceptors (or occasionally another pharmacist or health care professional) is assigned as the main contact for guidance in the project. Transition from the Bachelor of Science degree program, with its four week required general medicine APPE, to the Doctor of Pharmacy degree program, with its eight week required general medicine APPE, has improved the feasibility of students completing a meaningful DUE or CQI project during their tenure. In addition, some students complete specialty APPEs at SPH contiguously with their required general medicine APPE which may increase the amount of time available to complete the project to 12 weeks.

Outcomes

Over the past several years, the majority (approximately 80 to 90%) of the DUE and CQI projects completed by the pharmacy department at SPH has been completed by pharmacy students under the leadership of SPAHS faculty or faculty affiliates. These projects help to improve patient care and patient safety by characterizing, among other things, drug prescribing patterns and adverse drug events. The students essentially provide manpower to complete needed projects, freeing pharmacy staff to pursue other activities. Results of most of these projects are presented to the SPH Pharmacy and Therapeutics Committee or other SPH committees, with students presenting these results if time allows. Some of these projects are important to the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) process. Proctoring these projects allows the university-based pharmacy faculty members to become more fully integrated into hospital activities.

The importance and success of the pharmacy student quality assurance activity is reiterated by requests from hospital departments external to the pharmacy such as Diabetes Care, Infection Control, and Performance Improvement for assistance in completion of their projects related to drug therapy. Examples of projects completed by pharmacy students over the past two years include the following:

- Vitamin dosage in patients with alcohol use disorders
- Adherence to community acquired pneumonia guidelines
Incidence of *Clostridium difficile* diarrhea
Documentation of dangerous abbreviations
Deep venous thrombosis (DVT) prophylaxis
Intravenous phosphate dosing
Postoperative nausea and vomiting (PONV) prophylaxis
Adherence to pharmacy renal dosing procedure
Discharge prescriptions of patients undergoing therapeutic interchange
Timing to first dose of antibiotics
Vitamin K dosing

Blood sugar control in open heart surgery patients

Some of these projects have resulted in practice changes within the hospital, such as development of DVT and PONV guidelines and insulin drip order changes.

Documentation of value from allowing the hospital to host pharmacy students in their experiential training is important to the continued relationship with the school of pharmacy. Completion of clinical interventions by pharmacy students is a common focus of reports of value added by these students to their APPE site. Completion of quality assurance projects is an underappreciated method by which students can serve their site while at the same time gain valuable experience.

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Experiential Education Delivery and Academia-Practice Partnerships  
Area of Successful Practice: Interprofessional Education

Description
Creighton University’s School of Pharmacy and Health Professions created an Office of Interprofessional Scholarship, Service and Education (OISSE) in 2001. Since 1997, the School has been the recipient of federal funding from Health Resources and Services Administration (HRSA), Bureau of Health Professions for interprofessional education activities and delivery of clinical services on the Omaha and Winnebago Indian reservations in northeastern Nebraska. Currently, the Office functions under Circles of Learning” Community and Clinic as Interdisciplinary Classroom HRSA Grant #ID36HPO3158. As the self-sufficiency of these activities continues to emerge so has the need to coordinate student and faculty activities across the disciplines in these community-based sites. The Office is responsible for planning, organizing, and implementing interprofessional education, service, and scholarship activities that are part of the academic-community partnership with these rural, Native American communities. Office personnel are actively involved in developing an infrastructure for interprofessional education, research and practice within the School. The Office is led by three co-directors, one from each discipline, pharmacy, occupational therapy and physical therapy and includes a full time project coordinator and has administrative liason (associate dean). The Office is used as a resource base for interprofessional education models and practice, current educational research, seeking additional funding opportunities and an outlet for service learning opportunities which coincides with the University’s mission of service. The Office works collaboratively with various units on campus including the Office of Interprofessional Education within the School of Medicine and Health Sciences. The Office provides a central point of communication for coordination and scheduling of activities. This has been very successful in not only coordinating activities but enhancing service and scholarship activities across the disciplines.

Outcomes/Key Contributions to School/Institution
- Interprofessional approach to service learning and clinical service delivery with hundreds of students trained along with health care services provided to a rural, underserved area. The necessary infrastructure and support for these activities is present in the School of Pharmacy and Health Professions through the Office of Interprofessional Scholarship, Service and Education. Through clinical contracts between the School and the tribal health care facilities, support is provided to allow student clinical learning in Indian Health Service. This demonstrates a sustained commitment of the School to interprofessional training in rural, underserved communities.
- Development of a strong academic-community partnership between Creighton and the Omaha and Winnebago Indian Tribes. This academic-community partnership provides opportunities for students and faculty to be women and men for and with others. Students are offered a multitude of service opportunities from a one day volunteer opportunities including the Native American Retreat where students educate Native American high school students about the profession to a 3-day short term intensive which integrates cultural immersion, clinical exposure and service learning to three to twelve week clinical experiences.
- Engagement in scholarship surrounding interprofessional education. Faculty and staff engage in scholarship to promote the principles of service learning as social justice and explore the infrastructure necessary to support interprofessional education. Scholarship includes scholarly publications and presentations at local, regional, national and international conferences.
• Interconnectedness of activities with Creighton’s mission and Ignatian values provide student and faculty opportunities for service learning. The activities through the Office of Interprofessional Scholarship and Service are consistent with the most recent Committee on the Health Professions Education Summit Board of the core competencies needed for health care professionals: “All health professionals should be educated to deliver patient-centered care as members of an interdisciplinary team, emphasizing evidence-based practice, quality improvement approaches, and informatics.”

• Approximately 900 physical therapy, occupational therapy, physical therapy assistant, occupational therapy assistant, nursing, social work, radiological technology, medicine and pharmacy students have experienced rural, interdisciplinary health care on the reservations through short term experiences, class projects, and volunteer activities. Over 65 students from occupational therapy, pharmacy and physical therapy, have completed long term clinical experiences at the reservations.

• Rehabilitation services include over 11,000 patients since the grant funding began in 1997. Clinical services continue to expand.

• Self-sufficiency of clinical services has been achieved through contracts between the School of Pharmacy and Health Professions and Carl T. Curtis Health Center and the Winnebago IHS Hospital and billing for services by the sites. The contracts provide a physical therapist 5 days/week for the Winnebago Hospital, and an occupational therapist 4 days/week between the two sites. Through the academic-community partnership, the Omaha Tribe has hired a physical therapist for outpatient rehabilitation and an occupational therapist as the Director of the Four Hills of Life Wellness Center. Pharmacy faculty have been involved as consultants to the IHS pharmacists at both sites.

• Community activities through the Four Hills of Life Wellness Center impact the Omaha Tribe through health education programming, a health education website, after school programming for youth and a fitness room for adults.

• Supported by grant funding, the first national model for interdisciplinary short-term experience in pharmaceutical education was designed.

• Eight healthcare professionals from the reservations have received adjunct school appointments at Creighton University to retain and recruit rural health practitioners.

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Experiential Education Delivery and Academia-Practice Partnerships  

Area of Successful Practice: Professional Experience Program

Student Placement

The Professional Experience Program (PEP) at the University of Pittsburgh School of Pharmacy provides a progressive set of experiences throughout the curriculum, with specific focus each year based on the setting or context of practice and the students’ expected level of proficiency in performing pharmaceutical care. Students complete a total of 1264 hours of supervised practice, with 144 hours in introductory pharmacy practice experiences during the P-1, P-2 and P-3 years and 1120 hours in advanced pharmacy practice experiences during the P-4 year. During the final year of the curriculum, students are required to complete 7 four-week rotations. They include:

- Two (2) Acute Care Rotations
- One (1) Ambulatory Care Rotation
- Two (2) Elective Rotations
- One (1) Advanced Institutional Pharmacy Practice Rotation
- One (1) Advanced Community Pharmacy Practice Rotation

Furthermore, students choose the specific sites they would like to attend out of a possible 850 sites available. Operating within these parameters makes manual assignment of students logistically difficult. Because of this, the School now employs a novel computer program that automates the placement of students at rotation sites.

The “Professional Experience Program Pharmacy Placement Program” was developed by Indianer Computer Corporation in 1996 and is currently maintained by the Assistant Director of the PEP. The program has the following capabilities:

A. Rolodex for preceptor/students
B. Providing randomized lottery numbers for students to selection rotations
C. Tracking student selection and preceptor placement through reports

Rolodex for Students/Preceptors

All rotation sites that are used for the student selections are maintained in the site screen. The information contains, preceptor name, address, phone, fax and rotation category (i.e., acute care, ambulatory care, elective, community or institutional). As with the site screen the student screen provides information about the student (address, phone and emergency contact information).

Providing Randomized Lottery Numbers

The program also randomly generates lottery numbers for students entering their final year. This function is performed in the student screen section of the placement program. Once numbers are generated the administrator then prints out a report that gives students their place in the rotation selection process.

Tracking student selections/preceptor placements through reports

Once students are finished selecting rotations a report is generated indicating their selections. In addition, the report also lists all the students attending a particular site and the date of attendance. Merging capabilities within the program allow the administrator to create individual letters for students and preceptors indicating rotation selections and the dates of the rotations. In addition, the PEP has
incorporated *Blackboard's Course Info* course management software into the program. This software permits faculty to make course materials, audio and video clips, quizzes and grades available to students registered for the course. The communication tools make it possible for students to communicate with the other members of the class, preceptors, and administrators of the PEP.

**Professional Portfolio Development**

Throughout these experiences, the students’ level of mastery of the course ability outcomes is measured using a combination of assessments. The Preceptor Evaluation of Student Performance, Student Self-Assessment of Performance, and the Professional Portfolio are the three primary instruments used. The portfolio is an edited, integrated, collection of student evidence that demonstrate attainment of course outcomes. It reflects the students’ evolving professional growth from the start of the program to completion while encouraging a student-centered approach to learning. Students are encouraged to take responsibility for their learning and are held accountable to demonstrate it through their portfolio. Students submit their portfolio at the end of each term. The content of the portfolio is not limited to activities of the experiential learning courses. However, it serves as a medium for reflection of experiences in those courses. Students’ integrate a wide range of relevant experiences into the portfolio, including those from work, experiential learning activities, extra curricular or volunteer experiences, and didactic course work. Faculty members, teaching assistants, residents, and student graders (typically seniors in the pharmacy program) provide detailed written feedback that assists students in developing the document. The contents of the portfolio include a title page, table of contents, curriculum vitae or resume, personal statement or philosophy for the provision of pharmaceutical care, narrative describing how the student has progressed in attaining each course objective followed by representative supporting material, miscellaneous section including a reflective journal, course assignments, and preceptor evaluations of student performance.

Portfolio review is time consuming. However, the value extends beyond student evaluation. It provides a means for giving individual feedback and directing student learning. Each end of semester portfolio evaluation takes approximately 1 hour. The benefit of using more evaluators comes with the price of consistency in grading. Therefore, efforts are being made to develop an evaluation tool specific to this process. It is our hope that this tool will accelerate the pace of the evaluation process while achieving a level of consistency among graders.

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Experiential Education Delivery and Academia-Practice Partnerships
Area of Successful Practice: Quality Assurance for Education, Scholarship and Patient Care in Community-based Partnerships

Community Pharmacy Practice Program

Description
The Virginia Commonwealth University (VCU) School of Pharmacy has been partnering with community pharmacies for the past 9 years. At that time, the Community Pharmacy Practice Program was created to become a core focus area for the School.

The mission of the Community Pharmacy Practice Program is to improve drug therapy outcomes by detecting and solving drug-related problems in community ambulatory patients and to become a nationally recognized leader for providing pharmaceutical care in the community. The goals of the Community Pharmacy Practice Program are divided into three overlapping categories of teaching, research and scholarship and service to carry out its mission.

- Enhance the knowledge and competencies of Doctor of Pharmacy students, practicing pharmacists and residents to deliver advanced patient care to community patients.
- The main research focus is the pharmacist’s impact on the health care of patients with chronic diseases (e.g. diabetes, asthma, hypertension) and emphasizes outcomes research. Additional research initiatives will be the benefit of screening programs (e.g. osteoporosis, hypertension) and wellness programs (e.g. smoking cessation, immunizations).
- Provide service to the University, the profession, and the community to advance community pharmacy practice and patient care.

Currently, there are 3 full-time faculty and an Interim Director for the program:
- Amy L. Whitaker, Pharm.D., Assistant Professor (Practice Site: K-Mart Pharmacy)
- Andrew Frasco, Pharm.D., Assistant Professor (Practice Site: to be determined)
- Jean-Venable “Kelly” R. Goode, Pharm.D., BCPS, FAPhA, Associate Professor (Practice Site: Ukrop’s Pharmacy)
- Jeff Delafuente, MS, FCCP, FASP, Professor and Interim Director

Additionally, the Community Pharmacy Practice Program has a Pharmacy Practice Residency Program with Emphasis in Community Care accredited through the American Pharmacists Association and the American Society of Health-System Pharmacists. The faculty work with five different practices sites to train residents including two independent pharmacies (Buford Road Pharmacy and Richmond Apothecaries), a mass-merchandiser (K-Mart Pharmacy), a national chain (Rite Aid), and a local supermarket chain (Ukrop’s Pharmacy).

Outcomes
Community pharmacies provide an excellent environment for Schools of Pharmacy to place clinical faculty to develop innovative patient care practices. Community pharmacy faculty are able to meet all of the requirements of a successful academic career including teaching, service, and scholarship. At VCU, one faculty member has been promoted to associate professor based on work in a community pharmacy practice setting.
Teaching:
Community faculty are responsible for teaching Doctor of Pharmacy students, residents and pharmacy practitioners. The community pharmacy sites are used Doctor of Pharmacy advanced practice experiences. Last year, the community pharmacy faculty were able to provide an advanced pharmacy rotation for all of the Doctor of Pharmacy students. The faculty have created three electives (Pharmacy-Based Immunization Delivery, Health Promotion and Wellness and Advances in Community Pharmacy Practice and Therapeutics) concerning community practice for 3rd year Doctor of Pharmacy Students. Through these electives and core courses the community faculty teach an average of 200 hours per year of didactic instruction.

Research and Scholarship:
Research and scholarship for the faculty are focused on supporting service and teaching in the area of community pharmacy practice. The faculty have obtained funding for a number of projects including pharmacy-based immunization delivery, hypertension, and diabetes. Additionally, faculty contribute to the community pharmacy literature through published manuscripts and textbooks.

Practice and Service:
The Program has faculty practicing with K-Mart Pharmacy and Ukrop’s Pharmacy. The VCU model is for the faculty to serve as role model for the practitioners. Faculty create programs that the practitioners at the site will become actively involved with in their practice. Active patient care programs include pharmacy-based immunizations, smoking cessation, an American Diabetes Association recognized diabetes education program, and wellness programs. The wellness programs include screenings for hypertension, hyperlipidemia, diabetes mellitus, and osteoporosis.

In summary, the VCU School of Pharmacy has developed a viable model for faculty to practice in a community pharmacy setting and be successful in an academic environment.

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Experiential Education Delivery and Academia-Practice Partnerships

Area of Successful Practice: Administration of the Experiential Education Program

Description

Office of Experiential Education

The Office of Experiential and External Education administers the Introductory Practice Experiences (IPE) and the Advanced Practice Experiences (APE) programs as well as the non-traditional Pharm.D. program. Housed within the department of clinical pharmacy, the office structure consists of a Director of Experiential and External Education, Experiential Education Liaison/Coordinator of IPE, and a program assistant. The Director is responsible for all aspects of APE and scheduling of IPE and non-traditional student rotations. The Experiential Education Liaison is responsible for the IPE didactic curriculum. Both share in the responsibility of preceptor training.

Experiential Education Committee

The Experiential Education Committee provides oversight of the Experiential Education program for the School of Pharmacy. The committee consists of nine members including faculty, a community preceptor, an institutional preceptor, and a student. The Director of Experiential and External Education serves as an ex-officio member of the committee and the Experiential Education Liaison co-chairs the committee. The committee functions to assure quality within the program. Its primary goals are to approve policies and procedures for the experiential education program, approve all new rotation sites and delete those that no longer can provide a quality experience to the students, and approve or deny rotation changes for fourth year students. The committee also assists in identifying potential sites and preparing forms for evaluation of sites, preceptors, and students. An extremely important role of the Committee is to assist the Director of Experiential and External Education in identifying problems and concerns related to the experiential program and drafting solutions.

Outcomes

Each year, the Committee is assigned charges by the Dean of the West Virginia University School of Pharmacy. For the last several years, the committee has been successful in completing all of its charges, which approximate ten in number per year. The Committee has been successful in achieving these by breaking into subcommittees, also known as working groups. The committee members also attended a day-long retreat to develop a strategic plan for the upcoming year’s activities. This was also extremely successful in that it was much easier to identify charges for the new-year and assign duties with a timeline. In addition, the committee has approved 15 new rotations during the last year. Another measure of the committee’s success is the excellent evaluations that our students prepare for their preceptors. Very few negative evaluations are received and if so, problems are corrected immediately.

Introductory Practice Experiences

The Experiential Education Liaison is responsible for developing the introductory practice experience (IPE) program for the School of Pharmacy. Since the entry-level Doctor of Pharmacy program was initiated in 1998, the School has had IPE in only the first year of the curriculum. It was recommended by ACPE that this program be expanded to include IPE in all years of the didactic curriculum. The Experiential Education Liaison in partnership with members of the Experiential Education Committee developed an expanded plan that was approved by the faculty in May 2004. The
program will be implemented in the fall semester 2005. The three-year plan will focus on community, institutional, and clinical pharmacy practice.

An early experiential administrative rotation was designed by the Experiential Education Liaison to assist in developing the syllabi and the activities for the IPE program. This has been very successful in the first month that the rotation was offered.

**Advanced Practice Experiences**

This is a four-semester, clinical experiential program consisting of 11 four-week rotations. The curriculum includes two acute care, one ambulatory care, three community/institutional, two selective, and three elective rotations. Preceptor/site information and student schedules are maintained in a spreadsheet database. All scheduling is performed manually. The Director of Experiential and External Education reads the preceptor evaluations of student performance and the student evaluations of preceptors/sites monthly and apprises the Experiential Education committee of substandard sites and student remediation issues.

**Preceptor Training**

A formalized preceptor training program began in September 2001. The concept was based on the *Training Pharmacy Preceptors* program provided through AACP. Initially, the introductory program was offered in designated geographic areas around the state. In 2003, preceptor training became a regular continuing education program at the fall and spring joint meetings of the West Virginia Pharmacist Association and West Virginia Health Systems Pharmacists. This method has allowed us to reach a greater number of preceptors, especially those new to precepting. Beginning in the spring of 2005, programs relevant to the IPE program and dealing with difficult situations during the rotation will be offered for continuing education credit. The committee is presently developing a marketing plan targeted at potential preceptors attending continuing education seminars.

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Experiential Education Delivery and Academia-Practice Partnerships
Area of Successful Practice: Patient Care in Community-based Partnerships
The ‘Student Outreach to Prevent and Reduce Smoking’ (STOPRS) Program

Description
Through a project funded by an outreach endowment, faculty (Betty Chewning, David Kreling, and Beth Martin) at the University of Wisconsin School of Pharmacy have partnered with community pharmacists to help develop and implement tobacco cessation programs in their pharmacies. The ‘Student Outreach to Prevent and Reduce Smoking’ (STOPRS) Program brings together pharmacy students and a statewide network of clerkship pharmacists to reduce and prevent smoking in Wisconsin. The current project builds on a pilot project (funded with tobacco settlement funds in the State) that trained and subsidized pharmacists for providing a tobacco cessation program. In the pilot, we learned that pharmacies can be an accepted site for tobacco cessation services.

There are four main components of the project and partnership. First, pharmacists and students receive training and certification using the "RX for Change: Pharmacist-Assisted Tobacco Cessation" program as a foundation for providing a tobacco cessation service. Second, students who have received training are assigned to pharmacy clerkship sites which provide tobacco cessation counseling. This coordination and placement provides additional staff resources for pharmacy sites where trained pharmacist preceptors are located. Third, students complete a two-credit elective class on services marketing. As part of the class, teams of students are assigned to sites where there are trained pharmacists, and the students assume the role of marketing consultants to aid in implementing or enhancing the tobacco cessation counseling service. Lastly, students receive materials on tobacco prevention targeting adolescent/teen audiences. Interactive presentations then are provided at middle schools in various communities.

The grant also has provided support to allow program pharmacists access to a web-based case management and documentation software system through a partnership with Outcomes Pharmaceutical Health Care. The case management and documentation software system helps enhance program delivery.

Outcomes
This program and partnership helps provide both the preceptors and students training in a tobacco cessation and prevention program and leverages a synergistic partnership between students and pharmacists into expanded roles with patients. The program and partnership also allows participating pharmacists access to a web-based software system to help them manage their cases and document outcomes.

One of the goals of the funded project and partnership is to help this service product become self-sustaining for the pharmacists providing the tobacco cessation program. Although many pharmacists are early in implementing the program, several have identified sources of payment from clients and employers. The service marketing knowledge and experience of pharmacists and students across will be key for accomplishing this important step.

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Experiential Education Delivery and Academia-Practice Partnerships  
Area of Successful Practice: Administration and Quality Assurance

Description
The Drug Use Management and Policy Research Residency Program, introduced in May 2001, is a key component of the Chair held by Dr. Ingrid Sketris at Dalhousie University’s College of Pharmacy, which is sponsored by the Canadian Health Services Research Foundation, Canadian Institute of Health Research and Nova Scotia Health Research Foundation. The purpose of this 17 week program, which is open to graduate students and fellows, is to enhance the use of research evidence in policy-making for drug use management. The program goals are to: (1) create policy relevant research information; (2) facilitate interaction among residents, faculty, and decision-makers on specific projects; (3) learn about how research is used in decision-making; and (4) assist junior (uninitiated) health service researchers to understand decision-makers’ information needs and preferences. Residents complete a research or policy project, and actively participate within the host organization.

This program incorporates service-learning practices for working with students and decision-makers in health departments and health service organizations but it concentrates on enriching research skills of both student and decision-maker, and it requires graduate students to work on projects involving research and knowledge synthesis in a policy-making environment rather than a clinical practice setting.

Administration
Strategic Planning and Program Design. At the outset of the program, a strategic planning session lead by a business consultant involved stakeholders from government, health service delivery organizations, pharmacy professional and regulatory association representatives, pharmacy opinion leaders, university administration, and academics from a number of disciplines. This set the stage for the vision and the mission of the program; it also focused on strengths, weaknesses, opportunities and threats.

Program Operation. A program manual, which clearly defines the roles and responsibilities of the academic and community partners, is sensitive to issues such as intellectual property, rights to publish, guidelines for review of proposals by ethics and requirements of the residency site. It provides explicit instructions concerning the application and placement process, a detailed learning agreement to be developed with the student prior to the start of the residency, and requirements for assessment at the end of the residency. It specifies responsibilities for all parties (program director, host organization/preceptor, resident, faculty advisor, residency coordinator and graduate coordinator). Also included is a timetable for residency activities and all evaluation forms. Readings on health policy, knowledge utilization, authorship and mentoring are made available to residents, community partners and faculty members involved to establish a common understanding of the program and process. Integral to the process is the time allocated (by the Program Director) to ensure an appropriate student/resident-host organization/preceptor match and viability of the project proposal. Networking is facilitated through organized orientation sessions and bi-weekly knowledge development and skills building workshops.

Residents document their contributions to their host institution in a learning portfolio. It may include briefing notes for government, questions and answers for the legislature, presentations to committees, information requests from other jurisdictions, reports for government, summaries of data analysis, national survey, literature reviews, focus group results, abstracts from scientific meetings, and journal articles.

Evaluation Methods and Tools: A results based management accountability framework was developed for the Residency program. (The template for this framework may be found at www.tbs-sct.gc.ca/cmo_mfc/resources2/RMAF/RMAF00_e.asp ). The framework included a logic model and an
accountability matrix which identified possible indicators and data sources for short and medium term outputs/goals and long term impacts. External reviewers have examined the program’s operation and resident learning and knowledge utilization by the community from the research and policy projects.

Outcomes

The outcomes from this initiative encompass a broad range of benefits that accrue to drug policy residents, community partners and faculty advisors. Since the inception of this initiative in 2001 a total of 13 residents have completed the program and 5 are in progress. Residency positions have been held by Pharm.D fellows, students pursuing a Master’s degree (e.g., community health and epidemiology and health informatics) and PhD students (e.g., interdisciplinary PhD and pharmacy administration).

Placement sites for residents have been in the Nova Scotia Department of Health (e.g., Department of Pharmaceutical Services, Information Technology, Primary Care and Diabetes Care Program), and the Capital Health District (e.g., Pharmacy, Nursing, Cardiac Surgery, Gastroenterology and Primary Care).

Community partners incorporated research and academic information into their policy-making processes from their resident’s research/policy synthesis project about a timely drug use/management policy issue. Residents gain on-site experience in a health care policy-making setting, while their academic advisors gain insight into the research needs of policy-makers. A complete listing of residency projects and associated journal articles can be found on the web site for the Initiative for Medication Management, Policy analysis, Research and Training, College of Pharmacy, Dalhousie University, Halifax, Nova Scotia, Canada, http://impart.pharmacy.dal.ca

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