

Successful Practices in

**Interprofessional Education**

*Interprofessional Educational and Care Delivery Programs*

Pharmaceutical Education 2003

# **The University of Arizona**

College of Pharmacy  
Tucson, AZ 85721

## **The University of Arizona Health Sciences Center**

Phoenix Campus  
Phoenix, AZ 85012

### **Interprofessional Education**

#### **Description**

The AHSC team developed a Curriculum Working Group (CWG) in the spring of 2003 to develop a curriculum that will harness the full learning and teaching potential at the Phoenix Campus through active dialogue between and across colleges, departments, campuses, and partnering institutions. The CWG is composed of educators and clinicians from various stakeholders in medicine, nursing, and pharmacy and included students, practitioners, and faculty. In order to be responsive to the needs of medical education in the 21<sup>st</sup> Century, the curricular plan for a new paradigm in Learning and Teaching in Health Professions Education will include, to the extent possible, the following themes:

- Clinical skills
- Interprofessional education (IPE) and perhaps health care delivery
- Ambulatory medicine
- Disease management
- Population-based learning
- Genomics
- Cultural competence
- Committee Work

The CWG met three times with most of the discussions focused on the topic of IPE:

- Practical boundaries of governance, administration and funding (role of clerkship directors, accreditation requirements, academic calendars)
- “Ideal” educational programs without any restrictions (a “Blue Skies” Exercise)
- Models of IPE at other medical colleges (Creighton University, University of Washington, Nova Southeastern University COM)
- Medical issues for IPE collaboration (i.e., geriatrics, diabetes treatment/management, medical errors, caring for the underserved)

Possible barriers to implementing IPE were identified by the CWG:

- Differing educational standards of AHSC programs and different terminologies for IPE
- Academic calendars
- Medical school is perceived to be somewhat intimidating to the other health science colleges
- Student schedules (classes and work obligations)
- Faculty resistance

Strategies for implementing IPE were discussed:

- Developing instructional web-based resources that would help provide equal access to information regardless of patient load (a request by third-year medical students)
- Instructional modules could include: quizzes, video clips of procedures, sample H/P with explanations for questions, case write-ups, information on review courses, articles, evidence-based cases, and basic lectures (consider using Virtual Problem-Based Learning)
- Centralized Clinical Skills Teaching Facility for all learners (specific stations for practicing skills and OSCEs)

- Shadow other health care professionals – provide educational experiences in the curriculum to include a requirement for students to spend one day with a health care professional (e.g., PharmD or a pharmacist at a drug store; pass meds with a nurse (or Home Health nurse); PharmD or RN at MD office)
- Multi-profession rounds (both inpatient and ambulatory)
- Involve the community, policy leaders, patients with a health issue
- 1-2-1 Curriculum: Yr 1 basic sciences; Yr 2-3 clinical sciences; Yr 4 clinical and basic sciences enrichment (this is different from current in both medicine and pharmacy)
- Integrate Service Learning into the curriculum (develop expectations for students around particular learning issues; community partnerships for health)
- Interprofessional Clubs
- Courses or electives that can be taken together to highlight interprofessional issues
- Special events (e.g., Wit film project – an innovative interprofessional training program using the Emmy Award-winning movie to advance palliative care education nationwide)

### **Outcomes**

First IPE Event – On January 30, 2004, Dr. Mark Yarborough of the University of Colorado/Denver conducted a seminar at the AHSC Tucson campus entitled “Interprofessional Ethics Education: Lessons Learned from 6 Years Experience.” Dr. Vincent Fulginiti, Professor Emeritus, University of Arizona, and long time advocate of IPE introduced the speaker.

### **Next Steps**

- The Wit Film is currently being planned for April 16<sup>th</sup> for all AHSC students in Phoenix. Its purpose is to provide an interprofessional forum on end-of-life issues. Dr. Bernadette Arnecke will conduct the facilitator training. Several faculty have indicated an interest in being facilitators, as have nurses from Hospice of the Valley. Members of the Wit Film sub-committee are: G. Hall (Chair), B. Arnecke, F. Roberts, A. Austin, M. Grossman, M. Lundy, L. Michalski, J. Murphy, M. Faria (med student III), L. Carr. In addition, a group of medical educators from Canada (i.e., Toronto Rehabilitation Institute, Northeastern Ontario Medical Education Corporation, University of Alberta, School of Physical Therapy/University of Saskatchewan, Queen Elizabeth II Hospital, Rural Ontario Medical Program) have expressed an interest in collaborating on the Wit Film Project via “Simulcast”.
- Invite consultants in IPE to work with a small group from the CWG with representation from each of the 4 Colleges (including students) to develop a draft of a curriculum proposal.
- Consider visiting medical schools that have implemented successful innovative initiatives and examine how these can translate not only to innovation in our medical curriculum, but how they might be used to enhance IPE. Examples include:
- Florida State University COM (Tallahassee) - strongly embraced medical informatics into its curriculum; virtual medical library; state-of-the-art clinical learning center.
- University of Wisconsin (Madison) – new Health Sciences Learning Center opens in 2004 with custom application allowing standardized patients to control a digital camcorder as they role-play with a student. Digital videos are automatically cataloged and uploaded to a streaming server to be immediately available for viewing by students and their faculty advisors.

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# Creighton University Medical Center

School of Pharmacy and Health Professions

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## Interprofessional Education

### Description

Creighton University's School of Pharmacy and Health Professions created an Office of Interprofessional Scholarship & Service (OIPS) 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. 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 liaison (associate dean). The Office is used as a resource base for interprofessional education models, current educational research, and seeking additional funding opportunities. 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 student training, service provision, and faculty scholarship with hundreds of students trained, 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 and Service and the clinical contracts between the School and the tribal health care facilities. 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.
- 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 525 physical therapy, occupational therapy, physical therapy assistant, occupational therapy assistant, and pharmacy students have experienced rural, interdisciplinary health care on the reservations through short and long term experiences, class projects, and volunteer activities. Over 400 students from all five disciplines (PT/OT/PTA/OTA/Pharmacy) have participated in class community projects and volunteer activities at the reservations.

- Rehabilitation services include over 6500 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, a physical therapist 2 days/week for Carl T. Curtis, and an occupational therapist 4 days/week between the two sites. Pharmacy faculty have been involved as consultants to the IHS pharmacists at both sites.
- Through the grant 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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# **University of Houston**

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## **Interprofessional Education**

The University of Houston College of Pharmacy has several endeavors to develop interprofessional education in our curriculum. One such activity takes place in the third professional year where we have Physician Assistants from the Baylor College of Medicine teach a 4 credit hour course on physical assessment. Integrated in this class is a MD from the UT School of Medicine who teaches the fundamentals of anatomy necessary to focus on the physical examination of patients. During the didactic portion of this class, we have a pharmacist coordinator sit in and offer their perspective on the importance and use of physical assessment techniques within the domain of pharmaceutical care. Every week, a 3-hour lab is conducted that allows the student to perform physical assessments on their fellow students that involve multiple PA's and the pharmacist coordinator.

### **HOMES Clinic**

The University of Houston College of Pharmacy is involved in an interdisciplinary indigent clinic that utilizes medical students, pharmacy students and students from the college of social work. The HOMES Clinic (Houston Outreach Medical Education and Social Services Clinic) is part of a larger project, Healthcare for the Homeless, which promotes "health, hope and dignity for Houston's homeless through accessible and comprehensive care." This student-run, free clinic is a joint collaboration of the University of Houston College of Pharmacy, the Baylor College of Medicine and the University of Texas – Houston Health Science Center. This is a student run clinic for indigent patients that operates every Sunday morning. Students initially sit down with indigent patients to eat breakfast and learn about the social aspects of being homeless. Later the students round in interdisciplinary teams offering acute care to these individuals, including medication counseling. The pharmacist preceptor (a faculty member at UH COP) oversees all aspects of pharmacy from dispensing the medication samples to helping the students counsel the patients on their medication. After all patients are seen, all of the health care students sit together in a group and reflect on their experience. This experience teaches the students better communication skills and compassion with all populations they serve. These programs were implemented to allow student interaction with healthcare teams and allow them insight into the integrated role of patient care. Once graduated, students must understand patient care becomes fragmented without the team working together as a cohesive group. Problems encountered mostly revolve around misunderstandings of each individual's role in the team. Furthermore, pharmacy students do not always understand the reasons why they need to learn physical assessment. Their reasoning is that they don't see the "normal" pharmacist out there doing this task. The biggest obstacle is the lack of role models in practice that are elevating the profession to the level where we at the College feel pharmaceutical care can be brought to, with enhanced interdisciplinary training. We are still striving to overcome these barriers by bringing more pharmacy practitioners into the classroom that are actually doing these types of activities in their own practice settings to assess therapeutic effectiveness and medication adherence.

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# **University of Minnesota**

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## **Interprofessional Education “Immunization Tour”**

### **Description**

The “Immunization Tour” is an elective interprofessional learning experience for students enrolled in the College of Pharmacy and the School of Nursing. This 1-credit course enrolls approximately 20 3<sup>rd</sup> year pharmacy students and 20 senior nursing (RN) students and focuses on interprofessional teamwork and uses the design and implementation of a public health intervention to model this activity. The course has been offered each year since 2001.

The first part of the course is focused on classroom-based instruction, exploring the roles and responsibilities of each discipline in health care, helps students identify key elements for successful teamwork and provides course participants with the opportunity to explore various stereotypes each discipline has traditionally held of the other. Classroom sessions are interactive and, in some instances, are led by students. An additional topic of emphasis for the classroom component of this course is the role of individual health care providers in supporting a public health philosophy.

The experiential component of this course focuses on the design, implementation and delivery of influenza vaccination clinics on campus to students, faculty and staff. Pharmacy and nursing students are divided into teams of 10 students with one pharmacy and nursing student identified as “team leaders.” Approximately eight vaccination clinics are held each year, with each team participating in two clinics each. Clinics are held at campus residence halls, recreation center, Academic Health Center and in collaboration with the University’s annual employee benefits fair. Clinics are held in collaboration with the University’s student health service, where the health service provides vaccine and supplies and students provide the manpower to conduct the clinics. Course faculty provide oversight of all student activities. Immunizations are free to all students, staff and faculty.

Currently, this course only includes nursing and pharmacy students, however, discussions have begun with the School of Medicine to include medical students as well. It is hoped that the course will include all three disciplines by the Fall of 2004.

### **Outcomes**

The outcomes from this initiative have been positive from many perspectives. First, this initiative represents the most significant, structured opportunity for nursing and pharmacy students to learn and work together during their professional education at the University of Minnesota. Students report having a much greater appreciation of the skills held by the opposite discipline as well as an enhanced ability to work together in a patient care environment. Students are also much more confident in their skills with respect to immunization delivery following this course. Prior to taking this course, all pharmacy students complete a required unit focused on immunization delivery that addresses pharmacotherapy, screening and monitoring, legal and administrative issues, as well as drug administration practices. However, students are only able to practice the administration on one intramuscular and one subcutaneous (saline) injection within this unit. Through this course, students gain a greater appreciation for the importance of planning and managing patient flow as well as increased confidence in patient screening and drug administration. Each course participant will generally screen or administer vaccine to over 200 patients within the activities of this course.

This course and its collaboration with the University's student health service has greatly expanded the availability and delivery of influenza vaccinations on campus. During the fall of 2003, course participants administered over 4000 vaccinations to students, staff and faculty. Prior to implementation of this course, the student health service did not operate a significant outreach immunization program and administered less than 2000 doses each fall. With this program, outreach initiatives are possible due to increased manpower and the overall awareness on campus has lead to a dramatic increase in campus-based vaccinations. In addition to the 4000-plus vaccinations given by Immunization Tour participants, another 2000-plus vaccinations are administered annually within the health service.

Another significant example of collaboration is with the University's Employee Benefits office. Providing vaccinations as part of the annual benefits fair has resulted in increased employee satisfaction (due to free and convenient access to immunizations) as well as increased attendance at the fair itself. The influenza clinic has become the most popular component of this fair. Over 1500 individuals were vaccinated at this event in 2003.

A final outcome has been the model for interprofessional learning that this course has provided to all schools within the University's Academic Health Center. As stated previously, it is anticipated that medical students will be able to participate in this course in the future. Those who advocate for increased interprofessional learning opportunities consistently hold this course up as a model of what can be accomplished with a vision and commitment for this type of collaboration.

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**University of Montana**  
School of Pharmacy and Allied Health Sciences  
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**Interprofessional Education**

The University of Montana School of Pharmacy and Allied Health Sciences is the home of the Montana Geriatric Education Center (MTGEC). The MTGEC is a consortium effort of the University of Montana, Montana State University – Bozeman and Rocky Mountain College in Billings, MT. The eight academic disciplines involved in the MTGEC include pharmacy, social work, physical therapy and clinical psychology (UM), nursing and first year medical studies (MSU) and physician assistants (RMC). Co-principle investigators are the project are Gayle Cochran, Pharmacy Practice; Ann Williams, Physical Therapy (retired); and Colleen-Murphy Southwick, Project Director.

Prior to the formation of the MTGEC and the implementation of its six initiatives, there has been little or no interprofessional education provided for Montana health professions students. While almost all of the disciplines are using the same health care facilities across the state to train their students, there have been very few instances of joint training in the classroom or in the clinical setting. The lack of an academic health center in Montana, the lack of a medical school in the state, and the location of key programs on different campuses or in different schools or colleges on the same campus all contribute to the lack of interprofessional education.

Geriatric Education Centers primarily exist to educate and train health care professionals and faculty, both campus-based and clinical, in the health-related problems of the elderly. Of the five statutory purposes of GEC's, only one relates directly to students, that of providing clinical training for students in various settings where elderly patients predominate. The MTGEC is developing an online curriculum of geriatric core modules, education core modules, geriatric health problem modules and related case studies. The primary use of these modules will be for certificate training and continuing education of health care professionals and faculty wanting more background in geriatrics. However, it is also anticipated that some of the modules, particularly the case studies, will be utilized by faculty teaching geriatrics to health professions students.

The MTGEC initiative that directly relates to interprofessional education is Initiative IV: Interdisciplinary Geriatric Student Training. Implemented in Missoula in Spring 2003, teams of health professions students are formed in various health care settings, including acute care hospitals, long term care facilities and home health agencies. To date, the teams have been composed of various combinations of pharmacy, nursing, social work and physical therapy students, in numbers that would approximate actual interdisciplinary teams functioning in practice settings. At a minimum the teams meet weekly for three sessions, which include an orientation at the first session; discussion and preparation of an interdisciplinary care plan for a case study from the MTGEC online curriculum at the second; and discussion and preparation of an interdisciplinary care plan for an actual patient in the facility at the third meeting. In between sessions, students are expected to interact in the workup of patients and preparation for the sessions. Background materials are provided to each student during the orientation session as well as the first case study, a standard care plan format, a student data sheet and a program evaluation form. Each student receives a certificate of participation upon completion of the program.

While student groups continued to meet in Missoula through Summer and Fall 2003, the initiative was implemented in Great Falls, MT, during Fall 2003 for 20 nursing and pharmacy students. In total, approximately 60 students in Missoula and Great Falls participated in the training in 2003. While continuing with activity in Missoula and Great Falls in 2004, plans are also being made to implement the

training in Billings, MT. Year 3 of the project will be spent identifying and developing rural sites for interdisciplinary training, which will be implemented in Years 4 & 5. Even when fully implemented, it is unlikely that all Montana health professions students will participate in the MTGEC interdisciplinary geriatric clinical training. However, it may serve as a model for similar interaction in other areas of clinical training that could involve more students.

Student response to the training is excellent, not only for the opportunity to obtain geriatric training, but for the chance to work with students from other disciplines. To date there has not been a negative evaluation by a student, particularly of the interdisciplinary aspects. Many comment favorably on the opportunity to work with students in other disciplines. Several students have participated in the program more than once as they have encountered it in different practice settings. As part of the evaluation process, students are being surveyed at 6 month and 12 month intervals after completion of the training to see if it has had an impact on the rest of their training and/or initial practice. Not enough data has been collected to date to analyze that impact.

The biggest barrier has been the difficulty in coordinating training schedules among the programs. Each program uses a different model for its clinical training and a different schedule. Trying to identify 3 to 5 week blocks where several students are available in the same training site has proven far more difficult than originally anticipated and has led to smaller numbers completing the training than expected. It is also proving difficult to integrate medical, physician assistant, nurse practitioner, and clinical psychology students in the program because of the small numbers of these students in clinical training in these communities at any point in time. As more experience is obtained with the program, it is anticipated that scheduling and recruiting additional disciplines will become easier.

The primary successful outcome has been the positive response of students to the opportunity to work with students of other disciplines in the clinical setting. This interdisciplinary experience is providing opportunities for students to continue to network informally after the training is complete. It should also serve as a model for similar interdisciplinary activities around other patient groups or in other settings.

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