

Interprofessional Education: An Integration of Pharmacy and Medicine Courses to Create Team-Ready Students

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Background

- Interprofessional development has received considerable interest from professional programs
- Guidance on Interprofessional Education (IPE) has been directed through initiatives by interdisciplinary organizations, accrediting bodies, and the literature
- IPE activities early in the curricula at The University of Iowa have been coordinated across ten disciplines since 2014 (Figure 1)
- An additional IPE activity was developed to occur immediately prior to Advanced Pharmacy Practice Experiences (APPE)

Objectives

To develop and evaluate a novel two-week, interprofessional course designed to promote team-ready pharmacy and medical students, delivered immediately prior to beginning APPE

Methods

- An elective medicine course for third or fourth year medical students (n=9 students) was integrated with a required pharmacy pre-APPE course (n=103 students)
- Course was conducted with a case-based, collaborative learning format (Figure 2) focused on The Carver College of Medicine's Exemplars (Table 1)
- Teams of 1:1-2 medical-to-pharmacy students were created and scheduled using a randomization software program
- Pharmacy students were involved in two cases, one as an observer and one as a participant; medical students were involved with all cases
- Teams developed comprehensive care plans using shared-decision making, team communication, evidence-based practice, and foundational sciences
- Students presented their case plans in a 90-minute case-based format with discussion led by a physician and a pharmacist
- Students completed pre-and-post self-assessments using a 4-point Likert scale (1=strongly disagree to 4=strongly agree) to address their comfort in providing collaborative care to patients
- Data for each group were compared using two-tailed paired t-tests with a p-value of 0.05

Figure 1. IPE Curricula in Pharmacy and Medicine

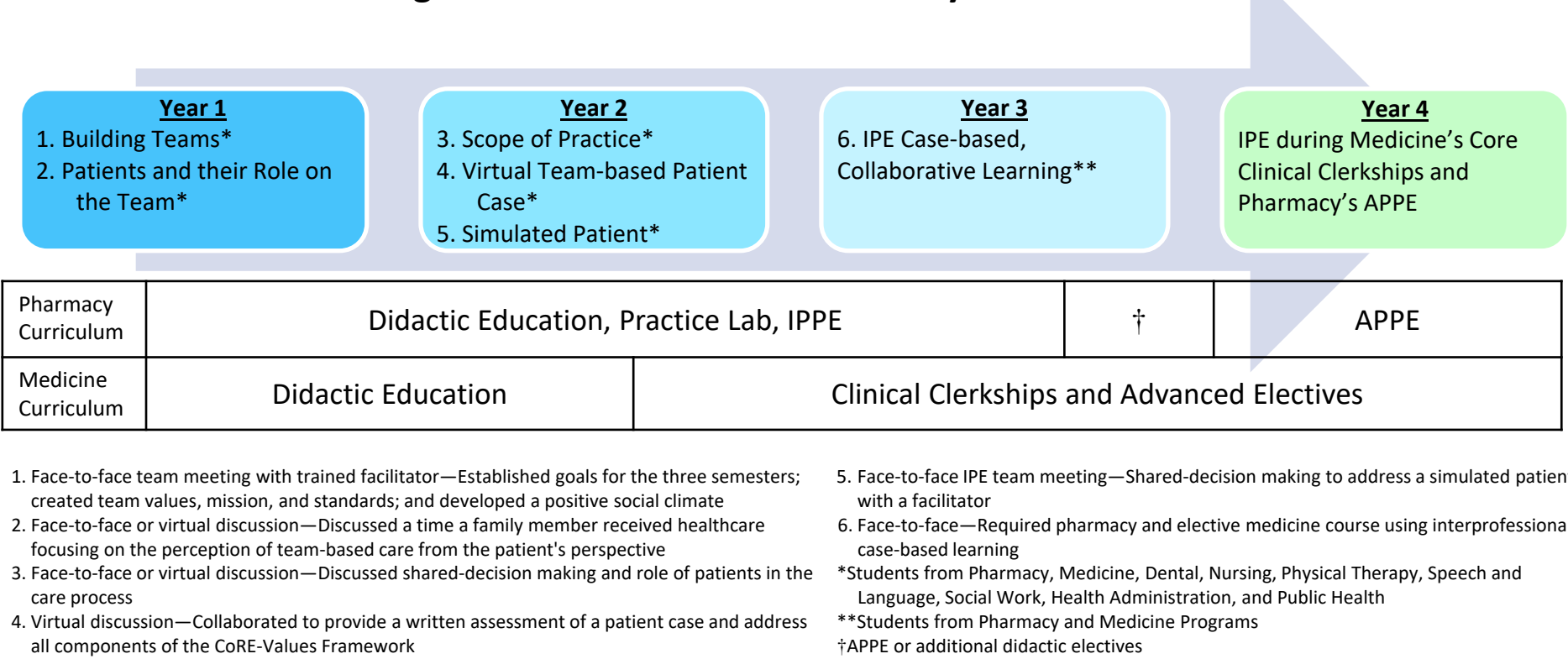


Figure 2: IPE Case Discussion Format

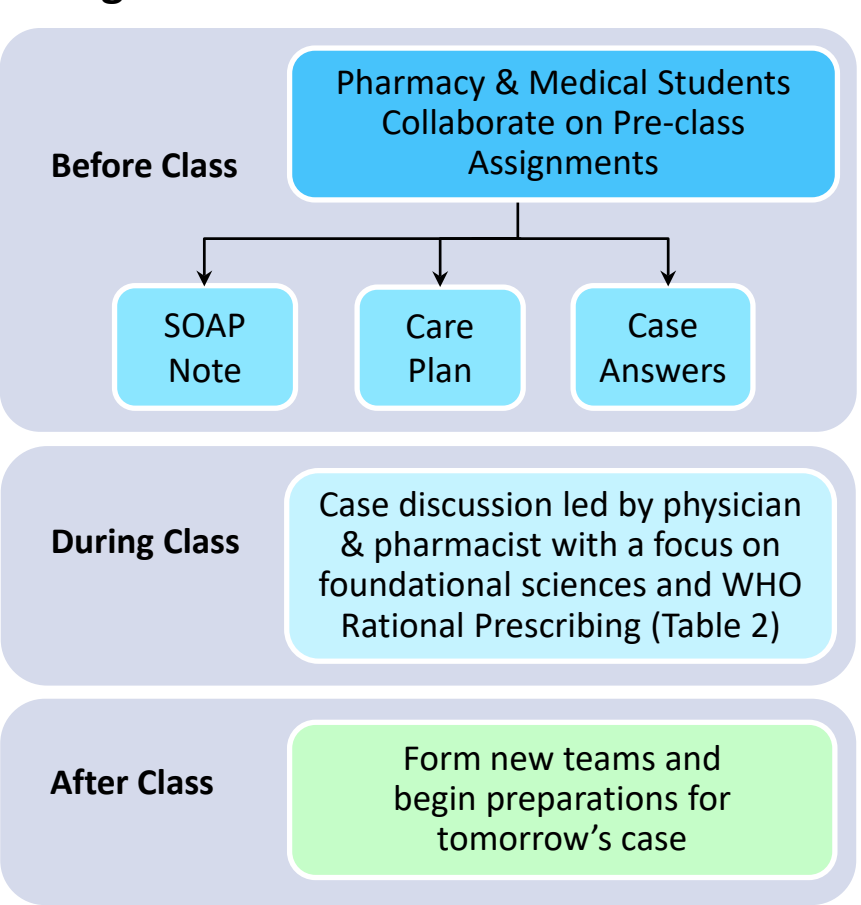


Figure 3: Change in Self-assessment Ratings

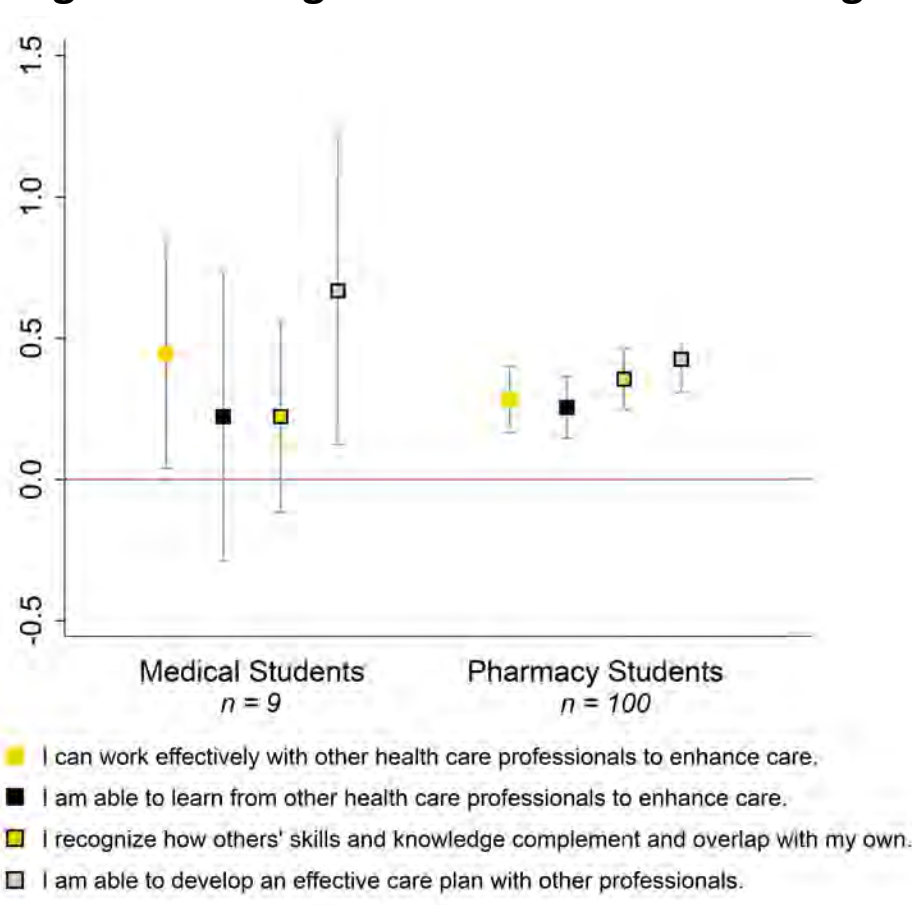


Table 1: Case Exemplars

Pneumonia	Congestive Heart Failure
Altered Mental Status	Diabetes Mellitus
Bleeding and Thrombosis	Hypertension
Arthritis	Obstructive Airway Diseases
Substance Misuse	Bone Remodeling

Table 2: WHO Rational Prescribing¹

STEP 1: Define the patient's problem
STEP 2: Specify the therapeutic objective
STEP 3: Verify the suitability of your P-drug
STEP 4: Write a prescription
STEP 5: Give information, instructions, and warnings
STEP 6: Monitor (and stop?) the treatment

Results

- Eight cases were completed over eight days
- Pharmacy student self-assessment response rate was 97%; Medical student response rate was 100%
- Both pharmacy and medical students' agreement with team-based readiness questions improved (pre=3.3 vs. post=3.7, p<0.01; pre=3.4 vs. post=3.8, p=0.02, respectively) (Figure 3)
- The largest increase in self-reported ability was in their ability to develop an effective care plan with other professionals (change=0.44; SD=0.61) (Figure 3)

Limitations and Challenges

- Scheduling was challenging due to competing courses, instructors' practice obligations, and examinations, including the Pharmacy Curriculum Outcomes Assessment® and US Medical Licensing Examinations®
- A small number of medical students enrolled due to timing, first-offering, novel approach, and elective nature of course
- Preparation and delivery of the course for instructors was time-intensive due to the concentration of discussions over two weeks

Conclusions/Implications

- This 2-week, integrated medicine and pharmacy case-based course was effective at enhancing pharmacy and medical students' perceived team-readiness prior to advanced experiential education
- Using both a physician and pharmacist to lead the case discussions allowed for modeling of interprofessional practice
- Teams successfully explored patient cases with a shared-decision making process
- Both colleges received endorsement and support from administration to further develop this interprofessional course
- This course will continue to exist as one piece of the larger IPE curriculum