

A Simulation-enhanced, Workplace-based Interprofessional Education for Patient Safety: Hacettepe University Undergraduate Experience

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Interprofessional collaboration has become one of the most important and challenging issues in health care for the last 20 years. The gaps in the interprofessional collaboration and communication have been regarded as the main causes of medical errors in health care services; and medical errors are the third leading cause of death in the USA. Patient safety can be improved with achievements in communication, collaboration, and leadership among health care teams. All of the research in the last 20 years revealed that health care workers who grow up in their own silos could not achieve the required competencies to work in health care teams. This outcome can only be achieved if health care workers are educated in interprofessional programs. The undergraduate and graduate programs in the universities are proudly offering interprofessional education for their students in health sciences, and even for other students who will have contact with health care workers in their professional lives. The educators, program developers, and administrators have been busy with creating learning environments for students from various professions that will enable students to learn with, from, and about each other. They can achieve the desired competencies more comprehensively when they have the opportunities to experience the real, or at least, similar situations. The students are novice learners, beginners of a new life, very close to making mistakes, and at the very vulnerable stage of their professional development. Providing appropriate professional experiences for these students is almost impossible in their workplaces where they can accidentally but easily cause harm and be harmed. Simulation-based education is the golden solution for all stakeholders. We can design environments, develop cases, involve health care team students, and let them learn with, from, and about each other in a safe environment.

We can define the causes of medical errors or patient safety, propose the solutions, and have the use of several tools for success. However, we are still struggling to reach fruition; because we cannot find a simple, successful, and standard way of doing all of this. We have been experiencing several problems in implementing interprofessional programs in our curricula. Health care education has a long history, hierarchy between professionals exists, as well as the self-esteem of each professional, there are unclear borders of work environments and responsibilities. Inviting health care professionals to a new area outside of their silos could make them feel insecure about several issues, and they could hesitate to trust in the idea of interprofessional education. Traditional educational programs developed for one profession have their own structures, schedules, and rituals. It is generally difficult to arrange common time periods for interprofessional activities. Patient contacts, clerkships, and similar educational activities conducted at workplaces have their specific limitations for teamwork: the real patients who are suffering and seeking help.

We have to develop educational programs with the responsibility of graduating health care professionals who will work in collaboration with other professionals at a safer workplace both for their patients and themselves.

We had a very similar situation in 2010 when we came together as the faculty members of health sciences schools at Hacettepe University in Ankara, Turkey. We had a well-established curriculum with all traditional strengths and weaknesses for a change. We had an aim of improved patient safety through an educational evolution called interprofessional education with the help of simulation. We started with the dissemination of simulation-based education among the schools, got funding for the Interprofessional Collaboration and Simulation Center, and implemented uni-professional simulation activities into each curriculum. We created the first circle of academicians who experienced the advantages of a new educational technique in three years. We had the administrative support in the medical school for the implementation of interprofessional education so in collaboration with the faculty members of other schools, we developed the first courses for medical students. Unfortunately, we could not get approval from the curriculum committee. We waited for two years. A new national legislation was released in 2013 requiring all programs to have at least 25% of their curriculum as electives. It was impossible to develop so many electives in a short time, and our school was very desperate. On the other hand, we had eight interprofessional courses. They had no choice but to approve the courses.

These eight courses about eight professions included lecture-based activities, small group case discussions facilitated by other profession's faculty members, and simulated patient encounters about other health professionals debriefed by other profession's faculty members. It might not be a perfect design, but it was the first program in Turkey. The perceptions of the students and the attending educators were encouraging. The program received a national award for its contributions to patient safety and interprofessional collaboration in its fourth year of implementation. That award was a milestone. We had a new administration that year, and they were aware of the importance of interprofessional education. We developed a new version of the program as a two-year vertical, compulsory course for second and third year preclinical medical students of a six-year medical school. We worked with 10 departments and schools, and 16 units of the university hospitals; and 75 health professionals and faculty members contributed as facilitators in the program.

The aim of the program is to make medical students achieve knowledge about interprofessional collaboration and patient safety and demonstrate the behaviors and attitudes relevant to their roles and responsibilities in improving collaboration and patient safety in their workplaces. The program is designed with small group activities in Year 2 focusing on the professions in health sciences, the workplaces in health care services and interprofessional collaboration; and in Year 3 focusing on patient safety regarding interprofessional collaboration.



Year 2: Interprofessional Collaboration

- a. Lecture 1: Interprofessional Collaboration and Education
- b. Lecture 2: Leadership and Conflict Resolution
- c. Simulation-based Practice 1 & d. Debriefing Session 1
 - c1/d1. Medical Receptionists
 - c2/d2. Pharmacy
 - c3/d3. Nursing (IPE with nursing students)
- e. Simulation-based Practice 2 & f. Debriefing Session 2
 - e1/f1. Nursing
 - e2/f2. Medical Receptionists
 - e3/f3. Pharmacy
- h. Case Discussion 1
 - h1. Child Development (IPE with CD students)
 - h2. Language and Speech Therapy
 - h3. Dentistry
- k. Case Discussion 2
 - k1. Child Development (IPE with CD students)
 - k2. Language and Speech Therapy
 - k3. Dentistry
- m. Observation 1 (Interprofessional workplace)
 - m1. Main Laboratory (Biochemistry and Microbiology)
 - m2. Emergency Laboratory (Biochemistry and Microbiology)
 - m3. Pathology Laboratory
- n. Observation 2 (Interprofessional workplace)
 - n1. Hospital Physiotherapy Unit

- n2. Blood Bank
- n3. Pathology Laboratory
- p. Observation 1 (Single-profession workplace)
 - p1. Hospital Pharmacy Unit
 - p2. Hospital Dietetics Unit
 - p3. Vocational Therapy Laboratory
- r. Observation 2 (Single-profession workplace)
 - r1. Hospital Pharmacy Unit
 - r2. Hospital Dietetics Unit
 - r3. Vocational Therapy Laboratory

Year 3: Patient Safety and Interprofessional Collaboration

- a. Lecture 1: Safety Culture and Patient Safety
- b. Lecture 2: Medical Error Cases
- c. Simulation-based Practice 1 & d. Debriefing Session 1
 - c1/d1. Dietetics (IPE with dietetics students)
 - c2/d2. Language and Speech Therapy (IPE with LST students)
 - c3/d3. Vocational Therapy (IPE with VT students)
- e. Simulation-based Practice 2 & f. Debriefing Session 2
 - e1/f1. Physiotherapy and Rehab.
 - e2/f2. Dietetics (IPE with dietetics students)
 - e3/f3. Language and Speech Therapy (IPE with LST students)
- h. Case Discussion: Reported Cases of Medical Harm
- m. Clinical Ward Observation 1
- n. Clinical Ward Observation 2
- o. Reflection Session for Clinical Observations
- p. Skills Training 1 (Prevention of Infection, and Personal Preventive Equipments)
- r. Skills Training 2 (Blood and Blood Culture Sampling)

We have almost 1,000 medical students (500 each year), 200 nursing students, 200 dietetics students, 40 vocational training students, and 150 speech therapy students involved in the course program in an academic year. We divide medical students into 30 groups each year. Each group participates in two of the small group activities for each topic (ie: m1 and n2 for observation of interprofessional workplaces) during the year.

The students are assessed via reflection and feedback during small group activities and simulation-based practices. They prepare three-sentence reports after certain activities and complete the observation forms for clinical wards.

This version of the program received more positive feedback from the students, the health care professionals working in the university hospitals, and the faculty members. The students expressed satisfaction with their experiences in various workplaces of the hospitals, and their interactions with the students and the faculty members of other departments and schools. The program provided medical students with the opportunity of early patient contact and workplace experiences with various health care professionals.

This program is formally for medical students and included in the medical curriculum. The faculty members from other departments and schools are contributing within the medical school. The students of the other departments and schools do not enroll in the interprofessional course. In fact, they enroll in another course in their program, but their course director lets them be involved in an interprofessional activity as a recognition. The success of the program, involvement of the students of five departments, and sustainability of the interprofessional interaction depends on the contributions and efforts of individual faculty members who believe in the interprofessional education.

We have been working on the aim (dream) of an interprofessional education for the students of the health sciences schools at Hacettepe University for 10 years. We have already achieved several steps. We have a program in the medical school. We have a group of faculty members and health care professionals who believe in the initiative and contribute. We have already developed activities that the students of two or more professions can learn with, from, and about each other. We have a long way to go, but we have the motivation and dedication to continue to advance our efforts.