

# Collaboration of Healthcare Professions to Provide Interprofessional Experiences through the Eyes of Learners

**Emily L. Fedor** *PharmD Candidate 2021, Western New England University*

**MaryCatherine E. Heighton** *PharmD Candidate 2021, Western New England University*

**Victoria L. Freniere** *PharmD Candidate 2021, Western New England University*

## Abstract

Interprofessional education encourages collaboration between several student healthcare professionals to provide experiences crucial to their success after graduation. Incorporating interprofessional education into the curriculum can be challenging, however it strengthens students' skills to work in a team and establishes understanding of roles and responsibilities. An interprofessional course, created by faculty from multiple institutions, effectively taught students through online learning modules as well as hands-on experiences such as simulations and communication activities. Activities included an identification questionnaire, TeamStepps paper chain, ambulatory care simulation, and a poverty simulation day. Throughout this course students learned about their roles, other professionals' roles, the importance of verbal and nonverbal communication, and the impact effective teamwork has on patient care.

*“I think that the biggest way the class helped me prepare for my career in healthcare is not only learning the roles of other healthcare professionals, but also the importance of knowing this information to create an efficient and optimal healthcare team.” - Matt, PA*

Interprofessional education (IPE) may be defined as, “When students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes,” but there is more to it than what’s at the surface (World Health Organization, 2010). Interprofessional education is a crucial part of a healthcare professional’s education and learning to work with others in the healthcare field is key to providing optimal patient care. Although there is a recommendation for guidance on IPE among healthcare professions, there are limitations to devoting adequate time to a concept that is so vital and reflects the environment of our future occupations (Barzansky et al., 2019). One large challenge is that many professionals have unique IPE accreditation standards, which make designing IPE curriculum to meet each of the different standards a challenge. Additional challenges when it comes to holding a course on interprofessional education may be the fact that a college may only have a few healthcare programs, limited funding, or have different schedules across the programs (West, C., 2016).

This widespread challenge however was conquered by the professors within the Cooperating Colleges of Greater Springfield (CCGS), a consortium of accredited colleges and universities located in Hampden County in Western Massachusetts, in and around the city of Springfield. A group of like-minded, entrepreneurial professors met together to design and offer a true interprofessional course. Faculty from Bay Path University, Western New England University, Elms College, Holyoke Community College, and Springfield College collaborated to create this novel, interprofessional elective for students. They saw the increased need for interprofessional education and were ready to take on this project. The college consortium offered the advantage in piloting this course as it was easy to register students and transfer credits between the schools. This elective course was built around fulfilling the four core competencies for interprofessional collaborative practice, which include values/ethics of practice, roles/responsibilities, communication, and teamwork (Interprofessional Education Collaborative, 2016). Additionally,

this course mirrored three of the best practice models for interprofessional education including the didactic program model, the community-based experience model and the interprofessional-simulation experience model (Bridges, D., 2011). The didactic program model is used to highlight interprofessional team building skills, understanding the knowledge of other professions, focusing on patient centered care, and grasping the effective impact of interprofessional collaboration. This was achieved through the in-class activities including the personality questionnaire and the TeamStepps paper chain activity. The community-based experience model was simulated through the Missouri Community Action Poverty simulation and the ambulatory care simulation, which focused on emphasizing how the environment and availability of resources impact one’s health status and how interprofessional teams can provide clinical services to patients. The interprofessional-simulation model was not only simulated through the ambulatory care simulation model, but the simulation held at Holyoke Community College, which gave the students an opportunity to hands-on experience working as a clinical team and for the students to develop and improve their communication and leadership skills. The inclusion of nursing, pharmacy, physical therapy, and physician assistant students provided the opportunity to explore and develop the skills required to fulfill these competencies. Each class session, built around IPE core competencies, was delivered through active learning components and simulation, interwoven with themes learned in the assigned Institute for Healthcare Improvement (IHI) Open School modules (Institute for Healthcare Improvement, 2020).

Throughout the course, there were a variety of activities with the purpose of promoting interprofessional education and teamwork. During the first class, we were broken up into two groups, each with equal representation of each health profession in the class. These remained our groups for the entirety of the semester, leaving it the responsibility of each individual to learn about, from and with each other in order to work as an effective team. One of the first activities in this course was aimed at figuring out what personality traits we have and how we would act in certain situations. Through the use of the questionnaire, Leadership Compass, we were able to identify our strengths and weaknesses which helped us understand where we could improve and where

we best fit in the group dynamics (Trimble, N. 2007). Starting with the first ice breaker, barriers were broken down through continued teamwork exercises, the ability to ask questions without scrutiny, and the comfort that a small class size brought. Being in this environment allowed students to interact during simulations, but more importantly during down-time, which offered students the opportunity to ask other professions questions they may have been too nervous to ask or ones that may have seemed “silly” in other scenarios. This class helped us foster new connections with students from other health professions, which we may not have had the opportunity to otherwise create. We were able to discuss each other’s professions and our scope of practice while clearing away any stereotypes that may have inhibited effective teamwork in the future.

*“Some things cannot be taught in school. With this hands-on experience I was able to look past stereotypes, gain a deeper understanding of their clinical expertise, and how a multidisciplinary approach to patient care positively affects patient outcomes.” - Victoria, PharmD*

In a later class, we were tasked with a timed, two phase activity called TeamStepps paper chain, that aimed to cultivate verbal and nonverbal communication skills (University of Washington, 2017). The ultimate goal was to make the longest paper chain, following the rules, and in the allotted amount of time. After the first phase, a debrief was held in which we identified who was appointed the natural leader of our group and the strategies used to accomplish the task at hand. In phase two, the group leader was given instructions of which order the colored paper must go in and had to relay it to the team without using words. Throughout this activity we explored how to form a cohesive and effective team in a short period of time by establishing roles and understanding how every individual fit into the team. Although not healthcare based, this activity proved useful because it illustrated the importance of both verbal and non-verbal communication skills. This can be applied in the real world because if every team member took just a little time to learn and understand what each group member brings to the table, a more efficient and valuable team might be formed. Additionally, a meta-analysis conducted by Hughes, A.M., et al. in 2016 demonstrated the benefits of team learning within the healthcare industry and used Kirkpat-

rick training effectiveness criterion as a measurement of effectiveness. Kirkpatrick training effectiveness criterion includes reactions to training, which is the extent to which trainees enjoy the training and perceive it useful, learning outcomes, which is the degree to which trainees acquire knowledge, skills, and abilities, transfer, which is the extent that trainees demonstrate the trained Kirkpatrick skills on the job, and results, which is the organizational and patient outcomes. A second goal of the meta-analysis was to determine if team based learning caused a progressive effect on the Kirkpatrick criterion where training caused reactions, which lead to learning, which influences transfer, and then ultimately caused results. The researchers measured the criterion using pre- and post-training scores for each of the four criterion. Examining the first goal, the meta-analysis showed that each of the four Kirkpatrick training effectiveness criterion improved after implementing healthcare team training. Additionally, the meta-analysis also showed that there is a progressive effect among the Kirkpatrick criteria but, the sequential effect began with learning rather than with reactions. The final result of the meta-analysis showed that healthcare team learning improves each of the four individual Kirkpatrick criterion and has significant and moderate direct and indirect effects on the sequential effect of the Kirkpatrick criteria as well. (Hughes, A. M., 2016).

*“Initial ice breakers showed me how crucial collaboration is with both verbal and non-verbal language and how vital each professional’s input is, especially when it comes to communication, in order to avoid medical errors.” - Danielle, DPT*

Toward the end of the course, we had a simulation day at Holyoke Community College in which the class was broken up into two groups with equal representation of each profession. Each group was then sent into the simulation and allowed five minutes to both assess the patient and create a care plan. Before going into the room, the teams strategized how they would approach the patient and what role each profession would have. Both groups allowed the physician assistant to take the lead and then involve each profession according to the expertise that was needed. For example, the pharmacist was called upon when the nurse found an unlabeled pill and needed it to be identified before administering

it to the patient, while the physical therapist provided education as to the optimal place to inject the insulin prior to physical therapy. In the second group, the patient became dizzy and their blood pressure dropped. The team was effective in stabilizing the patient because those who had more training in this type of scenario stepped in immediately while the others with less training stepped back until called upon to help. This was a great example of how knowing each profession's role and skills helped provide the best care and best outcomes for the patient. It was also beneficial that in previous classes we learned about each profession's scope of practice, which caused less uncertainty in this simulation. Everything was video recorded, which allowed the other group to observe what was happening in the simulation room. Both the group participating and the observing group created a list with regard to team dynamics, communication, what went well, and what could be improved upon. The debrief period that both groups participated in after the simulation was an important way to reflect upon the experience and learn how to improve in the future. This simulation provided a highly effective way for us to learn about each profession's scope, strengthen communication skills, and gain confidence. In a prospective descriptive survey design, medical and nursing students were split into teams to complete a clinical scenario. After the scenario they completed a survey, which depicted the benefits of a scenario. The survey results depicted the benefit of the scenario due to the usefulness of learning inter-professional communication skills, learning a sense of one another's roles on a clinical team and the way they would view themselves as part of the interprofessional team. (Reising, D. L, 2011)

*"To my surprise, there was significant overlap in skills that each profession was trained to do, therefore the simulation helped put into perspective which team member is best suited to perform each task. This further proves that using everyone's expertise is essential to provide the best care possible to the patient." - Emily, PharmD*

During the course, an interprofessional education day was held among several professions and programs of the CCGS. Western New England University hosted an ambulatory care simulation, while Bay Path University hosted the Missouri Community Action Poverty Simulation. As students of this class, we were able to help

facilitate and observe the simulations as we had already participated in some of them. For the poverty simulation there was a collaboration of nursing, occupational therapy, pharmacy, and physician assistant students. The poverty simulation is an hour-long simulation that is intended to replicate four weeks in the life of someone who is living in poverty (Missouri Community Action Network, 2020). All of the assigned families in the simulation have different financial and social statuses, and certain responsibilities that the families must complete in order to keep their family surviving, as they would in real life. As facilitators, we worked as community workers in either the bank, school, or store. It was interesting watching how everyone strategized what to do in order to make ends meet for their family. During the ambulatory care simulation, a team composed of medicine, nursing, occupational therapy, pharmacy, and physician assistant students worked together to solve a patient case. This simulation involved a standardized patient with a diabetic foot ulcer. Together, the teams had to assess the patient and treat them using each profession's expertise. Placing at least one profession on each team created a perfect environment, which ensured that students were able to learn about their role on the team as well as a variety of other professions. It was often observed that the physician assistant or medical students were first to speak with the patient and provide the diagnosis. After the pharmacist talked to the patient about their medications, the team discussed which plan would be best for the patient. During the discussion it was clear what each person could bring to the team to best help the patient. It was a great way to see what may happen in everyday life in a low stakes environment where there was time to learn from and about each other.

*"The simulation provided us with the opportunity to apply what we learned in our class about all the different professions and see them in action and see how the professions fit together to solve a problem." - MaryCatherine, PharmD*

Throughout the course there was a lot we learned about each other, the varying professions, and how this course is of use to us as we move forward in our careers. Rather than providing a lecture about interprofessional collaborative practice core competencies, the hands-on experiences in this class helped us explore these essential

concepts. Not only did we learn more about our role as pharmacists, but we also saw how each profession would approach a patient and how their perspective may be different than ours. As a team, using these different perspectives we can provide a patient treatment plan that caters to the needs of the patient while producing the best possible outcomes. With more effective patient care, we can hopefully achieve lower readmission rates, reduce costs, and provide overall better care for each of our patients (Bodenheimer, T & Sinsky, C, 2014). More emphasis should be placed on interprofessional collaboration throughout all healthcare professions, thus fostering a cultural norm of interprofessional practice that will one day rule the healthcare world. We had the opportunity to work with many other institutions to execute and successfully complete this course. The skills and lessons learned throughout this course will help all of us effectively collaborate and provide the best care possible to our patients.

*“I found this class to be informational and something that should be taught more in all aspects of healthcare education. The benefits to the patients with collaborative medicine are endless.” - Katie, RN*

## Acknowledgements

The authors of this article would like to acknowledge the contributions of Melissa J. Mattison, PharmD; Beth E. Welch, PharmD; Matthew Girard, PA; Danielle Cerrone, DPT; and Katie LaPierre, RN.

## References

Bodenheimer, T., & Sinsky, C. (2014). From triple to quadruple aim: care of the patient requires care of the provider. *Annals of family medicine*, 12(6), 573–576. <https://doi.org/10.1370/afm.1713>

Bridges, D., Davidson, R., Odegard, P., Maki, I., & Tomkowiak, J. (2011). Interprofessional collaboration: three best practice models of interprofessional education: Medical Education Online. <https://doi.org/10.3402/meo.v16i0.6035>

Framework for action on interprofessional education and collaborative practice. (2010). Geneva, Switzerland: World Health Organization. Retrieved from: [https://www.who.int/hrh/resources/framework\\_action/en/](https://www.who.int/hrh/resources/framework_action/en/).

Hughes, A. M., Gregory, M. E., Joseph, D. L., Sonesh, S. C., Marlow, S. L., Lacerenza, C. N., Benishek, L. E., King, H. B., & Salas, E. (2016). Saving lives: A meta-analysis of team training in healthcare. *Journal of Applied Psychology*, 101(9), 1266–1304. Retrieved from: <http://dx.doi.org/10.1037/apl0000120>

IHI Open School Online Courses. (2020). Boston, MA: Institute for Healthcare Improvement. Retrieved from: <http://www.ihio.org/education/IHIOpenSchool/resources/Pages/default.aspx>.

Interprofessional Education Collaborative. (2016). Core Competencies for interprofessional collaborative practice. Washington, DC: Interprofessional Education Collaborative. Retrieved from: <https://www.ipecollaborative.org/resources.html>.

Reising, D. L., Carr, D. E., Shea, R. A., & King, J. M. (2011). Comparison of communication outcomes in traditional versus simulation strategies in nursing and medical students. *Nursing education perspectives*, 32(5), 323–327. <https://doi.org/10.5480/1536-5026-32.5.323>

TeamSTEPPS® Paper Chain Team Exercise. (2017). Seattle, WA: University of Washington Center for Health Sciences Interprofessional Education Research and Practice. Retrieved from: <https://collaborate.uw.edu/teamstepps-paper-chain-team-exercise/>

Trimble, N. (2007, June). Leadership Compass. Northwest Leader Corps training curriculum. <https://doi.org/10.1108/hrmid.2007.04415aae.002>

Voyles, K. (2020). Poverty Simulation. Jefferson City, MO: Missouri Community Action Network. Retrieved from: [www.communityaction.org/povertysimulations/](http://www.communityaction.org/povertysimulations/)

West, C., Graham, L., Palmer, R. T., Miller, M. F., Thayer, E. K., Stuber, M. L., Awdishu, L., Umoren, R. A., Wamsley, M. A., Nelson, E. A., Joo, P. A., Tysinger, J. W., George, P., & Carney, P. A. (2016). Implementation of interprofessional education (IPE) in 16 U.S. medical schools: Common practices, barriers and facilitators. *Journal of interprofessional education & practice*, 4, 41–49. <https://doi.org/10.1016/j.xjep.2016.05.002>

## Corresponding Author

Emily L. Fedor

College of Pharmacy  
1215 Wilbraham Rd.  
Springfield, MA 01119

[emily.fedor@wne.edu](mailto:emily.fedor@wne.edu)