

Learning Together: *How Interprofessional Education Can Strengthen Health Care Professional Relationships and Improve Patient Care*

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Interprofessional education (IPE) has received growing international attention and has been championed by influential national organizations, such as the Institute of Medicine and the Association of American Medical Colleges (AAMC). The implementation of IPE represents a commitment from health care professional schools to provide the opportunity for future doctors, nurses, and pharmacists to learn with, and about, each other. By putting students of different disciplines in the same space, IPE fosters a shared perspective of common values and ethics in health care. When students train together, they are more likely to respect each other and understand the roles of their respective fields of expertise. The goal of IPE is primarily to produce well-rounded professionals that are prepared to work effectively in a dynamic social environment with multidisciplinary collaboration. To achieve such a goal is more important now than ever before. The advancing complexity of the health care system coupled with the alarming shortage of doctors solicits a need for teamwork among health care professionals. The population of America is increasing faster than the necessary number of licensed physicians due to a strict limit on the number of funded residency positions. The Association of American Medical Colleges estimates that there are 40,000 less physicians than currently needed in America, and they predict that by 2025 that figure will rise to 130,600.¹ This means that nurses, pharmacists, physician assistants, and many other

types of health care professionals will soon be playing a larger role in the delivery of health care.

Medical schools that provide IPE curriculum recognize the vital role team-building exercises play in allowing medical students to develop the skills they need in the future. Urban hospitals, where many doctors receive post-graduate education, rely on large teams to take care of patients. A 2007 study of a New Zealand hospital found that patients saw about 18 health care professionals on average during their admission. On medical floors, patients saw an average of about 6 doctors, 11 nurses, and 1 allied health worker, while on surgical floors, they saw 10 doctors, 16 nurses, and 1 allied health worker.² That study underestimates the size of the health care team, as it did not include the behind-the-scenes health care professionals that contribute to care like pharmacists, case managers, etc. The study should not be interpreted to mean that hospital teams are too big; team-based care has many proven benefits for patient satisfaction and quality of care. Another study from Massachusetts General Hospital has shown that the introduction of a transitional care pharmacist (TCP) and a discharge nurse (D/C RN) had a powerful impact on lowering hospital readmission rates. The D/C RN actively engaged in coaching the patient and family with regards to the transition of care from hospital to home, and the TCP performed pre-discharge medication reconciliation and post-discharge phone calls to patients.³ Other

studies focusing specifically on pharmacists have found similar results.^{4,5} Increased awareness of the benefits of multidisciplinary team-based care has motivated many medical schools to take action in preparing their students for this reality.

Medical schools are also interested in IPE because there is a wealth of evidence to support that interprofessional collaboration curtails adverse events, readmission rates, and medication errors. IPE prepares students for effective cooperation by teaching them the fundamental skill for effective teamwork: communication. Without communication, relationships fall apart and negative consequences follow. The Joint Commission has repeatedly found that communication failure is the most common root cause of many medical errors including wrong-site surgeries, delays in treatment, and medication errors.⁶ Furthermore, medical errors have recently been found to be the third leading cause of death in the US.⁷ This shocking statistic underscores the need to engender more cooperation among healthcare professionals.

In addition to patient satisfaction, workplace safety also stands to benefit from IPE. The Institute for Safe Medication Practices published a survey in 2013 which reports that over the last year 74 percent of nurse respondents were verbally abused, nearly half were shamed or humiliated, and over a quarter had objects thrown at them by physicians.⁸ When doctors intimidate nurses, they become afraid to speak up about their concerns. There are strategies employed in the hospital to deal with unprofessional behavior, such as calling “Tempo!” when tensions are rising, or “code pink” among nurses when one of them has been outright bullied. Despite these efforts, “our profession is still plagued by doctors acting in a way that is disrespectful, unprofessional, and toxic to the workplace,” former CEO of American College of Physician Executives Barry Silbaugh observed.⁸ IPE is in a unique position to stop this behavior before it begins. The push for IPE has the potential to reverse the historic trend of isolated education and hierarchical power structures that create barriers to communication.

The Liaison Committee on Medical Educa-

tion has required that all US medical schools implement some form of interprofessional collaboration but without specifying specific criteria. Despite that, a 2014 questionnaire of medical school graduates found that only 71.1% of all respondents said they had some IPE experience. Nursing, pharmacy, and physician assistants were the top 3 health professions that participated alongside medical students. One key barrier to further expansion of the programs is the lack of role models for IPE implementation.⁹ Fortunately, this is becoming less true as more medical schools share their results. Medical Education Online recently published an article that explains in detail how three universities have successfully implemented changes in curriculum to support interprofessional collaboration, the results of which have been summarized below. The Rosalind Franklin University of Medicine and Science, the University of Florida and the University of Washington have shared their approach to implementing IPE, defined as “members or students of two or more professions associated with health or social care, engaged in learning with, from and about each other.”¹⁰ The details are provided with the intent that medical schools will be inspired to reproduce some of the more successful strategies.

The Rosalind Franklin University of Medicine and Science (RFUMS) started IPE in 2004 with their one-credit-hour course HMTD 500: Interprofessional Healthcare Teams. All first-year students are placed into 16-member teams consisting of members from a variety of health care professions: allopathic and podiatric medicine, psychology, pathologists’ assistants, nurse anesthetists, medical radiation physicists, clinical lab technicians, and physician assistants. The course objectives direct the team to work together to solve problems through didactics and a service learning project. The didactics engage students in weekly small group sessions where they discuss collaborative patient-centered care and develop solutions to medical error cases. The service project allows the local community to benefit from student-provided prevention education. The course also provides the opportunity for four teams of three interested students to engage

in a clinical experience. During the clinical sessions, the teams meet with real patients at a clinic and choose one to ask how each profession could contribute to their care. Regularly held focus group meetings have provided RFUMS with positive feedback from the students regarding the promotion of teamwork and communication strategies.¹⁰

The University of Florida has over 10 years of experience in IPE with the Interdisciplinary Family Health course. Although not required for veterinary medicine students, they may volunteer to participate along with nutrition graduate students, physical therapy students, clinical and health psychology students, and those from the Colleges of Medicine, Dentistry, Pharmacy, Nursing, and Public Health and Health Professions. The two-semester course revolves around four home visits where students meet with volunteer families, the majority of which qualify as underserved. Reading material and discussion questions prompt students to address important topics during their meetings. On the second visit, the interprofessional team develop a project that will help the family in whatever way they require assistance, be it preventive, social, economic, or educational. At the end of the course, the team produces a presentation on their project for the other groups, as well as personal reflection papers that discuss their individual participation and development as future healthcare professionals. Future goals for this course include extending it into all years of training and keeping the group together to strengthen the bonds the students make during their first year.¹⁰

In 1997, the University of Washington established the Center for Health Sciences Interprofessional Education (CHSIE) in order to integrate the teaching and research of its professional schools. This center has allowed the University of Washington to now offer over 50 collaborative courses bringing together its six health professions schools: medicine, nursing, pharmacy, social work, public health, and dentistry. One large initiative of the CHSIE is the interprofessional team simulation program. This program provides students the opportunity to develop team-based skills while work-

ing on simulated cases of medical problems in a variety of care settings. The University of Washington requires that each simulation course reinforce the same IPE competencies, including respecting others' disciplines, consulting, collaborating, raising concerns about patient outcomes, and demonstrating conflict management/resolution. Another initiative, started even before CHSIE, is the SPARX (Student Providers Aspiring to Rural and underserved eXperience) program. Started in 1994, SPARX involves seminars, skill training sessions, and service projects which connect passionate students to people in need such as the homeless. Since then, SPARX has grown from less than 100 to more than 500 students from all health sciences.¹⁰

The common elements of the three IPE implementations discussed above include emphasizing important elements necessary for effective collaboration. Mutual trust and respect go a long way towards building healthy relationships. Another common thread is the focus on understanding each team member's role and the strengths and weaknesses of their profession. Most importantly, each implementation has students appreciate the impact of IPE and reflect upon how interprofessional relationships can improve patient care.¹⁰ Those universities have provided valuable sources of knowledge on the best ways to implement IPE, but they are not the only ways. The American Medical Association Journal of Ethics proposes two other possible ideas. First, that course directors work with IPE-trained faculty to provide IPE in the clinical setting. The advantage of that approach is the proximity of the training to the result. Second, that students work together on case-base scenarios, which is less faculty-intensive.¹¹ As there are no national requirement yet, medical schools have plenty of room to experiment to find what works best for their unique situations.

Just as important as implementing these new strategies, is the goal of building an evidence base for IPE to support its efficacy and convince other institutions to implement specific solutions with proven benefits. Exactly how to measure the impact of IPE on interprofessional relationships,

patient outcomes, and health systems as a whole remains a challenge. In 2015, the Institute of Medicine published the results of committee meeting to address this challenge; it has recommended four strategies to improve the quality of IPE evaluation. The first recommendation is to closely align the education and health care delivery systems. This allows a tighter association between IPE and tangible, measurable results in a patient-care setting. IPE programs that begin and end in the classroom miss out on the context in which the future professionals will interact. The second recommendation is to develop a conceptual framework for measuring impact. What kind of results are important to track? What sources should results be drawn from? Those questions will be addressed below. The third and fourth recommendations are to strengthen the evidence base for IPE and link IPE with improvements in collaborative behavior.¹² Together, the last two recommendations suggest that institutions implementing IPE conduct surveys, either before and after implementation, or with the basic scientific method of an experimental group and a control group. The latter option, although it produces stronger data, prevents students from receiving equal education, and so the former option seems like the optimal solution.

The Institute of Medicine concluded their committee meeting with a number of specific, yet flexible recommendations for the variety of IPE program possibilities across many diverse learning environments. Their publication lists a number of learning outcomes that can be gleaned from student questionnaires or professional observation: individual reactions, attitudes, perceptions; improvements in knowledge, skill, performance; and overall collaborative behavior. Those outcomes may be influenced by factors such as hospital and university cultures and policies, and so it would be prudent for any institution to first identify the variables relevant to IPE implementation. Next, medical schools can work to take advantage of enabling factors and overcome the challenges posed by interfering ones. The lack of precedent for formal IPE in some institutions and the many vari-

ables contributing to its complexity suggest that the outcomes listed above may not be enough for a comprehensive analysis. The Institute of Medicine also proposes that health profession administrators collaborate with other experts including health service researchers, educational evaluators, and economists using a mixed-methods approach.¹²

As an emerging field, IPE is far from standardized, but medical educators across the nation have learned much from experimenting with several types of programs. As IPE expands across the nation, more valuable data will be generated to allow programs to pursue options with the greatest proven benefit. Evidence-based refinement allows the most effective programs to be shared across institutions for the benefit of all. Ultimately, IPE will provide the medical community a tremendous return on investment through reduced medical errors and increased workplace safety from the communication skills it generates.

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