

Interprofessional Education: An Overview and Implications for Pharmacy Preceptors

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Introduction

The World Health Organization (WHO) defines interprofessional education (IPE) as a process that “occurs when students from two or more professions learn about, from, and with each other to enable effective collaboration and improve health outcomes.”¹ The core element of IPE is that learners from different professions are engaged with each other during their training programs. Although IPE may occur in the classroom, it more commonly

and authentically happens in simulations, professional laboratories and, most importantly, the experiential setting. We believe it is the experiential settings in which students have the greatest opportunity to learn from each other and grow from these interactions. Although the concept of IPE has been around for decades, there has been a tremendous increase in the implementation and evaluation of IPE in health care education in recent years. Issues related to patient safety, poor quality of care, and a perceived lack of patient-

centeredness in the health care system are driving the shift towards IPE.² The ultimate goal of IPE (and the correlated interprofessional care [IPC]) is to enhance patient outcomes.

In order for IPE to be successfully implemented, educational programs for health care professionals in the U.S. and worldwide must drive a paradigm shift. Historically, such programs have offered training in silos where each profession interacts solely with members of its own discipline. A shift toward IPE will likely be a difficult, potentially painful experience encompassing years. Although there is no agreed-upon endpoint for IPE, the call for action is clear.

The profession of pharmacy has been a leader in the IPE movement in the U.S. Since experiential learning should include opportunities for IPE, it is imperative that all pharmacy preceptors have a broad understanding of IPE and its importance in contemporary health care education. In addition, preceptors must be familiar with techniques to *implement* IPE in the experiential setting. A series of three articles in the *Pennsylvania Pharmacist* on the topic is planned. This article, the first, will provide an overview of IPE, including some of the drivers of IPE; identification of common resources; and suggestions for incorporation of interprofessional activities into the practice experiences. The second article will describe strategies and activities employed by



Pennsylvania schools of pharmacy to incorporate IPE into their programs. The final article in the series will highlight practitioners in Pennsylvania who practice in an interprofessional, patient-centered environment.

Overview of Interprofessional Education and Interprofessional Collaborative Care

While clearly part of the contemporary dialogue, IPE and collaborative, team-based health care and health care delivery are not new concepts. In 1972, the Institute of Medicine (IOM) convened leaders from medicine, pharmacy, nursing, dentistry, and allied health to consider why and how health care teamwork might be taught across the health professions. The resulting report, *Educating for the Health Team*, recommended that health professions' education programs prepare students for teamwork and that educational institutions "relate interdisciplinary education to the

practical requirements of health care."³ Conversations related to the current health care environment in the US often focus on achieving the "Triple Aim" for an optimized health care system. First articulated by the Institute for Healthcare Improvement, the three goals of the Triple Aim are to 1) improve the patient care experience; 2) improve the health of communities and populations; and 3) reduce the per capita cost of health care.⁴ Questions considered at the that first IOM conference are still relevant in this era of health care reform and guide the development of strategies to achieve the Triple Aim. It is the interface between health professions education and health care delivery systems where many are concentrating efforts and resources.

In addition to the long-standing focus on IPE and practice in the US by the IOM, and more recently by the American Interprofessional Health Collaborative (AIHC), the field was advanced earlier in other global regions by the Centre for the Advancement of Interprofessional Education

(CAIPE) in the UK, the Australasian Interprofessional Practice and Education Network (AIPPEN), the European Interprofessional Practice and Education Network (EIPEN), and the Canadian Interprofessional Health Collaborative (CIHC). Recognizing health and health care as global considerations and that a qualified health care workforce is a global concern, in 2010 the World Health Organization (WHO) published a comprehensive analysis and guidance *Framework* to inform policy development, educational program design, and implementation of collaborative practice models.⁵ A year later, an independent commission of 20 leaders in health care drawn from across the world published a report on transforming education to strengthen health systems in an interdependent world.⁶

Recommendations, emanating from a recent conference on transforming patient care, recognize that improving the US health care system and achieving the Triple Aim will require a deliberate and synergistic alignment of health professions' education programs with clinical practice.⁷ The research and development agenda outlined in the recommendations fall into five broad areas:

1. Patient, family and community engagement in the design, implementation, and evaluation of improvement efforts.
2. Development of innovative models to more explicitly link interprofessional education and collaborative practice.
3. Reform across the educational

continuum of health care professionals, from pre-licensure education to continuing professional development, to incorporate interprofessional learning opportunities and skills necessary to deliver effective team-based care.

4. Modification of standards and practices in health professions' education (i.e., accreditation standards and guidelines) and in practice (i.e., regulations that permit health care providers to function at the fullest extent of their training).
5. Dedication of resources to facilitate the development, implementation, evaluation, and sustainability of new models for interprofessional education and collaborative, team-based practice.

Recognizing that no one profession can achieve interprofessional expectations alone, new structures have emerged to facilitate the achievement of stated visions for practice and education and the interface between them. Six health professions' education organizations, including the American Association of Colleges of Pharmacy (AACCP), joined together in 2011 to address the development and implementation of models for interprofessional education focused on the preparation of a collaboration-ready health care workforce. The Interprofessional Education Collaborative (IPEC) published

competencies deemed critical to the capability of new graduates to function effectively as members of collaborative health care teams.⁸ Organized into four domains (values and ethics, roles and responsibilities, interprofessional communication, and teams and teamwork), 38 behavioral expectations now guide the development of educational experiences, both in the classroom and clinical education environments.

In 2012, the US Health Resources and Services Administration (HRSA) committed \$4M over five years through a cooperative agreement with the University of Minnesota Academic Health Center to establish the National Center for Interprofessional Practice and Education. The goals for the National Center reflect the Triple Aim and initial efforts are focused on strengthening the alignment between health professions' education and health care practice. Advancing the field of interprofessional practice and education through evidence-based program development can be achieved through the use of strong metrics and evaluation processes that are designed to identify successful educational practices and models of integrated care delivery.

Accreditation and Interprofessional Education

Changes in pharmacy education to prepare PharmD graduates

to participate effectively as members of interprofessional health care teams were stimulated a decade ago by the IOM's vision for health professions education in the twenty-first century:

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.*⁹

And while the thrust for IPE began with large, umbrella organizations such as the WHO and the IOM, assurance for quality IPE, which enables the future delivery of high quality, patient-centered collaborative

care, falls to the individual education and training programs for each of the health professions and their accrediting bodies. Specifically related to pharmacy education, curriculum guidance documents, such as AACP's Center for the Advancement of Pharmacy Education (CAPE) *2013 Educational Outcomes*^{10,11}; profession-wide strategic goals,

Table 1
IPE-related Statements in ACPE accreditation standards and Appendix C

Standard	Guideline
1: College or School Mission	1.6: The college or school's values should include a stated commitment and goals to a culture that, in general, respects and:...promotes development of interprofessional learning and <u>collaborative practice</u> in didactic and experiential education.
3: Evaluation of Achievement	3.2: In general, the evaluation plan should describe the:...desired outcomes of Mission and Goals of the college of school's mission and goals, including the educational program(s), research and other scholarly activities, professional and community service, <u>interprofessional education</u> , and pharmacy practice programs...
6: College or School and other Administrative Relationships	6.1: The relationships, collaborations, and partnerships should advance the desired outcomes of the college or school's mission and goals including student learning, research and other scholarly activities, professional and community service, <u>interprofessional education</u> , and pharmacy practice programs.
7: College or School Organization and Governance	7.2: In general, the responsibilities of the administrative leaders – individually or collectively – should include:.....developing and evaluating <u>interprofessional education</u> and practice opportunities....
8: Qualifications and Responsibilities of the Dean	The dean must have the authority and be responsible for ensuring:... collaborative efforts to develop, implement, evaluate, and enhance <u>interprofessional education</u> , practice, service, and research programs....
Appendix C	The pharmacy practice experiences should:....require active participation and patient care responsibilities, in a progressive fashion, designed to develop the practice skills, judgment, professional behavior, attitudes and values, confidence, and personal responsibility needed for each student to embark on an independent and <u>collaborative practice</u> .

such as the Joint Commission of Pharmacy Practitioners' (JCPP) *Vision for Pharmacy Practice in 2015*¹²; and the Accreditation Council for Pharmacy Education (ACPE) *Standards and Guidelines for the Accreditation of Programs Leading to the Doctor of Pharmacy*¹³ have reflected the need for new graduates to be able to participate effectively as members of interprofessional health care teams and to engage with patients, families, communities, and other health care providers to deliver care and promote health.

An analysis of the accreditation standards for dentistry, medicine, nursing, occupational therapy, pharmacy, physical therapy, physician assistant, psychology, public health and social work has illustrated that the IPE requirements and preparation for interprofessional collaborative practice (IPCP) within these disciplines varies widely.¹⁴ Currently, pharmacy is in the forefront of identifying IPE as a key component for the successful education and training of its students for the future.

The ACPE accreditation document for the Doctor of Pharmacy degree, explicitly identifies IPE within four of the standards (see Table 1).¹⁵ In addition, the term *interprofessional* is included twenty-three times within the document as a descriptor of not only education, but also of training, learning, activities, interactions, relationships, teams, healthcare teams, care teams and simulations. Further, a

reference to collaborative practice is made in both Standard 1 and Appendix C of the document (see Table 1).

In the preamble of the CAPE *2013 Educational Outcomes*, released in July 2013 by AACP, it is noted that "pharmacists of the future must be capable of functioning collaboratively as members of an interprofessional team."¹⁶ Elements of IPE are clearly included throughout. One such example is a learning objective in the domain of essentials for practice that states "Participate with interprofessional healthcare team members in the management of, and health promotion for, all patients." Another domain of approach to practice and care, emphasizes the importance of collaboration, noting that individuals are responsible for "active participation and engagement as a healthcare team member by demonstrating mutual respect, understanding, and values to achieve patient care needs."

As educators and role models for the pharmacy students of today, preceptors must demonstrate the importance of interprofessional teamwork as they train students to become active, engaged participants in the delivery of collaborative care in the future.

Role of Preceptors in Interprofessional Education

The academic environment is responsible for establishing the foundation for inter-professional collaboration. Through campus-

based endeavors such as shared coursework, simulation, case studies, and reflection exercises, the inculcation of attitudes, behaviors, knowledge, and skills necessary for inter-professional collaboration can begin at an early stage. It is in authentic practice settings, however, where students have the opportunity to interact with other health care learners and professionals in a manner that can have the greatest impact on patient care. The role of the pharmacy preceptor in identifying, modeling, and facilitating student involvement in such activities is crucial.

The stage for effective interprofessional interactions can be set during the introductory pharmacy practice experiences (IPPEs) and carried throughout the advanced pharmacy practice experiences (APPEs) in the final professional year. Based on the ability level of the student, such experiences will necessarily begin with observation and shadowing functions, progress to participatory activities that are facilitated by the preceptor, and culminate with interprofessional team activities that engage the student in a more self-directed way (AACP, 2007).¹⁷

In the introductory phase, observation and reflection can help students recognize their own roles and responsibilities as well as those of other health care professionals. Providing students with the opportunity to visit other departments and shadow other health care professionals in the midst of their daily activities can be readily achieved in many health care settings. Preceptors can

also work with other health care professionals to include students as observers in patient therapy and/or treatment sessions, diagnostic testing procedures, and as part of interprofessional committee meetings.

The opportunity to observe preceptors as professional role models in their interactions with other health care professionals is essential. As Paré et al. state, “. . . most students learn to interact with their colleagues by observing the behavior of professionals in educational settings.”¹⁸ Students in the community setting, for example, can observe how pharmacist preceptors interact with prescribers in making recommendations regarding patient medication therapy; students in the institutional setting can observe how pharmacists contribute to decision-making as part of interprofessional groups, such as pharmacy and therapeutics and patient safety committees.

As students progress, preceptors can facilitate more direct involvement in interprofessional activities. Participating in interprofessional patient table rounds or bedside rounds can be particularly effective, especially when the pharmacist preceptor is a contributing member. Encouraging students from multiple professions to discuss patient cases and arrive at recommendations prior to meeting with joint preceptor supervisors allows for shared problem-solving.¹⁹ Rotating student responsibility for the presentation lead among the professions provides parity and develops

respect for one another's roles. Forming student-preceptor journal clubs that are interprofessional in nature further provides students with the perspectives of other health care professionals.

Contributing to interprofessional committee work can also foster student growth. For example, students may be asked to prepare a formulary review for discussion and consideration at a pharmacy and therapeutics committee meeting. Interprofessional student groups can also be assembled to conduct root cause analyses, medication use evaluations, and/or audits for presentation to supervising preceptors.¹⁶ These types of activities not only allow for student engagement as part of a team, but also provide a valuable service for the practice site.

Direct patient care activities conducted in collaboration, such as patient assessments, medication reconciliation, and discharge consults, are particularly useful. Engaging with students and practitioners from multiple professions in the development of the patient plan of care allows for a heightened awareness of other professions and develops a strong network for referral.²⁰ Students can also be provided with the opportunity to work with physician assistants and nurse practitioners in mini-clinic settings within select community pharmacy environments. Collaborative practice agreements can further provide students with interprofessional engagement in outpatient settings.

Students across multiple

professions can participate in wellness activities in the community by providing screenings, preventive medicine, and health education.^{21,22} Likewise, students from multiple professions can provide joint educational presentations to the community that foster health and wellness. Free clinics that target underserved populations are ideal settings for interprofessional collaborative practice.²³

An essential piece of any interprofessional education process is preceptor-guided reflection. Preceptors should set expectations prior to an interprofessional interaction. Debriefing afterwards should include a discussion of the contribution of collaboration towards positive patient outcomes, the challenges that arise as part of a team-based approach, and ways to overcome barriers. Buring et al. add that “. . . an ideal intervention must include the opportunity for the students to perform some type of reflection as to their initial and changed perception of their role and value in interprofessional care.”²⁴

Nonetheless, logistics can present a formidable challenge for the pharmacist preceptor. Although it is not an easy task, schools can facilitate this process by coordinating the scheduling of students from multiple professions at the same facility. Preceptors can likewise enhance interprofessional interactions by engaging with colleagues from other professions, cultivating administrative buy-in and support, and establishing relationships in the community.²⁵

Table 2 Potential Ideas for Pharmacy Preceptors to Enhance IPE in the Experiential Setting

Community Practice

- Working with a local physician who is precepting medical students, arrange a “switch day” such that the pharmacy student spends a day in the physician office and the medical student observes activities in the pharmacy.
- Foster patient care by collaborating with and allowing students to observe /interact with mini-clinic health care professionals operating within the community pharmacy setting.
- Cultivate the medical home concept by embedding the pharmacy students in a physician practice on a regular basis during the practice experience.
- Include the students in the establishment of an immunization protocol with a supervising physician.
- Include the students in the development and implementation of a collaborative care agreement with a local physician.
- Allow the students to visit local health care and medical practices in the community to offer an overview of the services that the pharmacy provides.
- Incorporate the students in collaborative efforts with other health care professionals to offer services to the community (e.g., blood pressure screenings, risk assessments, immunizations, etc.) through local venues such as churches, community centers, libraries, fairs, etc.
- Incorporate the students in collaborative efforts with other health care professionals to provide educational outreach to community and school groups that promote health, wellness, and prevention.

Health System / Hospital Practice

- Provide visitation opportunities to other departments (e.g. nutrition, social services, physical therapy, occupational therapy, pastoral care, laboratory, radiology, etc).
- Create opportunities for students to observe interprofessional teams and follow those observations with a reflection and debriefing session focusing on the strengths and areas of improvement relative to the team interaction.
- Pair up nursing and pharmacy students during “med pass”.
- Incorporate students into interprofessional meetings such as pharmacy and therapeutics and discharge planning meetings. Encourage other professions (nursing, medicine) to do the same.
- Provide medication reconciliation and transition of care services which involve interaction and communication with other members of the healthcare team.
- Incorporate students in bedside rounds, table rounds, and/or grand rounds that include other members of the healthcare team.
- Serve as facilitator for patient case presentations and care plan discussions that include other members of the healthcare team and their students; alternate leads across the professions.
- Assign students to projects such as DUE’s or patient safety reviews/audits that include students from other health care professions.

Information technology such as electronic medical records and a physical layout conducive to interaction can further cultivate interprofessional relationships. Implementing IPE in IPPEs and APPEs will take time, effort, creativity and dedication. See Table 2 for a summary of ideas for IPE which may be incorporated into IPPEs or APPEs.

Interprofessional Education Resources

There are a variety of resources that may be utilized to gain a deeper understanding regarding interprofessional education. Below is a summary of several resources along with the type of information that can be obtained from each. These resources provide insight and ideas for educators, students, and professionals. The information provided by these resources ranges from suggested publications to active learning ideas and presentations. Additionally, several IPE organizations and initiatives within Pennsylvania are highlighted.

Core Competencies for Interprofessional Collaborative Practice have been released by an expert panel consisting of several disciplines. The report was sponsored by the Interprofessional Education Collaborative. The goal of the report is to establish a common language and defined core competencies for all health care professionals in order to close the collaborative practice

gap. The report contains detailed information about each of the core competencies, learning activities and IPE assessment criteria. These core competencies can be used as a guide for developing IPE initiatives in schools of pharmacy across the state. The core competencies are available from the American Association of Colleges of Nursing website at <http://www.aacn.nche.edu/education-resources/ipereport.pdf>.

The National Center for Interprofessional Practice and Education at the University of Minnesota's Academic Health Center provides a wide variety of resources about interprofessional education. There are links to various journal articles, organizations, and educational models which are useful for educators looking to integrate interprofessional education into their curriculum. Anyone interested in interprofessional practice and education may access materials from the Resource Exchange, participate in ongoing conversations through the Forums, and connect to others in the field through profiles and networks maintained by the National Center. The resources are available from <http://www.nexusipe.org>.

The Center for Health Science Interprofessional Education, Research and Practice at the University of

Washington provides resources for both practitioners and students. For educators, these include downloadable IPE presentations, recommended competencies, information about upcoming interprofessional conferences, and a list of International IPE organizations and links. Student offerings are geared toward University of Washington's students; however, there are downloadable presentations, learning modules, and links to information about other health professions that may be utilized in any classroom. These resources can be accessed at <http://collaborate.uw.edu/>.

MedEdPortal, is a program of the Association of American Medical Colleges (AAMC). The mission of MedEdPortal is to "promote educational scholarship and collaboration by facilitating the open exchange of peer-reviewed health education teaching and assessment resources." Many helpful publications cover a wide variety of topics and can be useful resources for preceptors. An initiative in 2012 significantly expanded IPE content. Additionally, iCollaborative, a MedEdPortal initiative, provides a platform for educators and students to share ideas and innovations. This section of MedEdPortal also contains presentation ideas, but these are not peer-reviewed. Anyone may submit ideas to iCollaborative for all

health professionals to see and utilize. All materials that can be found on MedEdPortal are free of charge and open to the general public. You will need to register for an AAMC account to access the resources at <https://www.mededportal.org/>.

American Interprofessional Health Collaborative (AIHC) is the US-based organization that connects individuals and organizations across professional and practice environment boundaries to ensure the integrity, viability, and quality of education and training programs, to assure health in all policies, and to influence systems impacting health and care delivery toward an improved system of health and wellness for individual patients, communities, and populations. Programs and resources available through AIHC may be accessed at <http://www.aihc-us.org/>.

Pennsylvania-based Resources:

Jefferson InterProfessional Education Center at Thomas Jefferson University is dedicated to the promotion of interprofessional care. An e-newsletter about IPE as well as various learning resources are available at this site. Learning resources include didactic learning modules with downloadable teaching plans, videos with facilitator guides, and a



toolkit for educators. Also provided are access to presentations, publications, and information about their Interprofessional Care Conference. These resources may be accessed from <http://jeffline.jefferson.edu/jcipe/>.

Northeastern and Central Pennsylvania Interprofessional Education Coalition (NECPA-IPEC) is an organization that aims to bring together students and educators from various institutions within the Northeastern and Central Pennsylvania region. Among other projects, each year NECPA-IPEC sponsors a collaborative care summit for learners to participate in interprofessional case based learning. For educators who might be interested in the coalition or summit, more information can be found at www.necpaipec.com.

Conclusion

The move toward IPE is probably the most dramatic change

in health care education over the past several decades. As pharmacy practitioners and educators, we are in a unique position to enhance the educational experience for our students, cultivate better practitioners and ultimately improve the overall health care system in the U.S.

Please note the list of references is available on the PPA website. Please visit www.papharmacists.com/peer to view the list. ■

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