



Introduction to Interprofessional Education (IPE):

Recent History, an Institutional Case Study, and Advice for Growing Your Program



Devin Nickol, MD, Associate Professor in the Department of Internal Medicine, Associate Dean for Interprofessional Education, University of Nebraska Medical Center, Omaha, Nebraska

A National IPE Movement Takes Hold

The role of interprofessional education (IPE) in training students for collaborative practice has been recognized for decades;

however, its current prominence in U.S. health professions education was spurred by the publication of several influential reports focusing on patient safety at the dawn of the new millennium. The Institute of Medicine (IOM) report, *To Err is Human: Building a Safer Health System* (Kohn, Corrigan, & Donaldson, 2000) is often cited as a turning point in thinking about health care delivery and education. By shining a light on the high incidence of dangerous medical errors—and the resulting cost in lives—this report helped prompt new approaches to collaborative health professions education. In 2001, the IOM published the follow-up report, *Crossing the Quality Chasm: A New Health System for the 21st Century*, followed by *Health Professions Education: A Bridge to Quality* (Greiner & Knebel, 2003). Together, these three reports greatly increased the momentum behind IPE. In 2010, the World Health Organization (WHO) published its *Framework for Action on Interprofessional Education and Collaborative Practice* (Gilbert, Yan, & Hoffman, 2010; WHO, 2010). This report included one of the most commonly cited definitions for IPE—namely, that IPE “occurs

IPE “occurs when students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes”

(WHO, 2010, p. 13).



when students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes” (WHO, 2010, p. 13).

In the years since, IPE has become a routine part of health professions education in the United States. Currently, nearly all major accrediting bodies for health professions training programs require accredited programs to include some level of IPE as part of their curriculum. In 2019, the Health Professions Accreditors Collaborative published the report, *Guidance on Developing Quality Interprofessional Education for the Health Professions*, with the hope of achieving greater consensus around accreditation requirements for interprofessional training for all professions.

Recent surveys of IPE centers across the country have demonstrated significant diversity in program maturity (American Interprofessional Health Collaborative, 2020). Some centers are relatively new to the process of developing curricular content, whereas others have well-developed programs incorporating a wide variety of clinical and pre-clinical learning opportunities. What follows is a historical account of how one institution—the University of Nebraska Medical Center (UNMC)—developed IPE. I hope that this account will help other institutions by serving as a useful example of a path from simple beginnings to a more fully developed program.

IPE at UNMC: A Case Study Spanning 12 Years (2008-2020)

Humble Beginnings

The first formal activities related to IPE at UNMC began in 2008, when a group of faculty with an interest in IPE designed a voluntary event for students from six UNMC colleges. The event included a panel discussion around the case study of a patient previously cared for by the multi-organ transplant team. This large-group discussion was followed by a small-group activity designed to answer the question, “How do we promote handwashing on campus?” Students in each faculty-facilitated small group produced a brief PowerPoint presentation summarizing their proposed actions.

The UNMC College of Medicine led the event. A total of 111 students—from the Colleges of Allied Health Professions, Dentistry, Medicine, Nursing, Pharmacy, and Public Health—attended. Thirty faculty served as volunteer facilitators, and participating programs jointly provided the event’s \$10,000 budget. Student assessment consisted of two self-reported attitudinal scales: **(1)** the Readiness for Interprofessional Learning Scale (RIPLS; Parsell & Bligh, 1999) and **(2)** the Interdisciplinary Education Perception Scale (IEPS; Luecht et al., 1990). Student and faculty members performed post-event evaluations. A description of this pilot activity yielded a 2009 publication in *Quality Management in Health Care* (Margalit et al., 2009).

This first event was well-received by students and faculty. In 2009, the UNMC College of Nursing designed and led a second event. Again voluntary for students, this event's panel discussion topic was "an interdisciplinary approach to geriatric assessment." The Division of Geriatrics led the large-group discussion, and it was followed by a small-group discussion with content similar to that of the 2008 event. A total of 121 students attended the 2009 event— including seven College of Nursing students who attended via distance technology. Twenty-eight faculty members served as facilitators, including clinical faculty and library faculty. The event again had a \$10,000 budget, and student assessment consisted of using RIPLS. Students and faculty again completed post-event evaluations.

In 2010, following these two successful voluntary events, campus educational leadership decided to centralize IPE and develop it into a required component of the curriculum. UNMC leadership created the position of Assistant Dean for Interprofessional Education in the College of Graduate Studies. With a full-time equivalent (FTE) of 0.5, the individual holding this position would report to the Vice Chancellor for Academic Affairs. UNMC leadership chose the position's home—in the College of Graduate Studies—in order to prevent the perception that IPE "belonged" to any single college or professional program. No formal budget was established for IPE, and the cost for support staff and event logistics has primarily come from the office of the Vice Chancellor for Academic Affairs.

Expanding the IPE Program in Synergy with National and International IPE Organization Efforts

While UNMC was working to establish IPE on campus, several established national and international organizations were already active in interprofessional research and education. The [American Interprofessional Health Collaborative](#) (AIHC) joined with the [Canadian Interprofessional Health Collaborative](#) in 2007 to host the first *Collaborating Across Borders* conference. The World Coordinating Committee—now known as [Interprofessional.Global](#)—hosted the first *All Together Better Health* meeting in 2006. At this time, several important milestones in the field had not yet been realized. The [Interprofessional Education Collaborative](#) (IPEC) released its initial set of *Core Competencies for Interprofessional Education* in 2011, and the [National Center for Interprofessional Practice and Education](#) was founded in 2012.

Within this national and international context, UNMC set out to expand and formalize the IPE offerings for students. UNMC



IPE STRUCTURE AT UNMC



leadership expanded the optional, annual campus-wide event to two required events and modified several existing clinical activities—including a popular student-run free clinic—to include specific interprofessional content. Following IPEC’s 2011 publication of *Core Competencies for Interprofessional Education*, campus leadership agreed that the competencies should serve as the foundation for interprofessional learning objectives at UNMC. Campus leadership established a committee structure consisting of an IPE curriculum committee (with representation from every college) and an IPE assessment subcommittee (with membership based on interest and expertise). The subcommittee led the assessment and evaluation of IPE on campus and produced reports following each campus event. The curriculum committee would review these reports for the purpose of ongoing planning and revision of campus offerings. Initial attempts at developing a student IPE interest group met with varying degrees of success, largely due to annual fluctuation in the level of student interest. Continuity improved once the Student Senate assumed the task of identifying potential members and a faculty sponsor to provide input for this newly designed student interprofessional society. Society members have since produced several student-led projects for presentation as oral and poster sessions at regional and international IPE conferences, including the Canada–United States joint conference, [*Collaborating Across Borders*](#).

UNMC IPE leadership established an initial set of campus IPE priorities on the basis of input from the deans of each college. The deans agreed that central oversight of campus IPE development, delivery, and assessment was essential, and they advocated for overall increases in the number of clinical and didactic activities available to students. Faculty engagement, especially in the area of IPE-related scholarship, was an early priority. Faculty who became involved in IPE cited the need for several national-level IPE resources. In addition to outlets for scholarly work in the field, they expressed a desire to network with colleagues from other institutions to identify and share best practices in interprofessional teaching.

Between 2012 and 2014, the desire of UNMC’s IPE faculty to connect with colleagues outside their home institution led to several events that, in retrospect, proved to be major milestones for IPE at UNMC. In 2012, the campus sponsored a team to attend an early version of the IPEC Institute. The IPEC Institute is a multi-day faculty development experience providing instruction, guidance, and dedicated time for an interprofessional team to develop an IPE plan that will be implemented at the team’s home institution. At this 2012 meeting, the UNMC team was challenged to develop an overall organizational



In addition to outlets for scholarly work in the field, faculty expressed a desire to network with colleagues from other institutions to identify and share best practices in interprofessional teaching.

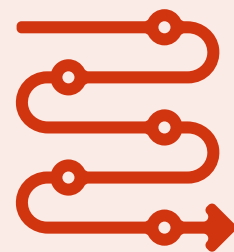
strategy for IPE; through this process, team members developed a strong working relationship that resulted in many collaborative projects in the years to come.

In 2013, the College of Dentistry held a regional training conference as part of a national Health Resources & Services Administration (HRSA) grant. Invited speakers included national IPE leaders, and this provided an opportunity for newer campus IPE faculty to meet with national colleagues already established in the field. The importance of building these relationships for an emerging program cannot be overstated.

Later in 2013, UNMC's Assistant Dean for Interprofessional Education approached Elsevier with a proposal for a new journal specific to IPE. Elsevier published the first issue of the (JIEP) in March 2015, and since that time, it has continued to advance knowledge in the field through the publication of hundreds of peer-reviewed articles.

In 2014, UNMC faculty attended a [regional IPE conference](#) hosted by the Thomas Jefferson University's Jefferson Center for Interprofessional Practice & Education (JCIPE) in Philadelphia and the [All Together Better Health conference](#) hosted by Interprofessional. Global (formerly known as the World Coordinating Committee) in Pittsburgh. These meetings provided more valuable networking opportunities, resulting in long-term professional relationships between UNMC faculty and many national colleagues. These new connections then led to the formation of the JIEP editorial board and participation by UNMC faculty on the board and executive committees of organizations such as the [American Interprofessional Health Collaborative](#) and the [National Center for Interprofessional Practice and Education](#).

Recent years have seen major new IPE initiatives at UNMC. In 2019, UNMC served as the host for the [first annual Heartland Interprofessional Education \(HIPE\) conference](#). The conference attracted 123 attendees from 13 states, including both coasts. Over 2 days, presenters delivered 54 workshop, oral, and poster presentations. Three national leaders in interprofessional education/interprofessional collaborative practice (IPE/IPP)—including the Director of the National Center for Interprofessional Practice and Education—provided plenaries. Twenty-three UNMC faculty, staff, and students were among the conference presenters. Conference evaluations were overwhelmingly positive, and HIPE was financially successful in its first year. Several other regional institutions have since joined the planning committee, with the goal of offering the conference at other Midwest locations in the near future.



MAJOR MILESTONES FOR IPE AT UNMC

2012

Attended IPEC Institute
a multi-day faculty
development experience

2013

**Regional training
conference held**
College of Dentistry
held a regional training
conference as part of a
national Health Resources
& Services Administration
(HRSA) grant.

Elsevier
Proposal for a new journal
specific to IPE for Elsevier.
Elsevier published the
first issue of the (JIEP) in
March 2015.

2014

JIEP editorial board
The JIEP editorial board
is formed.

2020

Davis Global Center
UNMC new educational
technology and simulation
facility opens.

Advancing to a State-of-the-Art IPE Program

In 2020, UNMC unveiled a new \$120 million educational technology and simulation facility, the [Davis Global Center](#), which now serves as the campus home for IPE. Technology within the facility includes large, interactive video walls with the capability to host collaborative teaching sessions with similar installations across the state. Pilot projects have demonstrated the ability for students to collaborate on clinically based cases and other interprofessional activities (see, e.g., Kumru, 2019). The facility also includes realistic hospital units where clinical competencies and team communication are learned, practiced, and tested with lifelike simulators and real-world clinical equipment. Simulation units include an acute-care unit with a simulated operating room, a labor and delivery room, patient rooms, and a pediatric unit. The critical care unit includes a simulated emergency department, trauma unit, ambulance bay, intensive care unit (ICU), and imaging room. Dedicated procedural skills labs provide opportunities for teams to train to competency before encountering real-life patient care situations. A simulated patient home environment allows learners to explore aspects of patient health often neglected in traditional training.

Ongoing projects include development of institutional learning outcomes for students in all health professions programs across the state, including outcomes specific to IPE. There has been increasing national interest in assessing competence in IPE using a model based on entrustable professional activities (EPAs) because they describe the real-world functions that graduates will need to demonstrate in their fields of practice (see, e.g., Ten Cate, 2013). With this in mind, UNMC's Assessment Committee has undertaken steps to define IPE-related EPAs to measure the trajectory of competence that students are developing during their training.

Advice for Growing Your Own IPE Program

The above timeline serves as an example of how IPE can evolve from humble beginnings into a full-fledged program with benefits to learners, faculty, patients, and populations. Every institution will follow a unique path while developing an IPE program, but wise choices in initial investments of time and resources can lead to major benefits down the road. Nationally, the field of IPE welcomes collaboration as part of its very nature, and newcomers will find colleagues eager to work together on a variety of projects. The barriers to entry are quite low—and, unlike many other fields, it is possible to get involved quickly at the national level.



DAVIS GLOBAL CENTER

[View a short video](#)
featuring the UNMC
Davis Global Center
for IPE



...the field of IPE
welcomes collaboration
as part of its very nature,
and newcomers will
find colleagues eager
to work together on a
variety of projects.

Developing local educational offerings can be a daunting process, especially when starting from scratch. Several IPE-related journals regularly publish descriptions of successful curricular activities, and using these as models for your own curricula can help ensure early success. Developing an annual campus report (see, e.g., University of Nebraska Medical Center, 2020), although time consuming, is very beneficial for programs at any level of maturity. A campus committee structure including representation from all stakeholders will help to increase buy-in from educators, many of whom may be asked to modify established teaching methods. Student IPE societies increase student engagement and also serve as a rich source for curriculum ideas. With faculty supervision, students can act as small-group co-facilitators, and their proximity in training to other learners may increase participants' engagement.

Faculty Development Makes a Difference

Membership in the [American Interprofessional Health Collaborative](#) (AIHC) is an easy way to pursue national involvement with minimal financial investment. AIHC has several well-organized national committees, providing opportunities for participation either as a member or as a committee chair. Serving on the AIHC board can be valuable to the career development of rising faculty, and membership at any level is a great way to keep abreast of the latest developments in the field. Conferences such as *Collaborating Across Borders* and *All Together Better Health* have served international audiences for more than a decade, allowing participants to present their work to attendees from around the world while hearing about the latest advances in IPE and building relationships with international colleagues. The [Nexus at the National Center for Interprofessional Practice and Education](#) provides a wealth of information about IPE—including history, assessment, curriculum, and accreditation. Each year, the [Nexus Summit](#) provides yet another opportunity to present, learn, and network.

A growing number of regional IPE conferences, many affiliated with AIHC, can offer scholarly meetings closer to home and at very reasonable prices. The AIHC website maintains a [list of regional conferences](#) and provides guidance for those interested in establishing a new AIHC-affiliated conference.

In Conclusion

Those who seek to get involved in the field will find it to be welcoming and rewarding. As described in the UNMC case study above, even programs that start small can soon find opportunities for networking, collaborative research, and curricular development. This introduction helps frame some events in the recent history of IPE and can encourage you as you take the next steps to move your campus forward in IPE/IPP.

References

- American Interprofessional Health Collaborative. (2020). *Organizational models of interprofessional practice and education in the United States: Results from a national survey*. National Center for Interprofessional Practice and Education. <https://nexusipe.org/informing/resource-center/organizational-models-interprofessional-practice-and-education-united>
- Gilbert, J. H. V., Yan, J., & Hoffman, S. J. (2010, Fall). A WHO report: Framework for action on interprofessional education and collaborative practice. *Journal of Allied Health*, 39(3), Suppl 1: 196-197.

Greiner, A. C., & Knebel, E. (Eds.). (2003). *Health professions education: A bridge to quality*. Washington, DC: National Academies Press. <https://doi.org/10.17226/10681>

Health Professions Accreditors Collaborative. (2019). *Guidance on developing quality interprofessional education for the health professions*. <https://healthprofessionsaccreditors.org/ipe-guidance/>

Institute of Medicine Committee on Quality of Health Care in America. (2001). *Crossing the quality chasm: A new health system for the 21st century*. Washington, DC: National Academies Press. <https://doi.org/10.17226/10027>

Interprofessional Education Collaborative. (2011, May). *Core competencies for interprofessional collaborative practice: Report of an expert panel*.

Kohn, L. T., Corrigan, J. M., & Donaldson, M. S. (Eds.). (2000). *To err is human: Building a safer health system*. Washington, DC: National Academies Press. <https://doi.org/10.17226/9728>

Kumru, E. (2019, November 22). iWall melts distance and time across the state. <https://www.unmc.edu/news.cfm?match=24723>

Luecht, R. M., Madsen, M. K., Taugher, M. P., & Petterson, B. J. (1990, Spring). Assessing professional perceptions: Design and validation of an Interdisciplinary Education Perception Scale. *Journal of Allied Health*, 19(2), 181-191.

Margalit, R., Thompson, S., Visovsky, C., Geske, J., Collier, D., Birk, T., & Paulman, P. (2009). From professional silos to interprofessional education: Campuswide focus on quality of care. *Quality Management in Health Care*, 18(3), 165-173. <https://doi.org/10.1097/QMH.0b013e3181aea20d>

Parsell, G., & Bligh, J. (1999). The development of a questionnaire to assess the readiness of health care students for interprofessional learning (RIPLS). *Medical Education*, 33(2), 95-100. <https://doi.org/10.1046/j.1365-2923.1999.00298.x>

Ten Cate, O. (2013). Nuts and bolts of entrustable professional activities. *Journal of Graduate Medical Education*, 5(1), 157-158. <https://doi.org/10.4300/JGME-D-12-00380.1>

University of Nebraska Medical Center. (2020). *University of Nebraska Medical Center Interprofessional Education Annual Report 2019-2020*. <https://www.unmc.edu/academicaffairs/educational/ipe/ipe-annual-report.pdf>

World Health Organization. (2010). *Framework for action on interprofessional education & collaborative practice*. <https://www.who.int/publications/i/item/framework-for-action-on-interprofessional-education-collaborative-practice>