Implementation of interprofessional education efforts at Duke University Health System and the University of North Carolina have enhanced teamwork, education, and mentoring for health professional learners and faculty. The IPE initiatives address the critical need for enhanced collaboration among all team members in the evolving health care arena.

In 2011, the Institute of Medicine of the National Academies (now the National Academy of Medicine) challenged health care systems across the nation to think beyond the siloed health care professions of medicine, nursing, social work, pharmacy, and public health and collaboratively consider strategies that would ensure optimal patient outcomes using interprofessional teams providing safe, evidence-based care in an era of increasing professional demands [1]. The need for health professionals to work together was illuminated through the report, which highlighted many benefits of effective teamwork such as improved patient satisfaction, decreased medical errors (emphasis on safety), improved workforce retention, greater provider satisfaction, cost efficiencies for systems as well as patients, and enhanced community engagement [2]. While these benefits seem obvious to most health care providers, strategies for helping form and sustain interprofessional teams remain a source of study and opportunity. The Interprofessional Education Collaborative (IPEC) established core competencies that outline the elements each member of the health care team should have in common: shared values and ethics, respect for professional roles and responsibilities, clear interprofessional communication, development of effective teams, and demonstrated teamwork [3].

Duke University Medical Center, which formed Duke AHEAD (Academy of Health Professions Education and Academic Development) in 2014, and the University of North Carolina at Chapel Hill’s Office of Interprofessional Education and Practice, created in 2017, have established dedicated programming to address the development needs of health professions faculty. Focused on establishing, promoting, and improving interprofessional (IP) teams and the outcomes of patients across our region and state, the 2 programs have led the way toward implementing the IPEC core competencies. Efforts in both academic settings have helped health professions students, faculty, and clinicians gain appreciation for the scope of each other’s practices and professional preparation; identify, implement, and utilize strategies for effective IP communication; and, most importantly, demonstrate the ability to enhance IP skills to promote delivery of excellent patient care in North Carolina. The development of the individual IPE programs was complementary and ultimately led to the recent development of an innovative collaboration called “Blending the Blues.”

Interprofessional Education in the Clinical Setting

IP collaboration existed in many clinical practice settings prior to the IOM report, primarily out of necessity for patient care transition and coordination of care. However, many clinicians enter their professional academic programs and begin clinical rotations with limited knowledge of interprofessional education (IPE) or understanding of various education, preparation, and scope of practice matters as they relate to delivery of health care by other professionals. Others may have graduated from a professional program with limited exposure to other health care professional learners. Practically speaking, many clinicians have little knowledge regarding the overall framework of the pre-professional curriculum. Many veteran clinicians have discovered or cultivated IP health care teams on their own to improve effectiveness of the clinical environment from each team member’s specific vantage point. Their expression of IP, though effective and valid for the unique setting, may not necessarily align with the IPEC core competencies and identity formation of current health care professional students as they enter clinical practice. This chasm can lead to a sense of disconnection for graduating health professions students as they enter a workforce that speaks a different language about IP collaboration. One could argue that it is adequate for clinicians to “just know and understand”
IP from a practical viewpoint; however, IP practice without the knowledge and understanding of core competencies is not ideal, as team members may miss important concepts integral to IP and the theory behind why this matters in the health care arena. While students in health care professions are rapidly gaining IP knowledge and application, closing this IP knowledge gap between learners and seasoned clinicians is a current challenge and opportunity for hospital- and clinic-based educators.

One effective educational method of teaching IPEC core competencies is simulation. Case-based simulation (both low and high fidelity) is effective in helping IP staff learn effective teamwork in a safe, controlled environment where they can actively develop skills in communication, professional roles and responsibilities, and conflict management. Simulating an emergency response, for example, can provide an excellent opportunity for hospital-based educators to integrate IP concepts into clinically relevant scenarios. Simulation debriefing, critical to the success of each scenario, focuses on how these concepts can be used effectively among the various team members in clinical settings, and provides an opportunity for seasoned clinicians to gain appreciation of what current students are learning.

Ideally, as more and more health professions students graduate and enter the workforce, transformation of IP concepts will be integrated into each clinical environment. The current transition-to-practice gap provides a unique opportunity for both academic and clinical educators to seek collaborative paths that will enhance IPE for all involved.

**Interprofessional Education in Faculty Development**

Duke AHEAD fosters a strong network of health professions educators across the system who are committed to strengthening their skills as teachers and are eager to model IPE for learners, peers, and IP colleagues. Many professional development opportunities exist via annual conferences, monthly workshops, lectures, and other activities designed to develop faculty leaders in IPE. Opportunities to further engage health professions faculty in IPE and collaborative practice exist beyond Duke’s campus. UNC’s Office of Interprofessional Education and Practice shares the vision of aligning educators in health professions schools with a common goal of preparing a future workforce with the knowledge and skills to respond together to the needs of society and the communities served.

The North Carolina Area Health Education Centers (AHEC), including both AHEC Program Offices at UNC and Duke, also represent a significant resource in addressing health workforce needs and education programs, including IP collaboration across the state. AHEC provides opportunities for continuing professional development, practice support, training fellowships, and awards to lead the transformation of health care education and clinical services in the state. The IP programming and resources provide a great mechanism for ongoing faculty and clinician development in IPE.

IPE training deserves its own focus in the preparation of clinicians for their roles as educators. IPE must include introduction to the foundational concepts of IPEC competencies, consensus building, and group facilitation skills to benefit faculty [4]. One significant opportunity lies in creating stronger links between IPE and interprofessional team-based practice.

As noted, health care professionals typically have strong clinical training in their discipline of practice but did not have IPE experiences built into their training prior to 2011 and the publication of the IOM report. Establishing faculty who help build cohorts of preceptors modeling collaborative practice, communicate effectively across disciplines, and value the unique contributions of members of the entire care team benefits everyone. IPE training also provides trainees, faculty, and IP colleagues with the ability to implement a truly collaborative practice in the future. Evidence of this is emerging in faculty led clinical practices that combine the efforts of experienced IP clinicians and learners to provide safe and effective care.

Planning, implementing, and assessing IPE curricula aimed at faculty is no small task. Institutional support, trained facilitators, and curriculum that meet the needs of the clinical context are important for success. Evidence suggests that successful faculty development IPE initiatives require at least 4 components: experiential learning, mechanisms for participants to receive feedback, interventions grounded in principles of teaching and learning, and utilization of a broad range of teaching methods [5]. Implementation of the curriculum within a clinical setting allows for practical application within patient care settings and has the potential to foster culture change, promote cohesive team functions, and improve delivery of care [6]. Additionally, faculty development curricula based in clinical settings bring the learning to clinicians who might not otherwise have access.

Successful implementation of faculty development focused on IPE provides an important step toward clinical settings that fully integrate team-based care and stronger multi-generational leadership to move collaborative practice forward.

In health care organizations as large as Duke and UNC, diversity among many health care providers is a known entity. What wasn’t so apparent until the advent of integrative, team-based patient care was the need for the members of each academic or clinical program, often working in “silos,” to enjoy a space that promoted collaboration, instilled mutual respect, and offered health care professionals opportunities to ask unassuming questions of one another about educational preparation, clinical practice, and research. Duke AHEAD ushered in the much-needed channel of communication among health care professionals in the Duke community, providing regular opportunities for *intra-*professional, *inter-*professional, and *inter-*generational
learning and networking for the entire academic and clinical enterprise.

Early adopters of Duke AHEAD included designated clinical faculty and selected student leaders from each of the health professions schools on campus—all volunteers. The IP group worked toward sustained collaboration across the communities and the clinical core of Duke with the firm expectation of measurable outcomes. Specific goals included implementation of educational innovations, community-wide social outreach enhancement, and IP research opportunities. The ideal expectation held that Duke AHEAD would ultimately improve patient health outcomes and enable happier, more vibrant, effective, and engaged teams of IP clinicians.

Duke AHEAD celebrated its early success by establishing an annual health education conference, which has attracted national health education experts and features the diverse body of IPE work that is ongoing. Monthly programming features health system topics relevant to all health care providers as well as resiliency promotion focused on topics such as preventing burnout, managing stress and sleep cycles, and navigating difficult conversations. The Durham Veterans Affairs (VA) Health Care System, physically located across the street from Duke Health, is also an active partner with Duke AHEAD; many staff and trainees serve at both facilities and mutually benefit from collaborative efforts. Additionally, Duke AHEAD stretched beyond the health system borders to bridge jointly with UNC IPE collaborators. Blending the Blues has resulted in health care professionals from both campuses and health systems collaborating with one another, sharing resources by alternating meeting settings, and acknowledging commonalities as well as differences. Blending the Blues represents a paradigm shift in focus on IPE methodology and making sure our faculty and clinicians can better understand what information trainees are now receiving in their didactic and experiential education. Efforts in this space are also attributable to the recognition by various health professions accrediting bodies that IPE and practice are crucial to the development of future health care professionals.

Future health care providers must recognize the importance of IP collaboration and that the IPEC core competencies are an essential part of health care training curricula. While accrediting bodies have individually drafted IP collaboration into their standards, the future sees the intent of these accrediting bodies coming together to integrate overall IPE standards [7].

With more alignment of academic health care system resources and continued collaboration across health discipline schools and universities across North Carolina, such as Blending the Blues, the growth of IPE methodology in our curricula and continued expansion into clinical practice will ensure North Carolina demonstrates examples of IPE and interprofessional practice at their best.

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References
1. Committee on Measuring the Impact of Interprofessional Education on Collaborative Practice and Patient Outcomes, Board on Global Health, Institute of Medicine. Measuring the Impact of Interprofessional Education on Collaborative Practice and Patient Outcomes. Washington, DC: The National Academies Press; 2015.
2. Brasher V, Phillips E, Malpass, J, Owen J. Measuring the impact of interprofessional education (IPE) on collaborative practice and patient outcomes. In: Committee on Measuring the Impact of Interprofessional Education on Collaborative Practice and Patient Outcomes, Board on Global Health, Institute of Medicine. Measuring the Impact of Interprofessional Education on Collaborative Practice and Patient Outcomes. Washington, DC: The National Academies Press; 2015:67-133.
3. Interprofessional Education Collaborative. Core Competencies for Interprofessional Collaborative Practice: 2016 Update. Washington, DC: Interprofessional Education Collaborative; 2016. https://www.iom.edu/IPE/research/ipec-2016-core-competencies.pdf. Accessed April 25, 2018.
4. Ratliff N, Zoref JA, Meyer SM. Overview of faculty development programs for interprofessional education. Am J Pharm Educ. 2017;81(5):96.
5. Steiner Y, Mann K, Centeno A, et al. A systematic review of faculty development initiatives designed to improve teaching effectiveness in medical education: BEME Guide No. 8. Med Teach. 2006;29(6):497-526.
6. Bridges DR, Davidson RA, Odegard PS, Maki IV, Tomkowiak J. Interprofessional collaboration: three best practice models of interprofessional education. Med Educ Online. doi: 10.3402/meo.v16i10.6035.
7. Zoref JA, Raehl C. Interprofessional education accreditation standards in the USA: a comparative analysis. J Interprof Care. 2013;27(2):123-130.