



INTERPROFESSIONAL EDUCATION

Celebrating the Culture of Interprofessional Collaboration in Athletic Training

Anthony Breitbach, PhD, LAT, ATC, FASAHP, FNAP
Doisy College of Health Sciences, Saint Louis University, MO

INTRODUCTION

Collaboration and teamwork are in the DNA of the athletic training profession. The traditional settings where we care for athletes in organized athletics are in the school, university/college, and amateur and professional contexts. The needs of individuals and organizations in these environments require that athletic trainers (ATs) coordinate care teams composed of varied health professionals. The knowledge and skills required for this coordination, referred to as “foundational behaviors or core competencies,” have been a strong part of our professional education.^{1,2} However, our professional programs evolved in varied academic settings, not alongside the professions with which we would eventually collaborate in clinical practice.³

Multidisciplinary or interdisciplinary practice has been identified as providing better health care since the beginning of the 20th century. However, since many of the health professions were educated in siloed professional programs and since the government and private financing focused on a hierarchical fee-for-service model, most graduates of these programs have had limited experience and skills with regard to collaboration and entered a clinical environment that did not incentivize teamwork and that offered limited opportunities to practice team-based care. Persisting issues around quality, efficiency, and medical errors in the health care system led to a renewed call for health care reform and more effective collaboration in the 1990s, culminating in the Institute of Medicine reports *To Err Is Human: Building a Safer Health System* (in 2000) and *Crossing the Quality Chasm* (in 2001), which called for improving cooperation, communication, and teamwork for health professionals in a collaborative care model.^{4,5}

This evolving paradigm led to the development of the concept of interprofessional education (IPE) to provide the skills to

support collaborative practice, as an evolution from the previous notions of multidisciplinary and interdisciplinary care. In the United Kingdom in 1997, the Centre for Advancement of Interprofessional Practice and Education defined IPE and updated the description in 2002 to define it as “occasions when two or more professions learn with, from and about each other to improve collaboration and the quality of care.”⁶ A 2003 Institute of Medicine report, “Health Professions Education: A Bridge to Quality,” stated the following: “All health professionals should be educated to deliver patient centered care as members of an interprofessional team, emphasizing evidence-based practice, quality improvement approaches, and informatics.”⁷ Building upon the Centre for Advancement of Interprofessional Practice and Education definition in 2010, the World Health Organization called for health professionals to be “collaborative-practice ready” upon entering the workforce and clarified that “Interprofessional education occurs when students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes.”⁸ The revision identified that we must learn “about” each other before we can learn “from and with” each other and states that the purpose of IPE is to enable “effective collaboration” and “health outcomes” that go beyond patient care.

Our purpose in this “Special Series” is to highlight the athletic training profession, which over the past decade has incorporated IPE to prepare graduates for collaborative practice, as peers with other health professions, in an evolving health care system.

INFORMING OUR COLLEAGUES (“ABOUT”)

In 2011, the Executive Committee for Education (ECE) of the National Athletic Trainers' Association (NATA) began a process to propose priorities for the evolution of athletic

Dr Breitbach is currently Vice Dean and a Professor in the Doisy College of Health Sciences at Saint Louis University. Address correspondence to Anthony Breitbach, PhD, LAT, ATC, FASAHP, FNAP, Doisy College of Health Sciences, Saint Louis University, 3437 Caroline Mall, St Louis, MO 63104. anthony.breitbach@health.slu.edu.

Full Citation:

Breitbach A. Celebrating the culture of interprofessional collaboration in athletic training. *Athl Train Educ J*. 2023;18(1):26–30.

training education. This process resulted in the development of 14 “Future Directions in Athletic Training” recommendations that were approved by the NATA Board of Directors in 2012.⁹ In this report, recommendation 3 stated that “Interprofessional education (IPE) should be a required component in professional and post-professional education programs in athletic training.” As the Executive Committee for Education looked to operationalize this recommendation, it became evident that we needed to inform the athletic training profession about the fundamental tenets and terminology of IPE and collaborative practice as well as inform our peer professions and the wider health care community about ATs’ knowledge, skills, and abilities with regard to interprofessional collaborative practice. With this objective, we developed a white paper, “Interprofessional Education and Practice in Athletic Training,” to not only inform but also model a collaborative and inclusive process. Executive Committee for Education Chair Dr Russ Richardson and I worked with 23 colleagues to author the paper, which was published in 2015 by the *Athletic Training Education Journal* (ATEJ).¹⁰ Our team and this paper were recognized with the ATEJ Outstanding Manuscript for Advancing Educational Practice Award in 2015.

This article was accompanied by presentations on the topic at the 2013 NATA Annual Convention in Las Vegas, NV; the 2014 World Congress of the World Federation of Athletic Training and Therapy in Dublin, Ireland; the 2014 All Together Better Health Conference in Pittsburgh, PA; the 2015 Canadian Athletic Therapists’ Association Meeting in Halifax, Nova Scotia; the 2015 Collaborating Across Borders Meeting in Roanoke, VA; and the 2012 and 2014 Annual Meetings of the Association of Schools of Allied Health Professions. Additionally, it was featured in the *NATA News* and additional manuscripts in the *Journal of Interprofessional Care* from members of the white paper working group: “Athletic trainers have a place in interprofessional education and practice,” by Rizzo, Richardson, and Breitbach in 2015,¹¹ along with my Guest Editorial entitled “The Organic and Strategic Growth of Interprofessionalism in Athletic Training” in 2016.¹²

STUDYING OUR PROFESSION (“FROM”)

IPE was a new concept in athletic training, but collaboration and teamwork were not; therefore, it was important that we learned from each other on the types of interprofessional learning and clinical practice activities that were occurring in the field. With my colleague, Dr Micki Cuppett, I surveyed Commission on Accreditation of Athletic Training Education (CAATE) Program Directors in 2012 (160 responses, 43.6%) and replicated that survey in 2015 (162 responses, 42.6%) and published the results in the ATEJ as “The Progress and Promise of Interprofessional Education in Athletic Training Programs” in 2018, showing growth over time, but still under 50% of the responding programs were involved in IPE. However, IPE occurred more often in athletic training programs that resided in health science–related academic units and that are accredited at the master’s level.¹³

In 2014, Kraemer and Kahanov¹⁴ authored a paper entitled “Development of Interprofessional Education for Entry-Level Athletic Training Programs,” and in 2019 Kraemer and colleagues¹⁵ examined interprofessional collaboration with a

cross-sectional sample of practicing ATs (314 responses), finding that ATs regularly interact with other health care providers and overall have positive perceptions of interprofessional collaborative practice (IPCP) and that purposeful communication could help enhance their collaborations. Welsch, Rutledge, and Hoch¹⁶ modified the Readiness for Interprofessional Learning Scale for ATs in clinical practice in 2017. Manspeaker and Hankemeier^{17–19} studied collegiate ATs in terms of interprofessional collaboration and published a series of articles in the *Journal of Interprofessional Care*, the *Journal of Athletic Training*, the ATEJ in 2018 and 2019. The authors found that collegiate ATs valued IPCP but were not always engaged in it, realizing that the “medical model” may create better opportunities. In 2021, Schwieterman et al.²⁰ examined athletic training preceptors’ self-assessed beliefs, behaviors, and attitudes relative to IPE after an online professional development module. Meskimen and colleagues²¹ authored a paper entitled “Interprofessional and Collaborative Practices of Athletic Trainers in Secondary School Settings” in 2022.

There were also several articles that studied the outcomes of IPE learning experiences in athletic training programs. Tivener and Gloe²² as well as Morrell and colleagues²³ described the development of interprofessional simulations including athletic training students. Pole and colleagues²⁴ examined the effect of including ATs in an existing graduate-level interprofessional team seminar in 2016. Sniffen et al.^{25,26} and Briggs et al.²⁷ published a series of articles in 2019 studying the development of a therapeutic modalities class for athletic training and physical therapy students. Manspeaker and Wallace²⁸ reported in 2019 about an interprofessional study-abroad experience, and Manspeaker and colleagues²⁹ published “Integration of Interprofessional Education Within the Didactic Aspect of Athletic Training Programs” in 2020. In 2021, Armstrong et al.³⁰ investigated athletic training student engagement with interprofessional education in both classroom and clinical settings. There are many emerging researchers, including a group of scholars from the Association of Athletic Training Educators, that will lead our field in this space moving forward.

ENGAGING ACROSS PROFESSIONS (“WITH”)

ATs have been collaborating interprofessionally with colleagues in publications for decades. Some of the most important research articles, consensus statements, and position papers were authored by ATs alongside peer professionals.³¹ However, in IPE, inclusion of ATs on research and writing teams came only after academic alignments in which health profession programs looked to include ATs.¹⁰ In many institutions, ATs soon emerged as key investigators and authors on collaborative research teams.^{32–42} However, many of these single-institution studies were limited in their scope. Multi-institutional studies began to emerge to explore interprofessional education through a wider lens. I was able to partner with colleagues from 4 universities to study early learners in multiple contexts using 3 different assessment instruments. Our team authored a series of papers^{43–45} that presented our collaborative process as well as analysis and discussion of the quantitative and qualitative data.

I was also able to collaborate with scholars from outside of the United States in research projects. This international engagement helped introduce the athletic training profession

to the wider interprofessional field. I invited Dr Scott Reeves, Editor in Chief of the *Journal of Interprofessional Care*, from England to serve as a keynote speaker at the 2015 World Federation of Athletic Training and Therapy World Congress in St Louis, MO. After the Congress Dr Reeves (who tragically passed away in 2018) and I were able to collaborate with Dr Simon Fletcher on “Interprofessional Collaboration in Sports Medicine: Findings from a Scoping Review”⁴⁶ in 2017, and together we conducted a World Café at the 2016 All Together Better Health Conference at Oxford, which produced the paper “Health Care as a Team Sport?—Studying Athletics to Improve Interprofessional Collaboration,” in 2017.⁴⁷ Since then, I have been able to collaborate with Dr Gert Ulrich from Zurich, Switzerland, in an international study on interprofessional collaboration among sport science and sports medicine professionals.^{48,49}

AT THE TABLE

In 2012, we set out with another goal: to bring ATs to the table with our peer professions in the wider interprofessional health care field.¹⁰ There is evidence to show that this endeavor is indeed happening. In 2015, the AT Strategic Alliance was invited to participate on the National Academies of Medicine (formerly the Institute of Medicine) Global Forum on Innovation in Health Professions Education.⁵⁰ The *Journal of Interprofessional Care* now has 2 ATs as Associate Editors,⁵¹ with many other ATs actively serving as reviewers with other interprofessional journals. In my role as NATA Liaison for the Association of Schools Advancing Health Professions I have looked to provide opportunities for athletic training colleagues who want to engage interprofessionally. Additionally, I have represented the Association of Schools of Allied Health Professions on the Interprofessional Education Collaborative Council and the Interprofessional Education Collaborative Core Competencies Revision Working Group.⁵²

In 2020, the National Academies of Practice approved the development of an Athletic Training Academy after an iterative and intentional process that has been described as a model for other new academies to follow.⁵³ IPE and collaborative practice were embedded into the 2020 CAATE Standards and Core Competencies.¹ The CAATE has also been involved with the development of the Health Professions Accreditors Collaborative and their report “Guidance on Developing Quality Interprofessional Education for the Health Professions.”⁵⁴ The Board of Certification has aligned with Joint Accreditation for Interprofessional Continuing Education, with the Nexus Summit offering continuing education for ATs in 2022.⁵⁵

The vision set forth in the “Future Directions” document regarding IPE for collaborative practice is now our reality. However, this is only the beginning; we are preparing collaboration-ready health professionals who will be leaders in education, scholarship, and clinical practice. Our knowledge, skills, and abilities will make us valuable members of the interprofessional health care teams contributing to our communities and society.

REFERENCES

1. Standards for professional masters programs. Commission on Accreditation of Athletic Training Education. Accessed Decem-

- ber 1, 2022. https://caate.net/Portals/0/Documents/Standards_and_Procedures_Professional_Programs.pdf
2. Standards for the accreditation of professional athletic training programs. Commission on Accreditation of Athletic Training Education. Accessed December 1, 2022. <https://caate.net/Portals/0/Documents/2012-Professional-Standards-.pdf>
3. Delforge GD, Behnke RS. The history and evolution of athletic training education in the United States. *J Athl Train*. 1999;34(1):53–61.
4. Institute of Medicine Committee on Quality of Health Care in America. *Crossing the Quality Chasm: A New Health System for the 21st Century*. The National Academy of Sciences; 2001.
5. Kohn LT, Corrigan JM, Donaldson MS, eds; Institute of Medicine Committee on Quality of Health Care in America. *To Err is Human: Building a Safer Health System*. National Academies Press; 2000.
6. About CAIPE. The Centre for the Advancement of Interprofessional Education. Accessed December 1, 2022. <https://www.caipe.org/about>
7. Greiner AC, Knebel E, eds; Institute of Medicine Committee on the Health Professions Education Summit. *Health Professions Education: A Bridge to Quality*. National Academies Press; 2003.
8. World Health Organization. *Framework for Action on Interprofessional Education and Collaborative Practice*. World Health Organization; 2010.
9. Future directions in athletic training education. NATA Executive Committee for Education. Accessed December 1, 2022. <https://www.nata.org/sites/default/files/ECE-Recommendations-June-2012.pdf>
10. Breitbach AP, Richardson R; National Athletic Trainers' Association Executive Committee for Education; Interprofessional Education and Practice in Athletic Training Work Group. Interprofessional education and practice in athletic training. *Athl Train Educ J*. 2015;10(2):170–182. doi:10.4085/1002170
11. Rizzo CS, Breitbach AP, Richardson R. Athletic trainers have a place in interprofessional education and practice. *J Interprof Care*. 2015;29(3):256–257. doi:10.3109/13561820.2014.942778
12. Breitbach AP. The organic and strategic growth of interprofessionalism in athletic training. *J Interprof Care*. 2016;30(2):138–140. doi:10.3109/13561820.2016.1138676
13. Breitbach AP, Eliot K, Cuppett M, Wilson M, Chushak M. The progress and promise of interprofessional education in athletic training programs. *Athl Train Educ J*. 2018;13(1):57–66. doi:10.4085/130157
14. Kraemer E, Kahanov L. Development of interprofessional education for entry-level athletic training programs. *Int J Athl Ther Train*. 2014;19(6):4–7. doi:10.1123/ijatt.2014-0046
15. Kraemer E, Keeley K, Martin M, Breitbach AP. Athletic trainers' perceptions and experiences with interprofessional practice. *Health Interprof Pract Educ*. 2019;3(4):eP1171. doi:10.7710/2159-1253.1171
16. Welsch LA, Rutledge C, Hoch JM. The Modified Readiness for Interprofessional Learning Scale in currently practicing athletic trainers. *Athl Train Educ J*. 2017;12(1):10–17. doi:10.4085/120110
17. Hankemeier D, Manspeaker SA. Perceptions of interprofessional and collaborative practice in collegiate athletic trainers. *J Athl Train*. 2018;53(7):703–708. doi:10.4085/1062-6050-308-17
18. Manspeaker SA, Hankemeier DA. Challenges to and resources for participation in interprofessional collaborative practice:

- perceptions of collegiate athletic trainers. *J Athl Train*. 2019;54(1):106–114. doi:10.4085/1062-6050-507-17
19. Manspeaker SA, Hankemeier DA. Collegiate athletic trainers' perceptions of the benefits and drawbacks of interprofessional collaborative practice. *J Interprof Care*. 2019;33(6):654–660. doi:10.1080/13561820.2019.1569604
20. Schwieterman J, Utley J, Breitbach A, Crocker H. Clinical preceptors' self-assessed beliefs, behaviors, and attitudes for interprofessional education after an online professional development module. *Health Interprof Pract Educ*. 2021;4(2):eP2163. doi:10.7710/2641-1148.2163
21. Meskimen J, Kirby JL, Drescher MJ, Eberman LE. Interprofessional and collaborative practices of athletic trainers in the secondary school setting. *Athl Train Educ J*. 2022;17(1):12–20. doi:10.4085/1947-380x-21-024
22. Tivener KA, Gloe DS. Designing simulations for athletic training students through interprofessional teaching collaboration. *Athl Train Educ J*. 2015;10(3):249–255. doi:10.4085/1003249
23. Morrell BLM, Nichols AM, Voll CA, et al. Care across campus: athletic training, nursing, and occupational therapy student experiences in an interprofessional simulation. *Athl Train Educ J*. 2018;13(4):332–339. doi:10.4085/1304332
24. Pole D, Breitbach AP, Howell TG. Using a real-life case scenario to integrate additional health professions students into an existing interprofessional team seminar. *J Interprof Care*. 2016;30(2):242–244. doi:10.3109/13561820.2015.1087976
25. Sniffen K, Breitbach AP, Briggs E, Hinyard L. Embedding interprofessional activities with physical therapy and athletic training students in shared professional course. *Int J Health Sci Educ*. 2019;6(1):Article 4. Accessed November 30, 2022. <https://dc.etsu.edu/ijhse/vol6/iss1/4>
26. Sniffen K, Briggs E, Hinyard L, Breitbach AP. Interprofessional role clarity, case-based learning, and perceptions of group effectiveness among athletic training and physical therapy students in a shared professional course. *Internet J Allied Health Sci Pract*. 2019;17(4):Article 6. doi:10.46743/1540-580X/2019.1847
27. Briggs EP, Sniffen K, Breitbach A, Hinyard L. Group performance trajectories of athletic training and physical therapy students engaged in case-based learning activities. *Health Interprof Pract Educ*. 2019;3(4):eP1181. doi:10.7710/1181
28. Manspeaker SA, Wallace SE. Creating an interprofessional education experience through short-term study abroad. *Athl Train Educ J*. 2019;14(4):315–322. doi:10.4085/1404315
29. Manspeaker SA, Feld SD, Hankemeier DA, Kirby JL. Integration of interprofessional education within the didactic aspect of athletic training programs. *Athl Train Educ J*. 2020;15(3):168–176. doi:10.4085/150120015
30. Armstrong KJ, Walker SE, Feld SD, Weidner TG. Athletic training students' engagement in interprofessional education in the classroom and during clinical education. *J Interprof Care*. 2021;35(1):101–106. doi:10.1080/13561820.2019.1707173
31. NATA consensus statements. National Athletic Trainers' Association. Accessed December 1, 2022. <https://www.nata.org/news-publications/pressroom/statements/consensus>
32. Breitbach AP, Sargeant DM, Gettemeier PR, et al. From buy-in to integration: melding an interprofessional initiative into academic programs in the health professions. *J Allied Health*. 2013;42(3):e67–e73.
33. Ruebling I, Pole D, Breitbach AP, et al. A comparison of student attitudes and perceptions before and after an introductory interprofessional education experience. *J Interprof Care*. 2014;28(1):23–27. doi:10.3109/13561820.2013.829421
34. Manspeaker SA, Donoso Brown EV, Wallace SE, DiBartola L, Morgan A. Examining the perceived impact of an ethics workshop on interprofessional values and teamwork. *J Interprof Care*. 2017;31(5):628–637. doi:10.1080/13561820.2017.1336992
35. Welsch LA, Hoch J, Poston RD, Parodi VA, Akpinar-Elci M. Interprofessional education involving didactic TeamSTEPS(R) and interactive healthcare simulation: a systematic review. *J Interprof Care*. 2018;32(6):657–665. doi:10.1080/13561820.2018.1472069
36. Breitbach AP, Pole D, Rauvola RS, Kettenbach G, Hinyard L. Longitudinal assessment of students' perceived collaboration skills at an institution with a structured interprofessional education curriculum. *J Allied Health*. 2020;49(4):235–245.
37. Goddell-Fields S, Rose A, Visker JD, Boyd MD, Cox C, Forsyth E. Undergraduate health professions students' perceptions of athletic training students before and after an interprofessional case study program. *J Interprof Care*. 2021;35(6):884–889. doi:10.1080/13561820.2020.1808600
38. Eliot K, Breitbach A, Wilson M, Chushak M. Institutional readiness for interprofessional education among nutrition and dietetics and athletic training education programs. *J Allied Health*. 2017;46(2):94–103.
39. Witt Sherman D, Flowers M, Alfano AR, et al. An integrative review of interprofessional collaboration in health care: building the case for university support and resources and faculty engagement. *Healthcare (Basel)*. 2020;8(4):418. doi:10.3390/healthcare8040418
40. Witt Sherman D, Maitra K, Gordon Y, et al. Illustrating and analyzing the processes of interprofessional collaboration: a lesson learned from palliative care in deconstructing the concept. *J Palliat Med*. 2017;20(3):227–234. doi:10.1089/jpm.2016.0332
41. Wallace SE, Farquharson K, Berdik M, Foote LT, Manspeaker SA, Hankemeier DA. Speech-language pathologists' perspectives of interprofessional collaboration. *J Interprof Care*. 2022;36(6):801–809. doi:10.1080/13561820.2022.2039106
42. Harmon MT, Farrell CF, Carter V, Randall DA, Loeb A, Jain T. Launching into interprofessional education: graduate students learning and growing together. *J Interprof Care*. 2019;33(5):590–592. doi:10.1080/13561820.2018.1548432
43. Breitbach A, Lockeman K, Gunaldo T, et al. Utilizing shared expertise across contexts to engage in multi-institutional interprofessional scholarship. *J Allied Health*. 2019;48(3):e95–e100.
44. Lanning SK, Pardue K, Eliot K, et al. Early-learners' expectations of and experience with IPE: a multi-institutional qualitative study. *Nurse Educ Today*. 2021;107:105142. doi:10.1016/j.nedt.2021.105142
45. Patel Gunaldo T, Lockeman K, Pardue K, et al. An exploratory, cross-sectional and multi-institutional study using three instruments to examine student perceptions of interprofessional education. *J Interprof Care*. 2022;36(2):268–275. doi:10.1080/13561820.2021.1892614
46. Fletcher S, Breitbach AP, Reeves S. Interprofessional collaboration in sports medicine: findings from a scoping review. *Health Interprof Pract Educ*. 2017;3(2):eP1128. doi:10.7710/2159-1253.1128
47. Breitbach AP, Reeves S, Fletcher SN. Health care as a team sport? Studying athletics to improve interprofessional collaboration. *Sports (Basel)*. 2017;5(3):62. doi:10.3390/sports5030062

48. Ulrich G, Breitbach AP. Interprofessional collaboration among sport science and sports medicine professionals: an international cross-sectional survey. *J Interprof Care*. 2022;36(1):4–14. doi:10.1080/13561820.2021.1874318
49. Ulrich G, Carrard J, Nigg CR, Erlacher D, Breitbach AP. Is healthcare a team sport? Widening our lens on interprofessional collaboration and education in sport and exercise medicine. *BMJ Open Sport Exerc Med*. 2022;8(3):e001377. doi:10.1136/bmjsem-2022-001377
50. Global Forum for Innovation in Health Professions Education. National Academies of Sciences, Engineering, and Medicine. Accessed December 1, 2022. <https://www.nationalacademies.org/our-work/global-forum-on-innovation-in-health-professional-education#sectionSponsors>
51. Editorial Board. *Journal of Interprofessional Care*. Accessed September 29, 2022. <https://www.tandfonline.com/action/journalInformation?show=editorialBoard&journalCode=ijic20>
52. IPEC Core Competencies Revision Working Group. Interprofessional Education Collaborative (IPEC). Accessed September 29, 2022. <https://www.ipecollaborative.org/ipec-ccr-working-group>
53. Breitbach A, Frost JS. Athletic training: the journey to becoming the newest NAP academy. *J Interprof Educ Pract*. 2021;22:100414. doi:10.1016/j.xjep.2021.100414
54. Guidance on developing quality interprofessional education for the health professions. Health Professions Accreditors Collaborative. Accessed December, 1 2022. <https://healthprofessionsaccreditors.org/wp-content/uploads/2019/02/HPACGuidance02-01-19.pdf>
55. Why become a jointly accredited provider? Board of Certification. Accessed September 29, 2022. https://bocac.org/joint_accreditation