BENDER, ANDREA L., ED.D. Athletic Training Preceptors' Experience With Interprofessional Education And Collaborative Practice In The Clinical Learning Environment. (2021) Directed by Dr. Diane L. Gill and Dr. Pam K. Brown. 51 pp.

Athletic Training programs are now required to align their educational curricula with the Institute of Medicine (IOM) core competencies and prepare students for working in dynamic health care teams to strategically address health outcomes (CAATE, 2018; IOM, 2001). Interprofessional education and collaborative practice (IPECP) is a framework that academic programs can use to facilitate didactic and clinical learning goals through collaboration with other health care professionals. IPECP initiatives have been implemented in the didactic aspects of program delivery; however, our understanding of how IPECP is actually being implemented by AT preceptors in clinical settings is limited. The purpose of this study was to gain greater understanding of how AT preceptors' experience with IPECP informs their clinical teaching. AT preceptors working in the NATA District 3 (Mid-Atlantic) region (n=45) were recruited to complete an online survey which gathered information on demographics, IPECP knowledge and training, implementation of IPECP in clinical practice and experience teaching students about IPECP. Responses were analyzed using descriptive statistics and reflexive thematic analysis of open-ended responses. Roughly 70% of preceptors had IPECP training (n=32) and agreed (n=31) that it is very or extremely important to teach their students how to engage in IPECP in their workplace. AT preceptors report engaging in IPECP most often with physicians, strength coaches, and physical therapists in their workplace setting, performing patient exams and developing treatment plans more often than research or professional development. Most report that collaborative practice with staff and students occurs sporadically in their workplace, suggesting that IPECP may not be intentionally planned or imbedded in their organizational culture. Formal IPECP training, positive and impactful experiences, exposure to various professionals, and high teaching importance were identified as promoting factors for IPECP implementation. Inhibiting factors such as scheduling/availability, lack of resources/"buy-in", and disruption stemming from the COVID-19 pandemic posed challenges for IPECP implementation. Despite almost 30% (n=13) of the participants not having any formal training in IPECP, AT programs may require preceptors to facilitate this as part of the clinical education experience. More IPECP education and training for AT preceptors may help close this gap and yield better teaching of collaborative practice behaviors with students transitioning to practice.

ATHLETIC TRAINING PRECEPTORS'EXPERIENCE WITH INTERPROFESSIONAL EDUCATION AND COLLABORATIVE PRACTICE IN THE CLINICAL LEARNING ENVIRONMENT

by

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A Dissertation

Submitted to

the Faculty of The Graduate School at

The University of North Carolina at Greensboro

in Partial Fulfillment

of the Requirements for the Degree

Doctor of Education

Greensboro

2021

Approved by

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DEDICATION

This project is dedicated to the many people who have helped me throughout my academic career. First, thank you to my committee members for guiding me through the writing process. Your continued support throughout this degree program is truly valued and appreciated. Thank you to all my friends, colleagues, professional mentors and family members who attended the virtual dissertation defense. You are as much a part of this celebration as all the members of the UNCG Kinesiology department because you also have been supporting me from day one. A special thanks to my parents who taught me the value of hard work, perseverance, and the importance of life-long learning. I would not have been able to climb to the top of this mountain without your enduring love and support at every twist and turn of this journey. And, finally, a special thanks to my "IT specialist", who not only helped me with numerous technical issues along the way, but gave me unconditional support and motivation to finish strong.

APPROVAL PAGE

This dissertation written by Andrea L. Bender has been approved by the following committee of the Faculty of The Graduate School at The University of North Carolina at Greensboro.

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CHAPTER I: PROJECT OVERVIEW

Today's health care professionals are being asked to manage increasingly complex health issues on both a local and global scale. The delivery of timely, competent and cost-effective patient care services is highly desirable from multiple stakeholder perspectives including patients, families, communities, as well as educational and governmental agencies. To achieve this vision of optimal healthcare, health professionals will need to adapt to working in dynamic, patient-centered, collaborative care teams to strategically address and improve health outcomes.

Athletic Trainers (ATs) are health care professionals who provide patient care under the direction of or in collaboration with a physician as part of a health care team. Healthcare services provided by ATs including injury and illness prevention, wellness promotion and education, emergent care, examination and clinical diagnosis, and therapeutic intervention and rehabilitation for treating injuries and medical conditions (National Athletic Trainers' Association (NATA), April 2021.) They work in a variety of patient-care settings including colleges and universities, secondary schools, primary care and rehabilitation facilities, professional sports, military and public safety organizations, performing arts and industrial/corporate facilities. Often, Athletic Trainers are the first point of access to health care services, especially for those patients living in underserved and rural communities.

Background

Athletic Training, as a professional practice, is well designed for promoting collaboration due to the unique patient-care environment and through required oversight by a team physician (Prentice, 2017). Because of this dynamic, ATs may be in a unique position to advocate for and recruit resources to promote intentional interprofessional collaborative practice that aims to improve the quality of care provided in their specific patient-care setting. Despite possible advantages, interprofessional collaboration may not be regularly implemented in many clinical settings which may imply that students are also not being exposed to models of collaborative practice during their clinical experience. Therefore, it is prudent to revisit the process by which AT programs are preparing to deliver effective clinical education through the framework of interprofessional collaboration.

Standards in AT Education

Similar to other health professional degree programs, AT programs have rigorous standards for educational training including oversight by a national accrediting agency, the Commission on Accreditation of Athletic Training Education or CAATE. Additionally, there are requirements to pass a national board of certification and individual state requirements, such as licensure, to be eligible to practice clinically. Program directors are tasked with designing, implementing, and evaluating both didactic coursework and clinical learning experiences as part of a comprehensive curriculum to prepare students to become Athletic Trainers. Clinical education is important for preparing students for successful transition to clinical practice. It allows students the opportunity to develop knowledge and clinical skill competency in progressive stages and in various clinical settings throughout the learning continuum.

Clinical Education

It is a common requirement in health professional degree programs for students to complete clinical experience hours under the supervision of a qualified preceptor (clinical instructor) to facilitate clinical skill competency and confidence in clinical decision-making skills related to contemporary practice (Accreditation Commission for Nursing Education, August 2017; Accreditation Review Commission on Education for the Physician Assistant, 2019; Commission on Accreditation in Physical Therapy Education, November 2020; CAATE, 2018). More practically, the purpose for engaging in clinical experience supervised by a preceptor is to facilitate students' professional socialization in the field and support successful transition to autonomous practice through direct patient care (Commission on College Nursing Education, September 2017). This is facilitated through the unique type of clinical environment in which the students are exposed and the interpersonal relationships they develop through their learning experiences. Bowman et al. (2017) agree, and suggest that program directors should "carefully select clinical education sites based on the relationships that can be fostered and the environment provided by preceptors (p.150)." To address this, programs may seek to develop clinical education experiences in emerging, non-traditional clinical practice settings such as the military, performing arts, and industrial/corporate workplace that would provide students with opportunities to engage with varying patient populations and learn from different health care providers as part of a patient-centered care team. Clinical experiences in these settings would allow for students to participate in the continuum of patient care from diagnosis to therapeutic

interventions and ultimately return to activity while working with various health care providers and peer health professions students (Jutte et al., 2016).

Preceptor Role

Preceptors are often selected at the discretion of program administrators based on the local proximity of health care professionals to the academic program, the mission of the academic program, and the instructional design for delivery of program-specific student learning objectives regarding clinical education. Preceptors have varying levels of knowledge regarding new competencies, such as interprofessional education, as well as varied experience in clinical practice. Regardless of their experience, all health care professionals serving as preceptors must demonstrate satisfactory compliance with accreditation requirements for appropriate educational background, maintain current certification and state licensure for clinical practice, and demonstrate a willingness and aptitude to serve as a teacher/mentor to students. Additionally, all preceptors are required to engage in "planned and ongoing education for their role as a preceptor" and maintain "contemporary expertise" in their field (CAATE, 2018). Continuing education activities offer health care providers a method for engaging in professional development as both educators and clinicians. Unfortunately, the nature by which preceptor training is implemented within AT programs greatly differs from program to program, and from year to year.

Transition to the Graduate Degree Level

Athletic Training professional degree programs are at a critical crossroads. In 2012, the members of the Athletic Training Strategic Alliance issued a recommendation for the professional preparation of Athletic Trainers to move from the undergraduate to the graduate degree level. This recommendation was accepted in 2015 and many programs have already started the process of degree transition that must be completed by 2022. Starting in 2020, all programs are required by the CAATE to implement and assess new program standards to help guide this transition. AT programs are instructed to align their educational curricula with the Institute of Medicine core competencies focusing on patient-centered care, interprofessional education and practice, evidence-based practice, quality improvement, healthcare informatics, and professionalism (CAATE, 2018; Institute of Medicine, 2001). The recommendation is a call to action for program administrators and key stakeholders to carefully re-evaluate their

respective curriculums to address these challenges seen in the workforce and better prepare students for entry-level practice.

IPECP Framework

Interprofessional education and collaborative practice (IPECP) is an "umbrella" term used for all types of activities involving interprofessional collaboration both in the academic and clinical learning environments. This concept can be used as a general framework to design and facilitate didactic and clinical learning goals while maximizing resources and personnel through collaboration and teamwork. *Interprofessional Education (IPE)* is defined as an educational approach "when students (from two or more professions) learn about, from, and with each other to enable effective collaboration and improve health outcomes" (National Center for Interprofessional Practice and Education, 2021; World Health Organization, 2010, pg. 13). This is often implemented in the didactic learning environment where students engage in planned learning activities such as a patient case study review or an integrated course on health care ethics with other health professional students. *Interprofessional Collaborative Practice (ICP)* is defined as when "multiple health workers from different professional backgrounds provide comprehensive health services by working with patients, their families, carers (caregivers), and communities to deliver the highest quality of care across settings." (National Center for Interprofessional Practice and Education, 2021; WHO, 2010, p.13). Care providers share mutual goals, resources and responsibility for addressing patient needs. In other words, ICP is what is occurring in the clinical setting when providing hands-on patient care in collaboration with other health professionals.

IPECP is not a new concept. It has been utilized by medical education and health professional degree programs such as Nursing for over 50 years. However, this concept is a relatively new component of the formal education requirements of Athletic Trainers. As of 2020, AT programs are required to demonstrate how they prepare students to "practice in collaboration with other health care and wellness professionals" (CAATE, 2018, p.38). This is in alignment with recent changes to accreditation standards for other health professional programs, such as Physical Therapy, which have adopted standards requiring programs to provide "learning activities [that] are directed toward the development of interprofessional competencies" (CAPTE, 2020, p.22). Various methods can be used to meet this requirement and programs must describe how they provide these opportunities for students both in the didactic and clinical

experience. Pedagogical techniques used in medical and health science education for teaching IPECP may include collaborative research projects, patient case studies, grand rounds, and/or simulations utilizing standardized patients or high/low fidelity mannequins. Administrators recognize that advanced IPECP activities, such as a mass casualty scenario/simulation events, often necessitate considerable planning and resources to coordinate (WHO, 2010).

Purpose and Aims

As AT programs embark on the degree transition process additional resources to support best practices for preceptors to teach IPECP competencies will be required. Those programs that can provide innovative interprofessional learning opportunities for students during their clinical experience will stand apart from the rest. The purpose of this research is to gain a greater understanding of how Athletic Training Preceptors' knowledge of and experience with Interprofessional Education and Collaborative Practice (IPECP) informs their clinical teaching. The specific aims for this study are to:

Specific Aim #1- Explore Athletic Training Preceptors' understanding of and experience with Interprofessional Education and Collaborative Practice (IPECP).

Specific Aim #2- Explore how Athletic Training Preceptors engage students in Interprofessional Education and Collaborative Practice (IPECP) in the clinical learning environment.

Methods

A convergent mixed-methods design was used with data collected through an online survey (Creswell, 2015). The survey gathered preceptors' demographic information, ratings on IPECP knowledge and use in clinical practice, as well as responses to open-ended questions about their experience implementing IPECP with students in their clinical practice.

Participants

Preceptors working in the NATA's District 3 Mid-Atlantic Athletic Trainers' Association were recruited to participate in the study. "Preceptors" are licensed and credentialed healthcare providers whose function is to "supervise, instruct, and mentor students during clinical education in accordance with the program's policies and procedures (CAATE Standards, 2020)."District 3 includes 45 professional degree programs located in Maryland, North Carolina, South Carolina,

Virginia, West Virginia and the District of Columbia. Contact information for each Athletic Training program is publicly available and updated regularly on the CAATE organization website and was used to form a contact list for recruitment.

Age, Gender, Race/Ethnicity

Eighty-four percent of the participants were between the age of 26 and 45 with more than half (n=25) between the ages of 26 and 35. The breakdown by gender was a sample of 24 female and 21 male. A majority (73%, n=33) of the participants identified their race/ethnicity as White. The remainder of the participants described their race/ethnicity as American Indian/Alaskan natives (n=4), Hispanic/Latino (n=4), Black/African American (n=3), and 1 participant identified as multi-racial. This sample was similar in representation to the NATA membership, which reports demographics as 56% female, 43.8% male, and predominately "White" (NATA, 2020). This sample had a higher number of American Indian/Alaskan native participants compared to national data and no participants representing Asian or Pacific Islander/Native Hawaiian.

Preceptor Education and Experience

This sample was comprised mostly of certified professionals in the early to mid-stage of their careers. Just over half (57.8%, n=26) have completed a Bachelor's degree in a CAATE accredited AT program to become credentialed as an Athletic Trainer and roughly 20% each completed either the Bachelor's degree/internship route or the new entry-level Master's degree in AT. The internship route was offered prior to AT accreditation standards beginning in 1991. The new entry-level, professional master's degree programs have been offered since announcing plans for the transition in 2015 (CAATE, 2015). Just over two-thirds (n=32) of the participants hold advanced master's degrees in either Athletic Training or other related fields such as Kinesiology or Education. Six participants have earned a clinical doctorate (DAT, PT, OT, etc.) or an academic doctorate degree (e.g., PhD, EdD, DHSc). Sixty-seven percent (n=30) of the participants have been practicing as an AT for 10 years or less; however, eight participants reported practicing 20 years or more. Seventy-three percent of participants (n=33) have been a preceptor for less than 10 years with 16 reporting less than three years of preceptor experience. About 75% of the participants supervised between 1-6 students annually and the other 25% percent supervised seven or more students per year. This is likely attributed to preceptors working primarily with large team sports that can accommodate clinical experiences for more students per rotation and multiple rotations per year.

Workplace Setting

A majority of the participants reported working in the College/University (n=19) and Secondary School (n=15) settings, which aligns with data from the NATA membership statistics (NATA member stats, 2020). The remainder of the sample reported various workplace settings including Professional Sports (n=2), Hospital/Urgent Care (n=3), Primary Care practice (n=1), Occupational Health/Public Safety (n=3), Military (n=1) and Other, which was further identified as an Outpatient Orthopedic PT clinic (n=1).

Survey Measure

The "InSITE: Interprofessional Education Site Evaluation Survey" (Sick et. al, 2019), served as a general guide for developing the survey questions for this study. "InSITE" is a self-assessment tool used to assesses preceptor readiness for facilitating interprofessional education and collaborative practice within their specific clinical setting. It has been validated for use in other health professional settings to determine interprofessional readiness, but it is not specifically oriented toward Athletic Trainers. The initial draft of the survey was reviewed by several faculty members and clinicians who have specific expertise in either IPECP, clinical education, or survey design. The resulting feedback was used to further modify the survey before deployment.

The survey was designed and administered through Qualtrics (Provo, UT). Demographic information collected at the beginning of the survey included age, gender, race/ethnicity, type of pre-certification degree, highest degree level obtained, number of years practicing as a Certified AT, number of years working in a preceptor role, number of students supervised annually, and type of workplace setting. Ratings and multiple-option items were used to gather information on IPECP specific behaviors including education in IPE, type of IPE experiences, overall satisfaction with IPE experience, importance of teaching students about ICP, frequency of ICP engagement in their workplace setting, type and frequency of professionals they engage with in ICP, and skills performed using an ICP framework. Open-ended questions gathered information from preceptors regarding their definition of IPECP, perceived student benefits, challenges to implementation, examples of impact on students, COVID-19 specific factors, and resources needed for improvement. The full survey is provided in Appendix A.

Procedures

After approval from the IRB committee at UNC Greensboro, participant recruitment began with an email invitation sent to all program directors of the CAATE Athletic Training programs located in the NATA's District 3 (Mid-Atlantic) region to inform them of the research study. A snowball sampling approach was employed, asking program directors to forward the email with a separate invitation to eligible preceptors affiliated with their academic program. Additional recruitment of participants involved posting a digital flyer on the primary investigator's social media accounts (Facebook, Twitter, and Instagram) with a QR code linked directly to the online survey. The purpose of the study was explained in the email invitation forwarded by the program directors as well as provided in a link accessible on the first page of the online survey. Informed consent was obtained prior to any data collection by clicking "yes" to proceed into the survey. The initial push of emails was sent at the beginning of the Spring 2021 semester. A follow-up email was sent 14 days after the initial email push as a reminder for participants to complete the survey. As an incentive to participate in the study, participants were offered a chance to win an Amazon Gift Card (valued at $25) awarded through a random draw process. Participants were also given the opportunity to share their contact information through a separate Google Form if they wished to receive a summary of the survey findings upon completion of the study.

Data Analysis

First, the data were cleaned and reviewed for errors. Individual responses were excluded if they did not consent, had not served in a preceptor role within the last two years, or were not an NATA District 3 member. Due to a large number of irregular responses, the raw data was also reviewed by a technology expert familiar with the Qualtrics platform and data analysis. After consultation, any responses with additional errors including a duration time less than 5 minutes, plagiarized written responses from open sources, or duplicate responses were also filtered out. Although 164 participants accessed the survey, only 45 participant responses were considered viable data sources for analysis. Raw data and graphic reports from this sample were downloaded from Qualtrics and stored in a secure digital folder. Descriptive statistics (frequencies, means, standard deviations, etc.) were used to report closed-ended survey question responses.

Open-ended responses were exported to an Excel file and each question was analyzed separately using an inductive process of reflexive thematic analysis described by Braun and Clarke (2006). First, participant responses were analyzed using open coding to obtain familiarization with the data. Each response was then reviewed a second time to confirm or modify their initial code(s). Then, codes were compared and similar topics clustered together into larger categories. Categories were organized into a table for each question, which provided a description of the category, examples of the codes in that category, the code count and a quote that best summarizes the category (Appendix E). After constant comparing and contrasting of the data, broader themes were developed to describe the relationship of the preceptor responses to a centralized organizing concept (Braun & Clarke, 2013). Ongoing analysis of the themes were reviewed by relating them back to the original survey question to gain clarity and refinement of the themes. Two faculty members from different institutions, with experience in qualitative research, reviewed the data analysis procedures during separate peer debriefing sessions to improve the trustworthiness of the findings. Researcher positionality is a concern with any qualitative research as the investigator's bias can influence perceptions during each stage of analysis. The investigator's perspective from previous experience as a preceptor and clinical education coordinator is acknowledged here as a benefit to the study (Braun & Clarke, 2019), thus adding value when making deeper connections about IPECP in clinical education. This was an ongoing reflective process. After separate analysis of the quantitative and qualitative data, the findings were organized into an excel sheet and integrated using a mixed analysis approach to provide greater context and answer the larger study aims.

Results

Closed-ended survey responses are presented first, followed by a summary of the thematic analysis results from the open-ended responses. A final summary of the mixed analysis is presented as a summative report.

Preceptor Training in IPE

Most of the participants reported having some type of formal education/training in IPE either pre-certification (n=15), post-certification (n=7), or both (n=10). Thirteen participants indicated they did not have any education or training in IPE. Patient simulation was the most commonly reported IPE training activity (n=15); followed by participation in a formal IPE

course (n=11), IPE workshops (n=8), IPE research projects (n=8) and completion of certificates/minors in IPE (n=7). The exposure to different activities during IPE training is encouraging; however, 29% (n=13) have not had any formal training in IPE and 22% (n=14) have not participated in any IPE activities before. Despite over 29% (n=13) of the participants not having any background training in IPE, 69% (n=31) agreed that it is very or extremely important to teach their students how to engage in ICP in their workplace setting. Although over 80% of the participants hold advanced degrees, there may be gaps in IPECP knowledge given that accreditation requirements for this competency were only recently established and only for entry-level programs (CAATE, 2018). To date there is no requirement for IPECP competencies in post-credential continuing education.

Table 1. Type of Professionals AT Preceptors Engage With In Their Clinical Setting

	Frequency of Engagement						
Type of Professional	**Never**	**(n)**	**Occasionally**	**(n)**	**Often**	**(n)**	**Total#**
Counselor/Sport Psychologist	17.7%	8	**66.6%**	**30**	15.5%	7	45
Chiropractor	35.5%	16	33.3%	15	31.1%	14	45
Dietician/Nutritionist	40.0%	18	44.4%	20	15.5%	7	45
EMT/Paramedic	22.2%	10	57.7%	26	20.0%	9	45
Pharmacist	**66.6%**	**30**	26.6%	12	6.6%	3	45
Physician (primary care/sports medicine)	6.6%	3	33.3%	15	**60.0%**	**27**	45
Physician Assistant	17.7%	8	42.2%	19	40.0%	18	45
Physical Therapist	13.3%	6	40.0%	18	46.6%	21	45
Massage therapist	46.6%	21	35.5%	16	17.7%	8	45
Nurse/NP/CAN	22.2%	10	46.6%	21	31.1%	14	45
Social Worker	57.7%	26	31.1%	14	11.1%	5	45
Occupational Therapist	55.5%	25	35.5%	16	8.8%	4	45
Orthopedic Surgeon	15.5%	7	48.8%	22	35.5%	16	45
Orthopedic Tech	44.4%	20	40.0%	18	15.5%	7	45
Exercise physiologist/Cardiac Rehabilitation Specialist	53.3%	24	26.6%	12	20.0%	9	45
Strength and Conditioning Coach/ Personal Trainer	15.5%	7	33.3%	15	51.11%	23	45

Preceptor Experience with IPECP in Clinical Practice

All participants indicated some degree of engagement in ICP in their workplace setting ranging from “Sometimes” (n=20) to “Half the time” (n=8) and “Most of the time” (n=13). Only four participants reported “Always” engaging in ICP in their workplace setting. Table 1 shows the frequency and type of professionals AT preceptors engage with in their clinical setting. Preceptors reported engaging most often with the Primary Care/Sports Medicine Physician, the Strength and Conditioning Coach/Personal Trainer, and Physical Therapist. More than half of the participants indicated that they never engage with some professionals, mainly Pharmacists, Social Workers, and Occupational Therapists. This may be due to fewer employment opportunities for ATs to work in health care facilities with these types of professionals/services. Participants also reported occasionally working with professionals such as a Counselor/Sport Psychologist, EMT/Paramedic and Orthopedic Surgeons, which may be due to the nature of patient care administered when treating acute injuries and mental health conditions (Table 1).

Student Engagement in IPECP

Preceptors indicate that opportunities for students to engage in IPECP during clinical practice are inconsistent. Slightly over half (n=24, 53.3%) reported opportunities occurred “Sporadically”; 12 reported weekly opportunities, 8 indicated daily opportunities and one commented that IPECP occurs “In between sporadically and weekly. More often than sporadically but less often than weekly.” Whether or not these potential opportunities turned into an actualized event was not assessed. The types of skills that preceptors engage their students in using a framework of ICP seems to be well dispersed throughout the domains of AT practice with Developing a patient care plan (n=32), Patient Examination and Clinical Diagnosis (n=24), and Prevention, Health Promotion and Wellness Programming (n=22) most commonly reported. IPECP activities involving research and professional development were not reported very often although these would be ideal activities for enhancing student engagement and development of professional socialization.

Open-Ended Response Findings

Participants were asked six open-ended questions about their understanding of IPECP and their experience engaging students in IPECP in their clinical setting. Results for each question are provided using tables to display the code category, the code count, and a supporting quote for each category as well as a brief contextual summary of the findings.

Defining IPECP

The first open-ended question in the survey asked the participant to explain how they would describe the term “IPECP” to their student during orientation. Initial codes were clustered into the following over-lapping categories: (1) multi-disciplinary, (2) working together as a team, (3) learning together and (4) patient-focused (Table 2).

Table 2. Coding analysis for how AT Preceptors describe the term IPECP

Categories	**Count**	**Description/Codes**	**Quote**
Multi-disciplinary	32	More than one person/ specialty working together listing health care providers involved	“A team of professionals of various backgrounds and certifications to ensure the wellbeing of the patient. Some are constant contacts and others are brought in as the need (clinical evaluation/patient reported outcome measures) warrants.”
Focusing on the Patient	21	Focused on the needs of the patient, for the benefit of the patient, patient-centered care	“IPE and practice is patient focused. It requires coming together as clinicians, highlighting and understanding each person's expertise, and coming up with a care plan that best fits the patient. Everyone should have the same "end game/goal".”
Working together	16	Teamwork, working together, collaborating, working with others	“In the day to day care of an injured athlete, ATs might have to coordinate care with other medical professionals or those that should have an interest in the injury and ongoing care.”
Learning together	14	More than one person/specialty learning together as a team	“Two or more people of different majors learn from each other to achieve mutual improvement and improve the quality of learning”.

Most participants demonstrated good understanding of the term and explained it with deeper context. Some participants gave specific examples related to the profession of AT and identifying IPECP as being part of their professional responsibility. Several made the connection that “IPECP” was essentially the idea behind the term “sports medicine team” where different health care providers work together to provide health care. They also described IPECP as being “patient-focused" where health professionals are working together to provide the best care for the

patient. One participant shared, "IPE and practice is patient focused. It requires coming together as clinicians, highlighting and understanding each person's expertise, and coming up with a care plan that best fits the patient. Everyone should have the same "end game/goal". Several gave basic definitions of IPECP, restated the term, and/or acknowledged that they did not know or use the term which indicates there is still a gap in understanding of the terminology and its application.

Student Benefits of IPECP

Perceived benefits from participating in IPECP activities were categorized into categories of professional socialization, advancing knowledge, gaining practical experience, and improving patient outcomes. Examples of professional socialization were reported the most, describing experiences that allow for students to develop professional behaviors and relationships through networking with different health professionals. They also reported "gaining perspective from other professionals" as a benefit of IPECP. One participant summarized this well describing,

> It allows students to view situations from more aspects than just one. There is a million ways to do one task in athletic training and to allow students to engage in different points of view only promotes a better learning environment and I believe prepares them better than if IPECP activities were not in the workplace setting.

Besides compliance with accreditation standards, there are additional perceived benefits to be gained from collaborating with other health professions activities such as opportunities for innovation & research, generational and transformational learning, improved confidence and shared respect for professional roles of the care team and even improved job satisfaction (Anderson, et al., 2006; Hoffman et al., 2008; Pinto et al., 2012). The data in this study supported findings from previous research regarding professional roles of the care team.

Challenges Engaging Students in IPECP

Challenges included a combination of scheduling/availability, difficult work relationships, lack of training, lack of resources and other work environment factors. Scheduling/availability issues appeared to be the top challenge. Examples were given such as "…class schedules conflicting with practice/treatment times/doctor appointments" and "…time with other professionals happens outside time students are present." Some preceptors further noted that their clinical environment was unpredictable stating, "At a high school, you don't

always see the same person so it is challenging to keep it consistent." Difficult work relationships were also a challenge to engaging students in IPECP. Preceptors described issues related to the work culture such as lack of buy-in/cooperation and lack of respect regarding the roles of different health care professionals. A lack of intentional planning and goal setting was also cited suggesting that IPECP is not considered a priority. One preceptor acknowledged, " [I] never considered making it an educational focus/formal part of clinical experience." Other challenges reported were related to a lack of training and a lack of resources (e.g., personnel, workload, equipment and money). This was summarized by one preceptor who identified "Smaller staff, clinical sites that don't allow as much student involvement, at times patient privacy with mental health issues…" were some of the challenges experienced.

Impact on Student Learning

Preceptors were asked to describe an IPECP activity that made the greatest impact on students in their clinical learning environment. Participants equally described examples of integrated patient care (11), simulation activities (10), and patient case studies (10) as being impactful for students. One preceptor described the impact of a planned simulation event below:

> I helped implement and facilitate a standardized patient and emergency simulation that opened the student's eyes to what they were uncomfortable with in emergency situations. I think it was great for all parties involved i.e. students, clinicians, and future athletes. It revealed things students needed to get comfortable with so that when it was real, they were prepared. For the clinicians/ preceptors it was informative on what skills need to be explained or taught better and as far as future athletes, the more practice we get as students or clinicians the better the outcome!

Another preceptor described an example of integrated care that a student was involved in during their clinical experience:

> I ask our students to meet with and observe our strength and conditioning coach, I include them in dialogue with him about athletes and how we collaborate to prevent injury and to promote recovery from injury if it does occur. I do the same with our doctors and PT if we have a patient that is under their care.

Impact of COVID-19 Pandemic

COVID-19 had a significant impact on IPECP during the 2020-2021 academic year. Due to disease transmission protocols, students, health care providers and patients were limited in their direct contact during daily operations which affected the facilitation of clinical learning. Emerging categories included changes to learning content and delivery, restricted access to clinical sites, lack of patients, and changes in preceptor workload. While some preceptors were limited due to cancelation of sporting events and restriction of elective patient procedures/treatment, others were able to adapt to changing protocols continuing to deliver patient care and clinical education opportunities through virtual platforms (e.g., telehealth). One preceptor wrote,

> Clearly we aren't having mass discussions but it has created more opportunities for telemedicine collaborations. Just this past week we had psychosocial OSCEs and students from our Psy D program served as the referrals. They were "Zoomed In" to the scenario at the time of referral.

For some, the change in workload forced them to prioritize patient care over student mentoring. One preceptor explained, “They are attending clinicals regularly, but all of the additional duties that have been dumped on us has left me little extra time to work with my students one on one.”.

Improving Preceptor Teaching of IPECP

Responses for improving the teaching of IPECP with students were clustered into the following categories: preceptor training & education, motivation & awareness, and resources. Many preceptors indicated that more training and education is needed to effectively teach IPECP skills in their clinical learning environment. Suggestions for improvement included recommendations for programs to provide better guidance on expectations for students and IPECP activities, providing continuing education credit for this content and providing training specific to the preceptor role. Some preceptors admitted they needed to be more aware of opportunities to engage in IPECP and make more of an effort to facilitate collaboration. One preceptor said:

> Most likely it would have to be more of an effort for me to try and do more of it when possible! I also think getting other staff members to buy into the importance and involvement would be crucial as it would allow for the student to learn from different perspectives.

Additional resources of personnel, time, equipment/ technology, and financial incentives to participate were identified in the responses. Supporting workload flexibility and planning time for developing these activities is desired. One participant shared, “Time...logistical planning is huge with these activities. Resources...to people and different settings but also as a means to buy out faculty time in order to have the brain space to create new things.”

Discussion and Implications

Integration of the mixed data indicates that most, but not all, AT preceptors surveyed had some formal training in IPECP. Most reported satisfaction with their IPE experience, which may be due to the high impact learning activities involving simulation modules or planned workshop training which were most often reported in the survey responses. Simulation training activities are good for developing discrete skills, but we may be missing additional opportunities to engage in IPECP such as conducting research with other health care professionals and health professional students (e.g., patient outcomes research), which was lacking in the survey responses. Overall, most preceptors demonstrated a good understanding of the term IPECP describing elements of working and learning together as a team, and involving multiple health care professionals to provide better patient care, which aligns with the definition provided by IPEC. Although some recognized that Athletic Trainers have been working in collaboration with other health professionals for years as part of the “sports medicine team,” others may still not recognize this as an example of IPECP in action. This is supported by participant claims that they “didn’t know the term IPECP” or “never had to explain it to a student (is that bad?).” This suggests a learning gap that still exists.

The findings confirm that Athletic Trainers are, in fact, engaging in IPECP and including students in these activities in their respective workplace settings. However, the degree and nature of these interactions are inconsistent and varied. Most participants reported that ICP occurs situationally in their workplace setting. Subsequently, that may also be why over half of the participants (53.3%, n=24) indicated they only provide opportunities “sporadically” for students to engage in ICP in their workplace setting. This suggests that there may not be an intentional plan for implementing IPECP activities at their clinical site and that IPECP competencies may not be embedded into their organizational culture yet.

IPECP implementation in the clinical setting appears to be impacted by the balance of promoting and inhibiting factors. Promoting factors described by participants included being trained in IPE, being exposed to a variety of IPE activities as a student, significant opportunities to engage with other health care providers in their clinical setting, and their individual perception of IPECP being important to teach. Some of the inhibiting factors described revolved around logistical issues (e.g., scheduling/availability conflicts, lack of equipment/technology, lack of time and personnel resources, Covid-19 protocols, etc.) as well as workplace culture issues (e.g., lack of buy-in/cooperation, inconsistent communication, lack of priority for IPECP, confusion on provider roles, lack of IPECP education & training). Student and patient availability were significant challenges reported, particularly during the Covid-19 pandemic. As restrictions ease on patient access and student placement, there should be more opportunities to engage in IPECP activities simply from the physical barriers of masks and space protocols being removed. Additionally, changes to the CAATE standards, which now require immersive clinical experiences as part of the student's clinical education may help to solve some of the issues of student availability and scheduling conflicts. Motivation and awareness of opportunities to collaborate will still be a factor that will affect IPECP implementation unless addressed individually by each stakeholder. Although advancement in education and training resources in IPECP has improved over the last decade, almost 30% (n=13) of the AT preceptors surveyed reported not having any formal training in IPE and 22.2% (n=14) have not participated in any IPE activities before. This describes a considerable learning gap that still exists regarding IPECP in the Athletic Training profession. The Clinical Education Coordinator will play a critical role in guiding future preceptor training in this area.

CHAPTER II: DISSEMINATION PLAN

A research presentation will be developed for AT preceptors to enhance their understanding of IPECP terminology and core competencies, and also to facilitate discussion regarding methods for implementing IPECP with students in the clinical learning environment. The presentation will be delivered as a PowerPoint presentation with an accompanying question guide for follow-up discussion at the end. Due to COVID-19, this will be created as a virtual presentation until provisions can be made to conduct a face-to-face presentation. The presentation slides are provided in Appendix F.

The presentation will be delivered to the Sports Medicine staff at Radford University during one of their bi-monthly "In-Service" meetings. This is typically held as a one-hour session, in a face-to-face format, to discuss current topics in sports medicine and/or hold skill review sessions together. It is attended by the Radford AT staff and the team physicians/fellows from the Virginia College of Osteopathic Medicine (VCOM). Some of the staff may have participated in the research survey and may be willing to openly discuss their perspective on implications for change in their clinical practice. There is also a possibility for the AT preceptors to receive continuing education credit for this presentation through the Board of Certification for Athletic Trainers. If CEU credit is awarded, I will advocate for the RU staff to invite ATs working in the local area high schools to attend this presentation as well to be able to reach a larger audience and have deeper discussions. I also plan to offer this to the UNCG Athletic Training program as a virtual preceptor training webinar or in person, if desired.

Preceptor Training Presentation

Slides 1-4: Introduction

Good morning/afternoon preceptors! My name is Dr. Andi Bender and I will be talking with you today about a subject that has been a passion of mine over the last five years. The title of my presentation is "Implementing IPECP in the Clinical Learning Environment". IPECP is a new requirement for all AT programs to implement, so I hope you will learn some new terms today and walk away with some teaching tools that you can implement in the clinical setting right away. The presentation will address the following learning objectives:

1. Define interprofessional education and collaborative practice (IPECP) and describe the role in which IPECP might play within our curricula and/or training models.
2. List and discuss the four core competencies for IPECP and the importance of incorporating IPECP experiences in our students' educational and clinical experiences.
3. Explore examples of how the IPECP framework can be used to address components of the IHI Triple Aim and impact social determinants of health in your community.
4. Explore preceptors' understanding of IPECP and discuss best practice resources for planning and implementing IPECP activities in the clinical learning environment.

Slide 5: Pre-Quiz

First, let's test your background knowledge in IPECP. Go ahead and take a few minutes to answer these 5 questions independently. We will discuss the correct answers in a little bit to see our baseline knowledge of IPECP. (A quick poll quiz of 5 multiple-choice questions will be used to gauge the audience's general understanding of IPECP concepts before discussing them more in-depth. The pre-quiz will be shown on one slide and answers revealed later in the presentation at the end of Slide 12. The questions assess the audience's knowledge of common themes of IPECP such as teamwork, communication, roles/responsibilities, patient-centered, and learning together vs. caring for patients together.)

Slides 6-8: IPECP Background

To better understand the purpose of interprofessional collaboration, we must understand the public health initiatives driving the quality improvement of health care and our shared goals in this process. In 2008, the Institute for Healthcare Improvement (IHI) coined the term "Triple Aim" describing three overarching goals of the healthcare system to (1) improve the health of populations, (2) improve the individual experience of care (patient-centered care), and (3) reduce the per capita costs of care. Subsequently, national campaigns and initiatives were created to promote policy changes that address the Triple Aim outcomes through collaboration by many different stakeholders of the health care system (Whittington et al., 2015). This major overhaul of the current health care system seemed to have benefits of improved care for patients; however providers quickly became overwhelmed as their workloads increased without proportionate changes in their organizational infrastructure. Some health care providers realized that the Triple Aim model was failing to acknowledge a key component in this organizational system, the care

provider. Bodenheimer and Sinsky (2014) suggested adding a 4th Aim to this model, coining the term "Quadruple Aim", to include improvement of the provider experience as a vital component to the quality improvement of health care. Interprofessional collaboration is an organizational framework that can help providers address the Quadruple Aim goals while optimizing personnel and resources. By using a multi-disciplinary team approach, providers can promote positive changes to health care policy that address the needs of the community and improve social determinants of health.

Slides 9-10: IPECP Core Competencies

Next, a review of IPECP taxonomy will be explored with a focus on their application in Athletic Training education/Sports Medicine programs. The World Health Organization defines the following terms (WHO, 2010, p. 13):

> *Interprofessional Education (IPE)* is an educational approach "when students (from two or more professions) learn about, from, and with each other to enable effective collaboration and improve health outcomes.
>
> *Interprofessional Collaborative Practice (ICP)* is when "multiple health workers from different professional backgrounds provide comprehensive health services by working with patients, their families, carers (caregivers), and communities to deliver the highest quality of care across settings. Care providers share mutual goals, resources and responsibility for addressing patient needs.

IPE is often implemented in the didactic learning environment where students engage in planned learning activities such as a patient case study review or an integrated course on health care ethics with other health professional students. Faculty members serve as mentors or facilitators in these activities and the goal is to learn together. ICP is often implemented in the clinical setting when students are supervised when providing hands-on, patient care in collaboration with other health professionals. A preceptor serves as the mentor or facilitator and the focus is on performing skills together on a real patient. IPECP is used as an umbrella term to encompass interprofessional collaboration in both didactic and clinical settings and including both learning

and working together to provide patient care. These terms have been used in Nursing and Medical Education curricula for over 50 years and continue to be refined as we better define the scope of interprofessional competencies. However, these may be new terms for those involved in Athletic Training Education and should be reviewed to clarify organizational goals.

The Interprofessional Education Collaborative (IPEC) was formed in 2009 involving six national associations for schools of health professions. Their mission was to promote and encourage interprofessional learning to prepare future health care professionals for the changing health care system. In 2011, they identified core competencies to guide interprofessional curriculum development and in 2016 they updated these core competencies to address four main themes: values and ethics, roles and responsibilities, interprofessional communication, and teams and teamwork. By having a uniform and shared taxonomy, stakeholders can better understand their shared goals and objectives when collaborating (IPEC, 2016).

Slides 11-12: Examples of IPECP Activities

After exploring IPECP taxonomy, lets discuss examples of different types of IPECP activities and who is typically involved in them. (An audience member will be asked to share an IP experience and I will ask follow-up questions to guide the discussion. Attention will be given to explain common methods of IPECP implemented in academic settings vs. clinical settings.) Depending on the setting and the mission of the organization, different professionals could be involved in IPECP activities such as team physicians, EMTs, physician assistants, physical or occupational therapists, and surgeons. This does not exclude professionals working in other disciplines such as counseling or education who are not traditionally thought of as health care providers, but are critically involved in effective patient care specifically in settings such as secondary schools.

Typically, IPE activities in the academic setting involve planned learning activities such as reviewing patient case studies or role play scenarios performed in interprofessional teams to examine roles and responsibilities of each provider and to develop a collaborative care plan. They may also participate in simulations using high and/or low fidelity manikins that allow students to role play behaviors in a low-stakes, controlled environment. Faculty members develop and facilitate these learning activities which are intentionally linked to specific course or program learning goals. Examples of ICP in the clinical setting focus on providing collaborative care to a real patient. One method, called “hot-spotting” is where an interprofessional care team

goes into the community to provide “on-site” patient care. In Athletic Training, this may look like an interprofessional team conducting pre-participation physical exams at a high school or facilitating Covid-19 testing as part of a community event. It also could include activities such as “grand rounds” done at the beginning of a shift/workday in a rehabilitation setting. While ICP may involve standardized patients for training purposes, the focus is more on demonstrating behaviors of collaboration when providing direct patient care.

Slides 13-15: IPECP in Athletic Training

Now, let’s review the new CAATE Standards and how they relate to IPECP and clinical education in Athletic Training programs. In 2015, the Athletic Training Strategic Alliance (NATA, NATA REF, BOC, CAATE) issued a recommendation for the professional preparation of Athletic Trainers to move from the undergraduate to the graduate degree level by 2022 (CAATE, 2015). This recommendation is a call to action for improving the coordination and delivery of AT education to align with the Institute of Medicine’s core competencies of patient-centered care, evidence-based practice, quality improvement, and healthcare informatics implemented through a framework of interprofessional education and practice. To guide this transition, the CAATE has created new educational standards that were recently implemented in 2020 (CAATE, 2018). It is now a requirement for all accredited programs to provide educational experiences that prepare students to work in interprofessional teams (Standard 8), and with a variety of patient populations (Standard 17) and health conditions (Standard 18). Programs will have to report annually to the CAATE describing their compliance with these standards (CAATE, 2020).

Research by Breitbach et al. (2018) shows that AT programs are slowly increasing their engagement in IPE, but there are still questions regarding how to implement these skills into clinical practice. This may be a golden opportunity to explore the nature of integrating IPE into clinical practice and develop preceptor training resources that promote best practices for teaching students how to engage in dynamic interprofessional care teams. Benefits and challenges of implementing IPECP in general will then be discussed leading into the purpose of my research project.

Slides 16-21: Research Project Overview

Next, I will describe an overview of my research starting with the purpose and specific aims. A mixed-methods research design was used, collecting both qualitative and quantitative

data, to gain greater understanding of the preceptors' experience with IPECP. Data was collected using an online survey which recorded both closed and open-ended responses to assess (1) Preceptor education and training in IPE, (2) Preceptor experience with ICP in their workplace setting, and (3) Preceptor experience with students and ICP in their workplace setting. My target sample consisted of AT Preceptor's in the NATA District 3 region identified through a snowball sampling approach via email sent to program directors. A total of 45 participant responses were reviewed and approved for analysis. Most participants were between the ages of 26-35, had been precepting less than 10 years, held advanced degrees in AT or other related field, and most of them worked in the collegiate or high school setting. (*Note: This sample highly resembles the audience for this current presentation.)

I will then go through some of the main results found in the study and ask if the audience has the same or different experience as what was reported from the sample. For example, most participants in the study had IPE training prior to working in their current job. Let's take a quick pulse here… How many of the preceptors in the audience today have had formal training in IPE? How many of you had IPE training as a student (pre-certification)? How many had IPE training after certification? (Compare audience responses with the research data. This will help them to relate to the findings of the study and be able to explain their experience in more detail.) A summary of the promoting and inhibiting factors for implementing IPECP in the clinical learning environment is presented in Slide 20. Do these responses resonate with your own experiences? Why or why not?

I now invite open discussion between the audience members regarding your ideas about engaging students in IPECP in your specific clinical site. What are the specific challenges you face? How can you collectively overcome barriers to IPECP implementation? What additional resources (time, money, technology, training, incentives, etc.) do you need to make this a reality? What are you currently doing that is working well? What could you start to implement together next week? Next month? Let's create some SMART goals to help us stay focused and achieve the changes we have discussed here today. (*Note: I will create a goals list and provide a copy to the administrative supervisor). Thank you for your time and I look forward to hearing about your creative collaborations in clinical practice!

CHAPTER III: ACTION PLAN

I plan to use the outcomes from this study to inform and guide my responsibilities as a Clinical Education Coordinator and faculty member teaching in an MSAT degree program. As part of the program administration responsible for implementing accreditation standards, I will use my background knowledge and research outcomes to guide implementation of IPECP activities in the AT program curriculum. I will use this information to continue to advocate for ATs to participate in IPECP activities with other health professionals both in the academic and clinical settings. I plan to continue my involvement on the steering committee that guides the development of collaborative learning activities and projects for students in health professional degree programs at the university. I also would like to provide ongoing support to AT preceptors through preceptor training and online resources focused on IPECP skills and learning activities.

Additionally, completion of this research project can be used to demonstrate that I have completed continuing education in my professional field as well as scholarship productivity that can be counted towards the promotion and tenure review process. It is a long-term goal for me to secure a tenure-track faculty position at a teaching-focused institution. This type of position will require me to establish an ongoing scholarly research agenda with a focus on teaching and learning. With the support of the university, I plan to continue to develop IPECP research projects with other faculty at the university and professionals in the community.

Short-term Plans

Locally, I plan to submit an abstract for consideration as a plenary presentation at the Waldron College Interprofessional Education and Practice Symposium held annually at Radford University. This symposium will allow me to share my research with a larger audience of healthcare professionals working in the New River Valley region. Faculty, staff and students from programs in Nursing, Physical Therapy, Emergency Services, Respiratory Therapy, Surgical Technology, Communication Sciences and Disorders, Physician Assistant, Public Health, Health Sciences, Healthcare Administration, Occupational Therapy, and Social Work will be in attendance. Presenting to this group will allow me the opportunity to disseminate my research findings to more professionals and gain valuable input about future directions in IPECP research outside of the AT profession. This event will be an opportunity to build my network

with potential collaborators for future research projects. It will also be a welcomed opportunity to advocate for Athletic Trainers and their role as part of the larger community of health care professionals. While the HHP department and the Waldon College of Health Sciences have many courses and content areas that overlap, HHP faculty are not always included in the events coordinated by the Center for Interprofessional Education and Practice. I hope that by inviting faculty members to attend the WCIPEP Symposium will help encourage them to maintain a bridge of communication and collaboration with these programs into the future.

Due to the new CAATE standards being implemented 2020, I anticipate that IPECP will be a trending topic in higher education for the next couple of years. I plan to submit my abstract to several professional conferences within the professional organizations for Athletic Trainers. I hope to present my original research at the 2023 NATA Athletic Training Educators Conference. This national conference has a competitive selection process and will have a target audience similar to my study participants. This conference has developed a program track specifically for preceptors who want to improve their clinical teaching skills and my research topic could fit into this program very well. I plan to offer the preceptor training presentation described in Chapter II as a plenary session, but I could also develop some hands-on learning activities that can be used in a breakout session format. Either presentation could be presented in a face-to-face or virtual format.

I also hope to present my research at other professional conferences in the region including the Virginia Athletic Trainers' symposium, the North Carolina Athletic Trainers' Association Symposium, and the Mid-Atlantic Athletic Trainers' Association Symposium. If accepted, I will be able to talk directly with members in attendance about my research design and outcomes. Connecting with AT preceptors in the region will give me better insight into how to improve on future research in this area.

Long-term Plans

Since we are in the process of transitioning all AT degree programs to the graduate level, there will be an increased demand for preceptor training resources. I plan to utilize the research findings to design preceptor training modules for clinical athletic trainers. The presentation will be designed to be delivered as a seminar in a blended learning format. The information presented will include a PowerPoint presentation and follow-up discussion guide that can be used in

breakout groups or a large group discussion. The guide will be used to engage preceptors in open discussion about their shared and individual experiences with IPECP. Sharing examples of how preceptors are currently teaching these concepts with students in their unique workplace setting will help to inform our collective understanding of IPECP as well as identify best practices and ongoing challenges to implementation. At the end of the workshop, I will summarize their discussion points and follow-up with additional resources to learn about what is currently trending in didactic and clinical education and suggest pedagogical tools that may help them implement IPECP more readily. This can be a catalyst to discuss their own organizational cultures and brainstorm ideas for implementation with their colleagues. I plan to offer this seminar/workshop for free to the preceptors affiliated with schools that I have worked for previously. If there becomes a greater demand for this type of preceptor training I would like to explore options to become an independent consultant and offer webinars/workshops for a fee as an approved provider for continuing education credit.

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APPENDIX A: SURVEY INSTRUMENT

This survey is part of a research study exploring Athletic Training Preceptor's experience with interprofessional education and collaborative practice (IPECP) and how they engage students in interprofessional activities in their workplace setting. The information provided will be used to better understand how the preceptor's experience in IPECP informs their clinical teaching. Participation in this study is voluntary and participants may choose to discontinue participation at any time. There is an opportunity to be entered into a random drawing to receive an **Amazon gift card (valued at $25)** for those that complete this study. Please direct questions about the study to the Principal Investigator, *Andrea (Andi) Bender*, at **albende2@uncg.edu.**

Click here to view Preceptor Recruitment Letter initial 1

1. Consent Are you at least 18 years of age or older and give consent to voluntary participation in this research study? Click "Yes" to proceed to the survey. Click "No" to exit the survey

   Yes (1) No (2)

2. Are you a clinical preceptor that has been supervising Athletic Training students within the last two years?

   Yes (1) No (2)

3. Do you currently work in the NATA District 3 Mid-Atlantic region?

   Yes (1) No (*Please identify your state below) (2)

   _____

4. What is your age?

   4.A. 18-25 years (1)

   4.B. 26-35 years (2)

   4.C. 36-45 years (3)

   4.D. 46-55 years (4)

   4.E. 56 and older (5)

5. What is your gender?

   5.A. Male (1)

   5.B. Female (2)

   5.C. Non-binary (3)

   5.D. Prefer not to answer (4)

   5.E. Other (participant may self-identify here) (5)

   _____

6. Which of the following best describes your race/ethnicity?

   6.A. Black/African-American (1)

   6.B. Asian (2)

   6.C. Hispanic/Latino (3)

   6.D. American Indian/Alaskan Native (4)

   6.E. Pacific Islander/ Native Hawaiian (5)

   6.F. White (6)

   6.G. Multi-racial (specify below) (7)

   _____

7. Which of the following best describes the degree route you completed for obtaining your ***entry-level*** AT credential?

   7.A. Bachelor's degree/Internship route (e.g. BA in Education with concentration in Sports Medicine) (1)

   7.B. Bachelor's degree in Athletic Training (e.g. BS or BA in Athletic Training) (2)

   7.C. Master's degree in Athletic Training (e.g. MSAT or MAT, "entry-level master's degree") (3)

   7.D. Other (please list and describe) (4)

   _____

8. Which of the following best describes your ***highest*** level of education?

   8.A. Bachelor's Degree (e.g. BS or BA in Athletic Training) (1)

   8.B. Advanced Master's degree in Athletic Training (e.g. MSAT, MAT) (2)

   8.C. Advanced Master's degree in related field (e.g. MEd, MPH, MS) (3)

   8.D. Advanced Clinical Doctorate (e.g. DAT, OT, DC,PT, PA, MD, DO) (4)

   8.E. Academic Doctorate (e.g. EdD, PhD, DHSc) (5)

   8.F. Other (please list and describe credentials) (6) _____

9. How long have you been practicing as a BOC Certified Athletic Trainer?

   9.A. 0-3 years (1)

   9.B. 4-6 years (2)

   9.C. 7-10 years (3)

   9.D. 11-15 years (4)

   9.E. 16-20 years (5)

   9.F. More than 20 years (6)

10. How long have you served in the role of preceptor for an Athletic Training program?

    10.A. Less than 1 year (1)

    10.B. 1-3 years (2)

    10.C. 4-6 years (3)

    10.D. 7-9 years (4)

    10.E. 10 or more years (5)

11. How many students do you typically supervise as a preceptor ***each year***?

    11.A. 1-3 (1)

    11.B. 4-6 (2)

    11.C. 7-9 (3)

    11.D. 10-12 (4)

    11.E. More than 12 (5)

12. What type of setting best describes your ***primary*** work environment?

    12.A. Secondary school (employed by school district) (1)

    12.B. Secondary school (employed by healthcare organization) (2)

    12.C. College/University (Division I) (3)

    12.D. College/University (Division II, III, NAIA, community college, etc.) (4)

    12.E. Professional sports (5)

    12.F. Hospital/Urgent Care clinic (6)

    12.G. Rehabilitation/Chiropractic Clinic (7)

    12.H. Primary Care practice (8)

    12.I. Orthopedic practice (9)

    12.J. Occupational Health/Public Safety (10)

    12.K. Military (11)

    12.L. Performing Arts (12)

    12.M. Other (please describe) (13)

    _____

13. How often do you engage with ***EACH*** of the following professionals at your workplace setting?

	Never	Occasionally	Often
Counselor/Sport Psychologist (1)			
Chiropractor (2)			
Dietician/Nutritionist (3)			
EMT/Paramedic (4)			
Pharmacist (5)			
Physician (primary care/sports medicine)			
Physician Assistant (7)			
Physical Therapist (8)			
Massage therapist (18)			
Nurse/NP/CNA (9)			
Social Worker (10)			
Occupational Therapist (11)			
Orthopedic Surgeon (12)			
Orthopedic Tech (13)			
Exercise physiologist/Cardiac			
Strength and Conditioning Coach/			

For the question below, pretend you are having an orientation meeting with your student on the first day of their clinical rotation.

14. How would you describe the term Interprofessional Education and Collaborative Practice (IPECP) to your student? (Type your response below)

_____
_____
_____
_____
_____

Please use the definitions below to answer the survey questions that follow.

Interprofessional Education (IPE) is defined as an educational approach when students (from two or more professions) learn about, from, and with each other to enable effective collaboration and improve health outcomes. (WHO, 2010)

Interprofessional Collaborative Practice (ICP) is defined as the provision of health care by providers from different professions in a coordinated and collaborative manner that addresses the needs of the patient(s). Providers share mutual goals, resources and responsibility for patient care. (WHO, 2010)

Interprofessional education and collaborative practice (IPECP) is being used as an umbrella term for all types of activities involving interprofessional collaboration both in the academic and clinical learning environments.

---

15. Have you had formal education in ***IPE*****?** (i.e. workshop, seminar, lectures, courses, etc.)
    - 15.A. Yes, as a student (pre-certification) (1)
    - 15.B. Yes, as a professional (post-certification) (2)
    - 15.C. Yes, both as a student and certified professional (3)
    - 15.D. No (4)

16. Which of the following types of ***IPE activities*** have you participated in before? (***Select all that apply***)
    - 16.A. IPE workshop (1-2 days max) (1)
    - 16.B. IPE patient simulation module (2)
    - 16.C. IPE research project (3)
    - 16.D. IPE formal course (4)
    - 16.E. IPE degree/certificate program (minors included) (5)
    - 16.F. None (6)
    - 16.G. Other (please describe) (7)

    _____

17. How would you rate your overall experience with ***IPE***?
    - 17.A. Extremely satisfied (5)
    - 17.B. Somewhat satisfied (4)
    - 17.C. Neither satisfied nor dissatisfied (3)
    - 17.D. Somewhat dissatisfied (2)
    - 17.E. Extremely dissatisfied (1)

18. How often do you engage in ***ICP*** in your clinical practice? (either in person or virtually)

    18.A. Never (1)

    18.B. Sometimes (2)

    18.C. About half the time (3)

    18.D. Most of the time (4)

    18.E. Always (5)

19. How often does your clinical site provide opportunities for students to engage in ***ICP***? (either in person or virtually)

    19.A. Never (1)

    19.B. Sporadically (e.g. patient case studies, annually planned training events (2)

    19.C. Weekly (e.g. planning meetings, grand rounds) (3)

    19.D. Daily (e.g. residency/fellowship or other training programs that operate in IP teams for daily patient care) (4)

    19.E. Other (please describe) (5)

    _____

20. What type of skills do you typically engage students in using a framework of ***ICP***? (Select all that apply)

    20.A. Patient Education and Advocacy (1)

    20.B. Patient Examination and Clinical Diagnosis (2)

    20.C. Developing a patient care plan (3)

    20.D. Managing patients with behavioral health conditions (4)

    20.E. Planning and/or implementing emergency care interventions (5)

    20.F. Prevention, Health Promotion and Wellness Programming (6)

    20.G. Patient outcomes reporting and other medical documentation (7)

    20.H. Healthcare administration tasks (8)

    20.I. Research (9)

    20.J. Professional Development (e.g. staff cultural competence training) (10)

    20.K. Other (please describe) (11)

    _____

21. How important is it for you to teach your students how to engage in ***ICP*** in your workplace setting?

    21.A. Not at all important (1)

    21.B. Slightly important (2)

    21.C. Moderately important (3)

    21.D. Very important (4)

    21.E. Extremely important (5)

22. Benefit List the **Benefits** your students get from participating in IPECP activities in your workplace setting? (Type your response below)

    22.A. Top Benefit (5)

    _____

    22.B. Other Benefits (6)

    _____

23. List the **Challenges** that affect your ability to engage students in IPECP activities in your workplace setting? (Type your response below)

    23.A. Top Challenge (5)

    _____

    23.B. Other Challenges (6)

    _____

24. Describe ***one type of IPECP activity*** you feel made the ***greatest impact*** on students in your workplace setting? (e.g. simulation event, patient case study project, prevention/wellness intervention programs, telehealth visits, etc.) **Briefly describe the nature of this experience below.**

25. Covid-19 How has the ***Covid-19 pandemic impacted your te****aching of IPECP* to students in your workplace setting? (Type your response below)

26. What would help you to ***improve your teaching of IPECP*** to students in your workplace setting? (Type your response below)

APPENDIX B: PROGRAM DIRECTOR EMAIL

Dear Program Directors,

Happy New Year! I hope this email finds you in good health and rested from the holidays. My name is Andrea (Andi) Bender and I have been a certified Athletic Trainer and educator for 17 years working in the Mid-Atlantic region. I am currently a doctoral student in the Ed. D. in Kinesiology online degree program at the University of North Carolina at Greensboro. I would greatly appreciate your ***assistance in recruiting preceptors*** affiliated with your degree program to participate in a research study examining "***Athletic Training Preceptors' Experience with Interprofessional Education and Collaborative Practice (IPECP) in the Clinical Learning Environment."***

The onset of the Covid-19 health pandemic this past year required all of us to re-evaluate how we go about our day to day operations, especially how we provide quality clinical education for the students we supervise. This is a ***valuable opportunity to capture information from the perspective of the preceptor about how we are implementing IPECP with our students*** in the clinical learning environment.

I hope you will consider ***forwarding this invitation to your Clinical Education Coordinator*** as well to ***help recruit active preceptors*** eligible to complete the online survey. Input from preceptors will help provide a deeper insight into current trends of IPECP training and implementation with students. Participants will have the option of receiving ***a summary of the research findings*** upon completion of the study which may better ***inform their clinical practice*** and preceptor responsibilities.

The survey consists of ***demographic questions, several items about IPECP training and use*** in the clinical setting and some ***open-response questions about engagement with students***. This survey will take approximately ***10-15 minutes to complete.*** Participation in the study is completely ***voluntary*** and responses will be collected anonymously. After completion of the survey, participants will be directed to a separate google form to enter a random drawing for a chance to ***win an Amazon gift card (valued at $25).***

If you have any questions, about the study please contact **Andrea Bender, Principal Investigator at albende2@uncg.edu or Dr. Diane Gill, Faculty Advisor at dlgill@uncg.edu**. If you have concerns about how you have been treated by this study, please call the Director of the Office of Research Integrity at 1-855-251-2351.

Thank you for your time and consideration. Be safe and stay healthy,

Andrea Bender, MS, LAT, ATC
Doctoral Student
Ed. D. in Kinesiology
UNC Greensboro
albende2@uncg.edu

APPENDIX C: PRECEPTOR RECRUITMENT LETTER

Dear Preceptors,

Happy New Year! I hope this email finds you in good health and rested from the holidays. My name is Andrea (Andi) Bender and I have been a certified Athletic Trainer and educator for 17 years working in the Mid-Atlantic region. I am currently a doctoral student in the Ed. D. in Kinesiology online degree program at UNC Greensboro. I would greatly appreciate your input for a research study examining "***Athletic Training Preceptors' Experience with Interprofessional Education and Collaborative Practice (IPECP) in the Clinical Learning Environment."***

The onset of the Covid-19 health pandemic this past year required all of us to re-evaluate how we go about our day to day operations, especially how we provide quality clinical education for the students we supervise. This is a ***valuable opportunity to capture information from the perspective of the preceptor about how we are implementing IPECP*** with our students in the clinical learning environment. I hope you will consider completing this online survey to help provide a deeper insight into these current trends in clinical education practice. Participants will have the option of receiving a summary of the research findings upon completion of the study to better inform your clinical practice and preceptor responsibilities.

The survey consists of ***demographic questions, several items about IPECP training and use in the clinical setting and some open-response questions about engagement with students***. This survey will take approximately ***10-15 minutes to complete.*** After completion of the survey, participants will be directed to a separate google form to enter a random drawing for a chance to ***win an Amazon gift card (valued at $25).*** You will also be able to provide your contact information on this form if you wish to receive a summary of the research findings.

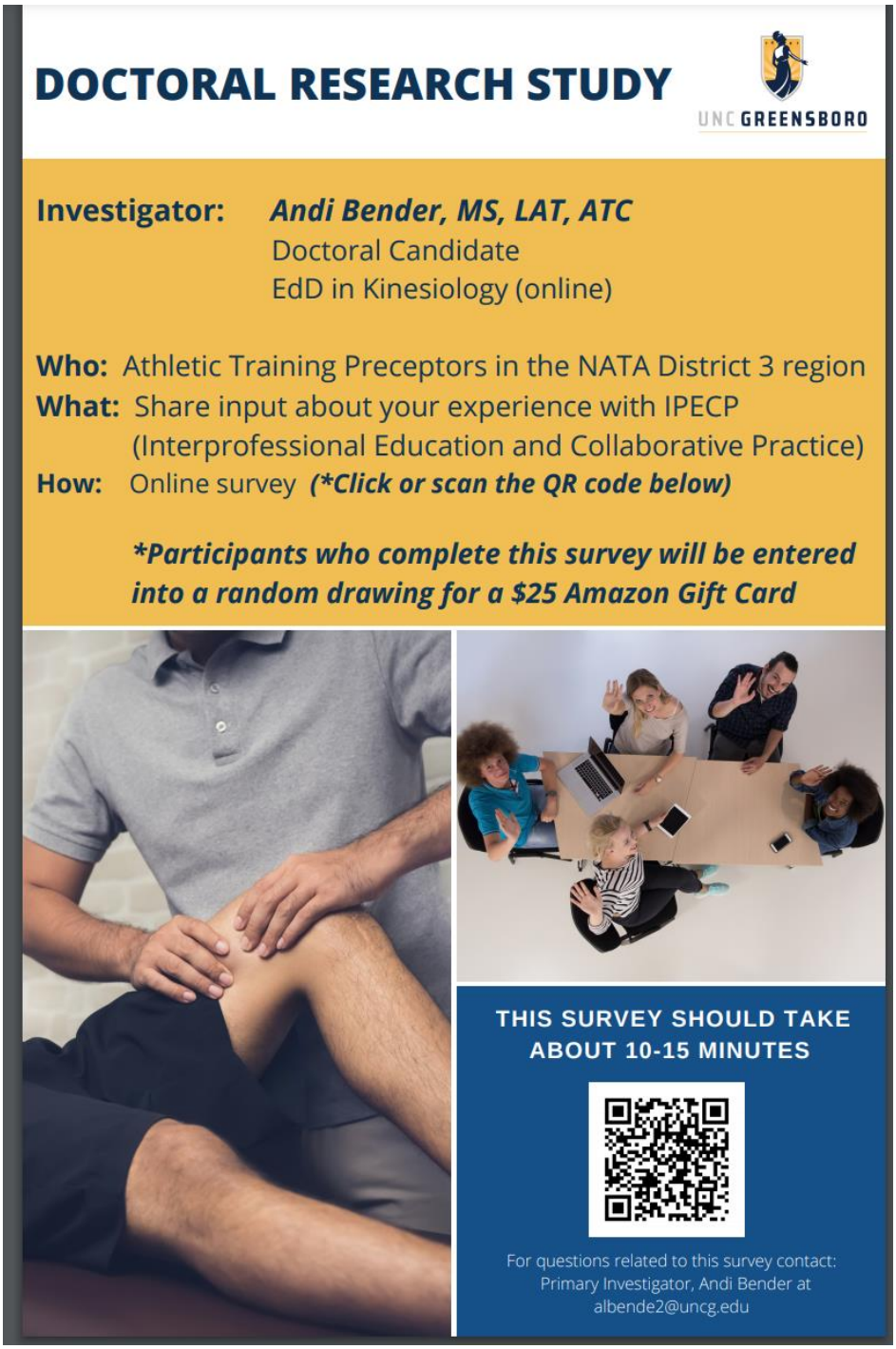
Your participation in the study is ***completely voluntary***, and you may choose to end the survey at any time without cause or penalty. Other than the time you spend on this survey there are ***no known or foreseeable risks*** involved with this study. Survey responses will remain confidential and no identifying information will be linked back to your institution, employer, or supervisor.

Click HERE to access the survey.

If you have any questions, about the study please contact **Andrea Bender, Principal Investigator at albende2@uncg.edu or Dr. Diane Gill, Faculty Advisor at dlgill@uncg.edu**. If you have concerns about how you have been treated in this study, please call the Director of the Office of Research Integrity at 1-855-251-2351.

Thank you for your time and consideration. Be safe and stay healthy,
Andrea Bender, MS, LAT, ATC
Doctoral Student
Ed. D. in Kinesiology
UNC Greensboro
albende2@uncg.edu

APPENDIX D: SURVEY FLYER FOR SOCIAL MEDIA POSTINGS



APPENDIX E: QUALITATIVE ANALYSIS SUMMARY

Q1:

For the question below, pretend you are having an orientation meeting with your student on the first day of their clinical rotation.

How would you describe the term Interprofessional Education and Collaborative Practice (IPECP) to your student? (Type your response below)

Categories	Count	Description/Codes	Quote
Multidisciplinary	32	More than one person/specialty working together. Codes: Listing health care providers involved,	"A team of professionals of various backgrounds and certifications to ensure the wellbeing of the patient. Some are constant contacts and others are brought in as the need (clinical evaluation/patient reported outcome measures) warrants."
Focusing on the Patient	21	Focused on the needs of the patient, for the benefit of the patient, patient-centered care	"IPE and practice is patient focused. It requires coming together as clinicians, highlighting and understanding each person's expertise, and coming up with a care plan that best fits the patient. Everyone should have the same "end game/goal"."
Working together	16	Teamwork, working together, collaborating, working with others	"In the day to day care of an injured athlete, ATs might have to coordinate care with other medical professionals or those that should have an interest in the injury and ongoing care."
Learning together	14	More than one person/specialty learning together as a team	"Two or more people of different majors learn from each other to achieve mutual improvement and improve the quality of learning".

Q2 & Q3:

List the Benefits your students get from participating in IPECP activities in your workplace setting? (Type your response below) - Top Benefits and Other Benefits (combined)

Categories	Count	Description/Codes	Quote
Professional socialization	23	Building relationships, learning how to work together as professionals, networking, gaining perspective from others	"It allows students to view situations from more aspects than just one. There is a million ways to do one task in athletic training and to allow students to engage in different points of view only promotes a better learning environment and I believe prepares them better than if IPECP activities were not in the workplace setting."
Advancing knowledge	14	Learning advanced skills or concepts, continuing to learn, increasing knowledge, engaging in research	"Create a better understanding of multiple source treatment" "Increased education and the ability to learn and therefore teach, networking"
Practical experience	10	Authentic, real-world applications of patient care, improving the clinician's skills	"Getting them ready for real-world practice." "Exposed to multiple patient oriented outcomes and observes how these outcomes are used with other professionals."
Patient outcomes	5	Serving the patient's needs, quality of care provided	"Better patient care and outcomes" "Better support system for patient"

Q4 & Q5:

List the Challenges that affect your ability to engage students in IPECP activities in your workplace setting? (Type your response below) - Top Challenge & Other Challenges

Categories	Count	Description/Codes	Quote
Scheduling/ Availability	15	Scheduling conflicts, lack of access to patients, lack of opportunities for students, unpredictable events, inconsistency in schedules	"Class schedules not allowing conflicting with practice/treatment times/ doctors appointments"
Work relationships	13	Lack of cooperation/buy-in from others, lack of communication, lack of respect, conflicts with staff	"Having other HCPS understand and respect ATs as HCPS" "Other professionals not willing to work together."
Lack of resources	10	Money, personnel, equipment, time/workload	"Time,… lack of identified professionals"
Lack of Training	5	Students/preceptors not prepared, lack of formal education, need more practice	"Lack of cross-professional collaboration training" "not knowing how to collaborate with students in other health professions on campus"

Q6:

Describe one type of IPECP activity you feel made the greatest impact on students in your workplace setting? (e.g. simulation event, patient case study project, prevention/wellness intervention programs, telehealth visits, etc.) **Briefly describe the nature of this experience below.**

Categories	Count	Description/Codes	Quote
Integrated Care	11	Observing care or treating a real patient together (ICP)	"I ask our students to meet with and observe our strength and conditioning coach, I include them in dialogue with him about athletes and how we collaborate to prevent injury and to promote recovery from injury if it does occur. I do the same with our doctors and PT if we have a patient that is under their care."
Simulations	10	Performing skills on simulated patients/ equipment (ICP)	"I helped implement and facilitate a standardized patient and emergency simulation that opened the student's eyes to what they were uncomfortable with in emergency situations. I think it was great for all parties involved i.e. students, clinicians, and future athletes. It revealed things students needed to get comfortable with so that when it was real, they were prepared. For the clinicians/ preceptors it was informative on what skills need to be explained or taught better and as far as future athletes, the more practice we get as students or clinicians the better the outcome!"
Patient Case Study	10	Discussing/dialogue about a patient case (IPE)	"Before the pandemic our college held an IPE event in which all programs had the same case. Tables were set up and each table had one or two students from each program in the college at the table. There was a faculty moderator and the discussions surrounded each discipline's role in caring for the patient."

Q7:

How has the Covid-19 pandemic impacted your teaching of IPECP to students in your workplace setting? (Type your response below)

Categories	Count	Description/Codes	Quote
Teaching content & delivery	12	Focus on Covid-related themes (hygiene, sanitation, respiratory conditions, treatments, etc.), Virtual teaching, telehealth/telemedicine	“Clearly we aren't having mass discussions but it has created more opportunities for telemedicine collaborations. Just this past week we had psychosocial OSCEs and students from our Psy D program served as the referrals. They were "Zoomed In" to the scenario at the time of referral.”
Restricted access to clinical site	11	Student visitation restricted, no clinical rotations allowed	“We do not have students this year due to covid restrictions to visitors on campus and number of people allowed at practice and in AT clinic.”
Lack of patients	9	Sporting events cancelled/ rescheduled, no patients reporting for surgery/treatments	“Lost part of spring 2020 semester. Limited access to enter healthcare clinics/hospitals to see surgery or cases beyond the training room.”
Workload	2	Change in duties/ responsibilities due to Covid, too busy	“They are attending clinicals regularly, but all of the additional duties that have been dumped on us has left me little extra time to work with my students one on one.”

Q8:

What would help you to improve your teaching of IPECP to students in your workplace setting? (Type your response below)

Category	Count	Description/Codes	Quote
Training & Education	18	Continuing education credits, formal instruction on how to implement, training for preceptors on IPECP	"After COVID P&P are no longer required, it would be great if the preceptors and educators were officially trained on how to improve IPECP teaching. We also would need better communication from the education aspect at our university which has a disconnect from us."
Motivation & Awareness	8	Identifying opportunities to engage in IPECP, make more of an effort, get more cooperation/buy-in from others	"Most likely it would have to be more of an effort for me to try and do more of it when possible! I also think getting other staff members to by into the importance and involvement would be crucial as it would allow for the student to learn from different perspectives".
Resources	6	Workload flexibility, planning time, financial incentives, technology/equipment, get more providers involved	"Time...logistical planning is huge with these activities. Resources...to people and different settings but also as a means to buy out faculty time in order to have the brain space to create new things."

APPENDIX F: PRECEPTOR TRAINING PRESENTATION

Implementing Interprofessional Education
and Collaborative Practice
in the Clinical Learning Environment

Presented by
Andi Bender, EdD, LAT, ATC

RADFORD UNIVERSITY

Professional Development Presentation for
Radford University Sports Medicine

1

Why am I here?

RADFORD UNIVERSITY

2

Why are YOU here?!

RADFORD UNIVERSITY

3

Today's Objectives

- Define interprofessional education and collaborative practice (IPECP) and describe the role in which IPECP might play within our curricula and/or training models.
- List and discuss the four core competencies for IPECP and the importance of incorporating IPECP experiences in our students' educational and clinical experiences.
- Explore examples of how the IPECP framework can be used to address components of the IHI Triple Aim and impact social determinants of health in your community.
- Explore preceptors' understanding of IPECP and discuss best practice resources for planning and implementing IPECP activities in the clinical learning environment.

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4

What's your IPECP IQ?

1. Which of the following is not a core competency of interprofessional collaborative practice according to IPEC?
   a. Teamwork
   b. Values
   c. Roles
   d. Cost Efficiency

2. Professionals practicing IPECP:
   a. Have a multidisciplinary certification.
   b. Must be licensed in multiple professions.
   c. Must have teaching experience
   d. Participate in a non-hierarchical interdisciplinary team approach.

3. IPECP is seen as a means of:
   a. Eliminating the need for training programs in different professions.
   b. Improving the client/patient/student experience of care.
   c. Cost-savings through personnel and staff reductions.
   d. Improving the design of health care and school facilities.

4. In IPECP teams:
   a. The physician leads with input from others.
   b. Team members rotate responsibilities for note-taking.
   c. The emphasis is on consensus-building and mutual respect.
   d. Each discipline writes a separate report.

5. IPECP occurs:
   a. Only in the academic setting
   b. When students from different AT programs learn together
   c. Only in settings where the students are face-to-face
   d. In both the clinical and academic setting

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5

Quality Improvement in Health Care

IHI Triple Aim (2009)

✓ Improve the health of populations
✓ Improve the individual experience of care
✓ Reduce the per capita costs of care
(Institute for Healthcare Improvement, 2009)

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6

Triple Aim or Quadruple Aim?

Quadruple Aim?

✓Improve the provider experience (Bodenheimer & Sinsky, 2014)

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7

How can we Improve Health Outcomes?

✓ IPECP framework can be used to address the **Social Determinants of Health** in your community

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8

What is IPECP?

Interprofessional Education (IPE):

"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)

Interprofessional Collaborative Practice (ICP) :

"When multiple health workers from different professional backgrounds **provide comprehensive health services** by working with patients, their families, carers (caregivers), and communities to deliver the highest quality of care across settings." (WHO, 2010, p.13).

****IPECP is used as an umbrella term to encompass collaboration in both didactic and clinical settings.***

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9

IPEC Core Competencies for Interprofessional Collaborative Practice

Values/Ethics for Interprofessional Practice	• Work together with mutual respect and shared values.
Roles /Responsibilities	• Shared acknowledgement of each participating team member's roles and abilities.
Interprofessional communication	• Communicate in a responsible manner that supports a team approach.
Teams and Team work	• Apply relationship-building values and the principles of team dynamics.

Core Competencies for Interprofessional Collaborative Practice: 2016 Update
https://nebula.wsimg.com/2fd6a19522b03338b4103bc370497473?AccessKeyId=DC06780E69ED19E2B3A5&disposition=0&alloworigin=1

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10

IPECP in Health Professional Programs

Who is involved?

- Medicine
- Nursing
- Pharmacy
- Physician Assistant
- Physical Therapy
- Occupational Therapy
- Social Work
- Pre-health professionals
- Athletic Training
- More professionals are welcomed!

- Studies have reported:
  - Positive perceptions of IPE by students, faculty and clinicians (Breitbach, 2012)
  - IPE improves teamwork, communication, understand roles and responsibilities and values/ethics (IPEC, 2016).
  - Barriers to IPE in academic programs stem from lack of time, scheduling conflicts, and siloes of professional culture (Curran, Sharpe & Forristall, 2007).
  - Many faculty and preceptors have not been formally trained in IPE or instructed in leading IPE teams (Gilbert, 2005).

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11

What Does IPECP look like?

NATIONAL CENTER for INTERPROFESSIONAL PRACTICE and EDUCATION

Examples of IPECP activities:

- IPE seminar or workshops in crossover content areas such as therapeutic interventions, public health, Covid-19 education
- IPE curriculum courses in healthcare ethics, administration, and informatics
- IPE simulation training with health professions and preceptors using high-fidelity manikins
- ICP Physical screenings for sports clubs and high schools
- ICP Clinical "Hot-spotting" to underserved communities

https://nexusipe.org/informing/stories-from-the-nexus/care-design-integrating-practice-and-education-utah

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CAATE Accreditation Standards

- Commission on Accreditation of Athletic Training Education (CAATE)
  - Transition of AT degree programs to the graduate level by 2022
  - Moving toward a medical model of academic preparation
  - New standards implemented in 2020
- New standards reflect language from the core competencies of the Institute of Medicine (CAATE, 2020):
  - (1) patient-centered care,
  - (2) evidence-based practice
  - (3) quality improvement
  - (4) healthcare informatics

  *using a framework of interprofessional collaboration

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CAATE Accreditation Standards

Standard 8 **Interprofessional education is incorporated within the professional program.**

Annotation *Varying methods can be used to incorporate interprofessional education. To meet this standard, each student in the program must have multiple exposures to interprofessional education.*

Standard 17 **A program's clinical education component includes clinical practice opportunities with varied client/patient populations. Populations must include clients/patients**

- **throughout the lifespan (for example, pediatric, adult, elderly),**
- **of different sexes,**
- **with different socioeconomic statuses,**
- **of varying levels of activity and athletic ability (for example, competitive and recreational, individual and team activities, high- and low-intensity activities),**
- **who participate in nonsport activities (for example, participants in military, industrial, occupational, leisure activities, performing arts).**

Standard 18 **Students gain experience with patients with a variety of health conditions commonly seen in athletic training practice.**

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Interprofessional Education in AT

The Progress and Promise of Interprofessional Education in Athletic Training Programs

KEY POINTS

- Interprofessional education showed growth in athletic training programs between 2012 and 2015.
- Interprofessional education occurred more often in athletic training programs at institutions with a post-baccalaureate component.
- Interprofessional education occurred more often at institutions where the athletic training program is housed in in health science related units.
- Administrative support and institutional commitment is recommended as key factors for further growth of interprofessional education in athletic training programs.

How are preceptors currently working as part of an interprofessional care team?

What resources do preceptors have/need to conduct interprofessional activities?

How are they mentoring students to work in interprofessional teams?

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Research Project Overview

The purpose of this research is to gain a greater understanding of how Athletic Training Preceptors' knowledge of and experience with Interprofessional Education and Collaborative Practice (IPECP) informs their clinical teaching. The specific aims for this study are to:

- ***Specific Aim #1***- *Explore Athletic Training Preceptors' understanding of and experience with Interprofessional Education and Collaborative Practice (IPECP).*
- ***Specific Aim #2***- *Explore how Athletic Training Preceptors engage students in Interprofessional Education and Collaborative Practice (IPECP) in the clinical learning environment.*

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Methods

Participants

General

- AT preceptors in NATA District 3- Mid-Atlantic region
- 163 accessed survey, many survey response errors
- Final sample (n=45)
  - Age 26-65 (n=35)
  - Female (n=23), males (n= 21)
  - "White" (n=33), "Other (n=12)

AT Education

- AT credential= 20% AT degree internship route (no accreditation)
- 80% hold advanced degree (MS, MA, DAT, PhD, etc.)

Professional Experience

- Practicing 10 years or less (n=30, 67%)
- Preceptor less than 10 years (n=33), 73%)
- Supervise 1-6 students annually (75%)
- College/University (n=15), High School (n=15),
- Other (n=11), low response from rehab/PT clinic setting

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Results

Table 1.1 Frequency and Type of Professionals Preceptors Engage with in the Clinical Setting

Type of Professional	Never	(n)	Occasionally	(n)	Often	(n)	Total N
	Frequency of Engagement						
Counselor/Sport Psychologist	17.5%	7	50.0%	20	32.5%	13	40
Chiropractor	32.5%	13	32.5%	13	35.0%	14	40
Dietician/Nutritionist	40.0%	16	40.0%	16	20.0%	8	40
EMT/Paramedic	32.5%	13	37.5%	15	30.0%	12	40
Pharmacist	36.8%	14	36.8%	14	26.3%	10	38
Physician (primary care/sports medicine)	6.8%	3	52.3%	23	40.9%	18	44
Physician Assistant	17.5%	7	42.5%	17	40.0%	16	40
Physical Therapist	13.5%	5	40.5%	15	46.0%	17	37
Massage therapist	40.0%	16	32.5%	13	27.5%	11	40
Nurse/NP/CNS	22.5%	9	40.0%	16	37.5%	15	40
Social Worker	37.5%	15	41.2%	14	21.2%	8	40
Occupational Therapist	32.5%	13	32.5%	13	34.8%	14	40
Orthopedic Surgeon	12.5%	5	40.0%	16	47.5%	19	40
Orthopedic Tech	40.0%	16	40.0%	16	22.5%	9	40
Exercise physiologist/Cardiac Rehabilitation Specialist	32.5%	13	34.0%	13	34.0%	13	40
Strength and Conditioning Coach/ Personal Trainer	12.5%	5	52.5%	21	35.2%	13	40

- Preceptor IPE Experience
  - IPE training (n=32), during pre-certification (n=15)
  - Most often as Simulation (n=15), IPE course (n=11)
  - Satisfied with IPE experience (n=27)
  - No IPE training (n=13)
  - 69% (n=31) very or extremely important to teach students about IPECP
- ICP Experience in Workplace Setting
  - Table 1.1- Frequency and Type of Professional
  - ICP with students occurs sporadically (n=24)
    - Developing a patient care plan (n=32)
    - Patient Examination & Clinical Dx (n=24)

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Results: Aim #1- Understanding IPECP

- Theme: Building Relationships
  - Sub-themes:
    - Multi-disciplinary
    - Learning together
    - Working together
    - Benefit the patient
    - Benefit the clinician

"IPECP is what being part of a "sports medicine team" is all about. As athletic trainers, we often work with other health care providers to ensure whole patient care is provided to our patients. While we oftentimes deal with orthopedic injuries it is not the only thing we deal with. This approach allows us to collaborate with other providers such as MDs, DO's, PTs, Strength Coaches, Psychiatrists, or RDNs to ensure our patients are getting high-quality care for whatever issue they are dealing with. Not only does it ensure high-quality care but it allows us as clinicians to learn from each other and grow as clinicians/profession."

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Results: Aim #2- IPECP with Students

Promoting Factors

- Trained in IPE, variety of methods
- Opportunity to interact with different HCP
- Feel it's important to teach students

Inhibiting Factors

- COVID-19 protocols
- Scheduling/availability
- Lack of "buy-in"
- Lack of planning
- Need more direction on implementation

"I helped implement and facilitate a standardized patient and emergency simulation that opened the student's eyes to what they were uncomfortable with in emergency situations. I think it was great for all parties involved i.e. students, clinicians, and future athletes. It revealed things students needed to get comfortable with so that when it was real, they were prepared. For the clinicians/ preceptors it was informative on what skills need to be explained or taught better and as far as future athletes, the more practice we get as students or clinicians the better the outcome!"

"Could has limited ability for students to get into healthcare clinics to see other aspects of the sports medicine team"

"Lack of clearly stated, shared, and measurable purposes; Lack of appropriate mechanisms for the timely exchange of information"

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Implications & Future Research

Conclusions

- Many preceptors understand IPECP and are implementing it in their specific clinical learning environment, but inconsistently.
- Some still do not understand IPECP or have not been trained in this concept.
- More training and resources to support preceptors are needed.

Future Plans

- Disseminate research study summary guide for preceptors and PDs
- Offer research presentation at preceptor training events and local IPECP symposium
- Develop online training modules for preceptors on IPECP

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Breakout Discussions

How are we engaging in IPECP at RU?

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Questions or comments?!

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