

# Integration of Interprofessional Education Within the Didactic Aspect of Athletic Training Programs

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**Context:** Accreditation competencies have been updated to include interprofessional education (IPE) as a required focus for health care students. While the development and implementation of IPE learning activities have been documented in other professions, there is a dearth of information describing didactic integration of IPE within athletic training program curricula.

**Objective:** To ascertain how IPE is being integrated within the didactic curriculum of athletic training programs.

**Design:** Consensual qualitative approach.

**Setting:** Higher education institutions with accredited professional master's athletic training programs.

**Patients or Other Participants:** Seventeen program faculty (9 women, 8 men; 1 program director, 14 clinical education coordinators, 2 other program faculty) shared their perspectives on integrating IPE.

**Data Collection and Analysis:** Semistructured phone interviews were used. All interviews were digitally recorded and transcribed. Upon achievement of data saturation, a consensual qualitative analysis approach was employed to determine themes. Data trustworthiness was achieved through triangulation, member checking, and use of an external auditor.

**Results:** More than half of the programs represented in this study (11 of 17) report that IPE activities are a required component of their didactic curriculum. Themes for integration of IPE include *delivery methods*, *educational content and objectives*, *assessment*, and *logistics*. Sample IPE activities include case-based discussions, dedicated IPE courses, online modules, and simulation.

**Conclusions:** Integration of IPE into the curriculum requires logistical considerations such as determining which health care disciplines to include, resources available (time, space, personnel), as well as overall institutional support. Program faculty in our study described varied methods to deliver IPE learning activities that meet content goals and objectives. Prior to integrating IPE into an athletic training curriculum, program faculty should determine the method of delivery and what content will work to achieve the goals of relevant stakeholders. Consideration of these components for didactic integration should work to create cohesive and meaningful learning experiences.

**Key Words:** Consensual qualitative, core competencies, curriculum, roles

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# Integration of Interprofessional Education Within the Didactic Aspect of Athletic Training Programs

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## KEY POINTS

- Integration of interprofessional education in athletic training has increased over the past 5 years.
- Interviews with program faculty indicate that interprofessional education is being accomplished through collaborative learning activities including though not limited to case-based scenarios, round table discussions, dedicated courses, and simulation.
- Planning and implementation of interprofessional education learning activities should be done in collaboration with other health care disciplines on campus or in the community and should consider the goals or objectives of the activity, the delivery methods, assessment strategies, and logistical aspects.

## INTRODUCTION

Interprofessional education (IPE) is an emerging component of learning within health care education programs. This educational technique is supported due to its potential to enhance preparation of health care students for collaborative clinical practice as part of a health care team.<sup>1</sup> Students from various health care fields who have participated in IPE have shown increases in knowledge about the roles of other health care professionals, demonstrated greater respect for the contributions of members of the team, understood the need to work collaboratively to improve patient outcomes, and increased their perspectives on ethics.<sup>2,3</sup> These benefits have been confirmed through emphasis on IPE within accreditation standards of many health care professions,<sup>4-6</sup> including those approved by the Commission on Accreditation of Athletic Training Education (CAATE).<sup>7</sup>

While education in an interprofessional manner may present new terminology to athletic trainers, the concept of practicing interprofessionally is not new, as athletic trainers have always worked alongside physicians.<sup>8</sup> Practicing in this interprofessional and collaborative manner necessitates understanding of not only one's own scope of practice but also those of other health care professions.<sup>1,9</sup> Authors and leaders in athletic training have recommended that athletic trainers integrate further into participation as members of these collaborating health care teams.<sup>10-12</sup> When working together, the Interprofessional Education Collaborative (IPEC) core competencies for interprofessional collaboration can be achieved, which include (1) values and ethics, (2) roles and responsibilities, (3) communication, and (4) teamwork.<sup>13</sup> Another guiding framework for health care resides in the Quadruple Aim.<sup>14</sup> This framework encourages the optimization of health care systems, including those that function collaboratively, through goals of reducing the cost of health care while improving health of populations, individual care experiences, and the provider experiences.<sup>14,15</sup> Therefore, integration of IPE may present opportunities to target aspects of the

Quadruple Aim at the student level for hopeful implementation following transition to practice.

In 2015, Breitbach and Richardson<sup>11</sup> aimed to provide athletic training educators with background and model pedagogy related to IPE integration. Examples of pedagogical methods in this work included individual program course content, cross-listing of courses with other health care disciplines, interprofessional seminars or projects, as well as specific concentrations or minors in interprofessional areas. While this information was valuable in establishing a base for IPE in our profession, many of the examples were summaries from IPE activities that excluded athletic training. Since this 2015 publication, the integration of IPE into athletic training programs has been further established.<sup>16</sup> However, foundational information is needed to ascertain how IPE is being integrated within athletic training programs and to what extent these efforts are successful in accomplishing the goals of IPE.

The potential impact of IPE during educational preparation on patient care is in the early stages of being defined, particularly in the field of athletic training. This study aimed to investigate how IPE is being integrated in athletic training programs from a didactic perspective. The exploration of how IPE is being integrated in athletic training programs will allow for increased understanding of the current state of IPE in professional education as well as identify potential challenges associated with implementation. In turn, these results may impact future development of IPE programming and possible definition of best practices in IPE.

## METHODS

### Research Design

This study was qualitative in nature, specifically using a consensual qualitative research (CQR) design.<sup>17,18</sup> The CQR approach is based in the qualitative traditions of grounded theory, phenomenology, and comprehensive process analysis.<sup>17</sup> Using this approach allowed the researchers to explore data and the phenomenon naturally through an inductive process, thus allowing results to be discovered with little bias from the researchers.<sup>17</sup> We chose the CQR approach to explore athletic training educators' experiences integrating IPE within the didactic curriculum of their academic programs. The CQR process requires a research team to work together and discuss opinions on the data to arrive at consensus throughout each stage of the data analysis process.<sup>17</sup> The key component of CQR is the group dynamic of respect, and each individual must feel safe to speak up and give their opinions.<sup>17</sup> The research team consisted of 4 athletic trainers. In addition to equal collaborations on study procedures and interview protocol development, 1 member served as the primary recruiting contact person (D.H.) while a second member (S.F.) conducted all phone interviews to

**Table 1. Program Faculty Demographic Data**

Participant Pseudonym	Age, y	Sex	Years Certified	Faculty Experience, y	Role in Athletic Training Program
Andrew	56	M	35	26	Program Director
Angel	45	F	24	2	CEC
Benjamin	31	M	10	6	CEC
Charlotte	33	F	10	2	CEC
Christine	31	F	11	3	CEC
Fred	45	M	21	17	CEC
Joanne	43	F	22	3	CEC
Leslie	41	F	19	2	CEC
Maria	37	F	15	3	Faculty, nonadministrative
Mark	47	M	23	8	CEC
Maureen	44	F	17	3	Faculty, nonadministrative
Max	32	M	11	3	CEC
Meg	33	F	12	8	CEC
Mimi	33	F	11	6	CEC
Raoul	43	M	21	11	CEC
Roger	31	M	10	3	CEC
Tom	33	M	11	4	CEC

Abbreviations: ATC, athletic trainer certified; CEC, clinical education coordinator; F, female; M, male.

ensure consistency in data collection. Three team members (D.H., S.F., J.K.) conducted the primary data analysis. The fourth member (S.M.) served as an internal auditor in addition to the development and initial analysis roles. An external auditor was recruited to serve solely in this role after data analysis. This approach allowed the research team to provide various perspectives to the data and have subsequent discussion about its meaning, thus resulting in a greater understanding of the data.<sup>18</sup>

### Participants

In spring of 2018, the clinical education coordinators (CECs) for the 107 identified CAATE-accredited professional master's athletic training programs were invited to participate in this study. In the event the invited CEC felt another program faculty member would better be able to speak to the integration of IPE in their program, the invitation was passed to that faculty member. Regardless of program faculty member role, inclusion criteria established that all participants must have been employed in their current faculty role for at least 12 months before participation and that the program was currently accredited and in good standing with the CAATE.

The CQR process recommends using 8 to 15 participants to include in a study using 1 interview.<sup>17,18</sup> A total of 17 program faculty who met the inclusion criteria responded to the request for participation and were included in our study. Demographic information of the program faculty can be found in Table 1. All program faculty provided consent to participate via e-mail and again verbally prior to each individual interview. The study was approved by the university institutional review board as exempt research.

### Instrumentation

A semistructured interview guide was developed by the research team and was dichotomous in nature (Table 2). The initial question related to whether IPE was being integrated within the athletic training program or not. Based

on response, participants were tracked toward 1 branch of interview questions aimed to ascertain how IPE was being integrated into the program or to the alternative branch aimed to ascertain why IPE was not being integrated. Additional questions determined demographic information related to program faculty as well as IPE resources available at the associated institutions. To assist in content validation after interview script development, 2 athletic training educators

**Table 2. Interview Questions**

1. Are you currently integrating interprofessional education (IPE) within the didactic aspect of the athletic training program?
2. Please describe how you are currently integrating IPE within the athletic training program.
3. What other health care professions are on your campus?
4. What other health care professions are in your community?
5. Why do you value IPE as part of the curriculum?
6. What are your primary goals for the current IPE plan?
7. How did you begin the interprofessional interactions with other entities on your campus or in your community to get the process started?
8. In what ways do you try to get students to connect their didactic IPE experience to their clinical education experience?
9. What challenges did you face when getting IPE off the ground in your program?
10. What challenges do you currently face in integrating IPE in your academic program?
11. Do you have strategies to overcome these challenges?
12. Please describe any future plans or goals you may have to enhance IPE within your program in the future.
13. Are there things that you would like to do in regard to IPE that you have not yet been able to implement?



who had experience as CECs, but did not meet the inclusion criteria of the study, reviewed the interview guide and provided feedback and suggestions. Changes were made per their suggestions, and the process was repeated until consensus was reached regarding the interview guide as appropriate to the research questions. Before data collection, the researcher conducting the interviews engaged in 2 pilot interviews to test the order of the questions, gain experience, and increase confidence in conducting the phone interviews. After pilot interviews were conducted and reviewed, alterations were made to the interview guide, specifically reordering of questions and wording or grammatical revisions. Data from these pilot interviews were not included in the analysis of data. In addition to the qualitative data, demographic data about the participants and the affiliated athletic training programs were collected via a Qualtrics (Provo, UT) online survey. The demographic survey was developed by the research team.

### Procedures

One research team member (D.H.) contacted all potential participants via e-mail and requested program faculty respond via e-mail if they were interested in participating and met the inclusion criteria. Once program faculty responded, they were sent a link to a demographic survey and a request to schedule a 30- to 45-minute phone interview with the designated research team interviewer (S.F.). Due to the geographic locations of the participants, phone interviews were used to allow for the greatest amount of participation. Once a phone interview was scheduled, program faculty were assigned a pseudonym to protect their identity, and their demographic data were also assigned the same pseudonym. Each phone interview was audio recorded for accuracy, and informed consent was gained over the phone and audio recorded.

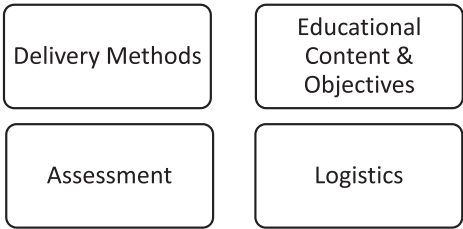
After verbal consent to participate in the recorded interview, program faculty were provided the definition of IPE according to the World Health Organization (2010), “[IPE] occurs when [students of] 2 or more professions learn about, from, and with each other to enable effective collaboration and improve health outcomes.”<sup>9(p13)</sup> After hearing the definition of IPE, the program faculty were asked whether or not they currently integrate IPE in their program, and their response dictated which set of interview questions they were asked, how they integrate IPE or why IPE has not been integrated.

Upon completion of each interview, audio files were transcribed verbatim by a research assistant. Any identifying information including proper names and places were removed to protect the identity of the participant. After transcription, the program faculty were sent their transcripts for member checking and allowed 1 week to review the transcript for accuracy. Data collection continued until data saturation was achieved.

### Data Analysis and Trustworthiness Measures

The CQR process relies on consensus throughout the data analysis process. For our study, consensus in data analysis began with each research team member independently reading the same 3 transcripts and taking notes on recurrent topics that could be used as potential codes.<sup>17</sup> Once the transcripts

**Figure 1. Themes for integration of interprofessional education.**



underwent an initial read through by each member of the research team, the entire team met to discuss their findings, reach a consensus on the identified topics, and ultimately develop a codebook for use in further analysis. After consensus was reached, the research team independently coded 1 more transcript with the established codebook. The full research team then met again to discuss the results and make modifications to the codebook as necessary. With the revised codebook, 3 members of the research team (D.H., S.F., J.K.) coded 4 more transcripts and compared the subsequent results to ensure code alignment. No further modifications were made to the codebook at that time. With the finalized codebook, 1 researcher (D.H.) coded the remaining 9 transcripts. One member of the research team (S.M.) served as the internal auditor who ensured consensus judgments were in line with the data.

The inclusion of multiple researchers in the CQR process ensures constant triangulation and peer discussion. This researcher debriefing aimed to diminish bias by using consensus and discussion between members of the research team. Finally, the external auditor, who did not have firsthand knowledge of the data or research design process, was sent the final themes and a sampling of quotations to support those ideas to confirm the alignment of themes and quotes.

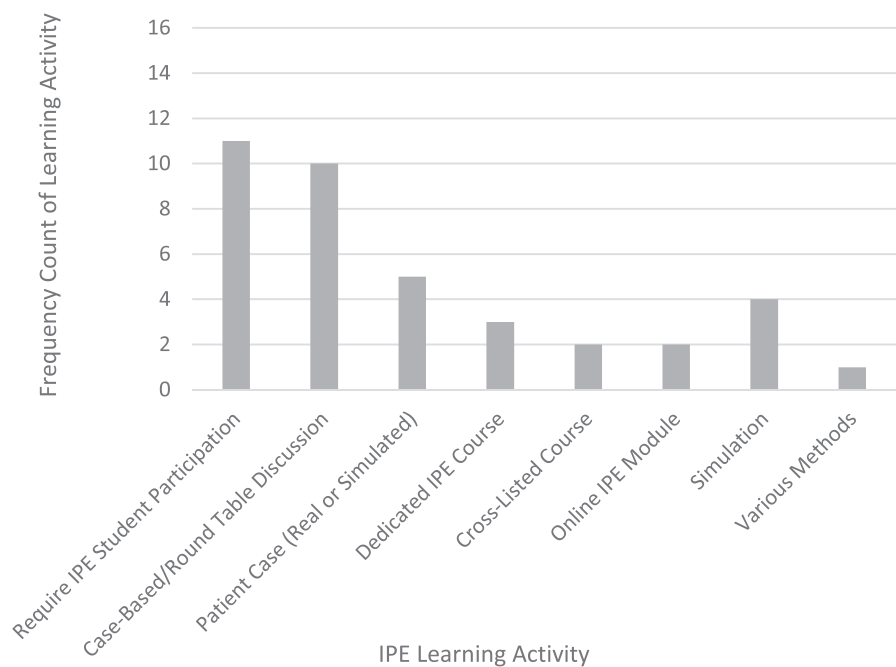
### RESULTS

Qualitative analysis revealed 4 themes related to how athletic training program faculty are integrating IPE into didactic education: (1) delivery methods, (2) educational content and objectives, (3) assessment, and (4) logistics (Figure 1). As related to the overall structure of IPE within the athletic training programs and at the institutional level, a majority of program faculty (11 out of 17) indicated IPE is a required component for students within the didactic portion of the program. Further delineation of the types of IPE activities are provided in Figure 2. Less than half of program faculty (5 out of 17) identified that a functioning center or program for IPE with a dedicated director or coordinator is available on campus, while a majority (10 out of 17) of participants identified an IPE committee on campus to assist in developing and implementing IPE initiatives. Table 3 provides an overview of descriptive data relative to participant employment settings.

#### Delivery Methods

Program faculty described the delivery methods used to integrate IPE into didactic aspects of the program. These methods varied from orientation activities or online modules,

Figure 2. Frequency count of interprofessional education requirements and activities. Abbreviation: IPE, interprofessional education.



to use as part of applied scenarios in case-based activities such as simulation. Regarding online modules, Andrew stated:

*We do an online module, which is about an hour, and then we have an in-person 2-hour workshop where they are at tables with the other disciplines and there is a little didactic part to it, but it is primarily a case-based presentation where they're discussing how each of the professions would fit into the care of the patient, the imaginary patient.*

In relation to applied scenarios, Mimi stated:

*We do 3 sessions where we've developed a case study for them, and then they work through that case study to talk about how each perspective would treat the patient and how they would work together to come up with a treatment plan, and then we have a handful of questions about interprofessional experiences and how one profession helps with the other and that kind of stuff.*

Table 3. Institutional Characteristics of Participant Employment Settings

Participant Pseudonym	Carnegie Classification <sup>a</sup>	Institution Type	Professional Master's Program, y	IPE Director or Coordinator on Campus	IPE Committee on Campus
Andrew	M1	Public	4	N	Y
Angel	R2	Private	4	N	N
Benjamin	R1	Public	2	N	N
Charlotte	M1	Private	4	N	N
Christine	R1	Private	4	N	Y
Fred	R2	Private	3	N	Y
Joanne	R2	Private	2	Y	Y
Leslie	M2	Private	1	N	N
Maria	R1	Public	6	N	In proposal phase
Mark	R2	Private	10	Y	Y
Maureen	M3	Public	3	Y	Y
Max	Baccalaureate Colleges—Arts and Sciences	Private	4	N	N
Meg	R2	Private	4	N	Y
Mimi	R2	Public	14	N	N
Raoul	R1	Private	4	Y	Y
Roger	R3	Private	2	Y	Y
Tom	M2	Private	2	N	Y

Abbreviations: ATP, athletic training program; HS, Health Sciences; IPE, interprofessional education; N, no; Y, yes.

<sup>a</sup> Carnegie Classification: R1, Doctoral Universities—Very High Research Activity; R2, Doctoral Universities—High Research Activity; R3, Doctoral/Professional Universities; M1, Master's Colleges and Universities—Larger Programs; M2, Master's Colleges and Universities—Medium Programs; M3, Master's Colleges and Universities—Smaller Programs.

Furthermore, some program faculty illustrated examples of cross-listed courses with other health care disciplines as well as full integration of IPE across the athletic training curriculum. Raoul indicated:

*We have, I guess I would call it a parallel curriculum that happens in the College of Health and Rehab Sciences, where the [IPE] curriculum has its own syllabus and specific objectives and outcomes and things. It's been a component of students' coursework, so it's been embedded in one of the courses in each of the semesters in the program, essentially, that they complete the [IPE] curriculum that's happening in each semester of the program.*

## Educational Content and Objectives

Closely associated with delivery methods, but defined within its own theme in this study, is that of content related to IPE. Within this theme, program faculty identified learning goals and objectives as well as specific topics and content included in the various events and activities used to deliver IPE content. Such goals included an overview of what IPE is and is not, roles and responsibilities, teamwork, and communication. For example, Christine stated:

*. . . prior to the module, we teach everyone the CUS acronym, which stands for, "I am concerned about the patient. I am uncomfortable with the current state of the patient. I believe the safety of the patient is at risk." It's not only knowing each other's roles and responsibilities; it's getting them [students] used to being able to speak up and not just letting, more often times, not just letting the future physician be the ringleader of it all.*

Participants also described incorporating the IPEC core competencies as goals for IPE integration. Maria indicated, "Each one [each workshop] has different IPEC core competencies that are addressed and different objectives, but they are typically doing some type of activity and discussion."

Other program faculty identified goals related to navigation of the overarching health care system and patient-centered care. Mark, for example, explained:

*In one of the IPE classes I teach, it's clinical decision making. Actually, it's applied clinical decision making, really. I have a group of 23 students. . . they are divided into 4 teams. Just last week, they did a standardized patient interview.*

Maria described the incorporation of an online activity to help familiarize students with available health care resources for patients and health care providers:

*The students, typically they have some prework they have to do. They will have some reading that they might do, modules on the Institute for Healthcare Improvement Web site. There are free modules on there. I think they do a patient centeredness one, and another one is the upstream thinking and thinking prevention.*

## Assessment

Data analysis also identified assessment approaches for IPE activities and objectives. Program faculty described using assessment for adapting the IPE events, evaluating learning, and allowing students to reflect on the experience. Tom stated:

*Prior to the scenario, we have them do an IPE questionnaire about if they're ready for IPE or if they know what IPE is and if they know each other's professions. After, they take that same questionnaire so we can compare before and after just for data collection purposes for the program.*

Andrew described how the assessment of their IPE offering has led to adjustments in the activity itself:

*The feedback from how we did it last year or the last 2 years, getting a standardized patient, that's going to make it way better I believe. The case, the first time we had a case, it was too complicated. We were trying to tie everything, too many different variables, not even variables, there was too much. It was too detailed; it didn't need to be as detailed. This time around, it is way less detailed.*

Program faculty emphasized that assessment is an ongoing process that adapts and changes each time an IPE activity is offered. Measures of assessment included pre-event and post-event surveys or interviews related to logistics, perceptions of the IPE activity, or both; reflection assignments; debriefs; and questionnaires aimed to attain levels of knowledge, application of IPE content, or both. For example, Maria described the type of assessment that members of the IPE organizing committee are conducting at her institution:

*There is a group that's doing kind of a pre/post and some qualitative interviews for research more based on the poverty piece of it, and then we will also have a pre/post on the IPE objectives that we have.*

Some program faculty indicated specific athletic training program level assessment in addition to that of the overarching IPE activity. Raoul described the nature of their IPE assessment:

*One of our large program goals is to recognize the role of athletic trainers as health care providers within the larger context of a changing health care system through measuring how students demonstrate a collaborative approach to care through various assessments throughout the program. One assessment is by preceptors in their clinical experiences and the debrief, which students are practicing collaboratively with intra- and interprofessionally, then through alumni surveys, identifying graduates who describe an ability to work effectively and collaborate with other health care providers.*

## Logistics

During the interviews, program faculty discussed several logistical considerations that must be addressed during IPE integration in the didactic setting. One aspect program faculty commented on was the consideration for whether to require IPE activities for students or to make it optional. Raoul, for example, described how participation requirements of IPE could evolve over time:

*I think early on, too, you want, as we start to develop these opportunities, these targeted interprofessional opportunities at our clinical sites. It's really hard to envision. We are never going to get all 500 students who are enrolled across all these programs to be able to have this experience. We got to start with something and let it grow from there. It's hard, I think, for people to wrap their heads around the fact that it's actually okay. We are looking for opportunities to be able to create, but it's not required of every single student to have*



*that specific experience. We are just looking to build on something, and we got to start somewhere. There is always that, I think, tug of war between you start at the top and say this is what everyone is going to do, or you start at the bottom and say, see if we can get, next year, if we can get 5 students at this site to work together and collaboratively on 1 patient case. Let's start there.*

Other considerations related to how often the IPE activities would be offered and what other health care disciplines would be included were discussed. For example, Andrew described how timing and disciplines of inclusion have changed:

*We moved it from a 1-time workshop to a 2-time workshop, and meeting face to face twice instead of once. This is the second year we are doing that. We didn't have simulated patients last year. The faculty just did one of the simulated patients. This year, we have been collaborating with our theater department actually to help recruit simulated patients.*

The availability of resources such as space, interprofessional groups or students for attendance, facilitators, and general organization or activity planning were also identified by participants as important for consideration. Joanne described the level of detail that is needed to successfully implement their IPE activity:

*We have 14 different health care professions. We actually have an afternoon to where the students are divided up into groups. They start out with a keynote speaker, and that's about an hour, and then for the other 3 hours, they have 3 different rotations they go through, and they stay within your groups, and their groups are intentionally split to where there are multiple students from different health care professions together. . . making sure there is a student at least from the groups that are in there represented. They have to introduce themselves, tell what their profession is, and they have to work through the case study as far as what care they would provide for that particular patient, and they report back. Each group reports back to the actual larger group.*

## DISCUSSION

Our study aimed to investigate didactic integration of IPE in athletic training programs. Methods described by program faculty in this study support the idea that the use of IPE learning activities has increased over the past 5 years. Although exact delivery methods for IPE in athletic training programs have not previously been reported, it is theorized that an expansion in the types of activities being used to accomplish IPE integration matches what is seen in other health care professions.

For example, authors of publications have previously described the processes and successes of grand rounds approaches to IPE.<sup>3,19,20</sup> Benefits of this type of learning activity include increasing knowledge of one's own roles or responsibilities, as well as those of others during patient care, and improved communication. Program faculty in our study identified specific objectives similar to grand rounds or other IPE workshops. The IPE activities described by participants in this study are similar to those of other works including athletic training students.<sup>2,11</sup> Furthermore, the content of these IPE activities aligns closely with the IPEC core competencies.<sup>21</sup> In fact, 3 of the 4 core competencies were highlighted as goals or objectives and content by participants

in this study; these included roles or responsibilities, interprofessional communication, and teams and teamwork. For example, program faculty in this study described improving student knowledge and participation related to roles and communication as content for learning activities or objectives for student learning. These examples blended with the theme of delivery methods as learning activities described by participants included class sessions, seminars, case-based activities, or all 3 similar to those described by Pole et al.<sup>22</sup> Learning activities such as these may be beneficial due to their ability to reach a large number of participants through 1 activity while targeting content toward specific objectives.<sup>22</sup>

## Resources for IPE Integration

It is apparent from our study that program faculty are seeking outside resources to support their IPE initiatives. For example, 1 method for incorporating IPE collaboration and communication identified by a participant in this study related to the acronym of CUS ("I am concerned. I am uncomfortable. There is a safety issue.") from the Team Strategies and Tools to Enhance Performance and Patient Safety (Team-STEPPS) program from the Agency for Health care Research and Quality.<sup>23</sup> This curriculum is designed to improve collaboration and communication among health care professionals, leading to an ultimate goal of enhanced patient outcomes. While not a novel topic unto itself, the Team-STEPPS approach provides an evidence-based framework from which to educate health care professionals, and the resources are free of charge. It is likely there are other programs besides TeamSTEPPS in which it may be appropriate for health care faculty to seek further education. In this vein, program faculty should continue to seek professional development opportunities to advance their knowledge and application of IPE to sufficiently model these behaviors for students.

## Collaboration for IPE

In addition to the outlined themes, the results of our study provide a view into the health care disciplines that athletic training program faculty are engaging with to accomplish IPE. Participating programs in the described didactic activities included, though may not have been limited to, counseling, social work, nutrition and dietetics, occupational therapy, through to the more traditional collaborators of physician assistants, nursing, and medical students. These findings support survey data indicating athletic trainers perceive that the top 3 professions athletic training students should be educated to work with are physical therapists, emergency medical technicians, and physician assistants.<sup>24</sup> Although each of these 3 disciplines were not explicitly listed by participants in the current qualitative study, the associated learning opportunities involving these disciplines reinforce the recommendation for role delineation and appreciation of responsibilities outlined in previous literature.<sup>8,25</sup> It should also be considered that the school in which an athletic training program is housed may influence IPE collaboration. For example, those programs housed within schools of health, medicine, nursing, or similar likely offer more opportunities for IPE collaboration with other health care disciplines.

## Recommendations for IPE Integration

For program faculty looking to integrate or expand integration of IPE within their didactic curriculum, there are several areas for consideration. Two early areas to evaluate may include (1) who is available for IPE collaboration, and (2) what are the objectives for the IPE collaboration? When beginning IPE, it is important to identify who will be involved to enable learning from, with, and about each other. More specifically, faculty should consider what health care professions or affiliated programs are available to engage in the learning activities. While it may be easy for some to identify these programs within their own academic unit or elsewhere on campus, it is also important to look to the local community or other connections for these opportunities. Once the programs have been identified, it may be helpful to establish who may have vested interest in IPE due to accreditation standards or other particular buy-in needs. Programs with these requirements may be more eager to engage in collaborations that can be recurrent or expanded.

After identification of appropriate people for collaboration in IPE, it is vital to establish the objectives for the collaboration. Considering the IPEC core competencies or an institution-derived strategic plan initiative, such as ethics or patient-centered care, may provide themes for faculty stakeholders to use as guidance, in general for the logistics and process of developing IPE opportunities and how that process should begin small and develop from there.

From an institutional standpoint, there are several areas that can be examined to demonstrate commitment to IPE. The Health Professions Accreditors Collaborative (2019)<sup>26</sup> recommends institutional leaders stimulate IPE by fostering collaboration and relationships both within and, when possible, beyond the institution. Specific recommendations to support IPE include the establishment of resources including logistical support, financial means, curricular planning, and policy establishment. For each of these areas to be successful, dedicated faculty must be in place to develop the IPE learning activities including designation of time, oversight, faculty development, and commendation of faculty effort when successful programs are achieved.<sup>26</sup> In relation to this study, these recommendations were not overly apparent, as only 5 of the 17 program faculty identified a dedicated coordinator for IPE on campus, while 10 of 17 indicated that there was an existing IPE committee. Our findings therefore support research stating that faculty who have institutional support for IPE are more likely to engage in IPE than those attempting more individualized approaches.<sup>27</sup> As athletic training program faculty are considering establishing or expanding their IPE integration, consideration of these recommendations may be beneficial.

## Understanding of IPE

In addition to the identified themes of our study, it is important to note IPE is still not fully understood by all program faculty in athletic training. For example, during the interview process, several participants described learning activities that did not match the IPE process of 2 or more professions learning from, with, and about each other. One participant described a class activity where a guest lecturer from another health care discipline delivered content related

to his or her profession. Another example depicted how students from several health care professions took an anatomy class together. While these classroom descriptions may provide some learning benefits such as introduction to other professions roles and understanding of the overarching health care system, they are not inherently IPE, as the students are not actively engaged in learning from, with, and about each other and their respective professions. These findings are not surprising, given that Breitbart et al<sup>16</sup> noted that a majority of athletic training programs are not incorporating IPE initiatives into the curriculum. Many factors may contribute to the lack of IPE integration such as a dearth of knowledge of IPE, lack of affiliated programs at similar levels or within similar academic units, and historical factors at the institution.<sup>16</sup>

## LIMITATIONS AND FUTURE DIRECTIONS

There are limitations to this work. It is assumed that all program faculty were honest and accurate in their descriptions of the IPE activities occurring within their affiliated programs. Our study was conducted as an individual interview during 1 semester. Therefore, it is likely that we obtained a single view of their current perceptions that may change during subsequent semesters and IPE offerings. As the sampling method for this study included only those athletic training programs accredited at the professional postbaccalaureate level, it is possible these findings may not be generalizable to all current CAATE-accredited programs or programs of other health care professions.

Furthermore, our work targeted the didactic aspect of IPE integration, and more work is needed to capture this evolving area in health care education as well as to describe the clinical education applications of IPE concepts learned during didactic activities as well as how IPE is being used to improve patient outcomes by athletic trainers will be beneficial outcomes of future investigations. Future research may consider further description of the logistics of creating IPE learning activities; such literature might address the how, why, who, when, and other organizational factors in creating these collaboration educational opportunities that may lead to the establishment of best practices. Further evaluation of assessment of IPE activities is warranted, as many learning activities are being planned, integrated, and described in the literature as related to the perceptions of participants, faculty, or both. However, there is limited information available related to specific assessment of learning outcomes or application of learning to clinical practice.<sup>28,29</sup> Additionally, literature related to the assessment of IPE learning activities and the impact on patient outcomes is limited in quality, and conclusions cannot be drawn linking IPE to quality patient care.<sup>28</sup> Such assessments would be valuable toward establishing achievable patient outcomes of IPE as well as presenting best practices for IPE.

## CONCLUSIONS

The results of our study provide insight as to how athletic training program faculty are integrating IPE into didactic aspects of curricula. Specifically, participants in this study confirmed a variety of delivery methods and types of educational content are used to engage students in IPE. The selected methods for delivery, content determination, objectives, assessment, and logistical considerations are novel



findings in the field of athletic training. Health care program faculty should appreciate that there is not one acceptable method or activity that should be used for integration of IPE. This flexibility allows programs the autonomy to build an IPE curriculum that best suits their needs and fits with the additional health care stakeholders at their institution. The results of this study may assist other program faculty in identifying appropriate and feasible methods for accomplishing successful IPE activities at their own institution.

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