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ORIGINAL RESEARCH

The Preparation and Development of Preceptors in Professional Graduate Athletic Training Programs

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Context: As professional athletic training programs transition to the graduate level, administrators will need to prepare preceptors to teach advanced learners. Currently, preceptor development is variable among programs and ideal content has yet to be identified. Exploring the development of preceptors teaching graduate learners can lead to an understanding of effective preceptorships.

Objective: To explore graduate professional athletic training program administrators' (ie, program directors', clinical education coordinators') experiences preparing and implementing preceptor development.

Design: Consensual qualitative research.

Setting: Individual phone interviews.

Patients or Other Participants: Eighteen program administrators (11 women, 7 men; 5.92 $\pm$ 4.19 years of experience; 17 clinical education coordinators, 1 program director). Participants were recruited and interviewed until data saturation was achieved.

Main Outcome Measure(s): Interviews were conducted using a semistructured interview guide, and were recorded and transcribed verbatim. Data were analyzed by a 4-person research team and coded into themes and categories based on a consensus process. Credibility was established by using multiple researchers, an external auditor, and member checks.

Results: Participants reported the delivery of preceptor development occurs formally (eg, in person, online) and informally (eg, phone calls, e-mail). The content typically included programmatic policies, expectations of preceptors, clinical teaching methods, and new clinical skills that had been added to the curriculum. Adaptations to content were made depending on several factors, including experience level of preceptors, years precepting with a specific program, and geographical location of the program. The process of determining content involved obtaining feedback from program stakeholders when planning future preceptor development.

Conclusions: Complex decision making occurs during planning of preceptor development. Preceptor development is modified based on programmatic needs, stakeholder feedback, and the evolution of professional education. Future research should explore the challenges associated with developing preceptors, and which aspects of preceptor development are effective at facilitating student learning and readiness for clinical practice.

Key Words: Clinical education, preceptorship, clinical teaching, experiential education

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The Preparation and Development of Preceptors in Professional Graduate Athletic Training Programs

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KEY POINTS

- Complex decision-making occurs when planning the delivery and content of preceptor development. Considerations include the years a preceptor has served as clinical teacher for a program, expectations of the program, stakeholder feedback, and other sources of evidence.
- Preceptor development content is modified based on programmatic needs, stakeholder feedback, and the evolution of professional education.
- As accreditation and education requirements evolve, program administrators should consider preceptor development, which addresses new knowledge or skills that have been recently added to the curriculum.

INTRODUCTION

Clinical education is a critical aspect in the preparation of health care providers.[1] During clinical education, students apply knowledge, skills, and abilities gained when providing patient care under supervision of a licensed professional.[2,3] Authors from various health care professions cite preceptorships as the model for clinical education in health care education.[4–7] Preceptors provide supervision and clinical education to help bridge the gap between educational theory and clinical practice.[7] In addition to clinical education, preceptors facilitate socialization of students into the athletic training profession.[7–9] During this socialization students learn the attitudes and behaviors of the health care culture, which cultivates excitement and commitment to the profession.[4,10] Preceptors also mentor athletic training students, which results in a relationship that has a substantial impact on students' socialization to the athletic training profession.[10–12] Furthermore, this mentorship and socialization helps students learn and accept the responsibilities of an athletic trainer (AT) and subsequently influences their career decisions after graduation.[13]

Preceptors provide clinical instruction and greatly influence athletic training students' professional preparation. Published literature suggests there are characteristics, behaviors, and skills that influence a preceptor's effectiveness.[3,8,9,14–16] The skills and behaviors that have been shown to influence preceptors' effectiveness include those in communication, interpersonal behaviors, management, and problem solving.[15] The methods of measuring preceptor effectiveness, however, have not been well defined. A preceptor's success in meeting the goals and objectives of clinical education may also depend on more innate characteristics such as patience, enthusiasm for the profession, self-confidence, and adaptability.[15,16] The characteristics, behaviors, and professional attributes of an effective preceptor are thought to be very similar to those of a developed leader.[15] Furthermore, preceptors' effectiveness is influenced by their understanding of the educational program's goals and objectives.[5] In order to effectively teach and evaluate students, preceptors must model the previously mentioned characteristics, skills, and behaviors. Therefore, when not properly developed, preceptors could be set up to fail at meeting these important expectations.[4]

Several health care professions, including physical therapy,[4] respiratory therapy,[4] nursing,[5] and pharmacy,[6] have developed preceptor training models for their clinical education and residency programs. Presently, no standardized mode of developing preceptors exists in athletic training. Athletic training programs are to provide preceptors with planned and ongoing education designed to promote a constructive learning environment for students.[17] This lack of standardization allows each program the freedom to develop preceptors based on the athletic training program's goals and objectives as well as their own needs.

Although research has revealed the characteristics, behaviors, and skills that help to improve a preceptor's success in meeting the objectives of clinical education, a gap in the literature exists as to how preceptors are being developed to ensure they exhibit such characteristics, behaviors, and skills.[3,8,9,14–16] To address this gap, there is a need to explore the current practices athletic training programs use to develop their preceptors. Therefore, the purpose of this study is to understand how athletic training administrators (eg, program directors, clinical education coordinators) for graduate professional athletic training programs prepare and implement their preceptor development programs. The secondary purpose was to explore which, if any, characteristics, behaviors, and skills are targeted within preceptor development delivery. This study was conducted with administrators for graduate professional athletic training programs. Therefore, comparisons cannot be drawn between preceptor development practices for graduate and undergraduate professional programs.

METHODS

Design

This study was grounded on a qualitative paradigm using a consensual qualitative research (CQR) design. The CQR approach has been previously established in athletic training literature.[18–21] Hill et al described CQR as a "rigorous method that allows several researchers to examine data and come to a consensus about their meaning,"[22(p204)] thus reducing researcher bias. Consensual qualitative research allows researchers to look for commonalities in participants' experiences and discuss these commonalities as a team before reaching a consensus on the data. By using a team of researchers and auditors, CQR helps to limit researcher bias so that the participants' experiences are represented as accurately as possible. Institutional review board approval was obtained before initiating this study and written informed consent was obtained before interviewing each participant.

Table 1. Participant Demographics

Participant Pseudonym	Sex	Administrative Title	Position Load	Years of Experience Developing Preceptors
Alice	Female	CCE	Full-time, non–tenure-line faculty	2
Barry	Male	CCE	Full-time, non–tenure-line faculty	10
Carol	Female	CCE	Full-time, clinical faculty	3
David	Male	CCE	Full-time, clinical faculty	1
Emily	Female	CCE	Full-time, clinical faculty	2
Emma	Female	CCE	Full-time, tenure-line faculty	2
Estelle	Female	CCE	Full-time, tenure-line faculty	5
Gary	Male	CCE	Full-time, tenure-line faculty	3
Joey	Male	CCE	Full-time, tenure-line faculty	8
Judy	Female	CCE	Full-time, tenure-line faculty	16
Julie	Female	CCE	Full-time, tenure-line faculty	4
Kathy	Female	CCE	Full-time, non–tenure-line faculty	5
Mona	Female	CCE	Full-time, non–tenure-line faculty	6
Monica	Female	CCE	Full-time, clinical faculty	0
Parker	Male	CCE	Full-time, clinical faculty	5
Richard	Male	CCE	Full-time, tenure-line faculty	12
Russell	Male	CCE	Full-time, non–tenure-line faculty	6
Susan	Female	Program Director	Full-time, tenure-line faculty	10

Abbreviation: CCE, Coordinator of Clinical Education.

Participants

We recruited program administrators who were primarily responsible for developing preceptors for graduate professional athletic training programs. Graduate professional programs were chosen to best align the findings with professional degree transition. To meet inclusion criteria, participants must have been the individual primarily responsible for preceptor development for a graduate professional athletic training program, and the program's accreditation status with the Commission on Accreditation of Athletic Training Education (CAATE) must have been active and in good standing at the time of data collection. In the event an individual was not primarily responsible for preceptor development or was new to the role and had not led or overseen preceptor development, the individual was excluded. Hill et al[23] recommend a sample size between 8 and 15 participants for qualitative studies to reach data saturation. Eighteen program administrators (11 women, 7 men; 17 clinical education coordinators, 1 program director; years of preceptor development experience = 5.92 ± 4.19) participated in this study. The clinical education coordinator was responsible for the development and delivery of preceptor development for 94% of the programs that participated, but because of the inclusion of 1 program director responsible for the delivery of preceptor development, participants will be referred to as either participants or program administrators throughout this manuscript. Individual participant demographics are presented in Table 1. Table 2 outlines the program and institutional information provided by each participant. After 14 interviews had been completed, the research team determined data saturation had been reached, as participants were reporting redundant information when responding to each question. Data collection continued, however, as interviews had previously been scheduled and researchers felt these data would add to the overall understanding of the topic. Continuing to collect additional responses, however, did not change data saturation.

Instrumentation

To confirm inclusion criteria, obtain written consent, and help researchers fully understand any demographic factors that could affect how preceptor development is designed, demographic information was collected from each participant before each interview via an electronic questionnaire using Qualtrics (www.qualtrics.com). This questionnaire included demographic questions related to the participants (eg, age, administrative title, position load, years of experience in their current role) as well as questions related to the program or institution (ie, geographic location, number of preceptors, and number of years the professional athletic training program had been at the graduate level). Each interview was conducted by the principal investigator (J.L.R.) using a semistructured interview guide (Table 3).[22] Before institutional review board approval, the demographic questionnaire and interview guide were reviewed for understanding, content, and clarity by 3 ATs who are considered experts in clinical education and qualitative methods. These individuals were independent from the research study, thus reducing researcher bias during the development of the instruments. Slight (ie, wording, grammatical) modifications were made throughout each instrument upon review of the feedback provided during this process. The demographic questionnaire and interview guide were then piloted with 2 individuals who were primarily responsible for preceptor development in their professional athletic training program at the undergraduate level. Based on feedback during pilot testing, slight wording modifications were made to the questions to improve clarity. Each pilot interview lasted approximately 60 minutes.

Procedures

Before recruitment (August 2016), all graduate professional athletic training programs were identified using the CAATE Web site. We narrowed these down to include only those programs who were listed as active and in good standing (N = 46). We then searched each institution's Web site to identify

Table 2. Program and Institution Information

Participant Pseudonym	Institution's Carnegie Classification	Institution's Geographical Location[a]	Distance to Urban Area, Miles (km)	No. of Years ATP at Graduate Level	No. of Preceptors	Preceptor Profession (Other than Athletic Trainer)
Alice	R1	Urban	NA	4.00	63	PA, PT
Barry	R2	Urban	NA	13.00	30	Physician, PT
Carol	R2	Rural	40 (64)	5.00	50	PA, PT
David	R2	Urban	NA	16.00	50	Physician, PT
Emily	R2	Urban	NA	0.33	26	NP, physician, PT, RD
Emma	B-Diverse	Rural	20 (32)	3.00	25	EMT, OT, physician, PT, RN
Estelle	R2	Urban	NA	2.00	30	Physician, PT
Gary	R2	Rural	52 (84)	3.00	25	Physician, PT, PTA
Joey	D/PU	Rural	30 (48)	1.00	28	Physician, PT
Judy	M1	Rural	18 (29)	14.00	65	PA, physician, PT
Julie	R1	Urban	NA	2.00	30	PT
Kathy	R2	Urban	NA	2.00	26	PT
Mona	R2	Rural	50 (80)	11.00	41	Physician, PT
Monica	D/PU	Urban	NA	3.00	35	NP, PA, physician, PT
Parker	R2	Rural	25 (40)	2.00	60	Physician, PT
Richard	R1	Urban	NA	2.00	26	Physician
Russell	R2	Urban	NA	8.00	30	OT, PA, physician, PT
Susan	R2	Urban	NA	4.00	24	NP, PA, physician, PT, RN

Abbreviations: ATP, athletic training program; B-Diverse, baccalaureate college—diverse fields; D/PU, doctoral/professional university; EMT, emergency medical technician; M1, master's college and university—larger programs; NA, not applicable; NP, nurse practitioner; OT, occupational therapist; PA, physician assistant; PT, physical therapist; PTA, physical therapy assistant; R1, doctoral university—very high research activity; R2, doctoral university—high research activity; RD, registered dietitian; RN, registered nurse.

[a] Urban locations have population $\geq$50 000; rural, populations $<$50 000.

Table 3. Interview Protocol

1. Please describe how preceptor development occurs at your university.
2. Please describe how the content is determined.
3. Discuss any personnel that are involved in making decisions regarding preceptor development.
4. Discuss instances, if any, that content for preceptor development has changed and why these changes may have occurred (or did not occur).
5. Please discuss how preceptor development is delivered.
6. Who delivers the content for preceptor development?
7. Discuss instances, if any, the delivery for preceptor development has changed and why these changes occurred (or did not occur).
8. How often does preceptor development occur and the rationale to this choice?
9. Please discuss any differences in frequency of preceptor development that may occur between preceptors.
10. Please discuss incentives, if any, that preceptors may receive for participating in the development program.
11. Please describe anything in your preceptor development that you would like to change.
12. Please discuss any specific challenges either the program or you personally have encountered while conducting preceptor development at your institution.
13. Please share any additional information about preceptor development at your institution that we have not addressed.

the program director and clinical education coordinator for each program. We used census sampling and began contacting the entire population of program directors and clinical education coordinators via e-mail to each of the identified graduate professional programs. For census sampling, all program administrators were sent a recruitment e-mail detailing the purpose of the study and asked that the individual primarily responsible for preceptor development respond to the primary investigator (J.L.R.) if interested in participating. When an administrator responded with interest to participate in the study, the principal investigator sent the online demographic questionnaire, which was used to confirm inclusion criteria, obtain consent, and gather demographic information. To protect the identity of the participants, pseudonyms were assigned and were used for the remainder of the study. Phone interviews were conducted using the semi-structured interview guide (Table 3). All interviews were audio recorded and then transcribed verbatim by a professional transcription company. To verify the accuracy of the transcription process, the principal investigator conducted member checks by e-mailing each participant a copy of the interview transcript and asking the participant to read through and verify the accuracy of the transcript.

Data Analysis and Trustworthiness

Data analysis was guided by the CQR processes as described by Hill et al.[22,23] Data were analyzed by a 4-person research team, which consisted of the principal investigator and 3 other researchers (J.M.C., D.A.H., S.E.W.) with varying levels of experience with qualitative research (Table 4). One member of the research team also served as the internal auditor,[18] who verified interpretations made by the research team. The research team independently read 3 of the same randomly

Table 4. Roles and Experience of Research Team

	Researcher 1	Researcher 2	Researcher 3	Researcher 4	Researcher 5
Study role	Principal investigator, research team member	Research team member	Research team member, internal auditor	Research team member	External auditor
Qualitative experience	Novice qualitative researcher new to the CQR approach	Experienced qualitative researcher with previous experience in CQR	Experienced qualitative researcher with previous experience in CQR	Experienced qualitative researcher with previous experience in CQR	Experienced qualitative researcher with an extensive background in CQR
Clinical education experience	Moderately familiar with the concepts of clinical education	Research experience on the topic of clinical education	Research experience on the topic of clinical education	Research experience on the topic of clinical education	Research experience on the topic of clinical education

Abbreviation: CQR, consensual qualitative research.

Table 5. Preceptor Development Theme Frequency Counts (n = 18)

Theme[a]	Frequency	No. of Participants
Delivery	Typical	10
Content	Typical	13
Process	Typical	9

[a] Each theme had a frequency of typical.

selected transcripts and identified common themes and emerging patterns in the data. The research team then compared these themes until a consensus was reached, and a codebook was created. To assess the accuracy of this codebook, the research team independently recoded 1 transcript and coded 2 new additional transcripts and then met to discuss the codebook. After discussion and modifications, a final consensus codebook was created. Using the consensus codebook, the principal investigator coded all remaining transcripts. Once all transcripts were coded, a random selection of the coded transcripts were sent to the research team for verification and cross-analysis to determine if they had been coded correctly. The internal auditor provided continual appraisal during each stage of the data analysis to ensure reliability. Finally, an external auditor (C.E.W.B.), with experience in qualitative research and a thorough understanding of CQR, reviewed coded transcripts and confirmed final themes and categories. The frequency counts for each theme were divided into 4 categories: (1) general, (2) typical, (3) variant, and (4) rare.[22] For our study, a theme was considered general if it applied to all or all but 1 participant, typical if it applied to 9 or more participants, variant if it applied to fewer than 9 participants, or rare if the theme related to 1 or 2 participants. The frequency counts for the categories associated with the themes are presented in Table 5.

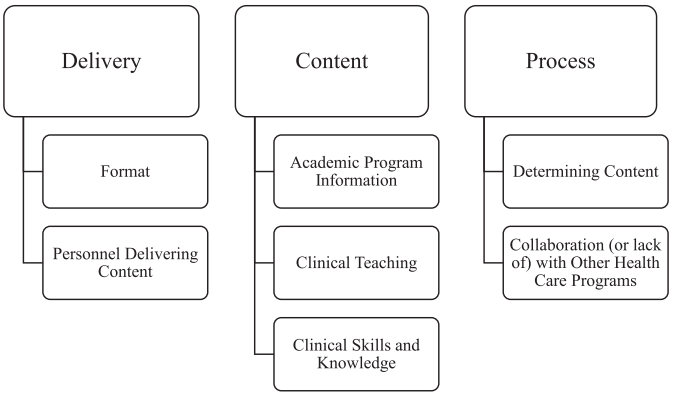
Investigator triangulation, internal and external audits, and narrative-accuracy member checks established trustworthiness of the findings.[19] For investigator triangulation, the CQR approach allowed the research team to consider multiple perspectives and an internal auditor to reach a consensus on the data.[18] Second, we used an external auditor as a means to establish rigor and trustworthiness of the data. Finally, narrative-accuracy member checks were conducted to ensure clarity of the data and allow participants to review their transcripts.

RESULTS

From the demographic questionnaire we found that preceptor development occurred annually for 61% (n = 11) of participants. Participants also reported frequencies of twice per year (n = 3), every 3 years (n = 1), every other year (n = 1), 2 or 3 times per year (n = 1), and ongoing (ie, no specific frequency but a continual process for individual preceptors; n = 1). Table 6 provides an overview of the frequency of preceptor development.

Three themes emerged from the data that described preceptor development for participants: (1) delivery, (2) content, and (3) process. These themes along with the corresponding subthemes are displayed in the Figure.

Figure. Emergent themes and subthemes.



Delivery

During interviews, participants discussed the delivery of preceptor development. This theme was further reduced into 2 subthemes: (1) format and (2) personnel delivering content. Participants described both formal (eg, online meetings and face-to-face workshops) and informal (eg, phone calls, e-mail, site visits, and video conferencing) formats in which they conduct preceptor development. Furthermore, participants discussed the individuals who deliver preceptor development content, such as program directors, clinical education coordinators, or other health care providers and content experts.

Format. Participants discussed using both formal and informal methods to deliver preceptor development opportunities. Online delivery was used primarily in a formal manner because of preceptors being spread out geographically and scheduling difficulties. Several participants discussed adapting preceptor development to accommodate for preceptors not in close proximity to the program. Russell stated,

> *We are talking about clinical sites that are abroad; to get them [preceptors] on campus is extremely difficult and cost prohibitive. So, because we have sites that are no longer close to us, doing things online is much easier.*

Participants also discussed meeting with groups of preceptors face-to-face for formal preceptor development content. When describing how he has conducted preceptor development, Parker indicated that he has used in-person workshops with groups of preceptors and how these meetings have been helpful. He stated,

> *Twice a year we have a local preceptor meeting and we get together at a local restaurant in town and discuss how the semester is going. Those discussions have been very productive because it gives preceptors a chance to ask questions and to give us feedback. . . . It helps us build our relationship with them.*

Additionally, participants noted preceptor development was delivered in person to individual preceptors if they were unable to attend a group workshop. Participants reported traveling to clinical sites to meet individually with preceptors. Emma provided an example of why this might happen:

> *If I have a preceptor who cannot attend because they have a vacation planned [during the group workshop] I will reach out to them and get to their site to meet one-on-one.*

Table 6. Frequency of Preceptor Development

Participant Pseudonym	Frequency
Alice	Annually
Barry	Annually
Carol	Annually
David	Annually
Emily	Every other year
Emma	Biannually
Estelle	2–3 times per year
Gary	Biannually
Joey	Annually
Judy	Biannually
Julie	Annually
Kathy	Annually
Mona	Annually
Monica	Annually
Parker	Every 3 years
Richard	Ongoing[a]
Russell	Annually
Susan	Annually

[a] Ongoing refers to no specific frequency but a continual process for individual preceptors.

Participants also met with individual preceptors face-to-face if they were new clinicians (ie, newly credentialed ATs). A preceptor's lack of experience serving as a preceptor and autonomous clinical experience beyond the preceptor's professional education created a situation in which participants felt they needed to connect with the preceptor in person. Susan reported meeting with preceptors who are new clinicians face-to-face throughout the year to help mentor them. She shared,

> *We try to foster some development throughout the year particularly with our younger preceptors. We try to meet with them on a regular basis and check in with them about the [clinical teaching] strategies they are using.*

Other participants also reported meeting face-to-face with preceptors who are new clinicians. Mona said:

> *The skills they [new clinicians] need are very different than others [experienced clinicians]. We just hired a new faculty member who comes to us with 6 years of clinical experience. So, from a clinical side, he probably does not need as many tools. . . . For the first-year preceptors [new clinicians], many times those first-year clinicians, they are trying to figure out how to function in their own clinical environment as well.*

Participants also reported informal methods of delivering preceptor development, which provided an opportunity for preceptors to ask specific questions in a one-on-one environment. Technology such as video conferencing has made it easier for participants to connect with preceptors informally. Parker has embraced using technology like FaceTime to deliver preceptor development content. He commented,

> *We communicate with people so quickly now. We used to do a lot of visiting in person, but we are finding it is not necessary when they [preceptors] can FaceTime me, and I am sitting right here in my office talking to them.*

Other participants reported using phone calls, e-mail, and site visits to check in with preceptors individually throughout the

year. For example, Susan discussed using these methods to see how off-campus preceptors are doing:

> *For off-campus preceptors, I usually make quick phone calls or send e-mails to them. Just checking in and seeing if there is anything we need to help them with in terms of their development as a preceptor. When I am out on site visits, we will have those conversations as well.*

Overall, participants described delivering preceptor development in ways that were adapted to meet the needs of individual preceptors. Typically, participants used a mix of different methods to ensure all preceptors received the training and development they needed to help them meet the objectives of clinical education.

Personnel Delivering Content. In addition to various delivery mechanisms, participants described using several different individuals to deliver preceptor development content. Whether the material is presented in one large workshop or smaller meetings over the course of the year, participants reported that program directors typically deliver programmatic and accreditation updates, and clinical education coordinators deliver content specific to clinical education. Alice described how personnel led the conversation at various points during an in-person workshop. She stated:

> *At our on-site training, [the program director] focused heavily on program updates and [the clinical education coordinator] focused on the clinical education piece. Then [the program director] would talk about some of the CAATE standards related to the program and [the clinical education coordinator] would talk about the [standards] related to clinical education. So, it is what we are comfortable with and what aligns more closely with our job and responsibilities.*

Additionally, participants like Mona used other health care providers such as program faculty and physicians to offer content aimed at advancing preceptors' clinical knowledge. Mona stated, "Emergency care content was given by the faculty member who teaches that course for us."

Overall, participants described a multimodal approach to delivering preceptor development that was adapted based on preceptors' availability and amount of professional experience. Furthermore, the personnel delivering preceptor development content varied among program directors, clinical education coordinators, and other health care providers such as program faculty and physicians depending on the expertise of the speaker.

Content

Content, another theme that emerged, refers to the information used to advance preceptors' understanding of the academic program, their duties as a preceptor, and their skills as health care providers. This theme consisted of 3 subthemes: (1) academic program information (eg, policies and procedures, expectations of preceptors, the curriculum), (2) clinical teaching (eg, how to evaluate students, giving feedback), and (3) clinical skills and knowledge.

Academic Program Information. Policies and procedures, expectations of preceptors and students, and program curriculum were aspects of the academic program information included in preceptor development. Participants felt this content would help current and new preceptors develop an understanding of the various expectations and policies/procedures of the program. Those participants who described this information included it for all preceptors to ensure they had consistent information. Kathy described the type of academic program information she included in preceptor development,

> *For example, how many hours do students need to get? How our evaluations are completed. What is the preceptor's role in our program; what is expected of them? Just how the whole system works.*

Other participants, however, reported they only included this information for new preceptors or those who had not served in that role for many years. In particular, Alice mentioned she built in material about the curriculum for new preceptors so they could begin to understand the dynamics of the program. She said,

> *Initially, for every preceptor that joins with us, I meet with them in person and give them a background as to what our program is about and all of the ins and outs of the academic side and clinical education.*

Clinical Teaching. Preceptor development also included information related to clinical teaching, such as evaluating students' clinical skills and providing feedback to students. Participants included information about evaluation forms and scoring students' clinical skills specifically to those preceptors who had not previously served as a clinical teacher for their institution. Parker said,

> *There is a whole section of information about the evaluation forms we use at the beginning, middle, and end of the semester. Preceptors also get links to all of those forms, so they can review them.*

Joey desired uniformity between how preceptors assessed students' abilities. As he described the content included in the initial meeting for new preceptors, Joey mentioned a need for coherence between preceptors' evaluations of students. He shared:

> *They need to understand our forms and paperwork, so they know how to evaluate the students. We also discussed quite a bit about consistency [in evaluations]. ... We want consistent scoring across all our preceptors. That is a difficult task. We have preceptors we would consider hard graders. Across the board, some are stricter than others. Then we have some who are easy graders. They do not score quite as hard as we would like them to. So, we have those discussions in our initial training to help [preceptors] understand what kind of consistency we are looking for in student evaluations.*

Others described clinical teaching content for all preceptors that focused on helping them identify teachable moments and providing students constructive advice to help improve their clinical skills. Barry explained a time when he met with a preceptor individually and the primary focus of the discussion was giving feedback:

> *An issue came up where students were reporting that a specific preceptor was not providing any feedback [on their skills]. The student was getting frustrated because they would ask for input and the preceptor would tell them, "Everything is fine." So, I needed to talk to the preceptor because we want*

preceptors to show students how they can improve. You need to do more than give them a passing grade and say, "Oh, you are checked off," and go. That is not what we want. So, I needed to remediate and gave the preceptor some literature on useful feedback strategies because it is something that students crave.

Overall, clinical teaching content included in preceptor development focused on educating preceptors on the need and how to consistently evaluate students as well as helping them provide constructive feedback to students.

Clinical Skills and Knowledge. The final subtheme that emerged refers to providing content aimed at updating preceptors' clinical skills and knowledge. This content focused on educating preceptors on evolving educational and clinical practice standards, so students received consistent information during their didactic courses and clinical experiences. Monica discussed why she included content related to sports equipment removal in a recent preceptor development workshop. She stated:

The most recent thing that comes to mind was the equipment removal process. The way I and most of our preceptors learned were you remove a face mask from a helmeted football player and [spine board] them. This has changed recently, and we want to make sure our preceptors are not giving outdated information to the students.

Participants also described their plans to include new clinical skills in preceptor development based on upcoming updates to accreditation standards. Richard commented, "We include anything that has to do with new practice standards. So, we are looking ahead, and we are able to offer specialized training such as IV [intravenous] administration."

Regardless of the delivery mechanisms, participants reported the content included focused on developing clinical teachers who are informed of their role, understand what is expected of them and how to work with students effectively, and possess the most up-to-date knowledge related to their clinical practice.

Process

The final theme that emerged was the process of developing preceptors, which refers to the decision-making process of creating preceptor development. This theme consists of the following subthemes: (1) determining content and (2) collaboration (or lack thereof) with other health care programs.

Determining Content. Participants reported consulting with stakeholders such as athletic training faculty, program administrators, and preceptors as well as using preceptor and student feedback and relevant literature when determining the content of preceptor development. Judy discussed preceptor development topics with program faculty and administrative personnel: "When I do have an idea [about preceptor development], or someone else has an idea, we discuss it as a group." Other participants described input they sought from preceptors because they wanted to meet the preceptors' perceived learning needs. Gary said, "We meet with our clinical staff here and get feedback regarding things they might like [in preceptor development] or things they want to emphasize better, and we try to incorporate that content into our plans for the next year." By seeking this input, participants wanted to ensure that preceptors were satisfied with the content included in preceptor development and that they were invested in the learning process. Russell used information from meetings with students to inform his decisions about preceptor development. He stated,

Our students meet with me to discuss how the clinical placement went. ... We will talk about the preceptor and how the preceptor did. ... The students will also complete a midsemester evaluation of the preceptor, which helps.

Using literature from other health care professions was also a strategy for determining content. Participants like Barry described their appreciation of publications from a variety of health care professions because of the length of time those professions have existed. Barry stated,

I use nursing articles because nursing has used preceptors for a long time. So, I read the literature and look at best practices for nursing programs and try to adapt to [athletic training].

Collaboration (or Lack Thereof) with Other Health Care Programs. Only 33% (n = 6) of participants reported collaborating with other health care programs or professionals regarding preceptor development. Those who did work with other health care programs mentioned the value of having a support system. Russell discussed meeting with administrators of other health care programs and asking their input. He stated:

Sometimes [the health care program administrators] will get together and I might ask about our upcoming preceptor development workshop. I will ask, "Here is a list of our agenda items. Is there anything we are missing?" Sometimes we identify things I missed or things I should add. So, it is collaborative that way, and it is outside our profession, which makes it helpful.

For various reasons, such as a lack of other health care programs, a lack of relationships with other health care programs, or a lack of time to collaborate, participants reported they did not collaborate with other health care programs. David shared, "We do not have any other health care programs at our institution, so that is not possible." Alice mentioned she has not collaborated in this way because the athletic training program has not had this type of relationship with other health care programs, but she hopes to collaborate in the future. She shared:

We joined the College of Nursing and Health Innovation, and we are slowly tapping into the potential. One of the things we are considering is talking with [other health care programs in the college] about preceptor development. So, it is not something we are currently doing but considering.

Kathy described how a lack of time to engage inhibits collaboration between health care programs. She said,

We have a group of clinical coordinators from other programs on campus who meet. In previous semesters I have been invited, but have not gone, because my classes are taught at the same time as the meetings.

These workload constraints limited the amount of time administrators had to build collaborative relationships with other health care programs.

Although complex, generally input from multiple stakeholders was used when making decisions about preceptor development. Furthermore, participants collaborated with other health care programs irregularly regarding preceptor development.

DISCUSSION

Recent and ongoing reform in athletic training education has created a renewed need to examine preceptor development. As professional programs transition from an undergraduate to a graduate level, program administrators will face a new demographic of student, and clinical education may look much different (eg, clinical immersion) than it has at the undergraduate level. The findings identified here highlight common preceptor development practices, including content, format, and delivery mechanisms, among graduate professional athletic training programs. The results of this study provide insight into how administrators for graduate professional athletic training programs could develop preceptors for their programs, as well as insight into the types of content that can be used to develop desired behaviors and traits within preceptors.

Delivery

We identified several common factors related to the delivery of preceptor development, including the format and the personnel delivering the content. Both formal and informal modes were used to provide preceptor development opportunities. Similar to our findings, many health care professions, such as nursing, have continued to use formal in-person workshops as a primary mechanism to deliver preceptor development.[24] Others, such as pharmacy, are beginning to use other modalities such as formal online modules to present preceptor development while accommodating the needs of the preceptor.[25] Ricchetti and Jun,[26] for example, listed several online seminars and self-study modules aimed to improve the clinical teaching skills of pharmacy preceptors. Moreover, a few athletic training program administrators have also turned to online, asynchronous learning to deliver preceptor development.[27]

Whether it concerned a preceptor's inability to attend a formal in-person workshop because of scheduling conflicts or geographical differences, administrators reported several ways in which they have adapted the delivery of preceptor development. Although a few administrators noted how they had used technology (eg, video conferencing, recorded presentations, and e-mail) to better deliver both formal and informal preceptor development opportunities, more comprehensive and widespread use of technology may alleviate the need to adapt preceptor development for these reasons. Administrators in our study noted using recorded presentations to deliver content online to those preceptors who are unable to attend a formal in-person workshop. Web-based preceptor development has been reported as a cost-efficient method to develop preceptors.[28] The use of video conferencing to conduct informal virtual meetings and online learning platforms such as Blackboard or Moodle could be used to provide preceptor development opportunities that preceptors may be more likely to complete.[28]

Additionally, some professional organizations have also begun to form online professional development opportunities for preceptors to supplement program administrators' efforts. Examples of this exist in pharmacy's Teaching Certificate for Pharmacists with a track specifically designed on teaching in experiential learning environments, offered by the American Society of Health-System Pharmacists[29]; athletic training's Master Preceptor modules published by the National Athletic Trainers' Association[30]; and the Preceptor Certification Portfolio from the American Academy for Preceptor Advancement.[31] However, although these initiatives show an organizational effort to improve the clinical teaching skills of preceptors, there has yet to be an examination into whether these initiatives are effective at training clinical teachers who are equipped to educate students.

Some administrators also noted they connected with preceptors informally on an individual basis if they were newly credentialed ATs to foster mentorship. Other authors[32–35] have noted the positive influence mentorship has played on a preceptor's socialization as well as their career satisfaction, confidence, and productivity. Collectively, this information suggests those who are new to clinical practice may benefit from additional training and mentorship to fulfill the expectations of a preceptor.

Content

When discussing their experiences with preceptor development, administrators described the content they have included in these opportunities, which consisted of information about the academic program, clinical teaching, and new clinical skills. Although the body of evidence that has examined the content included within preceptor development opportunities is somewhat limited, a few authors have noted this content has focused on improving specific skills associated with clinical teaching.[4,24,27,36,37] For example, the systematic review conducted by Windey et al[24] focused on reviewing interventions that support nursing preceptor development. They reported the content most frequently included in preceptor development was giving and receiving feedback, effective communication, facilitating adult learning, and reviewing roles and responsibilities of the preceptor, as well as development and evaluation of clinical judgment. These findings are similar to the results of our study in some areas, such as academic programmatic information and clinical teaching skills.

Preceptors, however, appear to prefer topics related to clinical teaching, such as giving feedback, motivating students, and teaching decision making within preceptor development opportunities. Pharmacy preceptors appear to prefer subjects including strategies to engage and motivate students, updates on teaching techniques, and effectively questioning students.[36] Similarly, athletic training preceptors have reported they prefer guidance on developing students' critical thinking skills and teaching clinical decision making within preceptor development.[37] Administrators in our study also noted the inclusion of new clinical skills and knowledge in preceptor development. As educational requirements of a professional program have evolved, the clinical skills being taught within these programs has also changed, which has prompted administrators to include these skills within preceptor development. The literature is limited in this content area; however, there may be an additional need to continue this practice as the curricular content standards progress. Regardless of the delivery mechanisms, the content included within

preceptor development influences preceptors' confidence and comfort teaching students within clinical education.[38] Further examining the learning needs of preceptors may lead to more engaged preceptors who are better prepared to meet their responsibilities as facilitators of student learning during clinical experiences.

Process

Administrators of our study discussed consulting with and receiving feedback from programmatic stakeholders as well as using information from relevant literature when making decisions about preceptor development. Other authors have reported a similar process when making decisions about preceptor development programming. For example, Gueorguieva et al[39] developed a preceptor development program for an academic health sciences center after consulting with clinical education experts and reviewing the literature as well as considering a framework for preceptorships that had been established by a professional organization. Other administrators have reported using an advisory board consisting of program administrators, faculty members, and practicing clinicians to inform decisions regarding a pharmacy preceptor development program.[40]

Collaboration with other health care programs appears to have occurred irregularly by athletic training administrators because of the lack of other programs or the lack of relationships with other health care programs at the institution. A collaborative approach to developing preceptors has been previously shown to decrease costs and improve the quality of preceptor development.[28] Sharing resources among athletic training programs near each other or other health care programs at the institution may provide an opportunity to reduce workload strain, program administrators in other studies have reported.[41] Furthermore, more collaboration may create an interprofessional learning environment where preceptors from various health care professions can learn with and from each other.

LIMITATIONS AND FUTURE RESEARCH

We recognize several inherent limitations to this study. The participants were limited to administrators for graduate professional athletic training programs. Not having included administrators for undergraduate programs, we are unable to draw comparisons between preceptor development practices for graduate and undergraduate professional programs. Additionally, our goal was to recruit a diverse sample of participants with a wide range of professional experience. Although each participant met inclusion criteria, we recognize a considerable number of participants (27%, n = 5) reported 2 years or less of experience with preceptor development. Although not specifically examined, this factor may have influenced the findings of this study. Furthermore, the nature of qualitative research design limits our ability to analyze findings across demographic characteristics of participants. Therefore, although we collected demographic information from our participants to ensure a diverse sample, we were unable to compare results between these various demographic characteristics. An additional limitation could be that the sample of participants included only those serving as administrators for professional programs. Not having interviewed preceptors for these programs in our study, we are not able to triangulate our findings with the experiences preceptors for these programs have with engaging in preceptor development. It should be noted that this study highlighted common preceptor development practices among graduate professional athletic training programs. Not having measured the outcomes of these practices, we are unable to determine if these findings represent best practices. Future research should explore the challenges associated with developing preceptors and which aspects of preceptor development are effective at facilitating student learning and readiness for clinical practice. Additionally, to better understand the demands placed on program administrators charged with developing preceptors, researchers should more thoroughly investigate how these administrators are evaluated and how faculty load requirements impact their administrative responsibilities.

CONCLUSIONS

The published literature suggests standards and selection criteria to be used by program administrators for preceptors in athletic training.[3,8,9,14,15] This literature, however, is outdated, as not only does it use previous standards regarding clinical education, but it examines athletic training preceptors for undergraduate programs. Our study sought to explore the perceptions and experiences of athletic training administrators in graduate professional athletic training programs in preparing and implementing preceptor development initiatives. Complex decision making occurs when planning the delivery and content of preceptor development. Considerations include the years a preceptor has served as a clinical teacher for a program, expectations of the program, stakeholder feedback, and other sources of evidence. Preceptor content is modified based on programmatic needs, stakeholder input, and the evolution of professional education. As accreditation and educational requirements evolve, program administrators should consider preceptor development content that addresses new knowledge and clinical skills that have been added to the curriculum. Furthermore, collaborating with other administrators when planning preceptor development opportunities may help to improve the overall quality of preceptor development programming.

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