JOURNAL OF ATHLETIC TRAINING EDUCATION AND PRACTICE

www.natajournals.org
ISSN: 3067-1833
DOI: 10.4085/1947-380X-24-061

ORIGINAL RESEARCH

Preceptor Orientation Strategies for Professional Athletic Training Students Before Beginning Clinical Education

Kirk J. Armstrong, EdD, LAT, ATC*; Jordan R. Dawson, MA, LAT, ATC*; Maegan R. Daniels, EdD, LAT, ATC*; Kevin Pham†; Xiomania Payton*
*Department of Health Professions, James Madison University, Harrisonburg, VA; †University Athletics, Coker University, Hartsville, SC

Context: To successfully prepare novice athletic training students (ATSs) for patient care during clinical education, preceptors must orient ATSs to their role as health care providers. Effective orientation is important before beginning clinical education to clearly outline expectations, roles, and responsibilities of the ATS. Despite the importance, orientation is often inconsistent, leaving novice ATSs with unclear expectations and confusion as they begin clinical education.

Objective: To explore how preceptors use orientation to prepare professional ATSs to begin clinical education.

Design: Consensual qualitative research.

Setting: Individual interviews.

Patients or Other Participants: Fourteen preceptors (34 ± 9.6 years old; 11.6 ± 9.7 years of experience; representing the secondary school, collegiate, and hospital practice settings) who supervised at least 1 professional ATS within the last 12 months participated. Interviews were conducted until data saturation occurred.

Main Outcome Measure(s): Data were collected via semistructured interviews, which were recorded and transcribed verbatim. Using a consensual qualitative method, data were independently analyzed by a 3-person team, who independently coded the data and compared ideals until consensus was reached. Credibility was established through multimember triangulation and external review.

Results: Overall, participants emphasized the importance of orientation to establish clear expectations regarding patient care and effective communication. Four themes emerged from the interviews: (1) roles and responsibilities, (2) communication and interpersonal skills, (3) professionalism, and (4) confidence.

Conclusions: Many preceptors fail to adequately use orientation to outline expectations and responsibilities to facilitate student success. By providing effective clinical education orientation, preceptors can establish clear expectations within their setting, cultivate communication and interpersonal skills, and improve professionalism and confidence. Thus, it is imperative to facilitate adequate site-specific orientation for professional ATSs to minimize confusion regarding their roles and responsibilities in providing patient care.

Key Words: Professional socialization, clinical skills, communication, interpersonal skills

Dr Armstrong is currently a professor and Academic Unit Head in the Department of Health Professions at James Madison University. Address correspondence to Kirk J. Armstrong, EdD, LAT, ATC, Department of Health Professions, James Madison University, 235 Martin Luther King Jr. Way, Harrisonburg, VA 22807. armst2kj@jmu.edu.

Full Citation:
Armstrong KJ, Dawson JR, Daniels MR, Pham K, Payton X. Preceptor orientation strategies for professional athletic training students before beginning clinical education. *J Athl Train Educ Pract*. 2025;21(2):115–125.

Preceptor Orientation Strategies for Professional Athletic Training Students Before Beginning Clinical Education

Kirk J. Armstrong, EdD, LAT, ATC; Jordan R. Dawson, MA, LAT, ATC; Maegan R. Daniels, EdD, LAT, ATC; Kevin Pham; Xiomania Payton

KEY POINTS

- Preceptors use the initial orientation and onboarding as a mechanism for outlining the expectations they have for athletic training students in providing patient care and for using clear and effective communication.
- Providing opportunities for the student's autonomy is important during clinical experiences, as this autonomy allows the student to grow as a clinical practitioner, requiring increased critical thinking and clinical problem solving in preparation for clinical practice.
- The development of clinical, communication, and interpersonal skills only begins during orientation. These skills should be reviewed and discussed throughout the entire clinical experience for continued development and refinement.

INTRODUCTION

The importance of clinical education cannot be underestimated in preparing students in health care programs for professional practice.[1] Clinical experiences play an important role in transitioning athletic training students (ATSs) into autonomous practice, as they include direct client or patient care to verify students' abilities to demonstrate the knowledge and skill needed for professional practice.[2] Thus, clinical education prepares students not only for knowing principles of clinical practice but also in integrating this knowledge within patient care.[3] Just as clinical education prepares students for success in clinical practice, proper orientation will assist students in transiting to the clinical learning environment.[4]

To assist ATSs in transitioning from didactic to clinical learning, formal orientation to clinical education is important for disseminating information regarding expectations and policies.[5] Establishing the expectations is important, as this helps reduce anxiety in students but also prepares them for successful learning during the clinical experience.[1,4,6] When the expectations are clearly outlined, students know how to adequately prepare themselves for the experience.[6] These expectations should address not only knowledge expectations but also attitudes and professional behaviors.[4] Additionally, formal orientation sessions are important for developing educational goals, introducing members of the health care team and their roles, and identifying where resources and supplies are located.[7] Developing an effective orientation should not only mitigate stress and anxiety but would also empower students to further strengthen the comradery and morale with their peers and preceptors as well as among all members of the health care team.[8]

Unfortunately, clinical education orientation is often a missed opportunity, consisting of passive transmission of content, quickly leading to information overload.[8] Orientation should be formatted to effectively prepare students for their roles within the clinical setting.[7] When orientation is not provided before beginning clinical education, students often turn to their peers who had previously completed the same clinical experience to answer questions.[6] When not provided essential information during orientation, novice students struggle with integrating information.[4] Currently, no standardized approach to orientation exists within professional athletic training programs for preparing students to begin clinical education. The process each program uses for orienting students to begin clinical education is often inconsistent, leaving ATSs with minimal information and unclear expectations as they begin patient care.[9] Therefore, the purpose of this investigation was to explore how preceptors use orientation to prepare professional ATSs to begin clinical education. The following questions guided this investigation:

1. What orientation strategies (or formal meetings) were used to prepare ATSs for patient care before beginning clinical education?
2. What topics were included in orientation?
3. What goals did preceptors have for mentoring ATSs during clinical education?
4. What challenges did ATSs experience as they transition into clinical education?

METHODS

The framework of this study was phenomenology, which comprises description and understanding of the essence of lived experiences of individuals who have experienced a particular phenomenon.[10] For this study, we used a consensual qualitative research methodology. We used 3 researchers to interpret data. The goal of participant interviews was to understand participants' experiences as preceptors facilitating clinical education orientation for novice ATSs. Institutional review board approval was obtained, and participants provided informed consent before data collection. Interviews were conducted using a semistructured format with an interview script guiding the interviews (Table 1).[10,11]

Participants

Certified athletic trainers serving as preceptors for a professional athletic training program were recruited for this investigation. Inclusion criteria included currently serving as a preceptor or having served as a preceptor within the last 12 months for a Commission on Accreditation of Athletic Training Education (CAATE)-accredited professional athletic training program. To be considered, preceptors must have supervised novice (first-semester or first-year ATSs), yet nearly all also reported all supervising advanced (second-year ATSs) during clinical education. A total of 14 preceptors participated in the study. Participant demographics are presented in Table 2. Demographic information is provided under pseudonyms. Data saturation guided the number of participants.

Table 1. Interview Guide

(1) What is the process of orienting ATSs to your organization or setting?
  (a) Does your organization or setting have a standardized orientation for ATSs?
  (b) If yes, can you describe your formal or informal strategies?
    (i) How does this orientation different for different types of clinical experiences (ie, integrated, immersion)?
    (ii) How does this differ for first-year students compared with second-year students?
    (iii) How do programmatic requirements guide your orientation, onboarding, or both?
  (c) If no, how do students get oriented to your clinical site or setting?
(2) Describe the initial meeting you provide an ATS before beginning patient care?
  (a) What information or resources does the ATS receive (information, policy manual, etc)?
  (b) What is the purpose or what are your goals for this orientation, initial meeting, or both?
(3) What are your expectations for an ATS regarding their:
  (a) Clinical skills?
  (b) Interpersonal skills and communication?
  (c) How do you relay these expectations?
  (d) How do you expect these skills to change throughout the experience?
  (e) What processes are in place to help an ATS overcome any shortcomings?
(4) How do you acclimate ATSs to your setting?
  (a) How do you prepare the ATS to understand their roles within your practice setting?
  (b) How do ATS typically prepare themselves for their role within your practice setting?
(5) What do you consider successful orientation and acclimation within your setting?
  (a) What skill sets must be demonstrated (clinical skills, interpersonal skills, etc)?
  (b) How long does it typically take an ATS to achieve this benchmark?
(6) How do you know when students are ready to assume more responsibilities in patient care?
  (a) What goes into that decision?
(7) What mentorship or guidance do you provide?
  (a) What do you hope ATSs gain from the mentorship you provide?
  (b) How often do you meet to discuss the ATSs goals or progress?
  (c) How satisfied are you with the mentoring you provide ATSs receive?
  (d) What would you change?
(8) What do you see as the biggest challenges for a first semester ATSs beginning clinical education?
(9) What do you see as the biggest challenges for a final semester ATS as they begin to transition to autonomous practice?
(10) Is there something you feel should be implemented in the educational preparation of students to better prepare them for beginning clinical education?
(11) Do you have anything else that you would like to share regarding how your onboard or orient MSAT students to clinical education?

Abbreviations: ATS, athletic training student; MSAT, Master of Science in Athletic Training.

Procedures

Participants were recruited via purposive sampling. A recruitment e-mail was sent to an intentional group of program directors (n = 25) representing each National Athletic Trainers' Association district and various institutional characteristics (eg, varying National Collegiate Athletic Association affiliations, public and private, varying numbers of students enrolled in the professional program). The recruitment e-mail contained information about the study and a link to a demographic survey on the Qualtrics (Qualtrics, LLC) platform. The demographic survey included the desire for a follow-up interview. A researcher contacted each participant to confirm his or her interest and schedule an interview. All interviews were conducted via Zoom (Zoom Video Communications, Inc.). Each interview lasted approximately 35 to 45 minutes. Interviews were recorded and transcribed verbatim. Data collection was complete when saturation occurred, the point where no new information was introduced and the findings from the data converged.[12] Figure 1 represents the study procedures.

Instrumentation

A semistructured interview guide (Table 1) was developed based on the research questions and prior research on clinical education orientation processes.[13] Before data collection, 3 experts in qualitative research methods, clinical education orientation, and clinical education evaluated the interview guide to provide content validity. Pilot interviews were conducted with 2 certified athletic trainers who met the inclusion criteria to check the guide for clarity, timing, comprehension, and content. Minor modifications were made to improve clarity and comprehension.

Data Analyses and Trustworthiness

Data were transcribed, and all personal identifiable information was redacted before coding began. Audio recordings were transcribed using Zoom transcription and then checked for accuracy by a member of the research team (K.P.). Data were analyzed using consensual qualitative review, with data coded for common themes and subthemes.[12] Each of the researchers individually reviewed the first 7 interviews and then met to discuss the codes until consensus was researched. Once the codebook was developed, the researchers coded the remaining interviews. Results were discussed among the research team until consensus occurred and no disagreement was reached. Credibility was established through multimember triangulation. Additionally, an external auditor with

Table 2. Participants

Participant	Gender Identity	Age	Years Certified	Practice Setting	State (District)	Job Title	Years of ATS Supervision
Tom	M	29	8	Outpatient Clinic	IL (11)	Athletic Trainer	3
Cameron	M	38	15	Secondary School	IN (4)	Athletic Trainer	13
Leslie	F	38	16	Secondary School	SC (3)	Performance Health Manager	4
Jerry	M	44	21	Outpatient Clinic	CO (7)	Athletic Trainer	14
Anne	F	25	2	Collegiate	NM (7)	Assistant Athletic Trainer	1
Hank	M	30	5	Secondary School	FL (9)	Athletic Trainer	1
Tammy	F	31	9	Secondary School	IL (11)	Athletic Trainer	4
Donna	F	32	10	Collegiate	CT (2)	Assistant Athletic Trainer	4
Craig	M	26	4	Secondary School	NM (7)	Head Athletic Trainer	4
April	F	38	16	Collegiate	PA (2)	Associate Athletic Trainer	13
Manny	M	31	9	Outpatient Clinic	SC (3)	Performance Health Manager	4
Walter	M	61	39	Collegiate	PA (2)	Associate Athletic Trainer	33
Sam	M	29	7	Secondary School	VA (3)	Athletic Trainer	1
Ron	M	24	2	Collegiate	AZ (7)	Assistant Athletic Trainer	2

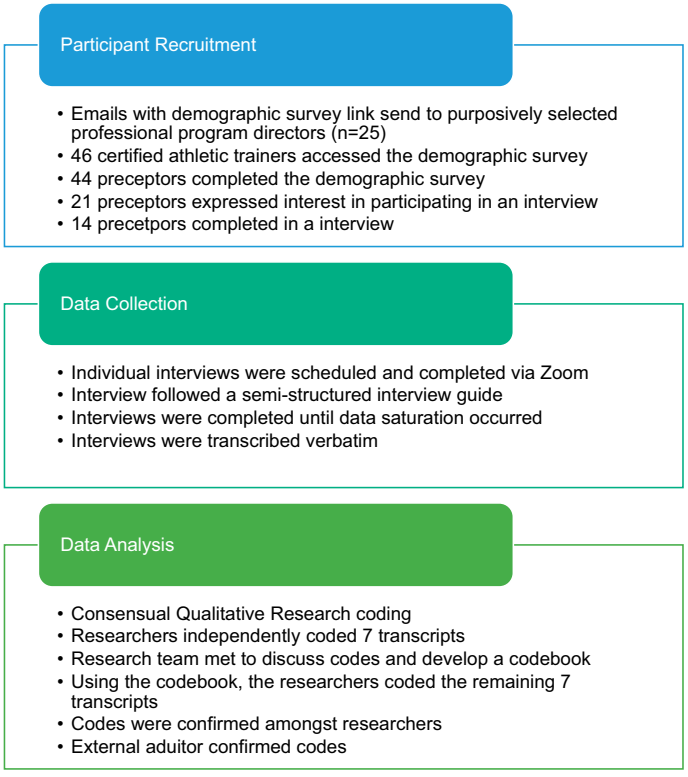
Abbreviation: ATS, athletic training student.

experience in qualitative research evaluated the themes and subthemes. The Consolidated Criteria for Reporting Qualitative Research was used to ensure the design and analyses were as rigorous as other qualitative works.[13]

RESULTS

Overall, 4 categories emerged regarding how preceptors use clinical education orientation to onboard novice ATSs before beginning clinical education: (1) roles and responsibilities during patient care, (2) communication and interpersonal skills, (3) professionalism, and (4) confidence. Roles and responsibilities were divided into 4 subcategories: expectations as an ATS; policies, procedures, and logistics of site; developing autonomy; and building clinical skills. Communication and interpersonal skills were divided into 2 subcategories: verbal and nonverbal communication and building patient rapport. Professionalism was divided into 4 subcategories: empathy, initiative, time management, and leadership. Confidence was divided into 3 subcategories: repetition of clinical skills, hands-on opportunities in patient care, and adaptability. See Figure 2 for representation of data.

Figure 1. Research procedure flow chart.



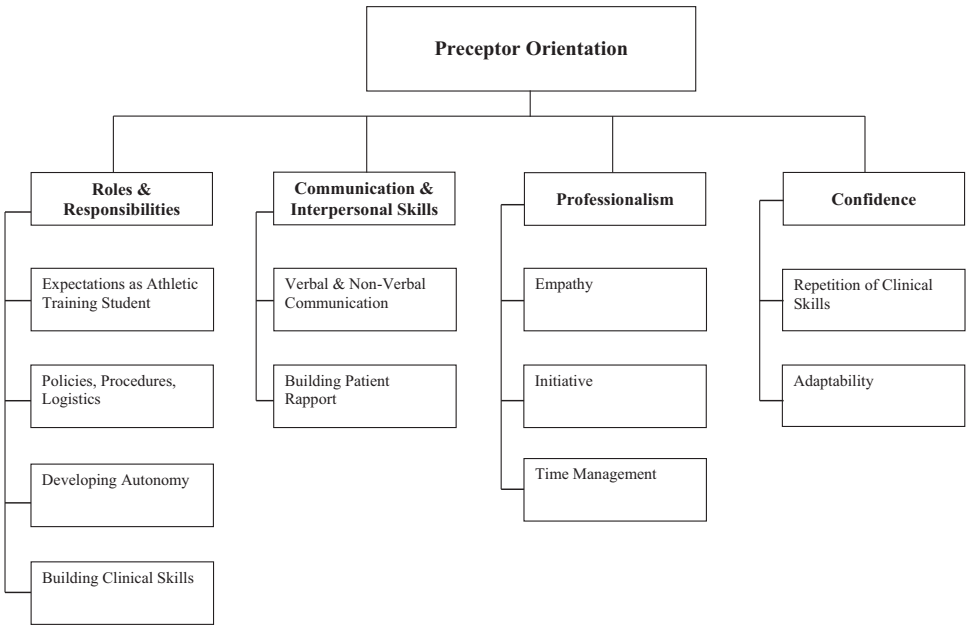
Roles and Responsibilities

Roles and responsibilities included comments regarding how preceptors used initial orientation and onboarding to outline the roles, responsibilities, and duties of the ATSs during patient care experiences at their site. Participant responses were divided into 4 subcategories: expectations of ATSs; policies, procedures, and logistics of site; developing autonomy; and building clinical skills.

Expectations of ATSs. Most participants used initial orientation and onboarding as a mechanism for outlining the expectations they have for ATSs in providing patient care. It is important to note that participants expressed a clear difference in the expectations of ATSs based on their progression within curriculum of the athletic training program (eg, first semester versus fourth semester). Throughout their comments, participants shared consensus that expectations for novice students (first semester or year) emphasized the development of clinical and soft skills (eg, practicing obtaining patient history, beginning clinical examination) and socialization within the athletic training profession (eg, engaging with patients and other staff, setting up clinic or venue for practice). Conversely, participants commonly reported that expectations for second-year students emphasized the application and integration of clinical skills, where the expectations of second-year ATSs were higher.

Related to outlining expectations for novice students, many participants noted that asking questions throughout the clinical experience was crucial to learning. As Jerry stated: "It's really about whether they [novice ATS] can follow directions

Figure 2. Conceptual framework of qualitative data: preceptor orientation.



and rules and learn to ask questions. . . this shows if the [ATS] is engaged. This also shows maturity in the student."

Similarly, Leslie explained how her expectations for novice and advanced students aligned with their progression through the program:

> *My expectations [in the first semester] are just for them to take initiative. That's probably my biggest thing and to go along with what they are learning in their program. So if they have done lower leg [evaluation] in class, then they should definitely try lower leg evaluations in clinic. I don't expect them to do something clinically that they haven't covered in their education yet.*

Mutually sharing expectations of one another (preceptor and ATS) creates continuity between the 2. As April stated:

> *I want to know their expectations for me, and I share my expectations for them. That's the 1 thing that I emphasize. We have an expectations worksheet that our clinical coordinator sends out, and the expectations worksheet basically outlines like what to expect from your preceptor and what your preceptor can expect from you, and it even breaks it down for us to review together.*

Setting clear expectations for novice ATSs is important, the preceptor should be communicating and outlining these expectations during initial orientation.

Policies, Procedures, Logistics of Site. Regardless of their practice setting, most participants reported using orientation to outline key policies, procedures, and logistics of their site. The emphasis of the initial orientation allowed ATSs to become familiar with the site, where equipment and supplies are located, and what will be used most frequently. This orientation also focused on explaining the emergency action plan (EAP) and the role of the ATS during an emergency.

Participants expressed the importance of using orientation to become familiar with the setup of the clinic. During this time, ATSs were able to get an understanding of where equipment and supplies are located, and how the clinic runs. As Donna shared:

> *Typically. . . I will introduce myself, talk a little bit about the sports that I oversee and that they'll most likely encounter as well as a tour of the facilities and different spaces in the building that the student should be familiar with, also dress code. I tend to also kind of go through coaches. So there's different coaches that run practices and run their programs different ways, and I try to make sure that my students are sensitive to that, just like I try to be sensitive to the way that things are run, and we also in that conversation talk about our emergency action and our involvement with public safety and different resources that we use, our health center and our orthopaedic office, and those types of things that we utilize on a pretty regular basis.*

Similarly, reviewing the EAP and role of the ATS during an emergency was also identified as crucial, to ensure ATSs know their roles and responsibilities during an emergency situation. As Anne stated:

> *I spend a bit of time reviewing and discussing the EAP. I think they have to understand the EAP and their role in the EAP. I make sure they [ATSs] know where emergency equipment is and have a general understanding of how the athletic training room operates so they can assist in an emergency situation.*

Participants also highlighted that familiarity in clinic operations can prevent any miscommunication or confusion later during the clinical experience, creating a smooth transition for the ATS to begin providing patient care. As Tom stated:

> *For the initial orientation meeting, I want to get them as familiar as possible with the setting so that they don't have to worry about where everything is or where do I need to go to*

find this. This really establishes a foundation of comfort so they can just kind of go [in patient care] based off what they already know.

For some participants, outlining site-specific policies, procedures, and logistics occurred in 1 day, while others indicated this was ongoing for multiple days or throughout the clinical experience.

Developing Autonomy. Most participants emphasized using orientation as the starting point for discussing opportunities for increased student autonomy during clinical experiences. This autonomy allowed the student to grow as a clinical practitioner, requiring increased critical thinking and clinical problem solving in preparation for autonomous clinical practice.

As a preceptor, it is important to outline expectations for autonomy during the initial orientation, within early days of the clinical experience, or both. Several participants outlined how they scaffolded learning experiences to increase students' opportunities for autonomy. This intentional structuring of patient care encounters supported students in developing their own approach to patient care. As Donna stated:

I've tried to incorporate the idea of scaffolding in our initial meeting. My intent is that the week to couple weeks, depending on how quickly [the student] acclimates to this space, they tend to do more observational type activities, or I do a lot more guiding in the first couple of weeks and then as I feel more comfortable that they know what they're doing. And as they start to feel more comfortable with the athletes, with the people, with the treatments, and the rehabs that we're implementing, then I try to do more individualized work and, as I get more comfortable with their skills, have them take care of something on their own with my supervision. And then, if there's a particular athlete or athletes that they're doing well with and have gotten, you know, good feedback from, I might have them kind of more consistently work with those athletes to give them a little bit more continuity to their care. So that way, they're kind of following 1 athlete and 1 injury or multiple injuries throughout their time to give them a little bit of a sense of that autonomy.

Interestingly, participants did not identify how ongoing discussions of autonomy were facilitated. Participants did indicate that they provide increased opportunities for autonomy and how this autonomy affects the student's development. As Ron shared:

To give up control [to an ATS] sometimes is a little scary, just because I'm nervous myself about the care provided, so how can I trust someone else? But I think, really allowing for some of that autonomy within the [ATSs], especially as they have the educational tools, they have the educational resources, as I make sure that they know that I am there to support them.

Building Clinical Skills. Many participants agreed that discussing expectations of clinical skill development is important during the initial orientation. This discussion included expectations in providing patient care and how feedback is provided when the student is struggling. Participants emphasized that building clinical skills occurs on a continuum and that there will always be more to learn even as a seasoned athletic trainer. Despite this, few participants included building clinical skills as a continuous process within their initial orientation. This is important to note because this conversation during orientation can set the expectation for ATSs' continued improvement and growth in building clinical skills.

Some participants noted not including this in orientation so students were not overwhelmed or scared before beginning patient care. As Cameron stated:

I don't want to crush them [novice ATSs] because they have such a short period to learn. I do my best to not be overbearing and to just be very. . . provide guidance and help and encouragement to continue to improve and build their clinical skills every day they are here.

Similarly, Anne believed that orientation is not the best time to share that building clinical skills is an ongoing and continuous process. As she shared:

At some point, we do have the conversation that you're probably never going to achieve full competency as a student or even as a professional. . . you're still working to improve your clinical skills, and if you think you've achieved them, you probably haven't, and you should try again.

Another aspect of developing clinical skills not discussed during orientation included opportunities for supervised autonomy. Several participants shared how they provide ATSs the opportunity to take a lead role in providing patient care and letting them figure it out. Participants outlined how they scaffold patient care experiences to provide increased autonomy throughout the experience. As Tom commented:

I think going heavier with the supervisions on the front end. . . it's probably the best way. Trial by fire is probably the style that I go by, have the student follow me and everything that I do, and so they can see and get a good picture of how things are moving. And then that way, when they're later into the clinical experience, they can act autonomously, providing care autonomously but still under my supervision.

Though not a part of the initial orientation, it is important for preceptors to let the student know of their expectations for increased responsibility in patient care. The only way for students to be successful with increased levels of autonomy is to ensure clarity in expectations, which should begin during initial orientation and continue throughout the clinical experience.

Communication and Interpersonal Skills

Communication and interpersonal skills highlighted how preceptors use orientation and onboarding to assess ATS needs and enhance their ability to communicate during patient care. However, participants emphasized that discussion mechanisms for improving communication and interpersonal skills do not stop with orientation; these discussions are continued throughout the entire clinical experience. Responses were divided into 2 subcategories: verbal and nonverbal communication and building patient rapport.

Verbal and Nonverbal Communication. Both verbal and nonverbal communication are important topics included in orientation and onboarding of novice ATSs but maintained throughout the clinical experience. However, no participant identified how communication was discussed during orientation nor throughout the clinical experience. Many participants identified specific communication cues (verbal and nonverbal) used by ATSs, not only to articulate their needs from the preceptor but also to communicate differently with patients. Specifically, participants identified several nonverbal cues they have picked up over the years indicating when a student needs guidance. As Leslie shared:

> *Body language is a key indicator of knowing when the student needs some guidance. This could be a variety of things such as their facial gesture or even the way they are moving around. . . when they start to pause and look at me uncomfortably, I know I need to step in and help.*

Another cue signaling that assistance was needed is the tone of the ATS's voice. Several participants noted that students start using filler words or that their voices get lower when they start to get stuck. At other times, the student's statements start sounding like questions rather than definitive statements. As Tammy stated:

> *If they seem to be lost, if they are circling around the same thing, or if they are lost in their evaluation, their statements end less confidently and more in a questioning tone. They are asking as a means of seeking validation.*

An important aspect of communication that nearly every participant discussed was being able to communicate with a patient in a manner they could understand. This aspect of communication was identified as a component of orientation. As health care professionals, complicated medical jargon is used when describing either an injury or intervention plan. Participants shared that the ATS has a responsibility to communicate in a way that the patient will understand and follow. As Manny stated: "It is important for an [ATS] to be able to share information in a way that is digestible for a student-athlete."

Building Patient Rapport. Every participant reported including the importance of building rapport with a patient during initial orientation and onboarding. This included the role of ATSs in providing care for the patient at a time in their career when they are struggling but also providing strategies to create a positive relationship, allowing the patient to be receptive and more comfortable with the ATS as their health care provider. Building rapport included understanding how to interact with patients in a professional manner, being mindful that every patient has unique needs. As Leslie stated:

> *I expect them to be very professional but also create a rapport with the athletes they care for. I want them to be, you know, overall respectful and culturally sensitive to the patient's needs.*

Building rapport often means earning the trust of the patient. Rapport will be built through open and honest communication, where both parties are comfortable with one another. Participants shared that, as rapport continues to be built, the relationship between the student and patient will grow as well. Tammy shared these thoughts: "They [ATSs] have to earn the trust of the students [patients], and the students also have to essentially earn the trust of the [ATS]. This relationship is a 2-way street."

One indicator identified by participants to signal that the ATS has established positive rapport with patients was that patients will begin to actively seek out the ATS to provide care. Participants noted that patients often communicate more with the ATS than they do themselves, and the process of them working together is natural. As Leslie stated:

> *I really find large success in if my athletes are also actively utilizing my students. It means that my students are doing well, and it means that they have created good rapport with the athletes. Success is when you can tell that student-athletes are also actively comfortable.*

Professionalism

The category of professionalism included comments regarding how participants used initial orientation to define key aspects of professionalism and set behavior expectations for ATSs during patient care at their site. Responses were divided into 3 subcategories: empathy, initiative, and time management.

Empathy. Demonstrating empathy is a skill ATSs will continue to refine throughout their careers. Thus, empathy is not just discussed during orientation but a topic that participants reviewed throughout the clinical experience. Being able to listen and understand the patient's needs is important, allowing an ATS to treat the patient holistically. An important aspect of demonstrating empathy was asking questions with a purpose and taking time to process what is being said by the patient. Participants emphasized throughout the clinical experience that ATSs should not ask questions because that is what they were taught to do but ask questions because they care. As Ron shared:

> *I discuss the importance of good communication skills. . . to be able to have empathy to practice active listening is important. I stress not to ask a question because you have to ask a question; ask a question to learn the next piece of information. How does that information then fit into the [patient] puzzle of what's going on?*

Although empathy is a skill that is extremely difficult to teach, participants hope that ongoing conversations throughout the clinical experience will provide pivotal insights or skills in improving empathy through their mentorship. As Walter stated:

> *We're hoping we're preparing them for independent practice, you know, not just in terms of clinical skills but in terms of patient-centered care and how it's important that you have your competent clinician, but it's just as important and those essential skills that are harder to judge the event, like empathy and leadership and your interaction styles and all those other things.*

Initiative. Though initiative is introduced during orientation and onboarding, participants expressed that initiative is another topic brought up multiple times throughout the clinical experience. Ultimately, participants expressed that it is up to ATSs to demonstrate initiative to make the most out of

their learning experience. Participants noted that engaged and focused students were perceived as students that will have a better clinical experience than an ATS less engaged and having to be told what to do.

Participants raved about ATSs that consistently ask questions about the care being provided, a sign of engagement and a strong desire to learn. As Leslie stated:

> *The enthusiasm and organization that [students] have coming in to the experience will tell you a lot. You know, if they take initiative to ask questions and learn what I am doing, as opposed to just going through the motions or having to be asked or told what to do, those that take initiative are the students that really get a lot out of the experience.*

Asking questions is often perceived as a sign of professional growth within a student. Multiple participants expressed that, once a student starts asking to do more in patient care, it shows that he or she is ready to learn new skills. As Craig stated:

> *When they start taking initiative. . . they start asking, "Hey, I'd like to run this rehab by you," or, "Hey, I was wondering if I could do this is today with the patient," they show they can be trusted to start doing more.*

Participants also explained that taking initiative is crucial for the workflow with an athletic training clinic. Having a student that can identify what needs to be done without having to be told what is do is beneficial for the overall facility operations. As April stated:

> *I expect a lot, and most of what I expect is about taking initiatives. We discuss this at the beginning, and I provide examples about what that looks like in the clinical setting. So I usually tell my students, I'm like, "You will go into the [athletic training] facility, and there will be students standing around, and then there will be patients just standing there waiting for one of the faculty members." And I tell my students, "My expectation is that that will never be the case when we are in the room, so I never want to see you standing around. There's always something to do, and if you're not sure what it is, then you should be coming up to make myself or another faculty member and asking, 'What is it that I could work on right now,' or, 'What can I help with?'"*

Time Management. Time management was identified as an important component of professionalism discussed during orientation. Interestingly, participants only noted revisiting time management when a student struggled with maintaining balance. Participants stated that, as graduate students, ATSs balance competing priorities, such as classes, clinical education requirements, outside employment, but also time needed for themselves. Despite time management being a crucial skill, participants acknowledged that ATSs are doing their best to balance their responsibilities. As Tammy shared:

> *I think that their work-life balance is affected because they're older, and because it's a master's program, they want to be able to provide for themselves, so going to school, family occasions, personal relationships. . . They're expected to process and learn information as master students, but it's a lot of information. So we see some struggle with time management and balance, often overwhelming themselves.*

A topic often not discussed during orientation was outside employment. As graduate students, ATSs often have fewer opportunities for scholarships and financial aid beyond student loans. For many ATSs, the financial needs to pay rent and meet basic food needs encroach on academic requirements. Multiple participants shared how the need for outside employment meant reduced availability for clinical education. As April stated:

> *I also see that a lot of these situations the students are put in that have been out of their control, such as financial, you know, that they have to work a job or sometimes 2 jobs in order to afford housing, afford tuition. . . and so there's a lot more to balance their time management right compared to a student 10 years ago.*

Unfortunately, most participants noted that time management was the aspect of professionalism that ATSs struggled to master as a student. Although many participants stated this as a challenge, none were able provide a solution for how to support students to overcome their struggles. As Walter shared:

> *I mean, look, the biggest challenge for students today is time management. They have so much going on, it's tough for them to figure out to balance it all. I don't have the good answer, but I'm hoping someone can come up with that answer.*

Confidence

Confidence included comments highlighting how preceptors used initial orientation and onboarding to define steps and strategies ATSs can use to strengthen their confidence. Responses were divided into 2 subcategories: repetition of skills and adaptability.

Repetition of Skills. To build confidence, many participants stressed the importance of skill repetition during orientation and throughout the clinical experience. For mastery of clinical skills to occur, students must practice that skill multiple times. Clinical skills are mastered over time, and some skills require significantly more time to practice before improvements are achieved; however, building clinical skills through repetition also builds confidence. As Tom stated:

> *Repeated demonstration of skills results [in] success over time, baby steps, getting incrementally better, and tasks being accomplished correctly. Through these steps, I see students' confidence also [increases] day by day.*

An important part of building confidence included pushing students beyond their comfort zone. While not discussed during initial orientation, this was discussed as students progressed through the clinical experience. Many participants stated that students often continue to repeat clinical skills because they are comfortable to the students; however, for growth to occur, students need to be pushed to practice skills they are not comfortable with. More exposure to the repetition of unfamiliar skills will result in increased confidence. As Hank stated:

> *And then when I know that it's time to say, look. . . you got to get comfortable with this. You're going to see tons of feet injuries through your career, and if you're going to be successful with these patients. You have to practice.*

Adaptability. During orientation, the importance of adaptability is stressed but reemphasized throughout the duration of the clinical experience. Participants expressed their sincere interest in being effective clinical teachers; however, they recognized that it is not possible to prepare ATSs for every patient scenario they may encounter during clinical practice. Many participants even shared their own shortcomings in clinical practice, identifying patient care scenarios they have not encountered, underscoring the importance of being open and adaptable. As Sam commented:

> *I think it's just the willingness to be open to change. There has to be the willingness to continue to learn and grow throughout the experience. This is so important to learn as a student because adaptability will be needed all through your [athletic training] career.*

An aspect of adaptability that is stressed throughout the clinical experience is that ATSs need to be open to learning new skills or doing specific clinical skills differently than they were instructed in class. Participants noted that ATSs often struggle with translating the knowledge learned in the classroom or laboratory into clinical practice with patients. At certain times, the knowledge translates well, but more frequently, it will not. Participants expressed the need to reiterate that different ways to perform clinical skills exist and that this is part of the learning process. Novice students need to be open to learning new methods of performing skills because every patient is unique. As Anne shared:

> *The ability to adapt and work well under pressure is a must. You must adapt to unknown circumstances to provide the best patient care you can. Not having all the knowledge is fine, but having enough information to figure out a way is essential.*

DISCUSSION

Orientation plays an important role in preparing students for the transition from didactic to clinical education; however, little evidence exists to document how professional athletic training programs are facilitating orientation to prepare novice students for clinical education. Preceptors are important stakeholders, as these individuals mentor and support novice students during this transition period. As our participants shared, more guidance is needed on how to provide ongoing orientation of students as they matriculate through clinical education.

Roles and Responsibilities

High-quality orientation can maximize a health care provider's performance.[8] The importance of clearly outlining expectations for novice students is important during initial orientation.[1,4,6] For many participants, this included facilitating a discussion with the ATS to explain their expectations but also understand what the student expects from the preceptor during patient care. This conversation is vital, as it ensures a mutual understanding of expectations. Students know what is expected of them, which reduces confusion on the part of students during patient care, allows for smooth operation of clinic, and ultimately ensures positive patient-centered care. Similarly, researchers in nursing explained the importance of outlining expectations for novice clinicians because it sets the tone and standard of what needs to be met, eliminating a lot of confusion.[14] Thus, it is important for athletic training program administrators to work with preceptors to develop strategies for providing an effective orientation for novice students.

Overall, expectations of ATSs ultimately change as students progress through their academic coursework. Athletic training students are progressively provided more autonomy in patient care with progression through clinical education. This is important to note because preceptors need to recognize that students need higher levels of support and guidance during early semesters, while needing more autonomy and clinical decision-making opportunities during later semesters. In medical education, researchers emphasized the importance of strong mentoring and providing novice students with support early in their careers.[9] They reported that novice students often lack the self-awareness needed for patient care, so early guidance and support can assist students in challenging their self-perceptions and discovering their blind spots.[9] Our participants also noted how expectations change as students matriculate through the professional program. Similarly, researchers in nursing reported final-semester students get more hands-on opportunities and are able to practice autonomously to help set students up for professional practice.[15] Preceptors and program administrators should be mindful of how students' knowledge and clinical skills expand with progression through didactic and clinical education and how the expectations for clinical practice should parallel students' knowledge and skills to adequately prepare students for clinical practice.

Communication

Clear and concise communication with ATSs during orientation and throughout the clinical experience facilitates a smooth transition from didactic education. Clear communication begins with a common language used with ATSs and other stakeholders, such as patients, family members, or staff members. As Gotlieb et al noted, medical jargon can be confusing for patients that have never heard of these highly specific medical terms before.[16] It is imperative for clinicians to provide clear explanations to patients, ensuring they understand the details of their care. It is also crucial for ATSs to engage in effective and clear communication with patients to build rapport. Effective communication is a 2-way process with the patient and clinician, where clear communication is essential to having the patient get the most from his or her health care provider.[17] Patients tend be more open and share about their injuries and their effects as they get more comfortable with their providers, and in return, it ultimately enables health care providers to be more effective in the overall care provided. Our participants included communication as a component of initial orientation but also had ongoing discussion to support ATSs in maintaining effective communication with all stakeholders.

Additionally, nonverbal communication is also important. When students are struggling during patient care, their demeanors often change. Some prominent nonverbal cues students show are changes in body language and tone of voice.[17]

Professionalism

Professionalism encompasses critical elements such as empathy, initiative, and time management.[18] Empathy is a cornerstone of patient-centered care and should be continually

nurtured throughout the clinical experience. Empathic care results in positive clinical outcomes and stimulated patient compliance.[18] Our participants emphasized the importance of initial orientation and ongoing discussion of topics, including active listening and genuine care, as critical aspects of professionalism, noting that asking purposeful questions is integral to understanding the patient's narrative fully.

Initiative emerged as another vital aspect of professionalism, where participants affirmed cultivating initiative throughout the clinical journey. Encouragingly, students who exhibit enthusiasm and proactively engage in learning opportunities tend to grow more during their clinical experiences.[19] Asking questions is an important component of initiative, as the act of questioning and seeking to understand not only showcases initiative but also signifies important professional growth.[19]

Unfortunately, time management remains a pervasive challenge for ATSs, as they experience difficulty navigating the multifaceted demands of academia, clinical education, and personal commitments. Students struggle in their attempts to find balance between professional obligations and personal well-being.[19]

Confidence

Skill repetition is a foundational strategy for fostering students' confidence and self-assurance.[20] Our participants emphasized the crucial role of repetitive practice in honing clinical skills and improving confidence over time, both during orientation and through ongoing discussions. Similarly, researchers in nursing stressed the importance of building student confidence through repetitive participation in simulations, putting students in situations of professional practice.[20] Frequent skill review sessions were also necessary to solidify students' knowledge and serve as refreshers on knowledge and skills that could be forgotten along the way.[5] Growth often involves stepping beyond one's comfort zone. This dual emphasis on both familiarity and discomfort in skill repetition reflects a comprehensive approach to confidence-building within the athletic training education framework, where students are encouraged to navigate the delicate balance between knowing what to do and what is the most appropriate based on their clinical program education.

In parallel, adaptability emphasizes the importance in preparing ATSs for the dynamic challenges of clinical practice. Our participants affirmed the inevitability that students will encounter unfamiliar patient scenarios, requiring both confidence and adaptability. Notably, the emphasis on adaptability extends beyond clinical scenarios to encompass the ability to integrate classroom knowledge with real-world application of clinical skills. As Xie et al reported, students who are adaptable in clinical situations tend to experience less burnout throughout their career.[21] By acknowledging the unique demands of each patient encounter, ATSs are encouraged to embrace uncertainty and leverage their skills to adapt effectively.[21]

LIMITATIONS AND FUTURE RESEARCH

While in this study we provide valuable insights into the orientation and onboarding preceptors used with novice ATSs, some limitations should be considered. First, our findings are based on the perspectives of select preceptors of professional ATSs, potentially overlooking the perspectives of novice ATSs themselves. Incorporating student feedback into future research could offer a more comprehensive understanding of effectiveness of orientation on the transition to clinical education.

Additionally, future researchers could examine how professional athletic training programs are facilitating clinical education orientation, specifically examining what strategies are being used, the effectiveness of these orientation strategies, and how orientation is included within preceptor development. Furthermore, longitudinal researchers could explore the long-term effects of the orientation processes on ATSs' clinical competence, professional development, and career outcomes within athletic training professional practice. These future researchers would enhance the effectiveness and inclusivity of orientation practices and ultimately outline evidence-based strategies for optimizing orientation processes.

CONCLUSIONS

Orientation is the mechanism through which preceptors delineate clear expectations, offer ongoing support, and lay the groundwork for students to thrive in their roles as athletic trainers. However, preceptors often fail to capitalize on the initial orientation to clearly outline the expectations and responsibilities to facilitate student success. The orientation to clinical education for novice ATSs should also cultivate knowledge and clinical skills, communication skills, professionalism, and confidence as students begin clinical education. However, cognitive overload is achieved when the ATS's capacity for new information is exceeded with essential information during initial clinical education orientation.

The need exists for ongoing orientation throughout the clinical experience for novice ATSs. It is imperative for preceptors to provide adequate initial orientation to minimize confusion regarding their roles and responsibilities during patient care. With intentional ongoing orientation and mentoring, ATSs can integrate knowledge and skills within a clinical environment that promotes skill refinement, patient-centered care, effective communication, as well as essential personal qualities like empathy, initiative, and adaptability. A well-structured scaffolded clinical education orientation ensures students gain the knowledge, skills, and confidence needed throughout the clinical education experience.

REFERENCES

1. Heale R, Mossey S, Lafoley B, Gorham R. Identification of facilitators and barriers to the role of a mentor in the clinical setting. *J Interprof Care*. 2009;23(4):369–379. doi:10.1080/13561820902892871
2. Commission on Accreditation of Athletic Training Education. Standards and Procedures for Accreditation of Profesion Programs in Athletic Training. Published online August 2023. https://caate.net/Portals/0/Standards_and_Procedures_Professional_Programs.pdf
3. Ahmed FA, Alrashidi N, Mohamed RA, et al. Satisfaction and anxiety level during clinical training among nursing students. *BMC Nurs*. 2023;22(1):187. doi:10.1186/s12912-023-01352-3
4. Moineau G, Bannister S. Clinical placements: setting the stage. *Clin Teach*. 2006;3(1):39–42. doi:10.1111/j.1743-498X.2006.00071.x
5. Mazerolle SM, Walker SE, Thrasher AB. Exploring the transition to practice for the newly credentialed athletic trainer: a programmatic

view. *J Athl Train*. 2015;50(10):1042–1053. doi:10.4085/1062-6050-50.9.02

6. Lewthwaite NA, Gray EA, Skinner MA. Exploring clinical learning experiences of novice physiotherapy students in a hospital setting. *Physiother Theory Pract*. 2023;39(10):2131–2143. doi:10.1080/09593985.2022.2069617
7. Gifford KA, Choi E, Kieffer KA. Resources for clinical learning environment orientation. *Med Educ Online*. 2022;27(1):2013404. doi:10.1080/10872981.2021.2013404
8. Lui JK, Walsh KF, Philbin M. Strategies for effective intern orientation. *Clin Teach*. 2020;17(6):600–605. doi:10.1111/tct.13151
9. Sandars J, Patel R, Steele H, McAreavey M. Developmental student support in undergraduate medical education: AMEE Guide No. 92. *Med Teach*. 2014;36(12):1015–1026. doi:10.3109/0142159X.2014.917166
10. Lichtman M. *Qualitative Research in Education: A User Guide*. 2nd ed. Sage Publications; 2010.
11. Miles MB, Huberman AM. *An Expanded Sourcebook: Qualitative Data Analysis*. 2nd ed. SAGE; 1994.
12. Hill CE. *Consensual Qualitative Research: A Practical Guide for Investigation Social Science Phenomena*. American Psychological Association; 2012.
13. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care*. 19(6):349–357.
14. Nielsen AE, Noone J, Voss H, Mathews LR. Preparing nursing students for the future: an innovative approach to clinical education. *Nurse Educ Pract*. 2013;13(4):301–309. doi:10.1016/j.nepr.2013.03.015
15. Hamilton V, Baird K, Fenwick J. Nurturing autonomy in student midwives within a student led antenatal clinic. *Women Birth*. 2020;33(5):448–454. doi:10.1016/j.wombi.2019.12.001
16. Gotlieb R, Praska C, Hendrickson MA, et al. Accuracy in patient understanding of common medical phrases. *JAMA Netw Open*. 2022;5(11):e2242972. doi:10.1001/jamanetworkopen.2022.42972
17. Thrasher AB, Walker SE, Hankemeier DA, Pitney WA. Supervising athletic trainers' perceptions of professional socialization of graduate assistant athletic trainers in the collegiate setting. *J Athl Train*. 2015;50(3):321–333. doi:10.4085/1062-6050-49.3.67
18. Guidi C, Traversa C. Empathy in patient care: from 'clinical empathy' to 'empathic concern. ' *Med Health Care Philos*. 2021;24(4):573–585. doi:10.1007/s11019-021-10033-4
19. Wise SL, Payne EK. Factors in and barriers to engagement and service within athletic training association leadership. *Athl Train Educ J*. 2022;17(2):138–150. doi:10.4085/1947-380X-21-045
20. Lundberg KM. Promoting self-confidence in clinical nursing students. *Nurse Educ*. 2008;33(2):86–89. doi:10.1097/01.NNE.0000299512.78270.d0
21. Xie YJ, Cao DP, Sun T, Yang LB. The effects of academic adaptability on academic burnout, immersion in learning, and academic performance among Chinese medical students: a cross-sectional study. *BMC Med Educ*. 2019;19(1):211. doi:10.1186/s12909-019-1640-9