

Athletic Training Student Communication: What They Need to Talk About

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Context: Employers note that new athletic training graduates are not able to effectively communicate. To date no studies have determined what topics new graduates need to be able to communicate.

Objective: To explore the opinions of athletic training preceptors as to what topics need to be communicated with a variety of stakeholders. Specifically, we wanted to explore what topics are communicated, what barriers exist to getting students involved in professional communication, and what strategies could be used to overcome those barriers.

Design and Setting: A qualitative design involving in-depth focus-group interviews. Interviews were conducted in a controlled environment.

Patients or Other Participants: Athletic trainers from 3 work settings were included: high school (3 male and 3 female; average age 32.5 ± 6.1 years), college/university/junior college (5 male and 1 female; average age 34.5 ± 6.8 years), and clinic/emerging practices (1 male and 4 female; average age 27.4 ± 2.8 years).

Main Outcome Measure(s): Focus-group interviews were audiotaped and then transcribed verbatim and analyzed deductively. Peer debriefing and member checks were used to ensure trustworthiness.

Results: The most often-cited topics to communicate were related to prognosis of the injury with limitations and return to play. The most often-cited barrier to getting students involved was related to interpersonal relationships, with participants noting that it was their role to lead the communication. The most often-cited strategy for getting students involved was challenging the student to do something he had not done before.

Conclusions: It is not realistic to expect new graduates to be proficient at communication if they are not given opportunities while enrolled as students. Preceptors should consider utilizing strategies to overcome barriers and get students more involved. Furthermore, it is important that employers anticipate these deficiencies and mentor new employees appropriately.

Key Words: Employer opinions, focus group interview, emotional intelligence

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KEY POINTS

- Students need to be given opportunities to practice effective communication on a variety of topics with a variety of stakeholders.
- Opportunities to communicate need to include important health care related topics.
- Barriers to getting students involved in communication can be overcome with practical strategies.

INTRODUCTION

General interpersonal communication between clinicians and stakeholders has been identified as lacking in new athletic training (AT) graduates.¹ Studies^{2–4} in the medical field have demonstrated that communication skills are critical to improving patient satisfaction and adherence to treatment. Additionally, studies^{5–7} have demonstrated that effective communication can decrease treatment time along with decreasing distress and anxiety. According to Street et al,⁷ communication influences outcomes via an indirect route. They stated that better communication has immediate effects that in turn improve outcomes through several pathways: increased access to care, greater patient knowledge, higher-quality decisions, increased adherence, and increased social support. With communication being identified as lacking in new AT graduates and with studies demonstrating that effective communication can improve patient outcomes, one can question the patient outcomes of new AT graduates.

The National Communication Association⁸ defines communication as a discipline that focuses on how people use messages to generate meanings. The study of communication is spread across a wide range of disciplines and is set in a variety of contexts. For the purpose of this study we chose to focus on medical/health-related education and training. Communication skills training programs have been developed and studied in many fields and quite extensively in medical education to address the clinician-patient relationship.^{9–11} Back et al⁹ studied a 4-day residential workshop for oncology fellows that used lectures, practice, and reflections. Participants demonstrated higher use of ‘desired’ communication skills covered in the intervention, giving bad news and discussing transition to palliative care, from preassessment to postassessment. Jenkins and Fallowfield¹⁰ found similar positive results after a 3-day residential workshop for oncology physicians. Their study used a pre-post survey instrument to measure attitudes and beliefs along with videotaped and coded interactions. Evans et al¹¹ compared students with communication training to a control group with no training in terms of the diagnostic accuracy of a medical interview. Their study also found that communication skills training improved participants’ communication ability. Interestingly, a literature review conducted by Cegala and Broz¹² discovered inconsistencies across many communication skills training studies. They found that quite often researchers did not provide theoretical frameworks for their interventions and that assessment instruments did not match stated intervention skills. Within pharmaceutical education, general interpersonal

communication training topics have included cultural competence,¹³ emotional intelligence,¹⁴ and personality assessment.¹⁵ No studies have been found to date that investigate communication skills training in AT education. Studies of communication skills within AT have focused on the psychological counseling skills of clinicians^{16–18} and preceptors.¹⁹

Common barriers to communication studied in health care are often associated with cultural/language issues^{20–22} and an uncertain prognosis or sensitive end-of-life considerations.^{23–25} It was noted by Morales et al²⁰ that Latino Spanish-speaking patients were less satisfied with their care than were Latino English-speaking or white English-speaking patients. While ATs are often confronted with cultural/language subjects, seldom do they encounter end-of-life discussions. According to Davies et al,²³ language barriers exist in end-of-life care, but the authors also noted uncertainty of prognosis and family resistance to an incurable condition. More commonly an AT will encounter end-of-season or end-of-career issues associated with a given patient and injury/condition. These end-of-season or end-of-career issues can be very sensitive for the patient and may be complicated by athletic team/coach influences and, for college athletes, by year of eligibility concerns. No studies have been found to date that address barriers to getting AT students involved in what can be very sensitive communications.

Strategies to overcome barriers in health care have been studied with a focus on increasing the health literacy or understanding of patients.^{26,27} A study by Schillinger et al²⁶ noted that physicians assessed recall and comprehension in only 20% of patients, thus increasing the likelihood of misunderstandings. Kroll et al²⁷ explored strategies to overcome barriers to communication in patients with disabilities and found that patient education would improve communication. With experience ATs are becoming more adept in the education of patients and other stakeholders in the health care of the patient. Students need to learn how to carefully package a response based upon whom they are addressing. There are often subtle differences in conveying information of a given injury or condition based upon the audience. No studies have been found to date that address strategies to getting AT students involved in communication with a variety of stakeholders involved in patient care.

Assessment of communication skills takes on several forms. Mailed surveys, telephone interviews, and nonparticipant observations are common. A review of pharmacist-patient communication by Shah and Chewning²⁸ found that most studies focused on one-way communication from the pharmacist to the patient. They recommended the use of more qualitative methods to determine the details of the interactions, as opposed to simply quantifying the behaviors and issues being discussed. Within the field of athletic training, no studies to date have been found that address what topics clinicians are communicating in everyday practice. Further-

Table 1. Participant Demographic Information

Participant Pseudonym	Setting	Sex	Age, y	Years of Experience as Athletic Trainer	Years of Experience in Setting
Bob	HS	M	46	22	17
Tom	HS	M	29	5	3
Jim	HS	M	34	7	7
Alice	HS	F	32	10	4
Emma	HS	F	27	5	3
Lorry	HS	F	29	4	3
William	C/U/JC	M	43	21	17
Kenneth	C/U/JC	M	39	16	16
Matthew	C/U/JC	M	34	11	11
Alec	C/U/JC	M	25	3	3
Jonathan	C/U/JC	M	38	15	15
Katie	C/U/JC	F	28	5	5
Guy	C/EP	M	30	7	5
Tess	C/EP	F	29	7	5
Cat	C/EP	F	26	2	2
Lilly	C/EP	F	29	5	4
Tonia	C/EP	F	23	2	2

Abbreviations: C/EP, clinic/emerging practice; C/U/JC, college/university/junior college; F, female; HS, high school; M, male.

more, no studies have been found that address what barriers exist to getting athletic training students involved or strategies to overcome those barriers. The purpose of this project was 3-fold: (1) identify the topics clinicians are communicating in everyday practice, (2) identify barriers to getting students involved in that communication, and (3) identify strategies to getting students involved. It is our hope that educators can develop focused interventions to improve student communication by having a better understanding of the topics that clinicians communicate in everyday practice and by identifying barriers and strategies.

METHODS

In order to capture the content and allow for an exploration of the identified themes, a qualitative methodology was chosen. It was felt that focus-group interviews would allow for an open discussion and allow for a deep exploration of the content. To ensure candid responses, participants were informed that confidentiality would be maintained, and no individual or institution would be identified. All participants reviewed and signed an informed consent form that was approved by an institutional review board.

Participants

It has been reported²⁹ that a sample size of 5 to 15 participants will provide an adequate variety of responses and is a manageable number of people for conducting an interview. For this study, an a priori target was established of 5 to 15 participants for each group so that saturation of data could occur. The 3 groups targeted for participation were high school (HS), college/university/junior college (C/U/JC), and clinic/emerging practices (C/EP) groups. Emerging practice settings included those delineated by the National Athletic Trainers' Association. Those 3 groups/work settings were chosen as they represent the most commonly used clinical settings for AT programs. Potential participants were identified via networking within the local community and were then recruited via email. To be eligible, all participants

had to be athletic trainers who functioned as clinical preceptors. With our convenience sample, there were no exclusion criteria based upon years of experience. Three focus-group interviews were scheduled at a convenient time for the participants. Table 1 describes the demographics of the participants. Pseudonyms were assigned by the lead researcher for each participant.

Data Collection

Three focus-group interviews with a list of core questions to direct the discussion were used. Divergence was encouraged, as each participant was allowed to express her opinions. Probing questions were used to expand upon responses and ensure clarity. Each interview included a set of core questions, as follows:

1. What topics do you as a practicing clinician talk about with regards to patient care?
2. What barriers exist to getting students involved in the communication?
3. What strategies could be utilized to overcome those barriers?

Each focus-group interview began with a discussion of the purpose and intent of the study, then shifted to the predetermined core questions. Focus-group interviews ranged from 25 to 30 minutes in length and were moderated by the lead author to ensure consistency. The focus-group interviews were ended when all participants indicated they had nothing further to add to the discussion. Focus-group interviews were conducted in a controlled environment free from distraction and were audio-recorded on a digital audio recorder.

Data Analysis

The audiotapes were transcribed verbatim by an online commercial service (www.verbalink.com). The 3 authors reviewed the transcripts to become familiar with the content. Data were analyzed with HyperRESEARCH 3.5.2 (Research-

Table 2. Incidence of Topics to Communicate by Group

Issue	Group, No.			Total, No.
	High School	College/University/ Junior College	Clinic/Emerging Practices	
Prognosis				
Activity limitations	4	9	2	15
Return to play	3	5	2	10
Risk: benefit	0	3	0	3
Treatment plan/compliance	3	9	3	14
Thought process/rationale	4	1	4	9
Diagnosis	4	5	0	9
Referral	1	3	0	4
Situational reflection	3	0	1	4
Limitations/scope of athletic trainer	4	0	0	4
Previous history	1	2	1	4
Psychosocial strategies	0	2	1	3
Prevention strategies	1	1	0	2
Social media	0	2	0	2
Insurance/financial issues	0	1	0	1

Ware, Inc, Randolph, MA) by coding each participant response with a 1-word to 3-word description of the meaning or theme. An open coding scheme was used in which the lead and second authors independently created a theme for each comment.

Trustworthiness

To enhance the validity and trustworthiness of the data analysis, triangulation, peer debriefings, and member checks were used. Triangulation was achieved as the transcripts were independently reviewed and coded by the primary and secondary authors. Both reviewers discussed the coding and themes that emerged from the transcripts. Disagreements occurred with less than 10% of the coded themes. Minor differences in the terminology used for the identified themes were resolved through this process. Interrater reliability was not calculated, as both authors were coding the same transcripts, and consensus was reached on each coded entry. As the researchers worked through the discussion of coding themes, it was felt that saturation was achieved, as no new themes emerged from the transcripts. The peer debriefing process allowed the researchers to analyze the transcripts without influencing the results.³⁰ The third author was used for quality control purposes to review each step and ensure saturation was achieved.

Member checks were completed by asking 2 participants from each focus-group interview (HS, C/U/JC, and C/EP) to review the transcripts and coded themes for consistency. The 6 participants who responded indicated that they agreed with the coded themes and that they reflected the responses from the focus-group meetings.

RESULTS

The participants were encouraged to openly discuss their opinions pertaining to the topics to communicate in patient care, barriers to getting students involved, and strategies for getting students involved. The results of our analysis found

several themes common to all 3 groups and a few particular to a given group. Tables 2 through 4 illustrate the incidence of each theme by each participant group. Each of the following quoted responses uses a pseudonym and indicates the practice setting within parentheses.

Subjects to Discuss

Several themes emerged as the analysis proceeded. Prognosis of the injury with regard to *Activity Limitations* (n = 15) and *Return to Play* (n = 10) were common to all 3 settings and most frequent in the HS and C/U/JC groups. Subjects with participation level and ability and reporting to other members of the coaching staff were common. Alice (HS) said the following: "... you need to discuss the injury and explain sometimes to the parents how it's going to affect them on the field, if they're going be able to do partial or full participation ...". Kenneth (C/U/JC) stated:

... making sure to talk to my strength and conditioning coach on a daily basis to make sure there is no loss of translation between what the athletes thinks they can do ... and what I actually want them to do ... is important.

Tess (C/EP) noted the following:

I think most often, it's just kind of like an update when the parents come in and say, "Okay, this is getting better but we still need to work on this," or a lot of people are curious about the timeline. How long do you think this is going take?

Treatment Plan/Compliance (n = 14) was the second most frequently cited theme across the 3 settings. Topics with reporting to colleagues and peers along with psychosocial aspects of compliance were noted. Emma (HS) said, "... with the coaches is letting them know what you're doing with the kid. If you're not going let the kid practice, they want to know what the kid is doing instead." Alec (C/U/JC) stated:

My situation requires communication with other athletic trainers. There's multiple working the same sport so we need

Table 3. Incidence of Barriers to Getting Students Involved in Communication by Group

Barrier	Group, No.			Total, No.
	High School	College/University/ Junior College	Clinic/Emerging Practices	
Relationships				
This is my role/job	3	2	2	7
Respect of coach	2	2	0	4
Preceptor dominance	3	0	1	4
Student personality				
Communication skills	0	2	3	5
Proactive/outgoing	1	3	1	5
Self-confidence	1	1	1	3
Background knowledge	1	1	0	2
Logistics				
Time/efficiency	0	0	4	4
Patient volume	0	0	3	3
Class schedule	0	1	2	3
Case seriousness	2	0	0	2
Patient privacy	0	3	0	3

to be on the same plan working on patient care, communicate with the patient and with the other athletic trainers that are involved in the patient care also.

Tess (C/EP) noted, "... with a physician ... certainly the progress of the patient, but things they are not progressing on, more of that emotional feedback, how the patient is responding."

Two other themes appeared in all 3 settings: *Thought Process/Rationale* (n = 9) and *Previous History* (n = 4). Topics of how and why a diagnosis and treatment plan were devised along with the impact of patients' prior history were discussed.

Thought Process/Rationale Examples. Guy (C/EP) noted:

My discussions with the students involve the rationale for why they're doing it, because a lot of them come in with, "I saw this exercise somewhere. Now I'm just going to use it here," but I'm trying to get them to why, because when they do—ever have to communicate to somebody else what they're

doing, especially to that patient, they have to be able to actually communicate that to them instead of just saying, "Yeah, because I saw it."

Emma (HS) stated:

I think part of what you need to be able to do also is, other than just guiding them [students], you need to be able to give them critical feedback. And they may not like it, but that's the one place where they're putting all of their classroom knowledge into action, and if they're not doing it right, it needs to be addressed at a level where they understand why you're doing it.

Previous History Examples. Alec (C/U/JC) noted that "Sometimes the background, history on the patient, how they react to treatments, how smart they are, in a sense, as far as if they understand things, how compliant they are." Matthew (C/U/JC) said the following:

I think we need to give them [students] background on the student athlete—how to manage the situation, how to manage

Table 4. Incidence of Strategies to Getting Students Involved in Communication by Group

Strategy	Group, No.			Total, No.
	High School	College/University/ Junior College	Clinic/Emerging Practices	
Challenge student	3	3	6	12
Low-pressure cases	4	2	0	6
Mock scenarios	0	2	4	6
More time with students	0	2	3	5
Autonomous experiences	0	3	2	5
Modeling	0	1	1	2

the patient—at times, so they kind of know what the plan is, long-term plan of the student athlete—our history with them helps our treatment.

The only issue to discuss specific to the HS setting was *Limitations/Scope of Athletic Trainer* (n = 4). This theme addressed how the athletic trainers interact and how they develop policies that set expectations and limitations. Tom (HS) said,

... when we're interacting with each other and kind of producing that sounding board, it helps us to redevelop or expand our policies on how we interact or treat or act in certain situations. We are better able to develop contingency plans and set expectations for one another during potential emergency care situations.

Subjects to discuss specific to the C/U/JC were *Risk: Benefit* (n = 3), *Social Media* (n = 2), and *Insurance/Financial Issues* (n = 1). The theme of *Risk: Benefit* dealt with managing an injured patient within the context and impact on the team, point in the season, and year of eligibility. The *Social Media* theme addressed privacy concerns of not only the patients but also the coaching staff. The *Insurance/Financial Issues* theme addressed the monetary implications of being injured and the complexities of secondary insurance coverage for collegiate athletes.

Risk: Benefit Example. William (C/U/JC) said,

I think the other thing we talk a lot about is risk to benefit as far as what are the risks of this athlete playing with a certain injury and what are the benefits as far as for that particular athlete and as far as the team and the scope of the season.

Social Media Example. William (C/U/JC) noted the following:

I think in this day and age also, what has been involved in my discussion with patients is that their injuries are their own business and privacy issues should be—you should be sensitive to other people's privacy about their injuries and about what's going on with social media today.

Insurance/Financial Issues Example. Kenneth (C/U/JC) stated that "... with parents, often what comes up is financial issues as to who's covering what and how much coverage."

No topics to communicate were specific to only the C/EP setting. Unlike the other settings, the C/EP setting focus group did not discuss *Diagnosis, Referral, Limitations/Scope of Athletic Trainer, Prevention Strategies, Social Media, or Insurance/Financial Issues*. The C/EP setting is unique compared with the other settings in that patients come with referrals and a diagnosis, there is no athletic team involvement, the focus is on rehabilitation, patient privacy doesn't have the same scope with athletic teams, and insurance issues are often addressed with billing staff.

Barriers

Barriers to getting students involved in communication were noted in all 3 settings, with *This is my job/role* (n = 7) noted the most frequently. Role responsibility was very important to the participants. Establishing a line of communication and

hierarchy of responsibility will reduce miscommunication and reduce student experience. As Jim (HS) said,

... it is difficult for me sometimes to let that student communicate these issues to the coaches, to the parents, when I've invested years now to develop these relationships with my parents and my juniors and my seniors, that they expect me to be the one talking to them.

Jonathan (C/U/JC) noted:

I think the barrier has to do certainly with the head coach, who that person prefers to communicate with, and then the other barrier is familiarity with the people involved with the athletic training student and vice versa.

Guy (C/EP) stated:

Personally, I really haven't tried helping my students communicate verbally with a patient's parents or anything like that or even with the physician just because it's, you know, the parents want the information, not what the students are thinking. They want to hear it from us.

Other barriers common to all 3 settings were related to student personality, in terms of *Proactive/Outgoing* (n = 5) and *Self-Confidence* (n = 3). Participants expressed a desire to work with students who are motivated to get involved and who demonstrate a level of buy-in with the patients' care.

Proactive/Outgoing Examples. Lorry (HS) explained:

Depending on the setting that the student wants to work in, they may or may not be willing to put themselves out there to do an evaluation at a high school. If they're planning on going into PT school and that's what they know they're gonna [sic] do and that's what they're looking forward to, I think some of them see their time at a high school or even a college setting as kind of a placeholder.

William (C/U/JC) noted:

I think the biggest barrier that I've had with students is if I have a student that is unwilling—or not unwilling, but has a difficulty wanting to insert themselves to be involved in the care of the athletes and what is going on and wants to consistently kind of just stay on the side and not get involved, not ask questions

Cat (C/EP) stated the following:

I will say a student's personality has a lot to do with it, how willing they are to step up and take control of that person, that patient that you're seeing, and then just trying to find that level of communication that works for the patient.

Self-Confidence Examples. Emma (HS) noted that "I think part of it—and this is something that we have to reinforce, but its confidence with the student to address someone and be assertive." Lilly (C/EP) stated that,

Verbally, it's the self-confidence to have them actually communicate to them, because in class, they'll be able to do everything in front of their peers and be able to answer all the questions you want them to do, but when it's a real-life situation, I believe most of the time, kids are afraid they're going to mess up, and that's the last thing they want to do.

The only barrier specific to the HS setting was *Case seriousness* (n = 2). The idea that injury conditions have a

level of seriousness with regard to the implications for the patient and the team was discussed. Jim (HS) said,

... if I have a coach and it's something not serious, "Hey, go talk to so-and-so. Let them know I'm looking at 'em [sic] and it's taken care of and relay the following information." I try to give them little nuggets of opportunity, but the big stuff of communicating to the parents, "Hey, this is what's going on with little Johnny," or whatnot, I think, is something that I've always, or most of us, have taken the reins on.

Tom (HS) noted, "So for me, I'm very hesitant, especially like was mentioned, if it's a serious incident, the student's probably not talking about it to the coach, the parent, period."

The only barrier specific to the C/U/JC settings was *Patient privacy* (n = 3). College athletes are adults and many have an active social media presence. This is compounded by coaching staffs that desire a high level of secrecy surrounding the condition of their athletes. Katie (C/U/JC) said the following:

The biggest barrier I have found in some information flow to student athletic trainers is the patient themselves not wanting anyone else involved, so the athlete not wanting anyone to know about certain circumstances, injuries, history, medications, anything like that.

The C/EP setting has 2 barriers specific to only that setting that were related to logistics: *Time/efficiency* (n = 4) and *Patient volume* (n = 3). The issue of scheduling patients was more acute in this setting for sustainability of the business model.

Time Efficiency Example. Tess (C/EP) said,

In this setting, time is money, so you also don't want to—you have to find that balance of how do I get my student to be able to do this and not hold their hand? At the same time, how do I not make it a longer evaluation so that we have to charge the patient more?

Patient Volume Example. Tonia (C/EP) noted the following:

... they [students] come in when we have treatment times, not when we're doing our downtime, paperwork and all that stuff, the administration duties. We don't typically have the students here to do that stuff because we want to be efficient with it, and I think it's mainly on us, just not giving them the chance to do it. We have to have the patience to do it. So I don't think it's totally a barrier with the student doing it; I think it's us.

Strategies

The most commonly cited strategy for getting students involved in communication across all 3 settings was *Challenge student* (n = 12). Participants talked about the need for pushing students out of their comfort zone. Alice (HS) said,

So I always tell them, "Don't be afraid to get as far as you can in an eval [sic] and then ask me for help. That's what I'm here for. That's why you come out to me." So just say, "Okay, I did range of motion, I did this, and now I don't know what to do next," and I think that's the biggest step, is not to

admit that you know everything, cause even as professionals, we don't know everything.

Lorry (HS) noted:

But the key emphasis, too, with those kids is to letting them know that ... even though you may be limited, finding areas and avenues to where you can maximize your abilities while you're here.

The HS and C/U/JC settings cited *Low pressure cases* (n = 6) as a strategy for getting students involved. The pressure within organized athletics dictates that the preceptors often must lead the discussion on critical cases. As Jim (HS) described it, "Like if I have a coach and it's something not serious, go talk to so-and-so. Let them know I'm looking at them and it's taken care of and relay the following information." Jonathan (C/U/JC) noted:

I think one of the areas they do get involved in this, unfortunately, the only place that I see that they truly get involved is working summer camps and having to deal with athletes of all ages up until seniors in high school, having to deal with athletes, parents, coaches that they don't know and they're not around, and having to give an evaluation, a thought or probability or what could be going on with somebody, and then having to make a decision, and having to come up with a game plan.

The C/U/JC and C/EP settings cited several strategies to getting students involved that were not cited by the HS setting, including *Mock scenarios* (n = 6), *More time with students* (n = 5), *Autonomous experiences* (n = 5), and *Modeling* (n = 2).

Mock Scenarios Examples. Jonathan (C/U/JC) said,

If they've missed morning treatments, progress of the athletes, do a daily injury report with the students so they are up to speed, and if they can't attend a coaches' report, we do mock coaches' reports with either myself or an assistant coach that's available.

Guy (C/EP) stated:

... if there's any way to have them practice that outside of here by talking to somebody who they don't know in classes ... you have to bring new people in that they don't know and have them explain this stuff ... I'm 99 percent sure they know all the material, now just work through it.

More Time with Students Examples. William (C/U/JC) noted that "I think the longer somebody's at an assignment, the more comfortable they should be with talking to each other. That's a matter of getting them opportunities to do that." Katie (C/U/JC) stated the following: "... to work in the right direction would be having an accommodating schedule, both on the student's classroom and in the athletics."

Autonomous Experiences Example. William (C/U/JC) said,

I had them take charge of an off-season sport as I supervise them, so where they actually have to make the communication with the athlete on the field, communicate with the coaches, communicate with the strength coach, so actually putting them in that situation when a season's not on the line and when they've actually developed an established relationship within the team.

Jonathan (C/U/JC) stated that,

... a lot of times, we'll get students that are third or fourth years getting closer to graduation, and they're hopefully being able to be more independent and start to develop the skills they've learned in class and apply them.

Modeling Examples. Jonathan (C/U/JC) stated:

Try to get them involved in the actual formal presentation of an injury report, so if you go up to your coach's office or you're with physicians or however you present it, if the student is available to do that, to come and observe that at first.

Emma (HS) noted the following:

... when I was in grad school, one of the things we had to do in one of our classes was our teacher had this fake phone ... and we would talk through scenarios and situations ... would make you pretend to have that phone call. And you were in front of the whole class, and at first, it was a really uncomfortable thing and she would pretend to be the physician or nurse or athletic trainer, whoever you're talking to, but I think that was something that really helped me just to get that practice and say, "Okay, you're talking to a physician. You've got 2 minutes to get your point across and tell them what you think is going on and how to kinda [sic] encounter that situation."

DISCUSSION

The 3 focused areas of the interviews—topics to communicate, barriers to getting students involved, and strategies to getting students involved—yielded a large amount of quality responses from our participants. While the topics to communicate may appear to be common sense to the average clinician, no previous study we have found established those subjects in detail. Many of the barriers to getting students involved were obvious structural/practicality issues, while several were more subtle and nuanced subjects that depend upon interpersonal relationships. While the strategies for getting students involved were practical, some raised concerns about appropriate use of students in a given clinical setting or with a given preceptor. For clarity we have organized the discussion based upon the 3 focused areas of our results.

Topics to Communicate

When exploring the topics to be communicated we found no studies within athletic training. The medical field deals with life-and-death disease states and has studied doctor-patient interaction quite extensively.^{30–36} Farber et al³⁵ used semi-structured interviews to determine the roles primary care physicians assume when discussing end-of-life issues. They found that all interactions are based upon the relationships they have built and that the physicians assume the roles of consultants, collaborators, and guides. Osse et al³⁶ used a similar qualitative interview format to the one used in our project to explore the issues that patients feel are important and categorized issues into quality of life and quality of care domains. We attempted to define the specific topics that a practicing clinician must be able to communicate in the course of normal patient care. With no previous research done in this area, we are unable to relate our findings directly to the literature. We have previously established³⁸ when students are

given the opportunity to engage in professional communication with a variety of stakeholders during their clinical rotations. Common sense would dictate that practicing clinicians are communicating prognosis, diagnosis, and treatment plans. The social media topic was not a surprise, but it was interesting that the development of said technology has become a factor in clinicians' everyday practice and care for patients. The social media topic was only cited in the college setting, where young adults are free to use the technology; however, this is often in conflict with coaching staff desires for control of information. The inclusion of *thought process/rationale* and *previous history* as topics to communicate were present in all settings. *Thought process/rationale* was more prevalent in the HS and C/EP settings, where patient and parent education are required skills. The *limitations/scope of the AT* topic was limited to only the HS setting. This might be due to the nature of working with minors and the need to involve parents in the decision process. The topic of *referral* was not cited in the CEP setting, as patients are most often referred to those clinicians for treatment. Education programs should be mindful of these topics when making clinical assignments and share expectations with both students and preceptors to ensure that students are given opportunities to address these topics.

Barriers

The barriers identified in our study are both practical and personal in nature. The logistics of patient care highlighted topics that were practical in nature, such as *efficiency* and *patient load*, that were only noted by the C/EP group but are important topics in any role. The *relationship* and *personality* topics dominated our findings. Personality of the student with communication skills and being proactive were noted by many. Exley et al³⁸ used similar interviews to ask patients and general practitioners about barriers to end-of-life communication. They noted that clinicians may give information in a harsh manner without noting how it affects the patient. Our results suggest that communication skills are important and that emotional intelligence is a component of communication skills. If a student cannot properly read the patients' reaction to the topic being discussed a barrier will arise, and patient care may suffer. A study by Kelly et al³⁹ used similar methodology to explore the psychological needs of palliative care patients. They noted several barriers, including the clinicians' identification with the patient. This could relate to our finding of the preceptor dominating the clinical experience and feeling that it was his job/role to lead the discussion as he identifies with the patient. The idea of preceptors purposely dominating the discussion out of a conviction that that is their role and that they had worked hard to gain the respect of the coaching staff in the HS and C/U/JC settings is understandable and worrisome. If students are not included in the discussion, or allowed to lead the discussion, they will not gain the experience needed of a new graduate. This lack of experience will directly affect the confidence barrier noted in all settings. Patient privacy was only noted in the C/U/JC setting and is likely due to coaching staffs' desire to control information. Class schedule was not noted as a barrier in the HS setting, as most AT students attend class in the morning, and the HS setting patient load is mostly in the afternoon. As more education programs integrate immersive experiences, as will be required by

accreditation, the HS setting may pose a unique challenge to scheduling students.

Strategies

The most commonly cited strategy for getting students involved was to challenge the student. Carefully challenging a student can help overcome the barriers of self-confidence and any lack of proactive/outgoing attitude. A study by Nestel and Tierney⁴⁰ used role-playing with medical students to develop communication skills. Students reported that the experiences were helpful in developing their ability to communicate subjects with patients. Some students will rise to the occasion when presented with real patients, while others will shun the opportunity. Students need to be given opportunities to practice communication skills in either real or simulated settings. Research⁴¹ in athletic training has found that simulations were the most prevalent method for assessing clinical skills. Preceptors should modify the experiences based upon the level of the student and continually challenge the student to leave her comfort zone.

Interestingly, the HS setting did not cite mock scenarios as a strategy for getting students involved. The HS setting did not cite more time with students, autonomous experiences, or modeling, as cited within the C/U/JC and C/EP settings. It is possible that the generalized triage nature of the HS setting, with less time for rehabilitation, precludes the applicability of these strategies. The differences could also be explained by the variety of roles played by HS athletic trainers and differences in job descriptions, with some focused on after-school practice and game coverage, while others have more time on campus to provide care.

The C/U/JC and C/EP groups both spoke of autonomous experiences being strategies to get students involved. This raises concern about how students are being used in their clinical assignments. True autonomy and supervised autonomy are 2 different strategies, with the former being haphazard/dangerous and the latter being more structured. Levy et al⁴² described situational supervision as a model in which preceptors adapt their supervision of students' progression. Students should be given more autonomy as they progress but still be supervised. Supervised autonomous experiences can work to overcome barriers such as communication skills and confidence by providing the student with support only when needed. Allowing students to address and lead low-pressure cases can provide valuable experience that can overcome personality barriers and logistic barriers, such as patient volume and time/efficiency, noted in the C/EP setting.

Limitations and Suggestions for Future Research

Our findings were based upon focus-group interviews with a small sample of convenience. The sample did not control for length of time as a preceptor and did not represent diversity of all clinical settings within the profession. This small sample limits the generalizability of our findings to the profession as a whole. Perhaps a larger sample from additional clinical settings might reveal different results. Our sample included several preceptors with less than 5 years of experience. It is possible that their socialization into the profession has affected their expressed opinions. Future studies could investigate the length of experience as a factor. Our sample

was limited to one stakeholder group of clinical preceptors, while other stakeholders, such as parents or physicians, may have different opinions of what important subjects need to be addressed. Future research could explore the opinions of various stakeholders, and that may affect what education programs will teach future students. Focus-group interviews capture the subjective opinions of the participants. A more objective direct observation analysis of communication between athletic trainers and various stakeholders may find different topics being discussed. Combining an in vivo analysis of what students are discussing with an intervention designed to improve communication skills may inform education programs and ultimately improve practices.

CONCLUSIONS

The purpose of this project was to identify topics that clinicians discuss in normal day-to-day care of patients, to identify barriers to getting students involved in discussion of those topics, and to identify strategies for overcoming those barriers. Students need to be given the opportunity to discuss important patient care-related topics appropriate to each setting. While many of these topics are common to all settings, several have been identified as specific or important to a given setting. Education programs should be mindful of the specific topics unique to a given setting and plan accordingly. Inclusion of the specific topics as learning objectives will inform both the students and the preceptors. Barriers to getting students involved in these discussions are numerous and can be complex. Many barriers can be overcome with practical solutions, while some will remain. Highly sensitive health care topics might not involve a student but could be reviewed through reflection and mock scenarios after the case has resolved.

Students who lack confidence and communication skills can be given supervised autonomous experiences on low-pressure cases. If the AT profession desires highly competent health care professionals upon graduation, more emphasis must be made to giving students opportunities to practice their communication skills. Likewise, employers of new graduates need to anticipate deficiencies and be prepared to address those with on-the-job training and mentoring.

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