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Athletic Trainers' Perceptions of Accessibility to Necessary Resources for Those Working Per Diem Services

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Context: As the demand for athletic training services has grown, the per diem athletic training setting has expanded to fulfill this need. Per diem services are provided by athletic trainers (ATs) who are hired as independent contractors for short time periods. These service opportunities help to increase access to care for medically underserved populations; however, due to the transient nature of the work, the quality of care may be compromised.

Objective: To examine current practices in per diem services and evaluate ATs' accessibility to resources.

Design: Cross-sectional study.

Setting: Online survey.

Patients or Other Participants: A total of 448 participants responded (access rate = 9.57%), of whom 210 were ineligible (46.9%). Of those who were eligible, 192 participants completed the entire tool (completion rate = 80.7%, age = 38 ± 12 years, years certified = 14 ± 11, years providing per diem services = 8 ± 8).

Main Outcome Measure(s): The survey comprised 3 sections: (1) demographics, (2) accessibility to resources and influence on patient care, and (3) domains of athletic training while providing per diem services. Resources assessed included those that are relevant to ATs practicing in accordance with the Board of Certification "Standards of Professional Practice." The final instrument included approximately 30 questions (depending on display logic) and took an average of 12 minutes to complete.

Results: Of the 11 primary resources assessed, participants had limited accessibility to 6. Critical resources related to informatics, legalities, and health care delivery were often not available, were seen as unimportant to providing medical services, or both.

Conclusions: Participants indicated varied perceptions about the need for and access to these resources. Yet such resources contribute to the creation of a safe infrastructure for providing medical services and should be part of the routine dialogue regarding independent contracting.

Key Words: independent contractors, underserved populations, contract services

Key Points

- To effectively improve both access to and quality of care for underserved populations, athletic trainers need better access to informatic, legal, and health care delivery resources.
- The best-practice guidelines provide a detailed list of resources that should be part of the regular dialogue with respect to independent contracting. Adherence improves the delivery of patient care and ensures protection of the provider.
- Access to specific emergency care equipment, such as an emergency action plan or automated external defibrillator, is imperative for athletic trainers supplying per diem services. To practice to the full extent of our licenses, athletic trainers must be prepared.

Per diem athletic training services describe medical care provided by athletic trainers (ATs) who are hired specifically for on-demand work, typically in limited quantity, such as on a daily, weekend, or short-term basis.[1] For ATs supplying these medical services, it is an opportunity to gain experience in different settings and potentially interact with patients outside of their traditional place of employment.[2] This interaction is seen as beneficial not only for the AT but also for the hiring organization in providing appropriate medical care at specified events. The National Athletic Trainers' Association (NATA) and others[3–5] have issued guidelines for universities and secondary schools to follow when providing appropriate medical care. These guidelines quantify how many and under which circumstances health care professionals[3] should cover an event. However, with budgeting restrictions, medical staffing constraints, and increased health care loads,[4,6,7] discrepancies exist between those who need and those who have access to an AT in the traditional sense. In addition to collegiate and secondary schools, per diem service opportunities are also available in emerging setting practices (ie, military, occupational health, performing arts,

public safety, and youth sports).[4] To facilitate appropriate medical care for underserved populations,[5] an influx of athletic training per diem service opportunities has occurred. Therefore, athletic training per diem services have the potential to increase health care availability by connecting hiring organizations to health care providers.

In every job setting, those who hire ATs for per diem services have different expectations and contractual obligations.[4] No matter where and when ATs are supplying medical services, all ATs must perform their requisite job duties within the confines of their scope of practice and state and federal laws, as well as applicable certifications, regulations, and guidelines. The AT has a responsibility to abide by Board of Certification (BOC) "Standards of Professional Practice"[6] and refer to NATA guidelines[7] while providing the highest quality of care to the patient.[4,6,7] So that these standards are maintained, clear and intentional communication between the hiring organization and AT is essential. Hiring companies can include but are not limited to self-employment, athletic training services companies, physical therapy companies, event coordinators, colleges or universities, secondary schools, and hospitals. Once an AT is contracted, the hiring company should define the job requirements and identify the resources that are available to the AT.[2,4] If important information is not discussed during the onboarding process, the AT may prepare inadequately before arrival. Athletic trainers have a responsibility to establish whether certain resources will be available when providing per diem services to ensure that they will be able to provide adequate care to patients.

Although communication is at the forefront of optimizing athletic training per diem service opportunities, other driving factors of success include knowledge of guidelines and implementation of best practices. In July 2019, the NATA Young Professionals' Committee developed the "Best Practice Guidelines for Per Diem Work" document that was specifically tailored for ATs working in the per diem setting.[8] Yet there is no guarantee that these guidelines will be applied consistently across all per diem encounters. Inconsistency in contracts, state and federal regulations, and company policies can put both the AT and patient populations at risk by compromising health care delivery.[1,9,10] We evaluated the missing elements between the standard of care guidelines[6] and current per diem services. Identifying discrepancies will allow additional recommendations to be established. These recommendations may improve the consistency of per diem services and minimize the disconnect and compromising factors for those providing per diem athletic training services. The purpose of our research was to examine current practices and explore the influence of experience on athletic training per diem services across settings.

METHODS

Research Design

We used a cross-sectional, descriptive survey to explore ATs' perceptions of accessibility to the resources needed to provide patient care while serving in a per diem capacity. We gained approval from the Indiana State University Institutional Review Board before data collection.

Table 1. Demographic Information of Participants

Demographic Variable	Mean ± SD, y
Age	38 ± 12
Certified by Board of Certification	14 ± 11
Providing per diem services	8 ± 8

Participants

We used the NATA survey database to recruit participants who might fit our inclusion criteria. Inclusion criteria were ATs who were active and certified members of the NATA and had provided per diem services within the past 12 months. Because no current database identifies ATs who practice per diem services, all recruited individuals who did not meet the aforementioned criteria were guided to the end of the survey.

A total of 4733 emails were sent, and 448 participants accessed the survey (response rate = 9.6%); 238 participants were eligible to participate and 192 (completion rate = 80.7%) completed the survey. Participant demographics are provided in Table 1. Before starting the survey, participants provided their informed consent electronically.

Instrumentation

Due to a lack of previous literature, 3 researchers (T.A.A., E.R.N., and L.E.E.) developed the instrument from athletic training professional standards and content experts' input. To begin, 1 expert (A.M.P.) helped to align the survey inquiries and ensure that the questions were relevant to athletic training per diem services. Next, 4 content experts in athletic training per diem services (A.M.P., K.E.F.M., and 2 individuals who were not authors) consulted on 3 drafts to help further develop and review the instrument. This process was intended as a means of ensuring that the questions were relevant to the topic and fully addressed the standards of practice as they pertained to per diem services. Each round of revisions was assessed by both the content experts and authors until a final consensus was obtained. The instrument comprised 3 sections: (1) demographics, (2) access to resources and influence on patient care, and (3) domains of athletic training while working per diem services. Section 1 consisted of 8 demographic questions that inquired about age, years of certification, years of providing per diem services, frequency of providing athletic training per diem services, clinical setting(s) in which the per diem services were provided, by whom he or she was hired for service, primary source of income, and whether the hiring organization for per diem services was the primary source of income.

The largest portion of the survey, section 2, contained questions related to the BOC "Standards of Professional Practice"[6] and how they were incorporated into athletic training per diem services. These standards of practice were the basis of the survey because all ATs are required to abide by these national guidelines when providing medical services and patient care. As the participant completed each question, additional questions were displayed depending on whether the AT had access to the specific resource. For each resource to which the respondent described having access, follow-up items asked the AT to select how

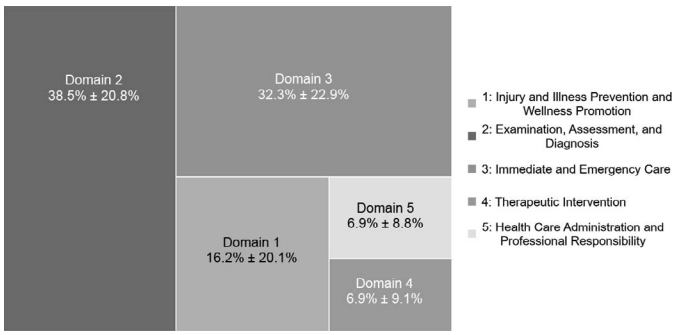

Figure 1. Section 3. Athletic trainers' implementation of practice domains in providing per diem services.

essential the item was for providing patient care on a 3-point Likert scale (*imperative*, *made no difference*, or *not essential*). For each resource to which the individual described lacking access, follow-up items asked how great the effect of not having the resource was on patient care using a 4-point Likert scale (*substantial*, *considerable*, *slight*, or *not at all*). For each resource to which the participant stated he or she lacked or was unsure about access, a follow-up item assessed the importance of the resource for providing patient care during athletic training per diem services on a 4-point Likert scale (*very important*, *important*, *somewhat important*, or *not important*). The question breakdown is further highlighted in Supplemental Figures 1 (section 2, question breakdown if the participant answered *yes* to having access to the resource), 2 (section 2, question breakdown if the participant answered *no* to having access to the resource), and 3 (section 2, question breakdown if the participant answered *I am unsure* to having access to the resource).

To conclude the survey, section 3 evaluated the frequency with which the AT used each practice domain of athletic training (established by the NATA) in supplying per diem care (Figure 1). Depending on the AT's answers and how many additional questions were prompted, the questionnaire consisted of approximately 30 questions and took an average of 12 minutes to complete.

The final instrument was developed, piloted, and validated by a Delphi panel of experts for structure.[11,12] The final survey was delivered via Qualtrics (Provo, UT) to allow maximum customization and ease of data collection. Initial pilot testing was performed by 19 ATs from a convenience sample who met the inclusion criteria to identify any double-barreled, confusing, or leading questions and to evaluate navigation of the tool. If pilot-test participants did not provide feedback, we assumed that the questionnaire was applicable and easily readable. Minimal feedback was provided on the pilot study, with attention placed only on navigation and grammatical errors. These data were not included in the final analysis.

Procedures

The NATA sent an initial recruitment email to potential participants in mid-August 2019. After the initial email contact and distribution of the survey, weekly follow-up emails were sent for 4 weeks to increase the response rate of those who had not yet completed the survey. The initial and subsequent emails were sent over a 5-week time span between August and September 10, 2019. Data collection ceased on September 10, 2019.

Statistical Analysis

We analyzed the data using descriptive statistics, including measures of central tendency (mean, mode, and frequency). All data analyses were performed using Excel (version 16.16.14; Microsoft Corp, Redmond, WA) and SPSS (version 26; IBM Corp, Armonk, NY). These analyses were applied to the demographic answers and section 3 of the survey. Frequencies were also calculated for each resource to examine the accessibility, effect on patient care, and importance of the resource within the per diem setting (Figures 2–4). To explore the influence of experience ($\leq$10 years of certification, $>$10 years of certification), we conducted separate Mann-Whitney *U* tests. Significance was set a priori at $P < .05$.

RESULTS

Participants were an average of 38 ± 12 years old, were certified as ATs for an average of 14 ± 11 years, and had worked athletic training per diem services for an average of 8 ± 8 years. Most respondents indicated they were recruited by an event coordinator (21.9%, n = 42/192) to provide services, provided services in the youth sports setting (70.3%, n = 135/192), and did not engage in per diem services as their primary source of athletic training income (91.1%, n = 175/192). The majority of ATs were hired for per diem services separate from their primary source of income (72.4%, n = 139/192), meaning that an outside institution or hiring organization requested their medical services, and indicated that they typically implemented domains 3 (examination, assessment, and diagnosis; 38.5% ± 20.8%), and 2 (immediate and emergency care; 32.3% ± 22.9%) of athletic training. The domain implemented least often while providing athletic training per diem services was 4 (therapeutic intervention; 6.9% ± 9.1%; Figure 1).

Resources

The following resources were assessed for their accessibility, effect, and importance in providing patient care during per diem services: written contract, directing physician, physician's standing orders, professional liability insurance, site-specific emergency action plans (EAPs), additional health care providers, patients' medical history, consent to treat, medical equipment and supplies, referral network, and documentation method. Most ATs had access to professional liability insurance (84.4%, n = 162/192), site-specific EAPs (63.5%, n = 122/192), medical equipment and supplies (56.3%, n = 108/192), referral network (60.9%, n = 117/192), and a documentation method (61.5%, n = 118/192). Conversely, most participants lacked access to a written contract (55.2%, n = 106/192), directing physician (50.5%, n = 97/192), standing orders (54.7%, n = 105/192), additional health care providers (66.1%, n = 127/192), patients' medical history (80.2%, n = 154/192), and consent to treat (65.6%, n = 126/192).

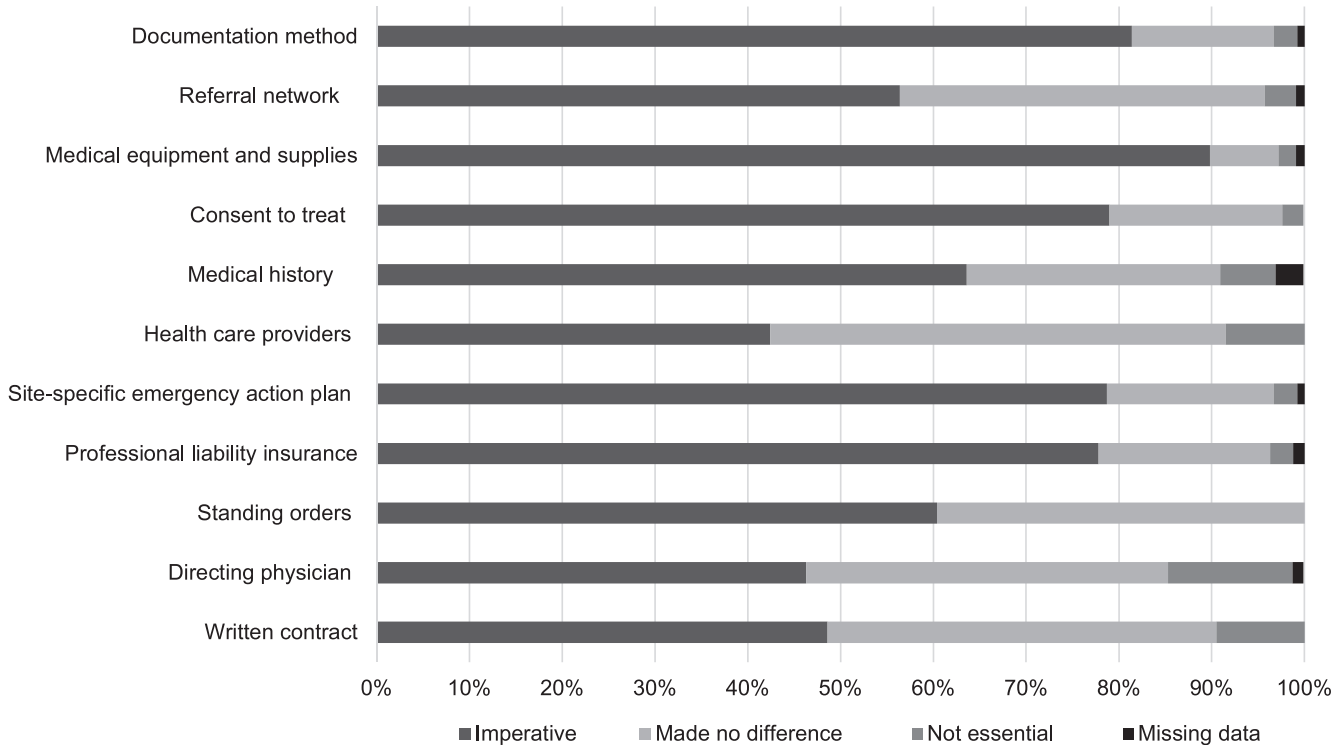

Figure 2. Athletic trainers' perceptions of how essential resources were to patient care (*yes* respondents).

Rendering Services

Informatics Resources. Informatics resources assessed for accessibility were consent-to-treat verification, medical histories, and mode of documentation. These resources are intended to establish safe and effective care when providing medical services and are typically supplied before services are delivered (Tables 2–4). The majority of participants (65.6%, n = 126/192) lacked access to consent-to-treat verification for the patient population, and of those individuals, most perceived no effect (44.4%, n = 56/126), whereas those who did not or were unsure about this access felt that consent-to-treat forms were *important* for

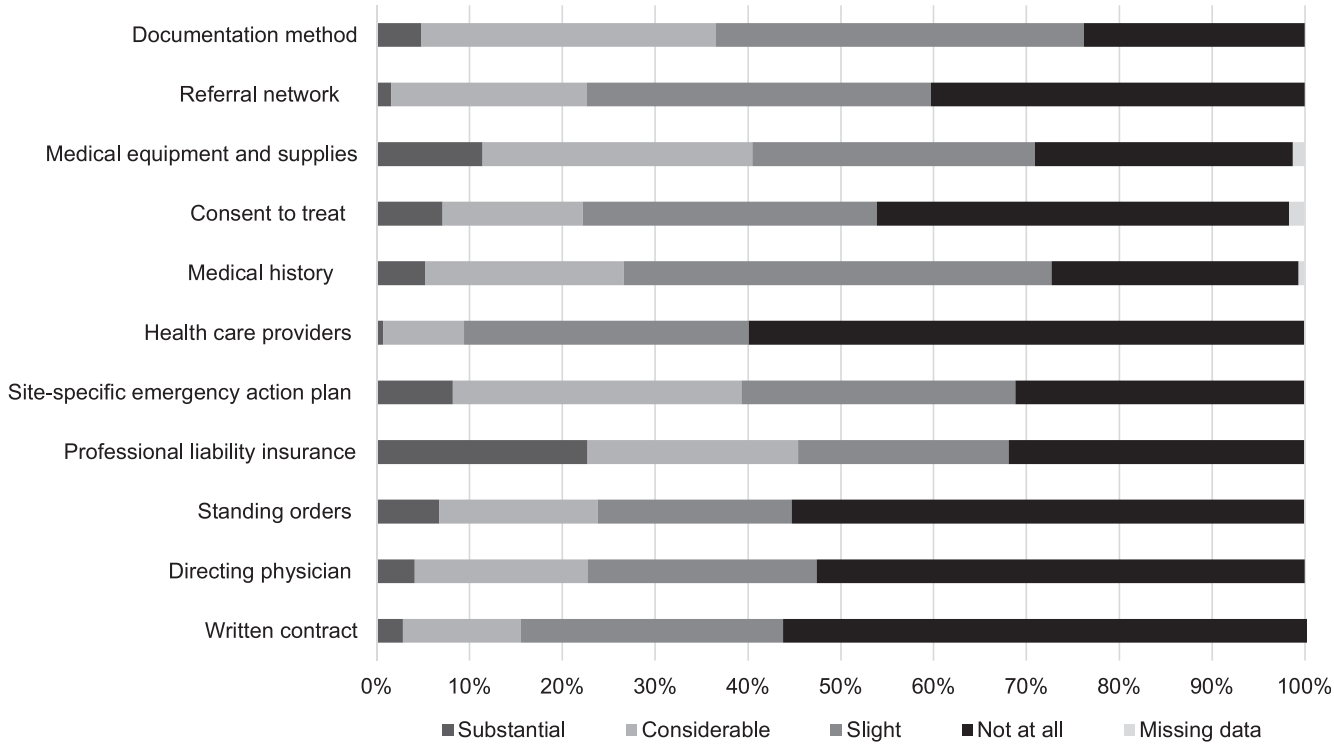

Figure 3. Athletic trainers' perceived effect of not having a resource on patient care (*no* respondents).

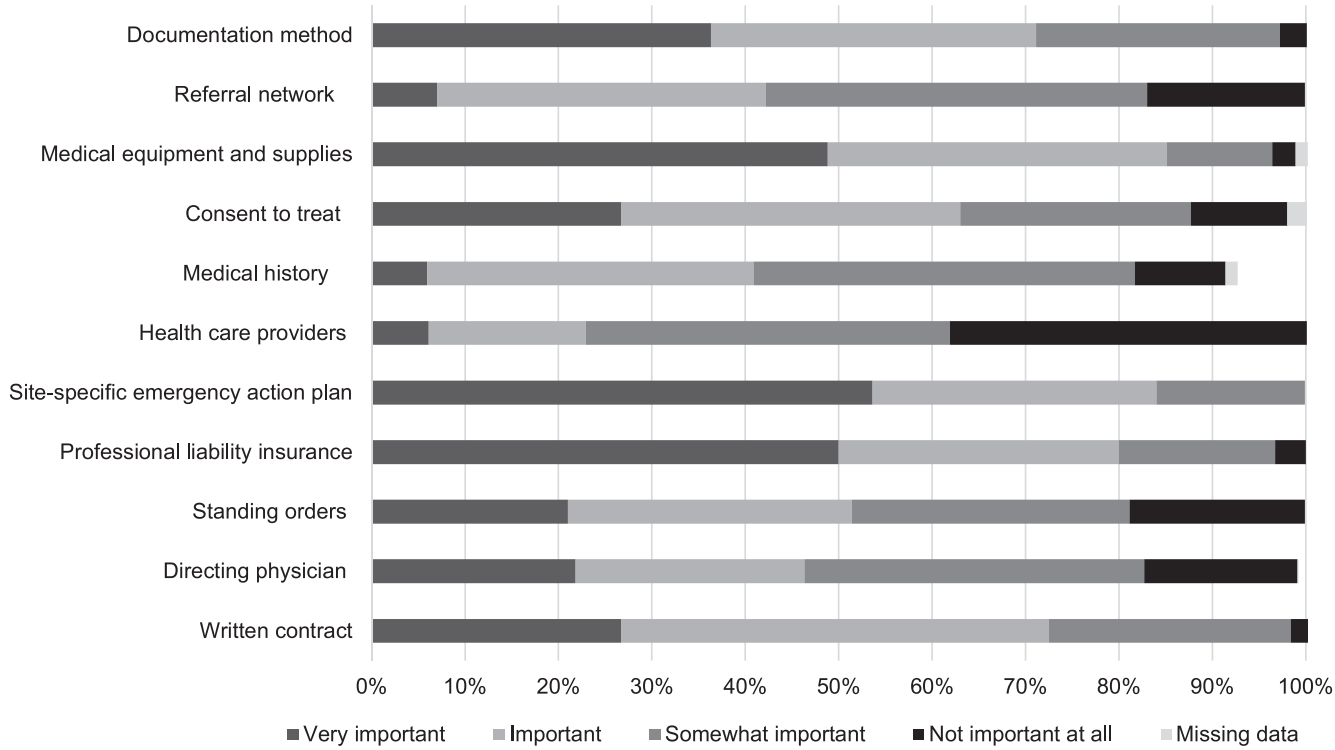

Figure 4. Athletic trainers' perceived importance of resources in providing patient care (*no* and *I am unsure* respondents).

supplying per diem services (36.3%, n = 53/146). Those with access to consent-to-treat forms felt that they were *imperative* for providing patient care (79.0%, n = 34/43). A mere 17.2% (n = 33/192) of ATs had access to patients' medical histories, and of these, most felt they were *imperative* for providing patient care (63.6%, n = 21/33). Those without access to patients' medical histories saw the effect as *slight* (46.1%, n = 71/154), and in combination with those who were unsure about their access believed a medical history questionnaire was only *somewhat important* for providing per diem services (40.8%, n = 64/157).

Many participants had access to a method of documentation (61.5%, n = 118/192) and perceived that it was *imperative* for patient care (81.4%, n = 96/118), whereas those who did not have access felt the effect was only *slight* (39.7%, n = 25/63). For those ATs who did not have or were unsure about access to a method of documentation, having the means to document was only *slightly important* (39.7%, n = 25/63) for per diem services. Young professionals perceived having access to the informatics resources as more important than their experienced colleagues (Table 5).

Legal Resources. The following items were categorized as legal resources due to their global influence on ATs' ability to perform per diem services based on judicial rules and regulations: written contract, directing physician, standing orders, and professional liability insurance (Tables 2–4). Of the 38% of participants who had access to a

Table 2. How Essential the Resource Was for Patient Care While Athletic Trainers Provided Per Diem Services

	No. (%)[a]			
Resource	Imperative	Made No Difference	Not Essential	Missing Data
Informatics				
Medical history	**21/33 (63.6)**	9/33 (27.3)	2/33 (6.1)	1/33 (3.0)
Consent to treat	**34/43 (79.0)**	8/43 (18.6)	1/43 (2.3)	0/43 (0.0)
Documentation method	**96/118 (81.4)**	18/118 (15.3)	3/118 (2.5)	1/118 (0.8)
Legal				
Written contract	**36/74 (48.6)**	31/74 (41.9)	7/74 (9.5)	0/74 (0.0)
Directing physician	**38/82 (46.3)**	32/82 (39.0)	11/82 (13.4)	1/82 (1.2)
Standing orders	**32/53 (60.4)**	21/53 (39.6)	0/53 (0.0)	0/53 (0.0)
Professional liability insurance	**126/162 (77.8)**	30/162 (18.5)	4/162 (2.5)	2/162 (1.2)
Health care delivery				
Site-specific emergency action plan	**96/122 (78.7)**	22/122 (18.0)	3/122 (2.5)	1/122 (0.8)
Additional health care providers	25/59 (42.3)	**29/59 (49.1)**	5/59 (8.5)	0/59 (0.0)
Medical equipment and supplies	**97/108 (89.8)**	8/108 (7.4)	2/108 (1.9)	1/108 (0.9)
Referral network	**66/117 (56.4)**	46/117 (39.3)	4/117 (3.4)	1/117 (0.9)

[a] Bold signifies the response with the highest percentage of participants.

Table 3. Effect of Not Having Access to the Resource for Athletic Trainers Providing Per Diem Services

Resource	No. (%)[a]				
	Substantial	Considerable	Slight	Not At All	Missing Data
Informatics					
Medical history	8/154 (5.2)	33/154 (21.4)	**71/154 (46.1)**	41/154 (26.6)	1/154 (0.6)
Consent to treat	9/126 (7.1)	19/126 (15.1)	40/126 (31.7)	**56/126 (44.4)**	2/126 (1.6)
Documentation method	3/63 (4.8)	20/63 (31.7)	**25/63 (39.7)**	15/63 (23.8)	0/63 (0.0)
Legal					
Written contract	3/106 (2.8)	13/106 (12.3)	30/106 (28.3)	**60/106 (56.7)**	0/106 (0.0)
Directing physician	4/97 (4.1)	18/97 (18.6)	24/97 (24.7)	**51/97 (52.6)**	0/97 (0.0)
Standing orders	7/105 (6.7)	18/105 (17.1)	22/105 (20.9)	**58/105 (55.2)**	0/105 (0.0)
Professional liability insurance	5/22 (22.7)	5/22 (22.7)	5/22 (22.7)	**7/22 (31.8)**	0/22 (0.0)
Health care delivery					
Site-specific emergency action plan	5/61 (8.2)	**19/61 (31.1)**	18/61 (29.5)	**19/61 (31.1)**	0/61 (0.0)
Additional health care providers	1/127 (0.7)	11/127 (8.7)	39/127 (30.7)	**76/127 (59.8)**	0/127 (0.0)
Medical equipment and supplies	9/79 (11.4)	23/79 (29.1)	**24/79 (30.4)**	22/79 (27.8)	1/79 (1.3)
Referral network	1/62 (1.6)	13/62 (21.0)	23/62 (37.1)	**25/62 (40.3)**	0/62 (0.0)

[a] Bold signifies the response with the highest percentage of participants.

Table 4. Importance of the Resource for Athletic Trainers Providing Per Diem Services

Resource	No. (%)[a]				
	Very Important	Important	Somewhat Important	Not Important At All	Missing Data
Informatics					
Medical history	25/157 (5.9)	55/157 (35.0)	**64/157 (40.8)**	9/157 (5.7)	2/157 (1.3)
Consent to treat	39/146 (26.7)	**53/146 (36.3)**	36/146 (24.7)	15/146 (10.3)	3/146 (2.1)
Documentation method	**25/69 (36.2)**	24/69 (34.8)	18/69 (26.1)	2/69 (2.9)	0/69 (0.0)
Legal					
Written contract	31/116 (26.7)	**41/116 (45.8)**	30/116 (25.9)	15/116 (12.9)	0/116 (0.0)
Directing physician	24/110 (21.8)	27/110 (24.5)	**40/110 (36.4)**	18/110 (16.4)	1/110 (0.1)
Standing orders	29/138 (21.0)	**42/138 (30.4)**	41/138 (29.7)	26/138 (18.8)	0/138 (0.0)
Professional liability insurance	**15/30 (50.0)**	9/30 (30.0)	5/30 (16.7)	1/30 (3.3)	0/30 (0.0)
Health care delivery					
Site-specific emergency action plan	**37/69 (53.6)**	21/69 (30.4)	11/69 (15.9)	0/69 (0.0)	0/69 (0.0)
Additional health care providers	8/131 (6.1)	22/131 (16.8)	**51/131 (39.0)**	50/131 (38.2)	0/131 (0.0)
Medical equipment and supplies	**39/80 (48.8)**	29/80 (36.3)	9/80 (11.3)	2/80 (2.5)	1/80 (1.3)
Referral network	5/71 (7.0)	25/71 (35.2)	**29/71 (40.8)**	12/71 (16.9)	0/71 (0.0)

[a] Bold signifies the response with the highest percentage of participants.

Table 5. Young Athletic Training Professionals' Perceptions of Importance of Resources When Providing Per Diem Services

Resource	n	≤10 Years of Experience, Mean ± SD	>10 Years of Experience, Mean ± SD	Mann Whitney *U*	Z Value	*P* Value[a]
Informatics						
Medical history	157	2.74 ± 0.83	2.54 ± 0.83	2624.5	−1.612	.107
Consent to treat	145	3.14 ± 0.82	2.46 ± 0.97	1600.5	−4.224	**<.001**
Documentation method	69	3.50 ± 0.67	2.65 ± 0.82	269.5	−4.107	**<.001**
Legal						
Written contract	118	3.07 ± 0.89	2.42 ± 0.98	1115.5	−3.501	**<.001**
Directing physician	110	2.78 ± 0.94	2.22 ± 1.02	1025.0	−2.972	**.003**
Physician standing orders	139	2.77 ± 0.92	2.23 ± 1.08	1694.0	−2.982	**.003**
Professional liability insurance	30	3.25 ± 0.93	3.29 ± 0.83	112.0	0.000	1.000
Health care delivery						
Site-specific emergency action plan	70	3.57 ± 0.67	3.07 ± 0.77	374.0	−2.837	**.005**
Additional health care providers	132	2.17 ± 0.89	1.65 ± 0.81	1445.0	−3.557	**<.001**
Medical equipment and supplies	81	3.48 ± 0.66	3.16 ± 0.87	655.0	−1.657	.097
Referral network	71	2.51 ± 0.71	2.07 ± 0.94	440.0	−2.168	**.030**

[a] Bold indicates a significant *P* value.

Table 6. Items Included in Emergency Action Plans

Item	Participants (n = 122), No. (%)
Venue	114 (93.4)
Personnel	93 (76.9)
Transportation	91 (74.6)
Equipment	58 (70.5)
Role delineation	49 (47.5)
Procedure for specific scenarios	7 (40.2)
Other	10 (8.2)
None of the above	0 (0.0)
Unsure	4 (3.3)

written contract, most found the document *imperative* (48.6%, n = 36/74) for providing patient care, whereas those who lacked such access indicated that it would have no effect (56.7%, n = 60/106). Overall, ATs without or unsure about having a written contract believed that having a contract was *important* to *very important* during per diem services (62.0%, n = 72/116). As for a directing physician, fewer than 50% (42.7%, n = 82/192) had access during their latest per diem experience. Of those who did have access, most individuals (46.3%, n = 38/82) found a directing physician to be *imperative* for patient care, whereas those who did not have access described no effect (52.6%, n = 51/97) and thought it only *somewhat important* (36.4%, n = 40/110). The majority of participants lacked access to a physician's standing orders (54.1%, n = 105/192) during their per diem experience, and of those, most perceived that standing orders did not have an effect on patient care (55.2%, n = 58/105). Those with access cited standing orders as *imperative* for their patient encounters (60.4%, n = 32/53), which also translated to *important* (30.4%, n = 42/138) when we assessed the overall effect of this resource on per diem services.

Most ATs had access to liability insurance (84.3%, n = 162/192), of whom 77.8% (n = 126/162) labeled it *essential* to providing patient care, whereas the feelings of those who did not have access varied greatly; the most frequent response was that it had no effect at all on patient care (31.8%, n = 7/22). Values were equal when participants who did not have access to or were unsure about professional liability insurance were asked how important they felt the resource was for per diem services (31.8%, n = 7/22). Legal resources were more important to young professionals than to their experienced colleagues (Table 5).

Health Care Delivery

The last subcategory of resources consisted of site-specific EAPs, other health care providers on site, medical equipment and supplies, and a referral network. These resources were delineated as *health care delivery resources* because they are used for initiating and continuing care (Tables 2–4). Emergency action plans were accessible to 63.5% (n = 122/192) of participants who had provided per diem services within the last year, of whom 78.7% (n = 96/122) viewed it as essential. According to the participants, EAPs included various levels of information (Table 6). This trend was disputed when we asked those who lacked access to an EAP: 60.6% (n = 37/61) indicated that an EAP had either no effect or only a slight effect. However, of those who had no EAPs or were unsure, 53.6% (n = 37/69) believed that an EAP was a *very important* resource when providing per diem athletic training services.

Table 7. Medical Supplies and Equipment Available on Site

Item	Participants (n = 108), No. (%)
Tape	98 (90.7)
First aid supplies	97 (89.8)
Ice	89 (82.4)
Automated external defibrillator	82 (75.9)
Coolers	80 (74.1)
Splints and slings	79 (73.1)
Treatment table	67 (62.0)
Emergency kit	61 (56.5)
Crutches	48 (44.4)
Cervical collar	27 (25.0)
Spine board	22 (20.4)
Other	14 (13.0)
None of the above	0 (0.0)
Unsure	0 (0.0)

Most ATs did not have access to other health care providers when working per diem (65.6%, n = 126/192) and felt that it made no difference (59.8%, n = 76/127) in patient care while also being *somewhat important* for per diem services (39.0%, n = 51/131). Of all participants, 56.3% (n = 108/192) had access to medical equipment and supplies, with varying resources available (Table 7), whereas 41.1% (n = 79/192) did not. Those who did have access saw these resources as *imperative* (89.8%, n = 97/108) to patient care, whereas those who did not or were unsure said the resource(s) were *very important* (48.8%, n = 39/80). These findings were contrary to the ATs' perceptions that a lack of access to medical equipment and supplies had only a slight effect (30.4%, n = 24/79) on patient care. The majority of participants (60.9%, n =117/192) had access to a referral network during per diem services, and most thought this was *imperative* (56.4%, n = 66/117). Of those who did not have a referral network, most did not feel the effect (*not at all*: 40.3%, n = 25/62), nor did they believe it was important (*somewhat important*: 40.8%, n = 29/71) for per diem services. Young professionals identified access to health care delivery resources as more important than their experienced colleagues did (Table 5).

DISCUSSION

Overview

When evaluating our results, it is important that we first recognize the constructs of the survey questions. Each resource was included because of its stated necessity for performing athletic training duties according to the BOC "Standards of Professional Practice."[6] Among these practices are (1) collaborating with or under the direction of a physician; (2) implementing preventive measures to mitigate patient risk; (3) providing immediate care; (4) using the medical history to determine the patient's impairment, diagnosis, level of function, and disposition; (5) choosing appropriate therapeutic interventions tailored to the patient's goals; (6) recommending program discontinuation or offering resources for continuing care; and (7) documenting all services in accordance with local, state, and federal laws, rules, and regulations.[6] Despite the setting or patient population, these regulations are the same for all

practicing ATs. Compliance with these professional standards is vital for the profession, the professional, and the patient.[6,7,10]

Vitality of the Profession

Per diem services are an opportunity to increase the availability of health care providers to communities in need.[4,13] The latest consensus survey (2019) that assessed secondary schools' access to an AT revealed that 34% of institutions still lacked access.[14,15] This finding was almost the same as in the 2015 census survey, indicating that little growth had occurred at these institutions toward hiring an on-site health care provider to aid in the wellness and well-being of their student-athletes.[14] Per diem services offer a cost-effective opportunity for secondary schools to access ATs, exposing their student-athlete population to health care services and creating the possibility of a permanent position. These services are not only expanding for secondary schools due to guidelines for appropriate medical coverage[15] but are also being made available in emerging settings (eg, club sports, youth sports, and government positions).[4] In addition, researchers[1,4,16] have focused on the need for access to athletic training services by all physically active populations. In part, these medical services can be provided to emerging settings via per diem services.

It is crucial that ATs abide by NATA's "Code of Ethics"[7] to maintain high standards and professionalism. The ethical behaviors detailed in the "Code of Ethics" are not specific to every individual and worksite; however, they are described generally to ensure that all ATs are able to follow these practices, no matter where they may be providing clinical services. Therefore, they are meant to be adhered to by every AT working in any setting, including but not limited to the professional, collegiate, secondary school, military, performing arts, industrial, physician practice, public safety, and per diem settings. Moreover, what is expected of ATs in terms of patient care should be maintained in the per diem setting. Nonetheless, our results showed that of the 11 resources that were assessed for accessibility, most ATs lacked access to 6. For per diem services to have the viability of other emerging settings, adherence to structure and best practices is required. The rendering of these services is only beneficial to the growth of the profession when quality health care is supplied and the delivery model reflects the standards of permanent positions. The resources are crucial pieces for maintaining professional standards, recognizing ATs as medical professionals, and ensuring the standard of care.

Young professionals, those with 10 or fewer years of credentialed practice experience, assigned great importance to the ability to access per diem resources. This outcome seems consistent with the perceived importance by the NATA Young Professionals' Committee and their creation of the "Best Practice Guidelines."[8] Their work suggests concern for the current state of ATs' per diem services. Education across the learning continuum should continue to stress the importance of the "Best Practice Guidelines" and "Standards of Professional Practice"[6] to help ATs avoid workplaces that leave them susceptible to risks in health care delivery.

Rendering Services

Informatics. Using informatics is one of the 5 core competencies developed by the Institute of Medicine for all health care professionals in order to provide quality care.[17] The purposes are to communicate, manage knowledge, mitigate error, and support decision making by using information technology.[17] Similar to the findings of Eberman et al,[18] our participants described similar access to documentation as those who provided athletic training services in the secondary school setting. Eberman et al[18] and we noted that the most readily available documentation method was paper and pen, despite the well-established fact that an electronic method should be used to protect personal health information and for continuity of care among providers.[18,19] Email communication, electronic medical records, and computer-aided decision-support systems also offer the potential to improve patient care across clinicians and settings, thereby reducing the chances of errors resulting from poor coordination.[17] These processes are vital for improving patient care safety and quality when ATs supply per diem services due to the transient nature of the setting and the need for disseminating information to other providers. A short form, such as that shown in the Appendix, would be beneficial for any AT to use during per diem services to ensure that all necessary information is documented and can be distributed as needed.

Legal and Practice Standards. To consider rendering services for health care providers to consider rendering services, certain requirements exist for care.[6] These requirements include acquiring consent-to-treat documentation for the specific patient (whether collected individually or for everyone), professional liability insurance for risk mitigation, and medical history information to ensure appropriate care without causing undue risk to the patient.[7,10] According to the BOC, a directing physician and standing orders are also required before medical services are provided.[6] The BOC serves to develop standards of competence, credential and maintain credentialing, and protect the public in the delivery of athletic training patient care. The BOC recognizes the differences that exist among state agencies but also establishes global standards that guide best practice. It is the duty of the AT to conform to the standards of the BOC, regardless of the state's expectations, even if those state regulations require only minimally competent care. This is not only applicable to ATs working in full-time or part-time positions but also to those providing short-term per diem services. Half of the ATs who participated in our study lacked access to a directing physician during their latest per diem experience. A total of 54% lacked access to a physician's standing orders, 13.5% to professional liability insurance, 80.2% to medical history records of the patient panel, and 65.6% to consent-to-treat verification. According to the BOC, those who did not have access to these resources were practicing in violation of standards,[6] resulting in risk to both the provider rendering these services and the patients who receive them.

The Healthcare Providers Service Organization[10] has detailed how and when ATs can be held liable for certain decisions regarding care. In 1 example, an AT applied a transcutaneous electrical nerve stimulation unit to the left lower extremity of a patient with diabetic neuropathy, which caused third-degree burns that required surgical

debridement. Knowing this patient's medical history could have reduced the risk to the patient and prevented the legal action taken against the AT. The Healthcare Providers Service Organization created recommendations to help all ATs mitigate risk in their setting, with specific recommendations for independent contractors (ie, ATs in the per diem setting). These recommendations include reviewing and complying with state regulations, ensuring that the job description follows the scope of practice, evaluating the contract carefully, and engaging with an attorney to examine any contract provisions.[10]

Delivery of Athletic Training Services

The per diem ATs in our study indicated that they spent most of their time on the domains of practice specific to the delivery of health care (emergency care and clinical examination). Logically, the resources available to them, such as a site-specific EAP, medical equipment and supplies, and a referral network, supported their ability to deliver athletic training services. Although most participants had access to these resources, the identified discrepancies could expose the patients and ATs to lapses in quality health care delivery for both traumatic and nontraumatic events.

A relevant example of a nontraumatic incident that can occur in any athletic training per diem setting is cardiac arrest. Sudden cardiac death accounts for approximately 75% of fatalities in collegiate student-athletes during sport and exercise[20] and approximately 1 case of sudden cardiac death occurs every 3 days among youths participating in athletics.[21] The initial components of managing sudden cardiac arrest include activation of emergency medical services, early cardiopulmonary resuscitation, early defibrillation, and rapid transition to advanced cardiac life support.[20,22,23] During a cardiac emergency, the probability of survival decreases 7% to 10% for every minute of active arrest, whereas the probability of survival is 89% when cardiopulmonary resuscitation and an automated external defibrillator (AED) are properly administered.[24] We found that more ATs had access to tape, first aid supplies, and ice when providing services than to an AED. Best-practice guidelines recommend that an AED be located within a 3-minute walk of all high-risk locations.[20]

Our results suggest that care of the spine-injured patient may be compromised by a lack of access to resources. Management recommendations for patients with a potential spine injury were created for emergency medical services providers and include initial stabilization and minimal handling strategies with respect to clinical judgment and triaging tools.[25] Previous researchers' conclusions varied on the use of rigid cervical collars and certain spine-boarding techniques[25] if not specifically warranted by the clinical presentation. However, it is imperative that the AT be familiar with what is accessible so that proper preparations with pertinent personnel[26] can be taken before a catastrophic incident. Considerations for the appropriate equipment to facilitate stabilization and immobilization and removal of athletic equipment[26] at the site of per diem athletic training services are vital to the success of the care provided. Access to ice coolers and a treatment table was more likely than to a cervical collar or spine board. Therefore, for per diem services, alternative methods need to be arranged with either the clinical site or other health care personnel before medical coverage starts. Interprofessional communication should establish the intended processes for effectively providing care at a clinical site that may be unfamiliar to the AT, and it is the duty of the AT to obtain this information regarding resources and practices.

Proper EAPs are needed for professional and legal reasons in the instance of a potentially catastrophic event. Well-developed and -rehearsed EAPs are the most effective way to prevent catastrophic fatalities and manage nonfatal catastrophic events.[9,22,24,27,28] The document should define the standard of care required during an emergency situation in order to promote efficient and safe delivery of health care.[9] Specifically, organizations that sponsor physical activities have a duty to develop plans that can be implemented immediately and apply appropriate standards of health care to all participants. When ATs indicated they had access to a site-specific EAP, only 47.5% of those specified that roles were delineated and 5.7% listed procedures for specific scenarios (Table 6). Emergent care processes could be delayed due to confusion on the parts of the clinician or other stakeholders about their roles or the exact action steps to take during an emergency.

Limitations and Future Directions

At the time this survey was being developed, the NATA created best-practice guidelines for per diem services.[1,2,8] We now have a reference guide for ATs to use when providing per diem services and a comprehensive checklist of essential components to verify. Based on our findings, the key is to ensure that, moving forward, ethical practices occur in accordance with federal, state, and local laws that govern the athletic training profession and that these guidelines translate to clinical practice. Due to the timing of the dissemination of these guidelines, we were not able to adequately assess their implementation.

Another aspect to consider is the perceptions of those who participated in the study. Although some results were alarming with respect to accessibility to certain resources and tools for providing care, the ATs' perceptions of the effects of these resources and their importance for patient care were also surprising. Thirty-six percent of those who did not have or were unsure of having access to a directing physician felt it was only *somewhat important* for providing patient care during per diem services. The only resources viewed as *very important* for per diem work were professional liability insurance, a site-specific EAP, medical equipment and supplies, and a method of documentation. Still, some respondents perceived these resources as being of different levels of importance. Young professionals perceived these per diem resources as more important than did their more experienced colleagues. These findings suggest that professional education has been effective in influencing perceived needs but not in empowering individuals to avoid jobs for which the appropriate resources were not provided. Moreover, education aimed at more experienced professionals needs to raise awareness about the risks of working in environments without these resources. Future researchers should explore interventions that have been successful with young professionals and methods that could be effective for more experienced ATs.

CONCLUSIONS

Overall, athletic training per diem services can be used in any setting to help provide medical care to individuals who might not otherwise have access.[3,13,16,29] However, the implementation of best-practice guidelines for these services is needed and organizations that engage these ATs must supply the necessary resources to ensure quality patient care. An inability to provide resources or have them readily available may compromise the quality of patient care provided and risk future athletic training per diem opportunities. Furthermore, this could limit the accessibility of care for underserved populations or in emerging settings. The ATs who provide per diem services must be aware of the implications of lacking access to certain resources and the effect on providing quality medical services as health care practitioners.

Appendix. Per Diem Athletic Training Services—Patient Intake Form

Supplemental Figure 1. Section 2: question breakdown if participant answered *yes* to having the resource.

Supplemental Figure 2. Section 2: question breakdown if participant answered *no* to having the resource.

Supplemental Figure 3. Section 2: question breakdown if participant answered *I am unsure* to having the resource.

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