

# Preparedness, Confidence, and Best Practices in Preventing, Recognizing, and Managing Mental Health Cases in National Collegiate Athletic Association Institutions

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**Context:** Currently, the National Collegiate Athletic Association (NCAA) recommends written policies and procedures that outline steps to support student-athletes facing a mental health challenge and the referral processes for emergency and nonemergency mental health situations.

**Objective:** To assess the mental health policies and procedures implemented and athletic trainers' perceived confidence in preventing, recognizing, and managing routine and crisis mental health cases across all 3 divisions of NCAA athletics.

**Design:** Cross-sectional survey design and chart review.

**Setting:** Online survey.

**Patients or Other Participants:** Athletic trainers with clinical responsibility at NCAA member institutions (N = 1091, 21.5% response rate).

**Main Outcome Measure(s):** Confidence in screening, preventive patient education, and recognizing and referring athletes with routine and emergency mental health conditions (5-point Likert scale: 1 = *not at all confident*, 2 = *hardly confident*, 3 = *somewhat confident*, 4 = *fairly confident*, 5 = *very confident*) using a content-validated survey (Cronbach  $\alpha$  = 0.904) and mental health policy and procedure chart review.

**Results:** Respondents indicated they felt *fairly confident* in screening (40.21%, n = 76 of 189) for risk of any mental health

condition and *fairly confident* in implementing preventive patient education (42.11%, n = 80 of 190). They were *fairly confident* they could recognize (48.95%, n = 93 of 190) and refer (45.79%, n = 87 of 190) patients with routine mental health conditions. Participants were *fairly confident* they could recognize (46.84%, n = 89 of 190) but *very confident* (46.32%, n = 88 of 190) they could refer individuals with mental health emergencies. Policies lacked separate procedures for specific emergency mental health situations such as suicidal or homicidal ideation (36.1%), sexual assault (33.3%), substance abuse (19.4%), and confusional state (13.9%). Policies also lacked a plan for regular engagement of student-athletes in leadership roles (16.7%) and annual training of all student-athletes (16.7%).

**Conclusions:** Although athletic trainers were generally confident in their ability to address emergency and routine mental health conditions, opportunities exist to improve policies for prevention, screening, and referral. Best-practice guidelines should be used as a guide to develop policies that foster an environment of mental health wellness.

**Key Words:** health care administration, implementation science, behavioral health

## Key Points

- Athletic trainers were generally confident in their ability to recognize, refer, and manage athletes with emergency and routine mental health situations.
- Increased adherence to National Collegiate Athletic Association mental health best practices is needed, with clear and concise policies that support these practices.

Over the past decade, the incidence of mental illness has steadily risen.<sup>1–4</sup> Today, 1 in 5 adults experience depression, anxiety, or other mental illnesses in their lifetime.<sup>1</sup> Mental health concerns are the third leading cause of hospitalization for young adults.<sup>1,2</sup> Rates of depression are highest among those aged 18 to 25 years, with suicide now the second leading cause of death for college-aged student-athletes.<sup>1–5</sup> Mental health diagno-

sis hospitalizations are costly, at an average of \$4300 each.<sup>2</sup> The mental health concerns student-athletes are experiencing are similar to those of their nonathlete peers.<sup>4,6</sup> Mental health disorders have a large effect on the overall health-related quality of life for student-athletes. Although exercise can be beneficial for those experiencing mental health concerns, and a support structure built into the athletic setting can improve mental well-being, other

aspects of the athletic setting may lead to feelings of isolation after injury, burnout, and increased pressure to perform.<sup>5–10</sup> Potential pressures and negative effects of sport competition can be burdensome on mental well-being in some individuals.<sup>5–7,9</sup> Specifically, injury, involuntary career termination, performance expectations, and overtraining are thought to be risk factors for depression among collegiate student-athletes.<sup>11</sup>

Previous researchers<sup>12</sup> noted that 98% of athletic trainers (ATs) had encountered student-athletes with anxiety or depression. Nearly 70% of those same ATs stated they had managed the care of student-athletes who had suicidal ideation.<sup>12</sup> Based on earlier studies and current statistics, nearly all ATs working in the collegiate setting will provide medical care to a student-athlete who has experienced mental health concerns.<sup>4,12,13</sup> Athletic trainers are primarily responsible for preventing, recognizing, and aiding in treatment plans for student-athlete health and well-being, including mental health.<sup>14</sup>

The creation and implementation of policies and procedures is an essential part of an AT's responsibilities. In 2013, the National Collegiate Athletic Association (NCAA) revised the "Interassociation Consensus Document: Best Practices for Understanding and Supporting Student-Athlete Mental Wellness."<sup>15</sup> This document provides practical steps with resources and recommendations for athletic and sports medicine departments to promote the mental well-being of student-athletes.<sup>15</sup> The NCAA best practices consist of 4 components: (1) providing access to mental health care, (2) procedures for identifying and referring student-athletes, (3) preparticipation mental health screening, and (4) environments that support mental well-being and resilience.<sup>15</sup> Additionally, a comprehensive checklist accompanies each component of the document to benchmark whether best practices are being implemented. The purpose of our study was to assess the implementation of mental health policies and procedures across all 3 divisions of NCAA athletics. We also explored ATs' perceived preparedness and confidence with respect to intervening in both routine and emergent mental health concerns.

## METHODS

We used a cross-sectional research design with chart review. The project was deemed exempt by the institutional review board, and all recruits consented before participating.

### Participants

We identified supervising ATs (eg, head ATs, directors of athletic training or sports medicine) from all NCAA member institutions using publicly available web pages. If an institution did not have a designated supervising AT (according to the web page), 1 AT from the institution was contacted. We sent a total of 1104 emails; 3 emails failed, 5 bounced, and 5 were duplicates, resulting in 1091 emails successfully distributed. A total of 235 institutions participated in the survey, for a response rate of 21.5%. We distributed the survey on May 1, 2019. Reminder emails were sent via Qualtrics once per week for the following 2 weeks. The emails were sent at variable times

to account for time zone differences (9 AM, 1 PM, and 10:30 AM EDT).

### Instrumentation

A 2-part instrument, containing a survey and chart review, was created based on the NCAA mental health best-practice guidelines and checklists.<sup>15</sup> For the survey component, we constructed an 18-item questionnaire that consisted of university demographics (4 items); mental health preparedness, including policy creation and review of incidence rates (8 items); and confidence in screening, preventive patient education, and recognizing and referring athletes with routine and emergency mental health conditions (6 items; 5-point Likert scale: 1 = *not at all confident*, 2 = *hardly confident*, 3 = *somewhat confident*, 4 = *fairly confident*, 5 = *very confident*). To develop the questionnaire, we provided a definition for an emergency mental health situation based on the NCAA mental health best-practice guidelines and then asked participants to indicate if they had a policy, when it was created, how many situations had occurred in the last 12 months, and finally, how recently the policy was reviewed. Similarly, we supplied the definition for routine mental health situations and asked the same questions. For the second component, we created a 23-item chart review of mental health policies to evaluate the presence of clinical licensures of practitioners providing mental health care, procedures for identifying mental health concerns and referring student-athletes for routine and emergency mental health situations, preparticipation mental health screening, and health-promoting environments that support mental well-being, developed from the NCAA's comprehensive checklist.<sup>15</sup>

Both the questionnaire and chart review were assessed by 3 content experts using a content-analysis rubric, which asked them to indicate if an item needed revision or was sufficient as written. We repeatedly reevaluated the questionnaire and chart review through 3 rounds until consensus was reached. No major deviations from the guidelines provided by the NCAA occurred. The confidence items resulted in strong internal consistency (Cronbach  $\alpha$  = .904).

After content validation, we pilot tested the chart review on 4 randomly selected policies supplied by survey participants. Three investigators evaluated all 4 charts independently and then met to establish a consensus on all items for training purposes. The principal investigator (J.Y.) then conducted chart reviews of mental health policies from 36 survey participants. If the principal investigator was unable to make a determination on a specific item, the 3 investigators met to review the item and come to consensus. After initial review by the primary investigator, 4 policies required a group consensus on a total of 10 chart review items.

### Statistical Analysis

We used frequencies and percentages to summarize perceived preparedness for and confidence in intervening in both routine and emergent mental health situations and the chart review findings. We calculated a Kruskal-Wallis nonparametric 1-way analysis of variance and separate Mann-Whitney *U* tests to determine the differences among

**Table 1. Individual and Institutional Characteristics**

Characteristic	Value
Individual	
Experience, y (mean $\pm$ SD)	19 $\pm$ 10
Institutional	
National Collegiate Athletic Association division of competition, No. (%)	
I	78 (33.19)
II	52 (22.13)
III	105 (44.68)
Student-athletes, No. (mean $\pm$ SD)	391.20 $\pm$ 158.37
Sports medicine athletic trainer staff composition, mean $\pm$ SD	
Full time	4.68 $\pm$ 3.45
Part time	0.49 $\pm$ 1.09
Interns	0.77 $\pm$ 1.75
Graduate assistants	1.19 $\pm$ 2.26

NCAA divisions in the presence of emergency and routine mental health policies. Significance was set at  $P < .05$  a priori.

## RESULTS

### Institutional Characteristics

Athletic trainers ( $N = 235$ ) from 78 Division I (33.19%), 52 Division II (22.13%) and 105 Division III (44.68%) institutions responded. Participants averaged  $19 \pm 10$  years of experience as credentialed ATs. They reported providing care to  $391 \pm 158$  NCAA student-athletes. On average, respondents indicated that their sports medicine departments employed  $5 \pm 3$  full-time ATs,  $0.5 \pm 1$  part-time ATs,  $1 \pm 2$  intern ATs (Although the term “intern” is outdated, it is still used by some. Therefore, we decided to include it as a category.), and  $1 \pm 2$  graduate assistants. Demographic data are summarized in Table 1.

### Behaviors and Confidence

Nearly two-thirds of the respondents noted the presence of a routine (65.84%;  $n = 133/202$ ) or emergency (65.53%,  $n = 154/235$ ) mental health policy. Emergency mental health policies were created  $22 \pm 26$  months (range = 1–203 months) before the survey, whereas routine mental health policies were created  $27 \pm 37$  months (range = 1–203 months) before the survey. Policy reviews typically

happened within 3 months (38.54%,  $n = 74/192$ ); however, 17.7% ( $n = 34/192$ ) stated policy review or revision never occurred. Nearly three-fourths of respondents indicated that a policy review had occurred within the last 12 months (74.48%,  $n = 143/192$ ), as is recommended by NCAA best practices. Respondents reported an average of  $2 \pm 3$  (range = 0–30) emergency mental health situations and  $19 \pm 27$  (range = 0–200) routine mental health situations within the past year. They had engaged in professional development related to mental health with variable recency:  $\leq 3$  months (25.64%,  $n = 50/195$ ),  $> 1$  year ago (8.21%,  $n = 16/195$ ), or never (16.92%,  $n = 33/195$ ). Participants indicated they felt *fairly confident* in screening (40.21%,  $n = 76/189$ ) for risk of any mental health condition and *fairly confident* in implementing preventive patient education (42.11%,  $n = 80/190$ ). They were *fairly confident* they could recognize (48.95%,  $n = 93/190$ ) and refer (45.79%,  $n = 87/190$ ) athletes with routine mental health conditions. Participants were *fairly confident* they could recognize (46.84%,  $n = 89/190$ ) but *very confident* (46.32%,  $n = 88/190$ ) they could refer those with mental health emergencies (Table 2).

### Policies and Confidence

We identified a difference among divisions for emergency ( $\chi^2 = 13.056$ ,  $P = .001$ ) and routine ( $\chi^2 = 9.264$ ,  $P = .010$ ) policies, whereby Division I institutions, proportionally, had more policies than Division III institutions (emergency policies:  $P < .001$ ; routine policies:  $P = .002$ ). Based on this finding and the premise that those with more experience with policies may have had increased confidence, we conducted a subanalysis to compare the levels of confidence among divisions in which the ATs worked (Kruskal-Wallis nonparametric 1-way analysis of variance and separate Mann-Whitney  $U$  tests). Differences were deemed significant at  $P < .05$ . We identified main effects for all comparisons and found differences between Divisions I and III for all 6 measures of confidence in the post hoc analysis and differences between Divisions I and II for confidence in the ability to recognize individuals with routine mental health conditions and between Divisions II and III for confidence in the ability to recognize those with emergency mental health conditions (Table 3).

Among the 36 policies reviewed in this study, all specified that the mental health evaluations and treatments

**Table 2. Participants' Confidence Ratings<sup>a</sup>**

Item	Total No. of Responses	Not at All Confident	Hardly Confident	Somewhat Confident	Fairly Confident	Very Confident	Mode	Mean $\pm$ SD
I am confident in my ability to recognize <i>routine</i> mental health situations.	190	1	4	43	93	49	4	4.0 $\pm$ 0.8
I am confident in my ability to appropriately refer patients with <i>routine</i> mental health situations.	190	1	2	16	87	84	4	4.3 $\pm$ 0.7
I am confident in my ability to recognize <i>emergency</i> mental health situations.	190	1	5	28	89	67	4	4.1 $\pm$ 0.8
I am confident in my ability to appropriately refer <i>emergency</i> mental health situations.	190	1	3	25	73	88	5	4.3 $\pm$ 0.8
I am confident in my ability to implement mental health education as a prevention measure for mental health situations.	190	7	18	48	80	37	4	3.6 $\pm$ 1.0
I am confident in my ability to screen for increased risk of mental health situations.	189	9	27	51	76	26	4	3.4 $\pm$ 1.0

<sup>a</sup> Scale: 1 = *not at all confident*, 2 = *hardly confident*, 3 = *somewhat confident*, 4 = *fairly confident*, 5 = *very confident*.



**Table 3. Confidence Differences Among National Collegiate Athletic Association Divisions<sup>a</sup>**

Item	Division	Mean $\pm$ SD
I am confident in my ability to recognize routine mental health situations.	I <sup>b</sup>	4.2 $\pm$ 0.8
	II <sup>c</sup>	3.9 $\pm$ 0.8
	III	3.9 $\pm$ 0.1
I am confident in my ability to appropriately refer patients with routine mental health situations.	I	4.5 $\pm$ 0.1
	II	4.3 $\pm$ 0.1
	III	4.2 $\pm$ 0.1
I am confident in my ability to recognize emergency mental health situations.	I <sup>b</sup>	4.4 $\pm$ 0.1
	II <sup>d</sup>	4.2 $\pm$ 0.1
	III	3.9 $\pm$ 0.1
I am confident in my ability to appropriately refer emergency mental health situations.	I <sup>b</sup>	4.5 $\pm$ 0.1
	II	4.3 $\pm$ 0.1
	III	4.1 $\pm$ 0.1
I am confident in my ability to implement mental health education as a prevention measure for mental health situations.	I <sup>b</sup>	3.8 $\pm$ 0.1
	II	3.7 $\pm$ 0.2
	III	3.5 $\pm$ 0.1
I am confident in my ability to screen for increased risk of mental health situations.	I <sup>b</sup>	3.7 $\pm$ 0.1
	II	3.5 $\pm$ 0.1
	III	3.2 $\pm$ 0.1

<sup>a</sup> Sample: Division I = 65, Division II = 42, Division III = 82.

<sup>b</sup> Division I athletic trainers responded with greater confidence than those in Division III ( $P < .05$ ).

<sup>c</sup> Division I athletic trainers responded with greater confidence than those in Division II ( $P < .05$ ).

<sup>d</sup> Division II athletic trainers responded with greater confidence than those in Division III ( $P < .05$ ).

were to be provided by qualified mental health practitioners. Most of the NCAA member institutions had policies that appropriately identified the characteristics of mental health emergencies (72.2%,  $n = 26/36$ ), when to contact emergency medical services (77.8%,  $n = 28/36$ ), communication of management expectations during a crisis (80.6%,  $n = 29/36$ ), and providers for nonemergency mental health concerns (83.3%,  $n = 30/36$ ). Regarding the

reviewed policies, most did not have written procedures for the management of acute delirium or confusional state (86.1%,  $n = 31/36$ ) and management of acute intoxication or drug overdose (80.6%,  $n = 29/36$ ). Only 2 policies (5.6%) identified local protocols for involuntary retention (Table 4).

## DISCUSSION

Although institutions create mental health policies, these policies should be more robust to prevent and manage student-athletes with mental health incidents.<sup>15</sup> These policies create an environment that fosters student-athlete well-being.<sup>15</sup> The policies should include written plans for the identification and referral of individuals experiencing mental health challenges and promotion of student-athlete health and well-being through the collaboration of the athletics staff, sports medicine team, campus administration, and the student-athlete population.<sup>15</sup> Researchers<sup>4,12,13</sup> have stated that every AT in the NCAA is likely to interact with a patient with a mental health concern; therefore, it is important that ATs and other health care providers in athletic medicine be prepared before a situation arises.

The AT may provide care in emergency mental health situations.<sup>14</sup> A *psychiatric emergency* is an acute disturbance of behavior, thought, or mood of a person, which if untreated may lead to harm to either the individual or others.<sup>16</sup> The National Institute of Mental Health defines *serious mental illness* as a mental, behavioral, or emotional disorder resulting in serious functional impairment, which substantially interferes with or limits 1 or more major life activities.<sup>1</sup> Emergencies are classified as *major* when there is a danger to life either of the patient or of others in their environment or *minor* when there is no threat to life but severe incapacitation may result.<sup>16</sup> Respondents in this study reported  $>1$  emergency mental health situation in the 12 months before the survey, demonstrating the importance

**Table 4. Chart Review of Mental Health Policy Inclusion**

Prompt	No. (%)		
	Yes	No	Unknown
Formal mental health evaluation or treatment by qualified practitioners	36 (100.0)	0 (0.0)	0 (0.0)
Identifies behaviors related to mental health emergencies	26 (72.2)	10 (27.7)	0 (0.0)
Written procedure for management of suicidal or homicidal ideation	13 (36.1)	23 (63.9)	0 (0.0)
Written procedure for management of sexual assault	12 (33.3)	24 (66.7)	0 (0.0)
Written procedure for management of acute psychosis or paranoia	7 (19.4)	29 (80.6)	0 (0.0)
Written procedure for management of acute delirium or confusional state	5 (13.9)	31 (86.1)	0 (0.0)
Written procedure for management of acute intoxication or drug overdose	7 (19.4)	29 (80.6)	0 (0.0)
Immediately identifies medical services	28 (77.8)	8 (22.2)	0 (0.0)
Identifies local protocol for involuntary retention	2 (5.6)	34 (94.4)	0 (0.0)
Management expectations of each stakeholder during a crisis situation	29 (80.6)	7 (19.4)	0 (0.0)
Steps after an emergency situation has resolved for patient support	16 (44.4)	20 (55.6)	0 (0.0)
Formal policy for contacting family for a mental health emergency	18 (50.0)	18 (50.0)	0 (0.0)
Policies are provided to stakeholders specifying management roles	5 (13.9)	1 (2.85)	30 (83.3)
Identifies symptoms/behaviors of nonemergent mental health concern	22 (61.1)	14 (38.9)	0 (0.0)
Specifies referral to a licensed mental health professional	30 (83.3)	6 (16.7)	0 (0.0)
Specifies who should be responsible for making the referral	28 (77.8)	8 (22.2)	0 (0.0)
Provides written instructions for referral of nonemergent situations	5 (13.9)	1 (2.7)	30 (83.3)
Preparticipation examination includes screening for mental health disorders	14 (38.9)	0 (0.0)	22 (61.1)
Procedure for when/where symptomatic or at-risk student-athlete will be referred	12 (33.3)	2 (5.6)	22 (61.1)
Annual meetings to develop strategies of education and management	6 (16.7)	0 (0.0)	30 (83.3)
Student-athlete advisory committee representatives and student-athletes receive annual information	6 (16.7)	0 (0.0)	30 (83.3)
Student-athlete advisory committee representatives and student-athletes receive annual information on prevention and response to sexual assault/interpersonal violence/hazing	4 (11.1)	0 (0.0)	32 (88.9)

of having all policies and procedures in place before an incident. Most participants indicated the presence of written emergency mental health policies; however, not all emergency mental health-related situations were included. According to the NCAA best practices, emergency mental health-related situations that should be addressed in the “Mental Health Emergency Action and Management Plan” include suicidal or homicidal ideation; victims of sexual assault, with clarification regarding exemptions from mandated reporting; highly agitated or threatening behavior; acute psychosis or paranoia; acute delirium or confusional state; and acute intoxication or drug overdose.<sup>15</sup>

Specific written procedures for emergency mental health situations are necessary to provide a clear action plan for all stakeholders and first responders within the athletics and sports medicine departments. Only a third of policies reviewed had a written policy for the management of patients with suicidal or homicidal ideation. Outside of cardiovascular-related deaths, suicide accounts for the most NCAA student-athlete sudden deaths (17%), accentuating the need for individualized emergency procedures.<sup>17</sup> According to the American Foundation for Suicide Prevention, some risk factors that can lead to suicide are depression, anxiety, and substance use or abuse problems.<sup>18</sup> Warning signs that athletes and medical providers should be aware of include (1) talking, writing, or thinking about death; (2) impulsive, aggressive, or reckless behavior; (3) increased alcohol and drug use; (4) social withdrawal from friends, family, or the community; and (5) dramatic mood swings.<sup>19</sup> These signs may indicate the need for referral to a mental health provider.<sup>19</sup> In extreme cases when student-athletes may be a danger to themselves or others, a mental health emergency action plan should be enacted. Signs of imminent danger that warrant immediate help from a mental health care provider are collecting and saving pills or buying a weapon, giving away possessions and putting affairs in order, saying goodbye to family and friends, talking about death, and self-harming behaviors.<sup>19</sup> Policies with listed signs and symptoms of suicidal or homicidal ideation and to whom to report the warning signs are beneficial to policy users. Information provided to all stakeholders should differentiate between warning signs that necessitate a routine referral and those that require more urgent action be taken.

Similarly, only one-third of respondents had written policies for the management of reported sexual assaults. Sexual violence on college campuses continues to be a pervasive public health problem, with approximately 11.2% of all students reporting rape or sexual assault through physical force.<sup>20</sup> Moreover, male college-aged students are 78% more likely than nonstudents of the same age to be victims of rape or sexual assault, whereas females of the same age are 20% less likely.<sup>20</sup> Sexual violence is associated with negative mental health outcomes, specifically posttraumatic stress disorder, depression, anxiety, substance use disorders, and suicidal behavior.<sup>21,22</sup> Researchers<sup>23</sup> suggested that institutions involved in NCAA sports are associated with increased reporting of relationship and sexual violence. Reports of sexual violence were greater on campuses with NCAA sports and were attributed to the presence of large sporting events and positive sport outcomes.<sup>23</sup> It is important that campuses encourage

faculty, staff, and administrators to welcome reporting and to take statements seriously. Campuses should improve their climate surveys and make these data available to the public to increase awareness of students and their parents.<sup>23</sup> Policies should identify situations in which the individual responding to the situation should contact the campus crisis center designated to address sexual assault.<sup>15</sup> Schools have obligations under Title IX to stop sex discrimination, prevent its recurrence, and address its effects.<sup>24</sup> To do so, schools must have a policy in place that prohibits sex discrimination, including sexual harassment and sexual violence, and grievance procedures that provide for prompt and equitable resolution when incidents occur.<sup>24</sup> Policies must be established in accordance with Title IX. Responsible employees, including ATs as defined under Title IX, and mandatory reporters within the athletics departments should be identified and trained in consultation with the Title IX coordinator and their identities shared with staff and student-athletes.<sup>25</sup>

Drug-related incidents accounted for 12% of sudden deaths in the NCAA.<sup>17</sup> Earlier investigators<sup>26</sup> identified that the majority of NCAA student-athletes engaged in substance use, particularly alcohol consumption. Stressors specific to student-athletes, including pressures to perform, injury, major life transitions, and coach and team relations, can lead to substance use.<sup>26</sup> Psychosis, paranoia, delirium, and confusion were some of the other conditions that were noticeably absent from and included in less than one-fifth of the mental health emergency action plans reviewed. Because sudden changes in mental state can be caused by substance abuse, acute situations of psychosis, paranoia, delirium, or a confused state should be treated as mental health emergency situations and require immediate medical care.<sup>3,26</sup>

Publicly available and accessible policies provide all stakeholders with the information necessary to successfully navigate both routine and emergent mental health situations. In this study, we found that fewer policies had been developed in Division III schools, likely contributing to less confidence in screening, preventive patient education, and recognizing and referring athletes with routine and emergency mental health conditions. Referral protocols must include information about the parties involved, who can share confidential information, and communication among staff, coaches, student-athletes, and parents.<sup>15</sup> Even when emergent situations occur, patient privacy guidelines must be followed to protect the rights of the student-athlete.<sup>15</sup> After a crisis situation, the individual will need a plan of care to transition back into sport and academic activity. These return-to-participation plans should be developed in collaboration with available campus and community resources, including but not limited to athletics, campus health, counseling services, disability services, and community agencies.<sup>15</sup>

Athletic trainers must be adequately prepared to recognize, refer, and prevent a wide variety of mental health conditions.<sup>4,8,12–15</sup> Given their close proximity and frequent contact with student-athletes, ATs have a responsibility to implement best practices for preventing, identifying, and referring patients with mental health-related illnesses.<sup>14</sup> Early detection is key to preventing emergency situations; this is particularly true with depression screenings due to the increased risk of self-harm.<sup>5,8,10,13,15,19,27,28</sup> Mental

health screenings were part of the preparticipation examination in fewer than half of policies reviewed. This also aligns with the lower levels of confidence, across all levels, for screening for mental health conditions. Validated mental health screening questionnaires are recommended in the NCAA best practices during the preparticipation examination to screen for symptomatic and at-risk student-athletes.<sup>5,15</sup> Procedures specifying when student-athletes should be referred to mental health care providers should accompany mental health screening practices.<sup>5,6,15</sup> One-third of the policies reviewed identified when and where symptomatic or at-risk student-athletes would be referred. Decisions related to what approach will be taken to screening should be made by the primary athletics health care providers in collaboration with licensed practitioners who are qualified to deliver mental health services.<sup>15</sup>

Most policies did not explicitly reference the methods of preventing mental health incidents or strategies to promote mental health and wellness. The NCAA recommends annual meetings with coaches, administrators, and student-athletes.<sup>15</sup> Fewer than one-fifth of policies endorsed annual meetings to review mental health education. The student-athlete advisory committee and student-athlete population should be involved in mental health wellness promotion.<sup>5,15</sup> Student-athletes should receive education on prevention and on identifying the signs and symptoms of mental health disorders and the appropriate response and intervention to peer distress.<sup>9</sup>

## Limitations and Future Research

A primary limitation of the study was the self-selection bias that is likely to occur with all survey research. It is possible that our sample was more interested in the topic of mental health, thereby influencing our results. In addition, the chart review consisted of only 36 policies; although this is a small sample, it does offer insight into policy adherence. Mental health concerns will continue to be pervasive in this population, even with prevention and interventions; however, efforts aimed at effectively educating ATs and destigmatizing behavioral health care should be evaluated.

## CONCLUSIONS

Our findings suggest that more work needs to be done in policy development and in training ATs relative to preventing, recognizing, and managing behavioral health care concerns in collegiate student-athletes. Athletic trainers at NCAA institutions need to develop clear, concise, and patient-available policies that include strategies for prevention, screening, and referral. Best-practice guidelines put forth by the NCAA can be used as a guide to policy creation.

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