

CALIFORNIA LEGISLATORS' AND SUPERINTENDENTS' PERCEPTION OF  
ATHLETIC TRAINING

A THESIS

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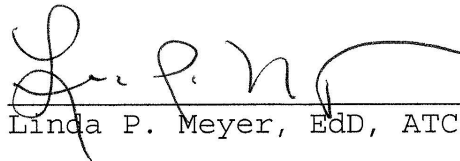
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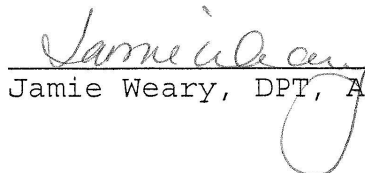
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## INTRODUCTION

California is one of three states that currently has no state regulation for the profession of athletic training. This is a problem for not only the profession but also for patients whom are either under the care of someone who is not trained to provide needed health care services or actually has no one supervising a given event. As of 2002, only 62% of California high schools had an athletic trainer (AT) on campus at least part time.<sup>1</sup> Not only are participants at risk of receiving improper healthcare, but there is a liability risk present for ATs, legislators, school district superintendents, coaches and athletic directors whom assume care for these students.

The purpose of this study was to assess current California legislator's and school district superintendent's perception of the roles and responsibilities of certified athletic trainers. As of now there is no state licensure, registration, or certification in place to regulate the practice of athletic training in the state of California. If we were able to assess the current knowledge and perceptions of CA legislators and superintendents about the benefits of the profession, it

would help to guide and educate the efforts by the California Athletic Training Association (CATA), National Athletic Trainers' Association (NATA), and Board of Certification (BOC) to obtain state regulation to both protect professionals working in the field as well as the athletes participating in sports.

Athletic training is practiced by health care professionals who are certified by the BOC to work under the direction of physicians to optimize activity and participation of patients and clients. Athletic training encompasses the prevention, diagnosis, and intervention of emergency, acute, and chronic medical conditions involving impairment, functional limitations, and disabilities.<sup>2</sup> Students who want to become certified athletic trainers must earn a minimum of a bachelor's degree from a university that is accredited by the Commission on Accreditation of Athletic Training Education (CAATE). Accredited programs' curricula include formal instruction in areas such as injury/illness prevention, first aid and emergency care, assessment of injury/illness, human anatomy and physiology, therapeutic modalities, and nutrition.

Classroom learning is enhanced through clinical education experiences. More than 70% of certified athletic trainers hold at least a master's degree.<sup>2</sup> In 1990, the

American Medical Association (AMA) recognized the profession of athletic training as an allied health care profession. Further, in 1998, the AMA recommended that all high schools provide athletic training services.<sup>3</sup> The NATA, BOC, and CAATE have become more efficient in management, regulation, and progression of the profession.

There are different types of state-level regulation including: licensure, certification, registration, exemption, and no regulation. To further clarify, licensure is a form of credentialing, administered by state government to protect the public and regulate a practice of trade or profession. Certification is more a form of title protection, established by state law or professional association, to show that practitioners have necessary knowledge and skills to protect the public.<sup>4</sup> Registration is a type of system that requires qualified members of a profession to register with the state to be able to practice. There are three states that currently have no licensure; they are California, Alaska, and Hawaii in where there is an absence of any form of law protection, either for the practitioner or the public. Obviously, it is of benefit for everyone involved with athletic training, be it the actual ATs or those under the care of ATs, to have a form of state regulation to protect all parties involved.<sup>4</sup>

There are legal parameters the certified athletic trainer has to abide by and work under. Statutory, regulatory, and case law comprise the three categories of law that are separate from an organization which any given athletic trainer is employed. Statutory law can be legislation at both the federal and state level that is also known as public law. State laws are much more specific and have a greater impact on athletic trainers. Athletic trainers must be able to locate laws governing their practice in their respective state to protect themselves. Regulatory laws are a series of rules composed by a state or federal agency such as the Drug Enforcement Agency. Finally, case laws are opinions of judges that come from litigation dealing with a specific issue. Case laws form the basis for state laws.<sup>5</sup>

Fortunately, there are only a few states, such as California, where athletic training is practiced and is not licensed and individuals are still calling themselves ATs without the education or the qualifications necessary to practice sports medicine.<sup>6</sup> It is believed that uniformity of state regulation, increase in public knowledge, and an increase in professional recognition will all benefit the profession and those under the care of an athletic trainer.<sup>6</sup>

Increasingly, ATs are managing the health of physically active populations that are not only limited to young competitive athletes, but also industrial workers, military personnel, public safety personnel, entertainment groups, and patients of a healthcare delivery organization.<sup>7</sup> Given this development, ATs need to improve their focus and embrace the role as healthcare professionals instead of settling with the stereotype as someone who merely tapes ankles. This can occur by not only educating the public, but also seeking and implementing evidence based medicine and clinical epidemiology in practice.

The purpose of this study, specifically, was to analyze the perception of those in power in the state of California to assist CATA, NATA, and the BOC's efforts to pass legislation in favor of professional recognition for athletic training and ultimately the public. In a study by Gould and Deivert<sup>8</sup>, research was completed on administrators in Ohio. It was shown that while 73% of administrators were very concerned about legal-liability issues, only 55% of those thought they should hire an AT, at least part-time.<sup>8</sup> Even still, administrators in Ohio are not willing to allocate sufficient funds for employing ATs which leads Gould and Deivert to believe that they have an inaccurate

knowledge of the value of athletic training, as evidenced by inadequate compensation and low employment rates.<sup>8</sup>

The data obtained from this study provides insight to the knowledge of legislators and superintendents of ATs' education requirements, scope of practice, and professional roles. Ideally, the data could suggest if the respondents have the current facts and information showing that ATs are qualified health care professionals and should be a necessary entity in every secondary school in the state. Passing state law is necessary to provide the appropriate health care to all student athletes, as well as protecting qualified ATs. Ideally, this information will be used as instruction to guide legislative and educational efforts in California.

The objective now is to increase the public's awareness of the profession. It is not known which technique will best serve this purpose. It has been recommended that ATs separate themselves from other professions with similar titles by changing the name in which they refer to themselves, such as being called athletic therapists instead.<sup>6</sup> The main goal is to inform and educate the public that ATs are indeed health care professionals and should be perceived as such.

## METHODS

The purpose of this study was to examine the perception of California legislators and school district superintendents knowledge on the profession of athletic training. The goal was to provide the California Athletic Training Association (CATA) and NATA with survey results that can aid the effort in pursuing state regulation in California. The methods section describes how this research was carried out and includes the following: research design, preliminary research, subjects, instruments, procedure, hypotheses, and data analysis.

### Research Design

A descriptive research design was used with an Athletic Training Survey (ATS) (Appendix C1) to conduct this study. The dependent variable was the subject's perception of the roles and responsibilities of certified athletic trainers. The independent variables included the subject's employment position, contact with an athletic trainer, whether the subject has or has not participated in

sports, and whether the subject currently has or has had a child who has participated in sports in high school or college. The strength of this study was that the survey has been previously used and validated and was employed in this research to identify the perceptions of California, instead of West Virginia as it was used in a previous study. Due to this prior validation, the survey was not changed for its use in this study. The limitations in this study include the possibility of emails or addresses being incorrect, possibility of a low response rate due to the use of email and Survey Monkey, and the possibility that someone other than the intended subject complete the survey.

### Subjects

The subjects (N=620) that were used for this study were California's legislators (N=120), senators (N=40), assembly members (N=80), and secondary school superintendents (N=620). The researcher chose to use the United State Postal Service (USPS) to mail a copy of the ATS and cover letter to the California legislators. As for the superintendents, an email was sent with a link to [surveymonkey.com](https://www.surveymonkey.com) to complete the survey to be able to reach the 620 superintendents. Included in the email was a cover



letter (Appendix C2) introducing the researcher, as well as explaining the purpose of the study. All surveys were anonymous and were kept completely confidential at all times. Data collected via pen and paper instrument were stored in a locked filing cabinet in the graduate athletic training program director's office. The Informed Consent was assumed upon completion and submission of the survey. The risk for participating in this study was minimal. The study was approved by the Institutional Review Board (Appendix C3) at California University of Pennsylvania. Each participant's identity remained confidential and was not included in the study.

#### Preliminary Research

There was no preliminary research completed due to the ATS having been used in a prior study with subjects in West Virginia. The researcher has chosen to use the identical survey to gain insight on the perceptions of California legislators' and superintendents' knowledge of the athletic training profession and to potentially allow for comparison of data between the two states. A preliminary study for this project was not required because the original survey was validated through all the questions deriving directly

from the six domains of athletic training defined in the BOC Role Delineation Study 5<sup>th</sup> edition<sup>9</sup> (RDS), which outlines the roles and responsibilities of a certified athletic trainer, (AT). Validity and reliability were already tested in two phases. The first phase was completed by a panel of experts assembled by the BOC in November, 2002 to identify the domains, task, knowledge, and skills consistent with the essential elements of athletic training.<sup>9</sup> The second phase required a sample from 5,000 ATs to review and validate the work of the panel, in particular, to evaluate the "importance and criticality" for the proposed domains and tasks by way of a survey.<sup>9</sup> The results of the survey validated the domains and tasks identified by the panel of experts.<sup>9</sup>

### Instruments

The researcher implemented a previously used survey with questions derived from the six domains of athletic training described in the BOC RDS 5<sup>th</sup> ed.<sup>9</sup> Demographic information was collected and included: gender, age, current position, and years of experience as a California Legislator or Superintendent. There were also additional demographic questions regarding previous participation in

athletics, injury history resulting from playing sports, and if the services of an AT were also asked of the survey participants. Along with these demographic questions, there were a series of questions that related to the survey participant's children and his/her participation in athletics. Following the demographic questions, the survey contained 35 Likert scale questions derived from the six domains as defined in the BOC RDS 5<sup>TH</sup> ed,<sup>9</sup> with a Likert scale ranging from: 1 - strongly disagree, 2 - somewhat disagree, 3 - no opinion, 4 - somewhat agree, and 5 - strongly agree. The answers of the surveys were analyzed using an independent sample t-test to examine the hypothesis. The current survey received no nomenclature changes due to the desire to compare the results received in this study to the prior data.

The ATS (Appendix C1) was distributed by the researcher to each chosen California legislator via USPS and each superintendent using email with a link to [surveymonkey.com](https://www.surveymonkey.com). Distribution of the survey to the superintendents using email was chosen due to cost effectiveness and the ability to survey all California superintendents with the number of subjects being quite large.

## Procedure

The researcher applied for approval from the Institutional Review Board (IRB) at California University of Pennsylvania (Appendix C3) before any research was conducted. A cover letter was also written to inform the subjects of the purpose, directions, potential risks, and obtain informed consent. The study was distributed through both USPS and email. The 120 legislators received the survey and cover letter via the USPS. The 620 superintendents received a link to the survey on survey monkey via email. The names and mailing addresses of all California senators and assembly members were obtained from California legislature website available at: <http://www.leginfo.ca.gov/yourleg.html>. The contact information was obtained for all California superintendents through an online database accessed from the California Board of Education at: <http://www.cde.ca.gov/ds/si/ds/pubschls.asp>. There were 120 copies of the survey that were mailed via USPS to each California legislator containing a cover letter, ATS (Appendix C1), and a postage paid, pre-addressed envelope

to return the completed survey to the researcher at California University of Pennsylvania. The ATS was emailed by the researcher to each California legislator and superintendent with the cover letter. Postage for the study was allotted from the graduate athletic training program budget. The survey was designed to take less than ten minutes to complete.

### Hypotheses

The following hypotheses were based on previous research and the researcher's intuition based on a review of the literature.

1. California superintendents will not have a significantly different score than legislators on the survey assessing athletic trainers' roles and responsibilities.
2. California superintendents and legislators who have participated in sport will not have a significantly different score than those whom have and/or do not.
3. California superintendents and legislators who have at least one child who has or is currently participating in athletics will not have a significantly different score than those who have and/or do not.

## Data Analysis

An independent samples t-test was performed to compare the California legislators' answers to the superintendents' responses. All data was analyzed by SPSS version 18.0 for windows at an alpha level of 0.05. The research hypothesis was analyzed by SPSS version 18.0 for Windows with a level of significance of 0.05.

## RESULTS

The following section will reveal demographic data and hypothesis testing obtained through the Athletic Training Survey.

### Demographic Information

The ATS was sent to a total of 620 California superintendents. The California legislators are made up of 80 Assembly Members and 40 Senators. The 120 California superintendents consisted of individuals across the state that provided their contact email to the California Board of Education. A total of 132 surveys were returned resulting in an overall completion rate of 18%. Table 1 is a breakdown of the frequency of return by position.

**Table 1.** Frequency of Return

<b>Position</b>	<b>Frequency (%)</b>
Superintendents	113 (22.6)
Legislators	19 (15.8)

Table 2 represents the frequency for the gender of the participants whom returned the survey by position.

**Table 2.** Frequency for Gender

<b>Gender</b>	<b>Superintendent (%)</b>	<b>Legislator (%)</b>
Females	21 (21.2)	6 (40.0)
Males	78 (78.6)	9 (60.0)

Table 3 reports the frequency for participants grouped by age class for both positions. There were 18 individuals who did not provide their age on the returned survey but their results were still analyzed.

**Table 3.** Frequency for Age

<b>Age</b>	<b>Superintendent (%)</b>	<b>Legislator (%)</b>
< 39	17 (15.1)	9 (47.3)
40-49	24 (21.2)	2 (10.5)
50-59	58 (51.3)	6 (31.6)
60-69	13 (11.5)	2 (10.5)
>70	1 ( 1.9)	0 (0)

Table 4 reports the frequency for individuals grouped by classes for the total number of years at their current position. All participants who returned the survey had been at their current position for greater than one year.



**Table 4.** Frequency of Years at Current Position

<b>Years</b>	<b>Superintendent (%)</b>	<b>Legislator (%)</b>
1-5	68 (69.4)	12(80.0)
6-10	20 (20.4)	2 (13.4)
11-15	5 ( 5.0)	1 ( 6.7)
16-20	4 ( 4.0)	0 (0)
>21	1 ( 1.0)	0 (0)

Table 5 represents responses given to the survey question that asked if the individual participated in school sponsored athletics in high school or college.

**Table 5.** Frequency that Participated in Sports

<b>Participation</b>	<b>Superintendent (%)</b>	<b>Legislator (%)</b>
Yes	79 (80.6)	13 (86.7)
No	19 (19.4)	2 (13.3)

Table 6 shows those individuals who sustained an injury while participating in athletics in high school or college.

**Table 6.** Sustained an Injury

<b>Injured</b>	<b>Superintendent (%)</b>	<b>Legislator (%)</b>
Yes	56 (57.1)	5 (33.3)
No	42 (42.9)	10(66.7)

Table 7 examines those survey participants who have children that are high school age or older.

**Table 7.** Have children High School Age or Older

<b>Children</b>	<b>Superintendent (%)</b>	<b>Legislator (%)</b>
Yes	66 (67.3)	6 (42.9)
No	32 (32.7)	8 (57.1)

Table 8 shows those with children who participate(d) in athletics in high school or college and sustained an injury while playing sports.

**Table 8.** Children Injured Participating in Athletics.

<b>Injured</b>	<b>Superintendent (%)</b>	<b>Legislator (%)</b>
Yes	45 (50.0)	3 (25.0)
No	50 (52.6)	9 (75.0)

Table 9 illustrates those participants and their children that were injured participating in athletics whom utilized the services of an athletic trainer.

**Table 9.** Utilized the Services of an athletic trainer (AT).

<b>AT Services</b>	<b>Superintendent (%)</b>	<b>Legislator (%)</b>
Yes	49 (51.0)	5 (38.5)
No	47 (49.0)	8 (61.5)

Hypothesis Testing

The hypothesis was tested using an alpha level of .05.

Hypothesis 1: California superintendents will not have a significantly different score than legislators on the survey assessing athletic trainers' roles and responsibilities.

An independent-samples *t* test was calculated comparing the mean score of participants who identified themselves as superintendents to the mean score of participants who identified themselves as legislators. No significant difference was found ( $t(111) = .766, p > .05$ ). The mean of the superintendents ( $4.152 \pm .475$ ) was not significantly different from the mean of legislators ( $4.046 \pm .671$ ).

**Table 10.** Hypothesis Results

<b>Position</b>	<b>N</b>	<b>M</b>	<b>SD</b>	<b>T</b>	<b>P</b>
Superintendents	98	4.1526	.47457		
				.766	.445
Legislators	15	4.0457	.67069		

Conclusion: The hypothesis was supported. There was no significance between California superintendents' and legislators' perceptions of athletic training.

Hypothesis 2. California superintendents and legislators who have participated in sport will not have a significantly different score than those who have and/or do not.

An independent-samples *t* test was calculated comparing the mean score of participants whom identified themselves as having participated in sports to the mean score of participants whom identified themselves as not having participated in sports. No significant difference was found ( $t(111) = 1.487, p > .05$ ). The mean of the subjects who had participated in sports ( $4.172 \pm .510$ ) was not significantly different from the mean of subjects who have not participated in sports ( $3.992 \pm .451$ ).

**Table 11. Hypothesis 2 Results**

<b>Participation</b>	<b>N</b>	<b>M</b>	<b>SD</b>	<b>t</b>	<b>P</b>
Yes	92	4.1718	.51012		
				1.487	.140
No	21	3.9921	.45056		

Conclusion: The hypothesis was supported. There was no significance showing that California superintendents and legislators who participated in sports altered their perception of athletic training.

Hypothesis 3: California superintendents and legislators who have at least one child who has or is currently participating in athletics will not have a significantly different score than those who have and/or do not.

An independent-samples  $t$  test was calculated comparing the mean score of participants who identified themselves as having a child who has or is currently participating in sports to the mean score of participants who identified themselves as not having children who have participated in sports. No significant difference was found ( $t(102)=.518, p > .05$ ). The mean of the subjects who have children who have or currently participate in sports ( $4.161 \pm .479$ ) was not significantly different from the mean of the subjects who do not have children who participate in sports ( $4.11 \pm .473$ ).

**Table 12.** Hypothesis 3 Results

<b>Child Participation</b>	<b>N</b>	<b>M</b>	<b>SD</b>	<b>t</b>	<b>P</b>
Yes	67	4.1610	.47919		
				.518	.606
No	37	4.1104	.47261		

Conclusion: The hypothesis was supported. There was no significance showing that California superintendents and legislators who have children that have or currently participate in sports which altered their perception of athletic training.

#### Additional Findings

Tables 13-20 show the means of each of the 35 Likert questions. Each table includes question from the ATS for which of the six domains it represents. The six domains include: prevention; clinical evaluation and diagnosis; immediate care; treatment, rehabilitation, and reconditioning; organization and administration; and professional responsibility.

**Table 13.** Domain I: Prevention

<b>ATS Question</b>	<b>Superintendent Mean (SD)</b>	<b>Legislator Mean (SD)</b>	<b>Difference Mean</b>
12	4.45 ( .76)	4.40 ( .83)	.05
13	4.40 ( .87)	4.00 ( .93)	.40
14	4.62 ( .77)	4.33 ( .90)	.29
15	3.92 (1.17)	3.87 (1.30)	.05
16	4.25 ( .90)	4.50 (1.07)	-.25
17	4.90 ( .42)	4.53 ( .83)	.37
18	4.37 ( .83)	4.00 ( .76)	.37
19	4.33 ( .81)	3.93 (1.22)	-.60
20	4.81 ( .51)	4.60 ( .63)	.21

1- Strongly disagree, 2- Somewhat disagree, 3- No opinion, 4- Somewhat agree, 5- Strongly agree

**Table 14.** Domain II: Clinical Evaluation and Diagnosis

<b>ATS Question</b>	<b>Superintendent Mean (SD)</b>	<b>Legislator Mean (SD)</b>	<b>Difference Mean</b>
21	3.79 (1.20)	3.73 (1.03)	.06
22	4.32 (1.07)	3.73 (1.39)	-.41
23	4.85 ( .46)	4.53 ( .92)	.32
24	3.76 (1.39)	4.00 (1.00)	-.24
25	4.12 (1.00)	3.73 (1.22)	.39

1- Strongly disagree, 2- Somewhat disagree, 3- No opinion, 4- Somewhat agree, 5- Strongly agree

**Table 15.** Domain III: Immediate Care

<b>ATS Question</b>	<b>Superintendent Mean (SD)</b>	<b>Legislator Mean (SD)</b>	<b>Difference Mean</b>
26	4.86 ( .48)	4.73 ( .59)	.09
27	4.67 ( .72)	4.40 ( .74)	.27
28	4.31 (1.10)	3.67 (1.11)	.64
29	4.32 (1.31)	3.80 (1.47)	.52

1- Strongly disagree, 2- Somewhat disagree, 3- No opinion, 4- Somewhat agree, 5- Strongly agree

**Table 16.** Domain IV: Treatment, Rehab., Reconditioning

<b>ATS Question</b>	<b>Superintendent Mean (SD)</b>	<b>Legislator Mean (SD)</b>	<b>Difference Mean</b>
30	4.84 ( .53)	4.67 ( .49)	.17
31	4.63 ( .65)	4.67 ( .49)	-.04
32	3.78 (1.27)	3.47 (1.19)	.31
33	3.84 (1.23)	3.53 (1.30)	.31
34	3.56 (1.31)	3.87 (1.06)	-.31
35	4.01 (1.09)	4.20 ( .78)	-.19
36	4.08 (1.06)	4.07 ( .92)	.01
37	3.48 (1.41)	4.07 ( .92)	-.59
38	3.78 (1.28)	4.20 ( .86)	-.42
39	4.26 ( .93)	4.20 ( .86)	.06

1- Strongly disagree, 2- Somewhat disagree, 3- No opinion, 4- Somewhat agree, 5- Strongly agree



**Table 17.** Domain V: Organization and Administration

<b>ATS Question</b>	<b>Superintendent Mean (SD)</b>	<b>Legislator Mean (SD)</b>	<b>Difference Mean</b>
40	3.20 (1.38)	3.87 ( .92)	-.67
41	2.77 (1.42)	2.93 (1.28)	-.16
42	4.29 ( .84)	3.87 (1.19)	.42

1- Strongly disagree, 2- Somewhat disagree, 3- No opinion, 4- Somewhat agree, 5- Strongly agree

**Table 18.** Domain VI: Professional Responsibility

<b>ATS Question</b>	<b>Superintendent Mean (SD)</b>	<b>Legislator Mean (SD)</b>	<b>Difference Mean</b>
43	4.84 ( .51)	4.40 ( .91)	.44
44	4.93 ( .33)	4.67 ( .49)	.26
45	2.80 (1.31)	3.29 (1.07)	-.49
46	3.20 (1.24)	3.27 (1.22)	-.07

1- Strongly disagree, 2- Somewhat disagree, 3- No opinion, 4- Somewhat agree, 5- Strongly agree

Table 19 represents questions 47 and 48. Only California superintendents were asked to respond to this question. Question 47 asked if the superintendent employs an athletic trainer in his/her school district.

**Table 19.** Athletic Trainer Employment Information

ATS Question	Superintendent (%)	
	Yes	No
47	48 (49.0)	50 (51.0)

Table 20 was also only asked to California superintendents. It was also only to be responded to given a "yes" answer on question 47. The purpose of this question was to determine if each individual superintendent whom employed an athletic trainer in his or her school district knew if the athletic trainer was a BOC certified athletic trainer.

**Table 20.** Athletic Trainer Employment Information

ATS Question	Superintendent (%)		
	Yes	No	Unknown
48	25 (53.2)	3 (6.4)	19 (40.4)

## DISCUSSION

The discussion section is divided into three subsections: discussion of the results, conclusions, and recommendations for future research.

### Discussion of Results

The purpose of this study, specifically, was to analyze California superintendents' and legislators' perception of athletic training. The Athletic Training Survey (ATS) (Appendix C3) was used in a prior study, surveying West Virginia administrators and legislators.

The ATS was derived from the RDS 5<sup>th</sup> ed. and utilized 35 Likert style questions where 1- Strongly disagree, 2- Somewhat disagree, 3- No opinion, 4- Somewhat agree, and 5- strongly agree. The ATS also began with ten demographic questions. The questions were taken directly from the six domains of athletic training in the Role Delineation Study 5<sup>th</sup> ed. (RDS), it was the belief of the researcher that all Likert questions should have been answered with a "5-

strongly agree". Also, because all questions were taken from the RDS, there were no purposely misleading questions out of the ATs scope of practice. The goal of the study was to identify the current perception of the subjects and what they believe the capabilities of an AT is able to perform according to the domains from RDS.

This study found that while California superintendents had a higher overall mean average score than legislators, there was not a statistically significant difference between the two groups. It was the belief of the researcher that because superintendents were responsible for hiring athletic trainers they would score significantly higher on the ATS than legislators.

To follow this hypothesis, the researcher wanted to differentiate California superintendents and legislators who have participated in sport, in high school or college, and to see if potential contact with an athletic trainer through sport participation may or may not affect their perception of athletic training. The results of the study showed that administrators who replied yes to sport participation had a higher mean score, but again there was not enough of a difference to yield significance. The final hypothesis tested by the researcher was to determine if there was a significantly different score between

administrators' who have at least one child who has or is currently participating in athletics and those who have children that do not participate in athletics. As before, with the administrators sports participation, the participants with children who have at least one child who has or is currently participating in athletics had a higher mean average score than those who do not; but it was not enough to show a statistical significance.

It is the belief of the researcher that due to the fact that there is a new bill, SB 1273 (introduced in 2012), which will provide licensure for ATs in California currently going before vote in front of California legislators, that may have increased awareness of the AT profession for these individuals. In a similar study by Gould and Deivert,<sup>8</sup> it reported similar results that while administrators in NATA District Four had an accurate knowledge of the athletic training profession, they did not have enough of an appreciation of the value of an AT to allocate enough resources to employ an AT.<sup>8</sup> Although none of the hypotheses were reported to be statistically significant, all of the subjects generally scored higher than a "4 - somewhat agree" on a vast majority of the questions.

In the 35 Likert questions, there were a variety of questions from each of the six domains of AT as defined by the RDS. The means, standard deviation, and difference in means are labeled in tables 13 through 18. The first domain of athletic training is Prevention, more specifically prevention of injury and conditions. In this section, there were nine questions outlining responsibilities of an AT. Only two questions, question 15 and 19, were found to have mean scores lower than "4- somewhat agree". Question 15 asked if ATs were qualified to make custom protective devices and both superintendents and legislators scored below 4.0 with an average mean of  $3.92 \pm 1.17$  and  $3.87 \pm 1.30$ , respectively. Question 19 asked the subjects whether an AT has the ability to recognize the signs and symptoms of an eating disorder which elicited an average mean response from legislators of  $3.93 \pm 1.22$ . In all but two of the nine questions, question 16 and 19, superintendents had a higher mean score than the legislators. In questions 16 and 19, the legislators' average mean was .25 and .60 higher, respectively. In all, the scores were very positive by both groups of participants in regards to the perception of ATs capabilities to prevent injuries and monitor conditions.

Domain two of the ATS addressed five questions addressing an ATs ability to complete clinical evaluation and diagnosis of athletic injuries. Each question but one, question 23, reported a response of below 4.0 by at least one group of the subjects. Despite this, there were no responses reported below a 3.7. Question 21, which asks if an AT is capable of taking a medical history of a patient, was the only question to lead both groups to score an average mean below 4.0,  $3.79 \pm 1.00$  and  $3.73 \pm 1.22$  by superintendents and legislators, respectively. The researcher found this interesting due to evaluation and diagnosis being a major part of the ATs clinical responsibilities.

Domain three of the ATS contained four questions asking subjects about an ATs ability to perform immediate care such as perform CPR and applying a splint to a fractured limb. Legislators were the only subjects to score below a 4.0 on two questions, question 28 and 29. Question 28 asked if ATs can apply a splint to a fractured limb in which legislators responded with an average mean score of  $3.67 \pm 1.11$ . Question 29 implored the subjects to find out if ATs are capable of immobilizing spinal cord injuries, in which legislators responded an average mean of  $3.80 \pm 1.47$ . The researcher found it interesting that both

superintendents and legislators thought ATs are more capable of immobilizing spinal cord injuries than they are able to splint a fractured limb. Granted, both cases can be handled poorly but the severity of a mishandled spinal cord injury can have much more serious outcomes. Overall, the responses were positive in regards to both groups of participants' perception of an ATs ability to provide immediate care in a variety of scenarios.

There were 10 questions that comprised domain four, which is the section containing questions regarding treatment, rehabilitation, and reconditioning of athletic injuries. Of the 20 responses, only eight were between a 3.4 and 3.9 with the rest being above 4.0. Questions 32-34 had the lowest combination of scores with both subjects scoring between the 3.4-3.9 range on each question. Questions 32-34 addressed an ATs ability to use electrical stimulation, ultrasound, and therapeutic massage on injuries. It was interesting to the researcher to see that with half of the questions legislators scored higher than superintendents with a range between .04-.42 above that of what the superintendents responded.

Domain five of the ATS had three questions pertaining to the organization and administration roles of an AT. This section contained the lowest scores in regards to



perception of ATs. Question 40 addressed an ATs ability to establish policies and procedures for the delivery of healthcare which resulted with superintendents responding with an average mean of  $3.20 \pm 1.38$  and legislators responding  $3.87 \pm .92$ . Question 41 asked if ATs can manage a healthcare facility in which superintendents and legislators responded with an average mean of  $2.77 \pm 1.42$  and  $2.93 \pm 1.28$ , respectively. As seen, both of these questions had the legislators having a higher perception of the capabilities of ATs. It is the belief of the researcher that due to the fact that superintendents employ ATs in a secondary school setting, they may not believe that they are capable of establishing policies or managing a facility.

The final four questions posed to both groups of participants come from domain six. Professional responsibility of ATs is the topic for these four questions. Question 45, which asks if ATs should have the ability to seek reimbursement by insurance companies for services, saw superintendents and legislators respond with an average mean of  $2.80 \pm 1.31$  and  $3.29 \pm 1.07$ , respectively. Question 46 asked if ATs are capable of reducing workers compensations claims in an industry setting. Superintendents responded with an average mean of

3.20 ± 1.24 and legislators had an average mean of 3.27 ± 1.22. It is the opinion of the researcher that while the participants had a positive perception in terms of professional conduct and keeping medical records, they did not believe ATs are very valuable in the industrial setting. This may be attributed to the fact that administrators are not aware of all the different settings an AT is capable of working.

Tables 19-20 represented questions only asked of the superintendents. Employment information was gathered from each superintendent to assess if the certification status of employed ATs was known by secondary school administrators. Question 47 asked superintendents if they employed an AT in their respective school district. Those who said yes were asked if the AT they employ is nationally certified by the Board of Certification (BOC). Of the 48 superintendents that responded "yes" to employing an athletic trainer, 25 (53.2%) said yes they are certified, 3 (6.4%) said no they are not, and 19 (40.4%) said it was unknown whether or not the individual is BOC certified. The researcher found this data the most interesting out of the entire study due to the fact that because there is no regulation of athletic training in California, it is not

required of anyone calling themselves an AT to provide proof of certification.

The researcher is concerned because California is one of three states that currently has no state regulation for the profession of athletic training. This is a problem for not only the profession, but also for patients whom are under the care of someone who is not trained to provide these health care services. As of 2002, only 62% of California high schools had an athletic trainer on campus at least part time.<sup>1</sup> Not only are participants at risk of receiving improper healthcare, but there is a major liability concern present for athletic trainers, legislators, superintendents, coaches and athletic directors whom assume care for these students. It is the goal of the bill, SB 1273, is to provide licensure and regulation of athletic training in the state of California. Currently, since California is one of the few remaining states that does have any regulation, those people who are not nationally certified by the BOC they are relocating to California to practice because there are no regulations there to stop them.

The results of this study were solely gathered from California superintendents and legislators. Subjects were also given the option to allow a staffer to complete and

return the survey in order to potentially increase the amount of responses. The researcher received two phone calls and four emails from legislators' staffers informing the researcher that their respective legislator did not complete surveys and the staffer also would not. The researcher also received surveys both in the form of hard copy and online via survey monkey. Also, due to the researcher's desire to potentially compare results to a prior study, was unable to change the format of the questions in the ATS but was able to add extra questions for additional data and information from the superintendents.

### Conclusions

The results indicate that a lack of legislation and regulation for athletic training in California cannot be attributed to a negative perception on the roles and responsibilities of ATs. Despite all three hypotheses not resulting in statistically significant data, quality information was still retrieved from the study. In domains one through four of the ATS, very accurate results were reported for both California superintendents and legislators with most average mean scores above 4.0.

Domains 5-6 showed a decline in average mean scores in comparison with the previous four domains due to subjects decreased appreciation of ATs in regards to organization, administration, and professional responsibilities.

Prior legislative efforts have not received the desired attention or approval due to the poor economic status in the United States and more specifically in the state of California. Bills in the past were thrown out on the basis of having any type of economic impact on taxpayers. The latest attempt was the bill, SB 1273, did not receive the necessary amount of votes to be put into effect. The bill would have provided licensure and regulation for ATs while not costing the taxpayers any money due to all costs coming from fees assigned to ATs.<sup>11</sup> The bill is necessary to protect the public from people who now may be relocating to California, if not already there, who call themselves ATs without the credential to do so. This is not only dangerous for the profession, but for people under the care of these individuals as they hold people's safety, welfare, and health in their hands.<sup>11</sup>

Hopefully, with the incessant efforts to gain legislation of athletic training in the state of California, administrator's knowledge of ATs professional capabilities, domains five and six, will increase. Ideally,

a bill will soon be introduced and passed that will make the profession of athletic training licensed and regulated as it should be, and as it is already being done in the 47 other states.

The results found in this study on California legislators' and superintendents' knowledge of athletic training was nearly identical to the results from the same survey used on West Virginia legislators and superintendents. The subjects in both states had a solid knowledge base of domains one through four, and the subjects also shared the lack of knowledge of domains five and six. These shared results bode well for California because West Virginia has since passed legislation in favor of regulating the profession of athletic training in their state.

#### Recommendations

The purpose of this study was to provide CATA, NATA, and the BOC information assisted their efforts in gaining legislation for the profession of athletic training in California. The researcher intends to provide a copy of this document to CATAs email correspondent to provide the association with the results found in this study. The

researcher only obtained a return rate of 18% on the survey and an increased response rate is desired for more accurate results, thus, finding a technique or method to have more subjects respond to the survey. Ideally, more legislators versus staffers would respond to gain more insight on their thinking since they are making the legislative decisions in the state.

In future studies, the researcher desires additional questions to legislators posing potential reasons as to why they have voted against previous bills that addresses athletic training regulation. This information would be valuable to CATA's efforts and aid them in tailoring the bill to be passed. Another interesting study would be to compare the answers of secondary school superintendents and athletic directors in California. It was difficult to obtain a comprehensive list of California superintendents and it is the researcher's opinion that it would be even more difficult to gather the contact information of California secondary school athletic directors.

A previous suggestion to alter the ATS was to remove the answer choice 3-no opinion from the Likert scale forcing respondents to choose a particular side on any given question without the option to answer no opinion. The Likert scale has five answer choices: 1- Strongly disagree,

2- Somewhat disagree, 3- No opinion, 4- Somewhat agree, and 5- Strongly agree. The researcher did not make this alteration for this study due to the desire to potentially compare the results from this study with the prior study. Another possibility may be to have an equal number of questions for each Domain given that Domains one and four each had more questions than Domains five and six combined.

If any future studies were to be completed for California or any other state the researcher believes it is necessary to use a more comprehensive survey to gather more applicable data that may serve to better aid growth in the profession across the country.



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## APPENDICES

APPENDIX A  
Review of Literature

## REVIEW OF LITERATURE

The profession of athletic training has evolved greatly from the beginning of the profession in the early 1900s until now. It was not until 1950 when the National Athletic Trainers' Association (NATA) was established to provide athletic trainers with a national governing body. Respect and acknowledgement of the profession grew even greater still when it was identified as an allied health care profession by the American Medical Association (AMA) in 1990.

Even with a national board of certification examination, accredited university programs and state regulation, athletic trainers still confront the image of being someone who only provides ankle tape jobs and water as opposed to health care professionals. The NATA and its members continue to work diligently to increase awareness of the public on the qualifications and benefits of the profession. This not only expands employment opportunities but also serves to increase the level of health care provided by a highly capable professional.<sup>1</sup>

## History of Athletic Training

The history and evolution of athletic training has been directly related to the growth of competitive sports. The need for qualified health care professionals has developed as the popularity of sport has increased across the globe. The NATA was founded in 1950 to strengthen the profession by connecting athletic trainers nationwide to exchange ideas, knowledge, and methods of athletic training.<sup>2</sup>

Historically, athletic trainers worked with only student and professional athletes, but now the profession has expanded far beyond the scope of solely athletics. Although other medical conditions are less commonly encountered, athletic trainers receive a broad education that ensures competence in managing a wide variety of neurological, cardiovascular, respiratory, digestive, and dermatological conditions associated with physical activity.

Increasingly, athletic trainers are managing the health of physically active populations that are not limited to young competitive athletes such as industrial workers, military personnel, public safety personnel, entertainment groups, and patients of a healthcare delivery

organization.<sup>1</sup> Given this development, athletic trainers need to do a better job of embracing the role of a healthcare professional instead of settling as an ankle taper. This can occur by not only educating the public, but also seeking and implementing evidence based medicine and clinical epidemiology in practice.

#### National Athletic Trainers' Association

It was not until 1950 when athletic trainers were able to form the National Athletic Trainers' Association. Since the inception of the NATA, the association has implemented multiple facets to enhance and expand the profession. The Journal of Athletic Training is one such development. The journal is being used to educate its readers with current and new information regarding athletic training. A Code of Ethics was also published for the first time in 1950 and was used to outline a variety of protocols to be implemented and used by athletic trainers in the field.

The NATA also was the first to develop educational standards to be used in both secondary schools and universities. In the late 1950's, the NATA Professional Education Committee was created to oversee athletic training education program development and approval.<sup>2</sup> In 1959, the first educational program was approved by the

NATA Board of Directors. There were two important features to increase employability. First, an emphasis was placed on the attainment of a secondary-level teaching credential. Second, the curriculum included many courses that were prerequisites for physical therapy school.<sup>2</sup> At the time, having the ability to teach while having a science background gave athletic trainers the best opportunity to be employed at the high school setting.

The 1970s are seen as the period of greatest proliferation of athletic training education.<sup>2</sup> The year of 1969 marked the first year there was an undergraduate athletic training education program. Also, 1970 marked the first year a certification exam was given which was developed by the NATA Certification Committee.<sup>2</sup> The 12-year period following the number of programs increased from four to 62 by 1982. In the same time, nine graduate athletic training education programs had been developed.<sup>2</sup>

In 1980, the NATA Board of Directors approved a resolution calling for all undergraduate athletic training education programs to offer a major field of study in athletic training.<sup>2</sup> This development was used as a catalyst to implement further changes in athletic training programs in the future. Due to deadline changes, it was finally decided that by July 1, 1990 all previously approved



undergraduate athletic training programs must have an athletic training major in place.<sup>2</sup> The subject matter that was required by the NATA Professional Education Committee included: prevention and evaluation of athletic injuries, therapeutic exercise and modalities, administration, human anatomy and physiology, nutrition, and psychology among the course content.<sup>2</sup>

Currently, the Commission on Accreditation of Athletic Training Education (CAATE) provides accreditation standards for athletic training education programs in colleges and universities. In 1990, The Joint Review Committee on Educational Programs in Athletic Training (JRC-AT) was created as the primary review committee for athletic training education programs. The JRC-AT created guidelines as to how undergraduate programs would be developed and implemented. The JRC-AT was a committee on Accreditation under the Commission on Accreditation of Allied Health Educational Programs (CAAHEP). Eventually in 2006, the JRC-AT became independent from CAAHEP and changed its name to the CAATE. The American Academy of Family Physicians (AAFP), the American Academy of Pediatrics (AAP), the American Orthopedic Society for Sports Medicine (AOSSM) and the NATA work together to sponsor CAATE.<sup>2,3</sup>

The American Medical Association (AMA) played a pivotal part in the profession of athletic training. In 1967, a few years prior to the establishment of the first undergraduate athletic training program and a national certification exam, the AMA commended the NATA on their efforts to upgrade professional standards.<sup>2</sup> The profession reached a milestone when, in June of 1990, the AMA formally recognized athletic training as an allied health profession.<sup>2</sup> To achieve this honor, the NATA had to seek accreditation of the entry-level programs by the AMA Committee on Allied Health Education and Accreditation (CAHEA).<sup>2</sup> The efforts of the NATA over the previous 40 years to enhance the education programs provided the basis for the AMA to recognize the profession.

#### The Athletic Trainer as a Health Care Provider

##### Role Delineation

Until 1989, the BOC was operated as a committee within the NATA (NATABOC). The leaders of the NATA realized that an independent entity was needed to set the standards for practice of athletic training. Every five years the BOC publishes the Role Delineation Study (RDS) to identify essential knowledge and skills for the athletic training

profession. The RDS is made up of domains outlining professional roles and responsibilities, while also serving as the template for the board certification exam. The domains include: injury/illness prevention and wellness protection, clinical evaluation and diagnosis, immediate and emergency care, treatment and rehabilitation, and organizational and professional health and well being.<sup>4</sup> The purpose of the RDS is to give athletic trainers a base of knowledge to provide quality health care.

### Education

As has been already established, the accreditation body for undergraduate athletic training programs is CAATE. It is the mission of CAATE to provide premier accreditation services to institutions that offer Athletic Training programs, verifying that all CAATE accredited programs meet standards for professional athletic training education and support continuous improvement in the quality of athletic training education.<sup>3</sup> These standards of education, which include objective criteria and academic requirements, require not only specific and defined processes, but also programmatic outcomes for the evaluations.<sup>3</sup> Reviews are conducted on a periodic basis for each school to ensure each university is up to code. The standards that were

previously mentioned are made up of NATA Educational Competencies and Clinical Proficiencies which are in turn derived from the Role Delineation Study (RDS). The only way for an individual to be eligible to sit for the BOC examination is successful completion of a CAATE-accredited educational program.<sup>3</sup>

Athletic training programs use multiple teaching techniques to attempt to put students in an applicable situation to test their knowledge. Out of three evaluation techniques, real time, simulations, and standardized patients, simulations were used most frequently.<sup>5</sup> Gardiner and Mensch<sup>6</sup> studied the factors that are used to develop athletic trainers. It is noted that in the end it is up to each individual athletic trainer to be responsible for his or her own development. The use of athletic training organizations, professional points programs, student-mentor programs, and implementing role models are all ways you can help promote professional development in an athletic training program. The experience each athletic training student is different because the experiences and situations each person experience are unique and cannot be predetermined. Another variable noted was the amount of effort the instructors put into seeking out more information because an athletic training student is more

likely to imitate their superior or teacher. It is the opinion of this author to encourage and expect professional development from all their employees and students to witness the greatest benefit.<sup>6</sup>

#### Board of Certification Exam

The Board of Certification, Inc. (BOC) has been responsible for the certification of Athletic Trainers (ATs) since 1969. The BOC was the certification arm of the professional membership organization NATA until 1989 when the BOC became an independent non-profit organization.<sup>2</sup> It is the mission of the BOC to provide exceptional credentialing programs for healthcare professionals to assure the protection of the public.<sup>2</sup> The BOC is the only accredited certification program in the United States (US). The exam is made of multiple choice and hybrid questions made up from the following domains: prevention, clinical evaluation and diagnosis, immediate care, treatment, rehabilitation and reconditioning, organization and administration, and professional responsibility.<sup>7</sup> The BOC exam is comprised of multiple domains which requires potential candidates to know a plethora of information that serves to qualify athletic trainers as qualified health care professionals. Thus, for any person who successfully

completes a CAATE-accredited educational program to become certified as an athletic trainer, they still must pass the BOC exam to be able to practice as an athletic trainer.

#### Employment Settings and Additional Trainings

There are several requirements for ATs to maintain the certification through the BOC. First and foremost, all ATs have to adhere to the BOC Standards of Professional Practice that can be located through the BOC website. An annual certification fee must be paid to the BOC. All ATs must maintain their emergency cardiac care competencies which outline adult and pediatric cardiopulmonary resuscitation (CPR), the use of an automated external defibrillator (AED), airway obstruction, and barrier devices. The final requirement for recertification is the completion and reporting of Continuing Education Units (CEUs).<sup>8</sup> All ATs have to obtain 75 CEUs in the period of every three years. Continuing Education Units are based on contact hours, which are defined as the number of actual clock hours spent in direct participation in a structured education format as a learner.<sup>8</sup> There are four categories given to ATs to obtain their CEUs. The first, category A, is made up of BOC approved provider programs such as workshops, seminars, conferences, and allowed home study

courses. Category B is labeled as professional development and is made up of BOC qualified examiner or model, EMT initial training, speaker or panelist at a conference, and author in things ranging from articles to textbooks. Category C, is post-certification college/university coursework, and is made up of official college/university courses, and medical residency. The last option, category D, is individual options such as activities by non-BOC approved providers or watching multimedia. With category A and C there are no CEU maximums and category B and D have a 50 and 20 CEU cap, respectively. The CEU caps are in place to encourage members to participate in BOC approved programs and to reward those who choose to further their education with college coursework or a residency program.<sup>8</sup> All members are required to document their CEUs online by each member's given deadline to be capable of recertification.

Armstrong and Weidner<sup>9</sup> analyzed the amount of continuing education activities (CE) an athletic trainer participates in, if the CE is formal or informal, and if there is a perceived benefit, growth in knowledge or practice, from participating in CE.<sup>9</sup> From the survey, it was determined that athletic trainers participate in more informal CEs than formal. Informal CEs included reading the

athletic training journal while formal CEs had more to do with workshops and conferences. In conclusion, it was determined that informal CEs were more beneficial for improving patient care and formal CEs did a better job at enhancing knowledge. Further, Armstrong and Weidner proposed the idea that informal CEs should be studied more and should be considered for receiving credit.<sup>9</sup>

The field of athletic training provides ATs a variety of fields from which to choose. Some examples include: professional and collegiate sports, secondary and intermediate schools, US military, sports medicine clinics, hospital ER and rehab clinics, occupational settings, fitness centers, and physician offices.<sup>7</sup> The difficult part for ATs is to find the setting which best suits the individual. Each setting has its benefits and difficulties, varying from budget concerns to autonomy, and a lot of consideration should go into deciding on which setting best fits the professional.

One area that is lacking in the amount of ATs employed is the secondary schools. With over nine times as many athletes participating in high school sports than college sports, there needs to be more medical coverage not only for safety and liability of athletes but also for the financial benefits that an athletic trainer provides.<sup>10</sup>



Claiborne et al<sup>10</sup>, concerned about the relatively small number of athletic trainers covering athletics in secondary school considering the amount of athletes performed a sports injury surveillance system at 16 public and private schools around Toledo, Ohio. The study collected treatment and rehabilitation data for over 780 injuries occurring over a 3 year period. The requirement to be listed in the data included an injury that caused the athlete to miss more than one day of participation. The data was then used to determine the frequency of injury given the sport. Though subjective pain level decreased significantly following treatments, it was shown that athletic trainers were able to manage the variety of injuries seen in any given sport.<sup>10</sup>

Most secondary schools struggle to supply sufficient funds to properly run a sports medicine program. Studies have been performed to examine the quality of care in relation to the size of the sports medicine budget in secondary schools. For example, Wham and Saunders et al used a survey system that included over 132 questions of an Appropriate Medical Care Assessment Tool (AMCAT) that was sent via mail and email to 166 schools chosen across South Carolina. In the data, it was found that utilizing athletic training services and increasing the sports medicine budget

both showed a positive relationship with the quality of medical care for the given high school.<sup>11</sup> Meaning, the schools that employed an athletic trainer were shown to have a greater level of medical coverage as opposed to having no sports medicine team, this is an obvious cause and effect relationship. The study also showed the higher the school's sports medicine budget, or the ability to hire more athletic trainers and improve facilities, also increased the quality of care seen.

In a study surveying athletic directors in North Carolina, Aukerman et al<sup>12</sup> found that a majority of schools only had a physician covering football games and most coaches were not even certified in CPR. Only 56% of the schools employed an athletic trainer either part time or full time. The rest of the schools (44%) used teachers and coaches to perform the sport medicine duties. The most surprising bit of data from this study was that only 27% of schools believed their medical coverage of athletic events was adequate.<sup>12</sup> Not only do athletic trainers help treat injuries but they are essential in the case of managing a catastrophic injury. In California, the results were much the same. Feder et al<sup>13</sup> reported that only 62% stated there was an athletic trainer employed at least part time on

campus for sports coverage. Only 62% of football games were even covered by a physician.<sup>13</sup>

The information given in the said studies is frightening when you consider how many student athletes are at risk with unqualified or no health care professional on hand to provide medical care given the unfortunate incurrence of an injury or emergency. There should be laws in place to require all secondary schools to employ an AT to provide health care services to not only serve the athletes but to protect the given school from litigation.

#### State Regulation in the United States

California is one of three current states with no state regulation whatsoever. The other two states without regulation are Alaska and Hawaii, with Hawaii being exempt. Exemption identifies a professional who is exempt from licensure requirements of another profession. A specific scope of practice is defined in the exemption statute of the licensing requirement. Individuals do not register with the state, but are held to the standards of the scope of practice.<sup>14</sup> There are different types of state regulation including: licensure, certification, registration, exemption, and no regulation. Licensure is the highest form

of credentialing, administered by the state to protect the public and regulate a practice of trade or profession. Certification is more a form of title protection, established by state law or professional association, to show that practitioners have necessary knowledge and skills to protect the public. Registration is a type of system that requires qualified members of a profession to register with the state to be able to practice. No licensure is a form of law protection where there are no laws in place for either the practitioner or the public. Obviously, it is of benefit for everyone involved with athletic training, be it the actual athletic trainers or those under the care of an athletic trainer, to have some sort of state law to protect all parties involved.<sup>14</sup>

There are legal parameters the certified athletic trainer must comply with in order to practice within the legal guidelines. Statutory, regulatory, and case law make up the three categories of law that are separate from an organization which any given athletic trainer is employed. Statutory law can be legislation at both the federal and state level that is also known as public law. State laws are much more specific and have a greater impact on athletic trainers. Athletic trainers must be able to locate laws governing their practice in their respective state to

protect themselves. Regulatory laws are a series of rules composed by a state or federal agency such as the Drug Enforcement Agency. Finally, case laws are opinions of judges that come from litigation dealing with a specific issue. Case laws form the basis for state laws.<sup>15</sup>

Since there are states, such as California, where athletic training is practiced and is not credentialed, there are still individuals calling themselves athletic trainers without the education or the qualifications necessary to practice sports medicine.<sup>16</sup> Another result of not having athletic training credentialing is that it allows even certified athletic trainers to perform outside their scope and outside of state laws which is illegal, to say the least. It is believed that uniformity of state regulation, increase in public knowledge, and an increase in professional recognition will all benefit the profession of athletic training.<sup>16</sup>

In opposition, those states where athletic training is regulated, there is also a risk for more litigation to occur. Athletic trainers should take warning, because practicing as a credentialed health care professional also means athletic trainers have independent potential liability for alleged negligence even if their employer, such as a state institution, has immunity from this type of

suit. Athletic trainers are also responsible for "upholding the standard of care of an ordinary careful trainer", which includes communicating the severity of an injury to the coach or athlete and the associated risks of participating with a certain injury. If this is not done, the athletic trainer is vulnerable to incur negligence liability.<sup>17,18</sup>

It is pivotal for the progression of athletic training to stay up to date on current political affairs and issues to have a more positive influence on bills advancing along the branches of government.<sup>19</sup> Due to this it falls on the members of the NATA to support the efforts of the organization in the expansion of athletic training in both state and national government.

As recent as 2010, the NATA has filed a law suit against the American Physical Therapy Association (APTA) in regards to the APTA violating antitrust laws against the defendant in an effort to unlawfully limit competition. One issue in the lawsuit was physical therapists (PTs) not allowing ATs to attend their conferences based on the reasoning that educating ATs was not legal under a PT license. In conclusion, the court found that both the NATA and APTA were no longer allowed to refuse the other from attending conferences, as well as adopting the practice of mutual cooperation and communication in the future.<sup>20</sup>

All previous efforts by the NATA and the California Athletic Training Association (CATA) to obtain regulation in California have failed. Most recently the bill, SB 1273 (introduced in 2012), did not gain approval to provide both licensure and regulation for athletic trainers within the Medical Board of California.<sup>21</sup> This bill is still receiving massive overhauls by lawmakers as it moves further along the process of passing the bill. The bill, as it is written, would prohibit a person from practicing as an athletic trainer or using certain titles without license issued by the committee. The bill would require an applicant for licensure to meet certain educational requirements, pass a specified examination, hold specified athletic trainer certification, possess emergency cardiac care certification, and submit an application and processing fee established by the committee.<sup>21</sup> In essence, the bill provides title protection to ensure only certified athletic trainers are able to practice in the state of California. As stated earlier, this protects not only the profession and its members, but also those who are under the care of certified athletic trainers.

## Perceptions of Athletic Training in United States

During the entirety of the athletic training profession, athletic trainers have constantly dealt with the general public being unaware of the roles and responsibilities of an athletic trainer. Even people familiar with sports and exercise have no idea what it is athletic trainers actually do resulting in professionals always being asked, "what is it that you do?" Most commonly people confuse athletic trainers with personal trainers. Another misconception is people believing all that athletic trainers do is provide water and ankle tape jobs to athletes. Obviously, this confusing is very frustrating for not only individual athletic trainers but also the NATA in its efforts to expand the profession. There have been several studies done analyzing the perceptions of different subjects who may come in contact with an athletic trainer.

### Athletes

Athletes are the primary patient population of athletic trainers. Therefore, the perception of athletes on athletic trainers is of importance to researches to make sure the services expected or desired by most athletes are sufficiently met. Unruh studied the difference between the



perceptions of male and female athletes, low and high-profile sports, and the differences between Division I and division II athletes. Unruh<sup>22</sup> sent questionnaires to 32 athletic training programs at 28 different National Collegiate Athletic Association (NCAA) Division I & II universities. Eighteen schools participated yielding a 56% response. Through the 18 different schools, there were 343 student-athletes that participated in the survey. This study determined that males had a high positive perception of services received from their respective athletic trainer in comparison to females; males at the Division I level also had a higher perception of services received than did those males at a Division II school. Unruh later performed the same study with differing results seven years later in 2005.<sup>22</sup>

In 2005, Unruh et al<sup>23</sup> again studied the level of satisfaction collegiate student-athletes had with their athletic trainer(s). The research team used a survey format to 40 randomly selected National Collegiate Athletic Association (NCAA) Division I and II universities reaching out to 325 subjects. The subjects were randomly selected from each participating universities athletic webpage and varied across all sports. The survey contained matter from the Role Delineation Study conducted by NATA to gauge the

satisfaction with the services provided by each subject's athletic trainer. Unruh et al found that men and women in low-profile sports were generally less satisfied with the services they received. Women in high-profile sports showed the highest satisfaction.<sup>23</sup>

In a differing study, Bone and Fry<sup>24</sup> studied the influence an athlete's perception of his/her athletic trainer has an impact on the rehabilitation process. The subjects were 57 Division I athletes with a combination of men and women whom received a survey after suffering and injury causing them to miss no less than five days of participation. Subjects who fit the criteria received two types of surveys. The first used was a Social Support Survey (SSS) to determine the level of emotional support the subject believed he or she received during the rehabilitation process. The second survey was a Sports Injury Rehabilitation Beliefs Survey (SIRBS) which was developed to measure the athlete's belief in the rehabilitation plan. The results from this study were most athletes did not have a strong correlation unless they perceived their injury to be of a more serious concern.<sup>23</sup> In that case, as in a longer term rehabilitation, the athlete believed the athletic trainer had a more beneficial impact on the recovery process.

### Orthopedic Surgeons

Physicians, as well as orthopedic surgeons, have the ability to play a pivotal role in the growth of athletic training. When orthopedic surgeons and physicians have a positive perception of athletic trainers it further validates the profession of athletic training and creates more employment opportunities. Storch and Stevens et al<sup>25</sup> performed a quantitative, descriptive study to examine the perception of orthopedic surgeons' perception of athletic trainers. The subjects used were orthopedic surgeons located in Mid-Atlantic U.S.<sup>25</sup> Out of 400 surgeons randomly selected, Storch et al<sup>25</sup> received 101 responses for a 27.1% response rate.<sup>25</sup> As with the study performed by Gould et al<sup>27</sup> the survey included demographic questions followed by questions regarding hiring an ATC as a physician extender.<sup>27</sup> Storch et al<sup>25</sup> found that Mid-Atlantic orthopedic surgeons had a more accurate perception of physician assistants. One drawback that the surgeons had was the uncertainty about billing for an athletic trainers' services.<sup>25</sup> It is believed by Storch et al<sup>25</sup> that as the profession of athletic training grows, there will be more opportunities to work in a clinical setting.<sup>24,25</sup>

### Secondary School Administrators

Secondary school administrators are responsible for the hiring of athletic trainers for their school districts; this alone is why the positive perception of athletic training is so important. On the other hand, if secondary school administrators were to have a negative perception of athletic training that information would be detrimental to the profession by a decreased perceived importance in employing an athletic trainer.

Felling et al<sup>26</sup> attempted to further research in the public's perception of athletic training roles and duties. The purpose of this study was to improve on the research design of past studies and gauge the awareness of California high school administrators about the practice of athletic training. A 24 question Likert-scale survey was mailed to 596 principals and athletic directors in the California school system. Two hundred and nineteen surveys were returned yielding a 36.9% response rate. Overall, athletic directors had a better grasp of the roles and responsibilities of athletic trainers than principals did. Larger differences were reported by schools that already employed an athletic trainer, generally resulting in stronger agreements when questioned about athletic training

roles. Felling et al concluded that it is difficult for athletic trainers to be employed in settings in which principals in particular do not understand the roles and responsibilities of athletic trainers, which also means they do not comprehend the potential benefit of the field.<sup>26</sup>

Gould and Deivert<sup>27</sup> attempted to understand the perceptions of secondary-school superintendents, principals, and athletic directors on athletic training. The research team targeted 10% of administrators in NATA District Four, totaling 1,095 subjects. District Four is made up of Illinois, Indiana, Minnesota, Michigan, Ohio, and Wisconsin. Two hundred and thirty four usable surveys were returned resulting in a 21% response rate. The survey included general demographic questions, but the main purpose was the familiarity each administrator had with the job an athletic trainer does and each subject's opinion if they should employ an athletic trainer at their respective secondary-school. The results showed that compared to past studies the amount of athletic trainers employed in NATA District Four has increased with greater appreciation of athletic trainers. Still, only 55% of the surveyed administrators were employed by a school that employed an athletic trainer at least part time.<sup>27</sup> Gould and Deivert believed that the perception of athletic training has

gotten better over time but still remains insufficient, and this is part of the reason for the low employment rates.<sup>27</sup>

### Coaches

A positive relationship with coaches is an area of great concern with all practicing athletic trainers. Due to this there are several studies gauging the perception of coaches and the associated satisfaction with the services provided by the athletic trainer. Mensch et al<sup>28</sup> performed a qualitative research study to examine the perspective of high school coaches toward athletic trainers and their roles in a high school setting. There were 20 high school varsity basketball coaches from 10 high schools chosen to perform the survey. The survey focused on the services received, the coach's expectations, and the level of satisfaction with each given coach. The athletic trainers were also interviewed on their background, perceived duties, and administration factors. The results showed that coaches had unrealistic expectations of their athletic trainers stemming from not understanding the athletic trainers qualifications, as well as poor communication.<sup>28</sup> The results from this study are not very strong as there were a small number of subjects, as well as a vague survey type.

Robbins and Rosenfeld<sup>29</sup> studied the perceptions of athletes' on their social support provided by coaches and athletic trainers throughout a season. Thirty five male and female Division I athletes were surveyed using the Social Support Survey (SSS), the same survey used during Bone et al research study.<sup>23,28</sup> Robbins and Rosenfeld surveyed the subjects after they reached the criteria to be included in this study. The results showed that pre-injury perceptions were equal across all three social support individuals but a big difference showed up during the rehabilitation phase. While in rehab the subjects were more satisfied by the support provided by their respective athletic trainer(s). In some cases the subjects reported feeling more pressure to hasten return to play from coaches before they believed they were ready to be pushed.<sup>29</sup>

#### Summary

Athletic training is practiced by athletic trainers, who are also health care professionals collaborating with physicians to optimize activity and participation of patients and clients. Athletic training encompasses the prevention, diagnosis, and intervention of emergency, acute, and chronic medical conditions involving impairment,

functional limitations, and disabilities. Students who want to become certified athletic trainers must earn a degree from an accredited athletic training curriculum. Accredited programs include formal instruction in areas such as injury/illness prevention, first aid and emergency care, assessment of injury/illness, human anatomy and physiology, therapeutic modalities, and nutrition. Classroom learning is enhanced through clinical education experiences. More than 70 % of certified athletic trainers hold at least a master's degree.<sup>7</sup> Over the past century, the profession of athletic training has progressed into being recognized by the AMA. The NATA, BOC, and CAATE have become more efficient in both management and progression of the profession.

Currently, California is one of three states with no state laws or regulation regarding the practice of athletic training. Even with the efforts of national, regional, and state associations, the level of state regulation has not successfully progressed to the desired outcome. California, along with Hawaii and Alaska, is one of the only three states that are lacking any formal state regulation to protect both the practitioner and the patient. California has attempted to pass some sort of title protection with no success in the past.



There is plenty of research analyzing multiple groups and subjects perception of the roles and responsibilities of an athletic trainer. A majority of the research shows the public has little to no understanding of not only the responsibilities of an athletic trainer but also the benefits of employing them. Although research does show that most of the subjects that have come in contact with an athletic trainers, such as a coach, athlete, and a physician are very aware of the capabilities an athletic trainer possesses from injury treatment to rehabilitation. It is the view of the general public, including secondary school administrators and state legislatures, that is limiting the employment opportunities for athletic trainers while also a negative impact on efforts to increase state regulation.

The objective now is to increase the publics awareness of the profession. It is not known which technique will best serve this purpose. It has been recommended that athletic trainers separate themselves from other professions with similar titles by changing the name in which they refer to themselves, such as being called athletic therapists instead. The goal is to inform and educate that athletic trainers are indeed health care professionals and should be perceived as one.

## APPENDIX B

## The Problem

## STATEMENT OF THE PROBLEM

California (CA) is one of three states that currently have no state regulation for the profession of athletic training. This is a problem for not only the profession but also for secondary school athletes whom are either under the care of someone who is not trained to provide needed health care services or actually has no one supervising any given event. This not only places participants at risk but is a major liability concern for legislators, superintendents, and athletic directors whom assume care for these students.

The purpose of the study is to assess current California legislator's and superintendent's perception of the roles and responsibilities of certified athletic trainers. As of now there is no state licensure, registration, or certification present to practice athletic training in the state of California. This is dangerous because not all secondary schools are required to have a certified athletic trainer on staff to provide health care for student athletes. If we are able to assess the current knowledge and perceptions of CA legislators and superintendents about the benefits of the profession it would help to guide and educate the efforts by the NATA and

BOC to obtain state regulation to both protect professionals working in the field as well as athletes participating in sports.

#### Definition of Terms

The following definitions of terms will be defined for this study:

- 1) Athletic training - Athletic training is the practice of prevention, diagnosis, and care of emergency, acute, and chronic medical conditions.
- 2) Certified athletic trainer - health care professionals that practice athletic training and have a national certificate from the Board of Certification (BOC).
- 3) National Athletic Trainers' Association (NATA)- is the professional membership association for certified athletic trainers.
- 4) Board of Certification (BOC) - is the accredited certifying body for athletic trainers in the US. Also, provides administrates the certification test for athletic trainers.
- 5) Commission on Accreditation of Athletic Training Education (CAATE) - the agency responsible for accreditation of athletic training education programs.

- 6) Licensure - a form of credentialing, administered by the state to protect the public and regulate a practice of trade or profession.
- 7) Certification - title protection, established by state law or professional association, to show that practitioners have necessary knowledge and skills to protect the public.
- 8) Registration - a type of system that requires qualified members of a profession to register with the state to be able to practice.
- 9) Exemption - a professional who is exempt from licensure requirements of another profession. Individuals do not register with the state, but are held to the standards of the scope of practice.

#### Basic Assumptions

The following are basic assumptions of this study:

- 1) All respondents answered the survey honestly and to the best of their knowledge of athletic trainers' roles and responsibilities without outside assistance.
- 2) The respondents had sufficient time to complete the survey.
- 3) The survey accurately represents the roles and responsibilities of athletic training.

### Limitations of the Study

The following are possible limitations of the study:

- 1) The data is only limited to those who responded to the survey.
- 2) The survey was only sent to legislators and superintendents in California.
- 3) The survey may have been filled out by someone other than the intended participant.
- 4) The participants may have researched the answers.

### Significance of the Study

The purpose of this study was to analyze the perception of those in power in the state of California to aid the NATA and BOC's efforts to pass legislation in favor of the profession of athletic training. The data obtained from this study will provide insight to the knowledge of legislators and superintendents of athletic trainers' education requirements, scope of practice, professional roles, and employment settings. Ideally, the data will show if the respondents have the current facts and information showing that athletic trainers are qualified health care professionals that should be necessary in every secondary school in the state. Passing state law is necessary to

provide the appropriate health care to all secondary school student athletes as well as protecting qualified professionals providing athletic training services.

Ideally, this information will be used as instruction to guide legislative and educational efforts in California.

## APPENDIX C

## Additional Methods



APPENDIX C1

Athletic Training Survey

### ATHLETIC TRAINING SURVEY

**PART 1: DIRECTIONS:** Please complete the demographic questions 1 through 10 by placing an (X) in the appropriate space that best answers the question.

1. Gender:         Female         Male
2. Age: \_\_\_\_\_
3. Which best describes your current position?     Senator     Assembly Member     Staffer
4. How many years have you been at your current position? \_\_\_\_\_
5. When in high school or college, did you participate in athletics?         Yes         No
6. Did you sustain an injury while playing athletics?         Yes         No
7. Do you have children of high school age or older?         Yes         No
8. Do/did your children play high school athletics?         Yes         No
9. Has your child sustained an injury participating in athletics?         Yes         No
10. Did you/your child utilize the services of an athletic trainer?         Yes         No

**PART 2 DIRECTIONS:** Please circle the number that corresponds with your perception of how strongly you disagree or agree with the following questions regarding an athletic trainer's scope of practice and professional role.

*1 – Strongly disagree    2 – Somewhat disagree    3 – No opinion    4 – Somewhat agree    5 – Strongly agree*

**Athletic trainers are qualified and have the ability to:**

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 11. Educate participants about risks involved with participation in athletics | 1 | 2 | 3 | 4 | 5 |
| 12. Recognize disqualifying medical conditions on a medical history form      | 1 | 2 | 3 | 4 | 5 |
| 13. Refer a participant to an appropriate medical specialist                  | 1 | 2 | 3 | 4 | 5 |
| 14. Make custom protective devices like a finger splint                       | 1 | 2 | 3 | 4 | 5 |
| 15. Identify safety hazards on a playing field like a divot or hole           | 1 | 2 | 3 | 4 | 5 |
| 16. Recognize the signs/symptoms of heat illness such as heat exhaustion      | 1 | 2 | 3 | 4 | 5 |
| 17. Instruct in the use of cardio-conditioning equipment like a treadmill     | 1 | 2 | 3 | 4 | 5 |
| 18. Recognize signs/symptoms of eating disorders                              | 1 | 2 | 3 | 4 | 5 |
| 19. Tape an ankle   | 1 | 2 | 3 | 4 | 5 |
| 20. Take a medical history on a patient                                       | 1 | 2 | 3 | 4 | 5 |

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**DIRECTIONS:** Please circle the number that corresponds with your perception of how strongly you disagree or agree with the following questions regarding an athletic trainer's scope of practice and professional role.

1 – Strongly disagree 2 – Somewhat disagree 3 – No opinion 4 – Somewhat agree 5 – Strongly agree

**Athletic trainers are qualified and have the ability to:**

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 21. Diagnose a sprained ankle  | 1 | 2 | 3 | 4 | 5 |
| 22. Recognize the signs/symptoms of a concussion                     | 1 | 2 | 3 | 4 | 5 |
| 23. Make return to play decisions                                    | 1 | 2 | 3 | 4 | 5 |
| 24. Perform joint tests to identify ligament laxity                  | 1 | 2 | 3 | 4 | 5 |
| 25. Perform CPR  | 1 | 2 | 3 | 4 | 5 |
| 26. Use an automated external defibrillator (AED)                    | 1 | 2 | 3 | 4 | 5 |
| 27. Apply a splint to a fractured limb                               | 1 | 2 | 3 | 4 | 5 |
| 28. Immobilize suspected spinal cord injuries                        | 1 | 2 | 3 | 4 | 5 |
| 29. Apply an ice bag to reduce swelling                              | 1 | 2 | 3 | 4 | 5 |
| 30. Apply a heat pack to sore muscles                                | 1 | 2 | 3 | 4 | 5 |
| 31. Use electrical stimulation to reduce pain in an ankle joint      | 1 | 2 | 3 | 4 | 5 |
| 32. Use thermal ultrasound on sore muscles                           | 1 | 2 | 3 | 4 | 5 |
| 33. Perform a therapeutic massage                                    | 1 | 2 | 3 | 4 | 5 |
| 34. Administer therapeutic exercise                                  | 1 | 2 | 3 | 4 | 5 |
| 35. Apply knee braces  | 1 | 2 | 3 | 4 | 5 |
| 36. Develop treatment plans for an injured patient                   | 1 | 2 | 3 | 4 | 5 |
| 37. Rehabilitate injuries  | 1 | 2 | 3 | 4 | 5 |
| 38. Develop an emergency action plan                                 | 1 | 2 | 3 | 4 | 5 |
| 39. Establish policies and procedures for the delivery of healthcare | 1 | 2 | 3 | 4 | 5 |
| 40. Manage a healthcare facility                                     | 1 | 2 | 3 | 4 | 5 |
| 41. Be fluent in medical terminology                                 | 1 | 2 | 3 | 4 | 5 |
| 42. Adhere to medical records confidentiality standards              | 1 | 2 | 3 | 4 | 5 |
| 43. Demonstrate appropriate professional conduct                     | 1 | 2 | 3 | 4 | 5 |
| 44. Get reimbursed by insurance companies for services               | 1 | 2 | 3 | 4 | 5 |
| 45. Reduce workers compensation claims in an industry setting        | 1 | 2 | 3 | 4 | 5 |

**FOR SUPERINTENDENTS ONLY.** Please answer questions 46 and 47 by placing an (X) next to the most appropriate answer.

46. Does your school district employ an athletic trainer? Yes ( ) No ( )

47. If yes, is the athletic trainer at your school nationally certified by the Board of Certification (BOC)?

Yes ( ) No ( ) Unknown ( )

**This concludes the survey. Please place it in the included pre-addressed, postage paid envelope and place it in a United States Postal Service mailbox or outgoing mail. Thank you for taking time to complete the survey.**

APPENDIX C2

Athletic Training Survey Cover Letter

March 26, 2012

Dear Legislator or Superintendent,

My name is Curt Snyder and I am currently a graduate student at the California University of Pennsylvania pursuing a master's degree in Athletic Training. I am sending this request again due to a lack of responses from my initial mailing of this request. The quality of health care that is provided to student athletes at the secondary school level has raised a cause for concern. Every high school athlete should have the services of a licensed health care professional to create the safest environment for sports. This is the reason I have chosen to study the perceptions of California superintendents and legislators on Athletic Training. To study this I am using survey research to analyze the current knowledge of the profession of Athletic Training in my home State of California. The survey will focus on the roles and responsibilities of any given Athletic Trainer. It is my goal that the data from this study be used to help aid the professional advancement of Athletic Training in California to not only increase state regulation of the profession, but also to increase the level of health care in secondary schools.

As a native of Imperial County in California, I have chosen to poll all state legislators and selected secondary school superintendents as my subjects because I am concerned with the level of health care provided to our student-athletes in our state. You have the right to choose not to participate or discontinue participation at any time without penalty and all data will be discarded. The California University of Pennsylvania Institutional Review Board has reviewed and approved my survey and is effective 1/26/2012 and expires 1/25/2013.

The survey will be completed online via [www.surveymonkey.com](http://www.surveymonkey.com). The link to the survey is <https://www.surveymonkey.com/s/CCKGW28>. All surveys are anonymous and will be kept completely confidential at all times. All subjects must be over the age of 18. The survey results will be stored on University servers in a password protected file. Your informed consent will be assumed upon return of the survey. The risk for participating in this study is minimal. I ask that you please complete the survey at your earliest convenience as it will take approximately 15 minutes to complete. **Please complete the online survey by Friday, March 30, 2012.** Please feel free to contact me at [sny4920@calu.edu](mailto:sny4920@calu.edu) or 760-562-9511. My thesis advisor's name is Dr. Linda Meyer, EdD, ATC and she may be contacted via email at [meyer@calu.edu](mailto:meyer@calu.edu)

Thank you in advance for taking the time to be part of my thesis research. Your participation in this study will be added to data from previous research studies and will be used to increase the quality of health-care available to all current and future student-athletes not only in California but across the United States. Thank you again for taking the time to complete the survey.

Sincerely,

*Curt Snyder*

Curt Snyder, ATC

## APPENDIX C3

Institutional Review Board -  
California University of Pennsylvania



California University  
of Pennsylvania

Proposal Number

Date Received

**PROTOCOL for Research Involving  
Human Subjects**

**Institutional Review Board (IRB) approval is required before beginning any research and/or data collection involving human subjects**

*(Reference IRB Policies and Procedures for clarification)*

***Project Title*** California Legislators and Superintendents Perception of Athletic Training

***Researcher/Project Director*** Curt Snyder

***Phone #*** 760-562-9511

***E-mail Address*** sny4920@calu.edu

***Faculty Sponsor (if required)*** Dr. Linda Meyer EdD, ATC, PES

***Department*** Health Science

***Project Dates*** January 1, 2012 to December 31, 2012

***Sponsoring Agent (if applicable)*** N/A

***Project to be Conducted at*** \_\_\_\_\_

***Project Purpose:***     *Thesis*     *Research*     *Class Project*     *Other*

**Keep a copy of this form for your records.**



2

**Please attach a typed, detailed summary of your project AND complete items 2 through 6.**

1. *Provide an overview of your project-proposal describing what you plan to do and how you will go about doing it. Include any hypothesis(es) or research questions that might be involved and explain how the information you gather will be analyzed. For a complete list of what should be included in your summary, please refer to Appendix B of the IRB Policies and Procedures Manual.*

The purpose of this study is to examine the perceptions of California state legislators, senators and assembly members, and secondary school superintendents regarding the athletic training profession. The goal is to provide the Far West Athletic Trainers' Association (FWATA) and National Athletic Trainers' Association (NATA) with information that can be used to assist them in the pursuit of state regulation for athletic training in California.

A descriptive research design will be used in conjunction with a survey to conduct this study. This is not a true experimental design as no variables are being manipulated. This survey, which was used in a prior study analyzing the same information in West Virginia by a previous researcher, will be distributed to California state legislators, senators and assembly members, and California secondary school superintendents. The questionnaire begins by asking the legislator and superintendents demographic questions. The subjects will then be asked questions related to the athletic training profession to gain insight on the perception and knowledge of both groups about the field of athletic training. The researcher will utilize United States Postal Service and email to distribute the survey. A hard copy survey will be mailed to the legislators due to their high volume of emails. For the superintendents I have chosen to use email due to the high number of subjects and cost effectiveness. Included with the survey (hard copy and email) is a cover letter that introduce the researcher, explain the purpose of the study, and discuss the significance behind the study. Consent by the legislators and superintendents will be implied through the anonymous return of the survey as stated in the cover letter. The legislators will return the survey in a postage paid, pre-addressed envelope via the United States Postal Service to the researcher at California University of Pennsylvania. The hard copy surveys going to the legislators will be coded to ensure confidentiality. The survey answers that are returned will be using identification numbers by the researcher so confidentiality is maintained. Data collected via pen and paper instrument will be stored in a locked filing cabinet in the graduate athletic training program director's office. The superintendents will submit the survey via an online survey system, [www.surveymonkey.com](http://www.surveymonkey.com). This data will be kept in a password protected file on University servers.

The following hypotheses will be examined by this study:

1. California superintendents will not have a significantly different score than legislators on the survey assessing athletic trainers' roles and responsibilities.
2. California superintendents and legislators who have participated in sport will not have a significantly different score that those whom have and / or do not.
3. California superintendents and legislators who have at least one child who has or is currently participating in athletics will not have a significantly different score than those who have and/ or do not.

A T-test will be used to compare the answers given by the legislators to those of the superintendents. After the data is gathered the researcher will analyze it using SPSS version 18.0

2. *Section 46.11 of the Federal Regulations state that research proposals involving human subjects must satisfy certain requirements before the IRB can grant approval. You should describe in detail how the following requirements will be satisfied. Be sure to address each area separately.*
  - a. *How will you insure that any risks to subjects are minimized? If there are potential risks, describe what will be done to minimize these risks. If there are risks, describe why the risks to participants are reasonable in relation to the anticipated benefits.*

Approved, September 12, 2005 / (updated 02-09-09)

3

There are minimal risks involved due to the nature of the survey. All subject's answers will be kept confidential and no identifying information is to be gathered. No research is going to be carried out before the researcher gains approval from the IRB.

- b. *How will you insure that the selection of subjects is equitable? Take into account your purpose(s). Be sure you address research problems involving vulnerable populations such as children, prisoners, pregnant women, mentally disabled persons, and economically or educationally disadvantaged persons. If this is an in-class project describe how you will minimize the possibility that students will feel coerced.*

The selection of subjects will be all 120 California legislators and all 1232 secondary school superintendents.

- c. *How will you obtain informed consent from each participant or the subject's legally authorized representative and ensure that all consent forms are appropriately documented? Be sure to attach a copy of your consent form to the project summary.*

The cover letter that will accompany the survey will state that subjects have the right to choose not to participate in the study. Therefore, informed consent is implied upon completing and returning the survey to the researcher. Further, all subjects have the right to discontinue completion of the survey at anytime and any results will be disregarded at that given time.

- d. *Show that the research plan makes provisions to monitor the data collected to insure the safety of all subjects. This includes the privacy of subjects' responses and provisions for maintaining the security and confidentiality of the data.*

The information of the participants will be kept confidential as neither their name or contact information will be included with their answers. Data collected via pen and paper instrument will be stored in a locked filing cabinet in the graduate athletic training program director's office. Electronic data will be stored on University servers in a password protected file. The only individuals that will have access to the data will be the researcher and the researcher's advisor.

3. *Check the appropriate box(es) that describe the subjects you plan to use.*

<input checked="" type="checkbox"/> <i>Adult volunteers</i>	<input type="checkbox"/> <i>Mentally Disabled People</i>
<input type="checkbox"/> <i>CAL University Students</i>	<input type="checkbox"/> <i>Economically Disadvantaged People</i>
<input type="checkbox"/> <i>Other Students</i>	<input type="checkbox"/> <i>Educationally Disadvantaged People</i>
<input type="checkbox"/> <i>Prisoners</i>	<input type="checkbox"/> <i>Fetuses or fetal material</i>
<input type="checkbox"/> <i>Pregnant Women</i>	<input type="checkbox"/> <i>Children Under 18</i>
<input type="checkbox"/> <i>Physically Handicapped People</i>	<input type="checkbox"/> <i>Neonates</i>

4. *Is remuneration involved in your project?*  *Yes* or  *No*. *If yes, Explain here.*
5. *Is this project part of a grant?*  *Yes* or  *No*. *If yes, provide the following information:*  
*Title of the Grant Proposal* \_\_\_\_\_  
*Name of the Funding Agency* \_\_\_\_\_

4

*Dates of the Project Period \_\_\_\_\_*

6. *Does your project involve the debriefing of those who participated?*  *Yes or*  *No*

*If Yes, explain the debriefing process here.*

7. *If your project involves a questionnaire interview, ensure that it meets the requirements of Appendix \_\_\_\_\_ in the Policies and Procedures Manual.*

**California University of Pennsylvania Institutional Review Board**  
**Survey/Interview/Questionnaire Consent Checklist** (v021209)

This form **MUST** accompany all IRB review requests

Does your research involve **ONLY** a survey, interview or questionnaire?

**YES**—Complete this form

**NO**—You **MUST** complete the “Informed Consent Checklist”—skip the remainder of this form

Does your survey/interview/questionnaire cover letter or explanatory statement include:

(1) Statement about the general nature of the survey and how the data will be used?

(2) Statement as to who the primary researcher is, including name, phone, and email address?

(3) **FOR ALL STUDENTS:** Is the faculty advisor’s name and contact information provided?

(4) Statement that participation is voluntary?

(5) Statement that participation may be discontinued at any time without penalty and all data discarded?

(6) Statement that the results are confidential?

(7) Statement that results are anonymous?

(8) Statement as to level of risk anticipated or that minimal risk is anticipated? (NOTE: If more than minimal risk is anticipated, a full consent form is required—and the Informed Consent Checklist must be completed)

(9) Statement that returning the survey is an indication of consent to use the data?

(10) Who to contact regarding the project and how to contact this person?

(11) Statement as to where the results will be housed and how maintained? (unless otherwise approved by the IRB, must be a secure location on University premises)

(12) Is there text equivalent to: “Approved by the California University of Pennsylvania Institutional Review Board. This approval is effective nn/nn/nn and expires mm/mm/mm”? (the actual dates will be specified in the approval notice from the IRB)?

(13) **FOR ELECTRONIC/WEBSITE SURVEYS:** Does the text of the cover letter or explanatory statement appear before any data is requested from the participant?

(14) **FOR ELECTONIC/WEBSITE SURVEYS:** Can the participant discontinue participation at any point in the process and all data is immediately discarded?

**California University of Pennsylvania Institutional Review Board  
Informed Consent Checklist (v021209)**

This form MUST accompany all IRB review requests

Does your research involve ONLY a survey, interview, or questionnaire?

**YES**—DO NOT complete this form. You MUST complete the “Survey/Interview/Questionnaire Consent Checklist” instead.

**NO**—Complete the remainder of this form.

**1. Introduction** (check each)

- (1.1) Is there a statement that the study involves research?
- (1.2) Is there an explanation of the purpose of the research?

**2. Is the participant.** (check each)

- (2.1) Given an invitation to participate?
- (2.2) Told why he/she was selected.
- (2.3) Told the expected duration of the participation.
- (2.4) Informed that participation is voluntary?
- (2.5) Informed that all records are confidential?
- (2.6) Told that he/she may withdraw from the research at any time without penalty or loss of benefits?
- (2.7) 18 years of age or older? (if not, see Section #9, Special Considerations below)

**3. Procedures** (check each).

- (3.1) Are the procedures identified and explained?
- (3.2) Are the procedures that are being investigated clearly identified?
- (3.3) Are treatment conditions identified?

**4. Risks and discomforts.** (check each)

- (4.1) Are foreseeable risks or discomforts identified?
- (4.2) Is the likelihood of any risks or discomforts identified?
- (4.3) Is there a description of the steps that will be taken to minimize any risks or discomforts?
- (4.4) Is there an acknowledgement of potentially unforeseeable risks?
- (4.5) Is the participant informed about what treatment or follow up courses of action are available should there be some physical, emotional, or psychological harm?
- (4.6) Is there a description of the benefits, if any, to the participant or to others that may be reasonably expected from the research and an estimate of the likelihood of these benefits?
- (4.7) Is there a disclosure of any appropriate alternative procedures or courses of treatment that might be advantageous to the participant?

**5. Records and documentation.** (check each)

- (5.1) Is there a statement describing how records will be kept confidential?
- (5.2) Is there a statement as to where the records will be kept and that this is a secure location?
- (5.3) Is there a statement as to who will have access to the records?

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**6. For research involving more than minimal risk (check each),**

- (6.1) Is there an explanation and description of any compensation and other medical or counseling treatments that are available if the participants are injured through participation?
- (6.2) Is there a statement where further information can be obtained regarding the treatments?
- (6.3) Is there information regarding who to contact in the event of research-related injury?

**7. Contacts (check each)**

- (7.1) Is the participant given a list of contacts for answers to questions about the research and the participant's rights?
- (7.2) Is the principal researcher identified with name and phone number and email address?
- (7.3) FOR ALL STUDENTS: Is the faculty advisor's name and contact information provided?

**8. General Considerations (check each)**

- (8.1) Is there a statement indicating that the participant is making a decision whether or not to participate, and that his/her signature indicates that he/she has decided to participate having read and discussed the information in the informed consent?
- (8.2) Are all technical terms fully explained to the participant?
- (8.3) Is the informed consent written at a level that the participant can understand?
- (8.4) Is there text equivalent to: "Approved by the California University of Pennsylvania Institutional Review Board. This approval is effective nn/nn/nn and expires mm/mm/mm"? (the actual dates will be specified in the approval notice from the IRB)

**9. Specific Considerations (check as appropriate)**

- (9.1) If the participant is or may become pregnant is there a statement that the particular treatment or procedure may involve risks, foreseeable or currently unforeseeable, to the participant or to the embryo or fetus?
- (9.2) Is there a statement specifying the circumstances in which the participation may be terminated by the investigator without the participant's consent?
- (9.3) Are any costs to the participant clearly spelled out?
- (9.4) If the participant desires to withdraw from the research, are procedures for orderly termination spelled out?
- (9.5) Is there a statement that the Principal Investigator will inform the participant or any significant new findings developed during the research that may affect them and influence their willingness to continue participation?
- (9.6) Is the participant less than 18 years of age? If so, a parent or guardian must sign the consent form and assent must be obtained from the child
  - Is the consent form written in such a manner that it is clear that the parent/guardian is giving permission for their child to participate?
  - Is a child assent form being used?
  - Does the assent form (if used) clearly indicate that the child can freely refuse to participate or discontinue participation at any time without penalty or coercion?
- (9.7) Are all consent and assent forms written at a level that the intended participant can understand? (generally, 8<sup>th</sup> grade level for adults, age-appropriate for children)

**California University of Pennsylvania Institutional Review Board**  
**Review Request Checklist** (v021209)

This form **MUST** accompany all IRB review requests.  
 Unless otherwise specified, **ALL** items must be present in your review request.

Have you:

(1.0) FOR ALL STUDIES: Completed ALL items on the Review Request Form?

Pay particular attention to:

- (1.1) Names and email addresses of all investigators
  - (1.1.1) FOR ALL STUDENTS: use only your CalU email address)
  - (1.1.2) FOR ALL STUDENTS: Name and email address of your faculty research advisor
- (1.2) Project dates (must be in the future—no studies will be approved which have already begun or scheduled to begin before final IRB approval—NO EXCEPTIONS)
- (1.3) Answered completely and in detail, the questions in items 2a through 2d?
  - 2a: NOTE: No studies can have zero risk, the lowest risk is “minimal risk”. If more than minimal risk is involved you **MUST**:
    - i. Delineate all anticipated risks in detail;
    - ii. Explain in detail how these risks will be minimized;
    - iii. Detail the procedures for dealing with adverse outcomes due to these risks.
    - iv. Cite peer reviewed references in support of your explanation.
  - 2b. Complete all items.
  - 2c. Describe informed consent procedures in detail.
  - 2d. NOTE: to maintain security and confidentiality of data, all study records must be housed in a secure (locked) location **ON UNIVERSITY PREMISES**. The actual location (department, office, etc.) must be specified in your explanation and be listed on any consent forms or cover letters.
- (1.4) Checked all appropriate boxes in Section 3? If participants under the age of 18 years are to be included (regardless of what the study involves) you **MUST**:
  - (1.4.1) Obtain informed consent from the parent or guardian—consent forms must be written so that it is clear that the parent/guardian is giving permission for their child to participate.
  - (1.4.2) Document how you will obtain assent from the child—This must be done in an age-appropriate manner. Regardless of whether the parent/guardian has given permission, a child is completely free to refuse to participate, so the investigator must document how the child indicated agreement to participate (“assent”).
- (1.5) Included all grant information in section 5?
- (1.6) Included ALL signatures?

(2.0) FOR STUDIES INVOLVING MORE THAN JUST SURVEYS, INTERVIEWS, OR QUESTIONNAIRES:

- (2.1) Attached a copy of all consent form(s)?
- (2.2) FOR STUDIES INVOLVING INDIVIDUALS LESS THAN 18 YEARS OF AGE: attached a copy of all assent forms (if such a form is used)?
- (2.3) Completed and attached a copy of the Consent Form Checklist? (as appropriate—see that checklist for instructions)

- (3.0) FOR STUDIES INVOLVING ONLY SURVEYS, INTERVIEWS, OR QUESTIONNAIRES:
- (3.1) Attached a copy of the cover letter/information sheet?
  - (3.2) Completed and attached a copy of the Survey/Interview/Questionnaire Consent Checklist? (see that checklist for instructions)
  - (3.3) Attached a copy of the actual survey, interview, or questionnaire questions in their final form?
- (4.0) FOR ALL STUDENTS: Has your faculty research advisor:
- (4.1) Thoroughly reviewed and approved your study?
  - (4.2) Thoroughly reviewed and approved your IRB paperwork? including:
    - (4.2.1) Review request form,
    - (4.2.2) All consent forms, (if used)
    - (4.2.3) All assent forms (if used)
    - (4.2.4) All Survey/Interview/Questionnaire cover letters (if used)
    - (4.2.5) All checklists
  - (4.3) IMPORTANT NOTE: Your advisor's signature on the review request form indicates that they have thoroughly reviewed your proposal and verified that it meets all IRB and University requirements.
- (5.0) Have you retained a copy of all submitted documentation for your records?



**Project Director's Certification**  
Program Involving HUMAN SUBJECTS

The proposed investigation involves the use of human subjects and I am submitting the complete application form and project description to the Institutional Review Board for Research Involving Human Subjects.

I understand that Institutional Review Board (IRB) approval is required before beginning any research and/or data collection involving human subjects. If the Board grants approval of this application, I agree to:

1. Abide by any conditions or changes in the project required by the Board.
2. Report to the Board any change in the research plan that affects the method of using human subjects before such change is instituted.
3. Report to the Board any problems that arise in connection with the use of human subjects.
4. Seek advice of the Board whenever I believe such advice is necessary or would be helpful.
5. Secure the informed, written consent of all human subjects participating in the project.
6. Cooperate with the Board in its effort to provide a continuing review after investigations have been initiated.


I have reviewed the Federal and State regulations concerning the use of human subjects in research and training programs and the guidelines. I agree to abide by the regulations and guidelines aforementioned and will adhere to policies and procedures described in my application. I understand that changes to the research must be approved by the IRB before they are implemented.

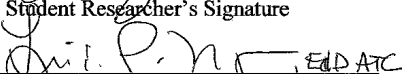
**Professional Research**


\_\_\_\_\_  
Project Director's Signature

\_\_\_\_\_  
Department Chairperson's Signature

**Student or Class Research**

  
\_\_\_\_\_  
Student Researcher's Signature

  
\_\_\_\_\_  
Supervising Faculty Member's  
Signature if required

  
\_\_\_\_\_  
Department Chairperson's Signature

**ACTION OF REVIEW BOARD** (IRB use only)

The Institutional Review Board for Research Involving Human Subjects has reviewed this application to ascertain whether or not the proposed project:

1. provides adequate safeguards of the rights and welfare of human subjects involved in the investigations;
2. uses appropriate methods to obtain informed, written consent;
3. indicates that the potential benefits of the investigation substantially outweigh the risk involved.
4. provides adequate debriefing of human participants.
5. provides adequate follow-up services to participants who may have incurred physical, mental, or emotional harm.

Approved [\_\_\_\_\_]

Disapproved

\_\_\_\_\_  
Chairperson, Institutional Review Board

\_\_\_\_\_  
Date

**Institutional Review Board  
California University of Pennsylvania  
Morgan Hall, Room 310  
250 University Avenue  
California, PA 15419  
[instreviewboard@calu.edu](mailto:instreviewboard@calu.edu)  
Robert Skwarecki, Ph.D., CCC-SLP, Chair**

**Dear Curt Snyder:**

**Please consider this email as official notification that your proposal titled "California legislators and superintendents perception of athletic training" (Proposal #11-033) has been approved by the California University of Pennsylvania Institutional Review Board as submitted, The effective date of the approval is 1-26-2012 and the expiration date is 1-25-2013. These dates must appear on the consent form .**

**Advisory note: The online consent information page makes reference to returning a paper survey, which is a logical inconsistency. Editing of the consent page to eliminate this reference is recommended to improve legibility and reduce potential participant confusion.**

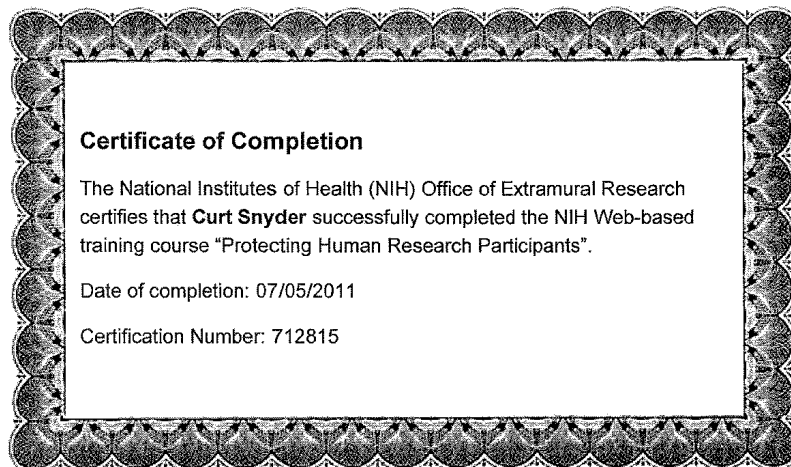
**Please note that Federal Policy requires that you notify the IRB promptly regarding any of the following:**

- (1) Any additions or changes in procedures you might wish for your study (additions or changes must be approved by the IRB before they are implemented)**
- (2) Any events that affect the safety or well-being of subjects**
- (3) Any modifications of your study or other responses that are necessitated by any events reported in (2).**
- (4) To continue your research beyond the approval expiration date of 1-25-2013 you must file additional information to be considered for continuing review. Please contact [instreviewboard@calu.edu](mailto:instreviewboard@calu.edu)**

**Please notify the Board when data collection is complete.**

**Regards,**

**Robert Skwarecki, Ph.D., CCC-SLP  
Chair, Institutional Review Board**



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## ABSTRACT

TITLE: California Legislators' and Superintendents' Perception of Athletic Training

RESEARCHER: Curt Snyder

ADVISOR: Dr. Linda Meyer

DATE: April 2012

RESEARCH TYPE: Master's Thesis

PURPOSE: The purpose of this study was to survey California legislators and secondary school superintendents to collect their perceptions on the roles and responsibilities of a certified athletic trainer (AT).

PROBLEM: California (CA) is one of three states that currently have no state regulation for the profession of athletic training. This is a problem for not only the profession but also for secondary school athletes whom are either under the care of someone who is not trained to provide needed health care services or actually has no one supervising any given event. This not only places participants at risk but is a major liability concern for legislators, superintendents, and athletic directors whom assume care for these students.

METHOD: A descriptive type design was used for this study. The Athletic Training Survey was the instrument used. Subjects were 640 California legislators and superintendents.

FINDINGS: There were three separate hypotheses.

1. No significant difference was found ( $t(111) = .766, p > .05$ ). The mean of the superintendents ( $4.152 \pm .475$ ) was not

significantly different from the mean of legislators ( $4.046 \pm .671$ ).

2. No significant difference was found ( $t(111) = 1.487$ ,  $p > .05$ ). The mean of the subjects who had participated in sports ( $4.172 \pm .510$ ) was not significantly different from the mean of subjects who have not participated in sports ( $3.992 \pm .451$ ).

3. No significant difference was found ( $t(102) = .518$ ,  $p > .05$ ). The mean of the subjects who have children who have or currently participate in sports ( $4.161 \pm .479$ ) was not significantly different from the mean of the subjects who do not have children who participate in sports ( $4.11 \pm .473$ ).

CONCLUSION: California legislators and superintendents have accurate knowledge of the profession of athletic training for Domains I - IV, but have incorrect knowledge for Domains V and VI.